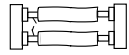


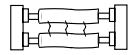
## Hipot Errors



**Overcurrent** The tester could not supply enough current to raise a cable connection to its intended high voltage. This means that there is either a high resistance “short” or a net with too much capacitance to be raised up to the full hipot voltage.



**Dielectric Failure** When high voltage was applied to a cable connection the tester detected a current spike caused by the discharge of a high voltage arc.



**High Volt. Leakage** When high voltage was applied to a cable connection the tester detected some current flow from the connection

## Component Errors

<b>Bad Resistor Bad Capacitor</b>	The tester senses that the measured component is outside the 10% tolerance programmed in the cable test.
<b>Missing Resistor Missing Capacitor Missing Diode</b>	The tester does <i>not</i> sense a component where it should be in the cable.
<b>Leaky Diode</b>	The tester senses a greater than normal current flow through the diode’s reverse bias.
<b>Reversed Diode</b>	The senses a diode’s orientation is reversed.

## Example of an error printout

-02 refers to pin #2 in the connector.

Since the cable has errors, the cable signature will not match the signature in the documentation. Instead, the tester prompts an “Error Signature.”

J1 refers to the position of the adapter in the tester

This is the net number, net #2.

CABLE ERROR SIGNATURE: EBF613-0706

J1-02 is open. It should be connected to J2-19. Instead, J1-02 is miswired to J2-02.

This shows that in net #5 J1-05 is shorted to J2-16

J1-02 OPEN J2-19 MISWIRE J2-02

J1-03 OPEN J2-18 MISWIRE J2-02

J1-04 OPEN J2-17 MISWIRE J2-03

J1-05 SHORT J2-16

J1-06 OPEN J2-15

## Getting More Help

Your 1100H+ Users Manual contains a more detailed explanation of this product. In addition a Cirris customer support representative is always ready to assist you. For Customer Support in the USA call 1-800-441-9910. Outside the USA locate the closest Cirris Sales Office by entering the URL [www.cirris.com/contact.html](http://www.cirris.com/contact.html).

# CIRRIS

Cable/Harness testing made easy®

# Quick Reference Guide

Signature®  
**1100H+**

## Basic Operation

- Back Button** Returns to the previous menu or to the main menu.
- Available Directional Buttons** Displayed on top line may include:
  - Top of list; more below
  - Scroll either up or down
  - Scroll up or go back
- Up/Down Buttons** Scroll menu options and settings.
- Selection Buttons** Select menu options.
- Menu Title** Always on the top line in capital letters.

## Creating a Test from a Cable

### STEP 1: Attach the cable to be learned.

1. Install the correct adapters.
2. Replace the cover plate.
3. Connect a sample cable.

### STEP 2: Learn the sample cable.

1. Press *Set Up Test Program*.
2. Press *Create New Test*.\*
3. Press *LEARN*.

\* During this process, you can change the learn settings for your cable specifications. See *Changing Setting for Learning and Testing*.

### STEP 3: Verify the learned cable is correct.

1. Press *Verify Test*.\*
2. Use the down button ▼ to check that the cable signature, settings, and connections are correct.
3. Use the back button ◀ to return to the CABLE LEARNED menu.

\* If you have a connected printer, you may want to verify by printing. For more information see the *Documenting a Cable* section.

You're ready to save the learned test in memory\*

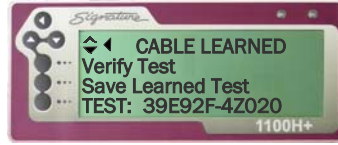
OR

start testing.

\* For more information on saving and retrieving a cable in memory, see the sections: *Saving a Test to Memory* and *Retrieving a Test From Memory*.

## Documenting a Cable

**Step 1: Create a test from a sample cable as in the previous section.**



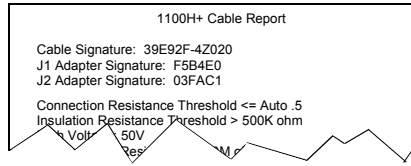
**Step 2:** *If you have a printer connected:*

1. Press down  $\blacktriangledown$  to view the print option.



2. Press *Print*.

The document is printed.

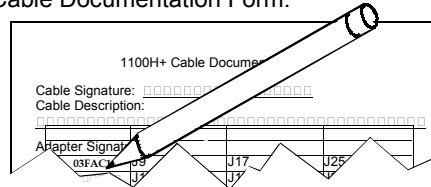


*If you don't have a printer connected:*

1. Press *Verify Test*.



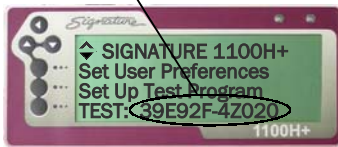
2. Scroll down  $\blacktriangledown$ , recording the information on a 1100H+ Cable Documentation Form.



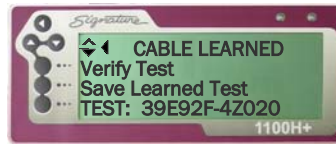
## Testing a Cable

**Step 1: Make sure the test program you want to use is loaded.**

The loaded test is always displayed on the main menu.



You can load a new test program by:  
creating a test from a cable



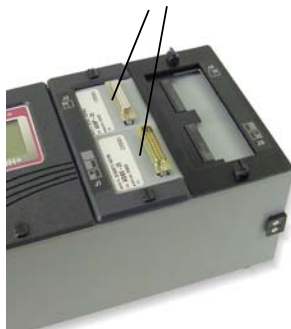
OR

retrieving a test from memory.



**Step 2: Duplicate the adapter setup you had in the original test.**

Original adapter positions

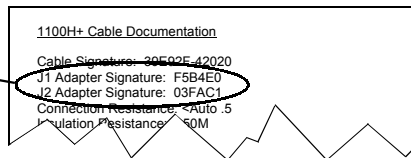


To remember the correct adapter positions in the tester:

Refer to the documentation you created for the test.

OR

1. Press *Test* for the loaded test.
2. Press *Show Required List*.
3. After installing the correct adapters, press *RETRY* to check the setup.



## Deleting a Test from Memory

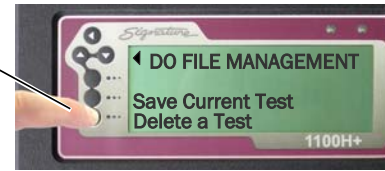
**Step 1: From the main menu press *Set User Preferences*.**



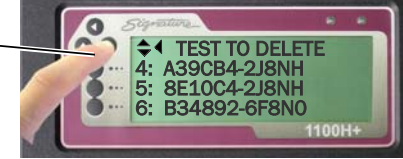
**Step 2: Scroll down  $\blacktriangledown$  and press *Do File Management*.**



**Step 4: Press *Delete a Test*.**



**Step 5: Scroll down  $\blacktriangledown$  to the memory location. Then press the button for the test to delete.**



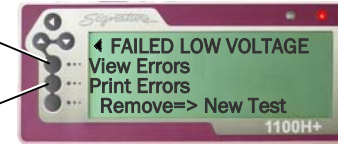
## Interpreting Error Messages

**To See a Detailed Error Messages:**

Press *View Errors*

OR

Press *Print Errors*

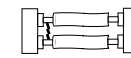


In this example we view the first detailed error and see NET 1 has a SHORT.

To see other detailed errors, we can scroll down  $\blacktriangledown$ .

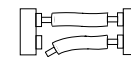


### Low Voltage Errors



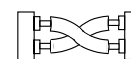
**SHORT**

The tester senses an interconnection that should *not* exist in the cable.



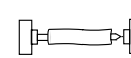
**OPEN**

The tester does *not* sense an interconnection that should exist in the cable.



**MISWIRE**

The tester senses that a contact that should have a valid connection is instead connected to a wrong contact.



**HIGH RESISTANCE**

The tester senses a cable interconnection that has too much resistance.

### Intermittent Errors

GOOD



BAD

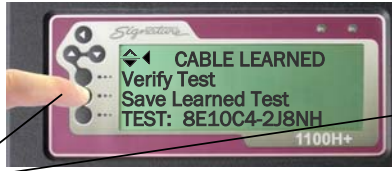
GOOD



To be an Intermittent error the cable must be good, then go bad, then go good again. Intermittent errors may be shorts, opens, miswires, and high resistance — just like the Low Voltage errors above.

## Saving a Test to Memory

**Step 1:** After learning from a sample cable...



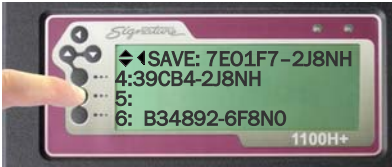
or editing a test...



press the save option.

If at any other time you need to save a test: (1) from the main menu, press *Set User Preferences*, (2) scroll to and press *Do File Management*, and then (3) press *Save Current Test*.

**Step 2:** Scroll to the desired memory location, then press the button to save to that location.



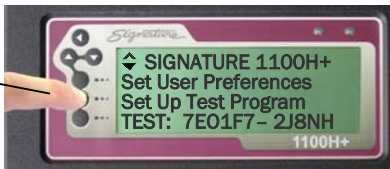
**Note:** You can either select an empty location or overwrite an existing cable test.

**Step 3:** If desired, record the location of the test on the *Memory Location Listing* for the tester.

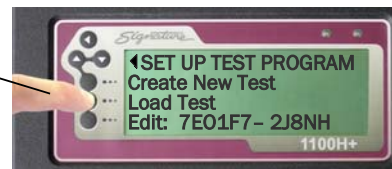
Mem. Loc.	Cable Description	Cable Signature
1	E0C	00000000
2	00000000000000000000000000000000	00000000
3	00000000000000000000000000000000	00000000
4	00000000000000000000000000000000	00000000
5	00000000000000000000000000000000	00000000
6	00000000000000000000000000000000	00000000

## Retrieving a Test from Memory

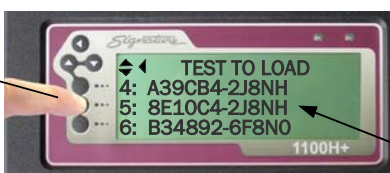
**Step 1:** From the main menu press *Set Up Test Program*.



**Step 2:** Press *Load Test*.



**Step 3:** Scroll to the test's memory location and press the button to retrieve it.



You may find the *Memory Location Listing* helpful to recall a cable test from memory.

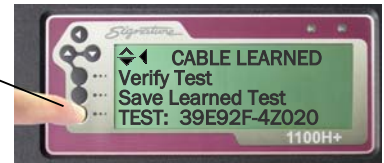
Mem. Loc.	Part Number	Cable Description	Cable Signature
1	00000000	E0C 000000000000	00000000
2	00000000	00000000000000000000000000000000	00000000
3	00000000	00000000000000000000000000000000	00000000
4	00000000	00000000000000000000000000000000	00000000
5	00000000	00000000000000000000000000000000	00000000
6	00000000	00000000000000000000000000000000	00000000

**Step 3:** Attach the cable to be tested and start the cable test.

1. Attach the cable to be tested.



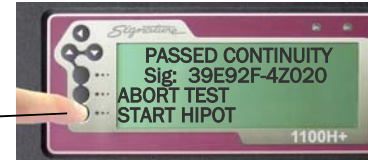
2. If you haven't already, press *Test* for the loaded test.



**Note:** If the User Preference *Test Mode* is set to *CONTINUOUS* the test will start automatically. If *Test Mode* is set to *SINGLE TEST*, press *START TEST* to start the test.

**STEP 4:** If prompted, press *Start Hipot*.

After the tester does a successful low voltage test, it's ready to do a hipot test.



Press *Start Hipot*

**Note:** If the User Preference *Automatic Hipot* is turned ON or if the Test Setting *High Voltage* is turned OFF, you are not prompted to start the Hipot Test.

**If the cable passes:**



The green LED lights.

The screen displays, PASSED ALL TESTS.

The tester sounds Tick Tick Tick ...

signifying the tester is performing continuous scans checking for intermittent errors.

**If the cable fails:**



The red LED lights.

The screen displays the type of error.

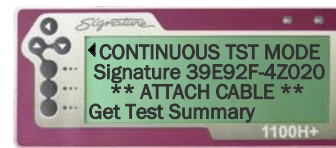
To get the detailed error information press *View Errors* or *Print Errors*.

The tester sounds Beep ...

1 beep = opens  
2 beep = short  
3 beeps = miswire or high voltage error

**STEP 5:** Remove the cable and connect the next one to the tester.

When you remove the cable the display tells you to attach the next cable.



## Changing User Preferences

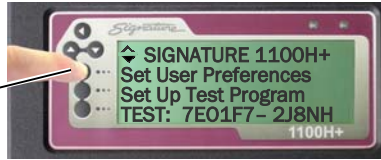
User Preferences affect the way the tester performs and interacts with the operator.

User Preferences do not affect the critical characteristics of the cable test.



### To change the User Preferences:

1. Press *Set User Preferences*.



2. Use selection and arrow buttons to change any of the User Preferences.

### Tester Settings

Setting Name	Description	Factory Default
Test Mode	CONTINUOUS: Starts the cable test as soon as a connection is sensed. At the end of the cable test, the cable is scanned for intermittents until removed. SINGLE TEST: Tester waits to start the test until the TEST button is pressed.	CONTINUOUS
Automatic Hipot	ON: The tester automatically performs the hipot test after the low voltage test and any hipot delay time. OFF: Operator must press START HIPOT to start the Hipot portion of the test.	OFF
High Speed Hipot	ON: Hipot test runs faster because the tester uses an algorithm to apply high voltage to several nets simultaneously. OFF: Hipot test runs slower because tester applies high voltage to each net one-at-a-time.	ON
Automatic Report	ON: Depending on the type of report selected, test results will print automatically either after a test or a test run. OFF: Operator must press PRINT to print test results.	OFF

### To restore all Preferences and Settings to Factory Defaults:

To restore User Preferences, Learn settings, and the loaded Test Settings to the factory defaults:

1. From the main menu press *Set User Preferences*.
2. Scroll down ▼ once and press *Set Factory Defaults*.
3. Press *RESET*.

## Changing Settings for Learning and Testing

**Learn Settings** affect how a cable is learned.

After a cable is learned these settings become the *Test Parameter Settings* for that cable.



**Test Parameter Settings** affect how a cable is tested.

The *Test Parameter Settings* determine the *Parameter Signature*.

7E10F7-2J8NH

### To change the Learn Settings:

1. From the main menu press *Set Up Test Program*.
2. Press *Create a New Test*.
3. Press *Set Learn Settings*.

### To change the Test Settings for the loaded test:

1. If the test you want to change is not loaded, make it the loaded test by learning a sample cable or retrieving a cable from memory.
2. From the main menu, press *Set Up Test Program*.
3. Press *Edit XXXXXX-XXXXX*.

Where XXXXXX-XXXXX is the signature of the cable to edit.

**Remember, if editing a test program retrieved from memory:** The test program in a particular memory location is not changed until the edited loaded test is saved back to the test's memory location.

### Learn/ Test Settings

Setting Name	Description	Factory Default
Conn Res (Connection Resistance)	Cable connections must be lower than this resistance to be learned and to pass the test.	10.0Ω
LV Insul Res (LV Insulation Resistance)	Unintended connections are considered shorts if under this resistance value. Also, intended connections are considered opens as opposed to having high resistance if over this resistance.	100KΩ
Component Resistance	Automatically set when learning components if setting <i>Learn Components</i> is turned on. Component are recognized as components if above this setting value.	none
High Voltage	Voltage applied to the cable during the hipot test.	1000V
HV Insulation Resistance	Cable insulation resistance must be above this resistance to pass.	10.0MΩ
Duration	Time period high voltage is applied to each net to test the dielectric strength.	.01 sec.
Hipot to	Determines whether hipot voltage will be applied to all the cable connector pins or only to pins with connections.	ALL PINS
Max Soak	Maximum time added to a hipot test to dry absorbed humidity from the cable insulation prior to measuring the HV insulation resistance.	0 sec.
Learn Components	Only in learn settings. Allows the tester to recognize passive components such as capacitors, diodes, and resistors.	OFF
High Cap Shield (High Capacitance Shield)	Allows cables with one highly capacitive shield to pass the hipot test.	OFF