Use this guide to install the easy-wire software, setup the hardware, connect the CR tester to a network, and get the overview of the test system.

**Parts List**
Check to make sure you received the following parts.

- **Base Scanner**
  - One required per system.
  - Provides 256 points.

- **Hand Held Probe**
- **Wrist Strap**
- **Power Supply**

- **easy-wire install CD**
- **Terminators**
  - Two per Base Scanner

- **USB Cable**
- **IEC Power Cord**
  - Varies according to the country of receipt.

**You may have received:**
A CR multi-box system requires some or all of the following parts.

- **Add-On Scanner(s)**
  - Up to seven connect on a Base Scanner or Booster Scanner.

- **Add-on Cable(s)**
  - One for every Add-on Scanner.

- **Extra Power Supplies**
  - One required for each Booster Scanner.

- **Booster Scanner(s)**
  - Provides power for every seven Add-On Scanners after the first seven.

- **Extra Terminator(s)**
  - One per Booster Scanner.

- **Booster Cable(s)**
  - One per Booster Scanner.

**Warning:** Improper installation of this cable can damage your equipment!

If you need assistance at any time, call your Cirris Customer Support representative. In the U.S.A. Cirris Sales and Customer Support may be reached at 1-800-441-9910.
System Requirements
These are the requirements for an easy-wire station or network server.

- **Computer CPU**
  1.6 GHz or better.

- **RAM**
  1 GB
  Minimum

- **CD ROM Drive**
  Required

- **Free Disk Space**
  Minimum: 5 GB
  Recommended: 10 GB

- **USB Port**
  1 Required

- **Internet Connection**
  Not required, but can facilitate support issues.

- **Monitor**
  Recommended: 1024X 768

- **Video Card**
  64 MB On Board Memory

- **Windows Environment**

- **Speaker & Sound Card**
  Required

- **Mouse**
  Required for installation and test setup. Can be replaced with a barcode scanner on the production floor.

- **Computer CPU**
  1.6 GHz or better.

- **RAM**
  1 GB
  Minimum

- **CD ROM Drive**
  Required

- **Free Disk Space**
  Minimum: 5 GB
  Recommended: 10 GB

- **USB Port**
  1 Required

- **Internet Connection**
  Not required, but can facilitate support issues.

If you plan on using a Network Server, be aware of the following:
The requirements for a network server are the same as a workstation. The computer that runs the network database should be dedicated to running the database software. The network database server should not be used as a workstation.

You may want to add these optional accessories
These accessories can be purchased at computer and office supply stores. Each accessory is easy to integrate with your computer and CR test system.

- **Sheet Printer**
  Used to print test reports and fixturing information.

- **Label Printer**
  Allows printed labels to be applied to the tested product.

- **PC Network Card**
  Allows the CR test stations to share test information with each other.

- **Barcode Scanner**
  Used on the production floor instead of the mouse.
Before you start the Installation
Before you start the installation, understand the issues below.

- **Stand-Alone or Network**
  If this is a new installation, decide whether you are going to set it up as a stand-alone station, or a network installation. The stand-alone installation is intended for stations that seldom need to exchange information with each other. Installing on a network is a good way to ensure all the stations on the production floor have the same test information. To install on a network you must have a computer that you can dedicate as a network server that meets the PC requirements described on page 2.

- **Changing previously installed stand-alone stations to a network installation**
  If you are changing from stand-alone stations to a network, keep in mind the following limitation. You can convert the test information from only one of the stand-alone stations to the network installation. The test information from the other standalone stations will have to be exported to a thumb drive and then imported to the network database. You will get more direction on how to handle this situation during the process of attaching a station to the network.

- **Updating an existing station with the software you’ve received**
  There are special steps for updating previous easy-wire software versions. If you are using the new software you received to update existing easy-wire stations, you will need to vary the installation process as described in the following pages.
Selecting an Installation Process

Choose the installation process below that best fits your requirements:

Install easy-wire on a new stand-alone station:

1. At each station complete the “Installing the Software” section on page 3.
2. Set up the tester as directed in the “Setting up the CR Tester” section on page 4.
3. When you first run the easy-wire software at a station refer to the section “Checking the System” section on page 8.

Update easy-wire on existing stand-alone stations:

1. At each station complete the “Updating the Software” section page 3.
2. At each station complete the “Installing the Software” section on page 3.
3. When you first run the easy-wire software at a station refer to the section “Checking the System” section on page 8.

Install easy-wire on a new Network Database Server Installation:

1. At each station and on the server, complete the “Installing the Software” section on page 3.
2. Set up the tester as directed in the “Setting up the CR Tester” section on page 4.
3. On the server, complete the “Updating the Server Configuration” section on page 13.
4. At each network station, complete the “Checking the System” section on page 8.
5. At each network station, complete the “Attaching a Station to the Network Database Server” on page 13.

Update easy-wire on an existing Network Database Server Installation:

1. At one workstation complete the “Installing the Software” section on page 3.
2. At the workstation with the updated software, start easy-wire to make sure it runs correctly (see “Checking the System” on page 8).
3. After you have verified that the software is working correctly at one station, install the software at the other station(s) and again verify that they work correctly.
4. Make sure all stations have exited the easy-wire software. Then at the Database Server, complete the “Installing the Software” section on page 3.

Note: the stations will not be able to access the server until you complete the next two steps.
5. After you install the software on the server, complete the “Updating the Server Configuration” section on page 13.
6. Complete the installation at each network station by completing the “Attaching a Station to the Network Database Server” on page 13.
Installing the Software

When you install the easy-wire software, you will also be prompted to install a driver and the software for the Composite Device in the hardware. Make sure the USB cable between the computer and the CH2 tester is disconnected.

1. Close all Windows applications on the computer.

2. Place the install CD into the CD-ROM drive. Make sure you use the appropriate CD.
   - Use the Station CD for a stand-alone station or a network station.
   - Use the Server CD only on the network server.

   After a moment the CD should auto-load. If the software does not auto-load, from the Windows taskbar, click Start, Run. Type: d:\install.exe in the text box (where d: is the CD-ROM drive) and click OK.

3. Follow the installation steps as they appear on the screen.

   **Note:** When you are prompted to choose the destination location, use the default location provided.

Updating the Software

Backing up the database

Before updating easy-wire, it’s important that you have a current backup of the easy-wire database. On your PC, navigate to the file path C:\Program Files\Cirris\easywire\Database and copy the easy-wire database file (easywire.fdb or easywire.gdb depending on the software version) to a network drive or thumb drive.

Special instructions for updating previously installed versions

Depending on your current easy-wire version, you may need to perform special steps before installing the current version. If you are unsure what version you have, before proceeding, start your easy-wire software and check the version information on the easy-wire main menu.

If your current easy-wire software version is from 2.0 to 9.0, call Cirris Technical Support before attempting to install the new version.
Consider these things before setting up your CR System

**Close together**
This is the standard configuration. The system is less susceptible to electrical noise in the environment, and therefore generally more accurate when stacked like this.

**Spaced apart**
Scanners can be spaced apart, putting them closer to where used, thereby reducing fixture length, resistance, and capacitance.

For this type of configuration you must order custom add-on cables. The following restrictions apply to cable lengths between Scanners.

- Twenty feet (6m) max from the following:
  - A Base or Booster Scanner to an Add-on Scanner
  - An Add-on scanner to another Add-on scanner.

**Note:** If boxes are greater than 20 ft apart, call Cirris at 1-800-441-9910. A shielded box to box cable may be needed.

- Fifty feet (15m) max between a Base Scanner and Booster Scanners
- Two hundred feet (60m) max total length of all connecting cables.

Select a test area where you can keep two feet (60 cm) between the test system and noise emitting electronics.

Some examples of electrically noisy devices include:

- Video monitors
- Florescent lights
- Equipment motors

Keep such devices at least 2 feet from the test system (including the test fixturing and tested device); otherwise measurement accuracy may be compromised.

**Note:** LCD monitors (flat screens) do not emit excessive noise and will not negatively affect the tester.
**Electrical Assembly**

1. Connect the USB cable from the USB port on the back of the Base Scanner to your computer.

2. Plug the power supply (latch side up) into the Base Scanner’s power connector.

   **Note:** To remove the power supply, press down on the base of the latch with your thumbnail and pull.

3. Connect the IEC power cord to the power supply.
4. Plug the free end of the IEC power cord into the same grounded outlet or plug strip that is used for the computer.

You should have received a power cord consistent with the power system of the country where the tester is being used.

For optimum measurement accuracy, the CR must have a consistent earth ground to the entire system. Make sure to use a grounded (3-prong) outlet or plug strip.

5. If you plan to use either the probe or wrist strap, connect it to the back of the Base Scanner.

6. **If this is a single scanner system,** connect the terminators to the unused scanner ports. Then proceed to “Error! Reference source not found.” on page 3.

   **If this is a multi-scanner system,** see the appropriate heading that follows. Then proceed to “Error! Reference source not found.” on page 3.

**Connecting Add-ons (up to seven)**

Connect up to seven Add-on Scanners to the Base Scanner as shown.

1. Connect an Add-on Cable between each box as shown.

2. Connect terminators to the two unused ports as shown.
Connecting Add-ons (more than seven)
Up to seven Add-on scanners may be connected on either Base Scanner or Booster Scanner. After the first seven Add-on Scanners, you must use a Booster Scanner for each additional set of seven Add-ons. You can have a maximum of 125 scanner boxes for a total 32,000 test points.

1. Connect an Add-on Cable to each Add-on Scanner as shown.

2. Connect a Booster Cable from the Base Scanner **Booster Out** connector to the Booster Scanner **Booster In** connector as shown. **WARNING!** If you attach the Booster cable to the Add-on Out connector, you will permanently damage your system!

3. Connect a terminator to each of the unused connector ports as shown.

3. Make sure to plug all the power cords and the computer into the same grounded power strip.

**For large systems:**
Chain the plug strips together to ensure consistent grounding. Don’t worry about overloading power cords; even a 125 scanner box system uses less than 200 watts of power.
Checking the System

When the tester boots up, it goes through a series of self tests. In the easy-wire main menu, you can tell if the tests pass or fail by checking the status indicator. You can also check to see if the sound in the tester is working from the easy-wire main menu. It is important that sound is working on the test computer. The easy-wire software relies heavily on sound prompts to provide feedback to the operator.

How to check the system:

1. On your desktop, double-click on the easy-wire icon. If you don’t see the icon on the desktop, from the Windows task bar, click Start>Programs>easy-wire Software>easy-wire.

2. If this is your first time to open easy-wire, the “Select Default Tester and frequency” window will appear on your screen.
   a) Enter the station name or server name (the station name will be used on reports generated by this station).
   b) Select easy-wire CR as the tester that will be attached to this station.
      Important! Make sure you select the correct tester. If you select the incorrect tester and click OK, call Cirris for assistance.
   c) Select your line frequency.
   d) Click OK.

3. easy-wire will load and the “Login User” window will open. Click [OK].
   Note: Initially when the User Login name says “Master Login”, no password is required. For security purposes, you can create a password for Master Login and also create your own user names and passwords. For more information, click the Help button in the “Login User” window.
4. Click [OK] to any Hardware Status Updates.

**Note:** Each time you run the software, this window will only appear if the system has been changed or disconnected.

5. Check to see if the color of the status indicator is green or red.

**If the status indicator is green,**
the tester is working. Skip to page 11 to check the sound.

**If the status indicator is red,**
there is a problem with the tester. See the “Troubleshooting a Red Status Indicator” section below.

For any other unresolved problems, see “Startup and Verify” in the easy-wire help system, or call Cirris Technical Support at 1-800-441-9910.
Troubleshooting a Red Status Indicator

If you have a red status indicator on the main menu of the software, do the following:

1. Verify that there is power to the Base Scanner and any Booster Scanners.

2. Verify that the USB cable is connected between the computer and the Base Scanner.

3. Reboot the tester. If the problem persists, write down the error messages that appear after launching the software, and call Cirris for assistance.
How to check the sound:

1. In the easy-wire main menu, click the green status indicator. You should hear two trumpet sounds coming from your tester.

2. **If you hear the sounds**, skip to “Completing a Network Install” on page 13.

   **If you do not hear the sounds**, continue with the steps below.

3. From the easy-wire main menu, click **[Utilities]**.

4. Click **[Setup System Options]**.

5. Open the “Computer” tab and click **[Change Volume]**.
6. Adjust the volume slider and press [Test] to try out the setting. When the setting is at the desired level, press [Done].

7. The “Setup System Options” window will be open on your screen. Press [OK].

8. The “System Utilities” window will be open on your screen, click [Done] to return to the main menu.

9. If you are still having sound problems, you can do the following:
   - Verify that speakers are connected to the PC and have power.
   - Verify that the speakers are on and that the volume is turned up.
   - Verify that the volume on your PC is turned up (the PC volume control can be found on your windows task bar).
Completing a Network Install

Updating the Server Configuration

If you have installed or updated the network server, do the following:

1. On the server, click Start, Programs, Cirris Systems Corporation, easy-wire server, Update easy-wire Cirris Server Configuration.

You will see the Updating Configuration... message. When this message disappears, the server configuration is complete.

Attaching a Station to the Network Database Server

For this process, you must do the following procedure at each station computer (not at the network database server). Before performing this process you should have previously installed the Cirris software on each station and on the Network Database Server.

To attach a station to the Network Database Server:

1. On your PC, click the Windows Start button.

2. If you are attaching easy-wire software, click Programs, Cirris Systems Corporation, easy-wire, Attach Station to Network.

   If you are attaching SPC Made Easy software, click Programs, Cirris Systems Corporation, SPCME, Attach Station to Network.
3. When this window appears, click [Find Server Location] to locate the database configuration file.

   The default server location is at: 
   C:\Documents and Settings\Users\Documents\Cirris\Common\database.ini.

4. Select the database.ini file on the server. Then click [Open].

   The “Test programs from other stand-alone stations must be exported, and afterwards imported at any station connected to the network database.

The "Convert Stand Alone Station to Network Station" window will be open.

The check box at the bottom of this window is only used when you are changing an existing stand alone station to a network installation. If you are, Cirris recommends checking this box on the station that has the most data on it. Then test programs on other stand alone stations will need to be imported at station you used to overwrite the database.

**Caution!** Check this box only if you want the test programs from the station you are on to overwrite the data on your server database. If you do not want your server database to be erased, do not check this box!
5. When you are ready to continue, click [Convert].

The conversion process may take a few minutes to several hours depending on how much data is being converted to the network database.

6. When the conversion process is complete "Convert To Network Station" complete window will open. Click [OK].

Before attaching other stations, verify that the software on this station is working:

1. On your desktop, double-click the easy-wire icon to open the software.

2. Make sure any converted test programs are displayed in the main menu and that existing programs on the easy-wire server are displayed.

3. Verify that everything is working by completing the “Checking the System” section on page 8.
Using the On-line Manual/Help System

In addition to this getting started guide, the complete easy-wire manual is available from the Help button in the easy-wire software. Sections of the on-line manual may be printed if desired.

To access the on-line manual/help system:

1. In the easy-wire software, click the Help button at the bottom of any window.
   The help information for that window will appear on the screen.

2. To view the entire on-line manual by chapter, click Contents.
3. Click any link to view that specific topic.

In every window of the on-line manual/help system, you can:

- Click **Contents** to view the easy-wire manual by topic.
- Click **Search** to find information using key words.
- Click **Contact** to view the contact information for all Cirris locations, reps, and distributors.
- Click **Website** to view the Cirris website if your PC has an internet connection.
Maintenance

Tester Maintenance
The CR tester requires no maintenance. If desired you may clean the outside surfaces of the CR tester.

Fixture Maintenance
The contacts on the fixturing that mate to the device under test may wear due to repeated insertion cycles. Contact wear can result in higher connection resistances which in turn will increase the measured resistances for the tested device. For this reason Cirris recommends that customers evaluate the number of mating cycles and the cycle life of fixture contacts to determine maintenance intervals for testing and/or replacing fixturing contacts. A good way to check fixture contact resistance is to construct and use a shorting block. For more information on creating shorting blocks, see http://www.cirris.com/adapters/test-adapt.html.

Service
All Cirris Testers are designed as modules for easy servicing. Should your Cirris tester require service, as directed by Cirris support personnel, you may need to send the affected module or the entire tester back to Cirris for repair. If needed during the repair period, a loaner tester can be sent to you. You should not attempt to service any circuit board at the component level. All component-level service should be performed by Cirris technicians.

Calibration
With your CR tester you should have received a Certificate of Calibration. Before leaving the factory every CR tester is calibrated in compliance with ANSI/NCSL Z540-1-1994 and MIL-STD-45662A to standards traceable to the NIST in the United States. The tester should thereafter be calibrated annually.

To verify calibration and functionality, you can purchase the CH+ Performance Check Kit. The CR Performance Check kit has a valid calibration period of 5 years after which it must be replaced. Note that in the event a Cirris tester is found to be out of calibration there are no adjustable controls; the tester, or the affected portions of the tester, must be sent back to a Cirris facility for repair.

Conditions for Operation
Your CR Tester is intended to be used indoors at a temperature of 10 to 40 degrees Celsius. The unit can be mounted in a ventilated compartment.

Never apply live voltages to the test points or probe input of your Cirris tester. Power supplies and other accessories not approved by Cirris may cause damage or present a hazard. If you use a Cirris product in a manner not specified in this manual and the accompanying help system, the protection provided by the product may be impaired.
A Harness Board Demo
Depending on your application and needs, Cirris can provide you with a demo to introduce you to the basics of the easy-wire CR system. One demo focuses on Traditional Fixturing; the other on easy-wire Adapter Fixturing. To understand more about these fixturing types see the Fixturing Guide section included in this manual. Each demo includes a step-by-step tutorial and a small harness board you can connect to your system to get hands-on training. For more information call Cirris sales and customer service at 1-800-441-9910.

Support calls
If you need additional help, a Cirris Customer Support representative is ready to assist you. Inside the U.S.A. call Sales and Customer Support toll-free at 1-800-441-9910.
Warranty

Cirris Systems Corporation warrants the CR / CH+ analyzer to be free of defects in materials and workmanship for a period of one (1) year from the date of delivery to you, as evidenced by receipt of your warranty registration form. In the event a defect develops due to normal use during the warranty period, Cirris Systems will repair or replace the analyzer with a new or reconditioned unit of equal value. For this warranty to be valid you must complete and return the warranty registration card.

In the event of replacement with a new or reconditioned model, the replacement unit will continue the warranty period of the original analyzer. Replacement units will be returned by the same method shipped; generally within one (1) working day.

If analyzer failure results from accident, abuse, or misapplication, Cirris Systems Corporation shall have no responsibility to replace the analyzer or refund the purchase price. Defects arising from such causes will be considered a breach of this warranty. Cirris Systems Corporation is not responsible for special, incidental, or consequential damages resulting from any breach of warranty, or under any other legal theory, including lost profits, downtime, goodwill, damage to or replacement of equipment and property, and any costs of recovering materials used with the CR / CH+ Analyzer.

ANY IMPLIED WARRANTIES ARISING OUT OF SALES OF THE CR / CH+ ANALYZER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE ABOVE STATED ONE (1) YEAR PERIOD. Cirris Systems SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGE, EXPENSES, OR ECONOMIC LOSS.

Some states do not allow limitations on length, or implied warranty, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

Cirris Systems Corporation
Salt Lake City, Utah.

PLEASE RECORD PURCHASE DATE AND SERIAL NUMBER BELOW.

DATE: ______________________________________
SERIAL NUMBER: ____________________________