Agilent BenchLink Data Logger Pro Software

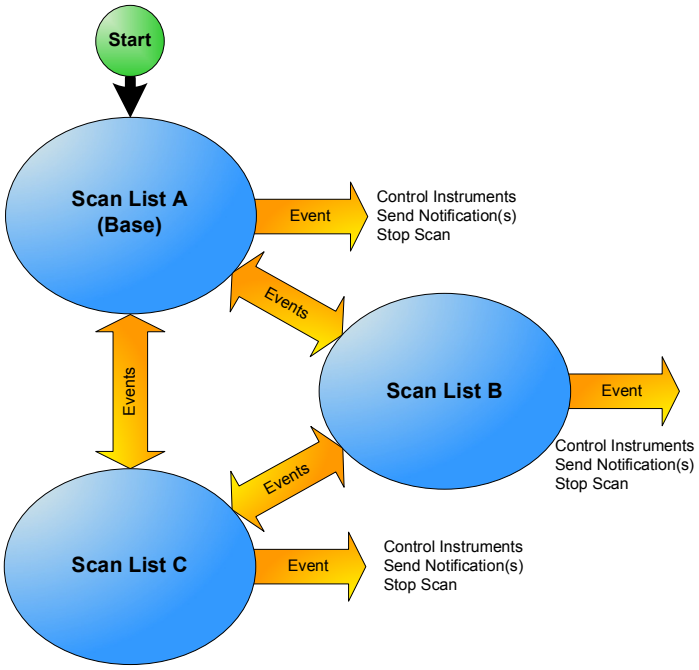
Quick Start Tutorial

BenchLink Data Logger Installation CD-ROM. You can install the BenchLink Data Logger applications listed below from the *Agilent BenchLink Data Logger CD-ROM*.

Agilent's BenchLink Data Loggers

- **BenchLink Data Logger** - A free application for basic scanning that is included with every Agilent 34970A, 34972A, and 34980A Data Acquisition/Switch Unit.

- **Upgrade to BenchLink Data Logger Pro! -** A licensed application for advanced scan control, limit testing, and SCPI instrument control for use with the Agilent 34970A, 34972A, and 34980A. Your installation CD contains a free 30-day trial version of BenchLink Data Logger Pro. Here are some of the many features of BenchLink Data Logger Pro:

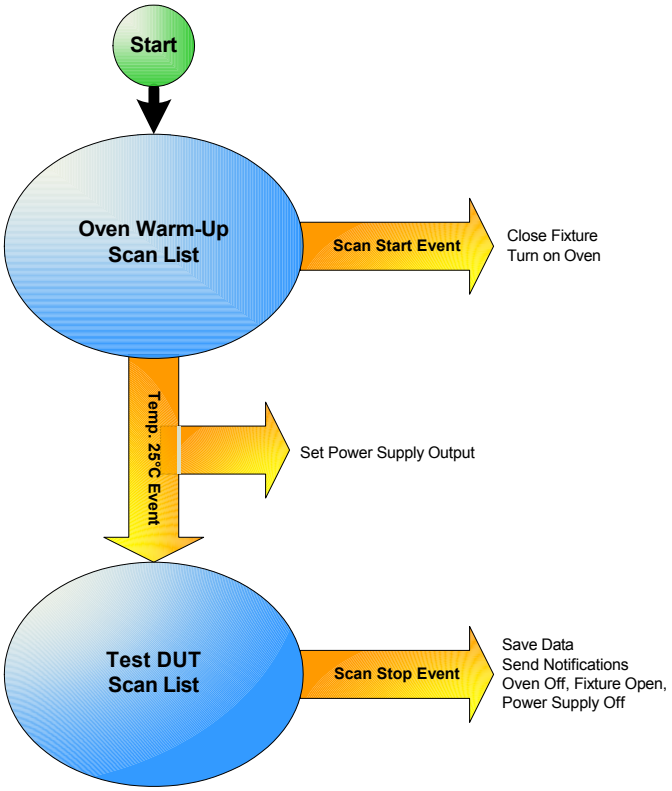


- **Scanning Flexibility!** Multiple scan lists allow you to tailor individual scans to your measurement needs. Event-based decision making controls the scanning. Multiple instruments are seamlessly integrated into scan lists.
- **Real-Time Limit Checking, Decision Making and Event Handling!** Advanced limit checking allows the software to make decisions and branch between scan lists, control instrumentation with flexible SCPI commands, handle errors and send notifications in response to events.
- **Easy Data Storage and Analysis!** Data can be automatically stored in a spreadsheet-compatible data file.
- **No Programming!** Instrument control and decision making that once required extensive programming skills can now be done in an easy to use spreadsheet environment**...all without programming!**

Agilent Technologies

Scanning and Instrument Control with BenchLink Data Logger Pro

This Quick Start Tutorial shows just how easy it is to control scanning and instruments with BenchLink Data Logger Pro. The following pages show a typical test scenario where the DUT (Device Under Test) is in a temperature-controlled test fixture. The sequence of operations is:



1. When the first scan list, *Oven Warm-Up,* starts, a script closes switches that close the test fixture and turn on the oven heater.

2. The first scan list, *Oven Warm-Up,* then monitors the oven temperature.

3. When the temperature stabilizes to between 24°C and 26°C for five successive scans, a limit event* runs a script that configures a GPIB power supply that powers the DUT.

4. The second scan list, *Test DUT*, measures the DUT's input and outputs for eight scans.

5. When the DUT test is finished, a script turns off the power supply's output, and opens switches that turn off the oven and open the test fixture.

6. A notification signals the computer to beep and logs the scan finished event.

...all without writing a single line of code!

**Limit events include: above a high value, below a low value, out of range, in range, stabilized in a delta band, and destabilized outside a delta band. You can set any of these limits to occur after a specified number of successive scans.*

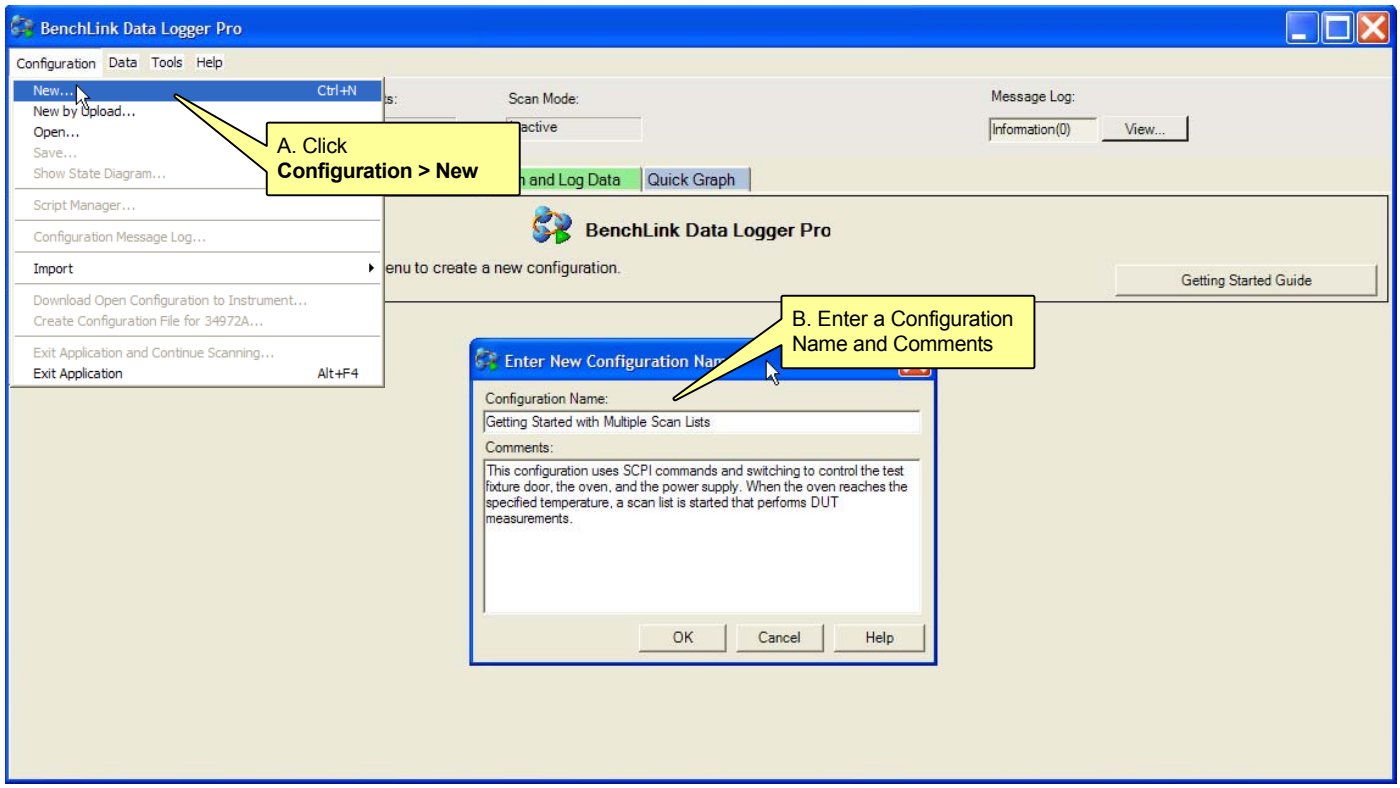
Starting BenchLink Data Logger Pro

After installing the Agilent IO Libraries and BenchLink Data Logger Pro, click this icon on your desktop to start the application:

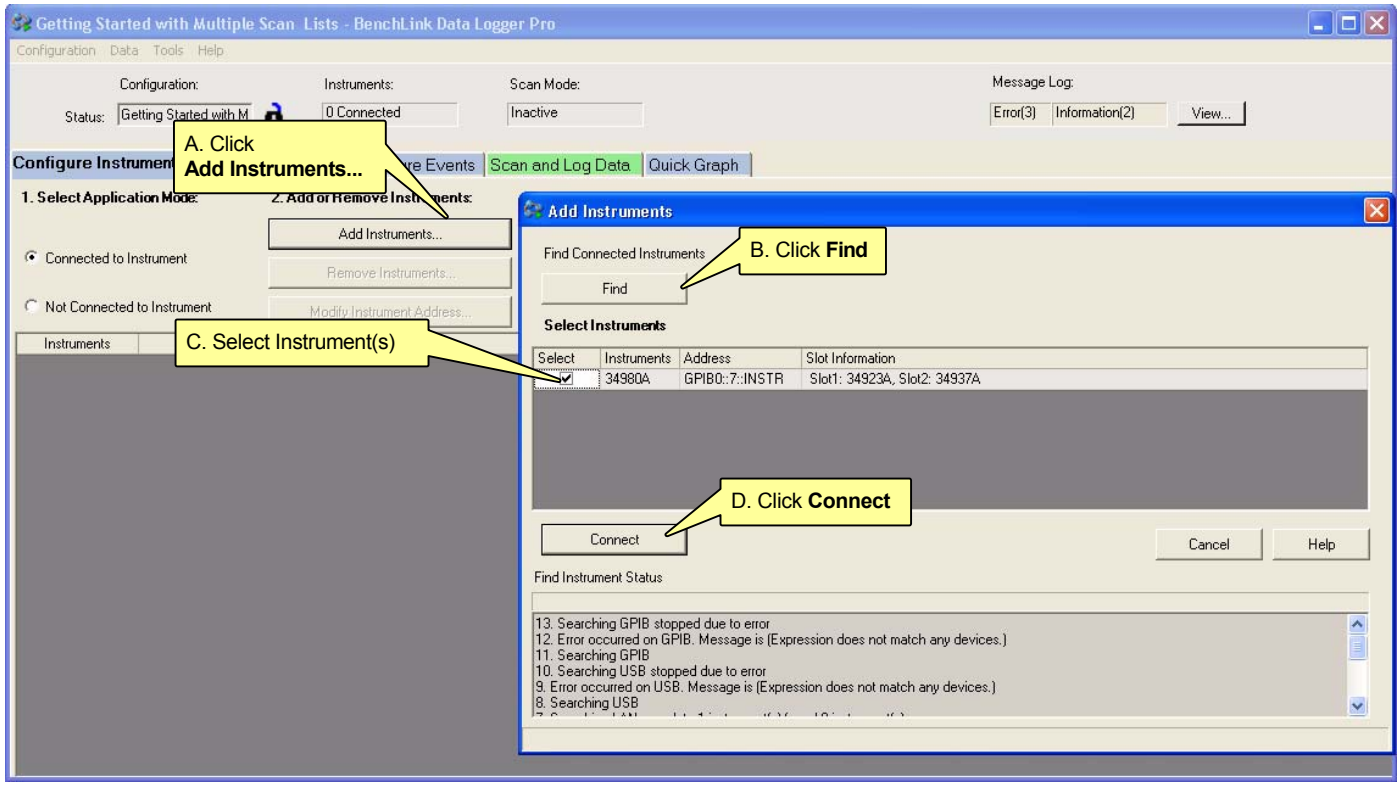
Once the application has started, click **Help > Quick Start Videos** to watch videos that show you how to get started with BenchLink Data Logger Pro.

Note: *If you are having difficulty running the application, refer to the software installation instructions at the end of this document.*

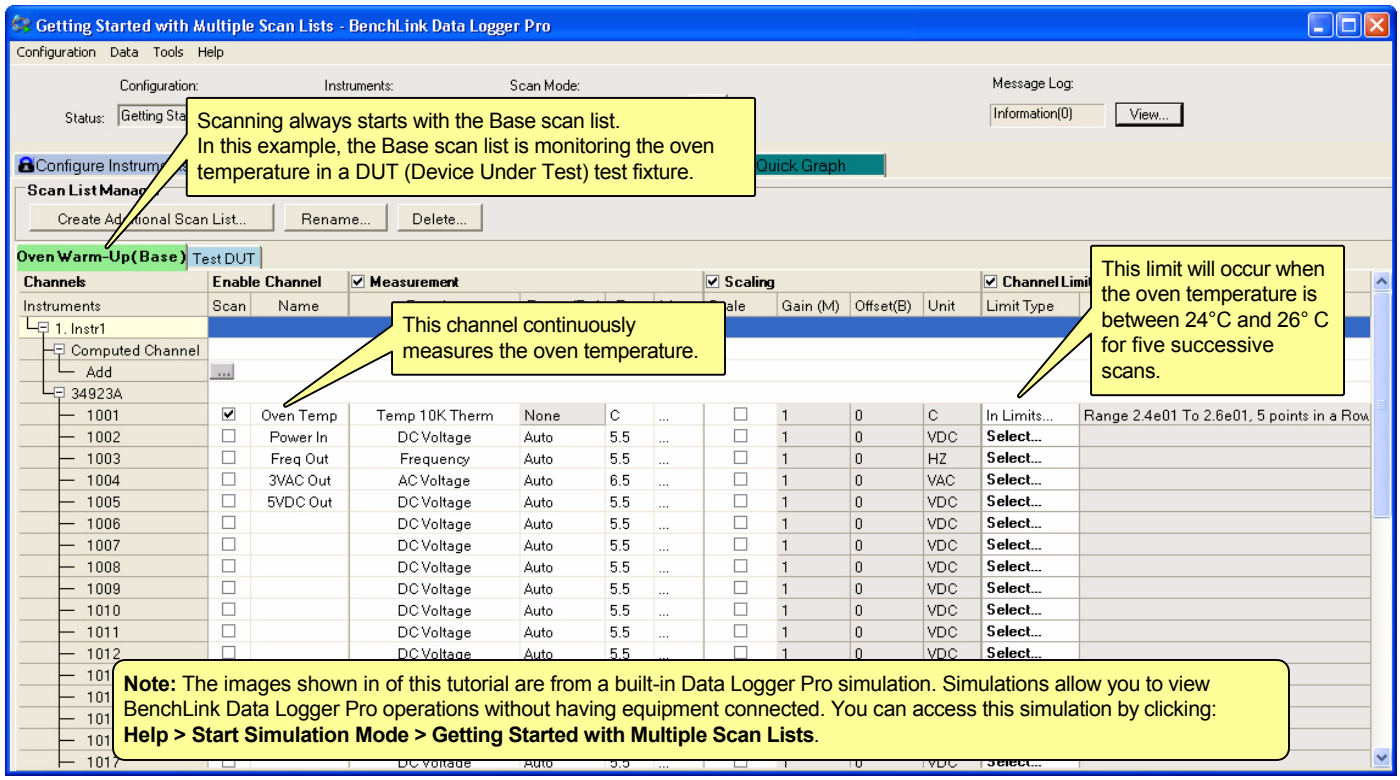
Step 1. Create a Configuration (Configure Instruments Tab)



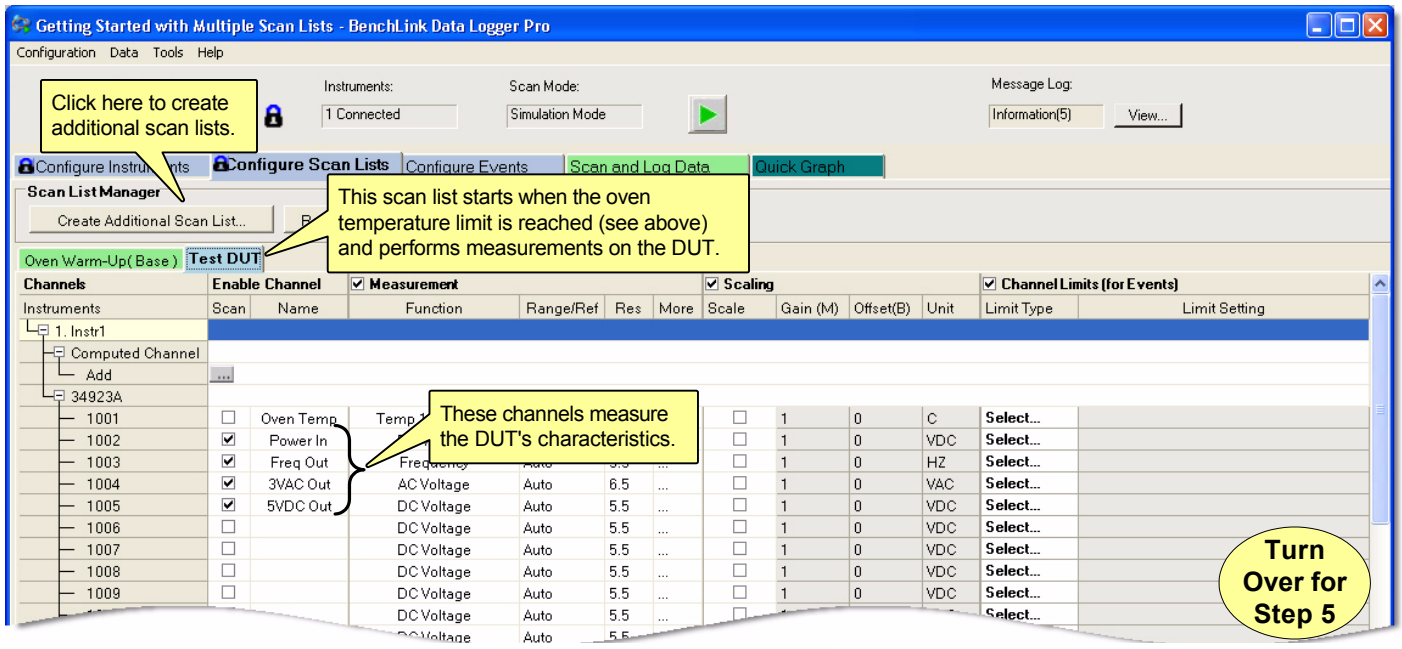
Step 2. Add Instruments (Configure Instruments Tab)



Step 3. Configure the Base Scan List (Configure Scan Lists Tab)



Step 4. Configure Additional Scan Lists (Configure Scan Lists Tab)



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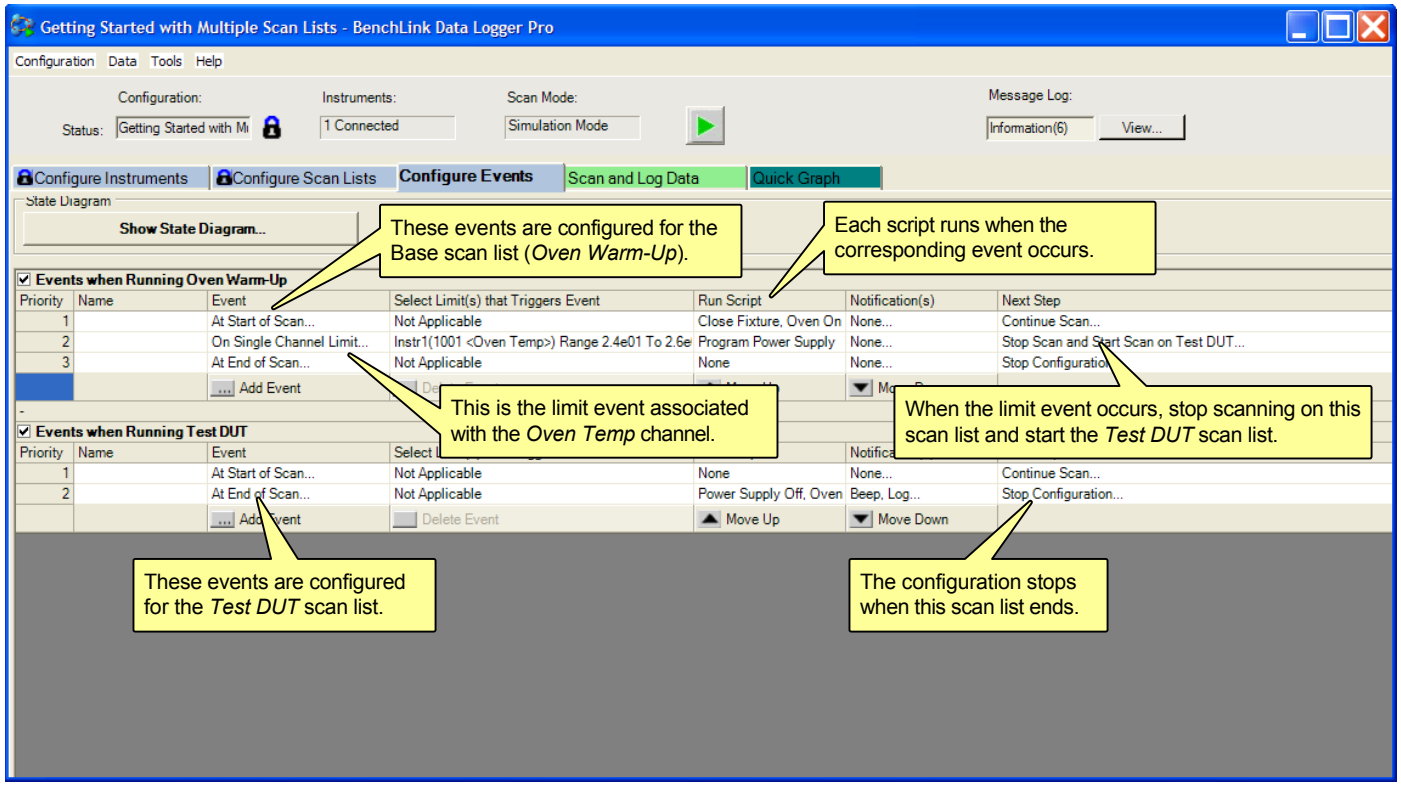
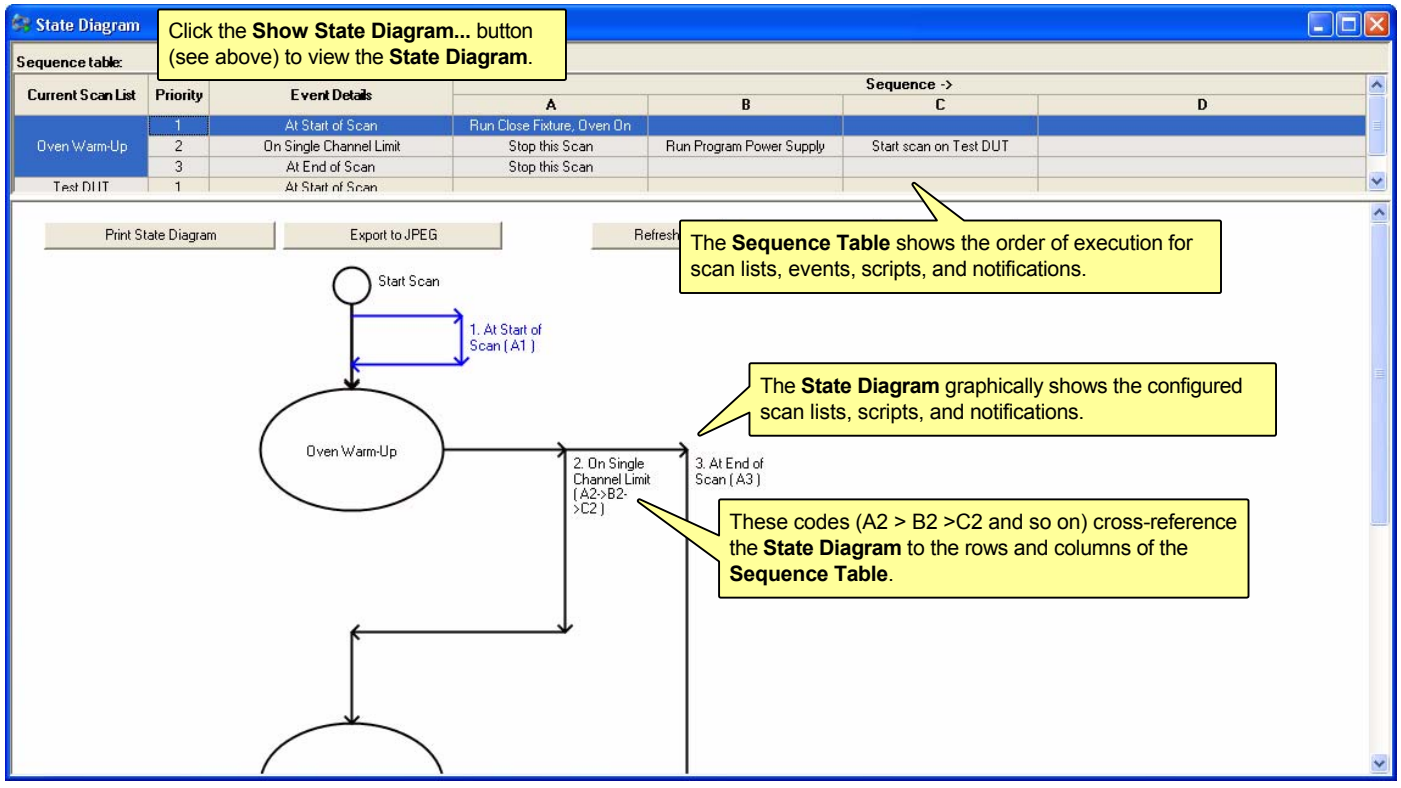
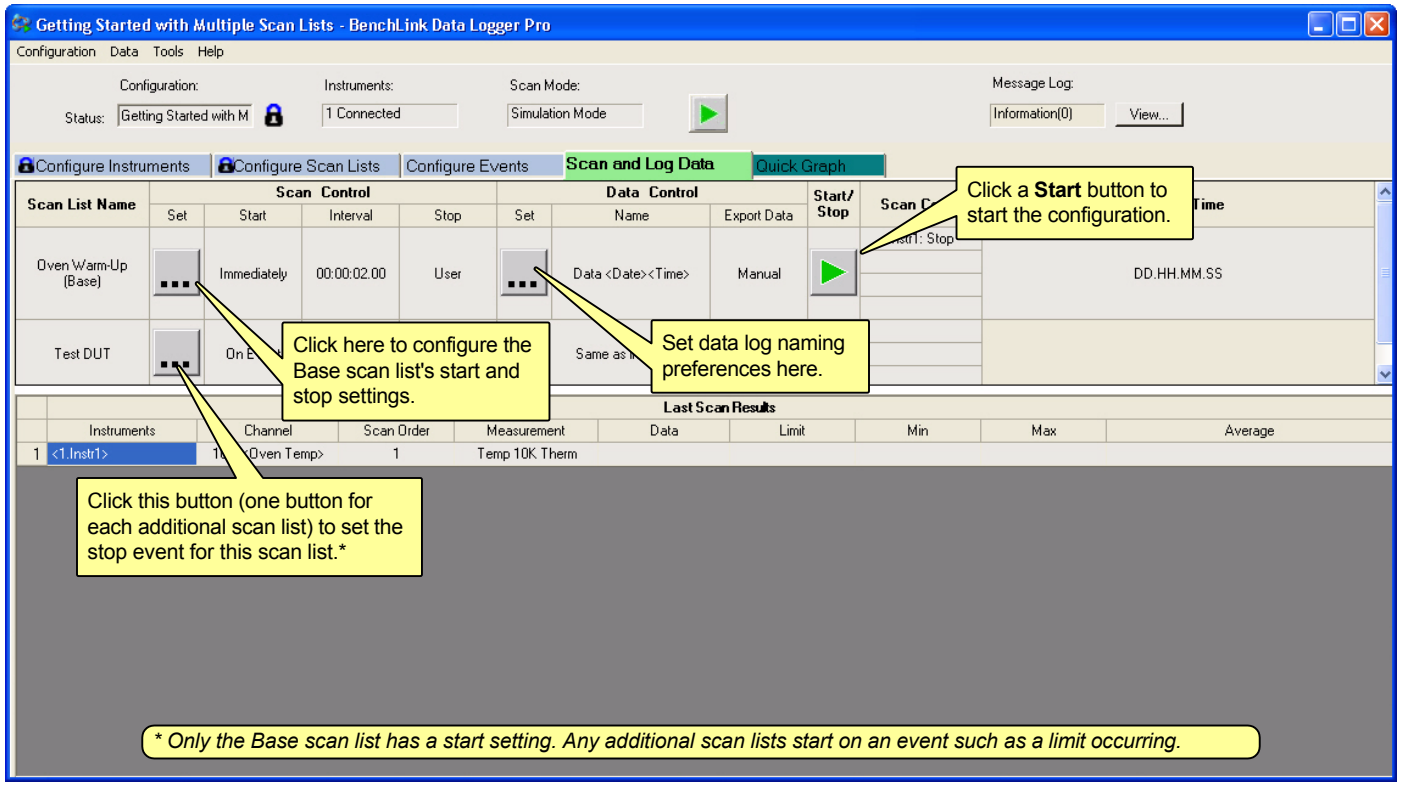
Step 5. Configure Events (Configure Events Tab)



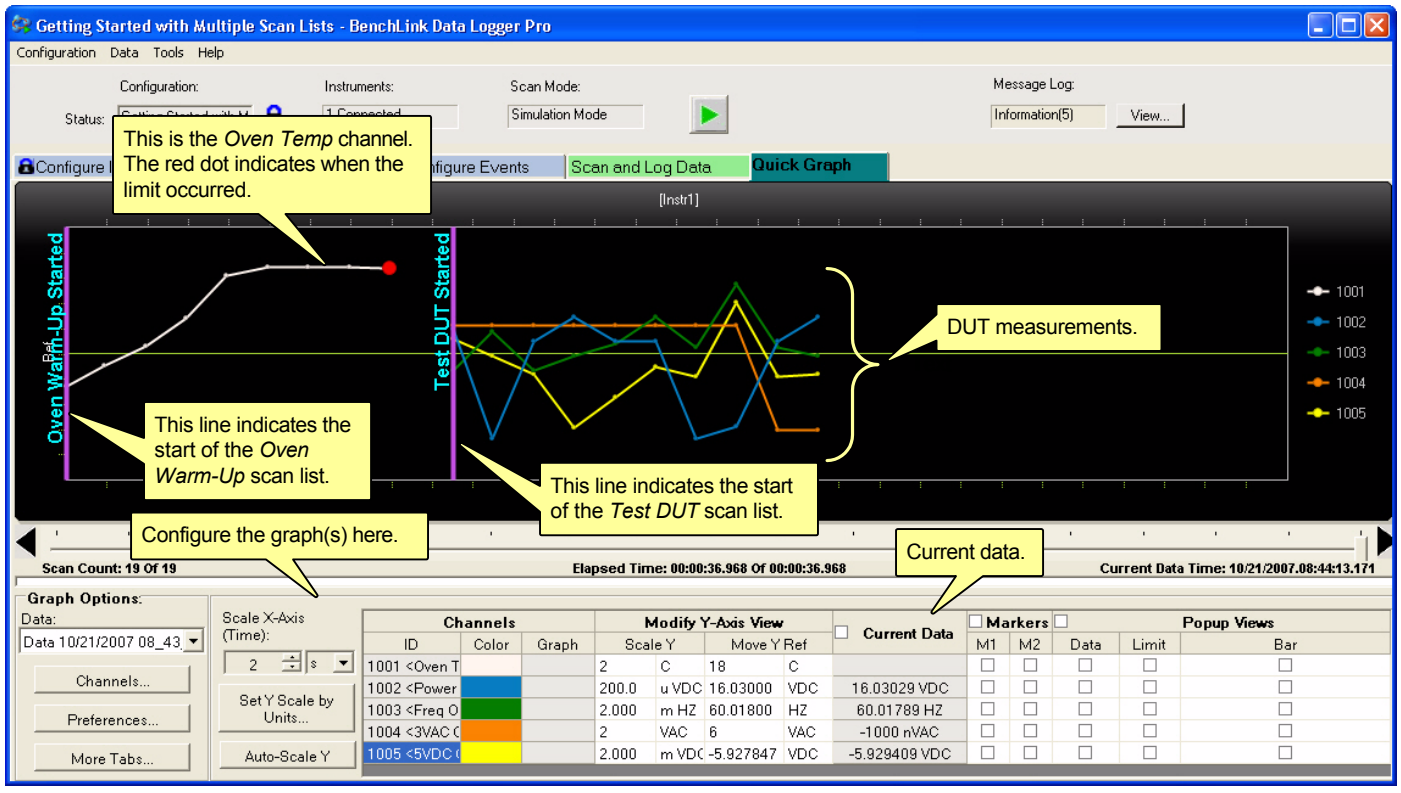
Step 6. The State Diagram (Configure Events Tab)



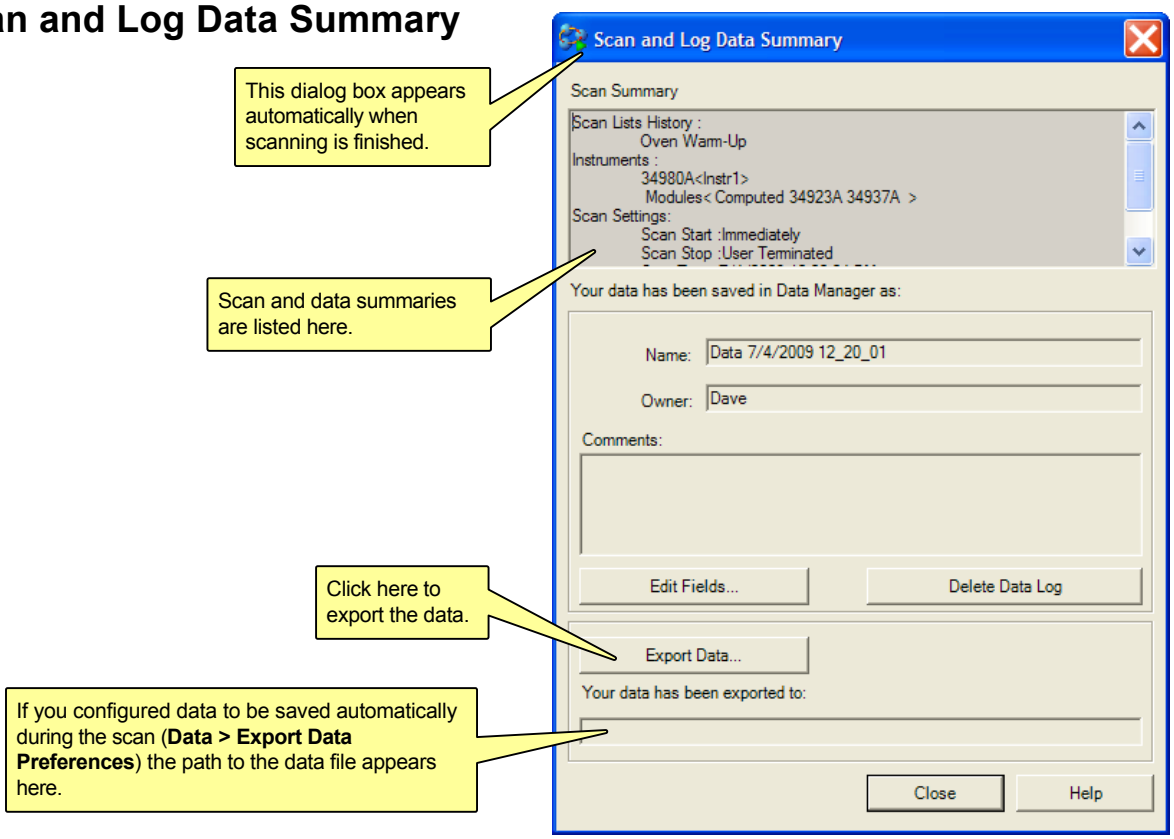
Step 7. Configure the Scan and Data Log Settings (Scan and Log Data Tab)



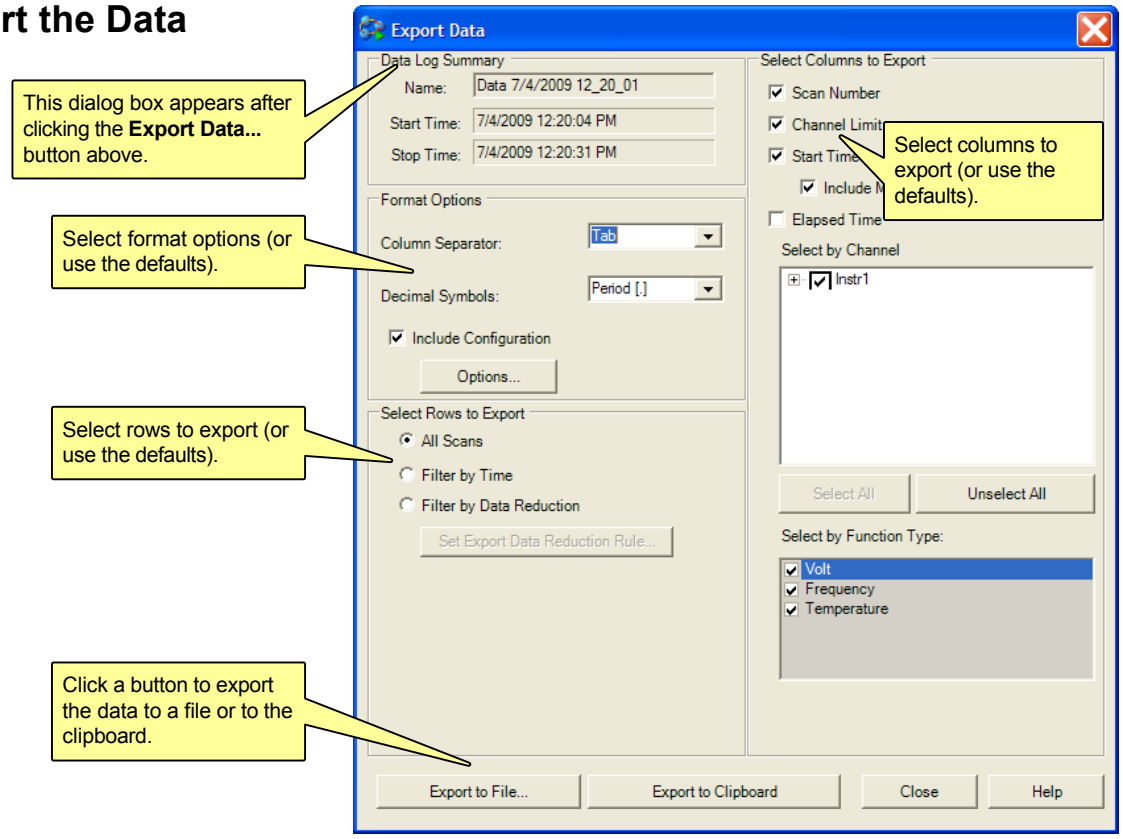
Step 8. View Scanned Data (Quick Graph Tab)



Step 9. Scan and Log Data Summary



Step 10. Export the Data



Installing the Software

Use Agilent Connection Expert to Connect to Instruments

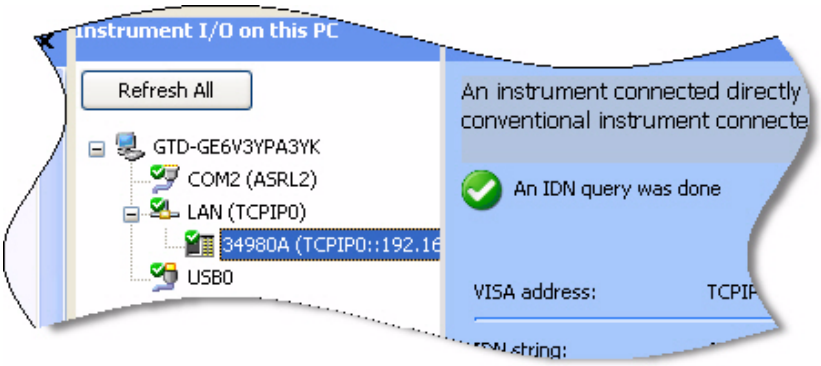
Agilent Connection Expert is an Agilent IO Libraries utility that configures the IO interface between the instruments and your PC. The IO Libraries are contained on the *Agilent Automation-Ready CD* or may be downloaded from the Agilent Developer Network website at: **http://adn.tm.agilent.com**. Data Logger Pro supports the M.01.01.04 version of the Agilent IO Libraries and newer.

1. Install the Agilent IO Libraries on your PC. Connect the instrument to the PC via LAN, GPIB, or USB.*

2. From the PC taskbar, click the Agilent IO Control icon and select **Agilent Connection Expert** from the menu.

3. Double-click the interface from the list. If your instrument appears in the list, with a green check mark, Connection Expert has already found and verified communication with the instrument. You can now skip ahead to *Install the Agilent BenchLink Data Logger Pro Software* below. If the instrument is not in the list, continue on to step 4.

4. With the interface selected, right-click and select **Add Instrument**. If this is a LAN interface, click the **Auto Find** button. Follow the instructions on the screen to complete the installation. When finished, you should see your instrument in the list with a green checkbox.



5. If you are having difficulty connecting to the instrument, use the instrument's front panel to ensure the interface is enabled and configured properly. Refer to the instrument's user's guide for details.

**You can also use a serial interface for the 34970A only.*

Install the Agilent BenchLink Data Logger Pro Software

Agilent BenchLink Data Logger Pro is a licensed product that has a 30-day free trial evaluation period. To get a license, go to **www.agilent.com/find/34830A** (for the 34970A/34972A) or **www.agilent.com/find/34832A** (for the 34980A).

1. Insert the Agilent BenchLink Data Logger CD into your PC's CD ROM drive. Installation should start immediately. If not, navigate to the CD drive in Windows Explorer and click Setup.exe.

2. Follow the instructions appearing on your screen. When prompted to select a data logger click: Agilent BenchLink Data Logger Pro.

3. After completing the installation, click the Data Logger Pro icon on your desktop to start the application:

See the instrument user's manual for safety and wiring information.