

Keysight 34832A

BenchLink Data Logger Pro  
Software for Keysight 34980A

Data Sheet

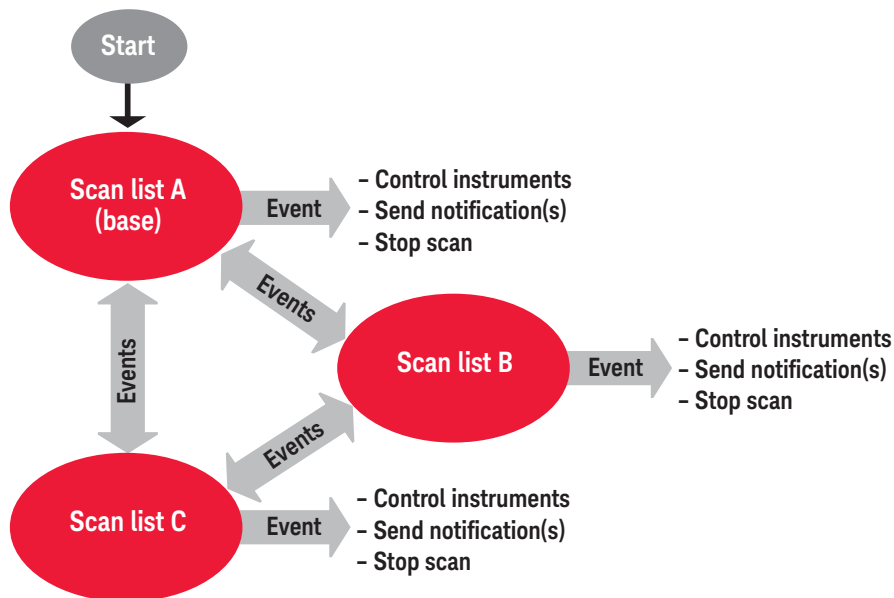
Advanced  
data logging and  
decision making with  
no programming

# Introduction

## Key features

- Quick test setup and execution
- Create multiple scan lists
- Execute different events based on predefined limits
- Use advanced math functions
- Collect, monitor and manage data
- Present data on a single or multiple graphs
- Export data to other applications for presentation and analysis

The BenchLink Data Logger Pro software from Keysight Technologies, Inc. provides a convenient way to collect and analyze your data. This software is a Windows-based application that uses a familiar spreadsheet environment to define measurement data to be collected. The tab-based format makes it easy to set up multiple scanlists and initiate scans based on predefined limits. Simply identify the measurements you want to acquire, define limits and actions to be performed, and then initiate the process. Your data is then collected, acted on real-time and displayed in table and graphical formats. With the BenchLink Data Logger Pro software you get advanced data logging and decision making capabilities without spending hours programming.



## BenchLink Data Logger

Your 34980A Multifunction Switch/Measure Unit comes standard with the BenchLink Data Logger software. This software gives you all the basic data logger capabilities including:

- Easy connection to the PC
- Set up measurements and scan lists
- Computed channels and alarms
- Collection, graphing and export of your data

The BenchLink software supports advanced features of the 34980A. You can log data at high speeds with the 34925A FET multiplexer at 900 ch/sec.

The BenchLink Data Logger Pro software adds advanced data logging and decision making with no programming required. See Table 1 for a list of standard features in both products.

## Multiple scan lists

With BenchLink Data Logger Pro you can identify multiple scan lists to be executed based on different limits specified in your configuration.

## Setting limits and events

Set limits to identify when to start other tasks. For out of limit conditions, you can specify for different events to be completed.

Scripts can be used to close switches or send DIO within the data acquisition unit, or SCPI commands can be sent to other instruments connected to the PC.

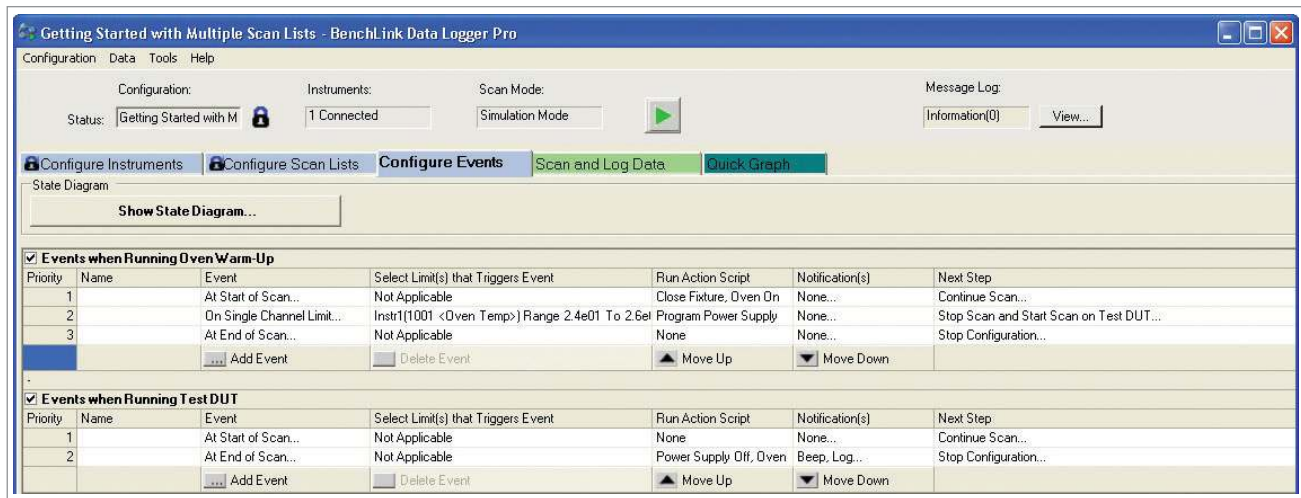
For example, when an oven reaches the desired temperature limit, you can start a script to send a SCPI command to the power supply to change the input power to your device under test and switch to a faster scan rate to collect the desired measurements.

For out of limit conditions other notifications such as audio beep, log events or run an external program can also be preformed. See Figure 1.

Table 1. Comparing BenchLink Data Logger and BenchLink Data Logger Pro

Feature	BenchLink Data Logger	BenchLink Data Logger Pro
Easy set up and configuration	•	•
Identify measurement for each channel	•	•
Set up and execute scans	•	•
Set up alarms conditions	•	•
Math functions including mx+b	•	•
View real-time and historical data	•	•
Support of multiple graphs	•	•
Log data to disk	•	•
Save and export data	•	•
Limit checking and decision making		•
Support of multiple scan lists		•
Customizable scripts		•
Run external programs based on alarms and events		•
Conditional control other instruments via SCPI		•
State diagram documentation		•
Advanced math and formula support		•
Data reduction rules		•
Simulation mode		•

Figure 1. Configuring events for out of limit conditions



The state diagram feature graphically shows the limits and the order of execution for scan lists, events, scripts and other notifications. See Figure 2.

### Computed channels

Statistical calculations can be added to analyze unique data points. Create computed channels for mathematical relationships with +, -, \*, /, dB, dBm, dBV, x2, SRT, full, 1/2 or 1/4 bridge strain. BenchLink Data Logger Pro adds a calculator function for additional math functions such as Sin, Cos, Tan and Log. Formulas can also be used for more complex equations including polynomial equations.

### Graphing and exporting data

Graph your data, save it to disk, or export it to other applications for further analysis.

Use the quick graph tab to monitor your data real time. You can specify multiple channels per graph, or send collected data to multiple graphs

Use strip charts with markers and alarm indication, or histograms with statistics. The data can be displayed with the auto scale or center on a common a reference point.

The data reduction features allow you to filter the data begin graphed or exported so that you only view or collect the data of interest.

The raw data is saved in Comma separated variable format (.CSV) and can be easily imported into standard Microsoft applications such as Microsoft Word and Excel for further analysis and documentation. Whether monitoring incoming data or reviewing historical data, you can use one of the many analog or digital options to display your data.

Data management is vital for data logging applications. The BenchLink software

features a data manager that allows you to easily manage all configurations and data-set files. Use this feature to copy instrument settings, find related data logs, rename files, edit comments, export data logs to .CVS format or just delete unwanted data.

The Windows user interface is also localized into multiple languages and includes context sensitive help.

Figure 2. Oven control state diagram

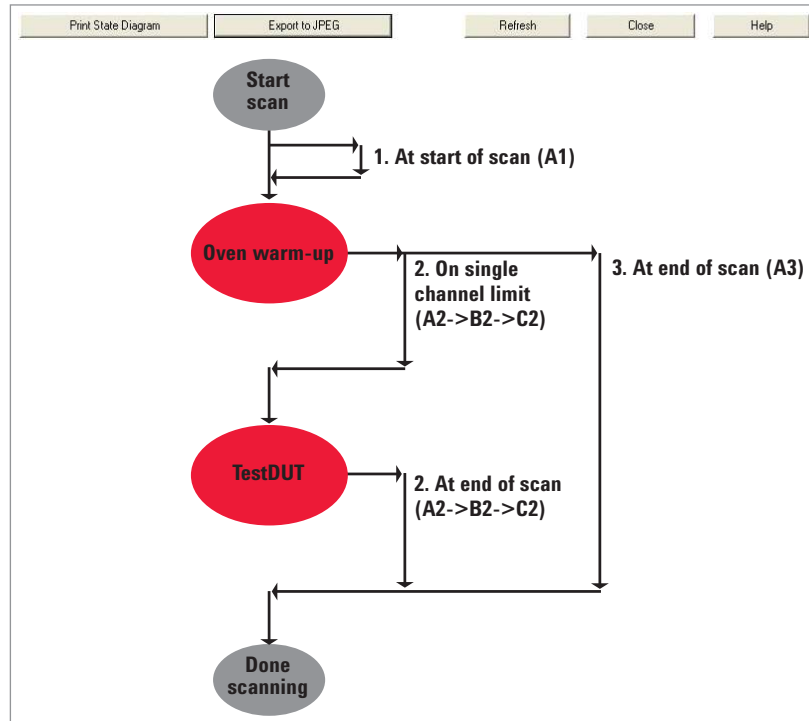
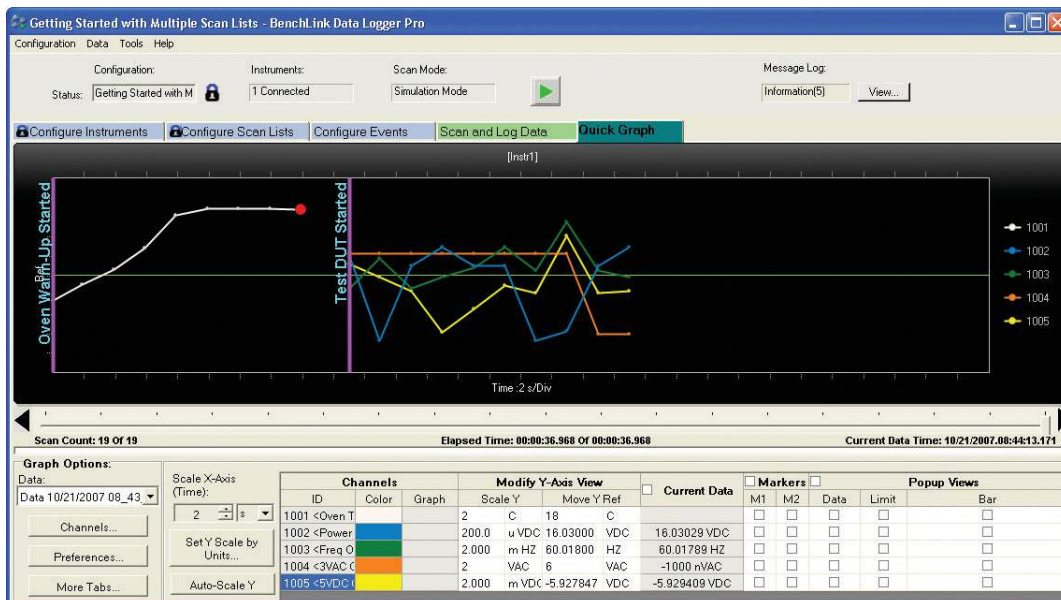


Figure 3. Graphing your data



## Specifications

### System requirements

**Operating system:**

Windows 7/Windows Vista Pro, Enterprise and Ultimate (32 bit and 64 bit); XP SP1, SP2, SP3. (Does not support any Home edition)

**Controller:**

Recommend Pentium 4, 800 MHz or greater, min. Pentium III, 500 MHz

**RAM:**

Recommend 256 MB or greater, min. 128 MB

**Disk space:**

Recommend 200 MB, min. 100 MB

**Display:**

1024 x 768 resolution, 256 colors

Adobe Acrobat Reader V5.0 or higher (to view documentation)

### Included run-time software components

- Microsoft .NET V2.0
- Microsoft Data access components V2.8 SP1
- Microsoft Internet Explorer V6.0
- Keysight IO Libraries Version 14.1 or later (included on a separate CD)

### Supported instruments

34980A Multifunction switch/measure unit with DMM and any of the following modules:

- 34921A/22A/23A/24A/25A Multiplexers
- 34931A/32A/33A Matrix switches
- 34937A/38A GP Switches
- 34941A/42A/46A/47A High frequency switches
- 34952A Multifunction module
- Supports one instrument at full speed or 2 instruments at a reduced speed

If you have a 34830A license as well, then you can configure up to two 34970As and one 34980A into a single configuration.

### Supported interfaces

- IEEE-488 GPIB, LAN, USB (at 9600 baud rate)

### Performance

Scanning speeds with 34980A\*:

343921A/22A 100 ch/sec

34923A/24A 500 ch/sec

34925A 900 ch/sec

34952A DIO read/write speed 95 ch/sec

- Speeds are for 4½ digits, delay 0, display off, autozero off. Scanning is within bank on the same module. Add 10 ms for between banks or modules. See the 34980A data sheet for additional 34980A performance specs

### Localization

GUI fully localized with context-sensitive help in English, Simplified Chinese, Japanese, Korean, French, and German.

## Ordering and licensing information

The BenchLink Data Logger software ships for free with every 34980A that has the internal DMM. The BenchLink Data Logger Pro software can be found on the same CD-ROM and can be used for 30 days with no obligation. After 30 days a software license is required to continue to use this software. Each PC requires a separate license. Go to [www.keysight.com/find/34832A](http://www.keysight.com/find/34832A) for purchasing information.

### Related literature

*Keysight 34980A Multifunction Switch/Measure Unit*, Data Sheet 5989-1437EN

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