

# Manual Supplement

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This supplement contains information necessary to ensure the accuracy of the above manual. This manual is distributed as an electronic manual on the following CD-ROM:

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## Trend Screen

Fluke DAQ 4.0 introduces a new Trend screen. This new Trend screen adds capabilities to Save and Load charts, Auto Scale, show Multiple or Single section displays, horizontal and vertical click-on-chart region zoom, and Print.

The Trend screen has a new arrangement and control operation. See the example screen in Figure 1 below.

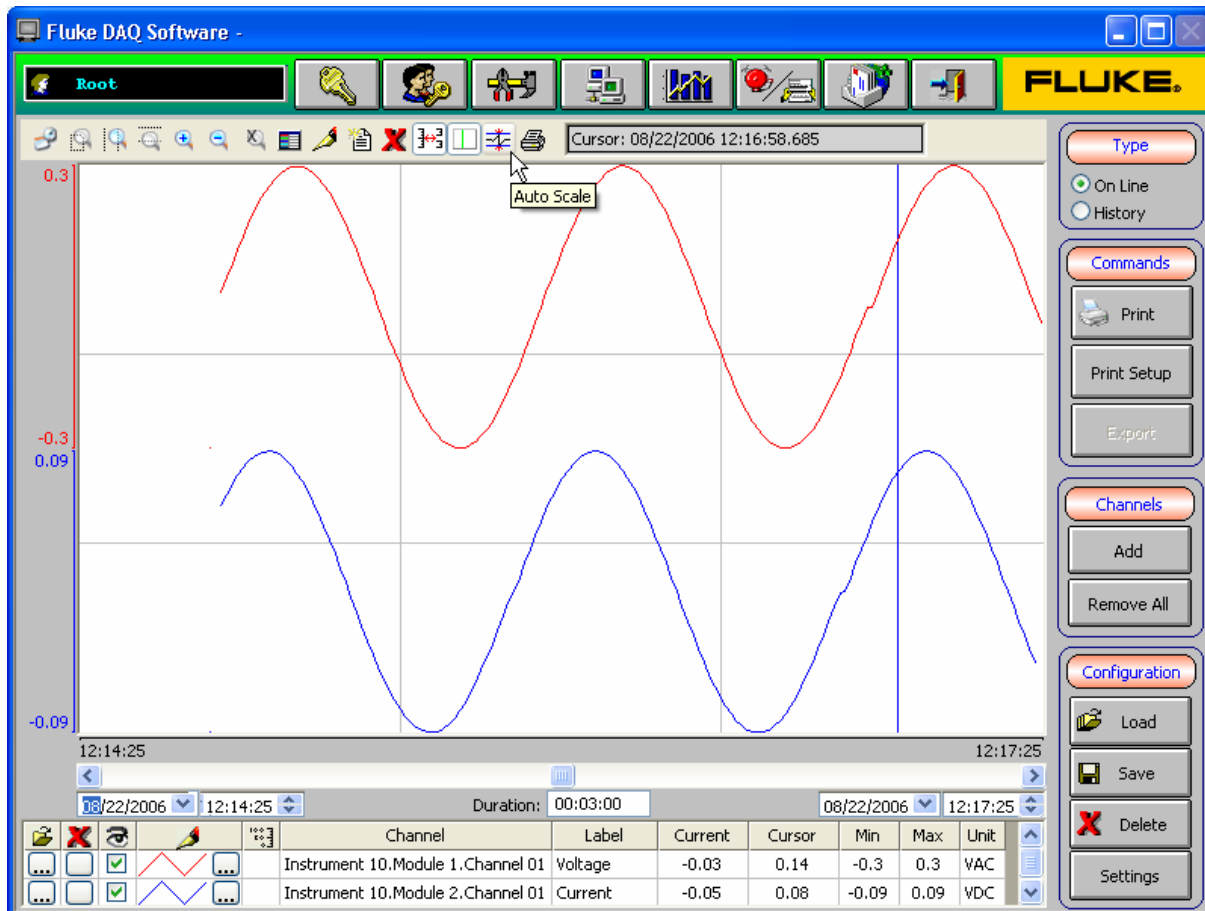


Figure 1. Trend Screen

On the new Trend screen, most of the set up of the Trend display is done with toolbar buttons along the top of the chart area. To help identify their functions, the toolbar buttons have tool tips that appear when the mouse cursor is held still over the button, as shown on the example screen above. The Trend toolbar buttons are in two groups, for time and chart settings.

The Trend toolbar buttons for time setting are the following (from left to center):

- Period: Sets the period of time to display on the Trend chart, the starting time of the chart, or for the chart to display from a certain time to the present.

## New Features in Fluke DAQ Version 4.0 Software

- ❑ **Windows Zoom, Horizontal Zoom, Vertical Zoom:** Enables zooming in time (Horizontal), amplitude (Vertical) or both (Window Zoom). Note that Horizontal time zoom can always be selected, but Vertical amplitude and Window zoom only are available when the Trend chart is in Single Section mode (described below).
- ❑ **Zoom In, Zoom Out, Cancel Zoom:** Used to Zoom In (or expand) the Trend chart display, Zoom Out (or shrink) the display, or cancel the Zoom mode. In addition, when a Zoom mode is selected, double-clicking at two points on the chart area zooms in to fill the chart display with the region between those two points.

The Trend toolbar buttons for chart settings are the following (from center to right):

- ❑ **Legend Properties:** Allows a choice of what columns to display in the legend section below the Trend chart area as well as the order of the columns.
- ❑ **Pen Style, Add Pen, Remove Pen:** Used to add Trend curves (or pens) to the chart, remove curves from the chart, and configure the curve style such as line color, type and weight, expansion mode and markers.
- ❑ **Multiple Sections, Cursor, Auto Scale:** Configures overall chart settings. Multiple Sections allows selection of either a display with each of the Trend curves having a separate vertical section, or with all of the curves sharing a single vertical axis. The Cursor button enables a cursor line that displays the time and all of the Trend curves' values at a point selected by clicking on the chart. Auto Scale scales each curve's vertical amplitude to fit all of the data presently displayed on the chart.
- ❑ **Print:** Prints the displayed Trend chart – see the Print Capability section below for a complete description.

On the right side of the Trend screen are buttons for the following command and configuration functions:

- ❑ **On Line / History:** Allows a choice of the type of Trend chart display. On Line updates the chart continuously as new data is acquired, while History displays the data at a particular fixed time selected by the user.
- ❑ **Print, Print Setup:** Used for printing the Trend chart – see the Print Capability section below for a complete description.
- ❑ **Export:** Allows data from a certain time period, instrument(s) and modules to be exported to a CSV data file. This opens the standard Export Data Group Configuration window (described in the Users Manual) that can either group the data from multiple modules and instruments into a single CSV file or export to separate files. The Export button is not active when instruments are scanning.
- ❑ **Add, Remove All:** Adds Trend curves to and removes them from the chart. The Add button opens the same Pen Selection window as the Add Pen toolbar button described above. Remove All allows all the curves to be removed at once, for example to clear the display to start a new chart.
- ❑ **Load, Save, Delete:** Allows Trend charts to be saved and loaded again. The Load button loads a saved Trend chart. Save allows a chart to be saved, either as a new chart name or to replace an existing named chart. The Delete button deletes saved charts.
- ❑ **Settings:** Sets some general settings for the Trend chart. These settings are a Chart Title used on the printed chart, number of decimal points displayed for number values, and number of horizontal and vertical grid lines on the chart background.

Below the Trend chart display area are a horizontal scroll bar, three time boxes, and the chart legend. The Period box in the center gives the period of time shown on the chart: it can be changed with the Period toolbar button, by zooming the chart, or by double-clicking on the Period box and entering a new time. The Start time on the left and the End time on the right operate somewhat differently depending on whether the chart is in On Line or History mode. In On Line mode, the End time shows the current time and the Start time changes as the chart updates with the time or when the Period is changed. When the chart is in History mode, the End time changes as the Period is changed or the chart is zoomed, or the user can double-click on either the Start or End time and set a new time for the start or end of the chart display time. Also, in History mode the horizontal scroll bar will scroll forward or backwards in time.

The legend section below the chart display area has a line for each Trend curve displayed on the chart. If there are more curves than will fit in a few lines at the bottom of the screen, the legend area will have a vertical scroll bar. The center and right columns of the legend has information and values for the curves, while the left columns are controls for each curve. These controls are the following (from the left):

- ❑ Pen selection opens the Pen Selection window for that Trend curve to allow it to be changed.
- ❑ Remove allows that Trend curve to be removed from the chart display.
- ❑ Visible checkbox selects whether the Trend curve is displayed on the chart.
- ❑ Pen Style opens the Pen Style window for that particular Trend curve.
- ❑ Show Scale checkbox selects whether the vertical axis scale values are shown for that Trend curve.

## Print Capability

Fluke DAQ 4.0 has new capability to print Trend charts and Alarm status information. Printing can be done from the Fluke DAQ 4.0 software as well as from the Web view in a Web browser. The location of the Print control buttons on the Trend screen is shown in Figure 1 and described in the Trend Screen section above – an example of the Alarm screen is shown in Figure 2 below.

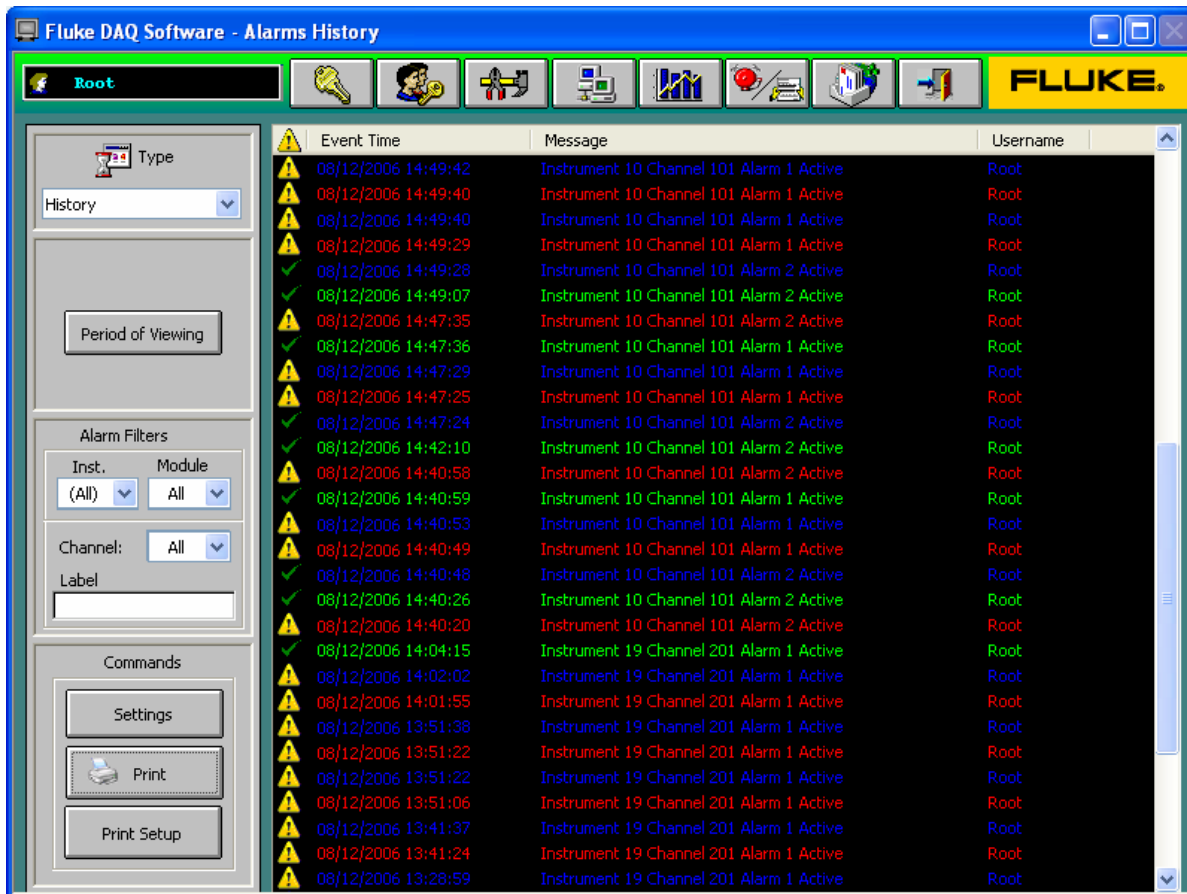


Figure 2. Alarm Screen

Command buttons for the Print functions are in the bottom left corner of the Alarm screen. On the Trend screen, the buttons are on the right side. The buttons for Print are the following:

- ❑ Settings: Sets the Alarm Title text to print at the top of the page. On the Trend screen, the Settings button is at on bottom right and allows a Chart Title to be set, along with other general chart settings.
- ❑ Print: Prints a report that contains the alarm status or history information displayed on the Alarm screen. The On Line / History mode, Period of Viewing and Alarm Filters settings determine what information is displayed on the Alarm screen and printed. On the Trend screen, Print will print the chart displayed on the screen.
- ❑ Print Setup: Allows selection of the printer to use in Windows to print the Alarm information or Trend chart, and also the printer properties such as Orientation, Paper type, and other printer-dependent settings.

## Web View

Fluke DAQ 4.0 adds to the previous Web viewing functionality. In addition to the current readings, the Web view now displays Trend charts and the Alarm screen in a Web browser such as Internet Explorer. There are four Web clients available, to allow connections from up to four remote users simultaneously.

The operation of the Web view screens is very similar to the Log On, Communication, Trend, and Alarm screens in the Fluke DAQ 4.0 software itself. An example of the Web view Communication screen is shown in Figure 3 below.

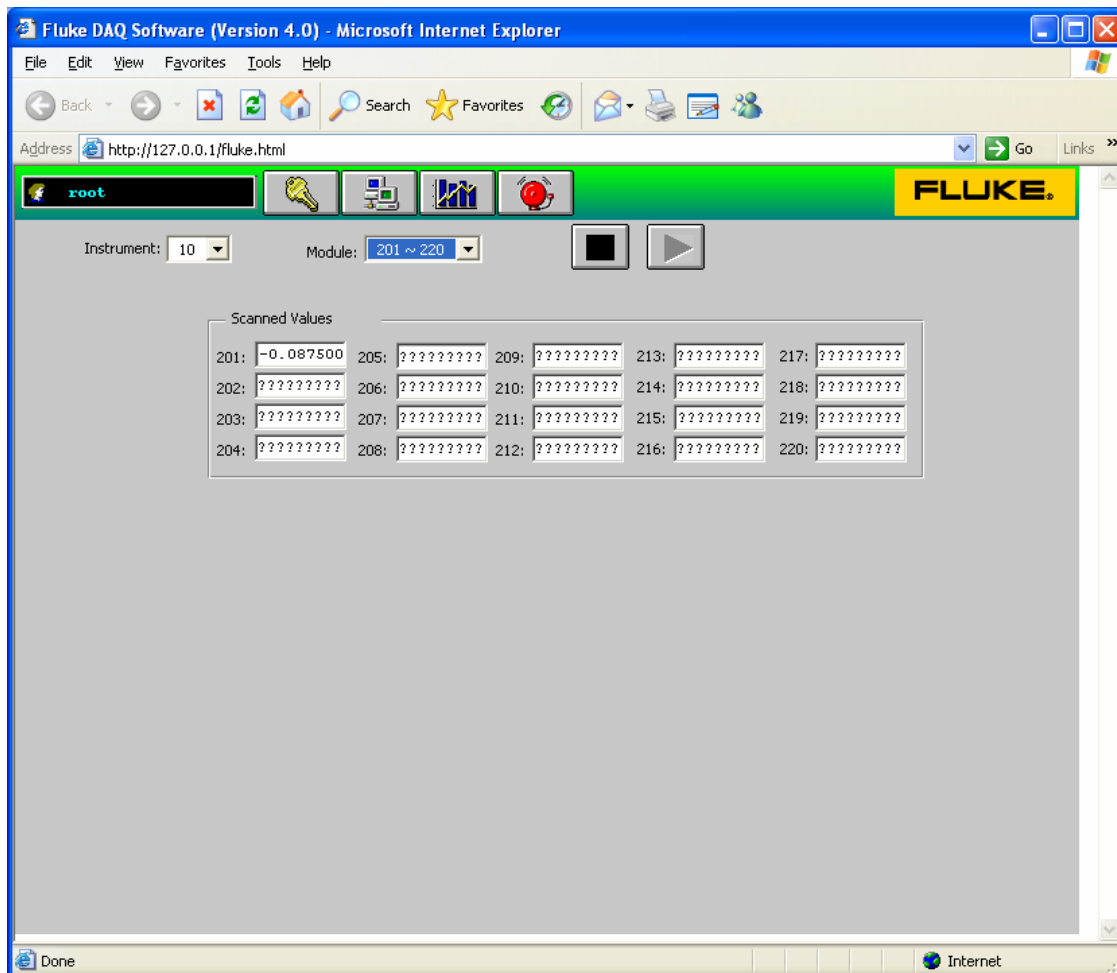



Figure 3. Web View Communication Screen

The toolbar buttons along the top of the Web view screen allow selection of the Log On, Communication, Trend, and Alarm screens in the same way as in the Fluke DAQ 4.0 software.

To use the Web view, it is necessary to set up the Web Settings and start the Fluke DAQ Web Server from the Internet and e-mail configuration screen in the Fluke DAQ software.

The Web screens can be viewed from a Web browser on any computer with a connection over a network, intranet or Internet to the PC running the Fluke DAQ 4.0 software. To open the Web view from another computer, use the URL <http://<IPAddress>/fluke.html> (where '<IPAddress>' is the IP address or computer name of the Windows PC running the Fluke DAQ Web Server software): for example, "http://192.168.0.34/fluke.html". The Open... button in the top right corner of the Internet and e-mail configuration screen in Fluke DAQ 4.0 will open up a Web view in the Web browser on the local computer.

 **Note:** The Fluke DAQ Web view operation uses an ActiveX control named "ISSymbol.ocx". A Web browser must support ActiveX to work with the Web view; Internet Explorer supports ActiveX, but other Web browsers may or may not. In addition, to be able to view the Web screens, the user must allow the Web browser to download and install the ISSymbol control (this control is signed by InduSoft Ltd).

When opening the Web view, the user must log on with a User Name and Password. When the Fluke DAQ software is originally installed, the default User Name is "root" with no password. However, user names and passwords can be changed with the Security System Configuration in the Fluke DAQ software.

### Web View Scan Control

Fluke DAQ 4.0 has a new Web view Scan control feature that allows instrument scanning to be started and stopped remotely from the Web view screen in a browser. The Web view Communication screen has Start and Stop scanning buttons that allow scanning to be started and stopped on individual instruments, like the Start / Stop Scan buttons on the Instrument Communication screen in the Fluke DAQ software. See the example in Figure 3 above.

The default settings in Fluke DAQ 4.0 allow any remote user to control the scanning. However, the Security System Configuration in Fluke DAQ can be used to create User Names that are not able to start or stop the scanning. If the Enable Configuration checkbox is not checked for a particular User Name, a user logged on with that name is not able to change the configuration or control scanning.

### Improved Instrument Setup

Fluke DAQ 4.0 has an improved instrument setup that can load a new instrument's hardware configuration to pre-populate the instrument's modules in the software. A New Instrument Wizard provides the user with the option of communicating with the new instrument to determine the number and types of modules installed, then entering those modules into the new instrument configuration. This simplifies creating the configuration for a new instrument.

To open the New Instrument Wizard in Fluke DAQ 4.0, click on the Insert... button on the main (top level) configuration screen. On the Wizard window, select the Base Channel (instrument number) and Instrument Type (model): if this is in the General Network mode, enter the instrument's IP Address as well. Then, either click on the Finish button to simply enter the new instrument, or Next >> to continue the Wizard.

If continuing in the New Instrument Wizard, ensure that the new instrument is connected and ready to communicate, and press the Next >> button. The Wizard will open communication with the new instrument – if the communication is successful, Fluke DAQ 4.0 retrieves the number and types of modules in the instrument and displays the information as shown in Figure 4 below. Click on the Finish button to enter the new instrument into the configuration.



Figure 4. New Instrument Wizard

Another new feature in Fluke DAQ 4.0 is the ability to change the number or the type of existing modules already in the configuration. On the configuration screen for the Analog Input modules, there are drop down controls to select the module number and module type; when either module number or type is changed, a message box will appear to confirm the change. See the example of setting the module type shown in the screen view in Figure 5 below.

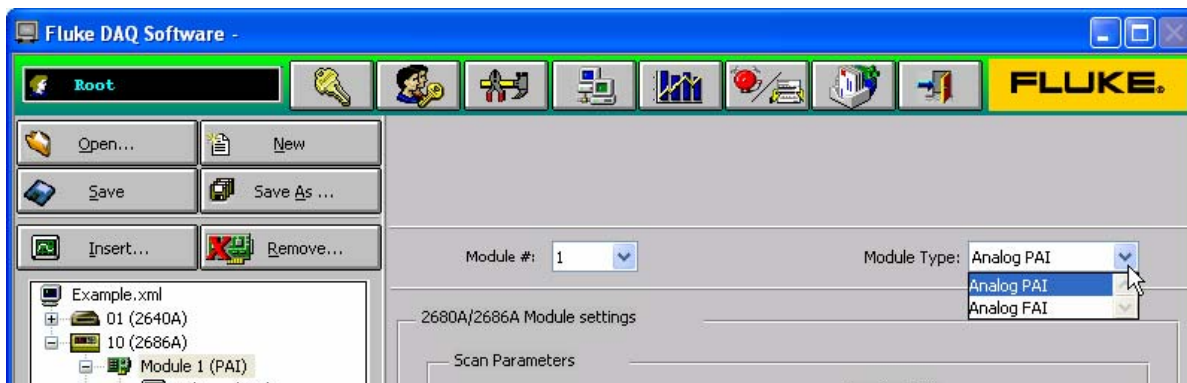


Figure 5. Module Number and Type Change View

In addition, it is also possible to change the instrument BCN number or model of existing instruments in the Fluke DAQ 4.0 software configuration. Drop down controls similar to the ones shown on the module screen above are available on the instrument configuration screen to select the Base Channel # (BCN) or Instrument Type (model). This feature is useful if changing an instrument to a different model, such as when modifying the system; it also is useful if the wrong model was accidentally entered in the configuration. Note that instruments can be changed to other similar models, for example 2680A to 2686A and vice versa, but not to a different series, such as changing 2680A to a NetDAQ 2640A model.

## Enhanced Off-Line Operation

Fluke DAQ 4.0 has enhanced Off-line operation. One new feature is that instruments can be left scanning when the Fluke DAQ 4.0 software is shut down; this is useful for example to allow a 2686A to continue logging to a PC Card in its internal PC Card slot after the PC is disconnected.

If the user closes the Fluke DAQ 4.0 software when one or more instruments are scanning, a message like the one in Figure 6 below will appear. The user can choose whether to leave either one instrument or all instruments scanning.



Figure 6. Continue Scanning Confirmation Window

Another new feature is the capability for the Fluke DAQ 4.0 software to reconnect to instruments that are scanning and resume data retrieval and control. This is useful if instruments were left scanning as described above or were started scanning manually from the instrument front panel. It also allows Fluke DAQ 4.0 software to recover easily from power failures, when used together with the Windows Startup group and the Automatic Start Scanning feature described below.

When Fluke DAQ 4.0 starts scanning, it checks each instrument to see if it is already scanning: if it is, Fluke DAQ 4.0 checks to see if the instrument's configuration is the same as is set in the software. If the instrument is scanning and has the same configuration, Fluke DAQ 4.0 retrieves any scans in the instrument's scan buffer then resumes control. Otherwise, Fluke DAQ stops the scanning if necessary, configures the instrument and starts it scanning as usual.

## Automatic Start Scanning

Fluke DAQ 4.0 can start scanning on the instruments automatically when the software starts. This allows unattended operation, as well as automatic resuming after power failures as described in Enhanced Off-Line Operation above. An Enable Auto Scan on Startup check box on the Main Configuration screen controls this feature. See Figure 7 below.

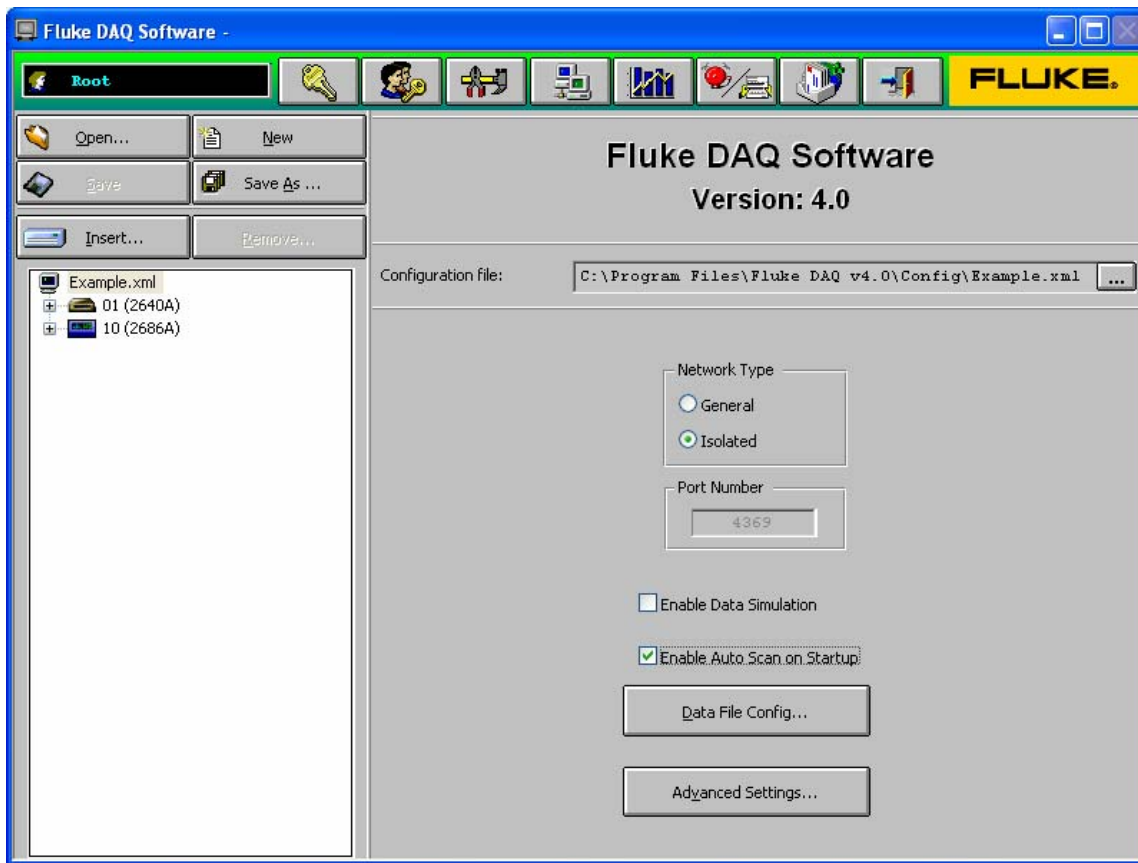


Figure 7. Auto Scan Selection



## Import / Export Configuration

Fluke DAQ 4.0 has the new capability to import or export configurations. The Fluke DAQ 4.0 software saves its configurations in XML format, which allows these configurations to be imported or exported to other applications. The XML configuration files can also be viewed easily with other application software, such as a Web browser.

## Instrument Time Feature

Fluke DAQ 4.0 has a new Instrument Time feature. In typical operation, the Fluke DAQ software automatically sets the Real-Time Clock in each instrument when scanning is started. An Instrument Time feature allows the time of the instrument Real-Time Clock to be checked or set from Fluke DAQ 4.0 software, without the need to start scanning.

To access the Instrument Time feature, click on the Advanced... button on the right side of the Instrument Communication screen in Fluke DAQ 4.0. This opens the Advanced communication function window, as shown in Figure 8 below. The actual date and time of the Real-Time Clock in the selected instrument is displayed. To set the instrument time, click the Synchronize button to set the instrument's Real-Time Clock to the time and date of the Windows PC clock. There is also a "Set instrument time when starting scan" checkbox on the Advanced communication window; this typically would be left checked by default for normal operation.

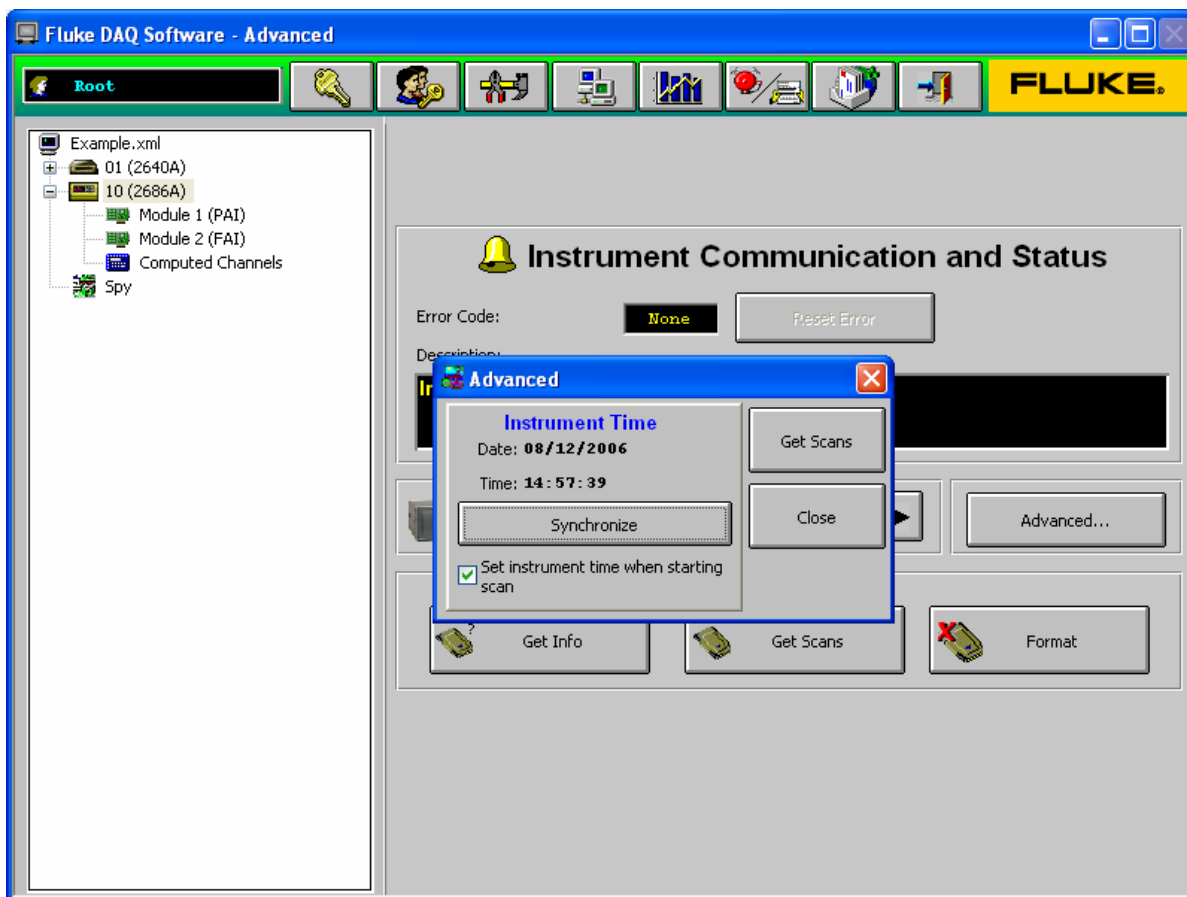


Figure 8. Instrument Time Feature

Note that the Get Scans button, which was on the Instrument Communication screen in previous versions of the software, is now located on the Fluke DAQ 4.0 Advanced communication screen.

## Multiple Languages

Fluke DAQ 4.0 can be configured to display the software's text and messages in ten different languages. Available languages are English, Chinese, French, German, Italian, Japanese, Korean, Russian, Spanish, and Swedish.

The language to use in Fluke DAQ 4.0 is selected when the software is installed; it also can be changed from the main Configuration screen. Click the Advanced Settings... button on the Configuration screen to open the Advanced Settings window; then, use the Language drop down control to select the appropriate language, and press the Apply button. See Figure 9 below.

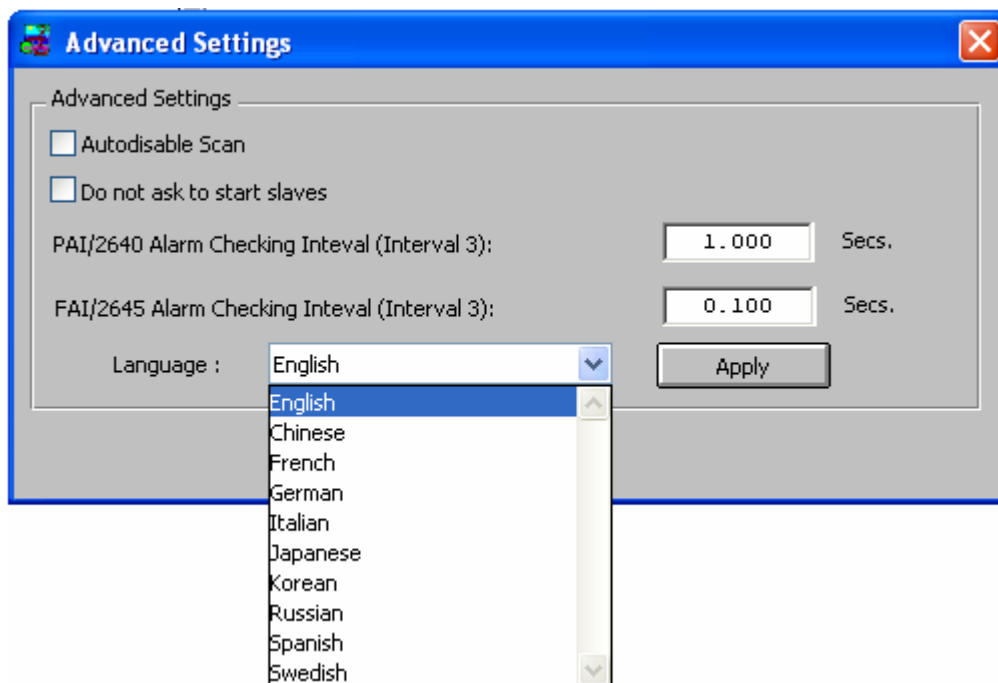


Figure 9. Language Selection on Advanced Settings Window

## Other New Features

In addition, the following are some features added in recently released previous versions of the Fluke DAQ software:

- Data merging from multiple modules and chassis, both in real-time and to exported files
- Change configuration on other instruments when some are currently scanning
- Differentiate between Open TC, +Overflow and -Overflow in data and display
- Configure multiple channels at once, selected using standard mouse Shift-Click or Shift-Ctrl
- Add configured channel labels to PC Card data files