FLUKE®

SW90W

FlukeView® ScopeMeter® Software

Users Manual

July 2006

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Chapter 1
Installing FlukeView

Installing the FlukeView Software

FlukeView® software offers you simple mouse-controlled tools to work with your ScopeMeter® test tool.

The setup program installs the FlukeView software on PC's running Windows 2000 and XP.

To install FlukeView, insert the CD ROM into the CD ROM drive and run SETUP.

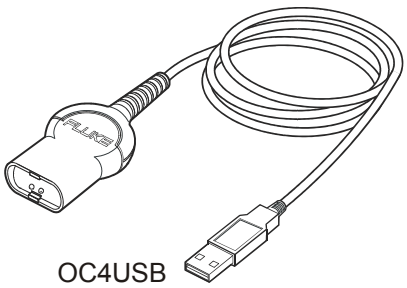
The setup program starts up and prompts you for information to complete the installation.

Running the FlukeView Software

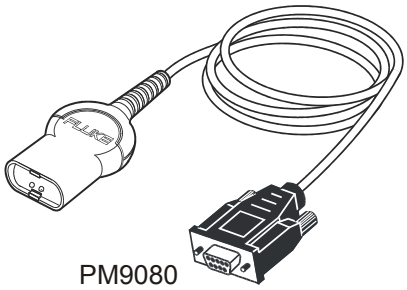
Choose from **Start - Programs - FlukeView** - **ScopeMeter 4.x English** to run the FlukeView software.

Connecting the ScopeMeter Test Tool

The FlukeView software communicates with your ScopeMeter test tool via the optically isolated USB cable OC4USB, or the optically isolated RS-232 cable PM9080 connected to the PC.



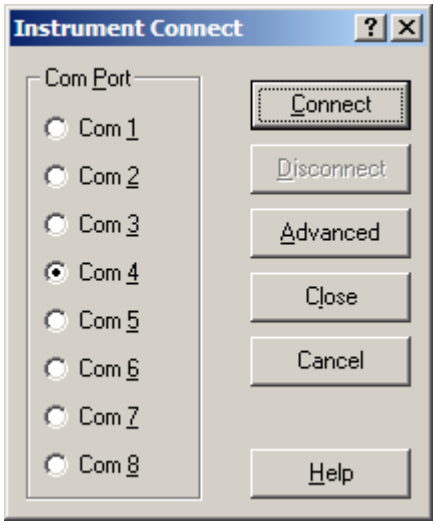
OC4USB



PM9080

During startup (except for the first time), the FlukeView software automatically tries to make a connection with the instrument according to the last valid connection.

If automatic connection is not successful, the dialog box shown below appears, allowing you to make a connection.



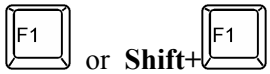
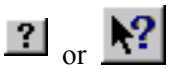
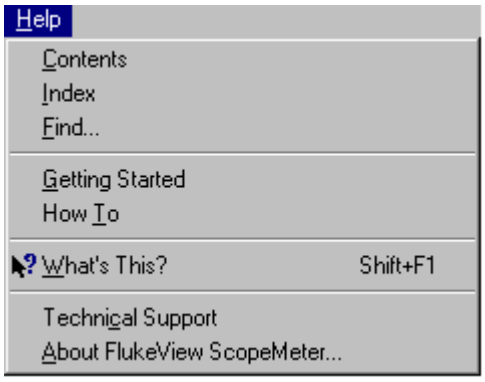
1 Select the **Com Port** that connects the instrument to the PC.

2 Click **Connect** to establish a connection with the instrument.

Chapter 2
Using FlukeView

Using Online Help

The FlukeView software offers you access to online help by using the **F1** key, a **Help** button, "**What's This?**" help, or the **Help** menu:

	Press to get online help for the topic that has the focus.
	Click, move the mouse pointer on a topic, and click again to get "What's This" help.
	Click to get help in dialog and error boxes.
	For example: Click **Help** - **How To** and view the online manual on the screen. Click **Help - Technical Support** to get access to the Fluke home page.

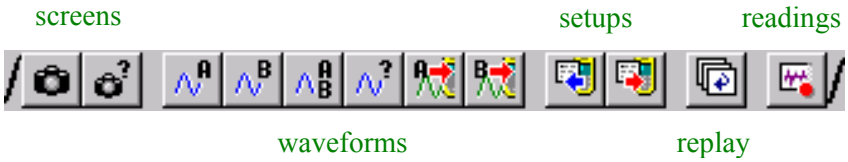
Note

To show help items on a help page, do one of the following:

- *move the mouse pointer (changes to* *above a help item);*
- *press* ***Tab*** *(changes the background of a help item).*

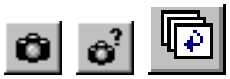
Introducing the FlukeView Software

By clicking the following buttons on the toolbar, you can read data directly from the ScopeMeter test tool:



You can save, open, and print the data, or export it to other programs.
FlukeView software enables you to read the following types of data from the ScopeMeter test tool into a window on the PC screen.

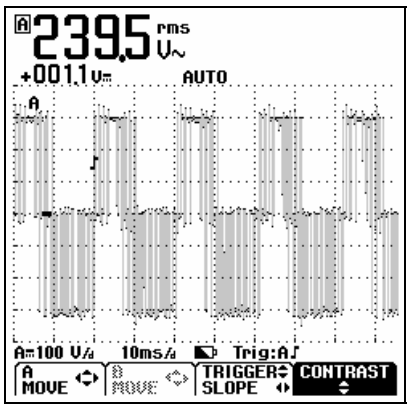
Instrument Screens

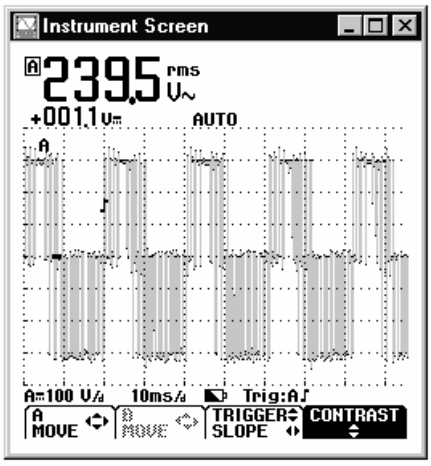


Type: bitmap graphics data from the instrument's screen (in pixel-format)

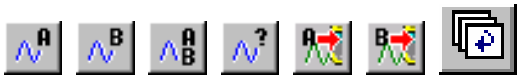
Use: to create documents and reports

Screen ➔ **Screen Window**





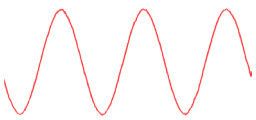
Waveforms



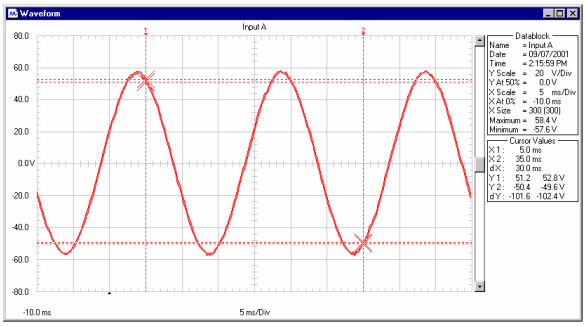
Type: numerical waveform points to generate Y-t vector-graphics data

Use: to analyze by zooming, scaling, or creating a spectrum from

Waveform➔



Waveform Window

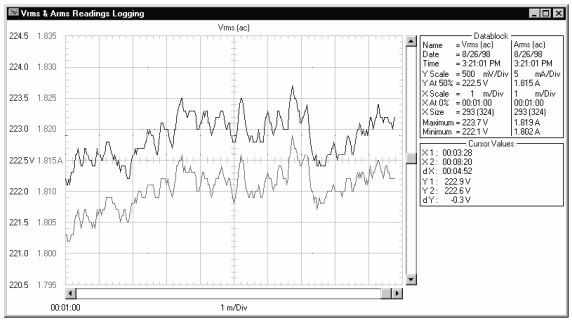


Readings

Type: numerical values to log Y-X vector-graphics data

Use: to analyze by zooming, scaling, or creating a spectrum from

Readings ➔ **Waveform (Readings) Window**



Instrument Setups

Type: binary settings data from the instrument

Use: to retrieve and send back instrument setups

Setup ➔ ➔ **Setup Window**

[actual ScopeMeter settings]

Creating a Test Report

To create a test report using Word, do the following:

1 Open the QWReport.dot or Qreport.doc file. You can find these files in the FlukeView installation folder.

In Word, select **Enable Macros** when requested.

2 Click predefined fields (**Company, Contact**, **...**) and type your text.

3 Click to insert the active ScopeMeter screen.

As a result, FlukeView is started, a connection is made, and the active **Instrument Screen** is pasted into the document.

4 Click the **Description** field and type your text.

5 Click to print your test report. See the next page for an example of a test report.

6 Click to save your test report.

7 Exit Word to continue with the next section of this manual.

Fluke ScopeMeter® Test Report

Company: Fluke Industrial

Contact: A. Person

Address: Street 90

Zip: 1234 AB

City: Almelo

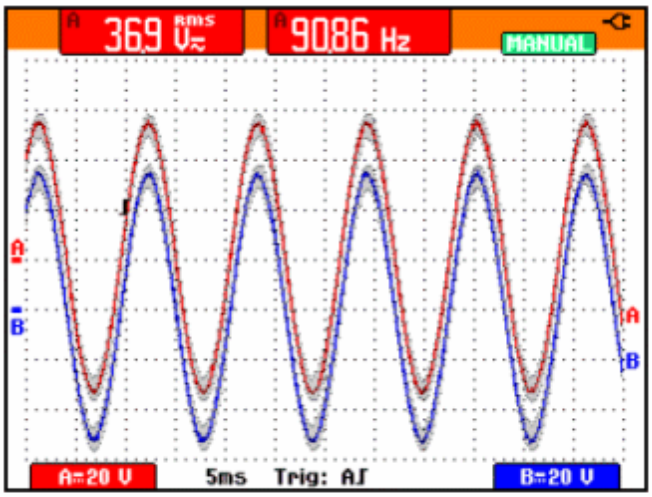
Phone: 12 345 678910

Fax: 12 345 678911

E-mail: aperson@almelo.fluke.nl

Date: September 6, 2001

Instrument Screen:



Description:

On these lines you can type your description.

Documenting Screens

Displaying an Instrument Screen on the PC

1a Click to display the **active** ScopeMeter screen in a screen window.

1b Click. A dialog box appears allowing you to select saved ScopeMeter screens to display in screen windows.

Tip

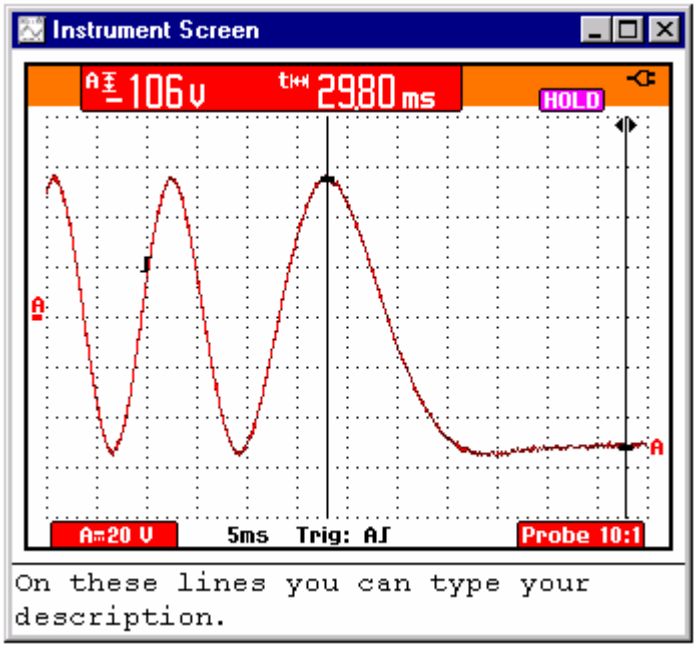
To specify conditions for transferring screens, choose **Instrument - Multiple Transfers**.

To change the window to your preference:

2 Select **Options - Add Description** and type a description in the text box below the window (max. 10 lines).

3 Select **Options - Title** to change the title of the window.

4 Select **Options - Colors** to change window colors.

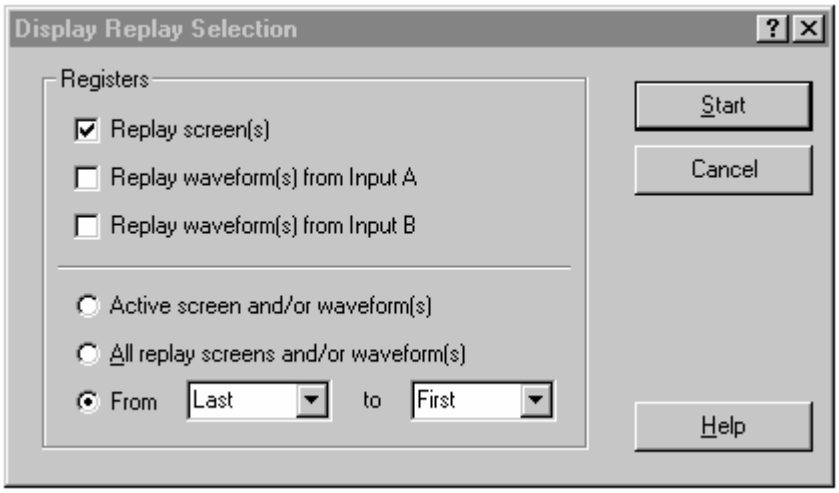


Each ScopeMeter screen appears in a separate screen window.

Replaying Screens

[for Fluke 190 series ScopeMeter test tools]

1 Click. A dialog box appears allowing you to make the following selections:

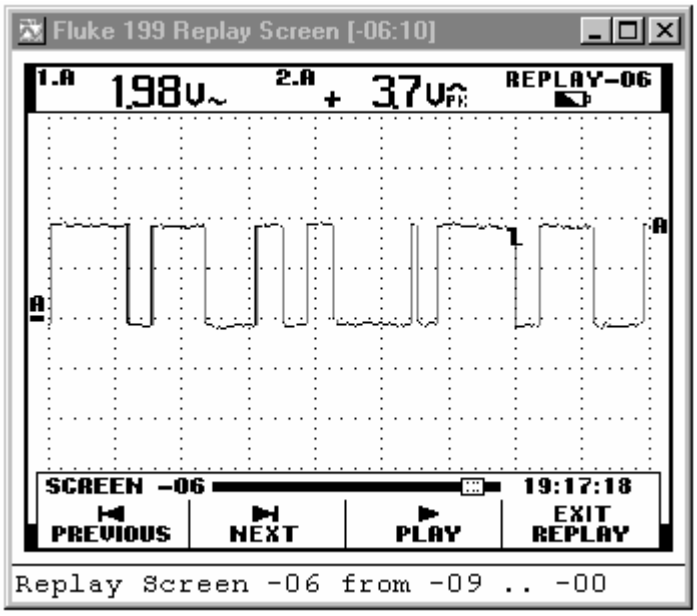


2 Click **Start** to read and display the replay screens.

Note

To stop reading and displaying the replay sequence, click STOP *or press* ***Esc****.*

3 If applicable, choose **View - Ratio 4:3** to change the X:Y ratio of the window.



To change the window to your preference:

4 Click to view the previous or next replay screen.

You can also choose **View - Replay** to scan through the replay sequence of screens.

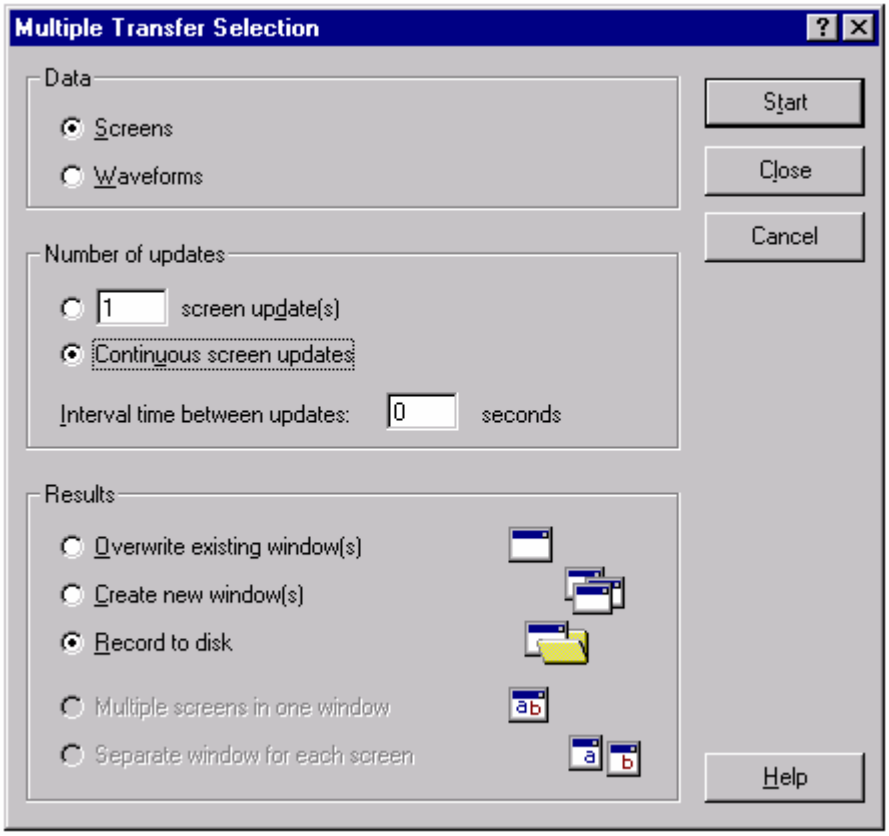
5 Select **Options - Add Description** and type a description in the text box below the window (max. 10 lines).

6 Select **Options - Title** to change the title of the window.

7 Select **Options - Colors** to change window colors.

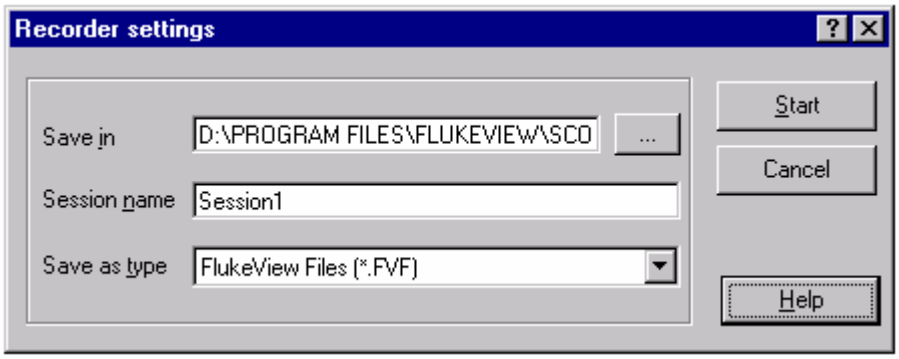
Recording Screens to Disk

1 Select **Instrument - Multiple Transfers**. A dialog box appears.



2 Choose **Screens**, **Continuous screen updates**, and **Record to disk**.

3 Click **Start**. As a result a dialog appears allowing you to make recorder settings.



4 Type or change the path in the **Save in** field.

Tip

Click ... to browse for the disk path.

5 Type or change the sub directory (sub folder) in the **Session name** field.

6 Select the file extension from the **Save as type** field, for example, BMP.

7 Click **Start** to begin recording the active screens to files.
The name of the files will be *rec1.bmp*, *rec2.bmp*, etc.
FlukeView is counting the number of recorded screens, see the status bar below.

8

Click to stop recording.
Check that the recorded screens are stored in the file names on disk.

Inserting Screens into a Document

1. Click on the screen window you want to insert.

Tip

To avoid losing resolution because of copying to the clipboard, choose **Windows – Default Size**.

2. Click to copy the window to the clipboard.
3. Switch to a wordprocessor.
4. Open or create a document and place the cursor where you want to insert the window.
5. Select **Edit - Paste** to insert the screen window into the document.
6. Click to save your document.

Note

In the same way, you can insert waveform and spectrum windows into a document.

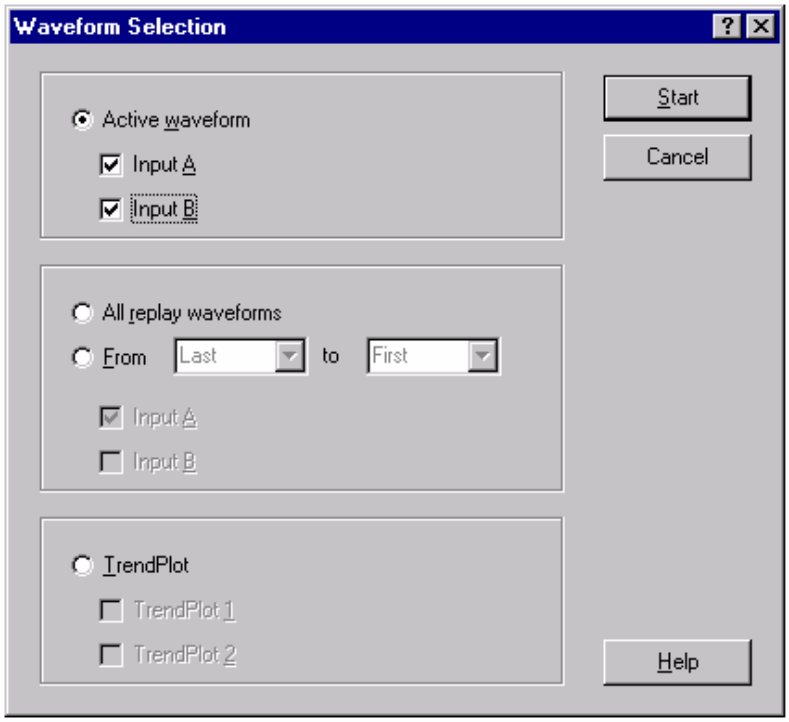
Analyzing Waveforms

You can read numerical waveform samples from the ScopeMeter test tool and display these samples in a waveform window. Up to four waveforms can be displayed in a window.

To demonstrate this, a trace will be read from Input A and B.

Displaying Waveforms on the PC

1 Click. A dialog box appears allowing you to select the waveforms you want to read.



2 Choose **Active waveform**.

3 Choose **Input A** and **Input B**.

4 Click **Start** to read and display the selected waveforms.

To change the window to your preference:

5 Select **Options - Add Description** and type a description in the text box below the window (max. 10 lines).

6 Select **View - Datablock** to show the data block.

7 Select **View - Cursors** to show the cursors.

8 Select **Options - Colors** to change waveform colors.

See the next page for an example of a waveform window.

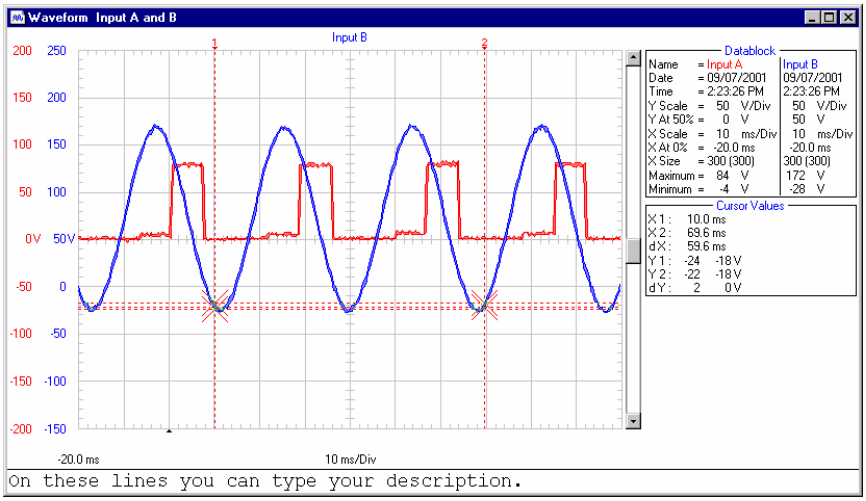
Tips

Click to quickly read the waveform from INPUT A.

Click to quickly read the waveform from INPUT B.

Click to quickly read the waveforms from INPUT A and INPUT B.

- To specify conditions for transferring waveforms, choose **Instrument - Multiple Transfers**.
- To change the scaling, select **Options - Scales**.
- To change window titles, select **Options - Titles**.
- To show or hide the description, select **View - Description**.
- To view a reference waveform (envelope) as a single waveform, select **View – Single Curve**.



Use the mouse or (**Shift**) ← → keys to move the cursors.

Datablock	**Cursor Values**
Name : Name of the waveform Date : Date of the waveform Time : Time of the waveform Y Scale : Vertical scale Y At 50% : Vertical position X Scale : Horizontal scale X At 0% : Horizontal position X Size : Shown (Total) number of waveform points Maximum : Maximum value Minimum : Minimum value	X1 : Time at cursor 1 X2 : Time at cursor 2 dX : X2 - X1 Y1 : Minimum and maximum value at cursor 1 Y2 : Minimum and maximum value at cursor 2 dY : Minimum and maximum Y2 - Y1 Notice that values apply to the active waveform.

Note

The Date and Time formats depend on the Windows® settings.

Sending a Reference Waveform

[for Fluke 190B/C and 199XRAY series ScopeMeter test tools]

Refer to paragraph **Displaying Waveforms on the PC** to create a waveform that you can use as reference waveform.

1 Select the active waveform by clicking on it.

Note

*Make sure that INPUT B is ON on the ScopeMeter test tool (press **B** and **F1**).*

2 Click to send the active waveform as reference waveform B to the ScopeMeter test tool.

Zooming In and Out on a Waveform

Drag with the mouse in the graph to select and zoom in on the part of the waveform you want to enlarge.

Click to zoom in on a waveform.

Use the scroll bar to select the part you want to view.

Click to zoom out on a waveform (undoes one ‘zoom in’ step).

Scaling a Waveform

If a waveform is not completely shown in a window, a scroll bar is displayed. Use this scroll bar to select the part you want to view.

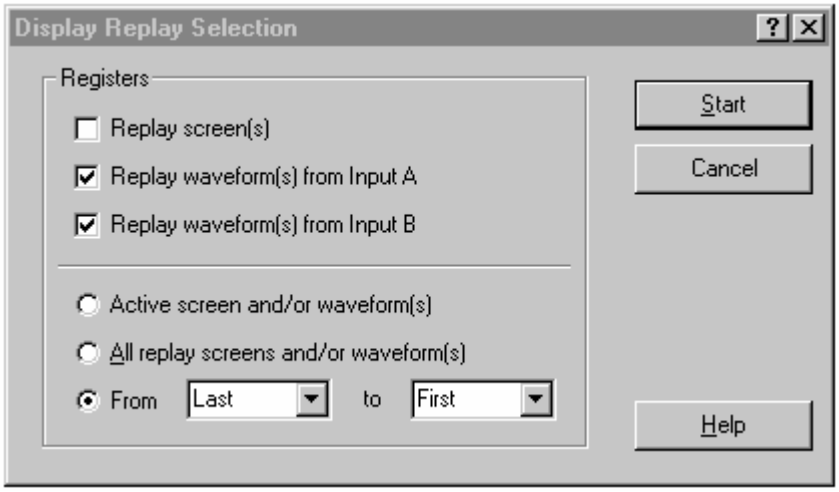
Select **Options - Scales**, to change the following in the active window:

- horizontal scaling (Time axis) of all waveforms
- vertical scaling (Y axis) of the active waveform

Replaying Waveforms

[for Fluke 190 series ScopeMeter test tools]

1 Click. A dialog box appears allowing you to make the following selections:



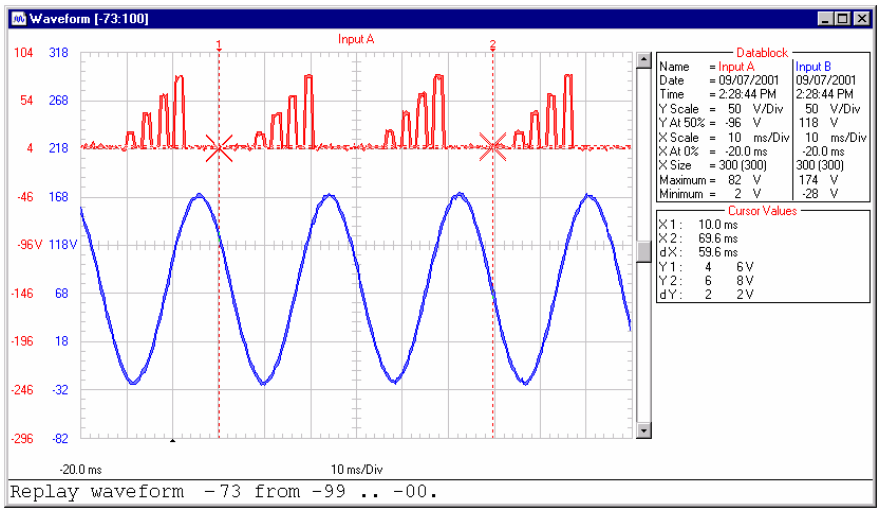
2 Choose **Replay waveform(s) from Input A** and **Replay waveform(s) from Input B**.

3 Select the range of waveforms (**From** - **to**) you want to display.

4 Click **Start** to read and display the replay waveforms.

Note

To stop reading and displaying the replay sequence, click *or press **Esc**.*



To change the window to your preference:

5 Click to view the previous or next replay waveform.

You can also choose **View - Replay** to scan through the replay sequence of waveforms.

6 Select **Options - Add Description** and type a description in the text box below the window (max. 10 lines).

7 Select **Options - Title** to change the title of the window.

8 Select **Options - Colors** to change window colors.

Generating an FFT-Spectrum from a Waveform

For spectrum calculations, a repetitive waveform or a waveform that contains repetitive components is superposed of a fixed offset value (DC component) and a number of sine waves. The spectrum shows the amplitude and frequency of each sine wave as a bar-graph. The value of the DC component is shown in the datablock.

1. Select the waveform from which you want to generate a spectrum.
   In a multiple waveform window, select **View - Active Waveform** or click with the mouse to choose the active waveform.
2. Select **Tools - Spectrum**. The Spectrum is created and displayed in a spectrum window.

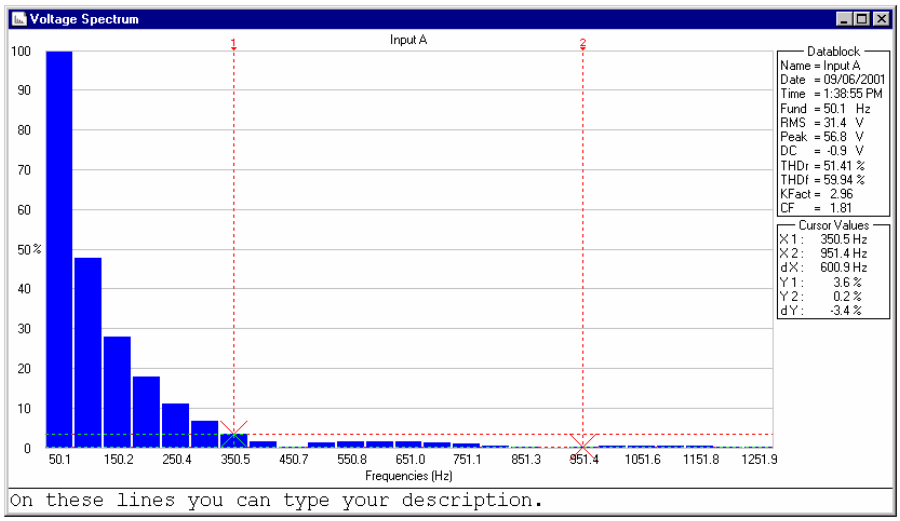
To change the window to your preference:

3. Select **Options - Add Description** and type a description in the text box below the window (max. 10 lines).
4. Select **View - Datablock** to show the data block.
5. Select **View - Cursors** to show the cursors.
6. Select **Options - Colors** to change spectrum colors.

See the next page for an example of a spectrum window.

Tips

- To change window titles, select **Options - Titles**
- To change the scaling, select **Options - Scales**
- To show or hide the description, select **View - Description**



Use the mouse or (**Shift**) ← → keys to move the cursors.

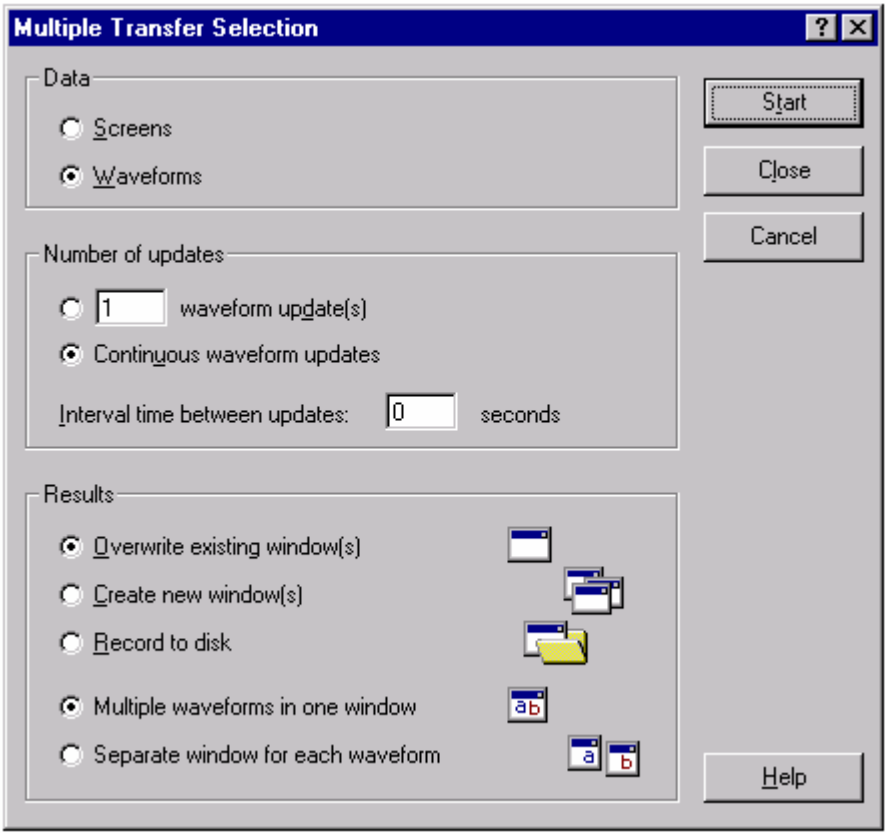
Datablock	Cursor Values
Name : Name of the spectrum Date : Date of the waveform Time : Time of the waveform Fund : Fundamental frequency RMS : Root Mean Square Peak : Maximum value DC : Direct Current value THDr : Total Harmonic Distortion (RMS) THDf : Total Harmonic Distortion (Fund) KFact : K-factor CF : Crest factor (Peak/RMS)	X1 : Frequency (or Harmonic Number) at cursor 1 X2 : Frequency (or Harmonic Number) at cursor 2 dX : X2 - X1 Y1 : Spectrum value at cursor 1 Y2 : Spectrum value at cursor 2 dY : Y2 - Y1

Note

The Date and Time formats depend on the Windows® settings.

Automatic Spectrum Updates

1. Click to select and display the waveform from which to create a spectrum.
2. Select **Tools - Spectrum** to create a spectrum from the waveform.
3. Select **Window - Auto Tile** to tile the waveform and spectrum window on the PC screen.
4. Select **Instrument - Multiple Transfers**. A dialog box appears.



5. Choose **Continuous waveform update(s)** and **Overwrite existing window(s)**.
6. Click **Start** to get continuous waveform and spectrum updates.

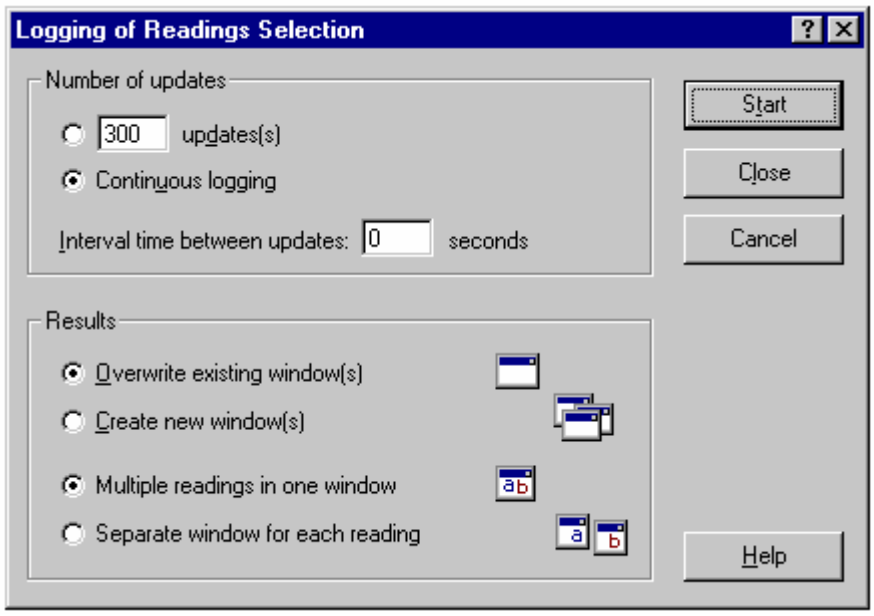
Logging Readings

Graphing Readings

You can transfer and graph readings taken by the ScopeMeter test tool over a period of time. Up to four types of readings can be displayed in a window.

To demonstrate this, four types of readings will be logged.

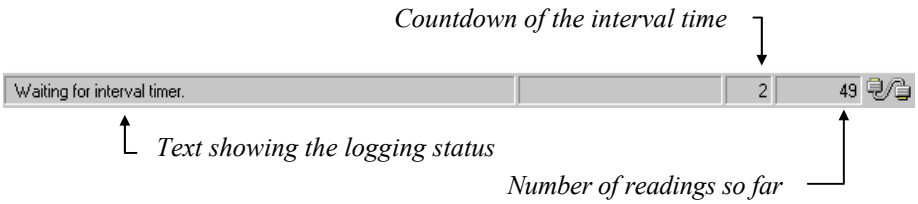
1 Click. A dialog box appears allowing you to select the logging parameters.



2 Set **Interval time** to three seconds, and choose **Continuous logging**, **Overwrite existing window(s)**, and **Multiple readings in one window**.

3 Click **Start**. A dialog box appears allowing you to select the type of readings you want to log.

4 Click **Start** to start logging. The status bar shows the logging progress.



5 Click to stop logging.

To change the window to your preference:

6 Select **View - Datablock** to show the datablock.

7 Select **View - Cursors** to display the cursors.

8 Select **Options - Add Description** and type a description in the text box below the window (max. 10 lines).

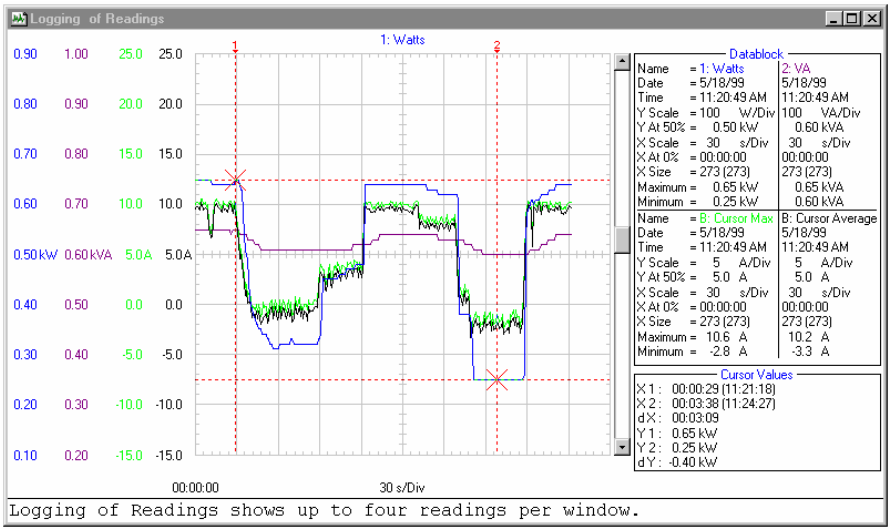
9 Select **Options - Colors** to change waveform colors.

See the next page for an example of logged readings in a waveform window.

Tips

Click to zoom in on a part of a waveform.

- To change window titles, select **Options** - **Titles**.
- To show or hide the description, select **View** - **Description**.
- To create a spectrum from a waveform of readings, select **Tools** - **Spectrum**.



Use the mouse or (**Shift**) ← → keys to move the cursors.

Datablock	Cursor Values
Name : Name of the waveform Date : Date of the waveform Time : Time of the waveform Y Scale : Vertical scale Y At 50% : Vertical position X Scale : Horizontal scale X At 0% : Horizontal position X Size : Shown (Total) number of waveform points Maximum : Maximum value Minimum : Minimum value	X1 : Time at cursor 1 X2 : Time at cursor 2 dX : X2 - X1 Y1 : Readings value at cursor 1 Y2 : Readings value at cursor 2 dY : Y2 - Y1 Notice that values apply to the active waveform.

Note

The Date and Time formats depend on the Windows® settings.

Inserting Readings into a Spreadsheet

1. Click on the waveform of readings you want to insert.
2. Select **Edit - Copy Data** to copy the reading's data to the clipboard.
3. Switch to a spreadsheet program.
4. Open or create a worksheet and place the cursor where you want to insert the data.
5. Select **Edit - Paste** to insert the data into the worksheet with the numerical readings arranged in columns.
6. Click to save your spreadsheet.

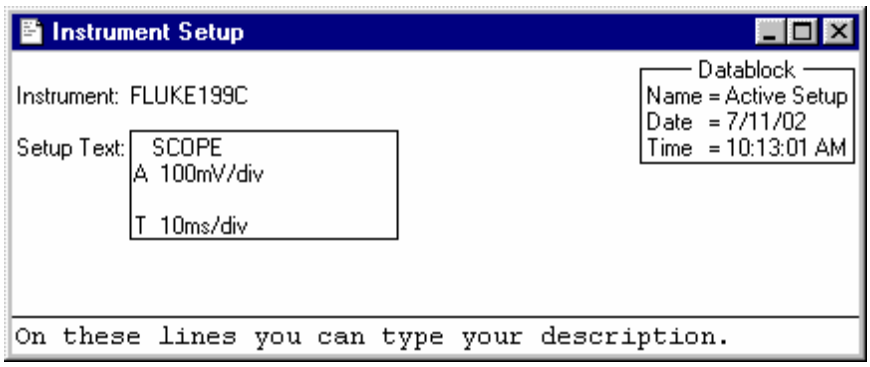
Note

You can insert waveform and spectrum points into a spreadsheet in the same way.

Transferring Instrument Setups

Reading/Saving Setups from/to File

1. Click to read the active setup or setups from ScopeMeter memories.
2. Select **Options - Add Description** and type a description in the text box below the window (max. 10 lines).
3. Select **Options - Title** to change the title of the window.
4. Select **View - Datablock** to show the datablock.
5. Select **Options - Colors** to change window colors.



Each ScopeMeter setup appears in a separate setup window.

6. If available from the ScopeMeter test tool, the **Setup Text** box shows setup information. Click and type in this box to change the setup text.

   Notice that special setup characters are not shown. If you change the setup text and send it back to the instrument, these special characters are not sent back.

7. Click to send the setups from the selected setup windows to ScopeMeter memories.

Saving/Recalling the Active ScopeMeter Setup

Fluke 120 series, Fluke 190 series, Fluke 190B/C series software versions below V7.00:

1. Select **Instrument - Remote Control**. A dialog box appears.
2. Click **Save Setup**. A dialog box appears.
3. Click on the down arrow to display the list with setup memories.
4. Click on the memory location in which you want to save the active setup.
5. Click **Save** to send the setup to the selected memory.

The active ScopeMeter setup has been saved in a ScopeMeter memory.

6. Click **Recall Setup**. A dialog box appears.
7. Click on the down arrow to display the list with setup memories.
8. Click on the memory location that contains the setup you want to make active.
9. Click **Recall** to recall the new active setup.

The active ScopeMeter setup has been recalled from a ScopeMeter memory.

Click **Close** to close the dialog box.

Fluke 190B/C series software versions V7.00 and newer, Fluke 199XRAY:

1. Select **Instrument - Remote Control**. See Remote Control on page 36.

Printing Windows

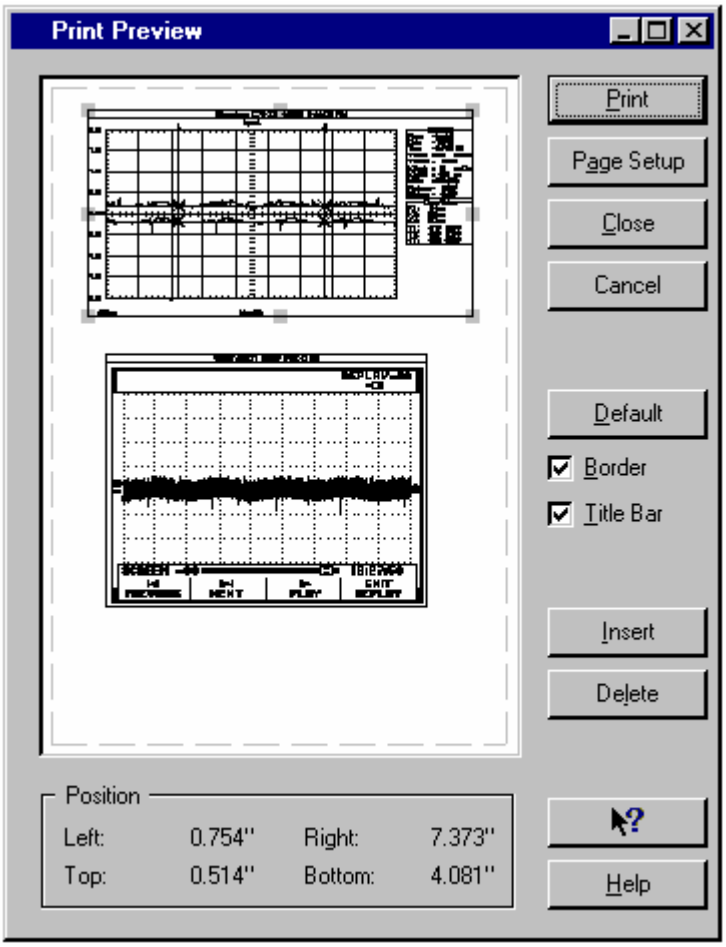
The Print Preview function enables you to preview any combination of screen, waveform, readings, spectrum, and setup windows on a page before printing.

1. Click on the window you want to print.
2. Click to preview the window on the page.

See next page for the window.

3. Choose **Border** to add a border around the active window.
4. Choose **Title Bar** to add the title of the active window.
5. Click **Insert** to add more windows on a page. A dialog box appears allowing you to select another window.
6. Click **Page Setup** to change the page setup
7. Click **Print** to start printing the window(s).

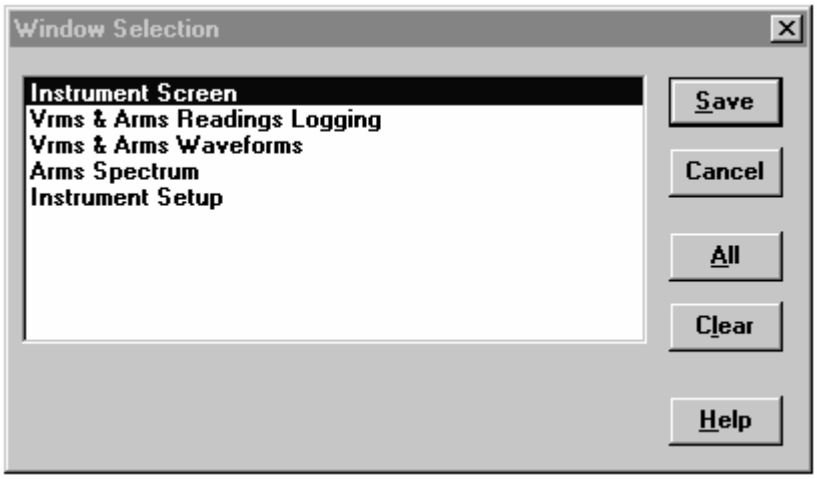
To change printer settings, select **File - Print Setup**.


Print Preview
Print
Page Setup
Close
Cancel
Default
Border
Title Bar
Insert
Delete
Help
Position
Left: 0.754"
Right: 7.373"
Top: 0.514"
Bottom: 4.081"

Saving Windows to a File

You can save any combination of screen, waveform, readings, spectrum, and setup windows to an FVF file.

1. Click on the window you want to save.
2. If there are more windows, a dialog box appears.



3. Select the windows of your choice or click **All** to select all windows.

   Click **Save**. Another dialog box appears.
4. Enter a name for the file in the **File Name** box (FVF is default file type).
5. Click **OK** to start saving the windows you selected to the file.

For more information on saving to a file, select **Index** - **File Formats** from the **Help** menu.

Remote Control

The Fluke 190B/C series software versions V7.00 and newer, and the Fluke 199XRAY can be completely remote controlled:

1 Select **Instrument - Remote Control**.

FlukeView will open an instrument remote control screen. The instrument remote control screen is a copy of the ScopeMeter front. It allows you to operate the ScopeMeter on your PC (remote control).

To operate the connected ScopeMeter via this screen click on the simulated keys. In addition, your PC F1…F4 keys, arrow keys, and Enter key will perform the same action as corresponding instrument keys.

ScopeMeter keys	**PC keyboard**
Softkeys F1…F4	F1…F4 or mouse click on ScopeMeter screen
Blue arrow keys	Arrow keys
Enter	Enter

After each remote control action the updated ScopeMeter screen will be transferred to the PC screen.

The ScopeMeter can still be operated with its own keys (local operation is not locked out). If you do this, the PC screen can be updated via the Update Screen button.

Click on Close to close the remote control screen.

The Fluke 190 series, Fluke 190B/C series with software below version V7.00, and the Fluke 120 series allows you to perform limited control over the ScopeMeter test tool:

1 Select **Instrument - Remote Control** to open the remote control functions menu.

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