



**ROHDE & SCHWARZ**

Test and Measurement Division

# **FSH View**

Software for FSH Spectrum Analyzers

Users Manual

April 2005

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# **Chapter 1**

## **Installing FSH View**

### **Installing the FSH View Software**

FSH View software offers you simple mouse-controlled tools to work with your Spectrum Analyzer.

The setup program installs the FSH View software on PC's running Windows 98, ME (Millennium Edition), NT 4, 2000, and XP.

To install FSH View, insert the CD ROM into the CD ROM drive and choose **Install FSH View**.

To install FSH View from floppy after you created floppies from the CD ROM, insert the first floppy in the appropriate floppy disk drive and run **Setup.exe**.

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

### **Running the FSH View Software**



Choose from **Start - Programs - FSH View - FSH View** to run the FSH View software.



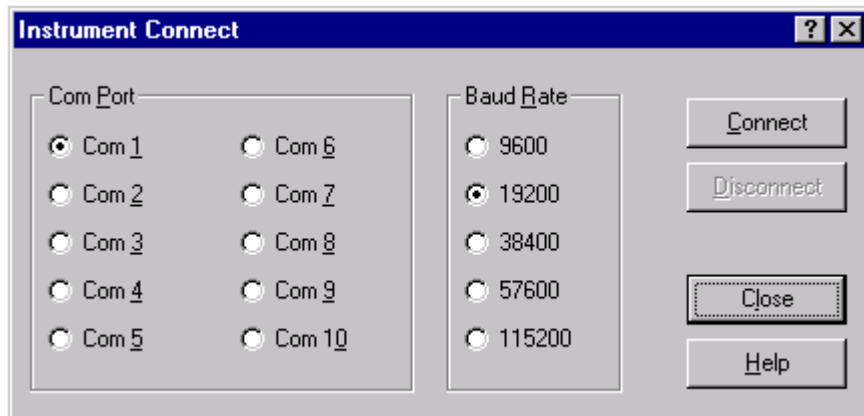
Choose from **Start - Programs - FSH View - FSH Report** to create a test report in Word.

## Connecting the Spectrum Analyzer

The FSH View software communicates with your Spectrum Analyzer via the optically isolated cable connected to a COM port of the PC.

During startup (except for the first time), the FSH View 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 Select the desired **Baud Rate**.  
FSH View will automatically select a lower baud rate if connection cannot be established at the selected baud rate.
- 3 Click **Connect** to establish a connection with the instrument.

## Chapter 2

# Using FSH View

### Using Online Help

The FSH View software offers you access to online help by using the **F1** key, a **Help** button, “**What’s This?**” help, or the **Help** menu:

|                                                                                                                                                                                      |                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|  or <b>Shift+</b>  | Press to get online help for the topic that has the focus.                                         |
|  or                | Click, move the mouse pointer on a topic, and click again to get “What’s This” help.               |
|                                                                                                   | Click to get help.                                                                                 |
|                                                                                                  | <p>For example:</p> <p>Click <b>Help - Contents</b> and select a topic from the contents list.</p> |

#### Note

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

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

## Introducing the FSH View Software

### Menu Commands

#### File

##### File menu commands:

|                                                                                                                  |                                          |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------|
|  <u>O</u> pen...      Ctrl+O    | Opens a file                             |
| <u>C</u> lose                                                                                                    | Closes the active window                 |
|  <u>S</u> ave As...      Ctrl+S | Saves window(s) to a file                |
| <u>C</u> onvert Files...                                                                                         | Converts from one file format to another |
| <u>P</u> age Setup...                                                                                            | Allows you to configure a page           |
| <u>P</u> rint Setup...                                                                                           | Allows you to setup a printer            |
|  <u>P</u> rint Preview...       | Previews the page (multiple windows)     |
|  <u>P</u> rint      Ctrl+P      | Prints the page                          |
| <u>E</u> xit                                                                                                     | Exits the FSH View software              |

#### Edit

##### Edit menu commands:

|                                                                                                                              |                                                                    |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
|  <u>C</u> opy <u>G</u> raphics      Ctrl+G | Copies window bitmap data to clipboard                             |
| <u>C</u> opy <u>D</u> ata                                                                                                    | Copies numerical sweep data to clipboard                           |
| <u>C</u> opy Sweep...                                                                                                        | Copies the active window sweep into another identical sweep window |
| <u>D</u> elete Sweep                                                                                                         | Deletes the active window sweep                                    |

#### Instrument

##### Instrument menu commands:

|                                                                                                                                                                                                                  |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|  <u>D</u> isplay <u>S</u> creen      Ctrl+I                                                                                   | Displays the active screen                |
|  <u>D</u> isplay <u>S</u> weep      Ctrl+W                                                                                    | Displays the active sweep                 |
|  <u>M</u> ultiple Transfers...                                                                                                | Displays multiple sweeps                  |
|  <u>D</u> ataset Control...                                                                                                   | Allows you to transfer datasets           |
|  <u>C</u> able <u>M</u> odel Control...                                                                                       | Allows you to transfer cable models       |
|  <u>L</u> imit Line Control...                                                                                                | Allows you to transfer limit lines        |
|  <u>T</u> ransducer Control...                                                                                                | Allows you to transfer transducer factors |
|  <u>C</u> hannel Table Control...                                                                                             | Allows you to transfer channel tables     |
|  <u>S</u> tandards Control...                                                                                                 | Allows you to transfer standards          |
|  <u>D</u> isconnect...  <u>C</u> onnect... | Disconnects/Connects the instrument       |

## View

|                                                                                                                 |        |                                                              |
|-----------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------|
| Select <u>M</u> arkers...                                                                                       | Ctrl+M | Selects sweep markers + data                                 |
| Select Measurement Mode...                                                                                      |        | Selects the 'Digital TV Receiver' display mode               |
| ✓ View Display <u>L</u> ine                                                                                     | Ctrl+L | Shows/hides the display line                                 |
| ✓ View Trace I <u>n</u> formation                                                                               | Ctrl+A | Shows/hides sweep trace data                                 |
| ✓ View Stat <u>u</u> s Information                                                                              | Ctrl+U | Shows/hides sweep status data                                |
| ✓ View Descriptio <u>n</u>                                                                                      | Ctrl+D | Shows/hides the description                                  |
| ✓ View Measurement Results                                                                                      |        | Shows/hides measurement text                                 |
| ✓ View Pass/Fail Result                                                                                         |        | Shows/hides PASS or FAIL text                                |
| ✓ View Grid                                                                                                     |        | Shows/hides the sweep window grid                            |
| A <u>ctive</u> Sweep...                                                                                         |        | Selects the active sweep                                     |
| All <u>Y</u> scales                                                                                             |        | Selects all Y-scales or only the Y-scale of the active sweep |
|  <u>Z</u> oom In               | Ctrl+Z | Zooms in on the window trace(s)                              |
|  <u>Z</u> oom Out             |        | Zooms out on the window trace(s)                             |
|  <u>Z</u> oom R <u>e</u> set | Ctrl+R | Undoes all previous zoom steps                               |
| ✓ <u>T</u> oolbar                                                                                               |        | Shows/hides the tool bar                                     |
| ✓ Statu <u>s</u> bar                                                                                            |        | Shows/hides the status bar                                   |

## Tools

|                                                                                                                     |                                           |
|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|  <u>C</u> able Model Editor...   | Allows you to edit cable model data       |
|  <u>L</u> imit Line Editor...    | Allows you to edit limit line data        |
|  <u>T</u> ransducer Editor...    | Allows you to edit transducer factor data |
|  <u>C</u> hannel Table Editor... | Allows you to edit channel table data     |
|  <u>S</u> tandards Editor...     | Allows you to edit standards data         |

## Options

|                           |                                                                          |
|---------------------------|--------------------------------------------------------------------------|
| <u>D</u> escription...    | Allows you to change the number of text characters on a description line |
| <u>C</u> olors...         | Allows you to change window colors                                       |
| <u>T</u> itles... Ctrl+T  | Allows you to change window titles                                       |
| <u>S</u> weep Settings... | Allows you to change active sweep settings                               |

### View menu commands:

### Tools menu commands:

### Options menu commands:



## Window

|                 |          |                                                        |
|-----------------|----------|--------------------------------------------------------|
| Cascade         | Shift+F5 | Arranges windows in a cascading pattern                |
| Tile Horizontal | Shift+F4 | Arranges windows one above another                     |
| Tile Vertical   | Shift+F6 | Arranges windows side by side                          |
| Auto Tile       |          | Automatically arranges windows                         |
| Arrange Icons   |          | Automatically arranges icons (minimized windows)       |
| Default Size    |          | Sets the active window to its initial height and width |
| Close           | Ctrl+F4  | Closes the active window                               |
| Close All       |          | Closes all windows                                     |

### Window menu commands:

## Help

|                                                                                                  |          |                                               |
|--------------------------------------------------------------------------------------------------|----------|-----------------------------------------------|
| Contents                                                                                         |          | Shows online help contents                    |
| Index                                                                                            |          | Shows online help index                       |
| Find...                                                                                          |          | Enables you to find text in the online help   |
|  What's This? | Shift+F1 | Enables the "What's This?" help information   |
| Rohde & Schwarz on the Web                                                                       |          | Activates the Rohde & Schwarz web site        |
| About FSH View...                                                                                |          | Shows information about the FSH View software |

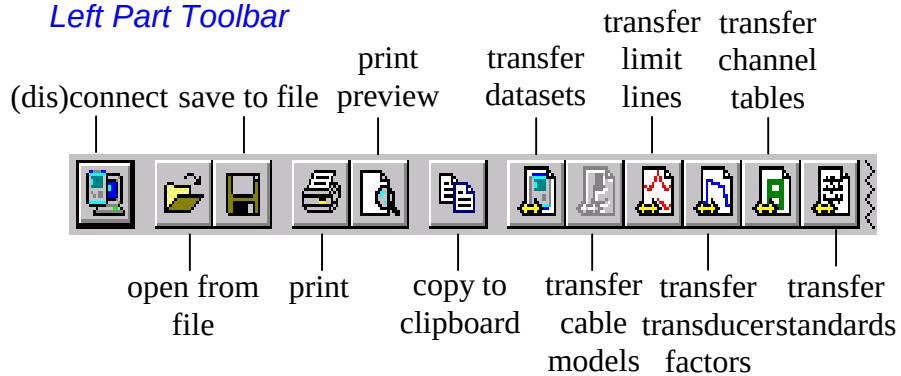
### Help menu commands:

## Toolbar Buttons

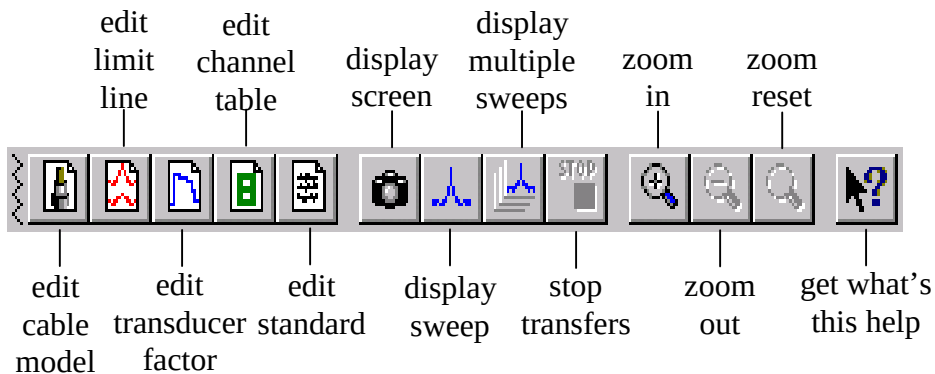


By clicking the buttons on the toolbar, you can transfer data directly from/to the Spectrum Analyzer or process the data.

### Left Part Toolbar



### Right Part Toolbar

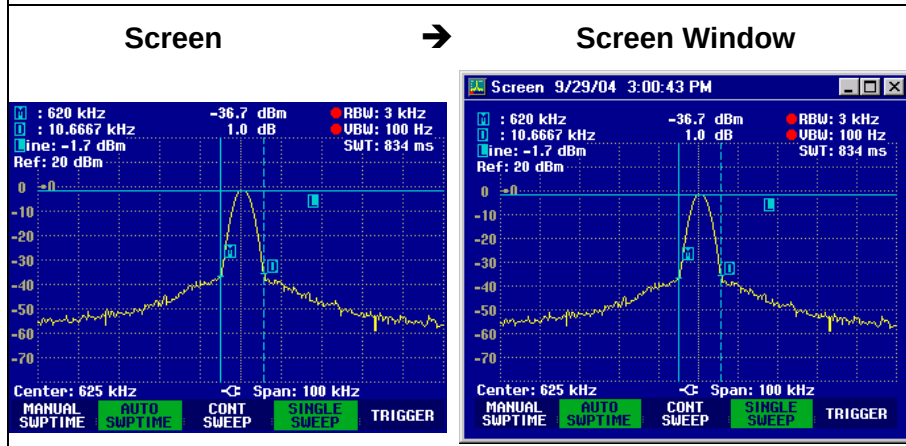


## Instrument Screens



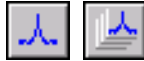
**Type:** bitmap graphics from the instrument screen (pixel-format)

**Use:** to create documents and reports



Refer to [Documenting Screens](#).

## Sweeps



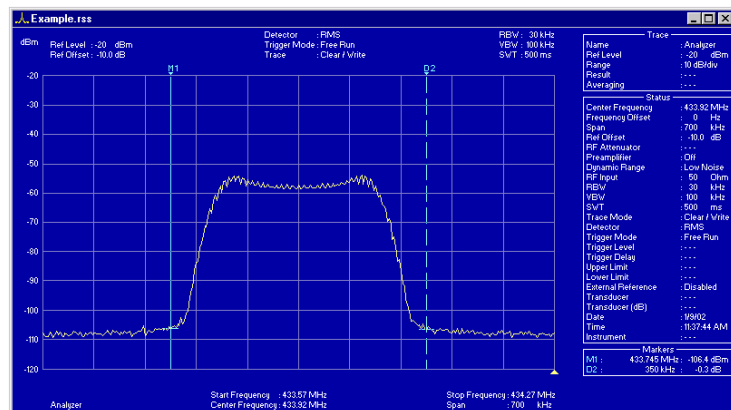
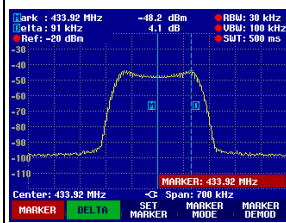
**Type:** numerical trace points to generate graphs

**Use:** to analyze by means of zooming or export to spreadsheets

**Sweep on instrument**



**Sweep Window**



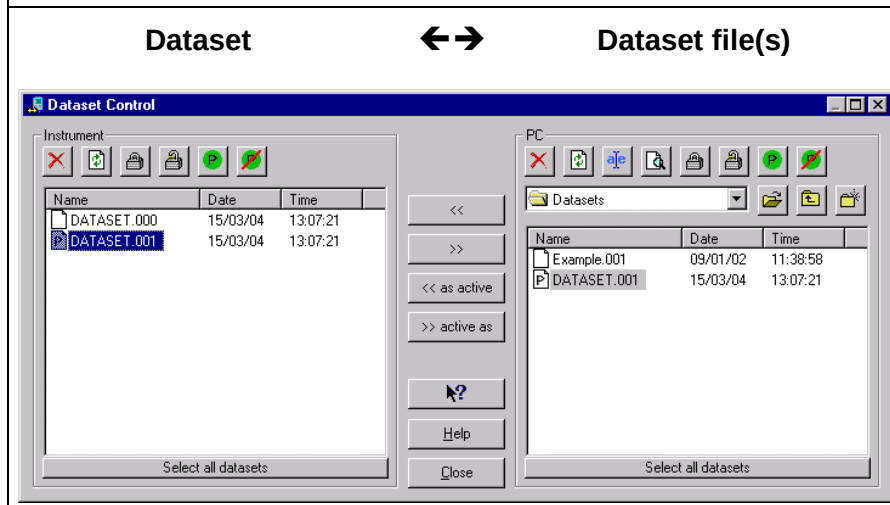
Refer to [Analyzing Sweeps](#).

## Instrument Datasets



**Type:** sweep and setup data

**Use:** to retrieve and send back instrument datasets



Refer to [Transferring Instrument Datasets](#).

## Cable Models



**Type:** cable model data

**Use:** to retrieve, edit, and send back instrument cable models

## Cable model

**Cable model file(s)**

The screenshot displays two windows from the 'FSH View 7.0' software suite.

**Top Window: Cable Model Control**

- Instrument Panel:** Includes a red 'X' icon, a green checkmark icon, and a table with columns 'Name', 'Date', and 'Time'. Below the table is a button labeled 'Select all cable models'.
- PC Panel:** Includes a red 'X' icon, a green checkmark icon, a blue 'i' icon, a folder icon, and a document icon. Below these is a dropdown menu showing 'Cable Models'. A table lists cable models with columns 'Name', 'Date', and 'Time'. The table contains 10 entries, all dated '18/12/02'. Below the table is a button labeled 'Select all cable models'.
- Navigation:** Between the panels are '<<' and '>>' buttons. Below the PC panel are buttons for '?', 'Help', and 'Close'.

**Bottom Window: Cable Model Editor - D:\program files\FSH View 7.0\Cable Models\RG141A.rsc**

- Fields:**
  - Cable Model Name:** 'RG141A' (text box) and '.RSC' (dropdown).
  - Description (optional):** 'Teflon cable' (text box).
  - Propagation Velocity:** '209000000' (text box) and 'Absolute (m/s)' (dropdown).
- Buttons:** 'New', 'Open', 'Save', 'Close', and 'Help' are arranged vertically on the right.
- Table:** A table with 20 rows and 2 columns: 'f (MHz)' and 'a (dB/m)'. The first 10 rows are populated with data:
 

| f (MHz) | a (dB/m) |
|---------|----------|
| 1       | 0.0112   |
| 2       | 0.0361   |
| 3       | 0.0886   |
| 4       | 0.128    |
| 5       | 0.1837   |
| 6       | 0.269    |
| 7       | 0.3609   |
| 8       | 0.4101   |
| 9       | 0.4429   |
| 10      |          |
| 11      |          |
| 12      |          |
| 13      |          |
| 14      |          |
| 15      |          |
| 16      |          |
| 17      |          |
| 18      |          |
| 19      |          |
| 20      |          |

Refer to [Using Cable Models](#) for Distance To Fault.

Limit Lines



**Type:** limit line data  
**Use:** to retrieve, edit, and send back instrument limit lines

Limit line

↔

Limit line file(s)

Limit Line Control

Instrument

Name

Date

Time

Select all limit lines

PC

Limit Lines

Name

Date

Time

Select all limit lines

<<

>>

?

Help

Close

Limit Line Editor - lower F db.rsl

Limit Line Name

lower F db

RSL

Description (optional)

lower limit line

X-unit

Hz

X-scaling

Relative

Y-unit

dB

New

Open

Save

Close

Sort

View

Help

|    | f (Hz)     | (dB) |
|----|------------|------|
| 1  | 1000000000 | -100 |
| 2  | 1500000000 | -105 |
| 3  | 2000000000 | -110 |
| 4  | 2500000000 | -90  |
| 5  | 3000000000 | -80  |
| 6  | 3500000000 | -70  |
| 7  | 4000000000 | -60  |
| 8  |            |      |
| 9  |            |      |
| 10 |            |      |
| 11 |            |      |
| 12 |            |      |
| 13 |            |      |
| 14 |            |      |
| 15 |            |      |
| 16 |            |      |
| 17 |            |      |
| 18 |            |      |
| 19 |            |      |
| 20 |            |      |
| 21 |            |      |
| 22 |            |      |
| 23 |            |      |
| 24 |            |      |
| 25 |            |      |

Refer to [Using Limit Lines](#) for pass/fail testing.

Transducer Factors



Type: transducer factor data  
Use: to retrieve, edit, and send back instrument transducer factors

Transducer factor

↔

Transducer factor file(s)

Transducer Control

Instrument

Name

Date

Time

Select all transducer factors

PC

Transducer Factors

Name

Date

Time

CBL6111

11/12/02

12:29:20

HE200A-20-200

11/12/02

12:29:20

HE200A-200-500

11/12/02

12:29:20

HE200A-500-3000

11/12/02

12:29:20

HE200A-HF

11/12/02

12:29:20

HE200P-20-200

11/12/02

12:29:20

HE200P-200-500

11/12/02

12:29:20

HE200P-500-3000

11/12/02

12:29:20

HE200P-HF

11/12/02

12:29:20

HK116

11/12/02

12:29:20

Select all transducer factors

Transducer Editor - D:\program files\FSH View\Transducer Factors\CBL6111.rst

Transducer Name

CBL6111

RST

Description (optional)

BILOG Antenna CBL 6111

Unit

dBuV/m

f (Hz)

TRD (dBuV/m)

1

30000000

19

2

40000000

15

3

50000000

9

4

60000000

6

5

70000000

7

6

80000000

8

7

90000000

9.5

8

100000000

11

9

110000000

11.2

10

120000000

11.7

11

130000000

12

12

140000000

11.7

13

150000000

11.5

14

160000000

10.7

15

170000000

10

16

180000000

9.4

17

190000000

9

18

200000000

9.3

19

220000000

9.8

20

240000000

11.3

f (Hz)

TRD (dBuV/m)

21

260000000

13.2

22

280000000

13

23

300000000

13.6

24

350000000

15

25

400000000

16.6

26

450000000

17.4

27

500000000

18

28

550000000

19.6

29

600000000

20.3

30

650000000

20.7

31

700000000

20.7

32

750000000

22.4

33

800000000

22.7

34

850000000

22.8

35

900000000

23.7

36

950000000

24.8

37

1000000000

25

f (Hz)

TRD (dBuV/m)

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

New

Open

Save

Close

Sort

View

Help

Refer to [Using Transducer Factors](#) to correct sweep points.



## Channel Tables



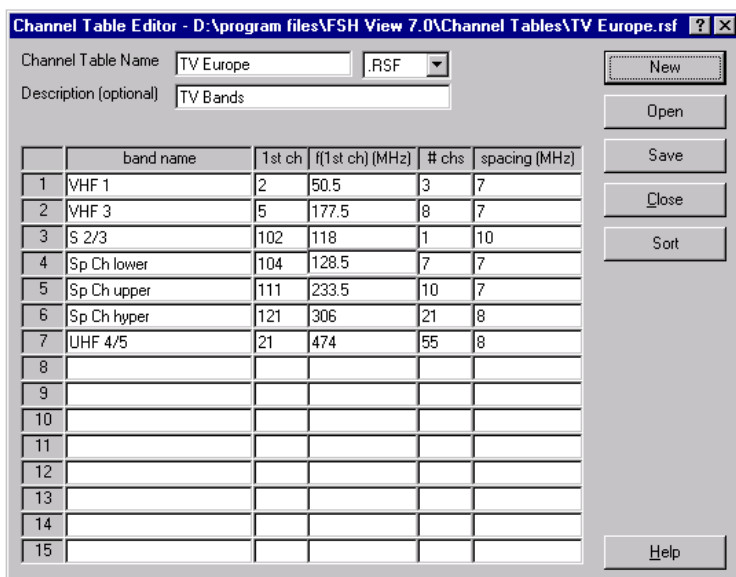
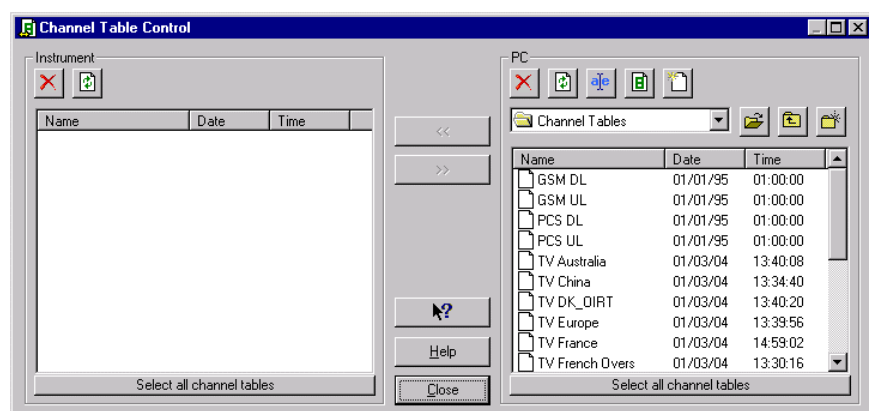
**Type:** channel table data

**Use:** to retrieve, edit, and send back instrument channel tables

### Channel Table



### Channel Table file(s)



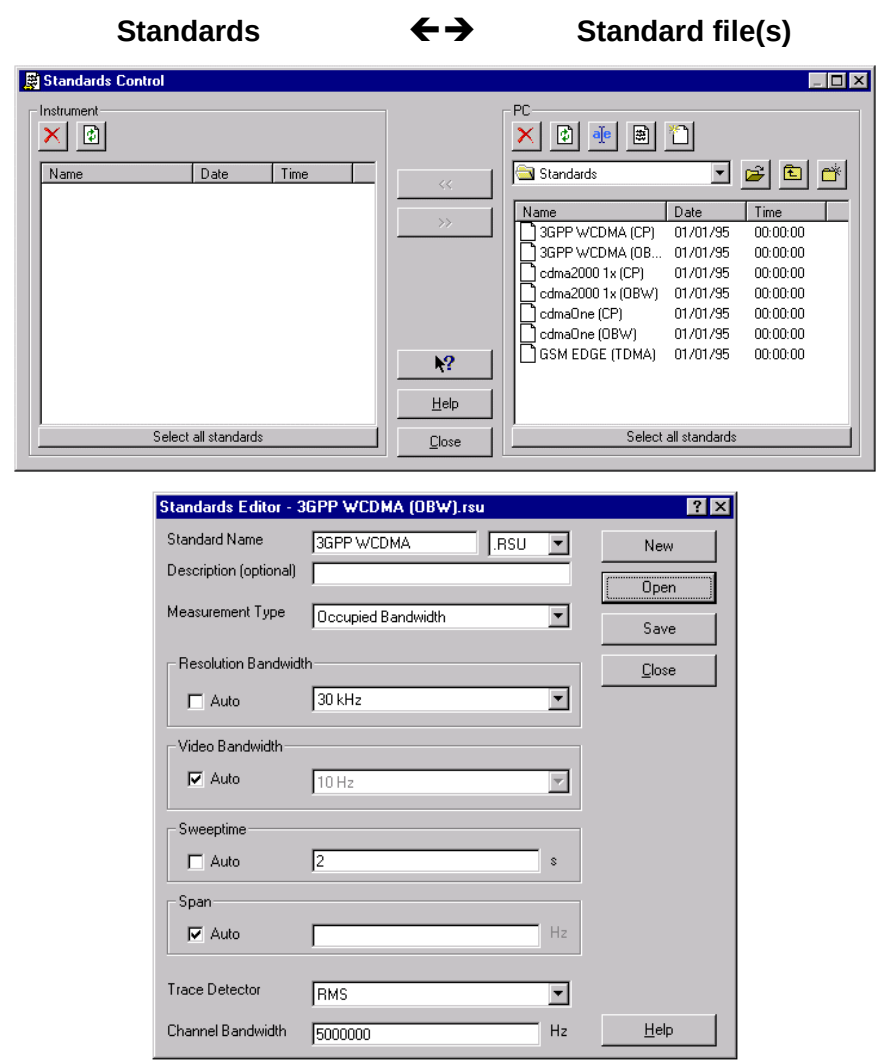
Refer to [Using Channel Tables](#) to define channel numbers for certain frequency bands that you can select in the spectrum analyzer.

## Standards



**Type:** standards data

**Use:** to retrieve, edit, and send measurement standards



Refer to [Using Standards](#) to select or define measurement standards, e.g. for telecommunication, that you can send to the spectrum analyzer.

## Creating a Test Report

- 1  **FSH Report** Choose from **Start - Programs – FSH View** to create a test report.

As a result, Word is started and the required macros are loaded. Select **Enable Macros** when requested.

- 2 Click predefined fields (**Company, Contact, ...**) and type your text.
- 3  Click to insert the active instrument screen in black & white  or color . As a result, FSH View is started, a connection is made, and the active screen is pasted into the document at the position of the mouse cursor.
- 4 Click the **Description** field and type your text.

**R&S FSH Test Report**

**Company:** Rohde & Schwarz

**Contact:** A. Person

**Address:** Street 3

**Zip:** 1234 AB

**City:** München

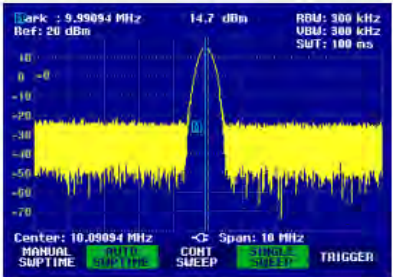
**Phone:** 12 345 678910

**Fax:** 12 345 678911

**E-mail:** aperson@R&S.com

**Date:** November 5, 2002

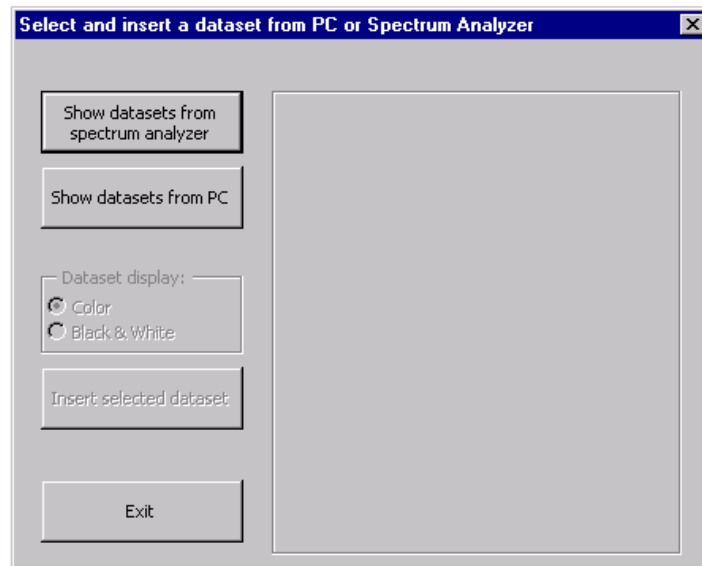
**Test Result 1:**

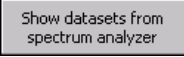
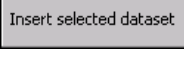


|                       |                 |
|-----------------------|-----------------|
| Center Frequency      | : 10.09094 MHz  |
| Span                  | : 10 MHz        |
| Reference Level       | : 20 dBm        |
| Reference Offset      | : 0.0 dB        |
| RF Attenuator Setting | : 30 dB         |
| RF Input Reference    | : 50 Ohm        |
| Resolution Bandwidth  | : 300 kHz       |
| Video Bandwidth       | : 300 kHz       |
| Sweptime              | : 100 ms        |
| Trigger Mode          | : Free Run      |
| Trigger Level         | : ---           |
| Trigger Delay         | : ---           |
| Trace Mode            | : Clear / Write |
| Trace Detector        | : Auto Peak     |
| Transducer            | : ---           |
| Transducer (dB)       | : ---           |

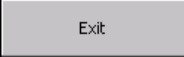
**Description:**  
On these lines you can type your description.

- 5  Click to select and insert dataset pictures into your document.



- 6.1  Click to show the list of dataset names stored in the connected spectrum analyzer and select a dataset from the list.
- 6.2  Click to select and show the dataset files stored in a PC folder (directory).
- 7 Click  **Color** or  **Black & White** to insert datasets in color or Black & White respectively.
- 8  Click to paste the selected dataset into the document at the position of the mouse cursor. Notice that you can also double click a dataset name from the list.

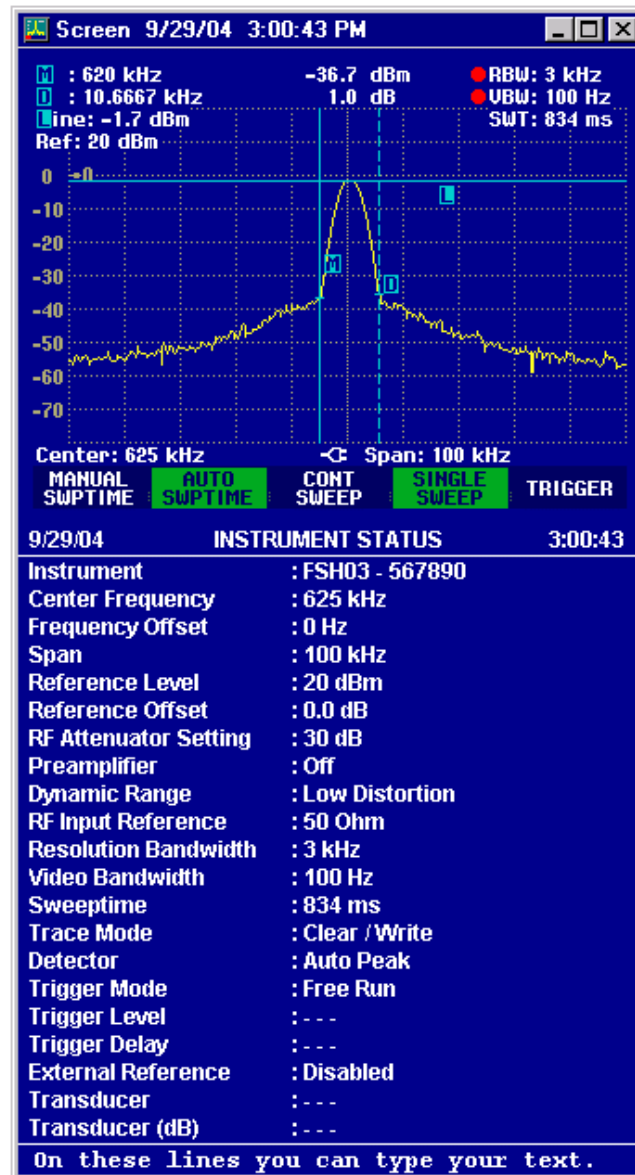
You can paste other dataset pictures by clicking the mouse cursor at new positions in your document.

- 9  Click to close the dialog box.
- 10  Click to print your test report.
- 11  Click to save your test report.

## Documenting Screens

### Displaying an Instrument Screen on the PC

- 1  Click to display the **active** Spectrum Analyzer screen in a screen window.



Each Spectrum Analyzer screen appears in a separate screen window. To change the window to your preference:

- 2 Select **View – View Status Information** to view or hide the status block.
- 3 Select **View – View Description** and type a description in the text box below the window (max. 10 lines).
- 4 Select **Options - Description** to change the number of characters on a description line.
- 5 Select **Options - Colors** to display a window in colors or black & white (greyscale).

### ***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 **Window – 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**

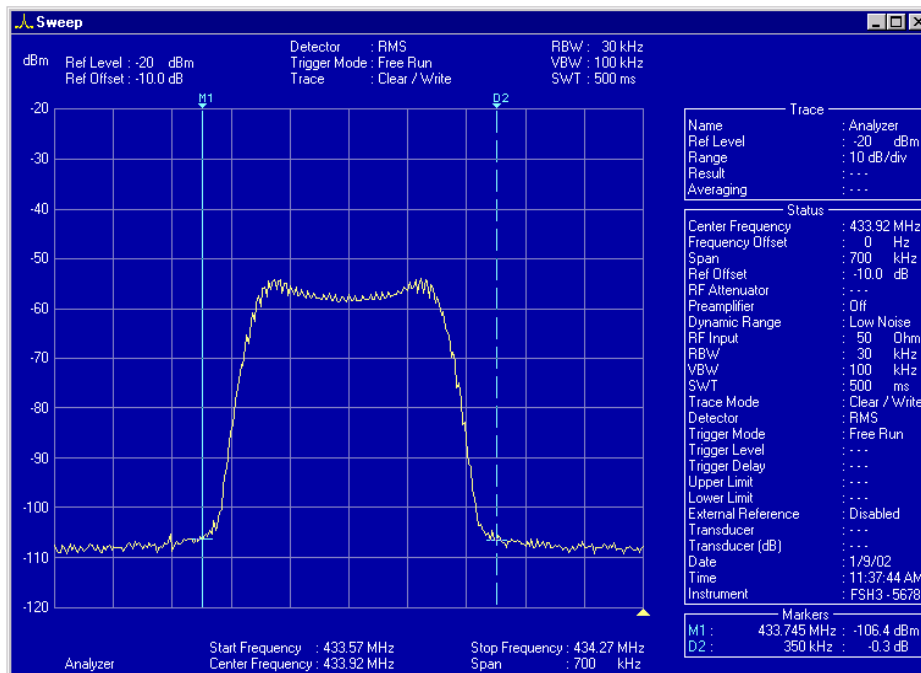
*In the same way, you can insert sweep windows into a document.*

## Analyzing Sweeps

You can read numerical trace samples from the Spectrum Analyzer and display these samples in a sweep window. Up to four sweeps can be displayed in a window.

### Displaying Sweeps on the PC

- 1  Click to display the active sweep and/or measurement from the instrument.

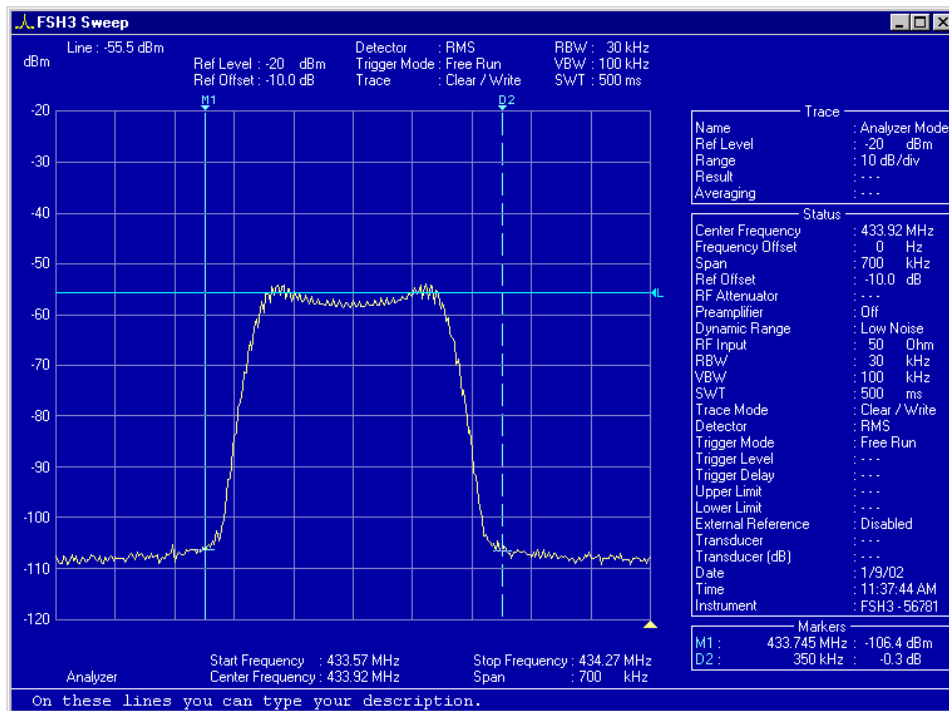


For information about the data in the Trace (or Status) block, select **Help – Index – Trace (or Status) block**, or refer to the settings on the spectrum analyzer (see operation manual).

To change a sweep window to your preference, various view and select features are available. However, not all features are available in all instrument modes.

- 2 Select **View – View Description** and type a description in the text box below the window (max. 10 lines).
- 3 Select **View - View Trace Information** to show or hide the trace block.

- 4 Select **View – View Status Information** to show or hide the status block.
- 5 Select **View – View Display Line** to show or hide the horizontal display line from the instrument.
- 6 Choose **Select - Markers** to select 1 up to 6 vertical markers. As a result, the Select Markers dialog box pops up allowing you to select or deselect the markers and X/Y-values you want to view in the sweep window.
- 7 Select **Options - Colors** to change window colors.
- 8 Select **Options - Description** to change the number of characters on a description line.
- 9 To change window titles, select **Options - Titles**.

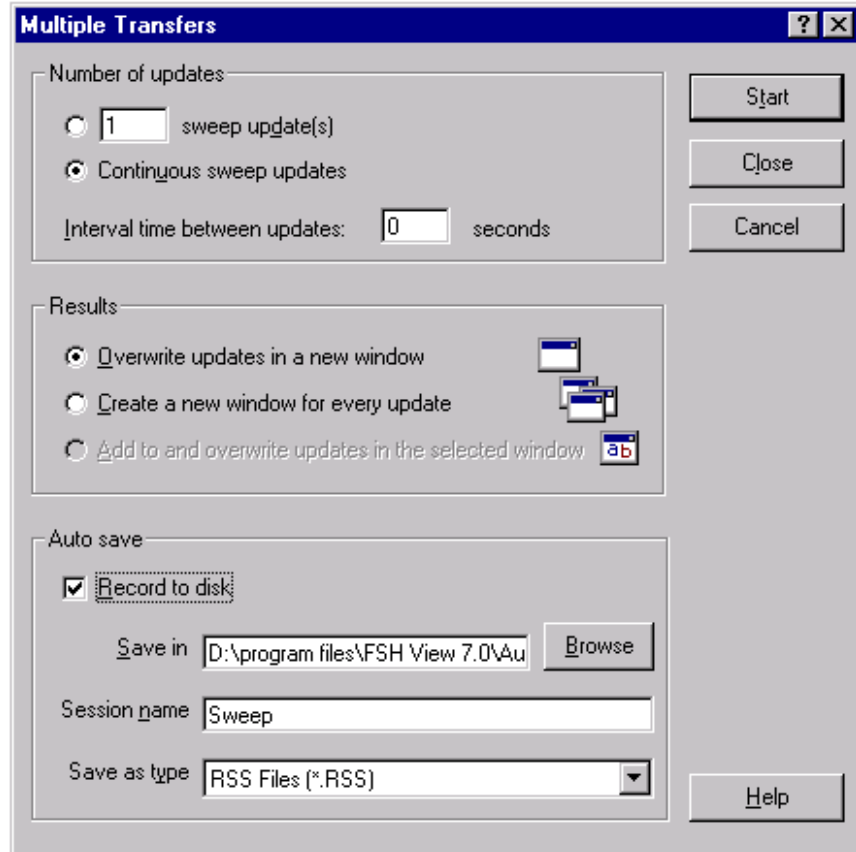


### Tip

To change sweep parameters, place the mouse cursor on the Trace or Status block and double click the left mouse button.



- 10  Click to read sweeps repeatedly. A dialog box appears allowing you to select options for multiple sweep transfers.



**Multiple Transfers**

Number of updates

☐ 1 sweep update(s)

☒ Continuous sweep updates

Interval time between updates: 0 seconds

Results

☒ Overwrite updates in a new window

☐ Create a new window for every update

☐ Add to and overwrite updates in the selected window

Auto save

☒ Record to disk

Save in: D:\program files\FSH View 7.0\Au Browse

Session name: Sweep

Save as type: RSS Files (\*.RSS)

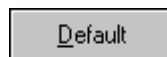
Start Close Cancel Help

- 11 Choose **Continuous sweep updates** to read sweeps continuously.
- 12 Choose **Add to and overwrite updates in the selected window** to add a second sweep in the window, which will be overwritten continuously by the newly read sweep.
- 13 Enable **Record to disk** to automatically save read sweeps onto disk. Click  to get further What's This help.
- 14  Click to read and display sweeps repeatedly.
- 15  Click or press **Esc** to stop reading new sweeps.

## Changing Sweep Settings

Select **Options – Sweep Settings**, or double click in the trace or status block. As a result, a dialog box pops up allowing you to:

- change the unit and range of the sweep in the active window;
- view the memory trace (if available from the instrument memory);
- view the upper/lower limit line from the instrument or select a new upper/lower limit line from file.



Sets the range, unit, and grid of the active sweep to default values.

It does not reset limit line selections.

For more information, click the help.

## Zooming In and Out on a Trace

Drag with the mouse in the graph to select and zoom in on the part of the trace you want to enlarge or use the following buttons:



Click to zoom in on a trace.

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



Click to zoom out on a trace (undoes one 'zoom in' step).



Click to reset zooming (undoes all 'zoom in' steps).

### ***Copying Sweeps between Sweep Windows***

To be able to do this you need at least two sweep windows (source and destination).

- 1 If there are multiple sweeps in the sweep window, click on the sweep you want to copy (to make it the active sweep).
- 2 Select **Edit - Copy Sweep** to copy the sweep to the other sweep window. If there are multiple sweep windows, the Windows Selection dialog box pops up first.

You can also use the Windows 'drag & drop' feature:

- position the mouse pointer on the sweep in the source window and keep the left mouse button pressed;
- move (drag) the mouse pointer (and underlying sweep) into the destination window;
- release the left mouse button (drop).

Dropping a sweep on the FshView background creates a new sweep window.

### ***Exporting Sweep Data to Other Programs***

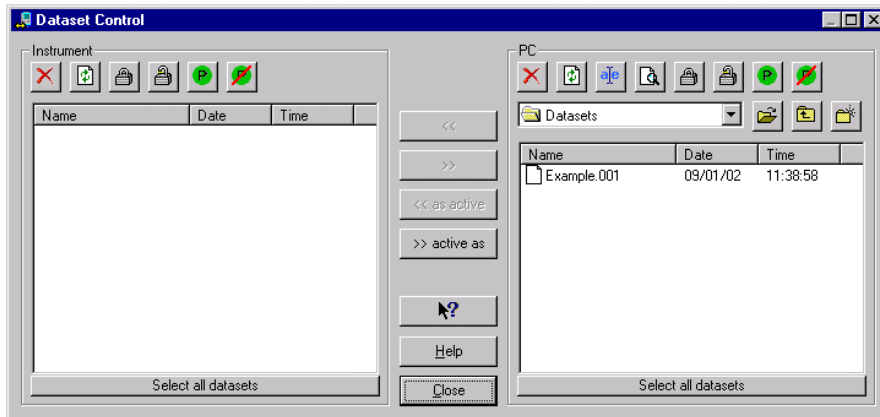
- 1 Click on the sweep you want to insert.
- 2 Select **Edit - Copy Data** to copy the sweep data to the clipboard.
- 3 Switch to a spreadsheet program (e.g. Excel) or wordprocessor (e.g. Word).
- 4 Open or create a worksheet or a document and place the cursor where you want to insert the data.
- 5 Select **Edit - Paste** to insert the data from the clipboard.
- 6  Click to save your spreadsheet or document.

You can also use the Windows 'drag & drop' feature:

- start up a spreadsheet or wordprocessor program;
- drag the desired sweep onto a worksheet or document, or onto its program button on the Windows taskbar;
- drop the sweep data on the worksheet or document.

## Transferring Instrument Datasets

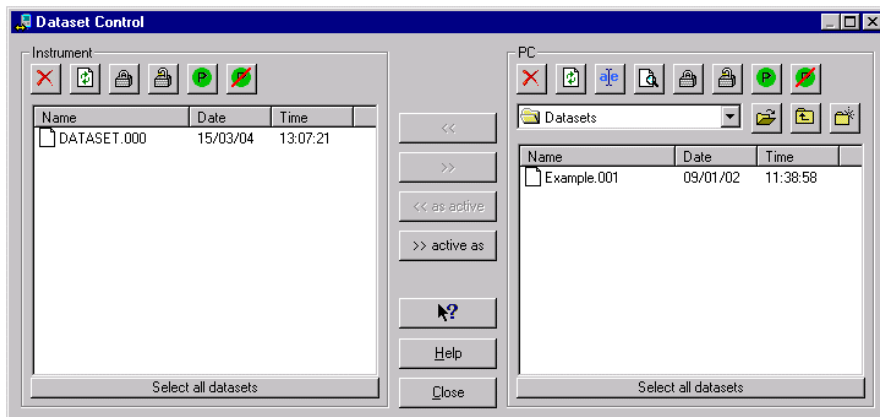
- 1  Click to transfer datasets to and from the instrument. As a result, the Dataset Control dialog box pops up.



## Saving Datasets to the PC

First, save a dataset in the instrument (default DATASET.000) by pressing the buttons **Save**, **F1**, and **F1** on the instrument.

- 2  Click to refresh the **Instrument** list. As a result, the datasets appear in the instrument frame list.



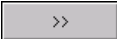
- 3 Select **DATASET.000** from the **Instrument** list.

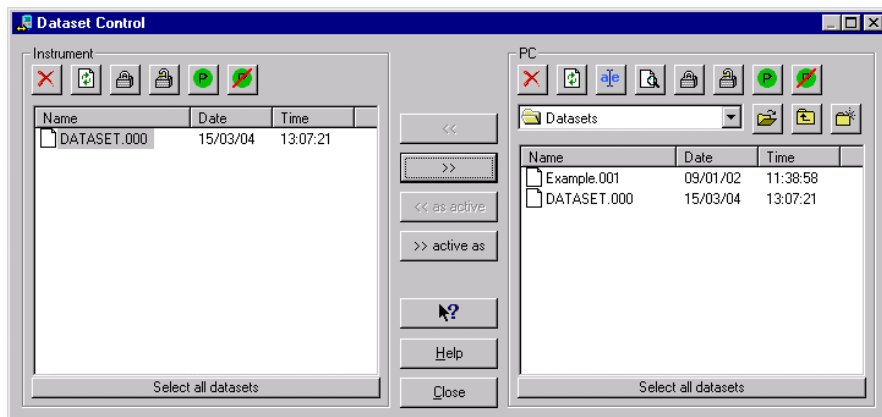


Click to select all datasets from the list.

- 4 Select a subdirectory from the **PC** frame where to store the dataset file(s).

Notice that the default directory is **\\FSH View\\Datasets**.

- 5  Click to transfer the selected dataset to the PC.



- 6 Select **DATASET.000** from the **PC** list.

- 7  Click to preview the selected dataset in a window or double click on the name.

Click  to close the preview window.

### Uploading Datasets to the Instrument

- 8  Click and rename the selected dataset into DATASET.001 for example.

- 9  Click to lock the selected dataset; see lock sign in front of the name.

#### Note

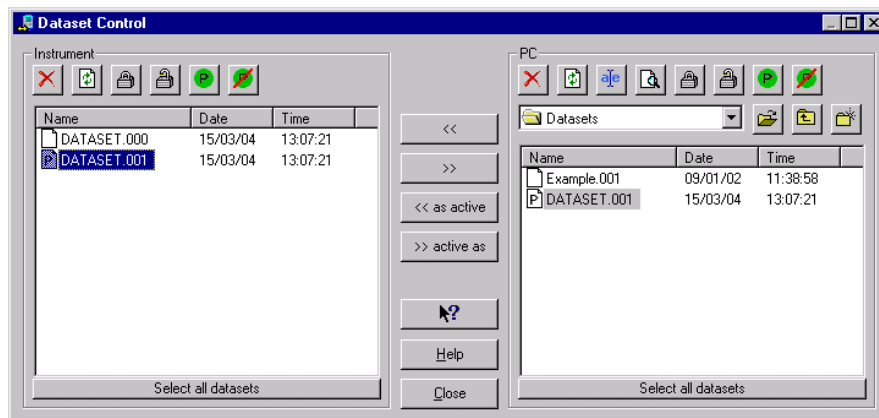
*A locked dataset cannot be deleted in the instrument.*

- 10  Click to make the selected dataset the preset dataset; see preset sign in front of the name.

*Note*

*A preset dataset is automatically locked (preset property overrides locked property).*

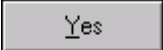
- 11  Click to transfer the selected dataset to the instrument.

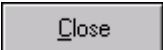


- 12 Select the locked **DATASET.001**, for example, from the **Instrument** list.

Using FSH View, you can delete locked datasets in the instrument.

- 13  Click to delete the selected dataset. As a result, a dialog box pops up for confirmation.

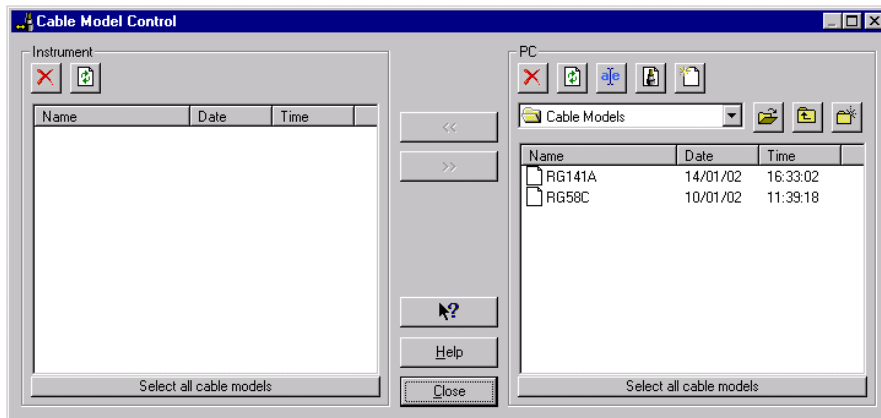
- 14  Click to confirm the delete action.

- 15  Click to close the Dataset Control dialog box.

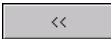
## Using Cable Models for Distance To Fault

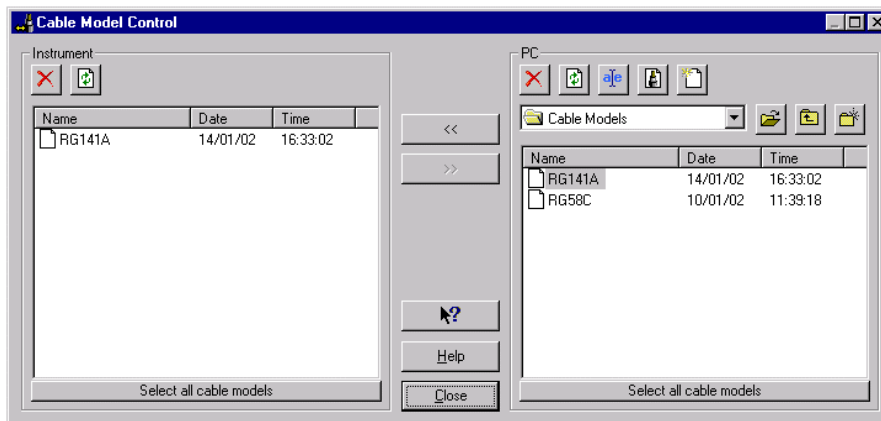
Transferring cable models to the instrument is possible only if DTF is available in the instrument.

- 1  Click to transfer cable models to and from the instrument. As a result, the Cable Model Control dialog box pops up.



## Uploading Cable Models to the Instrument

- 2 Select **RG141A** from the PC list, for example.
- 3  Click to transfer the selected cable model to the instrument.



## Editing Cable Models

- 4 Select **RG141A** from the **PC** list.
- 5  Click to edit the selected cable model file. As a result, the Cable Model Editor dialog box pops up.
- 6 Change the cable model characteristics to your preference.
- 7  Click to save the changes. As a result, a dialog box pops up allowing you to browse for a different folder, if you want to.  
Notice that the default folder is:  
**\\FSH View\Cable Models**
- 8  Click to save to file.
- 9  Click to close the Cable Model Editor dialog box.

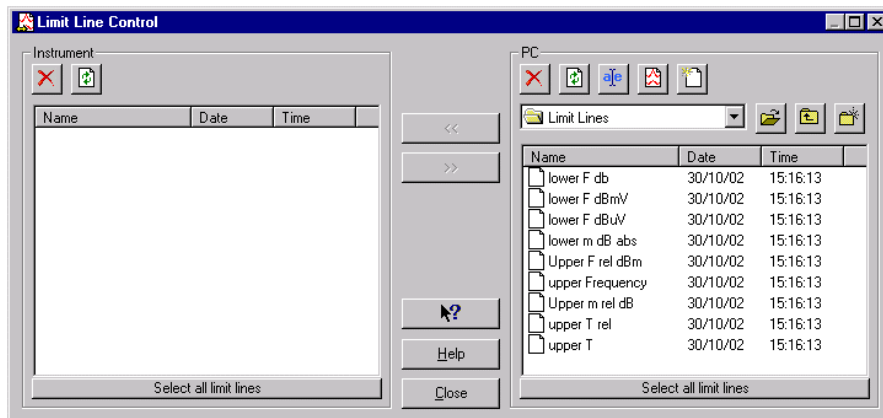
### Tips

-  Click to create a new cable model file.
-  Click to delete the selected cable model file.
-  Click to select all cable models from the list.
-  Click to transfer the selected cable models from the instrument to the PC folder.
- 10  Click to close the Cable Model Control dialog box.



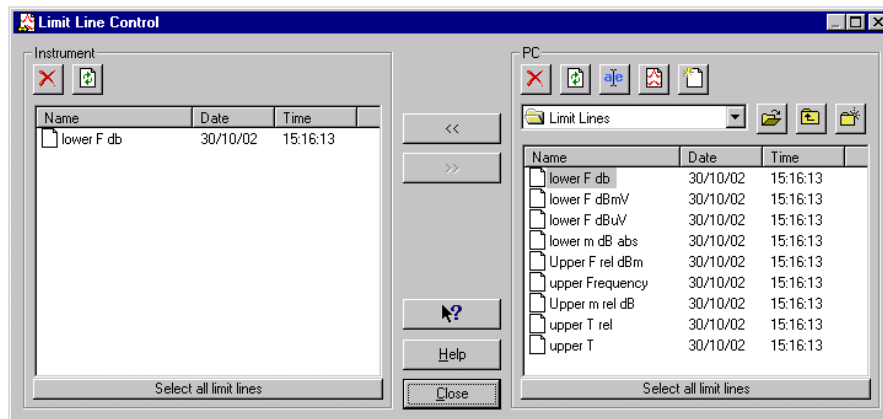
## Using Limit Lines

- 1  Click to transfer limit lines to and from the instrument. As a result, the Limit Lines Control dialog box pops up.



## Uploading Limit Lines to the Instrument

- 2 Select **lower F db** from the PC list, for example.
- 3  Click to transfer the selected limit line to the instrument.



## Editing Limit Lines

- 4 Select **lower F db** from the **PC** list.

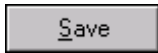
- 5  Click to edit the selected limit line file. As a result, the Limit Line Editor dialog box pops up.

- 6 Change the limit line characteristics to your preference.

### Tip

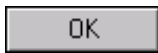


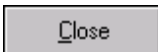
Click to preview the limit line.

- 7  Click to save the changes. As a result, a dialog box pops up allowing you to browse for a different folder, if you want to.

Notice that the default folder is:

**\\FSH View\\Limit Lines**

- 8  Click to save to file.

- 9  Click to close the Limit Line Editor dialog box.

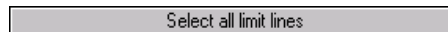
### Tips



Click to create a new limit line file.



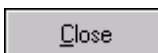
Click to delete the selected limit line file.



Click to select all limit lines from the list.

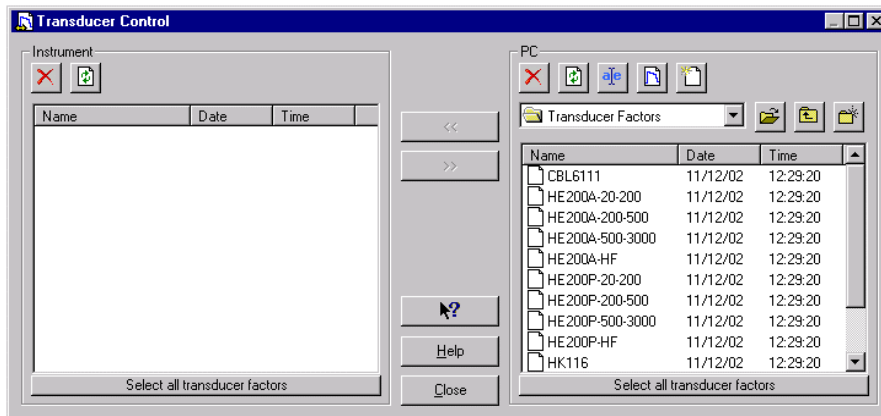


Click to transfer the selected limit lines from the instrument to the PC folder.

- 10  Click to close the Limit Line Control dialog box.

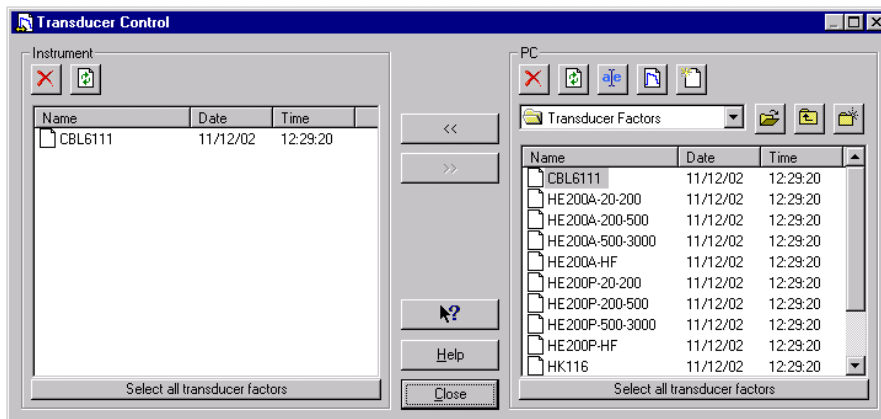
## Using Transducer Factors

- 1  Click to transfer transducer factors to and from the instrument. As a result, the Transducer Control dialog box pops up.



## Uploading Transducer Factors to the Instrument

- 2 Select **CBL6111** from the **PC** list, for example.
- 3  Click to transfer the selected transducer factor to the instrument.



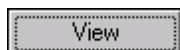
## Editing Transducer Factors

- 4 Select **CBL6111** from the **PC** list.

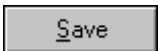
- 5  Click to edit the selected transducer factor file. As a result, the Transducer Editor dialog box pops up.

- 6 Change the transducer factor characteristics to your preference.

### Tip

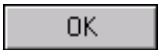


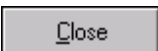
Click to preview the transducer factor.

- 7  Click to save the changes. As a result, a dialog box pops up allowing you to browse for a different folder, if you want to.

Notice that the default folder is:

**\\FSH View\\Transducer Factors**

- 8  Click to save to file.

- 9  Click to close the Transducer Editor dialog box.

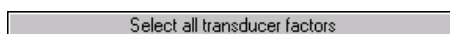
### Tips



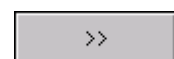
Click to create a new transducer factor file.



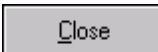
Click to delete the selected transducer factor file.



Click to select all transducer factors from the list.

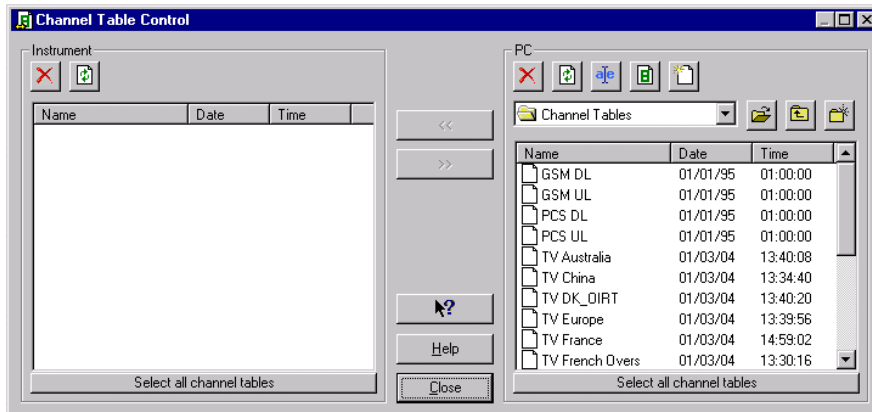


Click to transfer the selected transducer factors from the instrument to the PC folder.

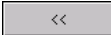
- 10  Click to close the Transducer Control dialog box.

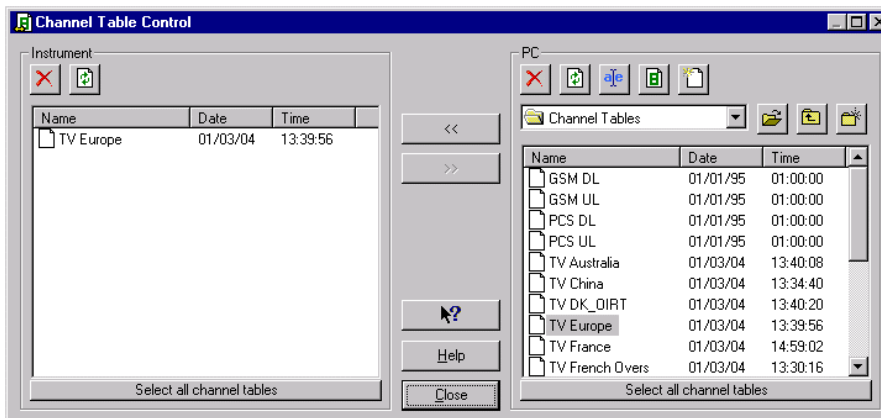
## Using Channel Tables

- 1  Click to transfer channel tables to and from the instrument. As a result, the Channel Table Control dialog box pops up.

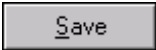


## Uploading Channel Tables to the Instrument

- 2 Select **TV Europe** from the **PC** list, for example.
- 3  Click to transfer the selected channel table to the instrument.



## Editing Channel Tables

- 4 Select **TV Europe** from the **PC** list.
- 5  Click to edit the selected channel table file. As a result, the Channel Table Editor dialog box pops up.
- 6 Change the channel table characteristics to your preference.
- 7  Click to save the changes. As a result, a dialog box pops up allowing you to browse for a different folder, if you want to. Notice that the default folder is:  
**\\FSH View\\Channel Tables**
- 8  Click to save to file.
- 9  Click to close the Channel Table dialog box.

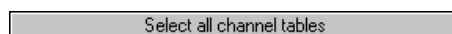
### Tips



Click to create a new channel table file.



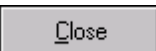
Click to delete the selected channel table file.



Click to select all channel tables from the list.

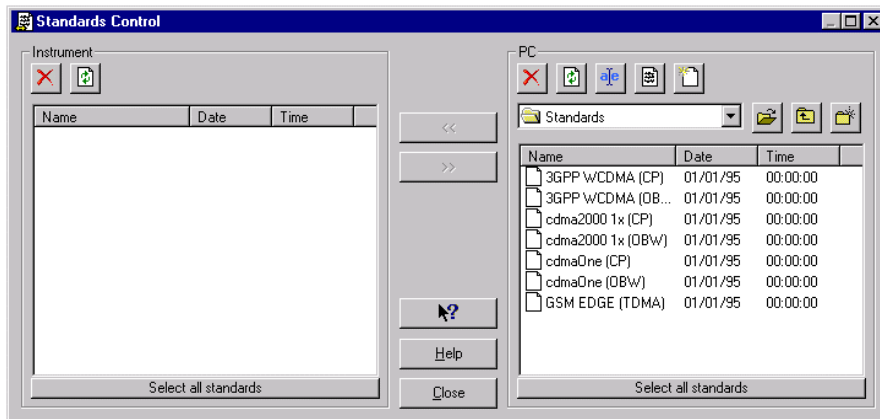


Click to transfer the selected channel tables from the instrument to the PC folder.

- 10  Click to close the Channel Table Control dialog box.

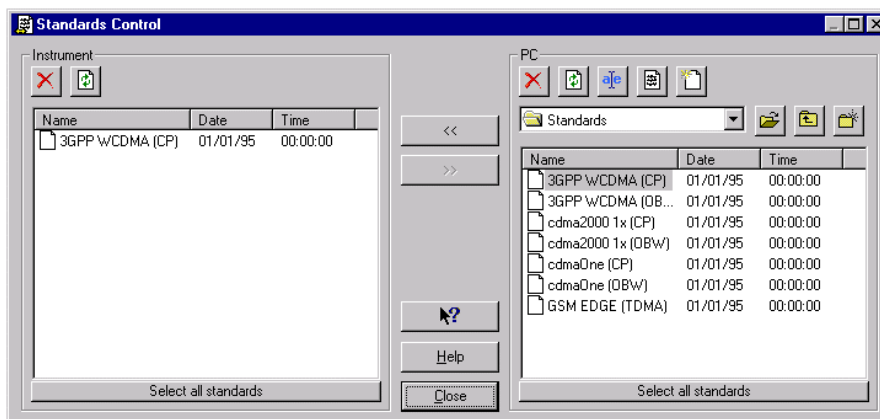
## Using Standards

- 1  Click to transfer measurement standards, e.g. for telecommunication, to and from the instrument. As a result, the Standards Control dialog box pops up.

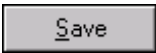


## Uploading Standards to the Instrument

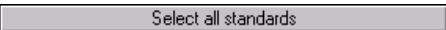
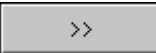
- 2 Select **3GPP WCDMA (CP)** from the PC list, for example.
- 3  Click to transfer the selected standard to the instrument.



## Editing Standards

- 4 Select **3GPP WCDMA (CP)** from the **PC** list.
- 5  Click to edit the selected standard file. As a result, the Standards Editor dialog box pops up.
- 6 Change the standard characteristics to your preference.
- 7  Click to save the changes. As a result, a dialog box pops up allowing you to browse for a different folder, if you want to.  
Notice that the default folder is:  
**\\FSH View\\Standards**
- 8  Click to save to file.
- 9  Click to close the Standards dialog box.

### Tips

-  Click to create a new standard file.
-  Click to delete the selected standard file.
-  Click to select all standards from the list.
-  Click to transfer the selected standards from the instrument to the PC folder.
- 10  Click to close the Standards Control dialog box.



## Printing Windows

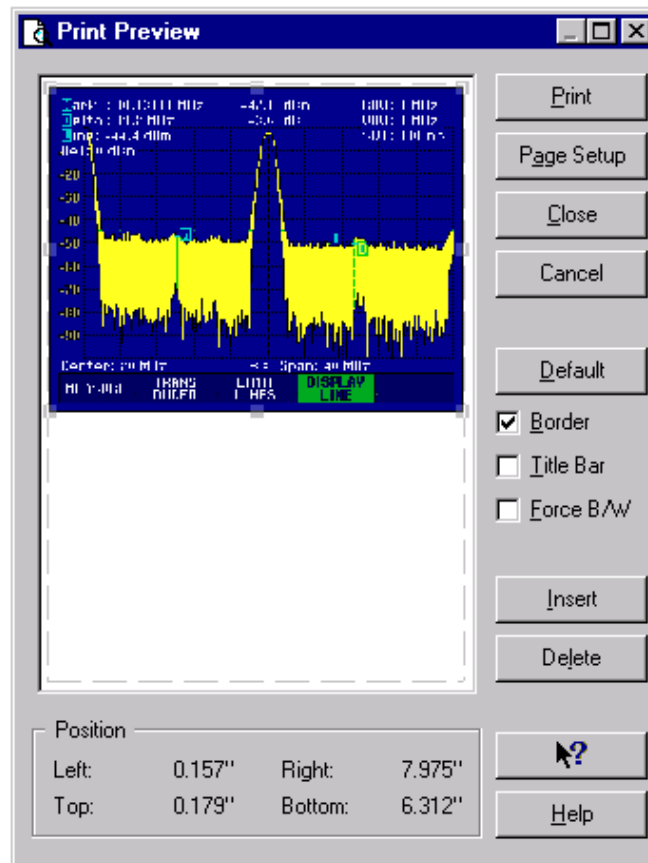
## Printing a Window

- 1 Click on the window you want to print.
- 2  Click to print the window.

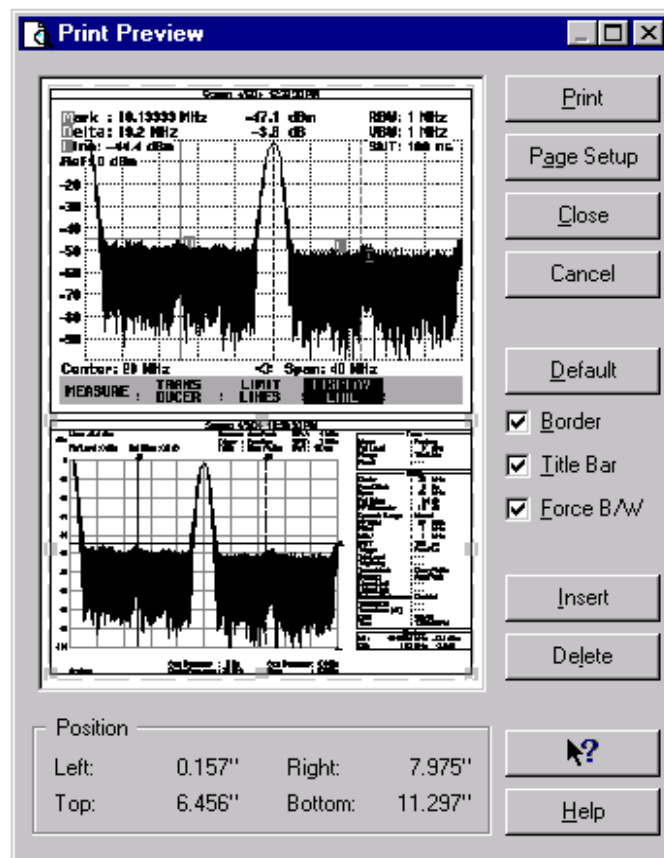
## Printing Multiple Windows on a Page

The Print Preview function enables you to preview a combination of windows on a page before printing.

- 3 Click on the window you want to print.
- 4  Click to preview the window on the page in the Print Preview window.



- 5 Check **Border** to add a border around the active window.
- 6 Check **Title Bar** to add the title of the active window.
- 7 Check **Force B/W** to switch from color to black & white (grey scale).
- 8  Click to add more windows on a page. A dialog box appears allowing you to select another window.



- 9  Click to start printing.

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

## ***Saving to a File***

You can save one window to a file.

- 1 Click on the window you want to save.
- 2  Click to save to file. As a result, the File Save dialog box appears.
- 3 Enter a name for the file in the **File name** box.
- 4 Enter a file extension (file format) in the **Save as type** box.

The following file formats are supported:

- ◆ **BMP, PCX, PNG, WMF** for saving a graphical bitmap of a screen or sweep window
- ◆ **CSV, TXT** for saving numerical sweep data (ASCII)
- ◆ **RSC, RSD, RSF, RSL, RSS, RST, RSU** for saving to Rohde & Schwarz data formats:
  - o **RSC** for Cable models
  - o **RSD** for Datasets (sweep + settings)
  - o **RSF** for Frequency Channel Tables
  - o **RSL** for Limit lines
  - o **RSS** for Sweeps
  - o **RST** for Transducer factors
  - o **RSU** for User-defined measurement standards

- 5  Click to save to file.

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

- 6  Click to open from file. As a result, the File Open dialog box appears.

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