

Products: [RSCOMMANDER – supported devices](#)

# RSCOMMANDER

## Versatile Software Tool for Rohde & Schwarz Instruments

RSCOMMANDER is a versatile software tool for a wide range of Rohde & Schwarz spectrum analyzers, signal generators and network analyzers. It allows for automatic instrument discovery, making hardcopies, reading traces, file transfer and for uploading user correction data for linearization.



## Contents

1	Overview .....	3
2	Software Features .....	3
3	Installing the Software .....	4
4	Connecting the Instruments .....	4
5	Getting Started .....	5
6	Software Description .....	8
	User interface .....	8
	Main menu .....	8
	File .....	8
	Utility functions menu .....	19
	Special Functions menu .....	22
	Window menu .....	24
	Help .....	25
7	Hardware and Software Requirements .....	26
8	Additional Information .....	27
9	List of Supported Instruments .....	27
10	Ordering Information Examples .....	27
	Appendix A – RSCommander.ini .....	28
	Appendix B – VisaDevices.ini .....	28

# 1 Overview

RSCommander is a versatile software tool for a wide range of Rohde & Schwarz instruments. It makes it possible to take screenshots for documentation purposes, read trace data for further processing and upload user correction data to signal generators for linearization. The software also allows for file management and interactive control of the instrument using its remote control commands. RSCommander can automatically detect all Rohde & Schwarz instruments connected via GPIB and LAN interfaces.

R&S® is a registered trademark of Rohde & Schwarz GmbH und Co. KG. The R&S® Spectrum Analyzer FSQ, the R&S® Vector Signal Generator SMU200A and the R&S® Universal Radio Communication Tester CMU200 are referred to as FSQ, SMU and CMU in the remaining application note.

# 2 Software Features

RSCommander features the following:

- Automatic device detection via GPIB and LAN interfaces
- "Look and feel" user interface
- Hardcopy
- Read trace data
- Upload user correction data to signal generators
- File Manager
- Obtain instrument status information
- Interactive control using remote control commands

### 3 Installing the Software

Execute the program **RSCOMMANDER\_X.X.EXE** and select the desired options.

### 4 Connecting the Instruments

RSCOMMANDER supports GPIB and LAN instruments:

- GPIB instruments can be connected to the controller with the traditional daisy chain method

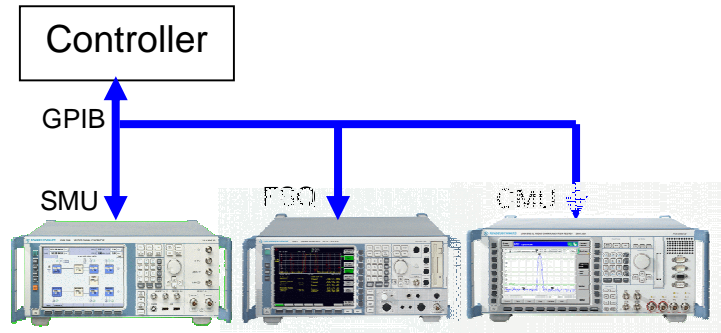


Fig. 1 GPIB instruments

- LAN instruments may be connected to the controller either directly, allowing only one device per Ethernet port,

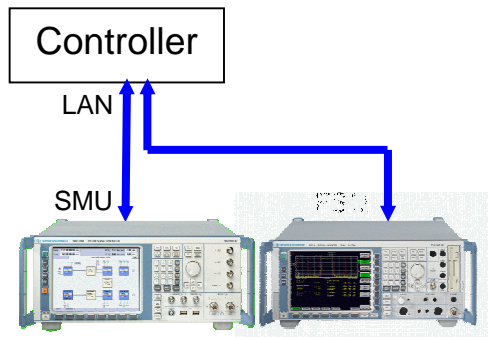


Fig. 2 LAN instruments connected to PC

- or via Ethernet switch/hub, which is optionally connected to a DHCP server (company network)

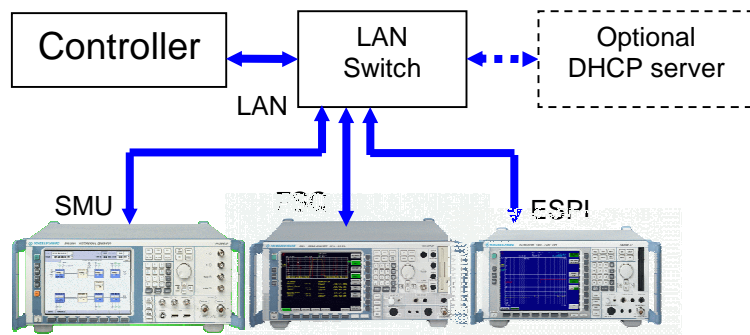


Fig. 3 LAN instruments connected to switch

## 5 Getting Started

This example shows how to make a hardcopy of an FSQ spectrum analyzer and send user correction data to an SMU signal generator. The FSQ is attached to the controller via Ethernet connection, and the SMU is connected with a GPIB cable.

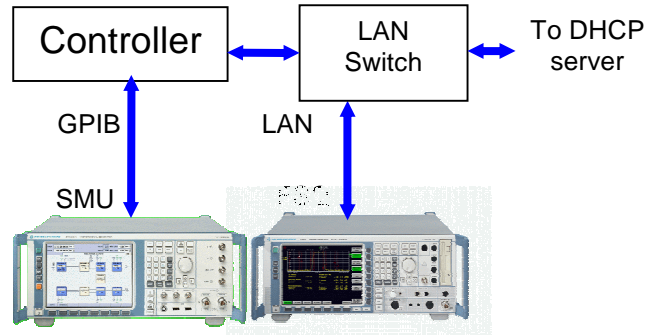


Fig. 4 Example configuration

- Start **RSCOMMANDER** by double-clicking the icon.
- Search for attached GPIB instruments with **FILE** → **REMOTE INTERFACES** → **SCAN**. The SMU will appear in the **DEVICES TO ATTACH** list.
- In the **ADD INSTRUMENT MANUALLY** menu, select **INSTR. NAME** → e.g. **MYFSQ**, **INTERFACE** → **LAN**, **NETWORK ADDRESS** → e.g. **FSQ26-200023** and press **ADD**. The FSQ will appear in the **VISA RESOURCES TO SCAN** list.

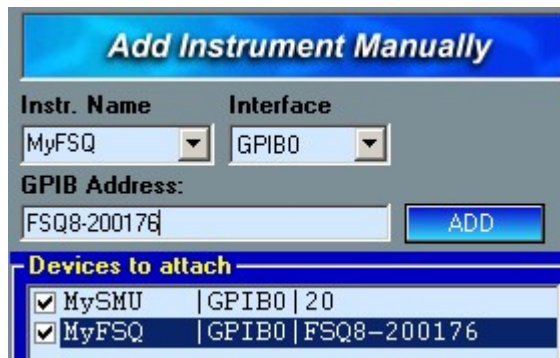


Fig. 5 Adding instruments manually

**Note:** The instrument name can either be selected from the alphabetical list of instruments or can be defined manually (e.g. "MyFSQ")

**Note:** The Network Address can either be the IP address, e.g. 192.168.0.1, or the symbolic name, e.g. FSQ8-200176.

- The instruments are then added to the **SELECTED INSTRUMENT** list by pressing **OK**.
- Choose the FSQ in the **SELECTED LIST** table and press the **HARD-COPY** button.

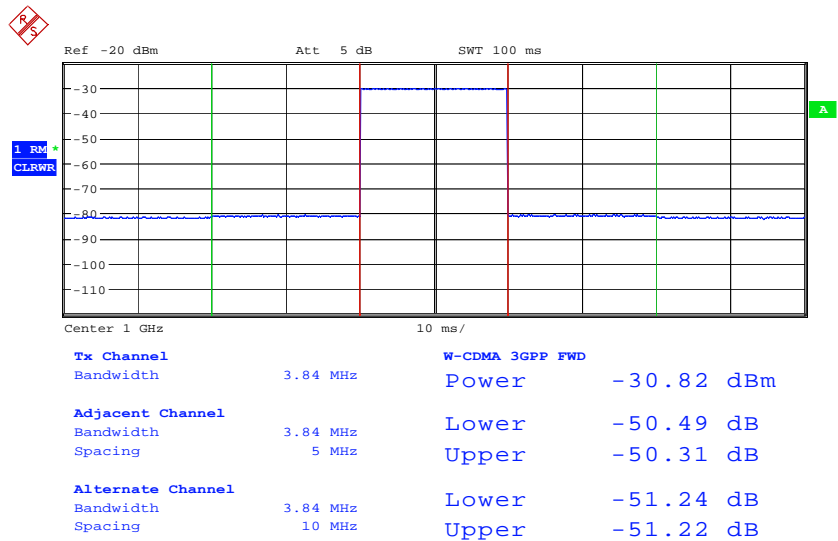


Fig. 6 FSQ hardcopy

- Choose the SMU in the **SELECTED LIST** table.
- In the **FILE → SETTINGS** menu, select the tab **USER CORRECTION** and select the appropriate parameters for the example file **USERCOR.TXT**.

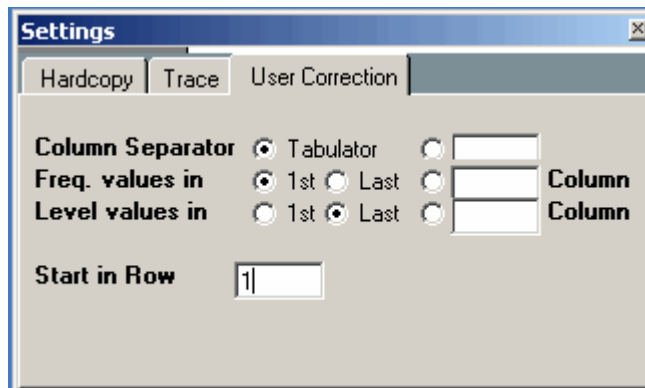
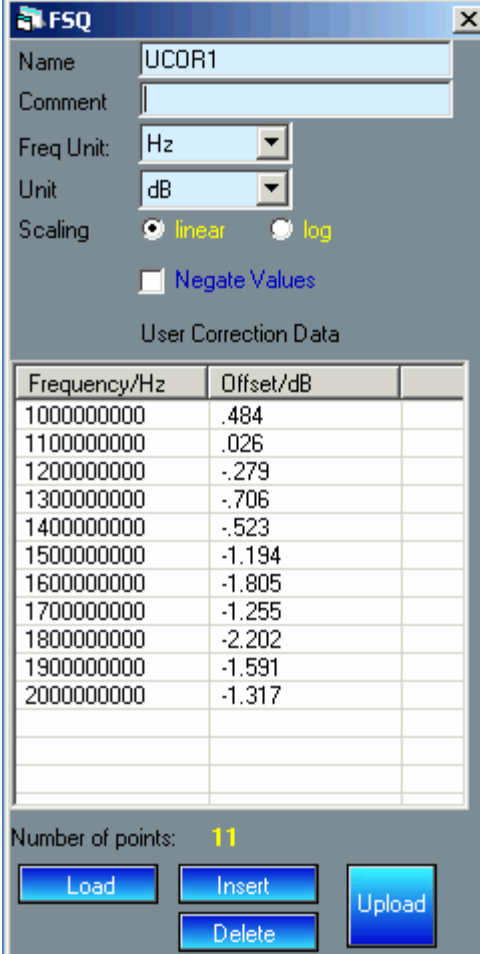


Fig. 7 User correction settings

- Perform **SPECIAL FUNCTIONS → USER CORRECTION**. In the **USER CORRECTION** menu enter a **NAME**, **COMMENT** and press the **LOAD** button.

- In the **SELECT USER CORRECTION** menu, open the file **USERCOR.TXT** containing frequency response example data of an RF cable.



FSQ

Name: UCOR1

Comment:

Freq Unit: Hz

Unit: dB

Scaling:  linear  log

Negate Values

User Correction Data

Frequency/Hz	Offset/dB
1000000000	.484
1100000000	.026
1200000000	-.279
1300000000	-.706
1400000000	-.523
1500000000	-1.194
1600000000	-1.805
1700000000	-1.255
1800000000	-2.202
1900000000	-1.591
2000000000	-1.317

Number of points: 11

Buttons: Load, Insert, Upload, Delete

Fig. 8 User correction data

- Press **UPLOAD** to send the correction data to the active generator.

## 6 Software Description

Double-click the **RSCOMMANDER** icon to start the program. The main screen will appear after a few seconds.

### User interface

#### Main menu

The main menu appears as shown below and features five pull-down menus: **FILE**, **NEW**, **UTILITY FUNCTIONS**, **SPECIAL FUNCTIONS**, **WINDOW** and **HELP**.

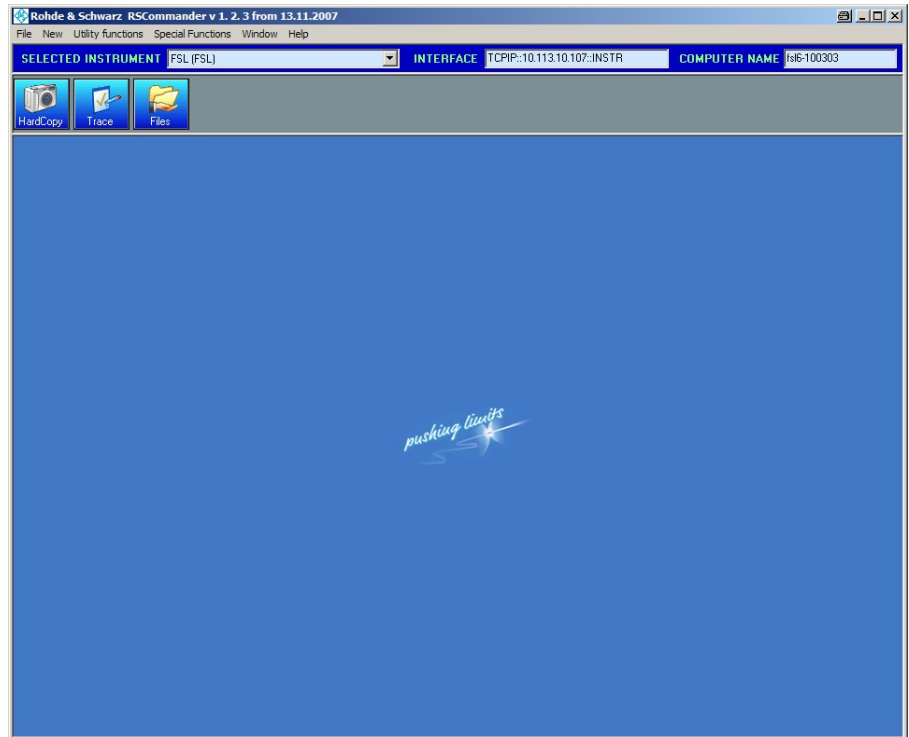


Fig. 9 Main menu

#### File



Fig. 10 File menu

**REMOTE INTERFACES** Dialog box– Allows automatic and manual detection of Rohde & Schwarz instruments connected to GPIB and LAN interfaces. This dialog box has two areas – “Interface Scan” and “Add Instrument Manually”.

#### INTERFACE SCAN:




- **INTERFACE** – Select GPIB0 (default), GPIB1, LAN (subnet) or LAN (any). The GPIB1 board identifier is used for a secondary GPIB board installed in the PC.
- **SCAN** – Scans **GPIB ADDRESS** 0 to 31 on interface **GPIB0**, **GPIB1**, **LAN (subnet)** or **LAN (any)**.



Fig. 11 GPIB Scan

If LAN (subnet) is selected the local subnet is scanned for VXI-11 compatible instruments. Any successfully identified devices are then added to the list of devices in the **INTERFACE SCAN** dialog box.

After the scan procedure has been finished a yellow circle is displayed on the right side of the **Scan** button . Clicking on this icon displays a list of all VXI-11 compatible devices on the subnet. Only devices identified as instruments and having their port for remote control available are however added to the list of devices.

The option **Include RSIB** allows you to find old Windows NT based Devices by including the RSIB Passport Library. RSIB Passport has to be installed on your system. If RSIB Passport is not installed on your System, this option will silently fail.

Warning: This option can dramatically slow down your search process you should only use it if you know that you have such a device.

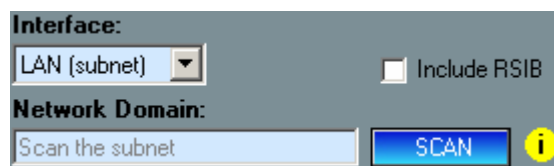


Fig. 12 Fig. 12 LAN (subnet) Scan

In order to scan outside the subnet the **LAN (any)** option can be used. It allows the local address (0 to 255) of a custom network domain (e.g. 192.168.0.) to be searched for R&S instruments.



Fig. 13 LAN (any) Scan

### ADD INSTRUMENT MANUALLY:

- **INSTR. NAME** – Enter a custom name for the instrument, e.g. MyFSQ or choose a predefined one from the pull down menu.
- **INTERFACE** – Select from LAN, GPIB0 or GPIB1.

- **NETWORK ADDRESS** – Enter an IP address or logical name of an instrument, e.g. FSQ8-200176, and press Enter or click on the **ADD** button.

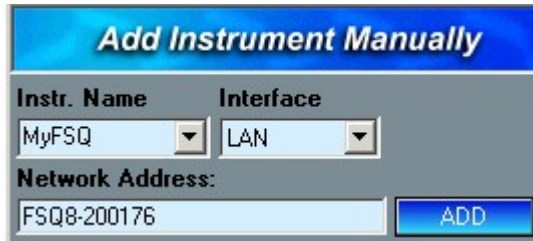


Fig. 14 FSQ LAN

- **GPIB ADDRESS** – Select the primary address (PAD) of an instrument connected to GPIB0 or GPIB1 and press **ADD**.



Fig. 15 FSQ GPIB

After all instruments have been added to the **DEVICES TO ATTACH** list, check the ones you will actually use and press **OK**.

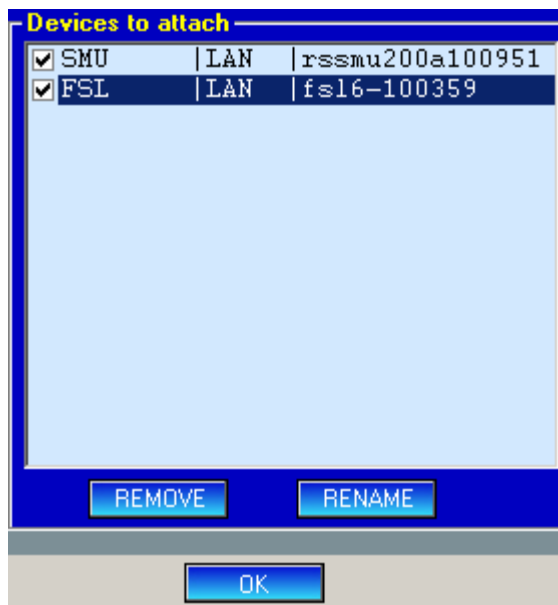


Fig. 16 Scanned VISA resources

The instrument names will appear in the **SELECTED INSTRUMENTS** list. The instrument type is shown in brackets. The **INTERFACE** indicator displays the VISA resource name of the selected instrument. If a LAN device has been added another text box is displayed to the left of the **INTERFACE** indicator, showing the computer name of the device.

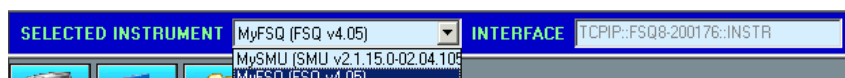


Fig. 17 Selected Instrument

**Note:** If the attempt to add any of the selected devices fails, an error message with the custom name of the device is displayed. The successfully detected devices are added to the instrument list of the software, but the REMOTE INTERFACES dialog box remains opened. The device that is currently unavailable can then either be removed or deselected, so that no further attempt is made to add it.

**SETTINGS** – Opens a configuration window for **HARDCOPY**, **TRACE** and **USER CORRECTION**.

- **HARDCOPY** – Allows to select the **BACKGROUND COLOR** and on a hardcopy event either

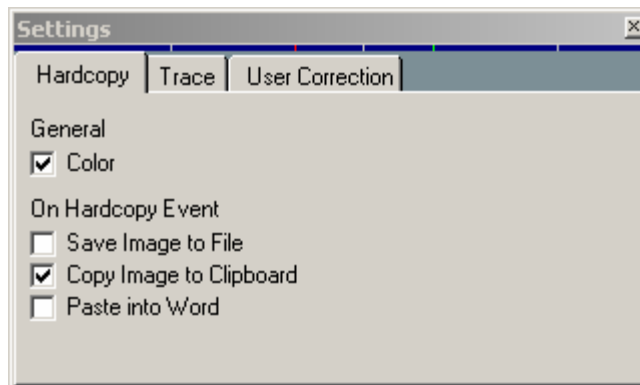


Fig. 18 Hardcopy settings

1. **Color** – Enable/Disable colored hardcopies. This will only work on devices that support colored hardcopies.
  2. **SAVE IMAGE TO FILE** – automatically save the hardcopy image to a file named:  
`<name of the instrument>@yyyy-mm-dd_hr_min_sec.<ext>`.
  3. **COPY IMAGE TO CLIPBOARD** (default) – This is selected by default and copies the image into the clipboard. It can be pasted to any Windows object with Ctrl-V.
  4. **PASTE IMAGE TO WORD** – Automatically copies the image at the cursor position in an open Microsoft Word document.
- **TRACE** – Allows to set the actions on a trace event.

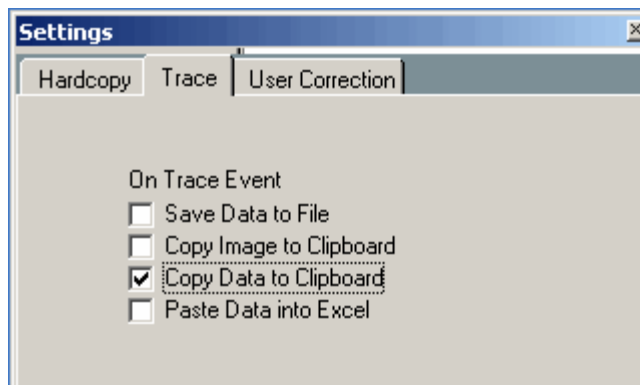


Fig. 19 Trace Settings

1. **SAVE DATA TO FILE** – Save the ASCII data (level vs. frequency or level vs. time) to the file  
`<name of the instrument>@yyyy-mm-dd_hr_min_sec.txt`

2. **COPY IMAGE TO CLIPBOARD** – Copies the graph of the trace data to the clipboard. It can be imported to any document with Ctrl-V.
  3. **COPY TRACE DATA TO CLIPBOARD** (default) – Copies the ASCII data (level vs. frequency or level vs. time) to the clipboard. It can be pasted to any Windows object with Ctrl-V.
  4. **PASTE TRACE DATA INTO EXCEL** – Pastes the trace data into an open Microsoft Excel sheet.
- **USER CORRECTION** – Allows to use custom files by varying the parameters: **COLUMN SEPARATOR**, position of **FREQUENCY** and **LEVEL** values, **START IN ROW**.

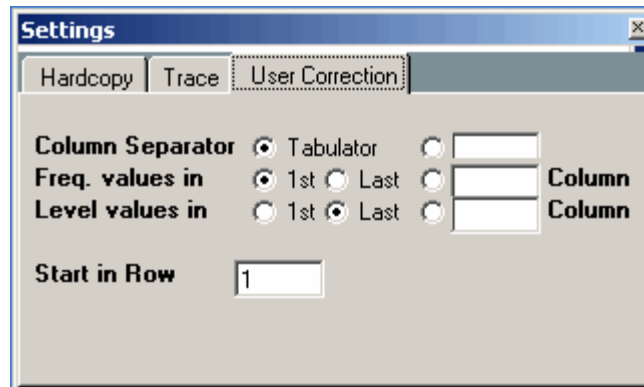


Fig. 20 User correction settings

- **COLUMN SEPARATOR** – Defines the character used for separating the two values, either <Tabulator> or custom one, e.g. <Space>, ‘,’, ‘,’, etc.
- **FREQ. VALUES IN** – Defines which column is used as frequency value. Default: first column.
- **LEVEL VALUES IN** – Defines which column is used as level correction value. Default: Last (usually 2<sup>nd</sup> column).
- **START IN ROW** – Defines which row to start with. This is necessary in case the file has a header.

**Note:** Data files generated by the frequency response measurement program FreRes \*.dat (see Application Note 1MA09) need the following configuration in order to be imported correctly. The columns are separated by a <space>.

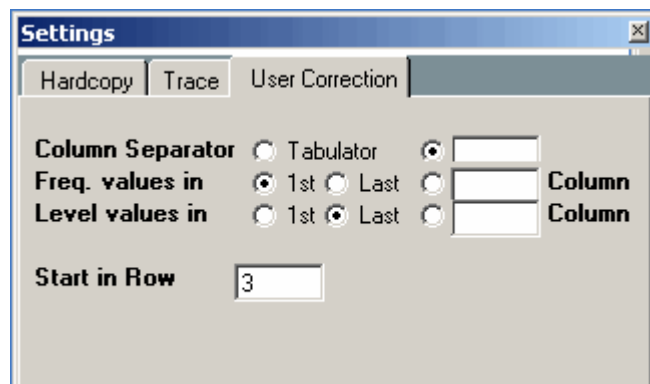


Fig. 21 User correction settings for FreRes

**DIRECTORY FOR SAVING FILES** – User-configurable directory where hardcopy and trace files are saved and user correction files are loaded.

### New

New	Utility functions	Special Functions
Hardcopy...		F2
Trace Display...		F3
File Browser - Instrument...		F5

Fig. 21 New menu

- **HARDCOPY** – Performs a hardcopy of the selected instrument screen and copies the image to the selected destination.

**Note:** If an instrument does not provide WMF, EWMF, BMP or JPG formatted hardcopies, e.g. UPL (PCX), a message appears notifying the user that the standard external viewer will be used.

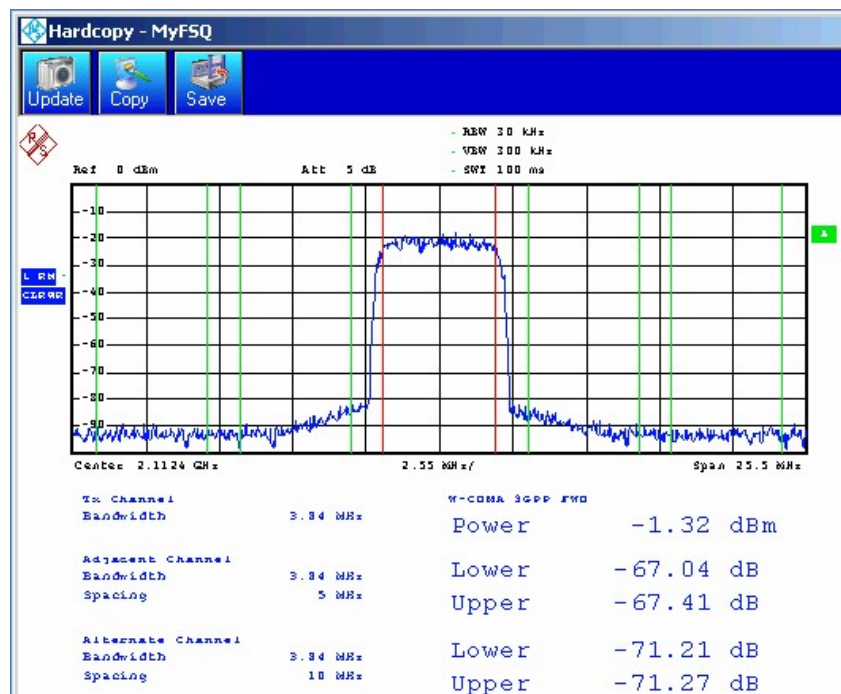


Fig. 22 FSQ Hardcopy

The following functions are available in the hardcopy window :

**UPDATE** – Performs another hardcopy and updates the current window.

**COPY** – Copies the hardcopy to the clipboard, from where it can be pasted into other applications with Ctrl-V.

**SAVE** – Opens a file dialog for saving the \*.wmf file.

**PRINT** – Opens a file dialog for printing the hardcopy.

- **TRACE DISPLAY** – Performs a trace on the selected instrument and returns the data to the selected destination. The data is displayed in a customized graphic.

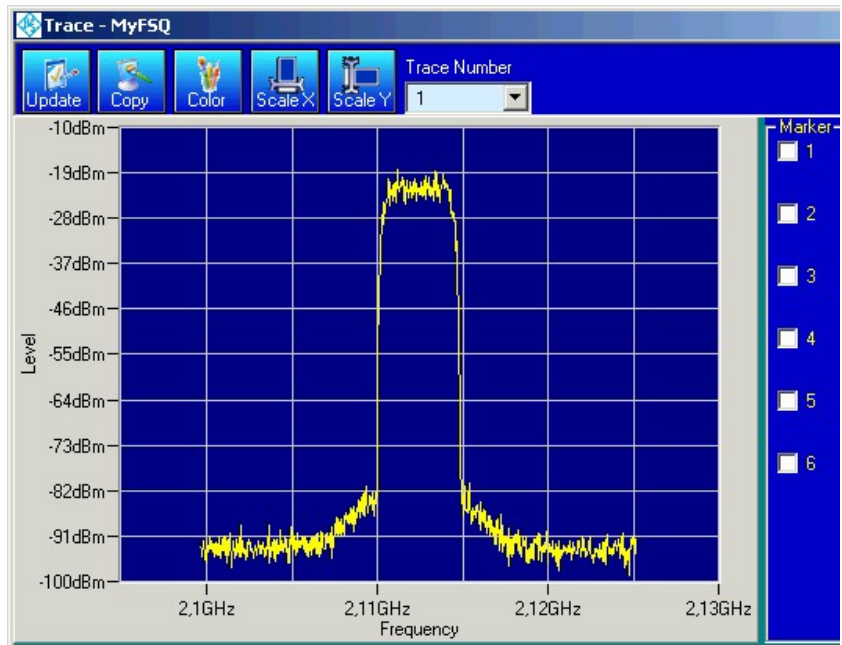


Fig. 22 FSQ trace

The following functions are available in the trace window :

**TRACE NUMBER** – Selects the according trace. An additional trace must be defined on the device manually (see instrument manual for details).

**UPDATE** – Reads the data of the trace number and updates the current window.

**COPY** – Copies the trace data to the clipboard, from where it can be pasted into other applications with Ctrl-V, e.g.:

```
987250000; -97.6549911499023
987290865.384615; -101.38890838623
987331730.769231; -100.270118713379
987372596.153846; -101.440811157227
987413461.538462; -99.4232406616211
987454326.923077; -98.0625915527344
987495192.307692; -97.9781723022461
987536057.692308; -98.2845458984375
987576923.076923; -99.3772201538086
987617788.461538; -98.2349472045898
```

**COLOR** – Selects the desired trace color.

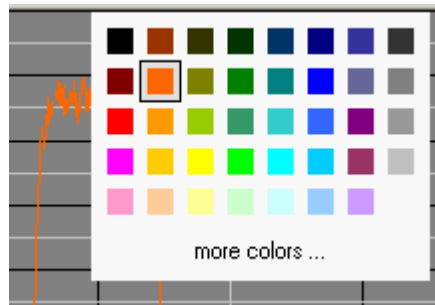


Fig. 23 Trace color

**SCALE X** – Performs an auto scale of the x coordinate.

**SCALE Y** – Performs an auto scale of the y coordinate.

**SAVE** – Opens a dialog box to specify a file name and save the current trace data.

**PRINT** – Opens a dialog for printing the trace graphic.

**MARKER 1..6** – Turns on marker 1 to 6 and displays current position.

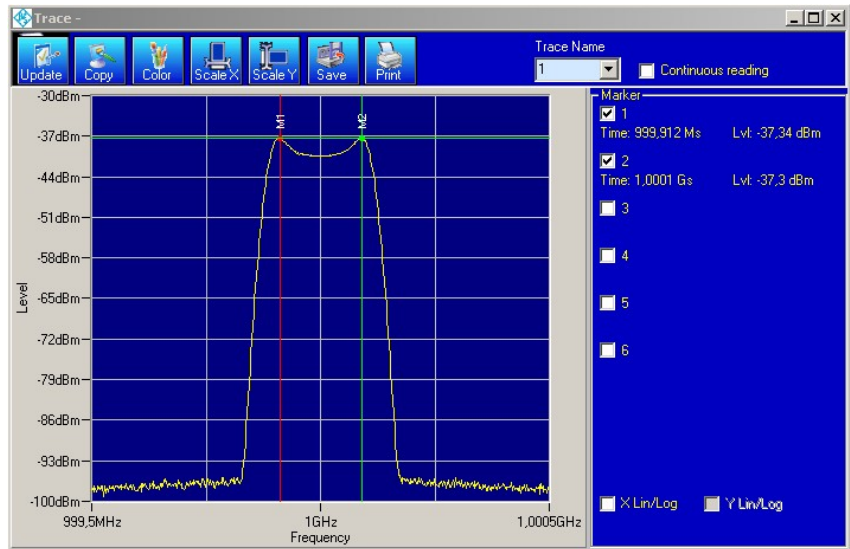


Fig. 24 Trace markers

The X- and Y-Lin/Log checkbox allows you to switch between linear and logarithmic display of both coordinate axis. If one of the axis has already a logarithmic unit like dBm, this option will be disabled for this axis.

Clicking the right mouse button while the mouse cursor is inside the graphics window displays the marker menu.

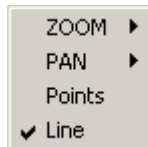


Fig. 25 Marker menu

**ZOOM** – Allows you to zoom in X, Y, XY and reset to original auto scale setting (Zoom out). Select the desired function, e.g. Zoom XY, and mark an area by positioning the mouse cursor at the start point and moving it to the stop point with pressed left mouse button.

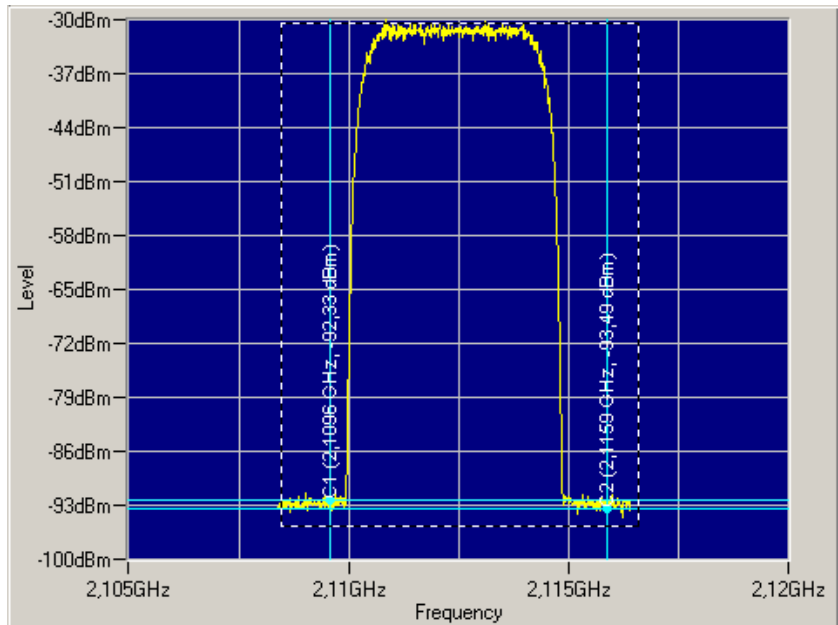


Fig. 26 Selecting the zoom area

After you release the mouse button, the selected area is fitted into the whole graphics window.

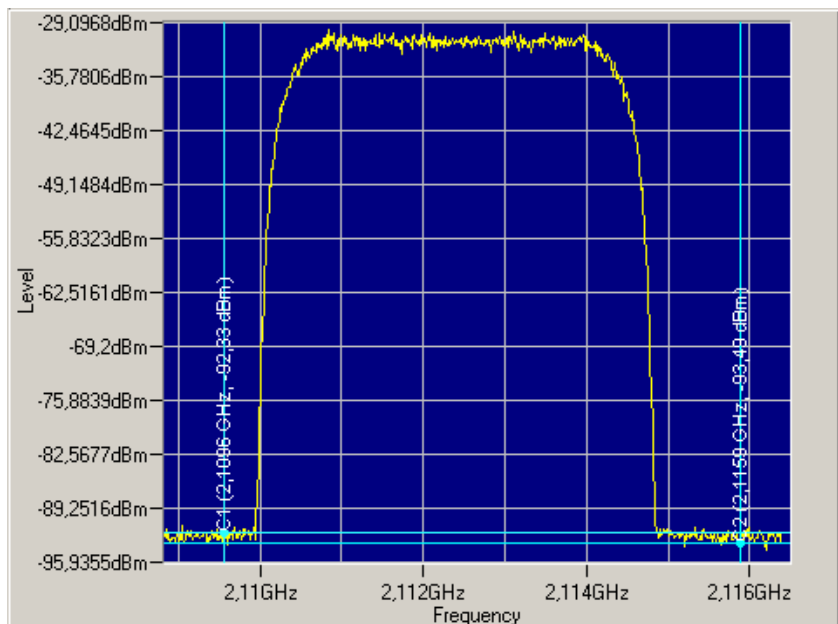


Fig. 27 Zoomed trace

**PAN** – Allows you to move the trace in X, Y or XY direction inside the graphics window with the mouse cursor by pressing the left mouse button.

**POINTS** – Draws points on all measured values.

**LINE** – Connects all measured points with lines when enabled.



- **FILE BROWSER – INSTRUMENT** – Allows you to copy files from the instrument to the PC or vice versa. This function is useful for GPIB instruments. A more effective way to access files on LAN instruments is either via net drive or remote desktop.

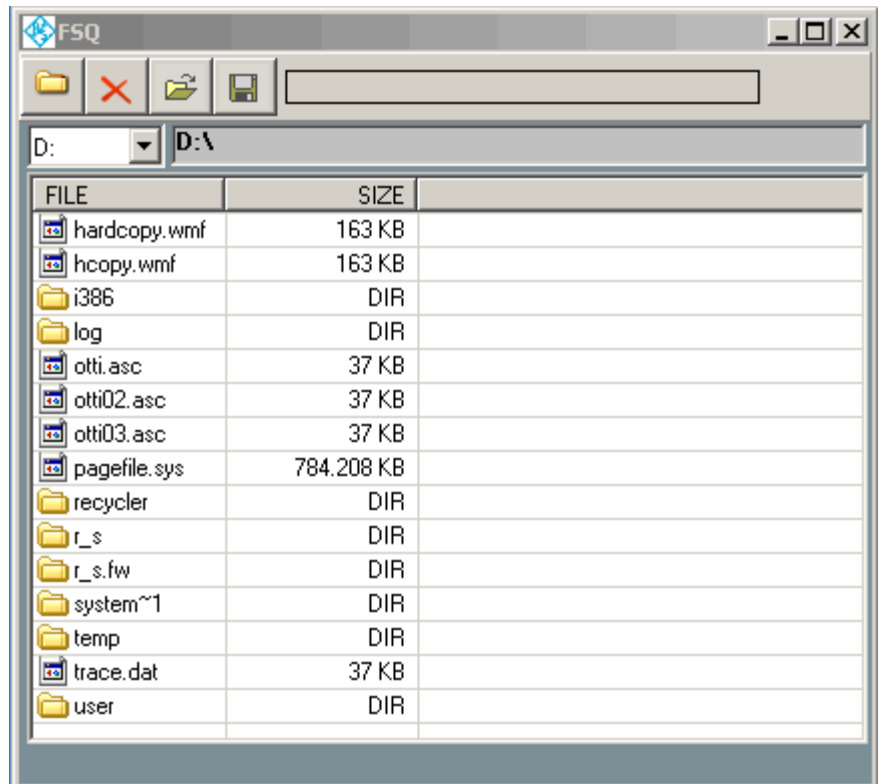


Fig. 28 FSQ file system

The file browser function can also be used for displaying and copying screenshots performed on the instrument itself. The following example shows how to display or copy a screenshot file located on the CMU200.

- Select the CMU as active instrument and press **OK**.

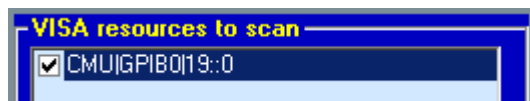


Fig. 29 CMU VISA resource

**Note:** When using a CMU instrument, RSCOMMANDER can only transfer and view hardcopies, which have previously been initiated manually by pressing the PRINT key on the frontpanel of the instrument.

- Press the **FILES** button, <F5> key or select **NEW** → **FILE BROWSER - INSTRUMENT**. Change to the **INT:\USERDATA\PRINT** subdirectory.

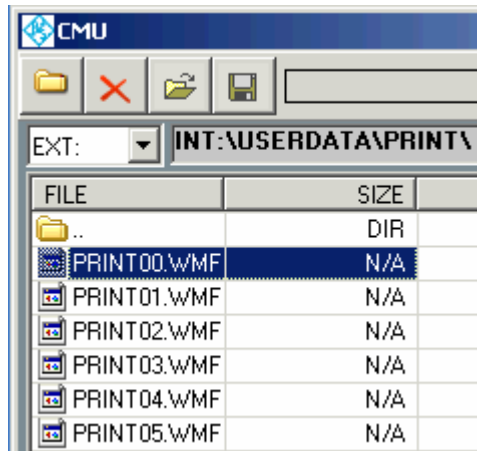


Fig. 30 CMU file system

- Right-click on the preferred file to either **OPEN** with the default windows viewer or transfer and **SAVE TO...** the local harddrive.

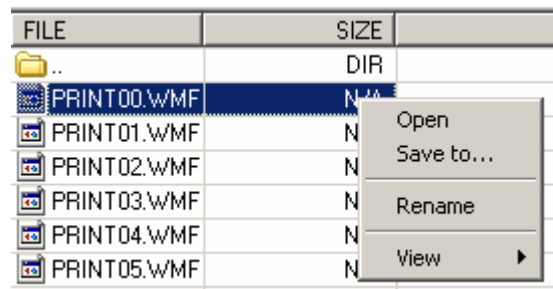


Fig. 31 CMU file view or save

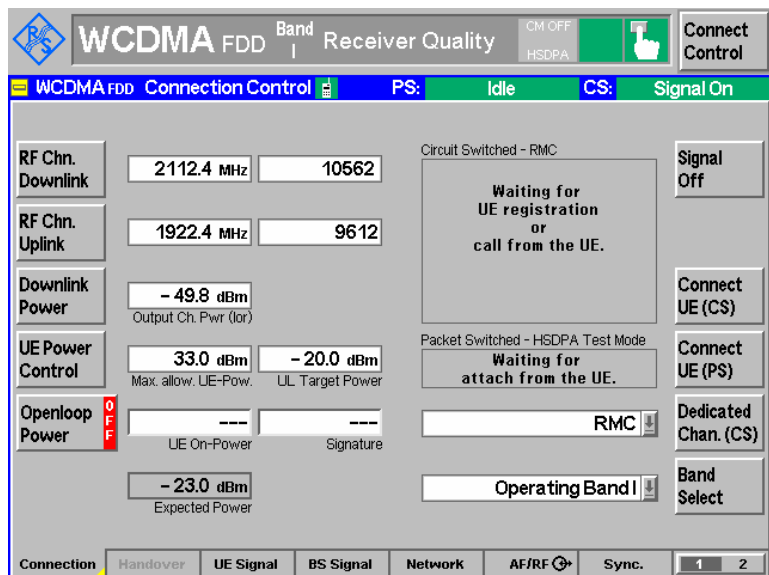


Fig. 32 CMU screenshot

### Utility functions menu

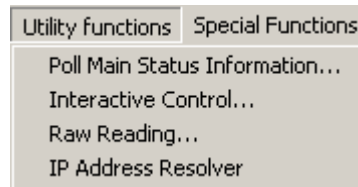


Fig. 33 Utility functions menu

- **POLL STATUS INFORMATION** – Polls and displays the status information, installed options and recent error messages of the active instrument.

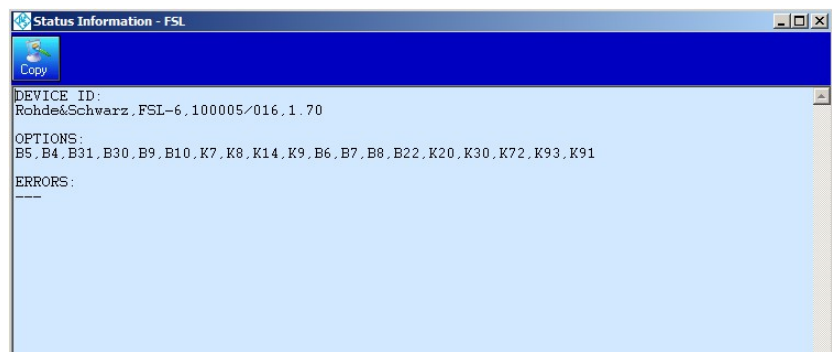


Fig. 34 Polling status information

The firmware revision of the device is the last item of the DEVICE ID string, e.g. 2.1.6.0-02.02.64 beta.

The **Copy** button copies the contents of the box to the clipboard.

- **INTERACTIVE CONTROL** – Allows you to send commands to and receive data from the active instrument.

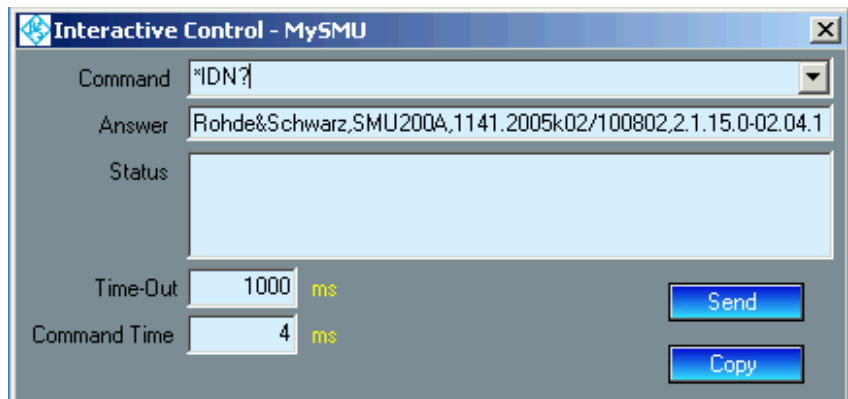


Fig. 35 Interactive control

When a command terminated with a question mark is transferred to the instrument by pressing **SEND**, the answer is automatically read and displayed. With **COPY**, the whole command history and the answers from the instrument are copied to the clipboard.

- **RAW READING** – Copies data of the active instrument to a file. This menu option is useful for reading ASCII or binary data points from an instrument. Usually there are also several commands necessary to configure and trigger a measurement and read the data. Use the **Add** button to add more commands to the list. The results of only the last command are saved into the file. If the whole command-response history is necessary, the **Interactive Control** box can be used. The list of commands is cleared by closing the **Raw Reading** window.

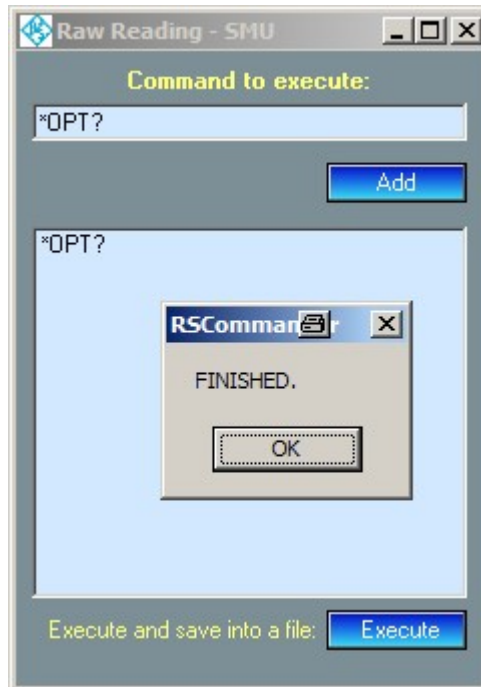


Fig. 36 Raw reading

- **IP ADDRESS RESOLVER** – Helpful utility for resolving the IP address from an instrument name or vice versa. Choose the method of resolving and enter the IP address or computer name into the upper box. Pressing the Enter button or clicking on “Resolve” displays the result in the lower box.

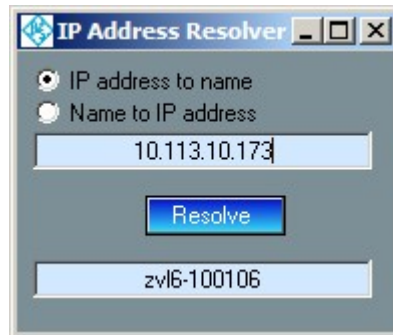


Fig. 37 IP address to name

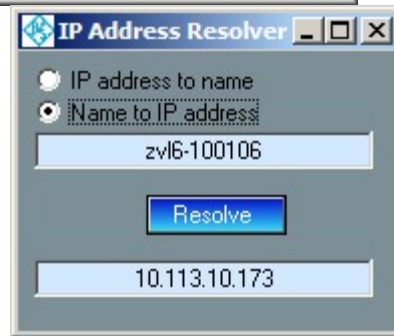


Fig. 38 Name to IP Address

## Special Functions menu

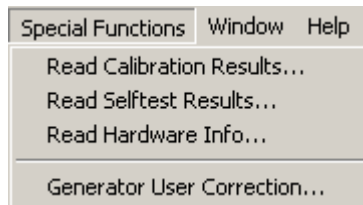


Fig. 39 Special functions

- **Read Calibration Results** – Reads the active instrument's result file of the most recent internal calibration procedure.

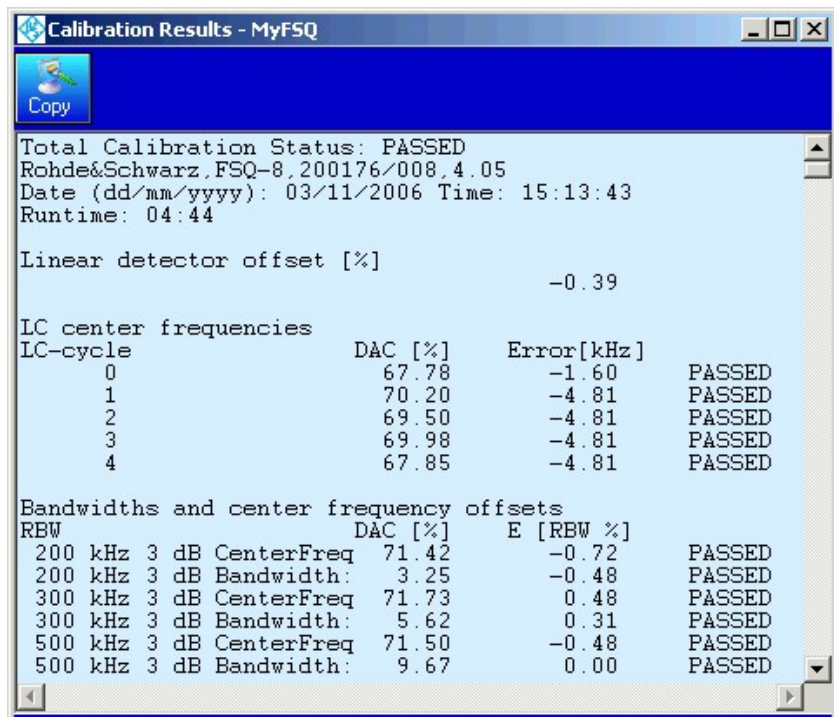
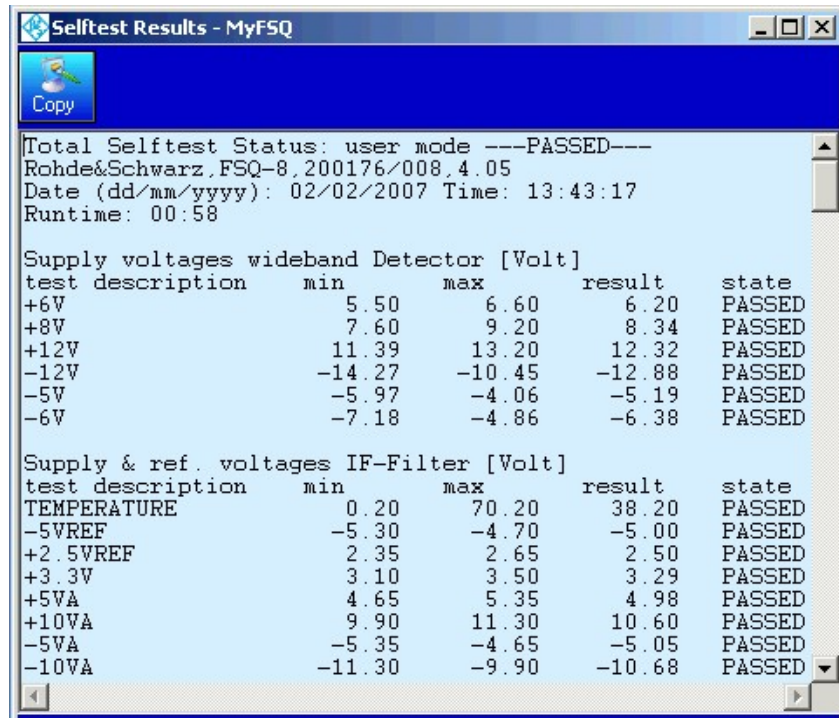


Fig. 40 Calibration results

- **READ SELFTEST RESULTS** – Reads the active instrument's result of its most recent selftest procedure (usually the last power-up).



Selftest Results - MyF5Q

Copy

Total Selftest Status: user mode ---PASSED---  
 Rohde&Schwarz,FSQ-8,200176/008,4.05  
 Date (dd/mm/yyyy): 02/02/2007 Time: 13:43:17  
 Runtime: 00:58

Supply voltages wideband Detector [Volt]

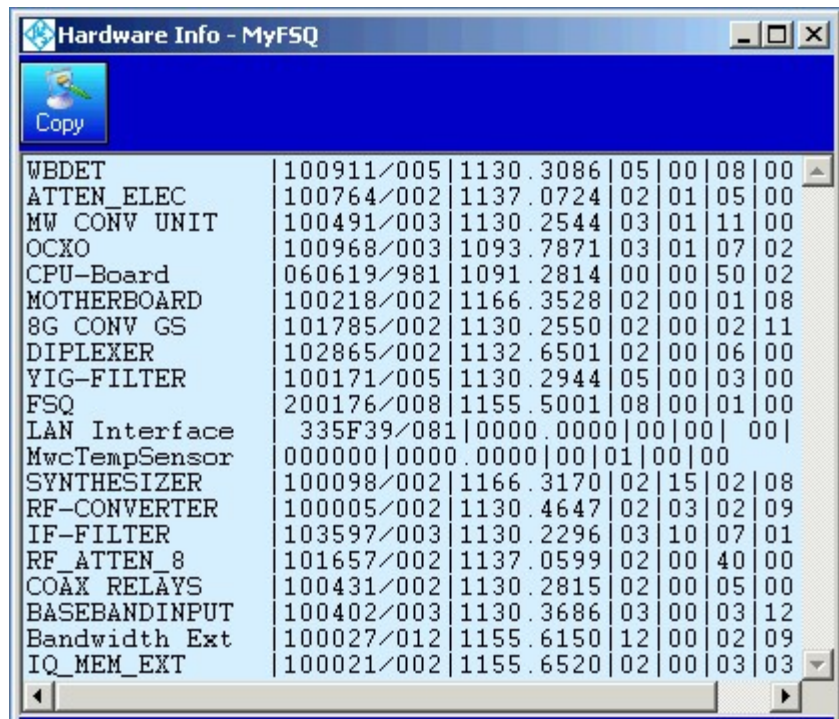
test description	min	max	result	state
+6V	5.50	6.60	6.20	PASSED
+8V	7.60	9.20	8.34	PASSED
+12V	11.39	13.20	12.32	PASSED
-12V	-14.27	-10.45	-12.88	PASSED
-5V	-5.97	-4.06	-5.19	PASSED
-6V	-7.18	-4.86	-6.38	PASSED

Supply & ref. voltages IF-Filter [Volt]

test description	min	max	result	state
TEMPERATURE	0.20	70.20	38.20	PASSED
-5VREF	-5.30	-4.70	-5.00	PASSED
+2.5VREF	2.35	2.65	2.50	PASSED
+3.3V	3.10	3.50	3.29	PASSED
+5VA	4.65	5.35	4.98	PASSED
+10VA	9.90	11.30	10.60	PASSED
-5VA	-5.35	-4.65	-5.05	PASSED
-10VA	-11.30	-9.90	-10.68	PASSED

Fig. 41 Selftest results

- **READ HARDWARE INFO** – Reads the active instrument's information on hardware options and revisions.



Hardware Info - MyF5Q

Copy

WBDET	100911/005	1130.3086	05	00	08	00
ATTEN_ELEC	100764/002	1137.0724	02	01	05	00
MW_CONV_UNIT	100491/003	1130.2544	03	01	11	00
OCXO	100968/003	1093.7871	03	01	07	02
CPU-Board	060619/981	1091.2814	00	00	50	02
MOTHERBOARD	100218/002	1166.3528	02	00	01	08
8G_CONV_GS	101785/002	1130.2550	02	00	02	11
DIPLEXER	102865/002	1132.6501	02	00	06	00
YIG-FILTER	100171/005	1130.2944	05	00	03	00
FSQ	200176/008	1155.5001	08	00	01	00
LAN Interface	335F39/081	00000.0000	00	00	00	00
MwcTempSensor	000000/0000	0000.0000	00	01	00	00
SYNTHESIZER	100098/002	1166.3170	02	15	02	08
RF-CONVERTER	100005/002	1130.4647	02	03	02	09
IF-FILTER	103597/003	1130.2296	03	10	07	01
RF_ATTEN_8	101657/002	1137.0599	02	00	40	00
COAX_RELAYS	100431/002	1130.2815	02	00	05	00
BASEBANDINPUT	100402/003	1130.3686	03	00	03	12
Bandwidth Ext	100027/012	1155.6150	12	00	02	09
IQ_MEM_EXT	100021/002	1155.6520	02	00	03	03

Fig. 42 Hardware info

## Window menu

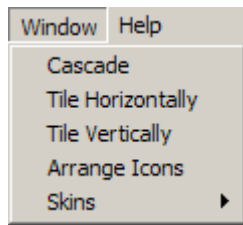


Fig. 43 Window menu

The Window menu allows you to customize the RSC Commander user interface.

- **CASCADE** – The windows are cascaded.

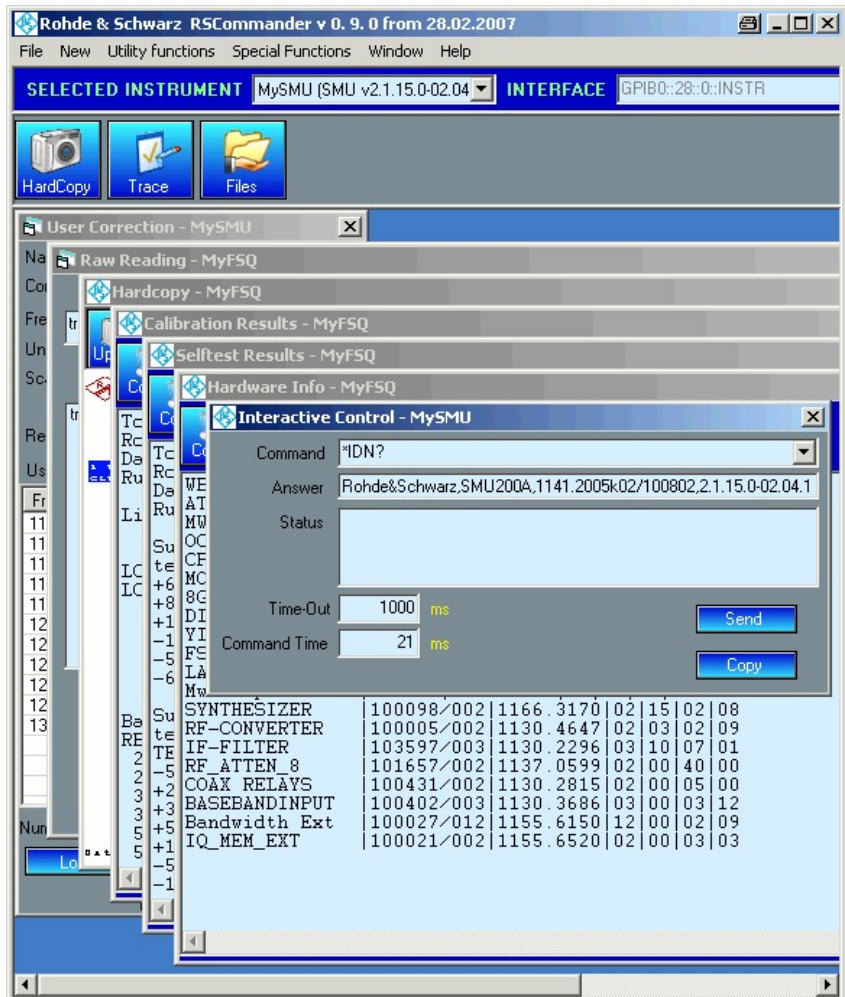


Fig. 44 Cascaded windows



- **TILE HORIZONTALLY** – Full view of all windows, which are resized to fit the screen.

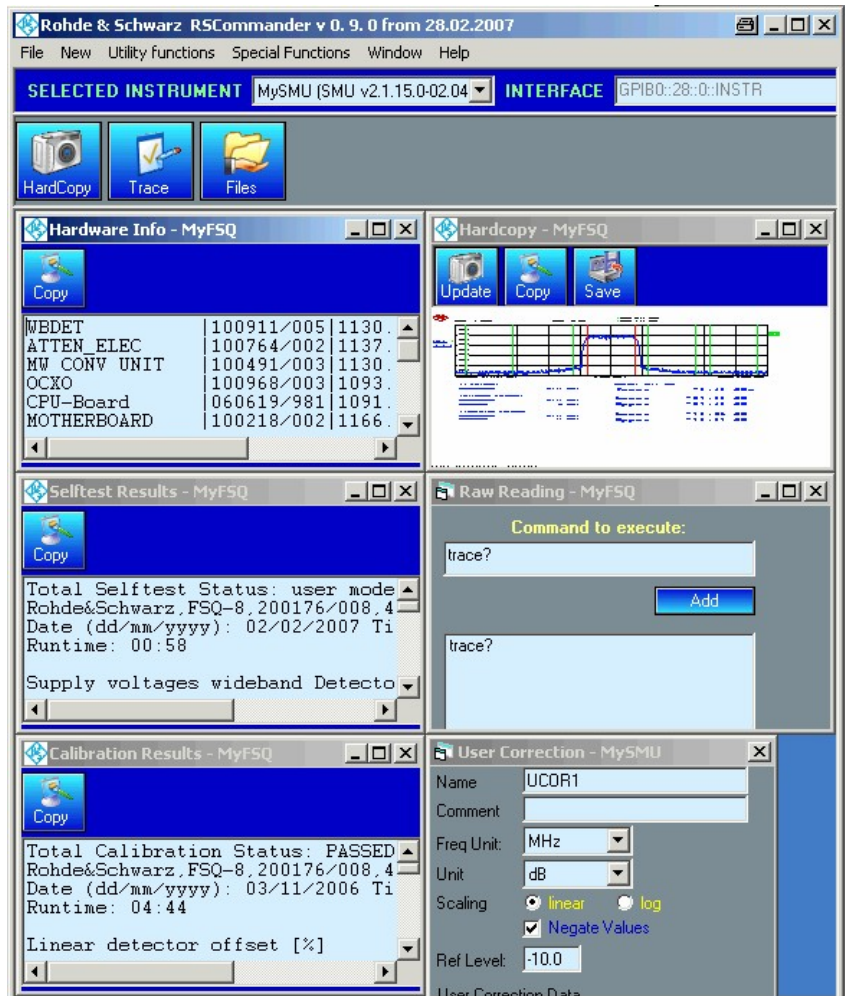


Fig. 45 Horizontally tiled windows

- **TILE VERTICALLY** – Full view of all windows, which are resized to fit the screen.
- **ARRANGE ICONS** – Arranges icons for better readability.
- **SKINS** – Selects from three different skins.

## Help

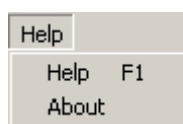


Fig. 46 Help menu

- **HELP** – Opens the online help, displaying the list of contents.
- **ABOUT** – Displays information about the program version.

## 7 Hardware and Software Requirements

The minimum requirements for running RSCommander are:

- PC with Pentium II 500 MHz processor or higher, 256 MB RAM, 100 MB free hard disk space, XGA monitor (1024x768), LAN interface and Windows 2000 / XP / Vista operating system.
- Optional National Instruments (NI) or Agilent GPIB controller.

Since RSCommander supports Rohde & Schwarz instruments with various interfaces (GPIB and LAN), the appropriate driver software must be installed first. The following table shows which software must be installed when using devices with certain interfaces (👍).

	NI-GPIB v3.x	NI-VISA v4.x	Agilent I/O Library M01.01	RSIB-Passport v1.4
Rohde & Schwarz instrument and NI-GPIB controller	👍	👍		
Rohde & Schwarz instrument and Agilent GPIB controller			👍	
Rohde & Schwarz instrument and LAN interface		👍		
Rohde & Schwarz instrument with Windows/NT OS and LAN interface				👍

A software driver needs to be installed only once and not separately for each device.

- If you are using a National Instruments GPIB controller (AT-GPIB, PCI-GPIB or PCMCIA-GPIB), the NI-VISA runtime version is free of charge. If no NI hardware or software (LabWindows/CVI or LabVIEW) is installed but you need NI-VISA for LAN control, please observe National Instruments licensing regulations (see <http://www.ni.com> for details).
- If you are using an Agilent GPIB controller, you only need the Agilent I/O Library M01.01 (or higher), which may be obtained at <http://www.agilent.com>.

**Note:** Older instruments with Windows NT OS cannot be upgraded to VXI-11 compatibility and require the controlling PC to have [RSIB-Passport](#) installed (application note [1EF47](#)). Scan LAN will discover such devices if the “Include RSIB” option is active (see section 6) and RSIB Passport is installed.

## 8 Additional Information

Please contact **TM-Applications@rsd.rohde-schwarz.com** for comments and further suggestions.

## 9 List of Supported Instruments

A list of the supported instruments is available at:

<http://www.rohde-schwarz.com/appnote/1ma74>

## 10 Ordering Information Examples

The following list gives only some examples for ordering information. Please contact your local sales office for details.

### Signal generator

R&S® SMU200A	(100 kHz to 6 GHz)	1141.2005.02
R&S® SMA100A	(9 kHz to 3 GHz)	1400.0000.02
R&S® SMLxx	(9 kHz to 3.3 GHz)	1090.3000.xx
R&S® SMV03	(9 kHz to 3.3 GHz)	1147.7509.13
R&S® SMJ100A	(100 kHz to 6 GHz)	1403.4507.02

### Microwave generator

R&S® SMF100A	(1 GHz to 44 GHz)	1167.0000.02
R&S® SMRxx	(1GHz to 40 GHz)	1104.0002.xx
R&S® SMRxx	(1GHz to 60 GHz)	1134.9008.xx

### Test receiver

R&S® ESCI	(9 kHz to 3 GHz)	1166.5950.03
R&S® ESIBxx	(20 Hz to 40 GHz)	1088.7490.xx
R&S® ESPIxx	(9 kHz to 7 GHz)	1142.8007.xx
R&S® FSMRxx	(20 Hz to 50 GHz)	1166.3311.xx
R&S® ESUxx	(20 Hz to 40.0 GHz)	1302.6005.xx

### Spectrum analyzer

R&S® FSPxx	(9 kHz to 40 GHz)	1164.4391.xx
R&S® FSUxx	(20 Hz to 26.5 GHz)	1129.9003.xx
R&S® FSQxx	(20 Hz to 26 GHz)	1155.5001.xx
R&S® FSL6	(9 kHz to 6 GHz)	1300.2502.16
R&S® FSUPxx	(20 Hz to 50.0 GHz)	1166.3505.xx

### Network analyzer

R&S® ZVAxx	(300 kHz to 40 GHz)	1145.1110.xx
R&S® ZVBxx	(300 kHz to 20 GHz)	1145.1010.xx
R&S® ZVT8	(300 kHz to 20 GHz)	1300.0000.08

### Communication Tester

R&S® CMU200	Univ. Radio Communic. Tester	1100.0008.xx
R&S® CBT	Bluetooth Tester	1153.9000.35

### Audio Analyzer

R&S® UPV	Audio Analyzer	1146.2003.02
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## Appendix A – RSCommander.ini

The file RSCommander.ini contains data about the resource strings of the instruments that have previously been used within the program. This file will be created upon the first program startup. To reset the settings of RSCommander simply remove this file from your hard drive.

The RSCommander.ini from version 1.4 is incompatible to former versions. Please refrain from using an old version of this file.

It is possible to add a section to the RSCommander.ini called [ESCAPESEQS]. Computer names starting with strings defined in this block shall be skipped during the scan procedure for autodiscovery of instruments connected to the LAN. If any workstations on the LAN are significantly slowing down the scan procedure they can be entered in this list to improve the performance of the scan.

Example:

```
[ESCAPESEQS]
VAL1 = "XYZ"
VAL2 = "YZX"
```

These entries avoid scanning of workstations with computer names starting with "XYZ" or "YZX".

## Appendix B – VisaDevices.ini

The file VisaDevices.ini contains all currently supported devices and their features. Normally, no changes to this file are required.

The section [MASTERDEVICES] contains all currently supported master devices. As most masterdevices require specific code, adding new master devices is not possible to users.

The section [MAPPINGS] contains all mapped devices. If a device is mapped to a master device RSCommader will treat it like it is of the master device's type. This only works on compatible devices.

The section [FUNCTIONS] contains the individual features of the master devices.



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*This Application Note and the supplied programs may only be used subject to the conditions of use set forth in the download area of the Rohde & Schwarz website.*