



ROHDE & SCHWARZ

Test and Measurement
Division

Release Notes

Firmware Release 1.71

with Service Pack 1

for FSU Spectrum Analyzers

New Features:

- Support for Multi Carrier Channel Power measurements
- Linear dB scaling
- Support for Agilent 8566A/8568A GPIB command sets (see "Problems eliminated with Service Pack 1")
- Support for option Trigger Port FSP-B28
- Extended # of frequency points (200 now!) with function SENSE:LIST
- Improved accuracy for CCDF and APD measurements
- Improved sweep speed for frequencies > 3.6 GHz and RBW < 300 kHz
- Full screen ACP display now also available via remote control
- Improved option license key handling for demo units

Release Note Revision: 3

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History

Date	Rel Note Rev	Changes
01. Nov 2002	1	First revision for V1.71
22.Nov 2002	2	Known problems added: - GPIB Language selection - ID-command
12.Dec 2002	3	Problems Eliminated with Service Pack 1 added

General Topics

Firmware Update

Generation of the update disk set

The files needed for the firmware update are grouped according to the disk contents:

Disk 1:	disk1.bin	(self-extracting ZIP file; needs to be renamed to disk1.exe before unpacking)
Disk 2:	data2.cab	(packed contents of disk 2, will be automatically unpacked by FW update)
Disk 3:	data3.cab	(packed contents of disk 3, will be automatically unpacked by FW update)
Disk 4:	data4.cab	(packed contents of disk 4, will be automatically unpacked by FW update)
Disk 5:	data5.cab	(packed contents of disk 5, will be automatically unpacked by FW update)
Disk 6:	data6.cab	(packed contents of disk 6, will be automatically unpacked by FW update)

The contents of disk 1 are packed in a self-extracting ZIP file and need to be unzipped. For this purpose the following steps are necessary:

1. Create a temporary directory on your local PC (e.g. FSUTEMP on drive C:)
2. Copy disk1.bin into that directory and rename it to disk1.exe
3. Execute disk1.exe. Under Windows 95/98/NT this is done best using the following sequence:
 <CTRL><ESC> - RUN – C:\FSUTEMP\DISK1 - <ENTER>
 or
 <CTRL><ESC> - AUSFÜHREN – C:\FSUTEMP\DISK1 - <ENTER> for a German Windows version.
 The files will be unzipped.

4. Delete disk1.exe from the temporary directory.
 The temporary directory will now contain the following files:

inst32i.ex	_isdel.exe	_setup.dll	_sys1.cab	_user1.cab
Data.tag	data1.cab	lang.dat	layout.bin	os.dat
Setup.exe	Setup.ini	setup.ins	setup.lid	

Please make sure that all the filenames are spelt correctly on your disks before you try to use them for the firmware update. Especially the trailing underscore ('_') as used in _inst32i.ex_ is essential for correct operation of the update program.

5. Copy the contents of the temporary directory onto update disk #1.

The contents of the other 4 disks are already packed in the format required by the firmware update program and need no further processing. The files only need to be copied onto disks #2 to #5, the number in the filename indicating the corresponding disk number (data2.cab => disk #2 etc).

Performing the firmware update on the instrument

The firmware update process via floppy disk is performed in the following steps:

- Ø Switch the instrument on and wait until the Analyzer has resumed operation.
- Ø Press SETUP → NEXT → FIRMWARE UPDATE
- Ø Confirm the query "Do you really want to update the firmware?" with OK
- Ø Insert update disk #1 to #6 as requested
- Ø The instrument will perform several automatic shutdowns, until the new firmware is installed properly.
Do not switch the instrument off until the update process has been finished completely.

After switching on the instrument for the first time after a successful firmware update, the following system message might occur once:

System Message
CDS: Error...

In this case the unit needs to be switched off and on again. This system message does not appear again during further power-on cycles.

Note: *If the unit is not restarted as described, system error correction data (CAL TOTAL) of a later date will be lost when switching the unit on again.*

Firmware installation of the FS-K7 FM demodulator software

The FS-K7 FM demodulator software package is included in the basic instrument firmware. It therefore needs no separate firmware update procedure.

Enabling the option via option key code entry

For activation of the FS-K7 a license key for validation must be entered. The license key is printed either on a label on the rear panel of the FSU or delivered as a part of the FS-K7 option package. The key sequence for entering the license key is:

SETUP - GENERAL SETUP – OPTIONS - INSTALL OPTION

Use the numeric keypad to input the option key number and press ENTER.

Ø On a successful validation the message 'option key valid' will appear.

Ø If the validation failed, the option software is not installed.

The most probable reason will be that the instrument is not equipped with firmware version 1.30 or higher.

Firmware Installation of the R&S FS-K8 BLUETOOTH Analyzer software

The R&S FS-K8 BLUETOOTH application software package is included in the basic instrument firmware. It therefore needs no separate firmware update procedure.

Enabling the option via option key code entry

For activation of the R&S FS-K8 a license key for validation must be entered. The license key is printed either on a label on the rear panel of the R&S FSP or delivered as a part of the R&S FS-K8 option package.

The key sequence for entering the license key is:

SETUP - GENERAL SETUP – OPTIONS - INSTALL OPTION

Use the numeric keypad to input the option key number and press ENTER.

Ø On a successful validation the message 'option key valid' will appear.

Ø If the validation failed, the option software is not installed.

The most probable reason will be that the instrument is not equipped with firmware version 1.50 or higher.

Compatibility to other Firmware Option Packages

FSU V1.71 is compatible to the following firmware option releases:

R&S FS-K5	R&S FS-K72	R&S FS-K73	R&S FS-K82
1.10	1.12	1.12	1.12

Modified Functions

The following modifications to functions released in earlier firmware versions are included in version 1.71:

1. Modified Marker and Deltamarker response with function RANGE LINEAR %

If function RANGE LINEAR % is active the level unit of the marker readout will be according to the selection in the UNITS submenu. Deltamarker amplitude values will be displayed in % related to the power / voltage / current of marker 1, depending on the selected amplitude unit.

2. Modified softkey menu MKR->

The functions NEXT PEAK, NEXT PEAK LEFT, NEXT PEAK RIGHT, NEXT MIN, NEXT MIN LEFT, NEXT MIN RIGHT were re-ordered for easier operation.

3. Additional softkeys for menu FILE

The softkeys ASCII FILE EXPORT and DECIMAL SEP were added to the FILE - NEXT menu for easier operation.

4. Trigger line remains on screen after leaving the TRIG menu

The line indicating the trigger level for active video trigger is preserved on the screen even if the trigger menu is abandoned.

5. Selected trace is marked by inverse color of the trace status indicator field

The trace selected by softkey SELECT TRACE in the TRACE menu is marked by inverting the color of its status indicator on the left side of the diagram.

Problems Eliminated

The version numbers in brackets indicate the version in which the problem was observed for the first time.

Manual Operation

1. (V1.61) Incorrect characteristics of TD-SCDMA channel filter

The filter specification of the channel filter for TD-SCDMA was not according to the standard.

2. (V1.41) TOI measurement does not take RefLvl Offset into account

A reference level offset other than 0dB was not taken into account in the TOI measurement results.

3. (V1.61) ACP limits do not handle RefLvl Offset correctly

Entering an ACP limit with an active reference level offset \neq 0 dB leads to wrong limit check results during ACP measurements.

4. (V1.21) Selecting TRACE VIEW restarts the sweep counter

Selecting TRACE VIEW with a sweep count \neq 0 restarts the counting mechanism, although the trace display is frozen.

5. (V1.41) Option B4 (OCXO) reports REFERENCE UNLOCKED rather than OVEN COLD during its warmup phase

6. (V1.51) Recall of active Bluetooth measurements doesn't work if option K7 (FM Demodulator) is not present

The recall of Bluetooth measurement setups failed if the option FM demodulator was not installed on the instrument.

7. (V1.61) Display Lines do not work properly with active tracking generator normalization

8. (V1.61) Signal dropout with option B10 (external generator control) and SMP

A signal dropout might occur at specific frequencies with the above configuration.

9. (V1.61) Datasets saved with V1.51 cannot be recalled

The instrument refuses to recall datasets generated with firmware version 1.51 with the following error message: "Invalid file format".

10. (V1.61) Frequency range limits with FSU26, option FSU-B23 and electronic attenuation

On instruments equipped with option B23 (20 dB Preamplifier up to 26.5 GHz) the frequency range is not automatically limited to 3.6 GHz as soon as the electronic attenuation is switched on. The resulting instrument settings will lead to incorrect level values on the display for frequencies > 3.6 GHz.

IEC/IEEE Bus**1. (V1.41) Missing GPIB commands for Limit Line x-axis spacing**

The commands for selection of the x-axis spacing was missing. For details please refer to the supplements to the operating manual.

2. (V1.61) *OPT? does not report presence of options FSU-B12 and FSU-B23

The above options were not present in the *OPT? response string even if the options were present in the instrument.

Problems Eliminated with Service Pack 1

Service Pack 1 fixes a number of problems included in the first release of version 1.71.

Instruments shipped with this release note edition included have service pack 1 already installed.

Manual Operation**1. (V1.71) Transducer state not restored on recall**

After a recall of a data set with an active transducer the transducer was not in its original state as stored in the save/recall dataset.

2. (V1.71) GPIB language selection "SCPI" is not marked in selection list

If the GPIB language "SCPI" is selected in the corresponding selection list, the corresponding line is not marked when the list box is opened next time. "SCPI" is nevertheless activated.

3. (V1.71) GPIB language selection "8566A"/"8566B"/"8568A"/"8568B"/"8594E" is not restored during system startup

If a GPIB language other than "SCPI" is selected before the instrument is switched off, the corresponding language will not be restored after the system has booted the next time, although the correct selection is displayed in the selection list. "SCPI" will be selected instead internally.

IEC/IEEE Bus**1. (V1.71) SYSTem:LANGuage "8566A"/"8566B"/"8568A"/"8568B"/"8594E" selection is not restored on system startup**

If a GPIB language other than "SCPI" is selected before the instrument is switched off, the corresponding language will not be restored after the system has booted the next time, although the correct selection is displayed in the selection list. "SCPI" will be selected instead internally.

2. (V1.71) Command "ID" will always return "8566A"

Command ID will always return "8566A", no matter which GPIB language is selected or which user defined identification string was entered.

3. (V1.71) Command "ID?" does not work

The query form of the command ID will return a syntax error.

4. (V1.71) Response formats are not conforming to the GPIB language selection "8566A"/"8566B"/"8568A"/"8568B"/"8594E"

If a GPIB language other than "SCPI" is selected the data returned on GPIB queries are not in a compatible data format.

Known Problems

none

Modifications to the Operating Manual

The order numbers for the current manual sets are

- 1129.9055.11-02 (German) and
- 1129.9055.12-02 (English).

The corresponding PDF-Files are separately available on the service board.

Modifications to the operating manual are included in an extra document "Supplement to the Operating Manual" shipped with new instruments and available on GLORIS and our web page.

The firmware options FS-Kxx come with their own operating manual and release notes. Please refer to the corresponding release notes for more information on changes to these packages.

Last minute changes to the operating manual

none

Appendix: Contact to our hotline

Any questions and ideas concerning the instrument are welcome to our hotline:

Phone : ++49-1805-124242
FAX : ++49-89-4129-13777
e-mail : CustomerSupport@rsd.rohde-schwarz.com