ROHDE&SCHWARZ

Test and Measurement
Division

Release Notes

Firmware Release 4.36 SP3

for R&S FSMR Measuring Receivers

with order number: **1166.3311.xx**

Release Note Revision: 9

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Republic of Germany

Contents

History

Date	Rel Note Rev	Changes
27. Nov 2007	1	First revision for V4.16 SP2
28. Nov 2007	2	Headline changed
25. Jan 2008	3	Update for V4.26
28. Feb 2008	4	Update for 4.26 SP1
21. Jul 2008	5	Update for 4.26 SP2
05. Dec 2008	6	Update for V4.36
07. Apr 2009	7	Update for V4.36 SP1
10. Jul 2009	8	Update for V4.36 SP2
26. Jan 2010	9	Update for V4.36 SP3

General Topics

Firmware Update

Generation of the update set

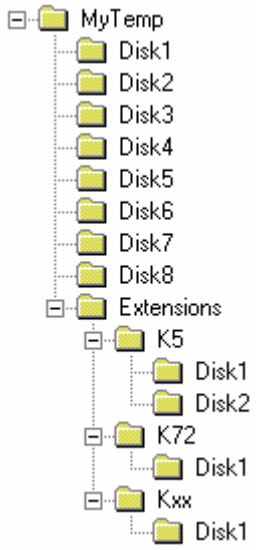
The instrument firmware is provided as ZIP. It is available from our website.

Preparing installation via USB stick or LAN:

Download the update set ZIP file.

Extract the contents of the ZIP file to a temporary folder, e.g. C:\MyTemp.

If also firmware options packages like FS-K5 shall be installed you should put them to ..\MyTemp\Extensions\K5\Disk1.



Recommended extension sub directory names:

- K5
- K30
- K40
- K70
- K72 (includes K73)
- K76 (includes K77)
- K82 (includes K83)
- K84 (includes K85)

Other files (e.g. release rotes) shall not be stored in these directories. This files would be copied on harddisk and may cause a disk full problem on drive E:.

Performing the firmware update on the instrument

A new method to install the base system and all required applications is available, if the installed base system firmware is V4.11 or newer. The sub directories for all update sets have to be aranged as described in the section "*Preparing installation via LAN or USB stick*". The new update manager will search for available update sets.
For updating to version 4.11 first update the bases system only to get the new update manager. Then update base system and all applications using the new update manager.

Skip the part *Base System Update*, if base system firmware V4.11 or newer is already installed and the directories are arranged as described above (with LAN or USB stick).

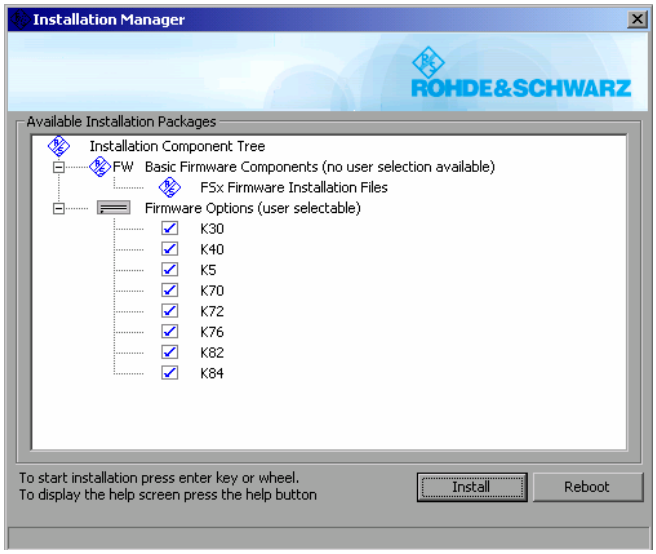
Base System Update:
The firmware update process is performed in the following steps:

- Switch the instrument on and wait until the Analyzer has resumed operation.
- For updates from LAN or USB use the SETUP | NEXT | FIRMWARE UPDATE | UPDATE PATH softkey to specify any path for the location of the disk directory (e.g. F:\MyTemp). For floppy usage the default A:\ must not be changed.
- Press SETUP → NEXT → FIRMWARE UPDATE
- Confirm the query "Do you really want to update the firmware?" with OK
- Insert update disk #1 to #16 as requested (for LAN or USB just confirm the copy process)
- 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.**

Complete Update with update manager:

- Use the SETUP | NEXT | FIRMWARE UPDATE | UPDATE PATH softkey to specify any path for the location of the disk directory (e.g. F:\MyTemp).
- Press SETUP → NEXT → FIRMWARE UPDATE
- Confirm the query "Do you really want to update the firmware?" with OK

The *Installation Manager* will terminate the analyzer application, search for available application update set and will show a selection list.



- Deselect applications, not to be installed and start the installation process with INSTALL. REBOOT will abort the update and restart the analyzer application without any changes.
- The instrument will perform several automatic shutdowns, until the new firmware and all applications are installed properly.

Do not switch the instrument off until the update process has been finished completely.

After a successful firmware update it is necessary to execute the instument's self alignment process by pressing CAL and softkey CAL TOTAL.

Firmware installation of the R&S FS-K7 FM demodulator, R&S FS-K8 BLUETOOTH Analyzer software R&S FS-K15 Avionics Demodulator and R&S FS-K9 power sensor measurement

The R&S FS-K7, R&S FS-K8, R&S FS-K15 and R&S FS-K9 application software package are included in the basic instrument firmware. It therefore needs no separate firmware update procedure.

Enabling these options via option key code entry

This section can be skipped if the option key was entered once.
For activation of these application software packages 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 FSMR or delivered as a part of the software package.
The key sequence for entering the license key for every option is:

SETUP - GENERAL SETUP – OPTIONS - INSTALL OPTION

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

- On a successful validation the message 'option key valid‘ will appear.
- If the validation failed, the option software is not installed.

Note: R&S FS-K15 requires 512MB memory.
For instruments, shipped with 256MByte system memory, a memory extension FSQ-B512, order number 1157.1590.02, is available.

The system memory size can be easily checked by pressing SETUP – SYSTEM INFO – STATISTICS, item "Memory size".

Compatibility to other Firmware Option Packages

The following firmware option packages are available with their own disks and they must be installed separately. Please refer to their release notes.

R&S FSMR V4.36 is compatible to the following firmware option releases:

R&S FS-K5	R&S FS-K30	R&S FS-K40	R&S FS-K72 FS-K73 FS-K74 FS-K74+	R&S FS-K76 FS-K77	R&S FS-K82 FS-K83	R&S FS-K84 FS-K85	R&S FSQ-K70
4.30	4.30	4.30 SP1	4.30	4.30	4.30	4.30	4.30 SP1

Note: R&S FS-K30 requires 512MB memory.
For instruments, shipped with 256MByte system memory, a memory extension FSQ-B512, order number 1157.1590.02, is available.

The system memory size can be easily checked by pressing SETUP – SYSTEM INFO – STATISTICS, item "Memory size".

New Functions in 4.36 SP2

- **Support for Power Sensor NRP-Z56, NRP-Z57, NRP-Z85 and NRP-Z92.**

Modified Functions

Modified functions in version 4.36:

Measurement Receiver Mode:

- **Auto recalibration function in RF LEVEL mode of measurement receiver.**
  In the RF LEVEL mode of the measurement receiver the “Auto Recalibration” function is available. If active, a recalibration into the next measurement range is performed automatically if the signal level reaches a recalibration range.
- **Demodulation bandwidth is adjustable in the AUDIO mode of the measurement receiver.**
- **Distortion is displayed in DEMOD and AUDIO mode of measurement receiver.**
  If detector “DISTORTION & SINAD” is active in the DEMOD mode, the values of THD, SINAD and DISTORTION are displayed. In the AUDIO mode these detectors are active automatically. The corresponding GPIB command is CALCulate<1|2>:MARKer<1..4>:FUNCtion:ADEMod:DISTortion?.
- **GPIB command CALCulate1:MARKer1:FUNCtion:ADEMod:CARRier1:RESult1? not available in power meter mode of measurement receiver.**
  If this command was sent by GPIB, a wrong result was returned in the power meter mode.
- **The 200 kHz audio filter in the DEMOD mode of the measurement receiver is only active if the demodulation bandwith is greater than the default value.**
- **Automatic activation of the relative measurement in the RF LEVEL mode of the measurement receiver, if a reference value is set.**
  If a reference value is set in the RF LEVEL mode, the relative measurement is activated automatically.

Spectrum Analyzer Mode:

- **New Filter Type 5-POLE DIGITAL for Analyzer Mode.**
- **ACP: Overlapping Adjacent Channels allowed now for parallel measurements.**
  It is now possible to configure overlapping adjacent channels. Based on a common carrier channel setting, it is now possible to measure with two slitely different ADJ channel settings with one measurement.
  Example: TX Channel / TX Bandwidth (common for both measurement A and B)
  ADJ used for measurement A
  ALT1 used for measurement A

  ALT2 used as ADJ for measurement B
  ALT3 used as ALT1 for measurement B
- **ACP Measurement: Result output format changed for number of ADJ channels > 3.**
- **ACP: Extended upper limits for Channel Bandwidth (5GHz) and Channel Spacing (20GHz).**
- **The increment behaviour of the step keys for parameter SWEEP POINTS is changed.**
  The behaviour of the knob wheel still has the highest possible resolution.
- **Dummy Video Bandwidth 0 Hz returned for active FFT filter.**

- **Availability changed for Spurious Measurement.**
  The Spurious Measurement is not available if the ACP measurement is active.

Other:

- **For local lockout the alias remote command SYSTem:KLOCk ON | OFF is provided.**
- **International keyboard driver package supported (German, Spanish, French, Italian and Portuguese).**
- **Application Setup Recovery restores previous settings after application exit.**
- **Additional soft keys available to change the LAN configuration.**
- **Save dialog reports a warning, if no item to save is selected.**
- **FSU-B9: The number of sweep points allowed in analyzer mode is now supported in NETWORK mode, too.**
- **Baud rate speed on COM (RS232) interface increased up to 128000 bps.**
  Now the following additional baud rates are available:
  38400
  57600
  115200
  128000
- **FS-K7: Deemphasis is now additionally supported for active Weighting AF Filter CCTTT and CCIR.**
- **Support for new option 3GPP HSPA+ Application Firmware R&S FS-K74+.**

Modified functions in version 4.36 SP1:

- **Modification for production internal purposes.**

Modified functions in version 4.36 SP2:

- **Reference level will not to be changed, when a power splitter sensor is connected.**
  If a reference level is set by the user, this value will not be changed if a power splitter sensor is connected. In earlier versions the previously adjusted reference level was changed depending on the currently active sensor attenuation.
- **Resolution of 30 Hz values of VOR-Mode and 90 Hz and 150 Hz of ILS-Mode of R&S K15 increased by one digit.**

Improvements

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

Improvements in version 4.36:

Measurement Receiver Mode:

- **(V4.26) Changing relative unit in AUDIO mode of measurement receiver was not effective if relative measurement was already active.**

Spectrum Analyzer Mode:

- **(V4.26)) Hidden analyzer grid after entry/exit of the WLAN, WIMAX, NOISE or PHASE NOISE personality.**
  After the following key strokes the internal database setting is corrupted. As a result the analyzer grid is hidden and an UNLOCK message may appear:
  Hotkey AVIONICS
  Hotkey WLAN, WIMAX, NOISE or PHASE NOISE
  Hotkey ANALYZER (to leave the application back to analyzer mode)
  Work around:
  Leave the AVIONICS application by any other personality, e.g. ANALYZER beforepressing WLAN or WIMAX or NOISE or PHASE NOISE.

Other:

- **(V4.26) Unit menu was not available in R&S FS-K7 measurement.**
- **(V4.26) Display messed up between R&S FS-K7 and measurement receiver.**
  The demod display was messed up after switching from R$S FS-K7 in full screen mode into measurement receiver mode.
- **(V4.26) Analyzer application slows down after several thousand PRESETs or *RST commands.**

Improvements in version 4.36 SP3:

Analyzer Mode:

- **(V4.36 SP2) Synthesizer setup of analyzer sweep improved.**

Known Issues

For known issues related to option packages R&S FS-Kxx please refer to the corresponding release notes of the individual option package.

Operating Manual

The order numbers for the current manual sets are

- 1166.3363.12-03 (English)
- 1166.3363.19-03 (English, letter format)

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

Appendix: Contact to our hotline

Any questions or ideas concerning the instrument are welcome by our hotline:

USA & Canada

Monday to Friday (except US public holidays)
8:00 AM – 8:00 PM Eastern Standard Time (EST)

Tel. from USA	888-test-rsa (888-837-8772) (opt 2)
From outside USA	+1 410 910 7800 (opt 2)
Fax	+1 410 910 7801
E-mail	Customer.Support@rsa.rohde-schwarz.com

East Asia

Monday to Friday (except Singaporean public holidays)
8:30 AM – 6:00 PM Singapore Time (SGT)

Tel.	+65 6 513 0488
Fax +	65 6 846 1090
E-mail	Customersupport.asia@rohde-schwarz.com

Rest of the World

Monday to Friday (except German public holidays)
08:00 – 17:00 Central European Time (CET)

Tel. from Europe	+49 (0) 180 512 42 42
From outside Europe	+49 89 4129 13776
Fax	+49 (0) 89 41 29 637 78
E-mail	CustomerSupport@rohde-schwarz.com