



ROHDE & SCHWARZ

Test and Measurement
Division

Release Notes

Firmware Release 4.42 SP2 (XP)

for R&S ESCI Test Receivers
with order number: **1166.5950.xx**

and R&S ESPI Test Receivers
with order number: **1164.6407.xx**

Release Note Revision: 5

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History

Date	Rel Note Rev	Changes
7 Nov 2007	1	First Revision for 4.12
28 Nov 2007	2	Headline changed
20 Aug 2008	3	First Revision for 4.32
16 Jul 2009	4	First Revision for 4.42 SP1
15 Oct 2010	5	First Revision for 4.42 SP2

General Topics

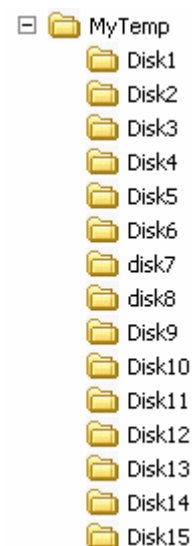
Firmware Update

Preparing installation via USB stick or LAN:

- The instrument firmware is provided as ZIP. It is available from our website.
- Download the update set ZIP file.
- Extract the contents of the ZIP file to a temporary folder, e.g. C:\MyTemp.

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

- Now copy the content of the temporary folder including all sub folders if present to a USB stick.
- The USB stick is now ready for the update.



Performing the firmware update on the instrument

Firmware Update from version < 4.12 to 4.12 or newer:

Skip this step, if the installed firmware is V4.12 or newer. The firmware update process is performed as follows:

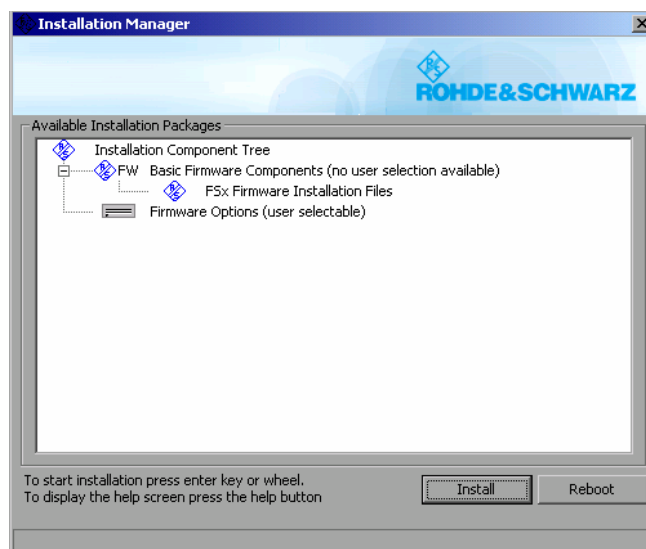
- Switch the instrument on and wait until the Receiver has resumed operation.
- Use the SETUP | NEXT | FIRMWARE UPDATE | UPDATE PATH softkey to specify any path for the location of the disk directory (e.g. F:\MyTemp).
- Press SETUP → NEXT → FIRMWARE UPDATE
- Confirm the query "Do you really want to update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



- 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 instrument's self alignment process by pressing CAL and softkey CAL TOTAL.

Known problems during firmware update

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 R&S FS-K7 FM demodulator software

The R&S 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 R&S 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 R&S ESCI or delivered as a part of the R&S 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.

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

New Functions in 4.42

Spectrum Analyzer Mode:

- Configurable Spectrum Emission Mask measurement available in analyzer mode.
- ACP measurement: User definable standards.
- ACP measurement: New standards for E-UTRA / LTE
- TOI Measurement: New TOI marker search function added (TOI MKR CALC/SRCH).
- TRAC:IQ sub system: New remote command TRAC:IQ:DATA:FORMAT.
- Harmonic Measurement: Additional remote command to get the used resolution bandwidth settings (CALCulate1:MARKer1:FUNCTion:HARMonics:BANDwidth[:LIST]?)

General:

- **Auto Login Password changed for user instrument to "123456"**
It is now possible to enter the password after remote desktop connection by the front panel.
- **Additional overload indication OVTRC.**
- **FSP-B10: Support for SMBV100a, SMA100a and SMB (TTL mode).**

Modified Functions

Modified functions in version 4.42:

- **Auto Run disabled for USB Memory sticks.**

Modified functions in version 4.42 SP1:

- **Receiver parameters are coupled to all spectrum analyzer screens.**
Receiver parameters, e.g. receiver frequency, were only coupled to screen A after changing from receiver mode to spectrum analyzer mode. Now the parameters are coupled to both spectrum analyzer screens (screen A and screen B).

Modified functions in version 4.42 SP2:

- **Frequency tuning with CISPR detectors.**
When doing measurements with the quasipeak detector a settling time of four seconds was applied when tuning the frequency with the knob. Now this delay is only carried out when the dwell time is ≥ 1 sec. With smaller dwell times the signal observation time is started immediately after changing the frequency. This modification makes it easier to manually measure drifting and unsteady signals. Instrument behaviour under remote control and with numeric input of the receiving frequency remains unchanged.

Improvements

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

Improvements in version 4.42:

Receiver Mode:

- **(V4.32) Preamplifier state after running a scan with “Current Settings”.**
If a scan was started with “Current Settings”, the preamplifier was set to the state defined in the scan table after the scan was finished. In this case the preamplifier state now remains unchanged.

Spectrum Analyzer Mode:

- **(V4.32) ACP Power Mode MAX HOLD was set to it’s default after the selection of C/N measurement.**
- **(V4.32) Signal Statistics: Changing sweep mode to SINGLE SWEEP was ignored for other measurement modes, e.g. ACP, C/N or C/N0.**
- **(V4.32) Signal Statistics: Gated Statistics with more than one active trace did not work.**
The measurement was internally restarted if the the required number of samples for all traces was not reached. As a result in single sweep mode the measurement did not terminate.
- **(V4.32) Spurious Emissions: TRANSDUCER function REF LVL ADJ AUTO was not taken into account for spurious emissions measurement.**
The transducer function REF LVL ADJ AUTO was not supported for spurious emissions measurement. As a result the allowed reference level range was not adjusted if the function REF LVL ADJ is set to AUTO and a transducer was activated in the related sweep range.

General:

- **(V4.12) Preinstalled transducer factor MDS21 changed.**
All level values are increased by 17 dB to compensate the internal conversion from dB μ V to dBpW.
- **(V4.32) Transducer set selection with more than 16 sets.**
If more than 16 transducer sets are available, the transducer table is divided into two or more pages. When a transducer set on any line of page 2 was selected, then the transducer set on the same line in page 1 was activated.
- **(V4.32) Remote command "STAT:QUES?": update of bit 8 (CAL state).**
The status value of bit 8 (CALibration) now reflects the calibration state, even if the display is switched off (done by default or after sending the remote command SYST:DISP:UPD OFF).
- **(V4.32) The instrument locked up if the dialog SETUP – GENERAL SETUP – OPTIONS – FW EXTENSION was left by ESC/CANCEL without a file name being entered.**

Improvements in version 4.42 SP1:

Receiver Mode:

- **(V4.32) Recall of saveset with peak list with only one element did not work.**
If a saveset with an existing peak list was recalled, the peak list was not displayed on the scan screen if the list contained only one element.
- **(V4.32) Recall with active limit lines.**
If a saveset with active limit lines was recalled, in some cases the limit lines were not displayed.
- **(V4.32) Empty hardcopies after aborting scan several times.**
If a scan was aborted more than 50 times, all subsequent hardcopies were empty.

General:

- **(V4.32) Text was inserted twice in all edit fields by using CTRL-V.**
If a text was copied into the clipboard by using CTRL-C, this text was inserted twice in all edit fields.
- **(V4.32) Hotkeys were not highlighted in proper mode after recall.**
If a saveset was recalled, always the "Spectrum" hotkey was highlighted independent of the currently activated mode.

Improvements in version 4.42 SP2:**General:**

- **(V4.42 SP1) Startup recall improved.**
If a setup file with active receiver mode was used as startup recall file, the upper screen disappeared after starting the scan.

Known Issues

- **Underload detection in Status Reporting not available.**
The detection of an underload in receiver mode is not available. Bit 1 and bit 9 in the STATus:QUEStionable:POWer register will not be set.

Appendix: Contact to our hotline

Technical support – where and when you need it

For quick, expert help with any Rohde & Schwarz equipment, contact one of our Customer Support Centers. A team of highly qualified engineers provides telephone support and will work with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz equipment.

Up-to-date information and upgrades

To keep your instrument up-to-date and to be informed about new application notes related to your instrument, please send an e-mail to the Customer Support Center stating your instrument and your wish. We will take care that you will get the right information.

Europe, Africa, Middle East

Phone +49 89 4129 12345
customersupport@rohde-schwarz.com

North America

Phone 1-888-TEST-RSA (1-888-837-8772)
customer.support@rsa.rohde-schwarz.com

Latin America

Phone +1-410-910-7988
customersupport.la@rohde-schwarz.com

Asia/Pacific

Phone +65 65 13 04 88
customersupport.asia@rohde-schwarz.com