



**ROHDE & SCHWARZ**  
Test and Measurement

## TS-EMF SYSTEM SOFTWARE RFEX

### Release Notes for RFEX Version 6.1.34

#### **Dear TS-EMF Users**

We have released version 6.1.34 of TS-EMF System Software RFEX.

With this Version, LTE-Decoding with R&S TSMW / TSMF (option TSEMF-K21) has been further improved and a number of smaller amendments and bug-fixes have been introduced as described below.

The User Manual TS-EMF and the Installation Instructions and the R&S RFEX Software Manual have been updated and are included on the CD.

#### **Hardlock Options concept**

(only users for UMTS/LTE decoding)

Together with the new version, the Hardlock concept has been changed. The iKey option for UMTS- and LTE-decoding are now available as Option-iKey. Thus, option can easily be added without returning the previously delivered Hardlock. However, this also means, that the Option iKey has to be connected in addition to the basic RFEX dongle to make use of the option.

## Uninstall of Previous Versions

Previous Versions of the RFEX or RFEX-Fast have to be uninstalled in the Windows control menu before installation of Version 6.1.34. A backup of some files is necessary before the update in the following cases, only:

1. If standard settings of the RFEX (device configuration, IP-address or report configuration have been modified and shall be recovered after the update).
2. If the customer has modified settings of the RFEX standard packets and stored them under the same name. Files created under a new name will not be deleted or overwritten.
3. If the customer has changed settings of the RFEX-Fast by modifying the file service.ini.

**The locations of the files potentially to be saved are:**

[\\RFEX\Application\RFEX.ini](#)

[\\RFEX\Packets](#)

[\\RFEX\Application\Service.ini](#)

## Installation of the new Version

The Installation Instruction available on the CD in detail describes the installation of the new version including the NI-VISA<sup>TM</sup>-environment. The latter only has to be installed, if FSH4 or FSH8 shall be controlled by the RFEX. To reduce the size of the download, the Internet image of the CD does not include the NI- VISA<sup>TM</sup>-file and the data have to be downloaded separately under the link given in the installation instruction.

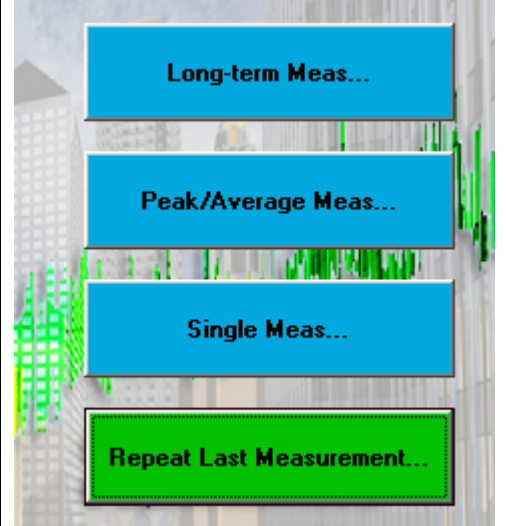
## Improvements in Version 6.1.34

### FSH4 / FSH8 Pre-amplifier

Selection of pre-amplifier is now supported in the packet setting if FSH4/8 is chosen in the configuration menu.

### Modified Function of the Button “Repeat last measurement”

According to the feedback from many RFEX-customers, warnings and intermediate step have been removed from the “Repeat Last Measurement” shortcut.

	<p>The button “ Repeat Last Measurement” only appears after a measurement has been carried out. The intention is to provide a</p> <p><b>quick shortcut for a repeated measurement with <u>identical</u> settings.</b></p> <p>Previous results are overwritten and respective warnings are suppressed. If applicable, save the report / results from the previous measurement under a different name.</p>
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### LTE decoding measurements

LTE decoding measurements have been improved. The measurement rate could be considerably increased compared to Version 6.1.30. Up to 10 measurements per second are possible, now (if there is only one frequency in the packet).

Optimum measurements of LTE-signal are still under discussion. Thus, measured parameters and structure of the RFEX report will be subject to future changes. In this context, customer feedback is highly appreciated.

The RFEX software manual has been updated to reflect more details on LTE measurements.

### Eliminated errors

#### RFEX-Installation / Windows redistributables

On some PCs, the additional windows files the RFEX requires for TSMW support were not available. The necessary files were not included in the delivery. Now, the necessary Windows re-distributable have been included in the RFEX-setup.

#### LTE-measurements

Invalid results (e.g. due to RF under-range, switched Cell-ID, not completed synchronization) reported by the TSMW could lead to wrong results in the report. The check for invalid measurement results in the RFEX has been improved to discard incomplete / inconsistent results.

#### FSH4/8-measurements

One customer reported problems with firmware version 1.56 for FSH4/8. In particular channel power measurements delivered wrong or no results.

A timing problem has been identified as reason. For the moment, this problem has been solved with a workaround in the RFEX, which unfortunately slows down the measurement. As soon as the necessary changes have been implemented in the FSH4/8 firmware, this will be rectified.

## Improvements / bug fixes in Version 6.1.30

Introduction of LTE-decoding measurement with TSMW

Support for latest TSMx-Firmware version and Firewire Driver  
Drivers were also tested under Windows 7.

## Improvements / bug fixes in Version 6.1.22

The NI-VISA™ setup included on the CD has been upgraded to a newer version (5.0.3).

### Eliminated errors

#### RFEX-Threshold

If the selection "Suppress Cross Talk" was activated in the Packet settings, the Threshold calibration routine did not work correctly. Depending on the packet settings, this could lead to high measurement values.

#### Channel Power with FSH4/8

In the RFEX measurement mode "Channel Power" sometimes an increased delay was recognized until the FSH-result was available. In this case the RFEX read back "0", which was interpreted as dBm and converted into a very high field-strength value.

## Improvements / bug fixes in Version 6.1.21

#### RFEX-Fast on FSL

The entry of frequencies and figures for the RFEX-Fast running on an FSL has been optimized.

#### Missing Antenna Files

RFEX-Fast did not show a message, if an antenna file was missing. Now, a message is displayed.

#### TS-EMF User Manual

Additional information has been added to chapter 8.1.8 on expert level settings.

### Eliminated errors

If no values above the threshold were found, the next measurement using the start button resulted in a runtime-error.

If no values above the threshold were detected, an empty report was stored.

Services activated in the RFEX-Fast selection window were not measured, if the services were outside selected frequency range for intermediate ranges. (Please refer to the TS-EMF User Manual Chapter 7.5.4 for details on the Services / intermediate range merging).

Antenna files could not be opened with a double click on the file in the antenna file window (→File → Antenna).

## Improvements in Version 6.1.20

RFEX / RFEX-Fast allow the handling of different sets of antenna files. After selecting the Type "Tri-Axis Probe", in the hardware configuration menu, the calibration files for the antenna in use can be selected. It makes no difference, if X, Y or Z are selected, as long as the software finds three files with the same antenna name and the complementary axes. The previously used files (Probe X.Antenna, Probe Y.Antenna, Probe Z.Antenna) can be selected in the RFEX / RFEX-Fast like any other antenna file. Of course, the serial number of the selected antenna is taken over into the EXCEL-report generated by RFEX / RFEX-Fast.

**Known Issues (all versions)**Known Issues : Installation on analyzer:

If the RFEX / RFEX-Fast are installed on an analyzer with WinXP operating system, the windows redistributable are not installed automatically. The setup has to be started from the subdirectory Microsoft\_Redistributables on the RFEX distribution.

Known Issues FSH4 / FSH8:

For the time being it is not possible to control the switching of an R&S Isotropic Antenna from the RFEX via the Probe Connector of FSH4 / FSH8 ( as it is possible for FHS3/6/18). As the reason for this restriction resides in the instrument firmware, this feature is also not available for user-written routines or third party software.

Known Issues FSH3/6/18:

When using the isotropic antenna 9kHz- 200 MHz TSEMF-B3 in standalone operation with FSH, only measurements in dB $\mu$ V/m were possible with firmware before Version 14.0. Since Version 14.0, also Transducers in dB $\mu$ A/m can be used.

### **Download link**

The software can be downloaded from the Rohde & Schwarz web site under the following link:

[http://www2.rohde-schwarz.com/en/products/test\\_and\\_measurement/emc\\_field\\_strength/TS-EMF.html](http://www2.rohde-schwarz.com/en/products/test_and_measurement/emc_field_strength/TS-EMF.html)

### **Customer Support**

In case of questions or problems please contact one of our Customer Support Centres:

#### **Customer Support Europe, Africa, Middle East**

+49 89 4129 12345

[customersupport@rohde-schwarz.com](mailto:customersupport@rohde-schwarz.com)

#### **Customer Support America**

+1-888-837-8772

option 2 (from outside of the US +1-410-910-7988)

[customer.support@rsa.rohdeschwarz.com](mailto:customer.support@rsa.rohdeschwarz.com)

#### **Customer Support Latin America**

+1-410-910-7988)

[customer.support@la.rohdeschwarz.com](mailto:customer.support@la.rohdeschwarz.com)

#### **Customer Support Asia/Pacific**

+65 65 130488

[customersupport.asia@rohdeschwarz.com](mailto:customersupport.asia@rohdeschwarz.com)

ROHDE & SCHWARZ  
Mühlhofstraße 15  
Department 1SP3 – Mielke  
81671 München