



**ROHDE & SCHWARZ**

Test and Measurement  
Division

## **Release Notes**

# **Firmware Release V1.83 SP4**

## **for R&S ESL EMI Test Receivers**

with order number: **1300.5001.xx**

**Release Note Revision: 8**

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## History

Date	Rel Note Rev	Changes
06. August 2008	1	First revision for V1.82 SP1
29. May 2009	2	First revision for V1.82 SP2
01. Oct 2009	3	First revision for V1.82 SP3
20. Sep 2010	4	First revision for V1.83
29. Mar 2011	5	First revision for V1.83 SP1
17. Jun 2013	6	First revision for V1.83 SP2
18. Nov 2014	7	First revision for V1.83 SP3
19. Feb 2015	8	First revision for V1.83 SP4

## General Topics

### Prerequisite for Firmware Update

**Attention:** In order to ensure a correct firmware update a minimum version 2.03 of the ESL XP Image is required.

The XP image version is shown during start-up. When the R&S ESL splash screen appears the “XP Image Version” is shown in the top left corner. The minimum required XP image version is 2.03. (The information is also available in the registry, use regedit HKEY\_LOCAL\_MACHINE/Software/Image/MajorVersion and /MinorVersion. The decimal values in brackets are the valid ones. MajorVersion (2) and MinorVersion (1) means 2.01)

If the XP image version is 2.01 the “XP Image Update 2.03 for ESL” or newer is required to install before proceeding any further firmware installations. The “XP Image Update for ESL” with its own release notes can be downloaded from the R&S internet in the ESL download section. Please install the XP image update according to its release notes.

With XP images prior to 2.03, the firmware update will finish and the firmware version will remain unchanged (Setup | More | System Info | Versions+Options: Table entry Instrument shows the old firmware version number)

### Firmware Update

If the XP Image Update fulfills the prerequisite (see chapter above) the firmware update can be carried out.

The firmware update set of the R&S ESL consists of one package file (with the extension .package) and the following installation files (with the extension .msi):

ESL.package	SA-*_ESL.msi	K30-*_ESL.msi
CO-*_ESL.msi	SP-*_ESL.msi	HW-*_ESL.msi
KS-*_ESL.msi	REC-*_ESL.msi	

The \* is the placeholder for a detailed version information of that file.

## Copying the installation files to the instrument

To install a new firmware version the installation files of the new version have to be copied to the instrument. This can be done in several ways:

Using a memory stick:

- Copy all files to a directory of the memory stick (the default path is D:\FW\_UPDATE).
- Insert the memory stick into one of the USB sockets at the front panel of the R&S ESL.

Using the remote desktop and copying the installation files to a directory of the instrument:

- Connect the R&S ESL to your LAN.
- Start the remote desktop on your PC (C:\winnt\system32\mstsc.exe).
- Enter the TCP/IP address of the instrument, you want to update. Ensure that the **local resources→drives** option is selected and press the **Connect** button.
- Login to the instrument (user name and password are by default "instrument").
- To get the TCP/IP address of the instrument, in the **Start** menu, select **Settings → Network Connections → Local Area Connection (2) → Properties**, select **Internet protocol (TCP/IP)** and press the **Properties** button.  
An edit dialog box with the **IP address** field is displayed. The IP address consists of 4 numbers between 0 and 255.
- After the login, create an own directory and copy all installation files from your PC to the instrument using the explorer at the instrument (the drives of your PC are listed in the folder window of the explorer as well as the local drives of the instrument).

## Performing the firmware update on the instrument

The firmware update process is performed in the following steps:

- Switch the instrument on and wait until the Analyzer has resumed operation.
- Press the **SETUP** hard key, go to the side menu using the **More** softkey, and press the two softkeys **Firmware Update** one after the other.  
A dialog box is displayed. If necessary, change the default path to locate the installation files (enter the path name using an external keyboard or the keypad at the front panel of the instrument or use the **Browse** button).
- Press the **Execute** button to start the update.  
The instrument firmware is shutting down and a dialog box is displayed. By default all the installation packages for the basic analyzer firmware available at the path you entered are selected.
- Firmware applications (e.g. R&S FSL-K30) appear at the end of the list and can be selected with the  key.
- Press the **Install** button.  
The installation is running. After a few minutes the system will restart automatically. After the restart the firmware installation is complete.
- After the firmware update the UNCAL flag appears. A self alignment is necessary. Press the **SETUP** hard key, **Alignment** and the **Self Alignment** to start the alignment procedure.
- Depending on the previous firmware version a reconfiguration of the hardware may be required during the first start of the firmware. In this case the following message box will be displayed:  
**"Start automatically reload of PCI FPGA ..."**  
The update will be performed automatically.

Afterwards, a message box with the following text will be displayed:

***"Finished automatically reload of PCI FPGA. Reboot the device!"***

Now, please turn off the instrument at the rear panel.

If you have an instrument with options FSL-B30 (DC power supply) and FSL-B31 (battery pack), please switch off the instrument at the front panel too. Wait until the instrument is completely switched off.

After a few seconds, you can restart the instrument.

***For problems with firmware installation see the chapter "Appendix: Installation troubleshooting" at the end of this document.***

## **Firmware installation of the R&S FSL-K7 analog demodulator and R&S FSL-K9 power sensor measurement**

The R&S FSL-K7 and R&S FSL-K9 application software packages are included in the basic instrument firmware. Therefore they do not need a separate firmware update procedure.

## Compatibility of R&S FSL-K30

The compatibility of this firmware option is checked with the installation tool. If a non compatible version of the basic instrument firmware is installed the options will be deleted.

R&S ESL V1.83 SP1 is compatible to the following firmware option releases:

R&S FSL-K30: 1.82 SP1

### Enabling options via option key code entry

This section can be skipped if the option key was entered once.

For activation of application software packages a license key for validation must be entered. The license key is in the device certificate or delivered as a part of the software package. The process is performed in the following steps:

- Press the **SETUP** hard key, go to the side menu using the **More** softkey, and press the **Option Licenses** softkey and then the **Install Option** softkey.  
A dialog box is displayed.
- Enter the option key number using the keypad.
- Press **ENTER**.  
On a successful validation the message **option key valid** is displayed. If the validation failed, the option software is not installed.

## Improvements in V1.83

The version number indicates the version in which the issue was observed for the first time.

Version	Function
V1.82	Printing in WMF format works now.
V1.82 SP3	Improved synthesizer setup for scan below 3 MHz.

## Improvements in V1.83 SP1

The version number indicates the version in which the issue was observed for the first time.

Version	Function
V1.83	Synthesizer setup of analyzer sweep with quasipeak detector improved.
V1.83	Sweep did not finish with certain combinations of Start Frequency, Stop Frequency, Sweep Points and EMI filters.

## Improvements in V1.83 SP3

The version number indicates the version in which the issue was observed for the first time.

Version	Function
V1.83 SP2	In some cases the instrument did not startup with battery pack. This issue is solved.

## Modified Functions in V1.83 SP2

The version number indicates the version in which the function was modified.

Version	Function
V1.83 SP2	Modifications for production internal purposes.

## Modified Functions in V1.83 SP4

The version number indicates the version in which the function was modified.

Version	Function
V1.83 SP4	Modifications for production internal purposes.

## Known Issues

The version numbers in brackets indicates the version in which the issue was observed for the first time.

Version	Function
V1.82	*TRG command not available within the receiver mode
V1.82	STATus:QUESTionable:LIMit command does not work in receiver mode.

## Modifications to the Documentation

The new and modified functions mentioned in these release notes are already documented. Except the below mentioned last minute changes you can find the description including remote commands in the online help or in the manual. The manual can be downloaded from the internet under: <http://www.rohde-schwarz.com>. Select DOWNLOAD and search for ESL within the category MANUAL.

## Appendix: Installation troubleshooting

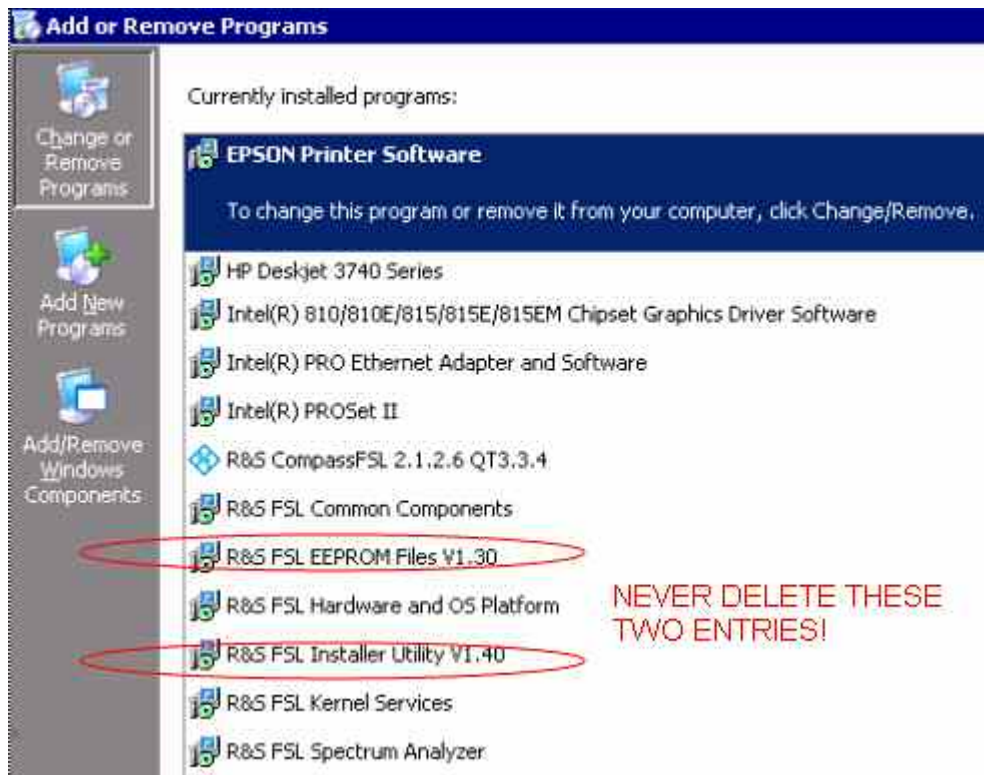
The installation will only be carried out correctly if it is done through the firmware with **Setup | More | Firmware Update** as described in the "Firmware Update" section in this release notes. A second valid possibility is the usage of the update tool (FSLUpdate)

**Never try to update by starting the MSI-files directly!  
In this case version checking is not carried out and this may lead to  
black screens when starting up the firmware or an application.**

If such an installation problem occurs on the FSL the following procedure will completely remove the firmware and a new installation of firmware and applications is possible. Please use a USB keyboard and mouse for this procedure.

- Open DOS prompt
- Change to the following folder (please include the quotes " " due to the blank and the & sign)  
*cd "C:\Program Files\Rohde&Schwarz\Installer"*
- Execute *FSLInstaller.exe /remove*
- Confirm with *Install* twice
- (after reboot it may happen that the driver needs to be copied again, allow this action)
  
- Execute *Windows Start -> Settings -> Control Panel -> Add or Remove Programs*
- Remove all R&S FSL components which are left - except the following components
  - R&S FSL Installer Utility Vx.xx
  - R&S FSL EEPROM Files Vx.xx





- Now execute *Windows Start->Programs->Accessories->FSLUpdateTool*
- Install firmware as described above in the “Firmware Update” section

## 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

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