

Release Notes

Revision: 3

R&S[®] ESR EMI Test Receiver

Firmware Release 1.77 SP1

These Release Notes are for following models of the R&S[®] ESR EMI Test Receiver:
R&S[®] ESR3, order no. 1316.3003K03, R&S[®] ESR7, order no. 1316.3003K07

Table of Contents

1	Revision History	3
2	Installation Information	3
2.1	Firmware Update.....	3
2.1.1	Performing the Firmware Update on the Instrument	3
2.1.2	Performing the Firmware Update from a Windows PC.....	5
2.2	Operation with and without Administrator Rights	6
2.3	Installing Firmware Options.....	7
2.3.1	Enabling Options by Entering Option Key Codes	7
3	New Functions	9
4	Modified Functions	9
5	Improvements	9
6	Modifications to the Documentation	10
7	Customer Support	11

1 Revision History

Date	Rel. Note rev.	Changes
20. Sep 2012	3	First version for ESR firmware V1.77 SP1

2 Installation Information

2.1 Firmware Update

The firmware update file for the R&S ESR is one file including the main firmware version number e.g. `ESRSetup_V1.77_SP1.exe`. It will be referred as `ESRSetup.exe` later in the text. The file can be found on Rohde & Schwarz web page.

There are several ways how to update the device after downloading the `ESRSetup.exe` installation file. The update can be performed on the instrument (see chapter 2.1.1) or from a Windows PC (see chapter 2.1.2).

2.1.1 Performing the Firmware Update on the Instrument

There are three ways to make the setup `ESRSetup.exe` visible to the device:

Using a memory stick:

1. Copy the file to a directory of the memory stick and insert the memory stick into one of the USB sockets of the R&S ESR.

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

1. Connect the R&S ESR to your LAN.
2. Start the remote desktop on your PC (`C:\winnt\system32\mstsc.exe`).
3. 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. (To get the TCP/IP address of the R&S ESR press the hard key "Setup" and then the soft keys "General Setup", "Network Address", "IP Address". The IP address consists of 4 numbers between 0 and 255)
4. Login to the instrument (user name: "instrument" and default password "894129").
5. Copy the `ESRSetup.exe` from your PC to a new folder e.g. `C:\FWUpdate`.
6. You can now access this directory with the `ESRSetup.exe` from the R&S ESR firmware.

Using a network drive:

7. Connect your R&S ESR to your LAN, and establish a connection to one of your servers. (Please ask you local IT administrator for support)
8. Copy the `ESRSetup.exe` from your PC to a directory on this server
9. You can now access the directory with the `ESRSetup.exe` from the R&S ESR firmware.

Performing the update on instrument:

The firmware update process is performed by the following steps:

10. Switch the instrument on and wait until the Receiver has resumed operation.
11. Press the "SETUP" hard key, go to the side menu using the "More" soft key, and press the soft keys "Firmware Update".

A dialog box is displayed to select the proper `ESR*.exe` setup file. Change the path to the drive and directory which you prepared in the step 2.1.1 (USB stick directory, remote PC directory or directory on a server) and close the dialog with the "Select" button.

12. Press the "Next" button to come to the selection of the firmware packages. By default all application should be installed. Ensure that the applications needed are selected.
Press the "Install" button.

The firmware will be stopped and the installation starts. After a few minutes the system restarts 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, then "Alignment" and the "Self Alignment" soft key 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 is displayed:

```
"FPGA Update. A system shutdown is necessary"
```

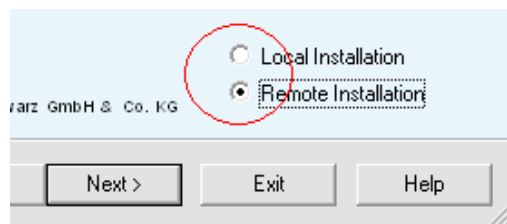
Accept this and the device will be shut down. It is then necessary to start the device on the front panel. A automatically restart is not possible because the FPGA needs a complete boot cycle from power off.

2.1.2 Performing the Firmware Update from a Windows PC

If the firmware version 1.20 or newer is installed on the instrument the new firmware can also be uploaded without using a memory stick or a network drive. Just a LAN connection from the instrument and a Windows PC is necessary.

13. Run `ESRSetup.exe` on your PC.

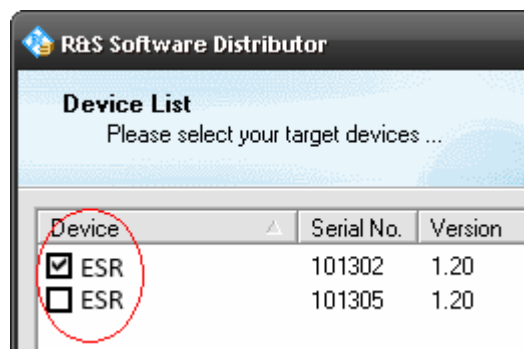
14. Select Remote Installation and click the button Next.



15. Select the Packages which shall be installed and click the button Next .

HINT FOR FIRE WALL USERS: The `ESRSetup.exe` is communicating with the instruments via LAN. Therefore it is necessary that the `ESRSetup.exe` may pass the fire wall. After adding it to the fire wall rules, restart the scan by clicking on Rescan .

16. After scanning your LAN subnet all found instruments are listed. Select the instruments you want to update. It is possible to select up to 5 instruments for updating in parallel.



ATTENTION



Please be careful and check twice if you have selected the correct instruments. Depending on your company's network structure also instruments of other departments will show up!

17. Additional help will be displayed after clicking the button "Help" and further options are available by clicking the button "Options".

18. Start the installation by selecting "Install"

19. Confirm that you want to reboot the instrument in order to activate the firmware update (the instrument then restarts automatically)

2.2 Operation with and without Administrator Rights

The receiver may be operated with or without administrator rights. Some administrative tasks (e.g. a firmware update or network configuration) do require administrator rights. In the default configuration, auto login is enabled, and the "Instrument" account with administrator rights is active. This means that no password is required, and the full functionality of the receiver is available. An additional user account (user name "NormalUser" with default password "894129") is pre-defined. Use standard Windows functionality if you wish to deactivate the auto login mechanism and activate the NormalUser account. Please refer also to the Quick Start Manual of the ESR.

2.3 Installing Firmware Options

All Firmware Options for the R&S ESR are part of the basic instrument firmware. Therefore they do not have a separate item in the installer to be selected.

2.3.1 Enabling Options by Entering Option Key Codes



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

To activate application software packages, you must enter a license key for validation. If a XML-file with an option key was sent to you see the install description below. 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:

20. Press the "SETUP" hard key.
21. Go to the side menu using the "More" soft key.
22. Press the "Option Licenses" soft key.
23. Press the "Install Option" soft key.
A dialog box is displayed.
24. Enter the option key number using the keypad.
25. Press "ENTER".

After a successful validation the message "option key valid" is displayed. If the validation failed, the option software is not installed.

26. Reboot the device.

Installation of options via XML-file

27. Press the "SETUP" hard key.
28. Go to the side menu using the "More" soft key.
29. Press the "Option Licenses" soft key.
30. Press the "Install Option by XML" soft key.

A dialog box is displayed.

31. Select the path to the XML file (e.g. network drive or USB stick)
32. Press "ENTER".

After a successful validation the message "option key valid" is displayed. If the validation failed, the option software is not installed.

33. Reboot the device.

3 New Functions

The following table lists the new functions and indicates the version in which the new function was introduced:

Version	Function
V1.77	RMS Detector available in Time Domain scan
V1.77	RMS Detector available in Real-Time spectrum Analyzer
V1.77	Peak Search function in Receiver Mode can use limit lines as a threshold

4 Modified Functions

The following table lists the modified functions and indicates the version in which the modification was carried out:

Version	Function

5 Improvements

The following table lists the improvements and indicates the version in which the issue could be observed for the first time:

Version	Function
V1.76	Frequency Mask Trigger in Real-Time did not work reliably. This has been resolved.
V1.77	The RF signal path frequency response was not taken into account properly in receiver scan mode with quasipeak detector. The time domain scan was not affected.
V1.77	Quasipeak detector did not show result for measurement time larger than 200 ms in EMI measurement mode.
V1.77	Quasipeak detector did not show result for measurement time larger than 200 ms in receiver scan mode. The time domain scan was not affected.
V1.77	The RF attenuation of input 2 was set 10 dB above the selected value . This has been resolved.

6 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 R&S ESR within the category MANUAL.

No last minute changes for documentation.

7 Customer Support

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 make sure that you get the right information.

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