

Release Notes

Revision: 01

R&S® FSC Spectrum Analyzer

Firmware Release 1.10

These Release Notes describe the following models and options of the R&S® FSC Spectrum Analyzer:

- R&S® Spectrum Analyzer FSC3, order no. 1314.3006.x3
- R&S® Spectrum Analyzer FSC6, order no. 1314.3006.x6

New Features of V1.10:

- Spectrum Analyzer: ACLR measurements
- Spectrum Analyzer: Spectrum Emission Mask measurements
- Spectrum Analyzer: Gated Trigger
- Spectrum Analyzer: Measurement of Harmonic Signals
- Spectrum Analyzer: AM Modulation Depth measurement
- Spectrum Analyzer: Display of frequency + channel number with active channel tables
- Indicator for presence of valid external reference signal
- Printer friendly color scheme
- Network Analyzer: Support of channel tables
- Remote control: Export of trace data in binary format
- Remote control: Support of HCOPy command

Table of Contents

1 Installation Information.....	3
1.1 General Information	3
1.2 Firmware Update	3
1.2.1 Preparing the Installation	3
1.2.2 Performing the Firmware Update on the Instrument.....	4
1.3 Installing Firmware Options	6
1.3.1 Enabling Options by Entering Option Key Codes	6
2 New Functions.....	7
3 Modified Functions	7
4 Eliminated Issues	8
5 Known Issues	8
6 Modifications to the Documentation	8
Appendix: Contacting our Hotline	9

1 Installation Information

1.1 General Information

- Firmware release V1.10 corresponds to FSCView V1.10, which is available on the Rohde & Schwarz web page as a separate update package.
- Although older versions of FSCView might be able to communicate with firmware release V1.10, an update of FSCView is highly recommended, as older FSCView versions might not support all functions included in the new firmware release.

1.2 Firmware Update

The firmware update file for the R&S FSC is one file with the name FSC_V1_10.EXE from the Rohde & Schwarz web page.

1.2.1 Preparing the Installation

In order to update the device after downloading the FSC_V1_10.EXE installation file, a USB stick is required.

Make a backup of datasets, screenshots and modified files.

Before you start the firmware update, make sure that you created a backup with FSCView of all datasets and screenshots which you previously stored on the instrument. The same holds true for all channel tables, standards, limit lines, transducer factors and cable models which you created or modified. The factory preset necessary to complete the firmware update procedure will otherwise erase or overwrite the files.

Preparing the installation files

1. Insert an USB stick into the USB slot and wait until windows has identified the USB stick as a new volume (e.g. D:)
2. Copy FSC_V1_10.EXE into the root directory of the USB stick, e.g. D:\

- Execute FSC_V1_10.EXE. The self-extracting .ZIP file will be unpacked.

The USB stick should now contain the following files:

bootloader_FSC_V1_10.bin
 osimage_FSC_V1_10.bin
 updater_FSC_V1_10.bin
 splashscreen_FS.bmp
 FSC_V1_10.EXE

Note:

Please make sure that only one file of each type is present on the USB stick. The update mechanism will reject the USB stick if it detects two versions of a file type (e.g. bootloader_FSC_V1_01 and bootloader_FSC_V1_10) and abort the update later on.

Prepare the instrument

- Switch the instrument OFF.
- Insert the USB stick into the USB slot of the instrument.

1.2.2 Performing the Firmware Update on the Instrument

The firmware update process is performed by the following steps:

- Press the keys PRESET and '8' on the numeric keypad simultaneously.



- Switch the instrument on and keep PRESET and '8' pressed for at least 5 seconds after the startup screen has appeared on the screen.



3. Release the keys PRESET and 8.

The FSC will continue its boot process and after a couple of seconds the following information will appear on the screen:

Instrument Firmware Update

Searching for Storage card ... OK

Searching for updater *.bin ... Found updater _FSC_V1_10.bin

Checking updater _FSC_V1_10.bin: ... OK

Update instrument to software version V1.10

Press [ENTER] to update the firmware.

Press [CANCEL] to abort firmware updating.

4. Press ENTER to start the firmware update process.

The instrument will perform the firmware update. This will take about 5 minutes. The progress of the update will be displayed in a sequence of messages on the screen.

Warning:

Do not switch the instrument off during the update process in order to avoid data corruption of the internal flash memory! Do not remove the USB stick from of the USB slot during the firmware update!

5. As soon as the firmware update is completed, the R&S FSC will display the following message at the bottom of the screen:

Firmware updating is successfully completed.

Please switch off the instrument.

Switch the instrument off and on again. The FSC will boot with the new firmware version.

6. After the boot process is completed, press SETUP – INSTRUMENT SETUP. Select "RESET TO FACTORY SETTINGS" by moving the cursor down the list with the cursor keys or the rotary knob. Confirm the selection with ENTER, and re-confirm with YES when prompted.

Note:

the subsequent reset and reboot process will take about a minute to complete.

Note:

Restoring the factory settings is necessary to update the pre-installed channel tables, cable models and transducer factors. If this step is omitted, bugfixes and updates to these pre-installed files will not be installed.

1.3 Installing Firmware Options

1.3.1 Enabling Options by Entering Option Key Codes



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

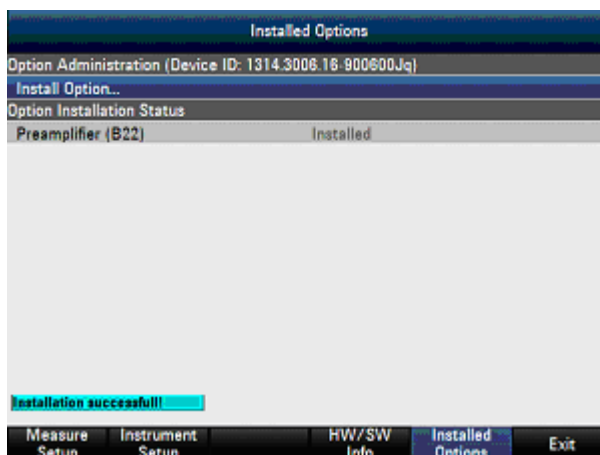
To activate application software packages, you must enter a license key for validation. The license key is in the device certificate or delivered as a part of the software package. The process is performed in the following steps:

- Press the SETUP key.
- Press the softkey INSTALLED OPTIONS.
- Use the rotary knob or the cursor keys to select the INSTALL OPTION... menu item and confirm the entry with the ENTER key.
- Enter the key code (32 digit number) for the option with the numeric keys and confirm with the ENTER key.



If the correct key code is entered, the R&S FSC displays "Installation successful", and the option is marked as "Installed" in the option list (example: Option Preamplifier (B22)).

If an invalid key code is entered, the R&S FSC displays "Invalid key code!". The correct key code can then be entered.



2 New Functions

The following table lists the new functions in V1.10:

Version	Function
V1.10	Spectrum Analyzer: ACLR measurements
V1.10	Spectrum Analyzer: Spectrum Emission Mask measurements
V1.10	Spectrum Analyzer: Gated Trigger
V1.10	Spectrum Analyzer: Measurement of Harmonic Signals
V1.10	Spectrum Analyzer: AM Modulation Depth measurement
V1.10	Spectrum Analyzer: Display of frequency + channel number with active channel tables
V1.10	Indicator for presence of valid external reference signal
V1.10	Printer friendly color scheme
V1.10	Network Analyzer: Support of channel tables
V1.10	Remote control: Export of trace data in binary format
V1.10	Remote control: Support of HCOPy command

The following table lists extensions which were introduced in earlier versions, and indicates the version in which the extension was introduced:

--	--

3 Modified Functions

The following table lists the functions modified in V1.10:

Version	Function
V1.10	More transducer and limit line points (1000)
V1.10	Spectrum Analyzer: Improved level adjust routine with active preamplifier
V1.10	Modified battery symbol for low battery level
V1.10	Auto sweep time in Network Analyzer mode changed for RBW < 10 kHz and span < 300 MHz

The following table lists modifications, which were introduced in earlier versions, and indicates the version in which the modification was introduced:

Version	Function

4 Eliminated Issues

The following table lists the issues eliminated in V1.10:

Version	Function
1.10	Network Analyzer: The accuracy with active normalization is limited to +/- 1.5 dB

The following table lists the issues already eliminated in earlier versions:

Version	Function
1.01	New synthesizer setup table

5 Known Issues

None.

6 Modifications to the Documentation

The latest manual can be downloaded from the R&S® FSC Spectrum Analyzer product web page under: <http://www.rohde-schwarz.com>. Select "DOWNLOADS" and "MANUALS".

Appendix: Contacting 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) 89 4129 13774

From outside Europe +49 89 4129 13776

Fax +49 (0) 89 41 29 637 78

E-mail CustomerSupport@rohde-schwarz.com