



ROHDE & SCHWARZ

Test and Measurement
Division

Release Notes

Noise Test

Application Firmware R&S FS-K30

Release 4.60

with Service Pack 2

for R&S FSP, FSU, FSQ, FSG, FSMR, FSUP
Analyzer Firmware V4.6x

New Features:

- Auto Switch Off setting for External Generator Control

Release Note Revision: 4

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History

Date	Rel Note Rev	Changes
19 July 2010	1	First revision for Noise Application Firmware 4.60
12 October 2010	2	New hot line phone number for calls from Europe. Improvements with Service Pack 1 added.
09 March 2011	3	Improvements with Service Pack 2 added, new chapter "Customer Support".
06 June 2011	4	Entry for FSUP.

General Topics

Compatibility of the R&S FS-K30 Noise Application Firmware with other Firmware Releases

The following table shows the compatible versions of the basic analyzer firmware and the Noise Application Firmware:

Table of compatible versions:

R&S FS-K30 Application Firmware	R&S FSP Basic Firmware	R&S FSU Basic Firmware	R&S FSQ Basic Firmware	R&S FSMR Basic Firmware	R&S FSUP Basic Firmware	R&S FSG Basic Firmware
4.60 SP2	-	4.61 SP3	4.65 SP3	-	Please refer to the FSUP release notes	4.69 SP3
4.60 SP1	-	4.61 SP2	4.65 SP2	-		4.69 SP2
4.60	-	4.61	4.65	-		4.69
4.51	4.50 SP1	4.51 SP1	4.55 SP2	-		4.59 SP1
4.50	4.50	4.51	4.55	-		4.59
4.40	4.40	4.41	4.45	-		4.49
4.30	4.30	4.31	4.35	4.36 SP3		4.39
4.20 SP1	4.20	4.21	4.25	4.26		4.29
4.20	-	-	-	-		4.29
4.10 / 4.10 SP1	4.10	4.11	4.15	4.16 SP1		-
4.00	4.00	4.01	4.05	4.06		-
3.90	3.90	3.91	3.95	3.96		-
3.80	3.80	3.81	3.85	3.86		-
3.70	3.70	3.71	3.75	-		-
3.60	3.60	3.61	3.65	3.66 SP1		-
3.50	3.50	3.51	3.55	-		-
3.40	3.40	3.41	3.45	-		-
3.30	3.30	3.31	3.35	-		-
3.28	3.20	3.21	3.25	-		-
-	3.10	3.11	3.15	-		-

Note: For **R&S FSMR** a system memory of 512MByte is required.
For instruments, shipped with 256MByte system memory, a memory extension FSQ-B512, order number 1157.1590.02, is available.
The system memory size can be easily checked by pressing SETUP – SYSTEM INFO – STATISTICS, item "Memory size".

Firmware Update of the R&S FS-K30

Since basic firmware version 4.2x a ZIP file with the update sets of the basic system firmware and all available applications is provided. This ZIP file is available in the instruments FIRMWARE section, e.g. R&S FSU of the Service Board on GLORIS.

Please follow the steps described in the instrument's basic firmware release note to perform a complete firmware update.

Enabling the Application Firmware via License Key Code Entry

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

After installing the application firmware package a license key for validation must be entered. The license key is printed either on a label on the rear panel of the instrument or delivered as a part of the R&S FS-K30 Noise application firmware package.

The key sequence for entering the license key is:

SETUP - GENERAL SETUP – OPTIONS - INSTALL OPTION

Use the numeric keypad to input the license key number and press ENTER.

- On a successful validation the message 'option key valid' will appear. The instrument will perform an automatic reboot.
- If the validation failed, the application firmware is not installed.
The most probable reason will be that the instrument is not equipped with the correct basic firmware version. Therefore a messagebox will appear asking for installation of the correct basic firmware version.

If the application firmware package was not installed prior to entering the license key code, a message will appear asking for installation of the application firmware package.

In any case please make sure that the correct basic firmware version and the application firmware package is installed prior to entering the license key code.

New Functions in version 4.60

- **Auto Switch Off setting for External Generator Control**

Improvements

None

Improvements with Service Pack 1

Service Pack 1 corrects the following issues. The version numbers in brackets indicate the version in which the issue was observed for the first time.

1. [V4.60] The marker does not display the measured value, only the frequency.

Improvements with Service Pack 2

Service Pack 1 corrects the following issues. The version numbers in brackets indicate the version in which the issue was observed for the first time.

1. [V4.60 SP1] The measurement execution time increases after recalling saved settings.
2. [V4.60 SP1] Changing the external generator control GPIB address does not reinitialise the connection to the generator with the new settings.
3. [V4.60 SP1] Switching the state of the preamplifier does not update the 2nd stage correction status.

Known Issues

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

IEC/IEEE Bus only

1. [V3.90] [SENSe:]CONFigure:MODE commands

[SENSe] is not optional for these commands when using the short form: "CONF:MODE" as it conflicts with the "CONFigure" subsystem.

Workaround: Do not omit SENSE for these commands.

Modified Functions

The behaviour of the following functions changed compared to earlier versions [the number in brackets indicates the firmware version that introduced the individual change]:

1. [V3.60] ASCII Trace export available
2. [V3.70] Increased number of digits in table of results
3. [V3.80] X-axis scale is configurable between RF and IF frequencies
4. [V3.80] Roll key direction is same as the spectrum analyzer
5. [V4.10] One marker is supported for noise and gain trace.
6. [V4.10] Binary trace data export supported.
7. [V4.10] Memory traces supported via SCPI.
8. [V4.10] Additional enhancement labels OVLD, EXREF, EXT, SGL and PA.
9. [V4.10] Optimized print colours.

Print functionality is using the optimized print colours for better view.

10. [V4.10] Trace Export shows all data values in one line

Trace Export function now provides useful array of data. All data values for one frequency point are displayed in the same line.

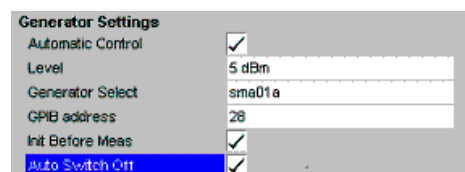
11. [V4.20] Support for new instrument model R&S FSG.
12. [V4.20 SP1] Added Print Table hardcopy functionality.
13. [V4.30] Added support for the Application recovery feature.
14. [V4.50] Support for option External Mixer B21.
15. [V4.51] Single frequency measurement.
16. [V4.60] Auto Switch Off setting for External Generator Control.

Modifications to the Operating Manual

The R&S FS-K30 Noise application functions are included in a separate manual set. Please refer to the following order numbers:

- 1157.2316.03 (German and English)

Modified Chapters for manual operation



When the Auto Switch Off option is selected R&S FS-K30 will automatically switch the external generator's RF output off after a measurement completes or is aborted.

This parameter is only available only when Automatic Control is selected.

Modified Chapters for remote operation

SYSTem:CONFigure:GENerator:SWITch:AUTO

This remote control command is used to specify whether a sequence of GPIB commands is sent to an external signal generator at the end of each measurement (after a single sweep or after a measurement is aborted) to switch the generator's RF output off.

Syntax: SYSTem:CONFigure: GENerator:SWITch:AUTO <boolean>
boolean := 0|1 or OFF | ON

Example: SYST:CONF:GEN:SWIT:AUT ON
The FS-K30 option switches the generator's RF output after each measurement.

Processing: FS-K30

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 take care that you will get the right information.

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