ROHDE&SCHWARZ

Test and Measurement
Division

Release Notes

FS300-K1 PC-Software (1147.1017.02) Release 3.1

for FS300 Spectrum Analyzer

New Features:

3.1

- Bug fixing

2.5

- New High Sense Mode
- Authorisation code eliminated
- Improved Peak Excursion function
- RBW / Span Low Noise Mode
- Min Hold Trace Mode
- New Editor
- Zoom Functions

Release Note Revision: 3.1

10. April 2006

Contents

General Topics

Firmware Update Overview

This firmware may only be installed from Windows 2000/XP USB hosts.

System Requirements

The following hardware and software is required to update a FS300 with the new release:

Standard PC:	min 800 MHz
Operating System:	Windows XP or 2000
Drives:	CD-ROM, Hard disk (min 100 MB free disk space)
Interfaces:	USB 1.1

Update file set

The update files will be distributed on a CD-ROM (Order number 1147.1017.02) or it could be downloaded from the Smart Instruments™ homepage (http://www.smart-instruments.de/).

Software Release Version Components

FS300-K1 PC-Software Release:	**3.1**
Build version	*3.1.0*
Series300 Software Manager:	**2.1**

Installation of the FS300-K1 Release 3.1

The installation of the Software update is described FS300 Operation Manual chapter 7 “Remote Control / PC-Software FS300-K1”.

Modified Functions

The version numbers in brackets indicate the version/release in which the problem was first identified.
All improvements and changes are related to the Release 1.0 of the FS300-K1.

Manual Operation

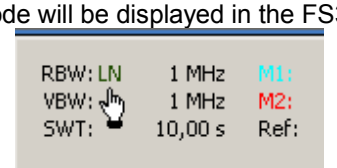
1. (Release 2.5) RBW / SPAN LOW NOISE

7.6.2.4.1 RBW RBW/Span

Note	The setting becomes effective only if the resolution bandwidth coupling is in AUTO mode.
Description	You can change the automatic coupling between the SPAN and resolution bandwidth (RBW) by means of the RBW/Span function. Thus, you can switch the analyzer between the two settings "Normal" and "Low Noise" for even more accurate signal analysis, for example.
Normal	▪ Default setting ▪ Corresponds to the normal operating mode and provides the shortest possible sweep times for a set SPAN
Low Noise	If the span is 1 GHz or lower, the resolution bandwidth is decreased in the "Low Noise" setting as compared with the "Normal" setting. As a result, the sweep time increases simultaneously. The resolution bandwidths (RBWs) are set in accordance with the table below:

SPAN	RBW
SPAN > 1 GHz	1 MHz
1 GHz ≥ SPAN > 50 MHz	300 kHz
50 MHz ≥ SPAN > 10 MHz	100 kHz
10 MHz ≥ SPAN > 5 MHz	30 kHz
5 MHz ≥ SPAN > 1 MHz	10 kHz
1 MHz≥ SPAN > 200 kHz	3 kHz
200 kHz ≥ SPAN > 100 kHz	1 kHz
100 kHz ≥ SPAN > 50 kHz	500 Hz
50 kHz ≥ SPAN > 20 kHz	300 Hz
20 kHz ≥ SPAN > 1 kHz	200 Hz

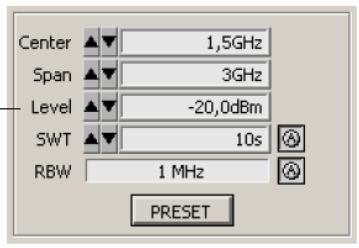
The Low Noise mode will be displayed in the FS300-K1 if it is switched on.



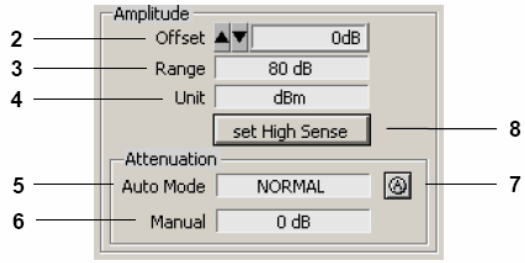
2. (Release 2.5) High Sense Mode

7.6.2.2 Amp Menu

Main function display (always visible)



Function display (insert with F6 key)



Function and shortcut

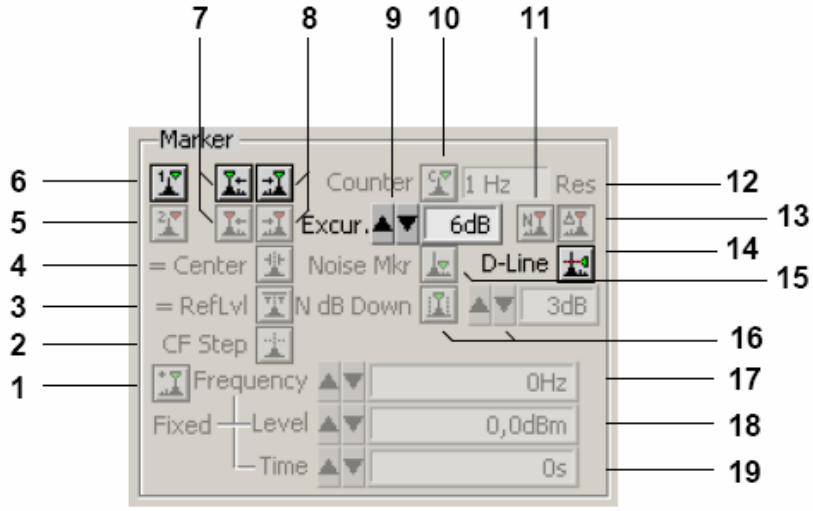
Ref Level Ctrl+Shift+L	Entering the reference level	(1)
Ref Level Offset	Entering a level offset	(2)
Range Ctrl+Shift+R	Selecting the level display range	(3)
Unit Ctrl+Shift+U	Selecting a unit for the level display	(4)
RF Attenuation	Setting the RF input attenuation manually	(6)
RF Attenuation Auto	Setting the RF input attenuation automatically	(5), (7)
Set High Sense	Setting the high sensitivity automatically	(8)

3. (Release 2.5) Improved Peak Searching Function

The Peak searching is now implemented with the “Peak Excursion” functionality.
The functionality of the “Peak Excursion” is described in the FS300 Operation Manual (chapter 6.2.3.4 Marker Measurement Functions).

7.6.2.3 Marker Menu

Function display
(insert with F7 key)



Marker Settings ▸	**Open submenu:** Search criterion of functions NEXT PEAK LEFT/RIGHT	
Peak Excursion	Entering the peak excursion	(9)

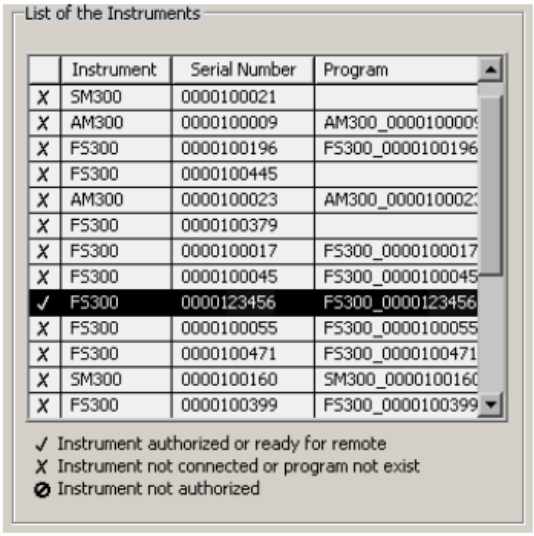
4. (Release 2.5) Authorisation code eliminated

The FS300-K1 PC-Software is now working without an authorisation code.

7.2.2.2 Creating the Program Version

Selecting the instrument

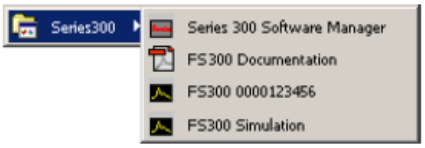
1. In **I** click on the instrument for which you create a link.



Creating the program version for specific instrument

2. Click **<Create Program>**. A program version for specific instrument is created and displayed in **II** with the status (✓). The program number is created from the instrument name (**FS300**) and the serial number (**0000xxxxxx**).

3. In **II** click **<Exit>** to close the service program. After correctly creating the program version, the option **FS300 0000xxxxxx** is available in the Windows™ start-up menu **Start\Programs\Rohde & Schwarz\Series300**.



Now the program **FS300 0000xxxxxx** can be started (↗ 6-188)

5. (Release 2.5) Min Hold Trace Mode

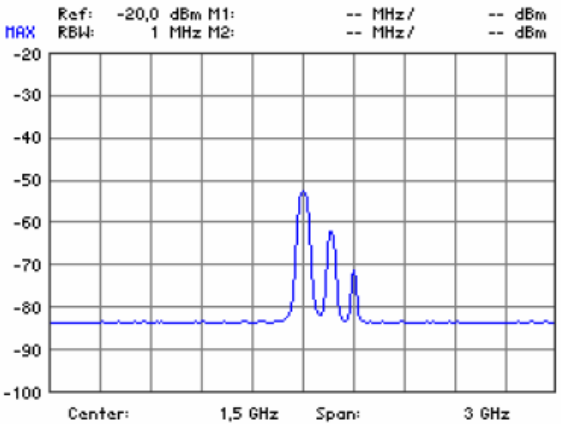
Displaying signal minimum/maximum

1. Press the HOLD **function key** in the TRACE **menu.**

   A selection field containing the available settings is displayed. The default setting is Min Hold.

2. Select a settings for displaying the active trace with **rotary knob** [10].
3. Press the **ENTER key** [5] to close the selection field.

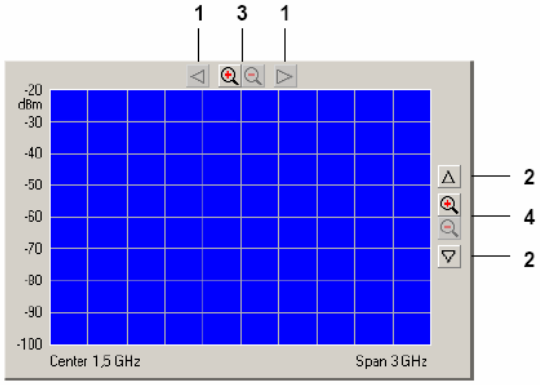
   The MIN/MAX function is activated. This means that, after every sweep, the R&S FS300 only transfers the new measured value to the measured value memory if it is smaller/greater than the previous value. The current display mode , e. g. MAX , is displayed in the top left of the diagram area.



6. (Release 2.5) Zoom Functions

7.6.5 Zoom Functions

Diagram area (always visible)



Functions

Zoom Zoom the screen window

- **(1)** Move screen window in X direction (one grid unit)
- **(2)** Move screen window in Y direction (one grid unit)
- **(3)** Zoom screen window in/out in X direction
- **(4)** Zoom screen window in/out in Y direction

Note Zoom function **(3)** corresponds to the Zoom In/Out functions (↗ 6-207). Zoom function **(4)** corresponds to the Range functions (↗ 6-208).

7. (Release 2.5) New Editor

The Unit can now be entered by using the first letter of the SI Unit.

Selecting the unit

The entry is made in the active measurement unit, which is indicated after the numeric value in the entry field and can be changed. Make sure that there are no spaces between the numeric figure and the measurement unit.

You may omit the base unit (e.g. Hz, s, dBm). However, you must specify the unit size (valid values: G, M, k, m, u, n, p).

Input examples

- **Span:**

15k	⇨	Span ▲▼ 15kHz
15kHz	⇨	Span ▲▼ 15kHz
150000	⇨	Span ▲▼ 150kHz
15M	⇨	Span ▲▼ 15MHz

- **Sweep Time:**

34m	⇨	SWT ▲▼ 34ms
34ms	⇨	SWT ▲▼ 34ms
34	⇨	SWT ▲▼ 34s
34u	⇨	SWT ▲▼ 34us

Problems Eliminated

The version numbers in brackets indicate the version/release in which the problem was first identified.
All improvements and changes are related to the Release 1.0 of the FS300-K1.

1. (Release 3.1) Exported ASCII file does not contain Level Offset
The exported ASCII file is now storing the level offset information.

2. (Release 3.1) Trace Averaging
The trace averaging is now handling all trace data not, only the last third of the displayed trace.

3. (Release 3.1) Exported ASCII file contains only actual sweep
The exported of ASCII file is now storing the post processed data from the trace mode (average, max hold etc.).

4. (Release 3.1) Freezing FS300-K1 after printing
On some systems the FS300-K1 was freezing after printing. The problem is now fixed.

5. (Release 3.1) Unit is shown in exported ASCII files
The exported ASCII file always contains values in dBm. The unit is written to the exported ASCII file.

6. (Release 3.1) Video Trigger Level not initialized
The Video Trigger Level was initialized to -150%. New initialisation value is 50%.

7. (Release 2.5) Device Not Connected
There were problems on some PCs, that the FS300-K1 displayed “Device not Connected” and didn’t get any connection to the instrument, even if the instrument was authorized and proper connected to the PC. This problem was fixed by a new USB access driver.

8. (Release 2.5) Slowing Down Program During Runtime
The FS300-K1 was slowing down during runtime, because of a memory leak. This problem is now fixed.

Known Problems

This chapter includes firmware problems relating to basic instrument firmware.

For problems related to option package R&S FS300-K1 please refer to the corresponding release notes of the individual option package.

The version numbers in brackets indicate the version in which the error was first identified.

1. (Release 2.1) Trace Averaging: Sweep Count stuck at 0
Changing the sweep count value in the averaging mode has no effect to the displayed value sweep count value. But the entered value is used.

2. (Release 2.1) Video Trigger Level after remote/local operation
The video trigger level will not be correctly exchanged after switching from remote to local and vice versa.

Modifications to the Operating Manual

The FS300-K1 Release 3.1 installation contains the FS300 Operation Manual 13th edition 02/2006.

Appendix

Up-to-date information and upgrades

To keep your Rohde & Schwarz equipment always up-to-date, please subscribe to an electronic newsletter at http://www.rohde-schwarz.com/www/response.nsf/newsletterpreselection or request the desired information and upgrades via email from your Customer Support Centre (addresses see below).

Feedback

We want to know if we are meeting your support needs. If you have any comments please email us and let us know CustomerSupport.Feedback@rohde-schwarz.com

Customer support centre

USA & Canada Monday to Friday (except US public holidays)
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From outside USA +1 410 910 7800 (opt 2)
Fax +1 410 910 7801
E-mail Customer.Support@rsa.rohde-schwarz.com

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Tel. +65 6 513 0488
Fax +65 6 846 1090
E-mail Customersupport.asia@rohde-schwarz.com

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From outside Europe +49 89 4129 13776
Fax +49 (0) 89 41 29 637 78
E-mail CustomerSupport@rohde-schwarz.com