



**ROHDE & SCHWARZ**

Test and Measurement  
Division

## Release Notes

# FS300-K1 PC-Software (1147.1017.02)

## Release 4.1

### for FS300 Spectrum Analyzer

#### New Features:

##### 4.1

- Windows 7 support

##### 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: 4.1**

01. September 2011

## **Contents**

<b>General Topics .....</b>	<b>3</b>
<b>Software Update Overview .....</b>	<b>3</b>
System Requirements .....	3
Update file set .....	3
Software Release Version Components .....	3
<b>Installation of the FS300-K1 Release 4.1 .....</b>	<b>3</b>
<b>Modified Functions .....</b>	<b>4</b>
<b>Manual Operation .....</b>	<b>4</b>
<b>Problems Eliminated .....</b>	<b>15</b>
<b>Known Problems .....</b>	<b>16</b>
<b>Modifications to the Operating Manual .....</b>	<b>17</b>

## General Topics

### Software Update Overview

This software may only be installed on MS Windows PCs hosts.

### System Requirements

The following hardware and software is required to update a PC with the new release of the FS300-K1:

Standard PC:	min 800 MHz
Operating System:	Windows XP, 2000, VITSA, Windows 7 (32/64 bit)
Drives:	CD-ROM, Hard disk (min 200 MB free disk space)
Interfaces:	USB 1.1

### Update file set

The update could be downloaded from the Smart Instruments™ homepage (<http://www.smart-instruments.de/>).

### Software Release Version Components

<b>FS300-K1 PC-Software Release:</b>	<b>4.1</b>
<i>Build version</i>	<i>4.1.0</i>
<b>Series300 Software Manager:</b>	<b>4.0</b>

### Installation of the FS300-K1 Release 4.1

The installation of the Software update is described later in this document.

## 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 4.1) Software Installation Procedure

1. Insert the CD containing the FS300-K1 software into a CD ROM drive.

The autorun function automatically initiates installation. Alternatively, you may also initiate the installation from the CD (see instruction 2.).

2. Start the installation routine by selecting Start -> Run, typing "X:\Setup" and clicking "OK", or by finding the CD-ROM drive "X" in MS Windows™ Explorer and double-clicking the setup executable ("Setup.exe").

In either case, "X" is the drive letter of the CD ROM drive with the installation CD.

3. To proceed with the installation, click the "Next >" button.

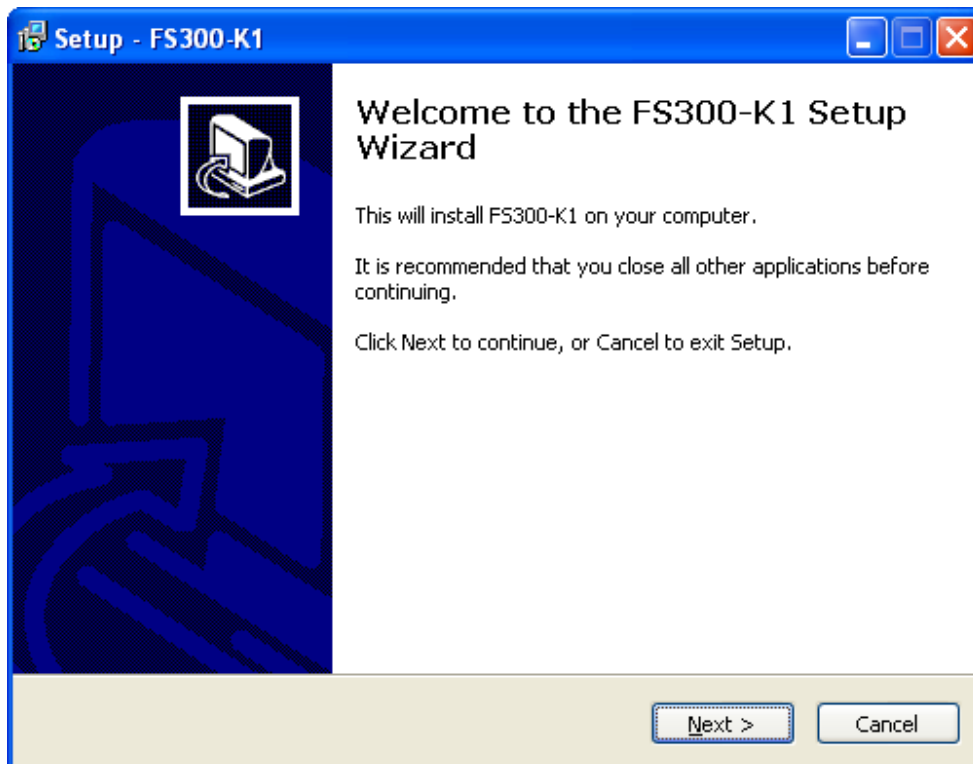


Fig.1 Installation main screen

4. Please read the License Agreement carefully. To proceed with the installation, select "I accept ..." and click the "Next >>" button.

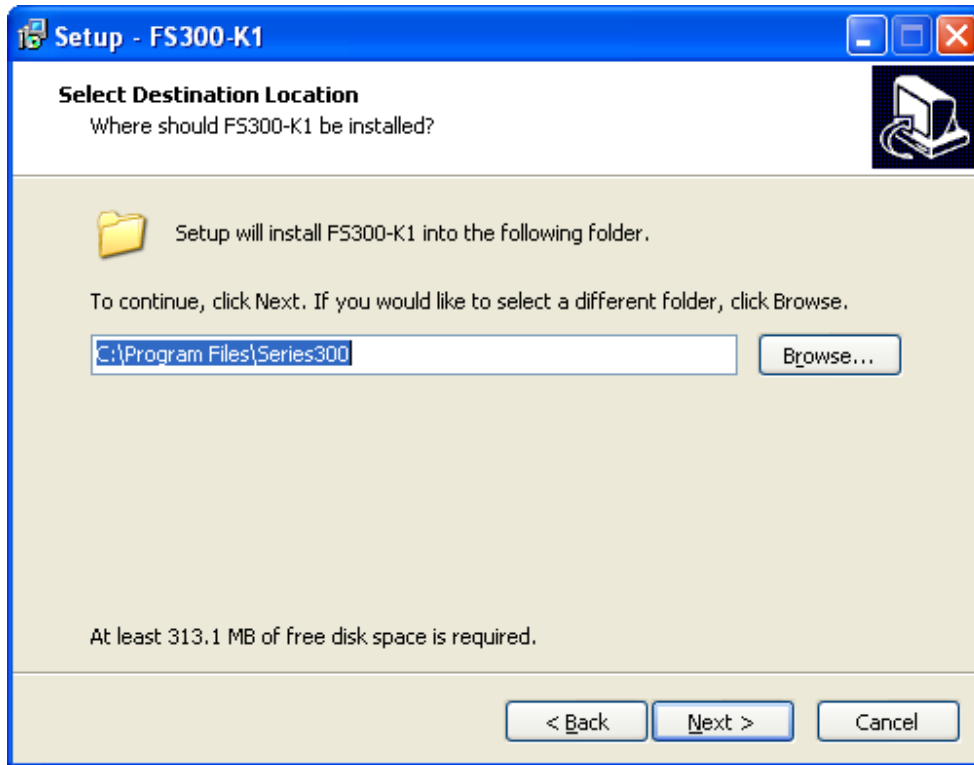


Fig.2 License agreement

5. To install the FS300-K1 to another than the default directory/drive, click the "Browse..." button.

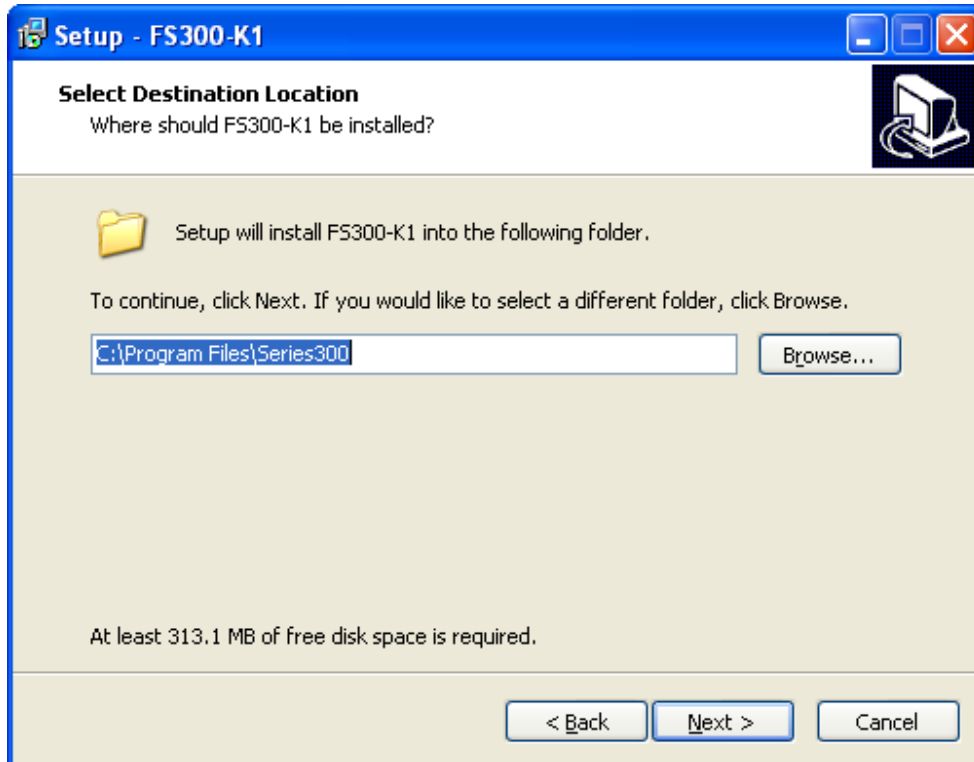


Fig.3 FS300-K1 installation directory location

- To install the FS300-K1 to another than the default Start menu folder, click the "Browse..." button.

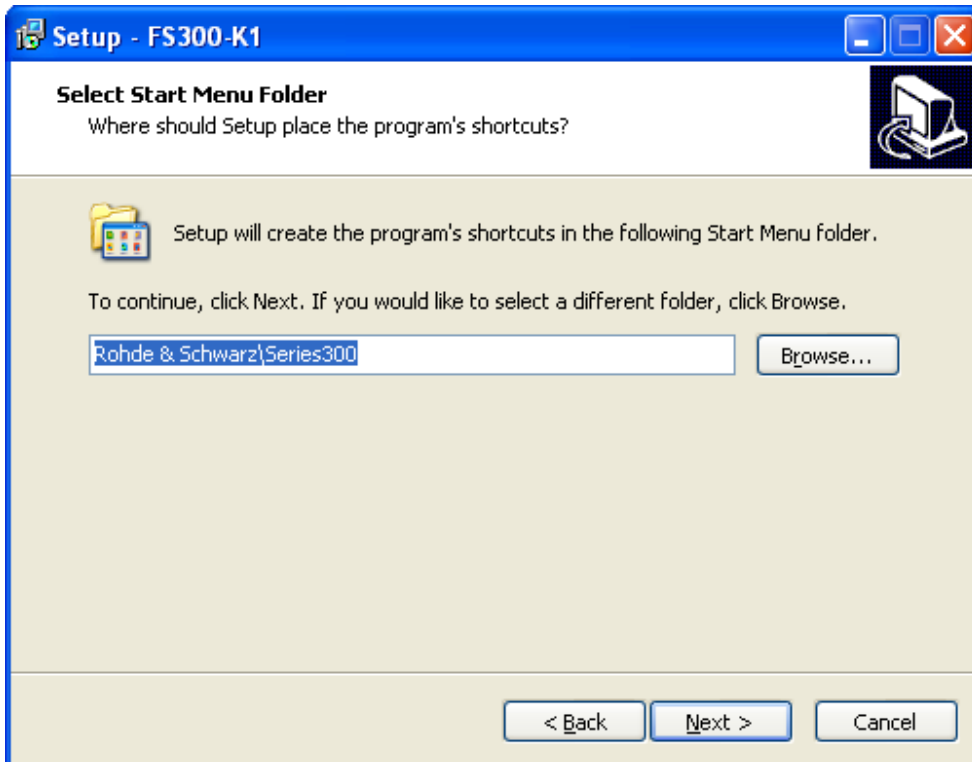


Fig.4 Start Menu entry

- To proceed with the installation, click the "Install" button.

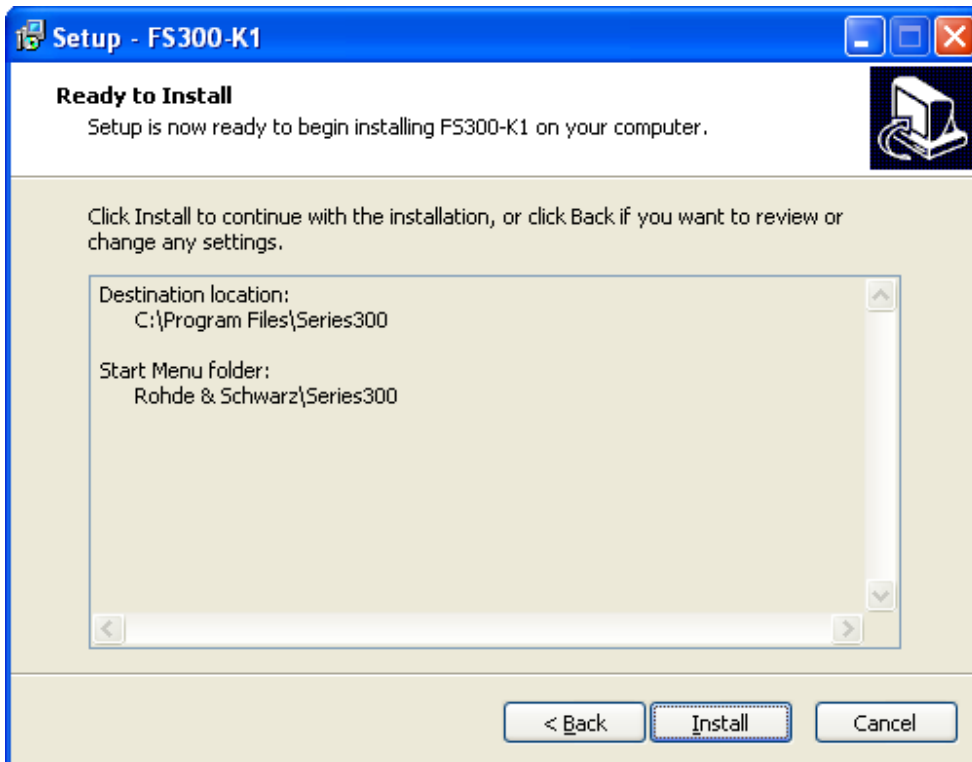


Fig.5 Installation start

8. After completion, select additional software components to be installed. To proceed click the "Finish" button and follow the installation procedure steps of the selected software components.

Note: It is highly recommended to install all the additional software components.

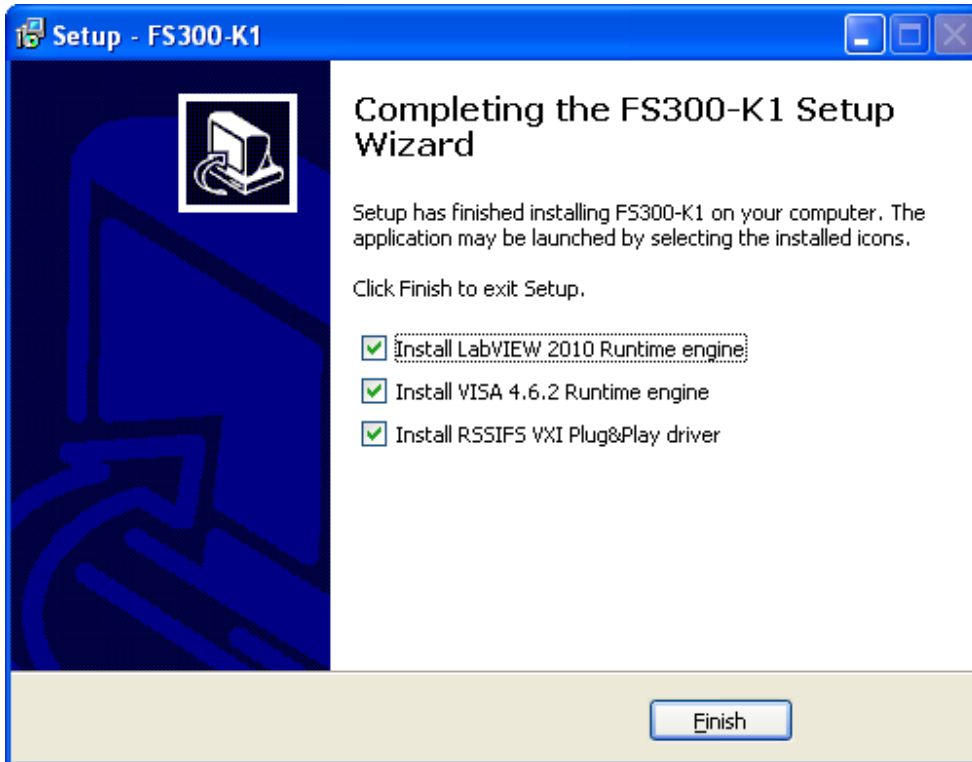


Fig.6 Additional software installation

9. The installation routine inserts an "Series300" entry in the user area of "Programs" in the "Start" menu. It also generates a desktop icon.

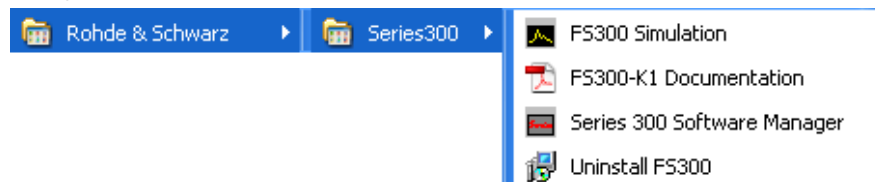


Fig.7 Start Menu

10. After installation of the "FS300-K1", it is recommended to reboot the PC.

2. (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.

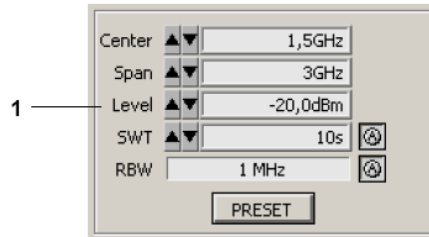




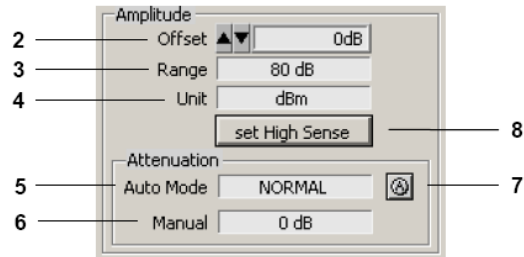
3. (Release 2.5) High Sense Mode

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 )

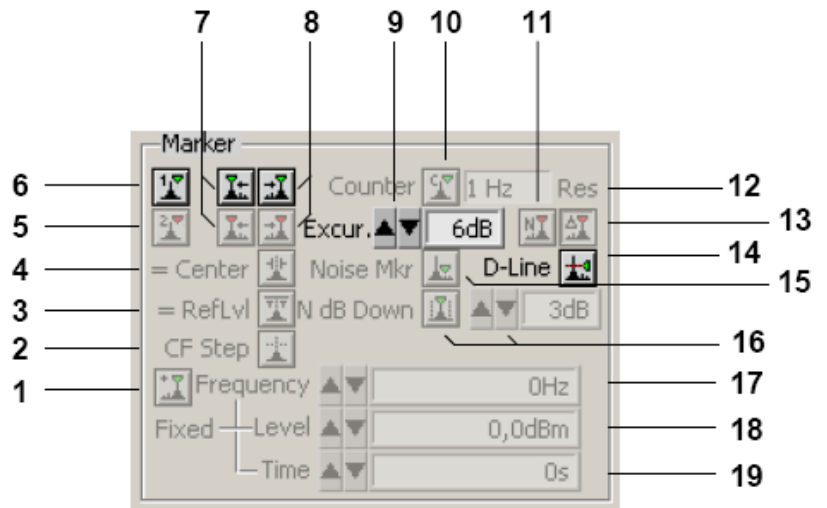
4. (Release 2.5) Improved Peak Searching Function

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 )

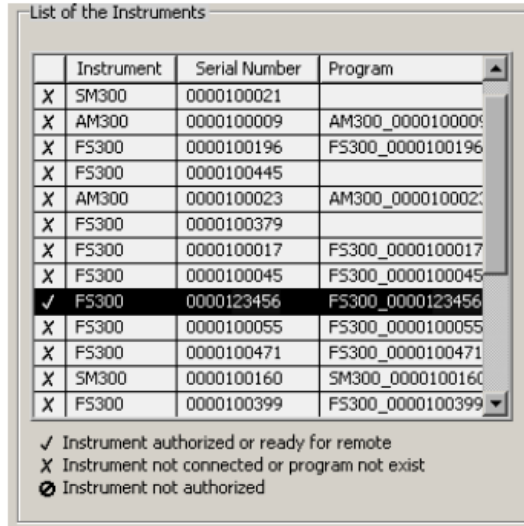
5. (Release 2.5) Authorisation code eliminated

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.

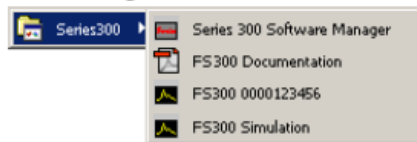


Creating the program version for specific instrument

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)

6. (Release 2.5) Min Hold Trace Mode

Displaying signal minimum/maximum

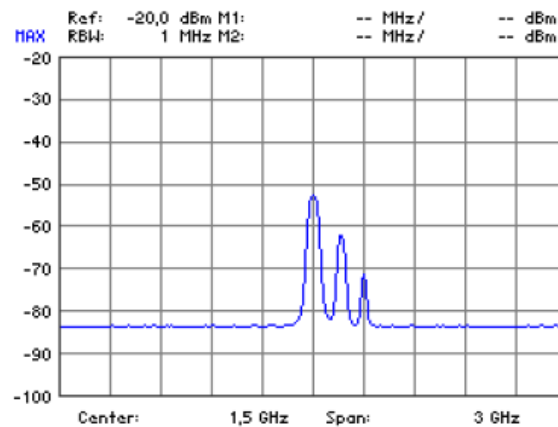
1. Press the **HOLD** function key in the **TRACE** menu.

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.

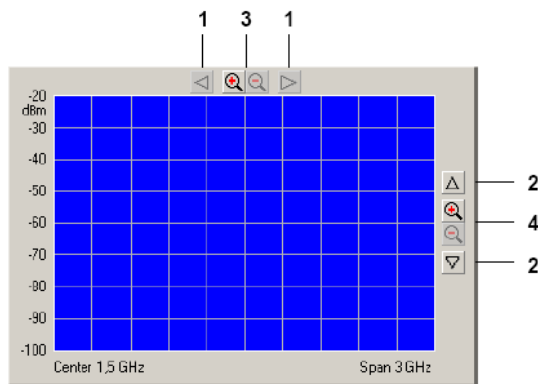
The MIN/MAX function is activated. This means that, after every sweep, the R&S FS300 only transfers the new measured value to the measured value memory if it is smaller/greater than the previous value. The current display mode, e. g. MAX, is displayed in the top left of the diagram area.



7. (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).

---

8. (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      ⇒     

15kHz    ⇒     

150000   ⇒     

15M      ⇒     

▪ **Sweep Time:**

34m      ⇒     

34ms     ⇒     

34        ⇒     

34u      ⇒

## 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 4.1) Driver Installation Fails on Windows 7**

The driver installation on Windows 7 is now possible.

**2. (Release 3.1) Exported ASCII file does not contain Level Offset**

The exported ASCII file is now storing the level offset information.

**3. (Release 3.1) Trace Averaging**

The trace averaging is now handling all trace data not, only the last third of the displayed trace.

**4. (Release 3.1) Exported ASCII file contains only actual sweep**

The exported ASCII file is now storing the post processed data from the trace mode (average, max hold etc.).

**5. (Release 3.1) Freezing FS300-K1 after printing**

On some systems the FS300-K1 was freezing after printing. The problem is now fixed.

**6. (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.

**7. (Release 3.1) Video Trigger Level not initialized**

The Video Trigger Level was initialized to -150%. New initialisation value is 50%.

**8. (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.

**9. (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 4.1 installation does not contain the FS300 Operation Manual.

### **1. (Release 1.1) Software Installation Procedure**

The new installation procedure is described above (see (Release 4.1) Software Installation Procedure in Chapter Modified Functions -> Manual Operations).

