



**ROHDE & SCHWARZ**

Test and Measurement  
Division

## **Release Notes**

### **TETRA II Analysis**

### **Application Firmware R&S FS-K110**

### **Release 4.70**

### **with Service Pack 2**

for R&S FSQ, FSU, Analyzer Firmware V4.7x

**Release Note Revision: 3**

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## Contents

History .....	3
General Topics .....	3
Compatibility of the R&S FS-K110 TETRA II Analysis Application Firmware with other Firmware Releases .....	3
Firmware Update of the R&S FS-K110 TETRA II Analysis Application Firmware .....	4
Enabling the Application Firmware via License Key Code Entry .....	4
System Memory Requirements .....	4
New Functions in Version 4.70 .....	5
Improvements .....	5
Improvements with Service Pack 2.....	5
Known Issues with option R&S FS-K110 TETRA II Analysis Application Firmware	6
Manual Operation and IEC/IEEE Bus.....	6
IEC/IEEE Bus only .....	6
Modified Functions.....	7
Modifications to the Operating Manual .....	7
Modified Chapters .....	7
Customer Support.....	8
Technical support – where and when you need it .....	8
Up-to-date information and upgrades.....	8

## History

Date	Rel Note Rev	Changes
21 April 2011	1	First revision of K110 Application Firmware for V4.70
10 August 2012	2	Known issue added
15 April 2013	3	Improvements with Service Pack 2 added.

## General Topics

### Compatibility of the R&S FS-K110 TETRA II Analysis Application Firmware with other Firmware Releases

The following table shows the compatible versions of the basic analyzer firmware and the TETRA II Analysis Application Firmware.

Table of compatible versions:

R&S FS-K110 Application Firmware	R&S FSQ Basic Firmware	R&S FSU Basic Firmware
4.70 SP2	4.75 SP5	4.71 SP5
4.70	4.75 SP4	4.71 SP4
4.70	4.75 SP3	4.71 SP3
4.70	4.75 SP2	4.71 SP2
4.70	4.75 SP1	4.71 SP1
4.70	4.75	4.71
4.61	4.65 SP1	4.61 SP1
4.60	4.65	4.61
4.50 SP1	4.55 SP2	4.51 SP1
4.50	4.55 SP1	4.51
4.40	4.45 SP 2	4.41 SP2

## **Firmware Update of the R&S FS-K110 TETRA II Analysis Application Firmware**

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 FSQ 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-K110 TETRA II Analysis 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 is installed prior to entering the license key code..**

## **System Memory Requirements**

For FS-K110 TETRA II Analysis Application Firmware, an installed system memory of 512MByte is essential.

The system memory size can be easily checked by pressing SETUP – SYSTEM INFO – STATISTICS, item "Memory size". This item is available since version 3.25 of the base system firmware.

For FSQ instruments, shipped with 256MByte system memory, a memory extension FSQ-B512, order number 1157.1590.02, is available.

For FSU instruments, shipped with 256MByte system memory, a memory extension FSP-B512, order number 1157.1590.03 (for CPU boards with order no. 1091.2520.00) respectively 1157.1590.04 (for CPU board with order no. 1091.2808.00 or 1091.2814.00), is available.

Please refer to the Software Release Notes of the basic system firmware for further system memory requirements which may apply.

## New Functions in Version 4.70

None.

## Improvements

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

1. (K1110 V4.60) **Print: use user defined colors for printing.**

## Improvements with Service Pack 2

Service Pack 2 corrects the following issues. The version numbers in brackets indicate the version in which the issue was observed for the first time.

1. (K110 V4.70) **Measurements *APC due to Modulation* and *ACP due to Transients***

The measured absolute powers (current and average) were shown on the display without considering the parameter *External Attenuation*. This issue was fixed.

Not affected were the maximum measured powers, all relative ACP results and all results (absolute or relative ones) when queried by means of SCPI commands.

2. (K110 V4.70) **An overload indication or a bad Signal/Noise ratio is visible dependend on previous analyzer attenuation settings.**

This has now been corrected.

3. (K110 V4.70) **The application sometimes locks up in remote operation.**

This has now been corrected.

4. (K110 V4.70) **The status bar now shows an instrument overload indication that will not be hidden by the *General Settings* dialog.**

# Known Issues with option R&S FS-K110 TETRA II Analysis Application Firmware

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

## Manual Operation and IEC/IEEE Bus

### 1. (K110 V4.40) Y-Auto scaling is not always optimum

The automatic scaling of the y-axis of some measurements needs improvement.

**Workaround:** Switch to manual y-axis scaling for measurements located in the EVM-submenu.

### 2. (K110 V4.40) RBW of FFTs blinks

In the measurements Spectrum FFT and ACP due to Modulation the application delivers FFT traces and the resolution bandwidth of them. These RBW figures blink and disappear after a RUN SGL is finished.

**Workaround:** In all releases the RBW was always 300 Hz.

### 3. (K110 V4.50)FSQ-B17: The message "PRBS Test passed" is indicated, but the test ist failed.

The remote status register bit is not affected.

**Workaround:** Check the status in Spectrum Analyzer mode (menu SETUP –SIGNAL SOURCE, Softkey DIGITAL BB INFO).

### 4. (K110 V4.70) The activation of the application does not work properly, if the analyzer uses *Split Screen* mode or *Screen B* is the active screen of the analyzer mode.

**Workaround:** Change to *Full Screen* and select *Screen A* before you enter K110.

### 5. (K110 V4.70) After Entry/Exit of the K110 application all traces are set to *BLANK* and therefore no measurements are possible now.

**Workaround:** Switch the *Trace Mode* of *Trace 1* back to *Clr/Write* or use preset.

## IEC/IEEE Bus only

### 1. (K110 V4.40) Setting limits for ACP due to Transients does not update GUI

Commands that set limits of the measurement ACP due to Transients like

*CALCulate1:LIMit:BURSt:ACPTrans:CHAN2:RELPower:BANDwidth0*

change the limits but the GUI does not reflect these changes.

Commands that query failed / passed limits like

*CALCulate1:LIMit:BURSt:ACPTrans:CHAN2:RELPower:MAXimum:RESult?*

use the correct (i.e. changed) limits.

## 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. (K110 V4.61) Softkey *Support* stores files in a separate folder**

If the the softkey *Support* is pressed, the FS-K110 stores various files on the instrument's hard disk. The user can send these files to the R&S support center.

Firmware version V4.61 the FS-K110 uses its own folder "D:\USER\SUPPORT\TETRA2\".

In earlier firmware versions various firmware applications share the same folder "D:\USER\SUPPORT\".

**2. (K110 V4.60) Print: use user defined colors for printing.**

## Modifications to the Operating Manual

The R&S FS-K110 TETRA II Analysis Application Firmware functions are included in a separate manual set. Please refer to the following order numbers:

- 1309.9680.42-03- (English)

## Modified Chapters

No change.

# 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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