

Release Notes

Revision: 01

R&S[®]TSMW Universal Radio Network Analyzer

Firmware Release 1.03

Software Release V1.1.0.0 R&S[®]TSMW-K1

These Release Notes describe the following models and options of the R&S[®] Universal Radio Network Analyzer:

- ◆ R&S[®]TSMW, order no. 1503.3001.02
- ◆ R&S[®]TSMW-K1 Software, order no. 1503.3960.02

New Features of Firmware V1.03:

- ◆ WiMAX measurement support
- ◆ Automatic GPS synchronization
- ◆ Enhanced IQ measurement features
- ◆ Enhanced TSMW measurement scheduler

New Features of R&S[®]TSMW-K1 Software V1.1.0.0:

- ◆ GPS support included
- ◆ Single and double precision output data type support
- ◆ Direct access to TSMW trigger port via trigger function
- ◆ Access to TSMW reference oscillator DAC value
- ◆ Updated TSMW IQ Interface Demo Application
- ◆ Updated TSMW Filter Design Demo Application

**NOTES FOR R&S TSMW USERS CAN BE FOUND
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1 Revision History

Date	Rel. Note rev.	Changes
30 July 2008	1.0	Firmware V1.03 Update of the initial Release Software TSMW-K1 Version V1.1.0.0 Update of the Initial Release

2 Installation Information

2.1 Firmware Update

The Web-Browser on the host PC is used to update the instrument firmware.

NOTICE**Danger of instrument damage!**

Make sure that neither ROMES nor any other utility tool interfaces with the R&S TSMW at the same time. Shut down any active utility before starting the browser!

2.1.1 Requirements

- ◆ PC/notebook with LAN interface
- ◆ PC/notebook and TSMW connected with a LAN cable
- ◆ Appropriate IP settings for the instrument and the LAN adapter of the host PC – refer to the TSMW user manual for details.
- ◆ TSMW powered up and power on sequence completed successfully – the green Process State LED on the front panel side of the TSMW needs to be on after switching on the instrument.
- ◆ TSMW firmware file (TSMW.fw) temporary stored on the host PC. The firmware file could be downloaded from the internet under: <http://www.rohde-schwarz.com>. Select "DOWNLOAD" and search for R&S TSMW within the category FIRMWARE.

2.1.2 Instruction for FW Update via Browser

1. Open Web-Browser
2. Enter TSMW IP address (default IP address: 192.168.0.2)
3. Scroll down to the "Firmware Update" section
4. Press the query button and select the TSMW firmware file (*.fw)
5. Press the "Install" button
6. The firmware file is being uploaded to the instrument - this can take up to a few minutes!
7. An amber dialog box comes up subsequently and the Web-Browser starts automatically to reconnect to the instrument. No user interaction is necessary at this point.
8. After reconnecting successfully a green message box in the TSMW Web-Interface pops up.
9. The updated firmware version could be checked via the TSMW Web-Interface.

NOTICE

Danger of instrument damage!

Switching off the power supply or disconnecting the LAN cable during firmware upload may cause severe instrument damage!

2.2 Installing Firmware Options

2.2.1 Option Key Installation

The option keys for reordered TSMW firmware options are shipped on a CD-ROM.

1. Connect the LAN interface of the TSMW with the host PC, switch on the instrument and insert the "TSMW Option File" CD into the host PC drive.
2. After self-test has been finished on the TSMW, start the Web-Browser application on the host PC and enter the IP address of the instrument to access the Web-Interface.
The instrument is shipped with the default the IP address 192.168.0.2

Note:

In cases where the IP address of the R&S®TSMW had been reconfigured manually according to local IP network setting requirements, please refer to the user manual how to query the current IP address.

3. The browser window will display the Web-Interface with all the instrument related system information.
4. Scroll down to the "Instrument Options" section and press the "Browse..." button. A file dialog comes up to select the option key xml file(s).

5. Browse to the root of the CD-ROM drive, select the "OptionKey*Kxx.xml" file and press "Open".
(Any ordered firmware option is shipped as an xml-file with the appropriate Kxx string in the file name)

Note:

Alternatively, the option key code could be entered manually via the Web-Interface as a column of figures in the corresponding entry field. The key code can be extracted from the accompanying "Software Option List" which is part of any ordinary option key shipment.

6. Press the "Install" button in the Web-Interface. The browser page starts refreshing automatically and the new option should now be listed in the "Instrument Options" section.
7. **Repeat step 5 to step 6 for every option key file located in the CD-ROM root directory as TSMW software options may require the installation of several option keys cf. 8.4 Software Options.**
8. The new firmware option(s) is (are) now available on the instrument.

3 New Functions

The following table lists the new functions and indicates the version in which the new function was introduced:

Version	Function
	Firmware
V1.03	WiMAX measurement support
V1.03	Automatic GPS synchronization
V1.03	Enhanced IQ measurement features
V1.03	Enhanced TSMW measurement scheduler
	R&S® TSMW-K1 Software
V1.1.0.0	GPS support included
V1.1.0.0	Single and double precision output data type support
V1.1.0.0	Direct access to TSMW trigger port via trigger function
V1.1.0.0	Access to TSMW reference oscillator DAC value
V1.1.0.0	Updated TSMW IQ Interface Demo Application
V1.1.0.0	Updated TSMW Filter Design Demo Application

4 Modified Functions

The following table lists the modified functions and indicates the version in which the modification was carried out:

Firmware

Version	Function
V1.02	Initial Release

Software (TSMW-K1)

Version	Function
V1.0.1.0	Initial Release – FW 01.02 mandatory

5 Eliminated Problems

The following table lists the eliminated problems and indicates the version in which the problem was observed for the first time:

Firmware

Version	Function
V1.02	Initial Release

Software (TSMW-K1)

Version	Function
V1.0.1.1	GPS is automatically enabled. GPS data can be acquired via USB port. FW 1.02 mandatory.
V1.0.1.1	Startup problem of Matlab IQ demo (Java Memory Overflow)
V1.0.1.0	Initial Release – FW 01.02 mandatory

6 Known Problems

The following table lists the known problems and indicates the version in which the problem was observed for the first time:

Firmware

Version	Function
V1.02	TSMW Modes "Connected" and "Measuring are not indicated correctly via front panel LEDs
V1.02	ROMES WiMAX measurements are only available on RF1 input.

Software (TSMW-K1)

Version	Function
V1.1.0.0	The frequency shift works only for subchannels 1 and 2

7 Modifications to the Documentation

The new and modified functions mentioned in these release notes are already documented. Except the below mentioned last minute changes you can find the description including remote commands in the online help or in the manual. The manual can be downloaded from the internet under: <http://www.rohde-schwarz.com>. Select "DOWNLOAD" and search for R&S TSMW within the category MANUAL.

7.1 Last minute changes to the operating manual

None

8 Notes for R&S TSMW users

8.1 TSMW requires initial GPS time base referencing

TSMW measurements require the initial PPS synchronization of the instrument via the internal GPS receiver in order to reference the internal quartz oscillator to the GPS time base and provide stable measurements.

Therefore connect the accessory GPS antenna to the receiver and provide a good GPS signal for the first time starting a ROMES or TSMW-K1 measurement.

After the GPS position had been fixed (the green GPS PPS LED on the TSMW front panel starts blinking) the GPS coverage should persist for at least five minutes.

During this time the internal reference quartz will be referenced to the high precision GPS time base. The correction value will be stored in a non-volatile memory section on the instrument and is available for consecutive TSMW measurements.

The correction value will be verified and adapted if necessary for every new TSMW measurement session at the availability of a valid GPS position fix.

8.2 ROMES V4.10 supports measurements only on RF-path 1 of the TSMW

WiMAX measurements with R&S® ROMES software V4.10 and R&S® TSMW-K28 firmware option could only be conducted on RF path 1 of the TSMW. This is a restriction of ROMES measurement software and will be solved on one of the next releases.

8.3 New Firmware is incompatible to previous software versions

⚠ WARNING**Incompatibility of Firmware version**

Firmware version 01.03 is not compatible to the previous versions (1.0.1.0 / 1.0.1.1) of the R&S® TSMW-K1 software (Gigabit Digital IQ Interface). This means that both the TSMW firmware has to be updated and the corresponding TSMW-K1 Software Version 1.1.0.0 has to be installed. Using a mixed firmware and TSMW-K1 configuration will likely result in a software crash.

Installing R&S® TSMW-K1 software is not necessary if the TSMW is used together with R&S® ROMES software.

8.4 Software Options

In order to enable new TSMW firmware options the installation of the appropriate option key(s) on the instrument and on the host PC side is mandatory.



Only additional software option has to be enabled

All new devices are preconfigured and software options are already installed on the instrument. Only for additional reorders you have to enable the software options with the adequate option keys.

Table 1: Software Options

Option	Option Name	Ordering Number	Required Option Keys on the Instrument	Required Host PC Options
GigaBit Digital I/Q Interface	R&S® TSMW-K1	1503.3960.02	TSMW-K1	n.a.
ROMES WiMAX Scan Option	R&S® TSMW-K28	1503.4543.02	TSMW-K28 TSMW-K128	ROMES4T 1W

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) 180 512 42 42

From outside Europe +49 89 4129 13776

Fax +49 (0) 89 41 29 637 78

E-mail CustomerSupport@rohde-schwarz.com