

R&S®ETC

Release Notes Firmware Version V01.43

R&S®ETCView

Release Notes Software Version V01.40

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The firmware of the instrument makes use of several valuable open source software packages. For information, see the "Open Source Acknowledgment" on the user documentation CD-ROM (included in delivery).

The following abbreviations are used throughout this document: R&S®ETC is abbreviated as R&S ETC.

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1 Information on the Current R&S ETC Version and History

1.1 New Functions

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

Improvements of Firmware V1.43:

Version	Function
V1.43	Generic support of any VSWR bridge. This feature is available in menu Setup: Auto Accessory Detection: Off, Manually Selected Accessory: FSH-Zx. This will activate the reflection measurement S11 also for generic VSWR bridges (eg R&S ZRB2) that do not support an automatic detection

The following table lists the previous functions and their respective version in which the function was introduced:

Version	Function
V1.42	New menu item to reset MPEG decoder hardware without power off device.
V1.42	Support up to 40 services in transport stream.
V1.41	MPEG firmware version number display on hardware/software information view.
V1.41	Support viewing of screenshot (*.jpg and *.png) on device.
V1.41	Support of NRP power sensors (NRP Z11, NRP Z21, NRP Z22, NRP Z23, NRP Z24, NRP Z31, NRP Z51, NRP Z55, NRP Z56, NRP Z57, NRP Z81, NRP Z91, NRP Z92).
V1.40	MPEG decoder features supported for all TV standards supported by ETC.
V1.40	Selection of video PID and audio PID for decoding.
V1.40	LIVE video display in full screen.
V1.40	Support decoding of video format MPEG2 and H264.
V1.40	Support decoding of audio format MPEG1 and MPEG2. Other format for AC3 and AAC will be supported later.
V1.30	Supports selection of T2-Base or T2-Lite on "Demod Settings" menu.
V1.30	Supports PP8 and PLP coderate of 1/3 and 2/5.
V1.30	Add new parameters of L12-post scrambled and L1-base Lite in L1-Pre Signaling info view.
V1.30	Support ISDB-T _{mm} with new FPGA design.
V1.30	Extend SCPI command for Amplitude-Phase-Group Delay measurement. Refer to User Manual for more details.
V1.30	Support data logging for TV Analyzer measurement mode for all TV standards.
V1.21	Support DVB-T2 V1.3.1 (L1 post-scrambling) and ESR5 measurement.
V1.21	Support manual entry of transformer loss (75Ohm) for TV Analyzer and Spectrum mode.
V1.21	Support SCPI commands for Amplitude-Phase-Group Delay measurement.
V1.20	Support ETC-K180 (Amplitude-Phase-Group Delay Measurement).
V1.10	Support BC Drive test software.
V1.10	Support saving to USB memory stick.
V1.10	Add new "SCPI : SYSTem:GPS:SPEed?"

Version	Function
V1.10	Add new "SCPI : SYSTem:GPS:TRACkangle?"

1.2 Modified Functions

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

Modifications of Firmware V1.43:

Version	Function
V1.43	None

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

Version	Function
V1.41	Support of updated FSH-Z18 power sensor.
V1.41	MPEG firmware update procedure. Please refer to section 4.3 for the detailed instructions for firmware updating procedure.
V1.31	Support of ISDB-T _{mm} Super Segment Type A (13 segments). Linked transmission phase compensation is implemented according to ARIB STD-B46
V1.30	Improve reception for low signal power or low C/N values.
V1.21	Saving of the Amplitude / Phase / Group Delay calibration file in binary. Please perform a new calibration routine to get the new calibration data.
V1.20	Modified Channel Adaption description to <ul style="list-style-type: none"> - Slow/Laboratory - Fast/SFN - Mobile
V1.20	Improved the contrast for inactive menu touch-screen button.

1.3 Improvements

The following tables list the improvements and indicate since which version the issue could be observed:

Improvements of Firmware V1.43:

since	Function
V1.43	None

The following tables list the previous improvements and their respective version in which the issue could be observed:

since	Function
V1.42	Fixed MPEG decoding service switching.
V1.42	Fixed device instrument mode switching.

since	Function
V1.42	Fixed "CALCulate:DTV:RESult:L1Post? APLP" to return "PLP Rotation, PLP FEC Type and PLP Payload Type" data.
V1.41	Fixed Amplitude-Phase-Group Delay measurement result due to wrong set of calibration data. Please remember to perform the alignment routine to get new calibration data.
V1.41	Fixed GPS unreadable coordinates data when GPS signal is lost and fixed.
V1.41	Fixed / Improve GPS receiver (HA-Z240) auto detection.
V1.31	DVB-T2 : SCPI command "CALCulate:DTV:RESult:PLP:SYNC?" is returning the correct SYNC status when it is locked or UNSY status when it is unlocked.
V1.30	DVB-T2 : Temporary Unsync when frequency offset is drifting beyond +/- 1/2 * carrier distance.
V1.30	DVB-T2 : bad synchronization on 0dB echoes.
V1.21	The GPS data for southern hemisphere is correctly detected and displayed.
V1.21	The Amplitude "Ref Offset" value is not reset to 0dB when switching from TA measurement mode to SA measurement mode
V1.10	Fixed minor issues for SCPI commands.
V1.10	Fixed "AUTO LOW DISTORTION" attenuation.

1.4 Known Issues

The following tables list the known issues and indicate since which version the issue could be observed:

since	Function
	None

2 Information on the Current R&S ETCView Version and History

2.1 New Functions

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

Improvements of Software V1.40:

Version	Function
V1.40	Support partial MPEG decoder parameters.

The following table lists the previous functions and their respective version in which the function was introduced:

Version	Function
V1.30	Support transfer of data logging files from SD card and internal memory to PC.
V1.30	Support setting of T2 profile (T2-Base / T2-Lite) for DVB-T2.
V1.20	Support Amplitude-Phase-Group Delay sweep.

2.2 Modified Functions

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

Modifications of Software V1.40:

Version	Function
V1.40	Support ETC firmware V1.30 and above. Please manually uninstall any ETC View version lower than ETC View V1.20 before installation of new software.

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

Version	Function
V1.30	Support ETC firmware V1.30 or V1.31. Please manually uninstall any ETC View version lower than ETC View V1.20 before installation of new software.
V1.20	Support ETC firmware V1.20 or V1.21. Please manually uninstall any ETC View version lower than ETC View V1.20 before installation of new software.
V1.10	Support ETC firmware V1.10.

2.3 Improvements

The following tables list the improvements and indicate since which version the issue could be observed:

Improvements of Software V1.40:

since	Function
	None

The following tables list the previous improvements and their respective version in which the issue could be observed:

since	Function
V1.20	Fixed installation issue when ETH View is installed on the same PC.

2.4 Known Issues

The following tables list the known issues and indicate since which version the issue could be observed:

since	Function
	None

3 Modifications to the Documentation

The latest quick guide manual can be downloaded from the R&S® ETC TV Analyzer product web page under: <http://www.rohde-schwarz.com>. Select "DOWNLOADS" and "MANUALS".

4 Firmware Update

The current firmware version is provided for download at <http://www.rohde-schwarz.com/downloads/firmware/etc.html>

In order to install the firmware, it must first be copied to a USB memory stick for installing a new firmware version.

For information on updating software options refer to the Quick Reference Guide, chapter 2.

4.1 Validity Information

Device	Order Number
ETC 04	2116.5000.04
ETC 08	2116.5000.08

4.2 Update Information

4.2.1 Preparing the USB Memory stick

NOTICE**Firmware update for device with FW Version 1.40 and below.**

If the device is with FW V1.40 and below, please install the MPEG pre-installer package first (See section 4.2.2). After installing this pre-installer, the normal firmware update can be executed.

If the pre-installer is not installed prior to installation of FW V1.41 and above, an error message will be displayed.

If the device is with FW V1.41 and above, please proceed to section 4.3 for the normal firmware update procedure.

Download the firmware update package from the R&S website into an empty folder on your PC.

The update package comes as a self-extracting *.ZIP file, e.g. "ETC V1.00.EXE" for version 1.00.

Start the *.EXE file.

Select the folder for the extracted files.

Press the OK button to start the file extraction

4.2.2 For device with FW V1.40 and below

Copy the files from the pre-installer folder into the root directory of the USB memory stick. There is no need to create a subfolder for the files. The update will not work when the files are copied to subfolder.

The root directory of the USB memory stick should now contain the following files :

- updater_TA_P01_41_0000.bin
- osimage_TA_P01_41_0000.bin
- splashscreen_TA.bmp

The pre-installer image is now ready for use.

Please proceed to section [4.3 Updating the Firmware](#) to perform the update.

After installation of this pre-installer, please proceed to section [4.2.3](#) to complete the normal firmware installation.

4.2.3 For device with FW V1.41 and above

If the above pre-installer step is executed, please remove the files from the USB memory stick before proceeding. If there is multiple devices to be updated, copying the firmware files to a new USB memory stick will be easier for multiple installation.

Copy all the files into the root directory of the USB memory stick. There is no need to create a subfolder for the files. The update will not work when the files are copied to subfolder.

The root directory of the USB memory stick should now contain the following files:

- bootloader_TA_Vxx_xx.bin
- fpgaloadfile_TA_Vxx.xx.bin
- osimage_TA_Vxx_xx.bin
- updater_TA_Vxx_xx.bin
- splashscreen_TA.bmp
- rootfs.jffs2
- ubootcfg1.bin
- ubootcfg2.bin
- vmlinux.ub

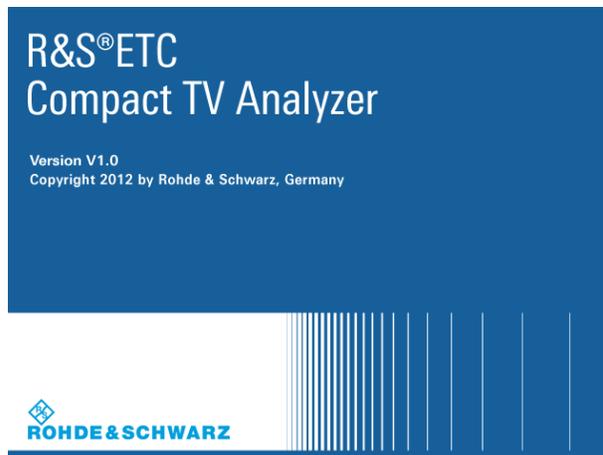
The USB memory stick is now ready for use.

4.3 Updating the Firmware

1. Switch off the instrument.
2. Insert the USB stick into the USB slot of the instrument.
3. Connect the instruments to AC mains via its AC power supply.
4. Press the keys PRESET and 8 on the numeric keypad simultaneously.



5. Keep the PRESET and 8 keys pressed for at least 2 seconds after the startup screen has appeared on the screen.



6. Release the PRESET and 8 keys.
The R&S ETC will continue its booting process and after a couple of seconds the following information will appear on the screen:

Instrument Firmware Update

```

Searching for firmware update (updater_*.bin)
...Found \ Storage Card \ updater ETC_ .....bin
...OK
Checking updater _ETC_.....bin: ... OK

```

Update instrument to software version ...

Press [ENTER] to update the firmware.

Press [CANCEL] to abort firmware updating.

7. Press ENTER to start the firmware update process.
The instrument will perform the firmware update. This will take about 5~10 minutes depending if the MPEG firmware need to be installed.

The progress of the update will be displayed in a sequence of messages on the screen.

Notice: Do not switch the instrument off during the update process in order to avoid data corruption of the internal flash memory!
 8. As soon as the firmware update is completed, the R&S ETC will display the following message at the bottom of the screen:
-

Firmware updating is successfully completed.

Please switch off the instrument.

9. Switch the instrument off and on again. The R&S ETC will boot with the new firmware version.

4.4 Loading the Default Files

The new firmware contains additional default files (channel tables, measurement profiles, limit tables, limit lines, cable models, transducers and standards). To load these default files, reset the R&S ETC to the factory settings. The reset to the factory settings deletes or overwrites all data sets and screenshots which you have previously stored on the instrument. The same holds true for all channel tables, measurement profiles, limit tables, limit lines, cable models, transducers, and standards which you have created or modified. Therefore make sure to create a backup with the R&S ETC View PC software of all data sets before calling the "Reset to Factory Settings" function. After the reset to the factory settings, you can reload all your data sets using the R&S ETC View PC software.

To load the additional default files

10. Create a backup with the R&S ETC View PC software of all data sets.
11. Reset the R&S ETC to the factory settings.
All default files are loaded.
12. Reload all your data sets using the R&S ETC View PC software

5 R&S ETC View Installation

For details on the installation refer to the R&S ETC View Manual.

Note : If ETC View V1.10 or below has been installed, please manually removed it manually prior to the installation of ETC View V1.20 or higher. If ETC View V1.20 or higher is installed, you do not have to manually uninstalled the software prior to installation of ETC View V1.20 or higher.

5.1 System Requirements

The minimum system requirements are the following:

- Pentium® processor or equivalent at 133 MHz or higher
- 64 MB free memory space
- 50 MB free hard disk space
- Display resolution SVGA (800 x 600)
- One free communications port (LAN or USB)
- Windows® XP/Vista/7 operating system

6 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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