

emc32



ROHDE & SCHWARZ

Instruments Division

Newsletter

EMC32

Version 5.10

1 Scope

This document gives an overview of the additional features since version 4.40 that are implemented in:

- EMC32-E+
- EMC32-A+ / -A
- EMC32-E / -S / -C
- IMS OS Software

Subject to change

2 Main Program

2.1 New File Type 'EuT Information'

The following additional file type will be available now:

- The new file type 'EuT Information' enables to store EuT specific information in a file (in the previous version this was only possible in the Test Information). One of these files can then be assigned to the current test and added to the report.

2.2 Report

Several improvements have been implemented:

- When adding a hardware setup to the report, many more details will be shown.
- Whenever a printer hardcopy is initiated manually, a printer selection dialog will show up in advance.
- When adding an EMS scan template or an EMI scan/sweep template to the report, then all defined actions will be shown, too.
- Via the popup menu of the Test Information dialog in the report editor it is now possible to import the information from an existing test.

2.3 Frequency Lists

The following improvement has been implemented:

- A frequency can also be added to a frequency list (via 'drag-and-drop') while the list is opened in the table editor (so far this was possible only when dropping the frequency on the file symbol).

3 EMI Section

3.1 Scan / Sweep Measurements

The following improvement has been implemented:

- The internal pre-calculation of the resulting correction (from transducer and attenuation correction factors) is now being done in the active frequency range only. So far the pre-calculation was done on the whole frequency range as defined in the scan / sweep template.

3.2 Auto Test

The following auto test will be available now:

- Measurement type 'Triple Loop' (available with EMC32- E+ only) for radiated hardware setups (with a transducer defined in dBuA).

Several improvements have been implemented:

- For radiated emissions tests (measurement type 'OATS') it is now possible to run the preview measurements with a continuously moving turntable (available with EMC32- E+ only). This can cut the time for the preview testing in half because the many accelerations and decelerations (when moving the EuT stepwise with the turntable) will not occur.
- For tests with a LISN, the second zoom measurement phase (after the maximization measurements) is now available. This helps with drifting interferers (e.g. switching power supplies, inductive cookers).
- The measurement type 'Automotive EN 55025' now also stores the BB Peak results even when BB Quasipeak results are stored. Besides, the test also stores the BB Peak results even when no BB limit is defined.

3.3 Fixed Problems

The following problem has been removed in the EMI section:

- Sweep templates: Sweep time values are printed correctly now in a report.

4 EMS Section

4.1 Nogo in Single Measurement

For storing Nogos during a single measurement the same dialog as during the automatic measurement is now used. The comment input in the EMS parameter control has been removed.

4.2 EN61000-4-3 Constant Power Reference Calibration Support

Running a reference calibration with the leveling method Transducer Power as alternative test method to the constant field strength method (both are described in the standard) is now supported.

4.3 Level Sweep (only for EMC32-A extension)

For the Key on/off sequence it is now possible to define more than one cycle.

4.4 Substitution Method (only for EMC32-A extension)

When a test with leveling on substitution method is defined the user can now decide whether to use one reference calibration file for all subranges or to use an individual file for each subrange. If this new option is active the reference calibration file cannot be changed in the Test New dialog.

4.5 Flexible Target Test Level (only for EMC32-A extension)

This new option can be activated in the Level tab of the Test New dialog and provides the following functions:

- The target level can be changed in the Scan Parameter control to generate a different test level as defined the EMS Scan template
- A different test level to the EMS scan template can be defined only for a certain frequency range via the Scan Parameter control.
- This new target level is stored as a new limit line in the Immunity Level graphics.

4.6 Fixed Problems

The following problems have been removed in the EMS section:

- EMS test doesn't stop from Action on NoGo
- A change of the antenna/transducer between two EMS Hardware subranges require now a change in the appropriate EMS Scan template as well.

5 Device Drivers

5.1 Triple Loop ('Van Veen Loop') Antenna Control

The following additional device driver will be available now:

- R&S Triple Loop HM020, controlled by the user port (TTL) of the measuring receiver.

5.2 Amplifiers

The following extensions have been added to the amplifier device class:

- Optional the attenuation correction for the reverse path of the directional coupler is now supported. If no reverse path is selected the coupler is assumed to be symmetrical and the forward attenuation correction is used.
- Optional a Start Level for the leveling process at the first frequency can now be entered. This helps when the implemented automatic start level calculation algorithm may not find a proper value for some TWT amplifiers (refer to the online help for further information).
- Bonn Amplifier: the driver can be used now for both series BLWA and BTA. The driver will also try several times to switch the amplifier to Operate state if the first try fails.
- ARTxGx: a new driver for supporting the TWT amplifier series TxGx is now available.

5.3 Field Probes

The following extensions have been added to the field probes device class:

- HI 6105: A new device driver for supporting the laser power field probe. The driver requires that the probe software delivered with the probe is installed.

5.4 EUT Monitoring

The following extensions have been added to the EUT Monitoring device class:

- UPL: A new device driver for supporting the UPL audio analyzer for measurements on audio equipment has been added (refer to the online help for further information).
- Video Inserter: The Generic Monitoring driver has been extended to support now video inserter units for showing the current frequency, test level and modulation on the video display.

5.5 Further Improvements

The following improvements have been added to the corresponding device driver:

- Antennas: The remote control section has been updated to be easier to understand whether you manually control the antenna, use a tripod with a fixed height or use a remote controller.
- Receivers ESPI / ESCI: Up to 1 million measurement points from a single scan subrange are now supported (requires the latest firmware to be installed on the instrument!).

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- Bonn Amplifier: The driver can be used now for both series BLWA and BTA. The driver will also try several times to switch the amplifier to Operate state if the first try fails.
- Generic Drivers: Several new configuration files for generic drivers have been added.
- EUT Monitoring of TTL signals: a new hardware USB-PIO (available via www.bmcm.de, price about 59€) supported by the mem-PIO device driver allows both to monitor TTL signals and use TTL signals for the EUT stimulation.

5.6 Fixed Problems

The following problems have been removed in the corresponding device driver:

- SML: remote control error for external pulse modulation