What's new in ACQUA 6.2.100

Significant changes since 6.1.110

The release of ACQUA 6.2.100 includes the newest *lab*CORE firmware and move°S firmware. Full functionality of all features requires the installation of this firmware.

New features

Analyses

ACOPT 41 – Speech-Based Distortion Measure

> New analysis for calculating distortion according to ETSI TS 104 063.

> ETSI TS 104 063 defines a speech-based method to quantify distortion in modern speech communication terminals. Unlike traditional approaches that rely on artificial test signals, this method uses natural speech to assess non-linear behavior across the full transmission path. It is particularly suitable for evaluating devices employing advanced signal processing or codecs, where conventional distortion metrics are unreliable.

Distortion (Farina)

> New mode Cumulative Harmonic Distortion: Sum of single harmonic distortions.

> Tolerance scheme for result check in SMD Distortion (Farina).

> The first considered harmonic is adjustable which is helpful with Rub & Buzz measurements.

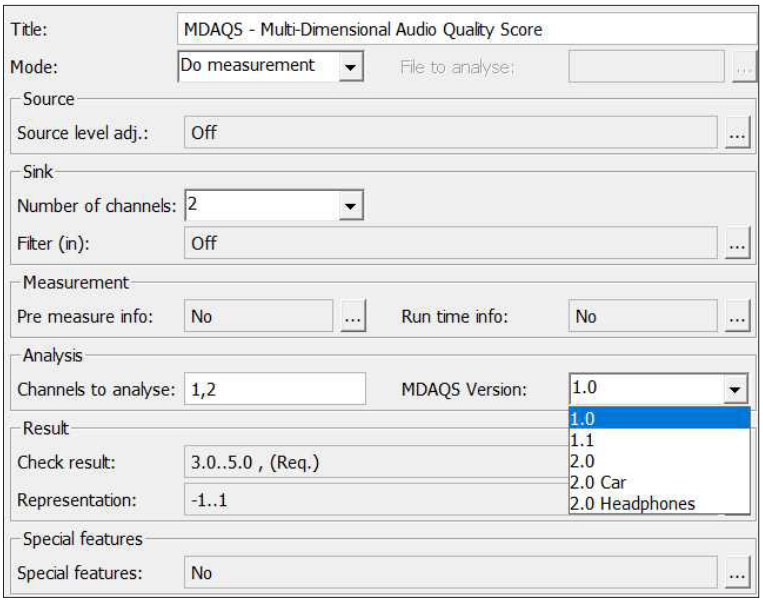
> New features in SMD Distortion (Farina):

– Extend record. Extends the recording of the measurement for compensating possible delays.

– Tolerance scheme for result check

ACOPT 36 – MDAQS

> MDAQS 2.0: New MDAQS version including device-oriented calculations – headphones and car – in addition to the generic calculation which is applicable for testing all other appropriate devices.



ACOPT 40 – MDAQS Headphones

> New ACQUA option that only contains MDAQS 2.0 Headphones.

ACOPT 29 – EQUEST

> Calculation time decreased when applying calculation method according to ETSI 103 802.

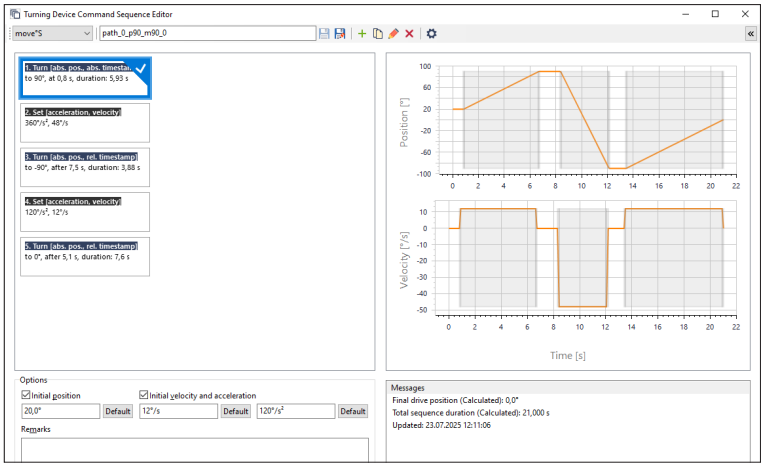
> The value *Echo level (listener's side)* is presented in the results.

ACOPT 38 – LEAP

> Calculation over multiple time ranges *(Sequential windowing)* is now possible.

Turning Devices (move°S, HRR I, HRT I)

> Simultaneous operation of various/multiple turning devices is now possible.



Command Sequences (only available for move°S)

> A command sequence describes a series of movements that the device should perform.

> Command sequences and positions are applicable in the respective column of the project tree in ACQUA.

> Automatic upload of the command sequence to move°S before the start of the measurement.

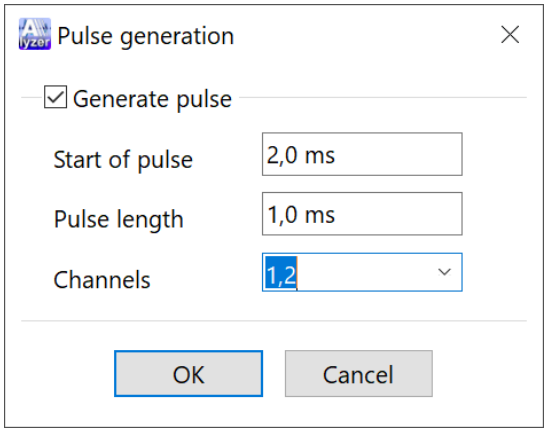
> Start of the command sequence is triggered by pulse to move°S.

Command Sequence Editor (only available for move°S)

> Editor for turning device command sequence.

Play & Record

> Possibility to generate a pulse during playback. This enables remote start of applicable turning devices.



*lab*CORE

General

> More audio channels. There are now 32 channels in total.

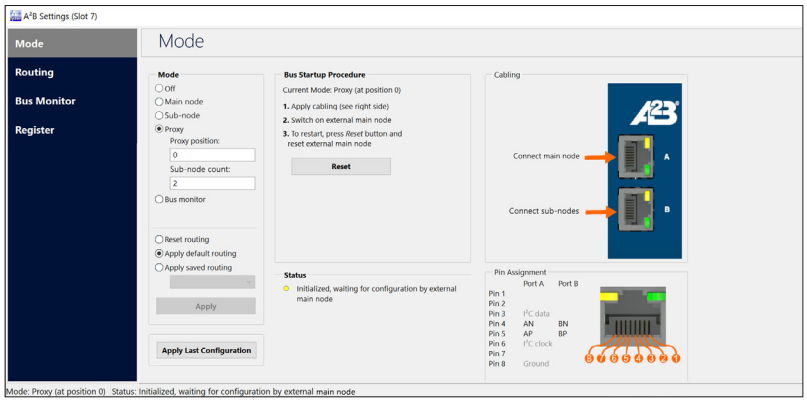
> Pulse routing: Increased number of possible input and output channels.

A²B®

> There is a new product structure concerning A²B products for *lab*CORE:

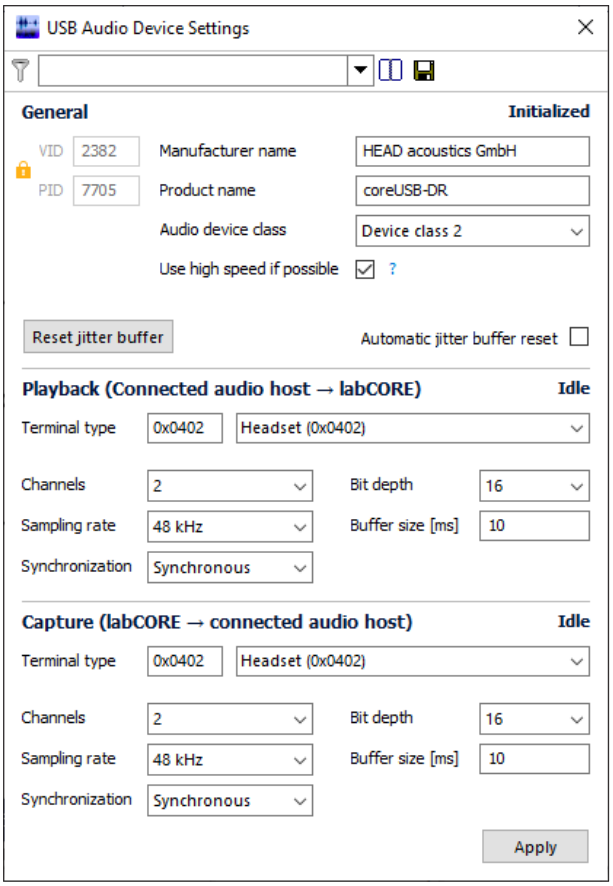
- *core*A2B-Basic (Code 7791)
- *core*A2B-Proxy (Code 7792)
- *core*A2B-Bus Monitor (Code 7793)

> *lab*CORE can be used with more than one A²B board.



> Identification of the main node configuration by means of the recorded data with bus monitor mode. The configuration can be transferred to another *core*A2B-Basic board.

coreUSB-DR



> Settings of the *core*USB-DR user interface can be saved and loaded. It is essential to apply the same settings for one specific device to execute reproducible measurements.

> The current settings have to be applied by the respective *Apply* button to be effective.

> VID/PID fields are locked by default and contain the VID (2382) of HEAD acoustics and the PID (7705) of *core*USB-DR. This applies if using *core*USB-DR as sound device, e.g., for connecting to a reference client in a measurement of an end-to-end call.
If using *core*USB-DR as sound device, the VID/PID fields shall retain the default entries to ensure the correct detection by the USB host.

> VID/PID fields are editable by selecting the lock icon next to them. Changing VID or PID applies, e.g., for emulating a specific headset to a connected terminal with *core*USB-DR.

> The user interface of *core*USB-DR can be opened from the status bar of ACQUAlyzer.

coreIP

> IPv6 is only applied in the VoIP stack if IPv6 is configured on the (front) network interface. This prevents, e.g., that IPv6 addresses from DNS responses are used even though IPv6 is not activated.

SMD Features

> SMD Viewer: Content of non-editable fields can be marked, copied, and scrolled.

Database/Report

> Improved file uploads and file downloads.

Miscellaneous

> Improvement of the user interface concerning multi-channel files. This concerns,e.g.:

- Channel selection for interactive analyses
- Configuration of the WAVE import
- Presentation of the manual analysis of level, distortion, etc.
- Store Mark
- Add Mark

  - Result diagram
  - Polar plot: Width and style of all curves is adjustable.
  - The result diagram does not reload every time if new graphs are added/removed. Thus, order, colors, ranges, etc. remain.

> Play & Record

  - Import and export of settings possible.

> The support snapshot includes more log messages to improve support possibilities.

> move°S control now displays the serial number of the connected artificial head.

Significant Bugfixes

> If a measurement result was Not OK (not required), no limits were written into the report.

> There is a warning now if one output channel is applied for equalization on several devices. Each device has to have its own equalization and channel.

> Active speech level: The calculation of active speech level in ACQUAlyzer (Calculation -> Active Speech Level) did not consider the physical unit.

> The function *Generate support snapshot during the next measurement* did not reset.

> Editing a ViBRIDGE filter did change the filter name to Unknown.

> No bandwidth was set when using filters to calculate the 1/n octave spectrum.

> Play and Record: Configuration settings were only applicable if input channels and/or output channels were available.

> The legend of the polar diagram was sometimes not visible when the image was copied to clipboard.

> Turntable: The display polarity (unipolar/bipolar) of the turntable had to match the angles (0...360° resp. +/-180°) given in the respective column of the project tree in ACQUA. Otherwise, an error message occurred even thought the correct position was reached.

> HEAD Database Administrator: Login sometimes failed.

> There was a false alarm on *lab*CORE that the firmware update failed.

> *core*IN-ICP4: Audio transmission was deactivated after a TEDS query.

> *core*BT2: HFP encoder delay was erroneously increased by 30 ms - 35 ms in previous firmware versions.