



HEARING IS A FASCINATING SENSATION



What's new in  
ACQUA 3.5.200



Presentation

HEAD acoustics

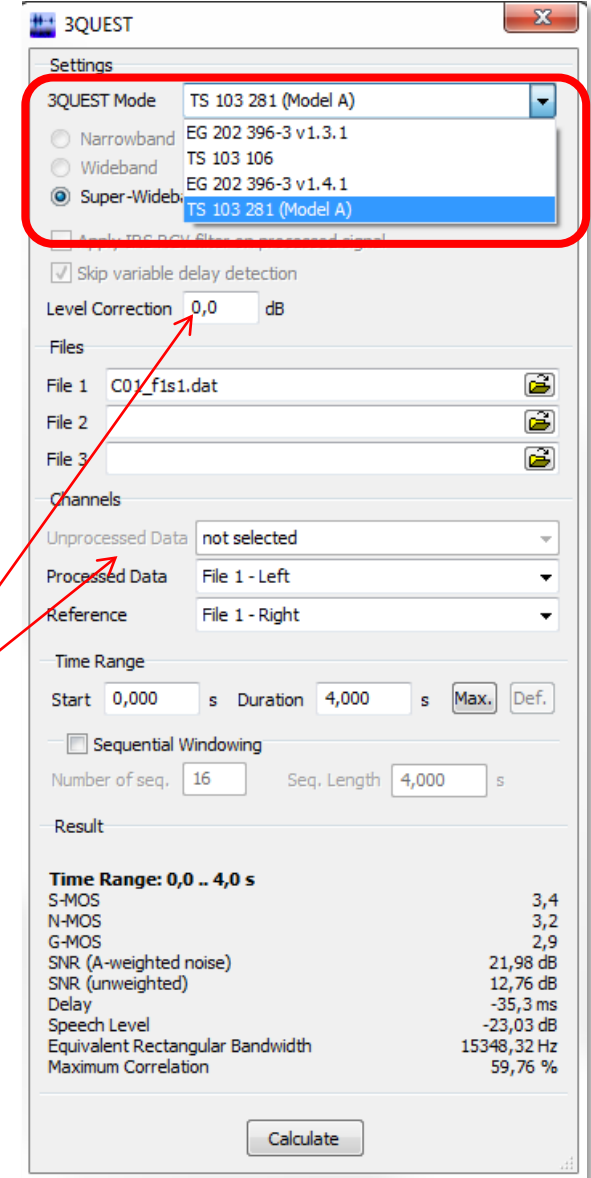
## *Highlights*

- ACOPT 35 (Option 3QUEST-SWB/FB)
- EQUEST Super-wideband
- Support of HRT I
- Extended Mouth Equalization
- Updates on MFE VIII.1
- Miscellaneous

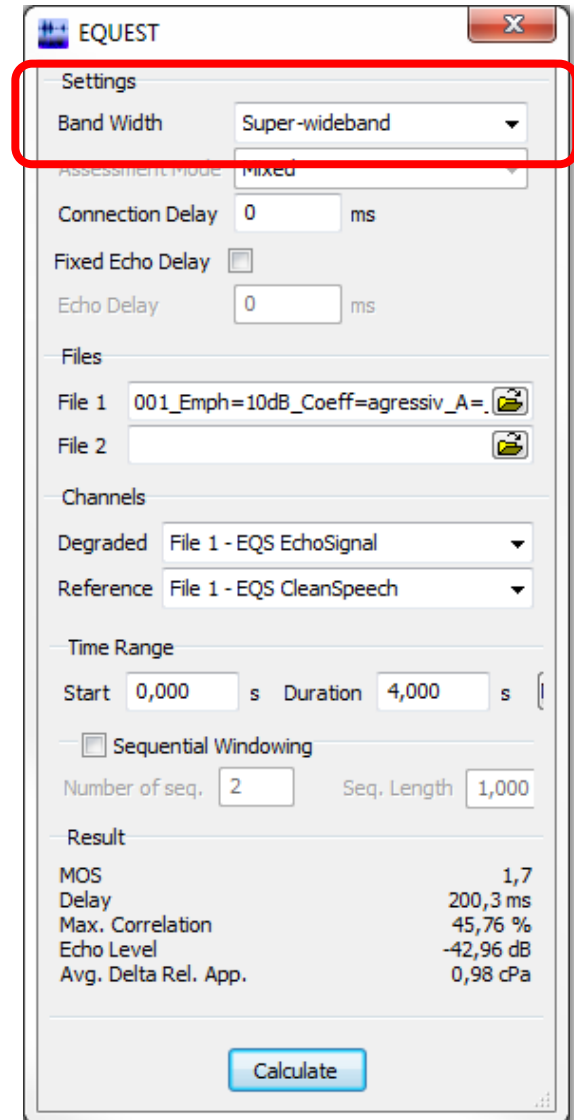


# ACOPT 35 (Option 3QUEST-SWB/FB)

- Calculation method now available for **super-wideband and fullband** scenarios  
→ audio in the frequency range up to 20 kHz
- Considers the influence of background noises in sending direction
  - Decisive advantage compared to other objective evaluation models such as TOSQA, PESQ or POLQA
- Unprocessed reference signal no longer required — but ACOPT 09 (Active Speech Level) is highly recommended
- Algorithm is approved as ETSI standard TS 103 281 (Model A)
- Also available for Batch Processor



- Calculation method for assessing the echo performance of terminals based on the hearing model analysis EQUEST
  - Now extended to super-wideband mode
- Simplified procedure
  - No longer distinction between female, male and mixed assessment mode
  - Echo performance is always adjusted correctly
- Super-wideband mode is able to assess echo performance also for narrowband and wideband



## HRT I – HEAD acoustics Remote-operated Turntable (Code 6498)

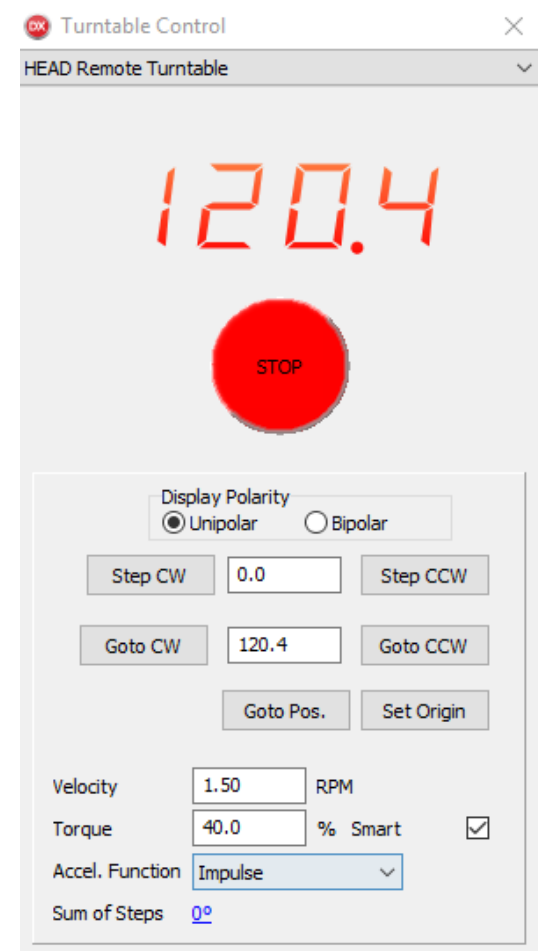
- High-precision turntable for automated orientation-dependent acoustic measurements
- Enables rotation of devices and measurement equipment to specific angles
  - Telephony devices
  - TV devices with central pedestal
  - (Video-)conferencing systems
  - HMS II.x with different equipment / accessories
- No noise emission in measurement position
- Buttons for manual control





# Support of HRT I

- Automated configuration and control by ACQUA via USB-to-RS-485 cable (standard delivery item)
- 360° rotation range at steps of 0.1°
- Clockwise / counter-clockwise rotation
- Stepwise / continuous operation
- LCD display with switchable mode (-180° to +180° or 0° to 360°)
- Does not require ACOPT 33, Option Turntable Support (Code 6864)



# Extended Mouth Equalization

- Pre-defined frequency ranges selectable (wideband, super-wideband)
- Now the filter is attenuated
  - beyond the upper frequency limit by 24 dB/octave
  - below by 3 dB/octave
- The attenuation should avoid large amplifications outside the relevant frequency range
- Tolerance scheme depends on the selected frequency range
  - Wideband: Tolerance scheme according to ETSI standard TS 26.132
  - Super-wideband: according to ETSI standard TS 102 924, except for the tolerance scheme at 100 Hz, which has been modified
    - modification will be suggested in the corresponding standardization committee



# Updates on MFE VIII.1

- New firmware version 1.13.2155 is available on the ACQUA setup DVD
- Logs in “Call“ tab of VoIP settings can now be cleared in context menu
- Logs now show VoIP warning and error messages from front end  
→ requires firmware version 1.13.2155
- Optional codec Cod-EVS (Code 6495) is updated to EVS version 14.1.0 → requires firmware version 1.13.2155





- MFE VIII.1
  - IP monitoring via USB works
  - Detection of MFE VIII.1-SPE (Single Processing Extension) is now more stable
- HIB I
  - Using multiple HIB I *at the same* time is now possible
- MFE IX
  - In the report, packet length was multiplied by the factor 1000 (from 20 ms to 20.000 ms) → Problem is fixed now
- Wave import
  - Wave signal level is now represented according to ITU-T G.100.1 (and no longer ANSI)
  - RMS level of a WAV file is now shown 3 dB lower (anyway just an informative value)

- SMD variation of Loudness Rating: RLR binaural
  - Comparable to the measurement descriptor *Loudness Rating*: calculation of Binaural RLR is now selectable
    - *Special Features / Channel Combination* is no longer possible with this type of measurement descriptor
- Script-SMDs
  - Now, users can link a script file and it can be used by several SMDs → up to now scripts were always used within the SMD
  - Changes to a script file will affect all script SMDs that use this file
- SMD distortion (sinusoidal)
  - Fixed issue regarding the exception in case of *Reference Level Adjustment* failed

- SNRI (Signal-to-Noise Improvement)
  - *Skip Alignment* added in SMD
  - Corrected physical unit of the delay value
- HEAD Download Area
  - In the database administrator, now users can download and restore ACQUA measurement standards directly from the HEAD acoustics server
    - Requires access authorization to the download area
- Dongle Update
  - In the *ACQUA License Selector* users can now update their local dongle directly online
  - Users can also load a dongle update file if the ACQUA PC is offline

- Python scripts
  - Python docstrings are now correctly read
- Exceptions under Windows® 10
  - Problem with unexpected non-reproducible exceptions under Windows® 10 fixed
- Microphone calibration
  - After a calibration, the gain of the microphone input is now reset to its original value
- ACQUA tree
  - Scrolling through the shown column of HHP IV is now easily possible

- DB Manager
  - Now, after copying a project between two databases, no error message will be displayed
- Upload error
  - An error message displayed after uploading files into the database will no longer appear
- Updated Python libraries

For further information please contact  
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