

DEQX Pre-8, Pre-4, LS-200

v1.4.0 Software Release Notes and Known Issues

1.4.0 Release Notes

1.4.0 Features

Version 1.4.0 introduces the following new features:

- **Time-of-Flight Improvements:**
 - Better peak detection using X-over frequency bandpass filter for each driver using that crossover
 - Implemented Hilbert transform for improved phase alignment
 - Adjusted bandpass filter implementation and Q-factor for more accurate crossover alignment
 - Added smoother peak detection to prevent false readings
 - Improved driver measurement truncation by adding 2ms fade in and 20ms fade out to the trim point to prevent discontinuities in the impulse response
 - Fixed issue where left and right correction filters would align to the sub positions rather than the highest frequency driver positions, which would result in the high frequencies being misaligned.
- **Graph Display Enhancements:**
 - Added zoom controls to identify drivers, create speaker and create system pages
 - Improved axis labelling and tick formatting for better readability
 - Added buttons to show and hide individual graph lines for improved visualization
 - Adjusted axis ranges and scaling for optimal display

- Enhanced colours and line styles – thickening important lines, adjusting colours, and showing dashed lines for measured response on the Speakers overlay and theoretical response on the Measured overlay.
 - Improved layout of data display elements to be more consistent
- **PEQ Enhancements:**
 - Overlay of the measured frequency response for a profile is now displayed on PEQ Graph.
 - Measured graphs for Left, Right, L/R Sum and Smoothed are available and togglable.
 - There is selectable 1/3, 1/6 & Octave smoothing for the Smoothed graph.
 - There is an Invert button, which will invert the measured response, which allows easier alignment of the PEQ graph for room correction.
- **Remote Control Functionality:**
 - Menu button (three lines) now navigates between Home, Source and Profile pages
 - Home and Back buttons return to the home page
 - Left, Right, Up and Down buttons select the corresponding input on the Inputs page
 - Up and down buttons change profiles when on the Profile page
 - Left and right buttons toggle bypass of the current profile
 - All remote buttons properly exit the screensaver
- **User Interface Improvements:**
 - Reduced screen saver time from 20 minutes to 30 seconds.
 - Improved layout of uploaded item selection in all Setup tabs.
 - Added opening and closing of progress modals during file uploads and processing to provide better user feedback.
- **Other New Features:**
 - Improved logging, including more subsystems logging to the system log.
 - We now remember the input source on power cycle, standby cycle and exiting Setup mode.
 - Added caching of uploaded server items for faster searching and selection.

1.4.0 Fixes

Version 1.4.0 fixes the following issues:

- Fixed bug where levels page resolution was 0.1dB, but the engine only has 0.5dB steps, so we now limit the UI to 0.5dB steps.
- Fixed a bug which could cause overcorrection filters to be created.
- Fixed a bug which could cause the graphs to not render correctly.
- Fixed race condition in S3 bucket selection that could cause uploads to go to the wrong server.
- Fixed bug where the Create a speaker tab would sometimes fail to produce chirp sound.
- Fixed an issue where you can press the chirp button before the system is initialised and ready.
- Disabled the STOP CHIRP button when we are not chirping. Updated the disabled style so it's dark red and translucent indicating it's inactive.
- Added banner preventing chirping for time-of-flight measurement if we don't have both driver and X-over data loaded.
- Changed name of tab from CAPTURE IMPULSE RESPONSE to DRIVER ALIGNMENT MEASUREMENT for clarity.
- Fixed a bug where the reset button would not reset the time-of-flight measurements.
- Fixed bug where the system graph doesn't always appear after successful upload and processing.
- Fixed bug where the system was timing out before the cloud completed. Increased the timeout time to 15 minutes, which is the longest that the DEQX Cloud process can run.
- Fixed issues with Q value handling that caused values below 0.001 to be improperly restored.
- Corrected channel names and distance calculation in time-of-flight boxes.
- Fixed bug in Create a System tab where the Prev/Next buttons would not work.
- Fixed initialization of TX_CTL_O8 with TXMUTE so the system starts digitally muted on power up until explicitly unmuted.
- Fixed bug where sound and/or noise could be heard on startup or coming out of standby. This was particularly evident on the digital outputs.
- Fixed issue with the measurement processing modal not closing on the Measure Drivers tab.
- Fixed major issue with audio processing where arrays of different lengths (left/right channels) could cause problems with the write Audio function. This

resolves audio noise, delays and other distortion that could occur in some created profiles.

- Added check for first boot after flash and wait 30 seconds and reboot. Display "SYSTEM UPDATING PLEASE WAIT" during this time to prevent users from using the system while the update is completing.

1.4.0 Known Issues

There are several known issues which were not able to be addressed in this release:

Gain Structure

The Gen-4 products have an internal 6dB headroom, depending on the final calibration filters, applying more than 6dB of PEQ may cause distortion. If the final PEQ gain required is more than 6dB, you can use the LEVELS page to reduce the output gains for each driver output to prevent distortion.

Levels Page UI not Synchronizing

The faders, mute and invert buttons do not reflect the changes made in the browser app page in real time. This UI page will resynchronize on browser refresh.

Single Levels Page memory

There is only a single memory for the faders, mute and invert buttons on the Levels page. This will be updated in a future version so that the levels will be preserved for each profile created.

The Pre-8 must have a sub-woofer driver included for all measurements

This is a known issue that will be addressed in a future release.

The software currently prevents a single driver measurement from being saved.

The workaround for the moment is to do a "dummy" sub-woofer measurement (no actual sub-woofer needs to be connected, just measure it) and add a very low crossover point when creating a speaker.

The digital outputs for Main/Woofer and Sub are swapped

This is a known issue that will be addressed in a future release. The current workaround is to simply connect your Main/Woofer digital cable to the sub digital connector and visa-versa.