
Release Notes

Sonolab Version 7.3

13 November 2017

Introduction to SonoLab 7.3 Software

SonoLab version 7.3.6.8 operates the following Covaris instruments:

E220
E220evo
E220R
E220x
LE220
LE220R

SonoLab software is necessary to run any of these Covaris instruments and will be provided at time of purchase. A laptop containing the software is sold with the instrument and connected via USB. The user can create, edit and save methods with varying acoustic treatments modifying duty factor, cycles per burst, peak incident power, duration, and other parameters based on the protocol being applied. SonoLab software gives a real-time display of bath temperature, average power and treatment time remaining. It also controls all hardware running and setting water temperature, degassing and acoustic treatments.

Installation Guide/System Requirements

Steps for Install:

Please refer to the appropriate appendix of the E/LE220 User Manual or contact Covaris for installation instructions.

User Manuals and installers for SonoLab 7.3 may be downloaded from the Covaris website, www.covaris.com.

System Requirements:

Operating System Compatibility: Microsoft Windows 7 or 10.

A USB 2.0 or 3.0 communications port must be available.

For more information or questions please contact:

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Version Changes

#1 – Release version 7.3.0.6

- Provides E220, E220R, LE220 and LE220R instrument support.

#2 – Changes from version 7.3.0.6 to 7.3.1.2

- Add E220 evolution (model number E220e) instrument support.
- Disable firmware updating for user levels below service.

#3 – Changes from version 7.3.1.2 to 7.3.2.4

- Improve handling of hardware errors.
- Add dynamic COM port assignments.

#4 – Changes from version 7.3.2.4 to 7.3.6.3

- Improvements to API, error handling, and shuttle operation in “R” version instruments:
 - Added a clear shuttle error command before every move command to mitigate shuttle and motion failures caused by shuttle error bit being set.
 - Removed loading of Open Shuttle and Close Shuttle coordinates from the file E220_Motion.cfg to eliminate collision with the side enclosure.
 - Disabled checking if the shuttle is open before each move command. Changed logic to always perform a shuttle close command before executing a non-shuttle move.
 - Added a user prompt if the shuttle failed to close before executing a move routine and additional logging for shuttle error commands.
 - Correct "Method Paused" message displayed from Covaris while running Tecan EvoWare script.
 - Filter Z' limit error handling to avoid interruption of Integration software.
 - Improved Side Door Open error handling for R instruments.
- Permissions:
 - Enable Acoustic Efficiency feature in Maintenance/Transducer tab for Service and Manufacturing users.
- Improved error handling:
 - Insert delay before checking for $\pm 50\%$ power errors to prevent false errors.
 - Verify any RF Power Board error is true (three occurrences) before posting an RF error in SonoLab. Avoids interruption due to nuisance/false errors.
- General motion reliability improvements:
 - Adjust default Service position to prevent a mechanical interference risk when E220 evolution systems moving from Service to Start positions.

- Changed default value for Manual Load position to $Z' = 0$, eliminates unnecessary move of transducer stage in moves from other positions.
- Motion control Firmware changes from version 7996 to 8449, increasing transducer stage drive current to prevent risk of stalls.
- Prevent Method Run if motion system detects an axis limit switch is ON.
- Improved logic for inappropriate forward and reverse limit trip errors on all axes, adding method abort and displaying a message to the user.

#5 – Changes from version 7.3.6.3 to 7.3.6.7

- Ensure HOME limit sensors turn OFF by moving out of detection range at end of HOME sequence, then returning to original zero position.

#6 – Changes from version 7.3.6.7 to 7.3.6.8

- Improved handling of Motion Simulation mode. This fix eliminates motion controller going into an inappropriate simulation mode, resulting in failure to move correctly from sample to sample.
- Improved detection of forward and reverse limit sensors on all axis by sending commands directly to motion controller. With this fix limit sensors on all axis can be monitored via Integration API.