LARSON DAVIS
A PCB PIEZOTRONICS DIV.

Enhancements and Fixes for SoundTrack LxT® and SoundExpert LxT™ Firmware[1]

LxT Version 2.404 — August 2020

- Fixed detection of PRMLxT2B preamp. (TFS 10055)

LxT Version 2.403 — May 2020

- Added support for PRMLxT2C and the 375A04 microphone. (TT 7084)
- Added microphone data for the 377A12 to the PRMLxT1 and PRMLxT1L. (TT 6536)
- Fixed Calibration>Sensitivity dialog issue; changing the preamplifier while in this display no longer recalls initial microphone type and settings. (TT 7170)

LxT Version 2.402 — August 2019

- Corrected calculation issue introduced with 2.302 which showed higher than expected Under-Range and Noise Floor levels shown on the Calibration screen for certain preamplifier types. (TT 7089)

LxT Version 2.400 — July 2019

- Updated firmware to support a new type of internal memory. (TT 6987, boot version 43)

LxT Version 2.302 — October 2017

- Corrected calculation for Under-Range. Value was lower than expected for low sensitivity microphones. (6705)

LxT Version 2.301 — December 2014

- Added support for the new EPS 2116 windscreen.
- Added support for the new 377C20 microphone. (6277)
- Changed the code to work with the new USB driver now shipping with SLM Utility software (G3 and G4).
- Fixed an issue where numeric entry fields were not working properly when decimal point localization was set to comma. (6043)

LxT Version 2.206 — January 2014

- No changes, version updated to match SLM Utility-G3

LxT Version 2.205 — October 2013

- No changes, version updated to match SLM Utility-G3

LxT Version 2.204 — September 2013

- Fixed issue with the time stamp provided with Streaming Data I/O command. (5883)
- Fixed an issue that caused Measurement History records, with time sync enabled, to not be synchronized with the time of day following a pause due to preamplifier removal. (5840)

---

[1] *Note: Numbers in parenthesis such as "(1234)" are an internal tracking number.*

- Fixed an issue that could cause a file to remain on the meter after it was deleted using SLM Utility-G3. (5846)

.

LxT Version 2.202   May 2013

- No changes, version updated to match SLM Utility-G3

.

LxT Version 2.201   April 2013

- Created the SoundExpert LxT™.
- Added functionality to the boot loader to suspend loading by holding the TOOLS & ENTER keys for a few seconds so that information about the system can be seen and new firmware may be loaded prior to the application being started. Boot loader version code is 38.
- Removed USB flash memory format; perform the format of USB flash drives with PC.
- Updated the standards listed in the LxT Version reference manual and the instrument's About Standards display. (5234)
- Fixed a fault with Back Erase where it included "Back-5" on the menu when less than 5 seconds of data was available. (5232)
- Fixed a fault that would show an overload percentage of 99.9% when an overload occurred 100% of the measurement. (5236)
- Fixed the range limits to prevent "Calibration outside normal range" messages during calibration of 377C01 and 377C10 microphones (5352 & 5418)
- Fixed a fault that prevented files stored with the Daily 24/day auto-store feature. (5627)
- Fixed a fault that displayed incorrect data on the C minus A and impulsivity display. (5654)
- Updated the Time History settings list to show "by Frequency" for the 1/1 and 1/3 octave spectra enables. (5766)
- Fixed the fault with the Time History peak level metric when the period is one minute or longer and OBA "At Max" mode was enabled. (5791)
- Removed USB flash memory format from System Utilities in order to improve compatibility with more USB Flash Drives; please perform the format of USB flash drives with PC. (5141, 5359)
- Enhanced system reliability and fault reporting. Session log will indicate when there is a USB controller fault or a general fault (a.k.a. panic restart) for diagnostic use. (5575)
- Added feature so that Block and Daily Timer modes will cause a Run at power on if the time is within a run period. (5218)
- Added limit of 20 to 200 dB for threshold and criterion dosimeter settings. (5321)
- Added 30, 15, and 10 minute daily auto-store options (48, 96 and 144 per day). (5512)
- Added timer expired status to the Live Status display. (1214)
- Added feature that will restart the instrument after continuously running for 8 months to prevent timer overflow issues. (2836)
- Added I/O command to seek into a file to a given download block. (5466)
- Changed setting validation to find and correct invalid timer setting to match those of G3 (4298)
- Changed "USB Copy" Message to "USB Move" to match functionality. (5333)
- Corrected format inconsistencies between various displays (5354)
- Fixed an issue were the user could inadvertently overwrite files when naming a file to the same as an existing file. If the file exists a message will be displayed and a new name entered. (5463)
- Fixed TA-Larm display not being shown for Current or Measurement History. (5283)
- Fixed USB flash drive free space being reported incorrectly for drives larger than 2GB (5334)

- Fixed an issue where daily auto-store files moved to an USB thumb drive failed to be properly named. (5582)
- Improved Time History capture to better correspond to when a Stop is performed. (5543)
- Fixed under-range indication for several displayed metrics. (5604, 5790)
- Corrected the label for Lmax and Lmin on the Ln pages to include the detector. (5787)
- Fixed an issue on the Current Profile page which displayed the Overall Start Time instead of the Current Start Time (5789)
- Fixed an issue with auto-store file naming, the file name was not incremented when data was stored to USB Flash Drive. (5600)
- Fixed an issue on the Overall data tab where the setting shortcut went to OBA instead of SLM settings tab. (5605)
- Fixed a fault with Dynamic Trigger which used next setting's values. (5668)
- Fixed a fault with the Record Number edit field for the Time History -> Locate dialog. (5740)
- Enhanced and fixed issues with the Single Block and Daily Timers. A stop and the next run can be set to the same time and setting conflicts are reported. (5735, 5788)
- Fixed an issue where in the Normalized Spectrum selection list the Leq metric was shown twice. (5639)

LxT Version 2.114   January 2013

- Corrected an issue that prevented Daily Auto-store files from being shown on the instrument's Data Explorer list. (5627)
- Corrected an issue that showed the incorrect metric for LAeq in the C minus A section of the C minus A page on the Measurement History tab. (5654)

LxT Version 2.113   May 2012

- Corrected an issue with the nominal sensitivities for the 377C01 and 377C10 microphone selections in order to prevent the warning "Calibration outside normal range?" following a calibration. (5418)

LxT Version 2.112   January 2012

- Corrected an issue, introduced with version 2.110, that caused the noise floor of the 1/1 and 1/3 octave bands to be higher than expected when in Low Range; in some cases as much as 20dB.

LxT Version 2.110   November 2011

- Takt Max fixed and confirmed to be compliant with DIN 45657
- Added support for 375B02, PRMLXT2B, 377C10 and 377C01.
- It is now possible to turn off power when lock mode is enabled.
- Changing the microphone type setting now requires stopping the measurement.
- Fixed a bug that causes the instrument to crash when OBA weighting is set to A–weighting and OBA statistics are enabled.
- Fixed a bug that caused random lockups and crashes; especially when booting the instrument.
- Restricted Evening time to be between Day and Night time settings for LDEN.
- Streaming data now uses a more accurate time stamp.
- The Voice Recorder progress bar is now reset when terminating a saved recording.
- Voice annotation record progress bar now moves even if the record is not saved.

- Fixed Measurement History timestamp error that occurred when Daily Auto-Store was set to midnight.
- Fixed Data Explorer incorrectly showing file size of 0 kB.
- Fixed Voice Recorder occasionally causing the meter to get stuck when in the "Run Pending" state.
- Sound output no longer continues after stopping playback.
- When viewing a file in the Data Explorer, the OSHA-1 and OSHA-2 pages of Overall and Measurement displays now show the Detector correctly.
- Fixed time of day drift that occurred while using ScreenGrabber.
- Fixed a problem that caused the broadband Lmax data not to be reset between records in the Time History record.
- Time History LZpeak(max) when compared to Overall LZpeak(max) now match.
- Fixed Time History Peak Levels being displayed as invalid when period is 1 minute or longer.
- Fixed USB bugs associated with thumb drives.
- When using daily timers, the run time is now managed more accurately.
- Added ability to bring the LxT Version out of standby mode using SLM Utility-G3.
- Microphone sensitivity now supports 4 digit calibration values.
- Large digit display updates at approximately four times per second for Fast time weighted metrics.
- Stored files display using the preferences that were active when file was stored.
- Instrument identification expanded to two lines.
- The sound level displayed in the mark sound type display is more stable.
- The print screen image is gathered immediately so changing displays will not cause an unwanted screen to be printed.
- On spectra Ln displays, cursor now stops at 20kHz filter.
- If run mode is set to "stop when stable" and the LxT Version is set to Auto-store the file, the instrument will no longer become unresponsive after run has been pushed.
- Measurement History bug fixed that could cause 0.1s record when using timers.
- Missed samples when pressing run can cause spectral noise is fixed.
- Accuracy improved for time stamp in streaming data.
- When OBA is off or uninstalled, sometimes calibration or voice recording can cause time history data to be incorrect.
- Czech language support added.

- BootLoader enhanced to provide the following functionality:
  1. Press and hold Tools and Enter simultaneously will force bootloader to wait 120s before loading firmware. This allows time to program new firmware
  2. Press and hold Power key will turn off LxT
  3. Press and hold Stop, Reset and Enter simultaneously with cause the LxT Version to format internal SD flash. This is useful if the LxT Version fails to fully boot because of a corrupt file system.
- LxT Version will reliably come out of power save mode without appearing to lock up.
- Under-range indication calculations were corrected.
- 1s data graph on Live tab displays 1s Leq data, previously 0.1s data was shown.
- Memory management improved to avoid low memory reboots when LxT Version heavily used.
- When using back erase, the records marked in time history could be one too many.

LxT Version 1.522   May 2010

- Internal maintenance release.

LxT Version 1.521 March 2010

- When OBA is off or uninstalled, sometimes calibration or voice recording can cause time history data to be incorrect.

LxT Version 1.520 November 2009

- Loading V1.520 firmware will cause LxT Version to reformat data drive and reset settings.
- Added QC tonality.
- Fixed "black bar" lockup that could occur while booting.
- Added printouts for NForcer application.
- Several bug were fixed that will lead to improved reliability when making long term measurements.
- QC Tonality algorithm modified to exclude tones if tonal band is not greater than both sidebands.
- Fixed an issue when power-save is enable the LxT Version display will not always repaint correctly upon exit.
- Updated Brazilian Portuguese translations.
- Use with SLM-Utility G3 V1.520 or later.

LxT Version 1.512 May 2009

- Allow USB memory sticks larger than 2GB to be detected properly.
- New "move all internal files to USB".
- New Time history time synchronization with Measurement History time sync.
- LDEN and LDN calculation changed to integrate over actual measured time (like 831, 824 and 820).
- Get file system corrupt message when booting.
- Setting OBA bandwidth to OFF will now disable all OBA controls.
- Backlight time option for 60s was changed to "Always On", which will leave the backlight on.
- 60s backlight time will not turn off if USB power is available..
- Portuguese split into a European and Brazilian version.
- Cursor added to back-erase display to note erase point.
- Internal temperature now follows preferences for units..
- Annotation of preamplifier types was sometimes reported wrongly in the calibration history.
- Changed default for delete all internal files from yes to no.
- Labeling of data in time history displays improved.
- Added printer support (PRN003).
- Added ability to temporarily turn off purchased options (masking).
- Added measurement counter field to the timed stop run mode.
- The name of the "Enforcement" display has been changed to "Digital".
- On some instruments ScreenGrabber acted slowly or would hang, this is fixed.
- Cursor will now move to the sum bar on OBA displays.
- Duration, run time and pause time now shown on overall tab.
- By-Time displays added to time history tab.
- Calibration spectrum now available.
- Ability to format a USB thumb drive.
- Added TaLarm display for German customers.

NOTE: Use with SLM-Utilities-G3 V1.51 or later.

LxT Version 1.309 February 2008

- Instrument can't boot if all screens are disabled in Tools > System Properties > Displays.
- Some files can't be downloaded when you upgrade from earlier versions.

NOTE: Use with SLM-Utilities-G3 V1.4.5 or later.

LxT Version 1.308 December 2007

- When 1/3 octave max is logged in time history and the detector is set to fast, the max levels were incorrectly low.
- When viewing the Measurement History 1/3 octave max spectrum on the LxT, the data was incorrectly displayed, yet stored correctly.

LxT Version 1.307 November 2007

- SLMScreenGrabber 2.1.4 used with LXT VERSION with DSP V0.5 causes instrument lock-up.
- Download file occasionally loses data during transmission is addressed with Error-Checking Protocol on USB file downloads.
- Time history peak can have 0dB levels in DNA, "- - -" on instrument. This was caused because the peak detector was returning a level of 0 and log10(0) = undefined. This has been changed to report the level associated with the peak detector noise floor.
- When the OBA is A-weighted and integration method is exponential, a mathematical error has been fixed that could cause low frequency levels to read very high (>130dB).
- The standards declaration on the about screen has been changed to be consistent with the new back labels.
- A bug in exported LAIeq - LAeq visible in the SLM-Utility-G3 export to MS Excel or CSV files.