
List of changes made to Larson Davis Spartan 721-821

Spartan 721-821 Version 1.502

June 2025

Fixed

1. **On Screen Keyboard Disappearing** – When editing a setting that uses the built-in keyboard, occasionally the keyboard will disappear soon after opening. This has been fixed and the keyboard remains active while editing the setting.

Spartan 721-821 Version 1.501

May 2025

Fixed

2. **Session log view** – It is now possible to scroll entries in the session log on the meter's UI. In previous firmware versions, attempts to scroll the session log would scroll the entire view potentially leaving some session log entries unviewable.

Spartan 721-821 Version 1.500

March 2025

Fixed

1. **Critical Fix: Time History Data Corruption** – Fixed an issue where time history data could become corrupted typically after multiple days of continuous operation, particularly with *100 ms time history intervals*. When viewing time history in a spreadsheet, users will see corrupt or garbled values. Once this occurs, the affected data cannot be reliably interpreted or recovered past that point. This update ensures this bug will not happen again.
2. **Critical Fix: Octave Band Analysis** – Fixed an issue where 9 of the 1/3 octave bands were found to not comply with the ANSI standard S 1.11-2014 for Class 1 meters. The bands that did not meet the standard are the 40 Hz, 80 Hz, 160 Hz, 315 Hz, 630 Hz, 1250 Hz, 2500 Hz, 5000 Hz, and 20000 Hz bands. The bands were found to have sections of the frequency response that did not meet the required attenuation in the stop band. An example of this behavior can be seen in figure 1 below. The OBA processing was fixed so that the correct attenuation was maintained across the full frequency range as shown in figure 2. This update makes all octave bands meet the Class 1 specifications given by the standard.

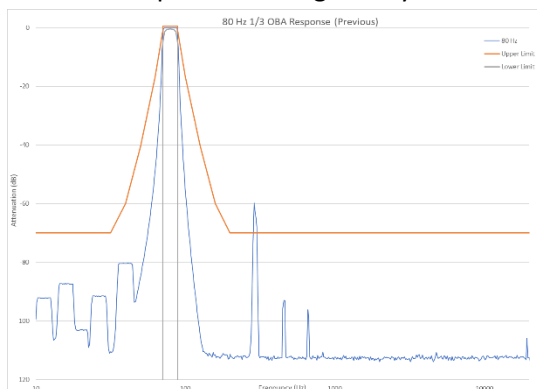


Figure 1.

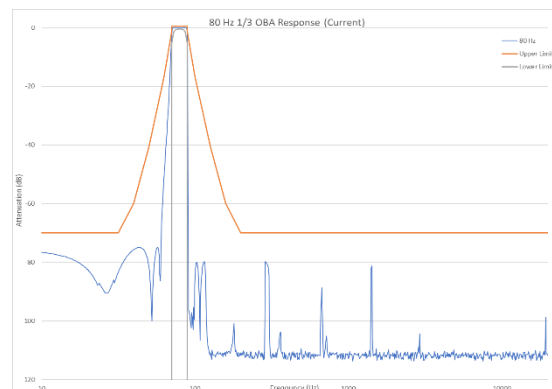


Figure 2.

Spartan 721-821 Release History



Spartan 721-821 Version 1.400

November 2024

Features

1. **Measurement History** – Added ability to disable Interval Time-Sync (affects Measurement History and Time History).
2. **Fix** – Previously, installing firmware lacking certain settings from the current version would reset the entire group to default values. Starting with this version, that only happens if you install a version from before this update.
3. **Fix** – When an Overall file backup and Auto-Store occurred simultaneously, there was a risk of conflict between the operations, causing the file to appear corrupted despite the data being correct.

Spartan 721-821 Version 1.300

June 2024

Features

1. **Measurement History** - Added whole/third octave data to Measurement History interval data.
2. **Calibration Precision Consistency** - Two decimal places of precision are now shown for calibration levels, deltas, and sensitivity.
3. **Custom Report Settings** – Added firmware support for custom report settings saved with meter data files.
4. **Support for Finnish** – Added firmware support for Finnish (Suomi).

Spartan 721-821 Version 1.201

April 2024

Fixed

1. **Full OBA Value Labels show selected frequency bin** – In the UI, opening either Live or Overall with OBA set to 1/1, the data labels would show the summation character (Σ) instead of the selected frequency. Selecting a frequency would correct it but leaving and returning to the tab would result in it showing the summation character again. The value being shown was correct for the selected frequency on the graph.

Spartan 721-821 Version 1.200

April 2024

821IH-QPR Support

1. Added support for the 377A12 1/4" pressure, pre-polarized condenser microphone.
2. The meter will dynamically adjust the range of the Ln table according to the sensitivity of the selected microphone.
3. User entered settings for "Other" microphone are now retained when switching to a standard mic and back.

Measurement History

4. Added a 3-minute measurement interval option as well as a manual option.

Spartan 721-821 Release History



Spartan 721-821 Version 1.110

March 2024

Time History

1. Fixed issue where Time History data could become delayed if the meter was reset while running. This caused old data to be added to the beginning of the next Time History file, shifting the current histories to later in the file. This could be avoided by stopping the measurement before resetting the meter.

Spartan 721-821 Version 1.101

December 2023

Format SD card

1. Fixed issue where the format SD card feature would only partially format the card. This sometimes caused corrupt files and file lists. This issue was introduced in version 1.100. Upgrading to 1.101 or later and using the format SD card function will repair any corrupt SD cards.

Spartan 721-821 Version 1.100

December 2023

Measurement History Ln Percentiles

1. Added Ln Percentiles to Measurement History.

Extended Valid Ln Percentile Range

2. Extended Ln Percentile range settings from 0.1%-99.9% to 0.0%-100.0%.

Meter User Interface

3. Added German to supported languages, and updated missing/mistranslated French and Italian text.
4. Added Set Date & Time functionality to System Utilities on meter. This allows the time to be set manually on the device. Previously this could only be set with G4.
5. Improved the layout of navigation controls on the Time History tab to be more convenient.
6. Added measurement history period, run time, and pause time to the Measurement History Bar Graph that remains at the top of the tab.
7. Improved navigation responsiveness on the Time History and Measurement History tabs. This also improved time history and measurement history view responsiveness within G4.
8. Improved the clarity of the OBA legends to include frequency for the selected band in metric name. Previously, the meter only displayed the frequency in the bar graph and not the legend.
9. Fixed the Measurement Metrics card on Measurement History tab which showed incorrect Leq values because they used pause time in their calculations. This caused any displayed Leq values to drift down while the measurement was paused. Now only the actual run time is used. The meter calculated the stored data correctly. This did not affect the stored data nor the Measurement Any Data card.

Spartan 721-821 Release History



10. Fixed an error where time history data could be missing from the time history graph. This data could only be viewed once the file was stored. This was intermittent and more common with large amounts of data.
11. Dosimetry and Ln cards now correctly follow the decimal preference setting. Previously, a period was always displayed for the decimal separator.
12. Files could be corrupted and generate parse errors when being opened by G4 if Markers contained invalid characters. The meter now prevents invalid characters from being entered. Valid characters are letters, numbers, and '#'.

External Disconnect Voltage Default

13. Default value for external disconnect setting changed from 10.8 V to 10.5 V. This accounts for a 300 mV drop offset that exists with the displayed external voltage compared to measured external voltage at the connector.

Weighting Filter Adjustments

14. Minor adjustments to A and C Weight filter coefficients to better match nominal filter shape at frequencies higher than 4 kHz. The filter shapes before were within specifications for A and C weight filters, but these improvements match the nominal shape better for high frequencies.

Time History with 100ms Period

15. Fixed an issue where Time history data could be stored incorrectly when running at the 100 MS time history rate.

Spartan 721-821 Version 1.002

July 2023

1. The decreased run time, increased power consumption, created in 1.001 has been rectified.

Spartan 721-821 Version 1.001

June 2023

1. Fixed issue where the meter would lock up when entering sleep mode.
2. When entering sleep mode, without OBA enabled, data could become corrupted.

Spartan 721-821 Version 1.000

June 2023

1. Initial Release