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## List of changes made to Larson Davis SoundAdvisor Model 831C<sup>1</sup>

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### SoundAdvisor Model 831C Version 4.6.0

March 2021

1. Feature: FFT functionality has been added to work in G4 and in the meter's UI, including the use of vibration sensors with integration. Tonality for ISO 1996-2 and ISO 20065.
2. Feature: The weather inputs on the AUX connector are now supported for anemometers
3. Feature: SEA page available in the meter UI and G4.
4. Update: The Adjust Graph feature now has a reset to default and autoscale functions. Based on the selected units the adjustments may now descend to 1e-8.
5. Update: When recording time history data at periods shorter than once per second the Lpeak is for the selected period.
6. Update: Random incidence mic corrections for 377A15 added in System Properties > Preferences.
7. Improved: The display of PRM2103 temperature, humidity and serial number on the 831C has been improved to be more reliable.
8. Fixed: Corrupt USB thumb drive doesn't stop meter from running and the data will be stored internally.
9. Fixed: The Time History Meter UI has labels that fit correctly and the navigation arrows display correctly.
10. Fixed: On the 831C meter UI, the Measurement History tab shows the correct information after switching from a file.
11. Fixed: When using .ogg sound records, the meter could report incorrect file size.
12. Fixed: Sometimes files can display their start time as 2075-04-29 05:07:38 but corrects after download.

### SoundAdvisor Model 831C Version 4.5.2

October 2020

1. Feature: Addition of Rain and Hail weather data to the Time History records.
2. Feature: Only append Model and Serial Number to the cloud storage file path if the setting is left blank. The default path is blank and so will include Model Serial number as the last folder on the cloud storage.

### SoundAdvisor Model 831C Version 4.5.1

August 2020

1. Feature: Support added for new GPS.
2. Improved: Session Log entry for Sound Buffer overrun.
3. Improved: In scheduled run mode, the meter can do an auto cal-check when stopped.
4. Improved: Email addresses, with uppercase letters that are migrated to the new Accounts, can now be modified.
5. Improved: USB as Backup has been removed. The meter will default Data Storage to USB.
6. Bug Fix: Setup Manager configuration list scrolls correctly with the arrow keys.

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<sup>1</sup> Note: Numbers in parenthesis such as "(3210)" are an internal tracking number.

# SoundAdvisor™ Model 831C Release History

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7. Bug Fix: Extra invalid data could be appended to the end of the Time History. G4 correctly handled the issue while DNA did not. This firmware keeps the extra data from being appended.
8. Bug Fix: Pressing store without a run or zero length duration will not create a file.

## SoundAdvisor Model 831C Version 4.5.0

May 2020

- Feature: Added user accounts that can control who can access the 831C from a network and/or to create user specific configurations for email and text alerts. When enabled, users are required to login with a user name and password in order to access certain features of the 831C over remote connections.
- Feature: Scheduling allows the meter to control Run, Stop, Alerts, Event Triggers and Cellular Modem functions using a user-defined schedule.
- Feature: When configuring the 831C to automatically push files the Dropbox, the authorization process has been improved and the user interface localized.
- Feature: The 831C now supports encryption of network traffic for increased security. The encryption is supported on TCP/IP port 443.
- Feature: Wind speed and direction at Lmax and max wind speed and direction over the duration of the event.
- Feature: Event Time History includes max wind speed and direction.
- Improved: Event Trigger Source reporting to include the source and trigger level.
- Feature: Events can now be triggered from specific or multiple 1/1 or 1/3 octave filters.
- Feature: Events contain all of the any level data.
- Feature: GPS function when connected to Sierra Wireless Modem.
- Feature: The Calibration tab allows for mic selection.
- Feature: Sierra wireless modem power control has been added
- Bug Fix: Audio Streaming no longer has audio pop at the beginning of the stream

## SoundAdvisor Model 831C Version 4.0.8

January 2020

- New Feature: For SDK users, when using the API for streaming data the data streaming settings in the 831C are now remembered when establishing a new connection.
- Bug Fix: Fixed a bug that could cause the meter display to have a gray overlay and then not accept inputs.

## SoundAdvisor Model 831C Version 4.0.7

December 2019

- Bug Fix: Closing the Calibration popup using the “x” would leave the meter in a locked state.

## SoundAdvisor Model 831C Version 4.0.6

November 2019

- Bug Fix: RClone works correctly with G4 to authorize Drobox.
- Bug Fix: The Locked Screen with the Big Digit display would show the incorrect label.
- Bug Fix: The Event Triggers would not appear on the Measurement Properties popup menu when on the Setup Manager Tab.

# SoundAdvisor™ Model 831C Release History

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- Bug Fix: Sometimes the dates on the control would change to a wrong date after selecting the desired date. This includes the fix for the Time Zone offset causing the day to appear to be the previous day when in the Eastern Hemisphere.

## SoundAdvisor Model 831C Version 4.0.5.1

October 2019

- Bug Fix: If an improper shutdown occurs the meter will recover the file numbering correctly now. When an .RCO is created the file numbering will not restart at 00.
- Some third-party security software on your desktop could put tracking files into archive files breaking the file structure for the SLM files. The files are now ignored by the meter.
- Feature: Low Frequency L(20-200Hz) added to the 1/3 Octave Overall page

## SoundAdvisor Model 831C Version 4.0.5

September 2019

- Bug Fix: After reboot the meter sometimes would come up with a grey screen; this has been corrected with this firmware.

## SoundAdvisor Model 831C Version 4.0.3

August 2019

- Feature: Added configurable trigger source and level to Measurement History Interval email and text alerts, updating the property Control tab to allow users to select these options
- Feature: Added pause, run, and reset to list of conditions that will trigger state transition email and text alerts
- Bug Fix: Fixed issue where date filenames restart at sequence number 0 after reboot or when files have been removed (i.e., moved to Dropbox). Now the sequence number will only reset to 0 at the beginning of a day
- Feature: Added 1, 2, and 5 minute Daily Auto Store periods and changed user interface to show interval time rather than files per day.
- Bug Fix: Dropbox and email now will continue working when multiple network interfaces attached or the same interface repeatedly attached and remove.
- Bug Fix: Fixed a memory leak which could cause the system to run out of memory when the 831C is frequently queried
- Reduced the overall memory usage of the system

## SoundAdvisor Model 831C Version 4.0.1

July 2019

- Bug Fix: Previously, system properties may be corrupted when transferring between other 831Cs or G4 LD Utility software with different software or firmware versions. Now, differences between versions are handled correctly. If concerned about possible corruption, use G4 LD Utility V4.0.1 or later to resend system properties to the meter.
- Bug Fix: A defect that caused the keyboard on the 831C to freeze and become unresponsive has been fixed.
- Bug Fix affecting 831 & 831C: Weather data displaying dashes when the value is 0.0 has been fixed and 0.0 is correctly displayed.

# SoundAdvisor™ Model 831C Release History

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- Bug Fix affecting 831 & 831C: Wind compass direction would display as dashes if the direction is between 350 and 359 degrees. Now, correct direction is shown for all cases except when direction is due north (0 degrees), which still shows dashes.

## SoundAdvisor Model 831C Version 4.0.0

June 2019

- Fixed default SFTP path (7029)
- Fixed NTP settings not being applied properly when transferring settings to the meter (4947)
- Fixed meter not waking from power save when the power save preference changes (i.e., turned off) (6744)
- Fixed duplicating the active calibrator, and dropping calibrator 4, when transferring settings to the meter (7014)
- Fixed not waiting for GPS time sync on boot (7030)
- Improved communication with G4 for faster connection
- Fixed Run Time being incorrect when Single Block Timer timespan between the start and end dates is greater than 24 hours
- Fixed Block Timer end date not keeping the correct day reverting to previous day when navigating back to the page after saving the settings
- Fixed: When degrees are selected for weather the live weather page would not show the indicator correctly
- Fixed issue where the session log digits lost small floating point value for calibration
- Bug Fix: Unable to maintain zoom on FFT graph in 831C
- Bug Fix: On the 3rd daily timer the start and stop times are set to the same time when only changing the start time

## SoundAdvisor Model 831C Version 3.3.1

April 2019

- Bug Fix: Fixed an issue with the Settings that may cause DNA or other older software using the old SDK translator not parse files correctly.

## SoundAdvisor Model 831C Version 3.3.0

January 2019

- Features added for PTB certification
- The settings for OBA and Sound range now show the range in dBA as well as the Normal and High selection
- Changed AudCal narrow-band noise calculation to use FFT instead of octave bands. This allows the 831C to correctly determine the narrow band noise levels when the noise bandwidth does not match 1/3 octave filter bandwidths.

# SoundAdvisor™ Model 831C Release History

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- Added capability to the SDK that allows the number of files and/or emails that remain on the 831C in a queue because the meter is unable to send them. Also added the ability to clear this queue using the SDK
- Updated Date Time Picker to use buttons for scrolling the selection
- The 831C will queue email and files that are to be sent. The queue has a maximum size of 25MB. Previously when the queue was full the newest items would be removed. It has now been changed so that the oldest items are now removed to make room for new items.
- When the run mode is set to daily timer, previously the 831C assumed the meter was stopped when a timer to run was encountered and also assumed the meter was running when a stop timer occurred and would toggle the run state. This caused the 831C to stop running if it was running when a run timer occurred and to start running if a stop timer occurred when the meter was already stopped. This has been changed so the meter will always perform the selected action, run or stop, independent of the current state.
- Fixed issue where the UI came out of sleep state while the backlights stayed off, thus draining batteries faster than expected
- Fixed problems with run-mode timers where the auto-store preference would cause the meter to not store
- When the meter is cradled in 831-INT-ET, the meter will display the IP Address from the Ethernet connected 831-INT-ET
- A period is no longer allowed within the prefix (the portion before the “.extension”) portion of a filename
- Changed Running Leq to account for Linear Integration method
- Added Running Leq to Time History
- Fixed missing Time History entries that could happen with Auto Store
- Updated EPS2116 windscreen filter coefficients and calibration correction
- Adjusted FF:FF gain
- Change to turn off mic corrections during calibration
- When the preferences for the 831C specified a startup tab which was invalid, the meter UI would continually restart. This could happen if a preferences file was copied from one meter to another and the receiving meter didn't support the selected startup tab or if improperly selected through the SDK. Now when the startup tab is invalid, the meter will default to the Live tab.
- Fixed an issue where the event trigger level was reported incorrectly in the file and export
- In AudCal mode, fixed the FFT zoom when accessing the Live View in G4 or on a tablet

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- Fixed the selection of a Measurement or Event to be persistent when more than one exists while accessing the Live View in G4 or on a tablet

## SoundAdvisor Model 831C Version 3.2.1

September 2018

- Added ability to configure a static IP address
- Added a running Leq with a user selectable period from 1 sec to 1 hour. The running Leq is calculated for the current frequency weighting for the broadband signal.
- Added more event triggers, including the new Running Leq, which can be configured on the new Measurement Properties tab Event Triggers
- Updated the name of Triggers to Exceedance Triggers to show that they are for Exceedances
- Added the ability to send an email or text alert, if the Leq at the end of a measurement is greater than the Exceedance SPL 1 setting
- Fixed the duplicate Time History entry which would appear at the end of the Time Histories when pausing then stopping or when running while performing a firmware upgrade
- Fixed the first 100 ms of Time History data to use the correct TMS value
- AudCal THD - fixed issue for frequencies above 5K where previous frequency data was shown for harmonics that would be greater than 20K
- Removed charger faults and cal. checks notices from Time Histories

## SoundAdvisor Model 831C Version 3.1.0

April 2018

- Audiometer calibration option added to 831C (831C-AUD)
- System health notifications by HTML email and/or plain text email alerts for
  - Memory low (25% free), out (10% free), and stopped for primary memory
  - Internal temperature too low or high
  - Low external battery - warning for low battery and shutting down due to dead battery
  - Lost A/C power for systems with external battery backup. This alert only occurs if A/C power has been off for more than ½ hour and when power is restored
  - Meter stops running
  - Settings or preferences changed
  - USB memory is set for primary storage and is missing or mounted
  - Calibration due according to interval setting
- It is possible to reset the 831C from the web live view interface by selecting Menu -> Reset
- When selecting dates on the 831C, sometimes the date would be set as the previous day; this is fixed for all time zones.
- Overall data will now include
  - Min, Max and current external battery voltage measured at the end of the measurement period

- Min, Max and current internal temperature measured at the end of the measurement period
- Support for Chinese and Thai languages has been added
- Fixed the 831C showing “insufficient power” and not charging rechargeable NiMH batteries issue
- Fixed the Set to Active where it would fail to make the selected file active and when manually changing settings the new settings didn’t always store
- Fixed weather page that had trouble with switching units between degrees and compass, and missing Temperature
- Fixed an issue where changing User Preferences while running using USB storage caused the meter to switch from USB to internal memory until the next stop and store or reset. (6234)
- Fixed sound recordings where “static” was in recordings that were over-range and clipped.
- Fixed an issue where a one-minute file was created at daily auto-store when time was adjusted backwards by NTP or GPS.
- Fixed default settings files that are not restored after performing "Format Internal". (6245)
- Fixed an issue where saved Streaming Data Options (measurement controls) prevented time from updating. (6069)
- Added support for the microphones shipping with the AudCal systems as well as some legacy microphones.

## SoundAdvisor Model 831C Version 3.06

November 2017

- Update to improve the demise battery operation, allowing for proper shutdown in loss of power
- Firmware upgrade process to protect against downgrading to prior than 3.06 to prevent errors reading/writing newer flash chips
- Fixed crash bug due to communication inconsistency on meter

## SoundAdvisor Model 831C Version 3.05

October 2017

- Updated for recent changes to new Dropbox API
- Added queue and additional retries for files that fail to transfer to remote storage
- Email messages queue in an outbox until successfully sent
- Certain HTML email messages now contain some instrument status information
- Fixed issues with Run Timer where timer would count incorrectly

## SoundAdvisor Model 831C Version 3.04

June 2017

- Added ability to automatically push data files to SFTP or Dropbox. Configuration is done through G4. Files are transferred after they are stored on the 831C.

# SoundAdvisor™ Model 831C Release History

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- Added notification to inform user if there is not enough power available to charge the batteries (i.e., connected USB devices require more power than will allow concurrent charging)
- Using the touchscreen will keep the backlight on
- Changed Light Theme cursor color so that it is more visible on the Calibration History and Calibration Check Plots
- Weather and Touchscreen options are now maskable
- Added check for files on the USB when automatically generating file names
- Fixed an issue where the GPS would sometimes not be detected when booting

## SoundAdvisor Model 831C Version 3.03

May 2017

- For time history periods greater than 1s previously the meter would report the wind speed and direction for the last 1 second sample. Now the meter reports the average over the sample period.
- Added support for NMS044 with a new setup file that will appear at the top of PC list
- Time corrections will now only occur when stopped. If Auto-Store is enabled, the time sync will happen between runs.
- The “File Not Available” indicator was not being display correctly and now models the behavior of the file system
- Improvements to battery charging, allowing for better indicators and messages to be provided to the user
- The Big Digit trigger point uses the correct level from the meter to indicate that the level has been exceeded
- Mic correction constants have been updated
- Event Time History post trigger samples have an appropriate value matching the time slices that come from the meter on the time sync boundaries
- Added upgrade progress indicator, denoting that an upgrade is in progress
- Time zone will now update from the Time tab when pressing the “Set Time” button and will update before the new time is set on the meter. If EST is selected and the time is set to 07:00, and the button is pressed the meter will set EST and then set the time to 07:00. It does not convert the time before changing the time zone.
- Fixed issue with WiFi network passwords; the password is now correctly saved when using G4, allowing connection over WiFi
- Improved inter-communication between meter and G4
- Updated Options tab to ensure most recent properties are displayed



# SoundAdvisor™ Model 831C Release History

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- A property on the PC side for event notification via email is no longer on the PC side and can only be set on the meter.
- Improved file system to correctly allow opening of data files; when opening multiple files in succession the meter will now handle these files.
- Update to fix the Communications tab where the IP Address will be updated at regular intervals so that changes to the address will be shown on this tab
- The Overload indicator only displays when the OBA is selected and on
- Playback of Sound Recordings on Android is improved allowing the user to press the play button if audio does not start immediately
- Modified main view of Awesome.html to work with more browser sizes where some display widths would cause text to wrap incorrectly changing the display to look incorrect
- External voltage is now monitored in power-save mode

## SoundAdvisor Model 831C Version 3.02

April 2017

- Fixed issue with battery charging and improved power control
- Improved clock accuracy on reboot

## SoundAdvisor Model 831C Version 3.00

March 2017

- First Release