

Smaart v8.2 Release Overview





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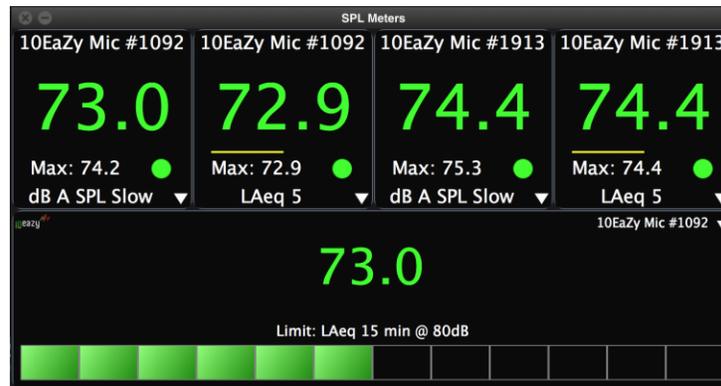
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8.2 Release Notes

- 10EaZy SPL monitoring system integration
 - Connect any number of 10EaZy systems to a computer running Smaart for a calibrated class-compliant SPL measurement system
 - Cross-platform hardware support through Smaart
 - 10EaZy Maximum Average Manager (MAM) with limit warnings
 - Recalibration support
- SPL calculation centralization – logging or metering an input triggers the calculation of 13 SPL metrics automatically
- Comprehensive SPL log file – all SPL metrics in one file for every logged input
- SPL History Window – view SPL plotted over time in a standalone window
- Separated Input Meters from SPL Meters
- SPL Alarms and SPL readout colors triggered by user-defined thresholds
- Leq buffer progress bar
- Input calibration date is now stored in the config file and used in SPL log files
- Added “Peak C” SPL metric
- Added Polarity Invert function, accessed via Input Meters
- Added horizontal orientation option to Input Meters
- Removed aspect ratio lock from Input Meters
- Added option to use Comma as decimal mark in log files (General Options)
- Added right-click menu to SPL meters
- Added “under range” indication to status button in SPL meters
- Various UI changes to comply with IEC 61672
- Added handling for spotty network connections while using the Client Window
- Added “Export to ASCII” option to Data Library right-click menu. Saves directly to ASCII text file
- Added support for multi-select -> Copy to ASCII in the Data Library
- Added more granular axis labels when zooming into Live IR
- Fixed crash that could occur if Data Library Menu was open and the program was closed
- Fixed bug where application focus was occasionally lost
- Fixed bug where captured trace color pool reset after program restart, resulting in repeat colors
- Fixed bug where Meter Config was not being stored when saving through Manage Configurations dialog
- Fixed bug where Weighting Curve dialog table didn’t update after Import/Delete
- Fixed bug where measurements would stop on server when Client Window connected
- Fixed crash that occurred randomly while measurements were not running
- Fixed deadlock related to changing plot types
- Fixed scaling bug in Spectrum plots
- Fixed bug where capturing a trace from a weighted measurement and hiding it would clear the weighting

10EaZy Integration

Smaart 8.2 includes support for communicating with and measuring through the 10EaZy SPL measurement hardware, developed by SG Audio Aps. During 8.2 installation, the 10EaZy hardware drivers are automatically installed on your computer, so you only need to plug in the 10EaZy system and launch Smaart to begin measuring. Previously, 10EaZy hardware could only be used in the Windows operating system, however drivers for both Windows and Mac OS X are included with Smaart. 10EaZy can be used for all single-channel measurements in Smaart. For more information about 10EaZy hardware, visit <http://www.10EaZy.com>



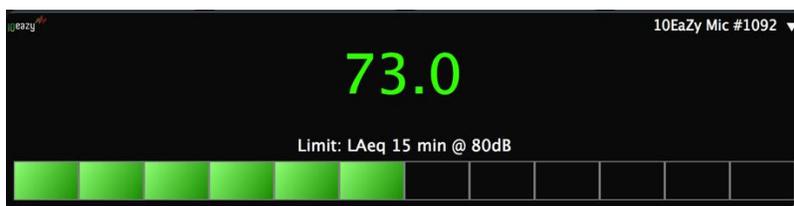
Note: The 10EaZy/Smaart integration features are only available for 10EaZy Class 1, Class 2, and RT systems. The 10EaZy SW dongle is not supported.

Multiple Systems

Smaart can interface with multiple 10EaZy systems if they are all connected to the same computer via the onboard USB ports or a powered external USB hub. The 10EaZy Maximum Average Manager (MAM) implementation in Smaart can reference one 10EaZy microphone at a time. To monitor the SPL from multiple systems simultaneously, simply create a standard SPL Meter for each 10EaZy input.

Maximum Average Manager (MAM) with dedicated Leq meter

A dedicated Leq meter and Maximum Average Manager meter is provided for the 10EaZy microphone. When 10EaZy is connected, an additional settings group becomes available in the SPL Config (previously Meter Config) tab of the Configurator. The MAM is tied to the SPL Meters window, so you must show the SPL Meter windows (E hotkey) to see the MAM.



SPL Calculation Centralization

When an input is calibrated for SPL, and logging is enabled or an SPL meter is displayed, Smart automatically begins calculating 14 sound level metrics for that input regardless of which meters are actually showing.

The 14 SPL metrics are:

- dB FS
- dB SPL Fast
- dB A SPL Fast
- dB C SPL Fast
- dB SPL Slow
- dB A SPL Slow
- dB C SPL Slow
- Leq1
- LAeq1
- LCeq1
- LeqT (where T is a user-defined time period)
- LAeqT
- LCeqT
- Peak C

This provides a way to easily log and monitor SPL/Leq without taking up screen real estate, and without the risk of resetting Leq buffers while reconfiguring SPL Meters.

Comprehensive SPL Log File

Each logged input has a dedicated, time-stamped log file containing all 14 SPL metrics. Additional logged data includes Input Clips, Alarms, Leq Reset, and a dedicated 10EaZy Leq column if the logging device is 10EaZy. Notes can also be added to the log via the SPL History window, for storing additional information throughout the logging session.

When Smart is closed, an informational header is written to the top of the log file containing various post-analysis results.

File Creation Date:	7/27/17 19:00															
Operator:	Samwise Gamgee															
Company:	Ring Productions															
Venue:	House of Elves															
Input Device:	10EaZy #1092															
Input Channel:	10EaZy Mic #1092															
Calibration Date:	Unknown															
Smart Software Version:	8.2.4898.1															
10EaZy Limit:	80.00 dB LCeq															
10EaZy Calibration Status:	User Calibration															
Number of Limit Violations (10EaZy):	4															
Total time above Limit (10EaZy):	17m45s															
Max LCeq 10 value (10EaZy):	93.34															
Alarm 1:	n/a															
Alarm 2:	n/a															
Number of Alarm 1 Violations:	0															
Number of Alarm 2 Violations:	0															
Max Leq 1:	96.01*															
Max LAeq 1:	88.11**															
Max LCeq 1:	95.48*															
Max Leq 10:	91.45**															
Max LAeq 10:	82.48**															
Max LCeq 10:	90.95**															
Max dB SPL Slow:	103.27															
Max dBA SPL Slow:	93.03															
Max dB C SPL Slow:	102.66															
Max dB SPL Fast:	103.27															
Max dBA SPL Fast:	93.03															
Max dB C SPL Fast:	102.66															
Number of input peaks:	0															
Time	10EaZy LCeq 10	Leq 1	LAeq 1	LCeq 1	Leq 1 C-A	Leq 10	LAeq 10	LCeq 10	Leq 10 C-A	dB SPL Max	dB SPL Max (dBAmaz(F))	dBAmaz(S)	dBAmaz(S)	dB Cmax(F)	dB Cmax(S)	dB F5 Max
07/26/2017 15h:26m:03s	87.16	87.54	77.95	87.16	9.2	87.54	77.95	87.16	9.2	93.37	90.07	86.12	86.12	92.88	89.68	-44.13
07/26/2017 15h:26m:06s	87.17	87.57	77.89	87.17	9.28	87.57	77.89	87.17	9.28	90.2	88.29	78.83	78.83	89.77	87.91	-47.16
07/26/2017 15h:26m:09s	87.53	87.92	78.46	87.53	9.07	87.92	78.46	87.53	9.07	92.88	89.99	82.35	82.35	92.45	89.57	-42.95
07/26/2017 15h:26m:12s	88.44	88.84	79.16	88.44	9.27	88.84	79.16	88.44	9.27	93.62	92.42	83.75	83.75	93.24	92.01	-42.64
07/26/2017 15h:26m:15s	89.01	89.41	79.79	89.01	9.22	89.41	79.79	89.01	9.22	94.55	93.03	84.57	84.57	94.2	92.63	-42.58
07/26/2017 15h:26m:18s	89.36	89.76	80.08	89.36	9.28	89.76	80.08	89.36	9.28	95.48	92.71	83.34	83.34	95.08	92.3	-42.37
07/26/2017 15h:26m:21s	89.55	89.96	80.19	89.55	9.36	89.96	80.19	89.55	9.36	94.15	92.18	82.52	82.52	93.71	91.78	-43.01
07/26/2017 15h:26m:24s	89.78	90.19	80.51	89.78	9.28	90.19	80.51	89.78	9.28	94.52	92.64	84.7	84.7	94.07	92.24	-42.57
07/26/2017 15h:26m:27s	89.78	90.19	80.51	89.78	9.28	90.19	80.51	89.78	9.28	92.64	92.11	81.95	81.95	92.73	91.73	-43.14

SPL History Window

The SPL History window is a standalone window that shows a graphical presentation of the log file generated from log-enabled inputs. Active log files (real time) or previously generated log files can be viewed in the SPL History plot. The SPL History window contains two plots where the top (primary) plot shows the full log file and is always displayed, and the secondary plot shows either the full log, or some portion of it designated by the zoom widgets in the primary plot.

The SPL History window can be accessed from the View Menu (View -> SPL History), the hotkey combo [Alt+H], or selecting SPL History from within the SPL Config tab of the Configurator. When SPL History is visible, it is listed in the Window menu along with other program windows.



Separate Input Meters and SPL Meters

Input Meters and SPL Meters are now independent standalone windows. Input Meters are automatically configured based on selected devices and inputs. Meter Config has been renamed to SPL Config and is dedicated to configuring SPL Meters. A horizontal orientation has been added to Input Meters, toggled using hotkey Alt + Shift + E or via the menu at View -> Input Meters -> Input Meter Orientation. The aspect ratio lock has been removed from Input Meters, making it a more flexible little dude.



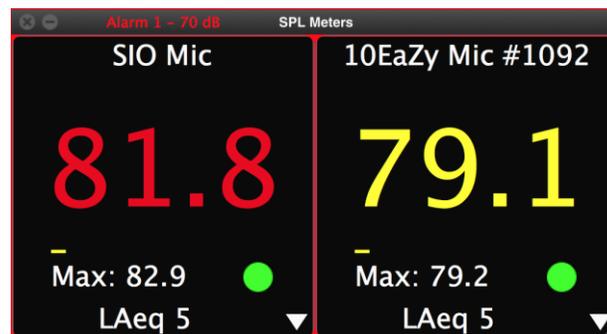
Polarity Invert

The polarity of an input can be inverted using the \emptyset button near the corresponding Input Meter. Engaging this setting inverts the polarity of the signal at the input level, effecting all measurements using that input in Smart.



SPL Alarms and SPL readout colors

Two customizable SPL Alarms can be configured in the lower portion of SPL Config. When an alarm is active, the chosen calibrated input is monitored using the selected SPL metric and alarm level. If the level is exceeded, the border of the SPL Meters window flashes red and "Alarm 1 - X dB" is displayed in the title bar for the configured duration. If logging is enabled on the input, the alarm is recorded in the log file.



In the SPL Display Settings area of the SPL Config, there are three SPL thresholds that control the color of SPL meter readouts; Green Above, Yellow Above, and Red Above. If the value displayed in an SPL meter exceeds one of these thresholds, the readout color will change to reflect the threshold color. These colors serve as visual aids and SPL readout color changes are not recorded in the log file.