

# Smaart v7 Release History

## Smaart v7.5.3

- Fixed bug where certain elements of the control strip would "flicker" on OSX Yosemite

## Smaart v7.5.2

- Fixed bug where IR ETC would not calculate for certain filters
- Fixed bug where Normalize wouldn't work if only one trace was being shown
- Fixed bug where global weighting was being applied to loaded traces
- Fixed smoothing bug with measurements falling below magnitude threshold

## Smaart v7.5.1

- Fixed bug where IR Metadata was not being stored if using the IR wave recorder
- Fixed bug with IR Mag Threshold
- Fixed bug where Live IR plot would return to default range when exiting Transfer Function Options
- Fixed bug where program could hang if continuous IR measurement was taken but no signal of any kind was present

## Smaart v7.5.0

- Added Target Curves
- Added Quick Compare (Trace Subtract) to live TF traces
- Added Normalize function to Magnitude plots
- Added Histogram for displaying "All Bands" data in IR Mode
- Added high-pass filter to IR Options
- Added option to drop data window and sync noise/FFT size in IR Mode
- Added ability to hide Trace Register
- Added option to make Live IR plot occupy 1/2 or 1/3 of window (Proportional Panes)
- Added informational metadata to IR measurements
- Added hover text to trace folders
- Added Clock option to sound level meter (hotkey **[K]**)
- Added Magnitude Threshold for Impulse Response measurements
- Improved fractional octave smoothing
- Improved Coherence-weighted averaging
- Improved Ln marker placement math
- Improved integrated averaging (1 sec, 2 sec, etc)
- Changed SPL meter UI to be consistent with Smaart v7 Di
- Changed Mag Range in TF options to be a customizable default
- Fixed Spectrograph cursor readout bug
- Fixed bug where Smaart started in Decade scale even when Octave was selected
- Fixed bug with order of Smoothing and Weighting
- Fixed bug on Mac where Smaart would not maximize on a second display
- Fixed bug with Live IR trace rendering
- Fixed bug where Smaart would not recognize changes to a device's channel count (ie. Dante)

Virtual Soundcard)

### Smaart v7.4.3

-----

- Added 1/3 Octave frequency scale to Spectrum options
- Added horizontal guide lines to RTA plot when spectrograph threshold markers are moved
- Changed signal generator button color when generator is "on"
- Changed "Scale" setting in Spectrum control strip to control Banding. Scale settings now live solely in Spectrum Options
- Fixed performance issue with Smaart and OSX. Controls should be much more responsive when working with 32k FFT measurements/traces and when working with long IR measurements.
- Fixed bug where start/stop frequency of IR measurement was not getting reset after changing FFT size.
- Fixed bug where All Bands table copy was rounding certain values to the nearest integer.
- Fixed bug where IR measurement would fail to calculate if FFT size was small and device driver failed to respond quickly enough.

### Smaart v7.4.2

-----

- Fixed crash with delay tracker if signals are uncorrelated
- Removed Load Config feature
- Fixed fringe case licensing issue

### Smaart v7.4.1

-----

- Optimized delay finder signal handling which could result in slow or incomplete measurement
- Fixed bug where Smaart would crash in IR Mode if measurement was taken while Spectrograph is visible (Mac only)
- Fixed bug regarding Transfer Function measurement using wrong device/channel if changed post creation
- Fixed bug regarding manually moving Ld widget
- Fixed IR signal levels showing clip if no meas pair is selected (Mac only)
- All Bands table will resort if new records are added (using current sort criteria)
- Fixed bug where changing a Spectrum trace name would not affect other name listings for that trace
- Fixed rounding issue with actual plot Y ranges and config values (notable by plot change or Options change)
- Fixed bug where ESC key wasn't closing the options dialogs
- Fixed bug where the wait cursor wasn't being removed when calibration was finished
- Sound Level Meter device selection no longer honored on startup

### Smaart v7.4.0

-----

- Impulse Response mode overhaul
  - Changed UI to be more intuitive and support new features
  - Added ability to change Time "0" of the Impulse Response
  - Added the ability to Crop IR

- Added plot-level controls
- Added calculation of Schroeder Reverse Integration Curve and decay measurements
- Added the ability to calculate various intelligibility criterion
- Added user defined Zooms
- Added user defined Views
- Added Peak Hold (also in saved trace data)
- Added two new generator options: Pink Sweep (Swept Sine) and Speech Weighted Noise
- Added the ability to perform multi-device Transfer Function measurements
- Added Recall to Config Management
- Added Live IR to saved trace data
- Added Trace Z order drop down control to plots
- Added distance to cursor readout for all time displays
- Added right click context menu to trace registers
- Added LIR ETC data to trace file
- Added the ability to load folders of traces back into Smart

### Smart v7.3.2

- 
- Added support for 10th dB increments for dB offsets (Set via Trace Info & Meas config)
  - Added hotkey 'h' to hide top trace
  - Added a prompt to the calibration screen if applying changes to a gain reporting device and no microphone is set
  - Added support to API for honoring current smoothing/banding settings
  - Removed error message when canceling an export to weighting curve operation
  - Keyboard dB offset is now in 10ths of dB instead of dB
  - Fixed bug when an imported ASCII trace would not be removed from a plot when the register is deleted
  - Fixed bug for IR frequency domain plots where wavelength/note id settings weren't being honored on start up
  - Fixed bug where background trace thickness was not being loaded from config on startup
  - Fixed bug where averaged spectrum measurements were being stored to file as weighted data.
  - Fixed bug where group/measurement deletion was not being applied to config file
  - Fixed bug involving weighted LEQ not working/honoring calibration offset
  - Fixed bug where measurement name would be incorrect for a trace of a measurement that had it's named changed
  - Fixed bug where averaged measurements would lose their contributors if copied as a group
  - Fixed reset averaging hang
  - Fixed bug with global FFT settings
  - Fixed bug where Import ASCII was not honoring global settings {banding, smoothing and weighting}
  - Fixed issue with calibration process for a gain reporting device miscalculating microphone sensitivity
  - Fixed case where Transfer Function measurement control list would reset to the top of the list on start/stop
  - Fixed bug where deleting a trace wouldn't work if not showing traces of that type
  - Fixed bug where IR ETC plot wouldn't honor some global IR settings (such as peak cursor)
  - Fixed Spectrum delay value bug
  - Hang on Mac when resetting averaging seems to have been resolved

## Smaart v7.3.1

- Added \*.ref wildcard to trace load dialogs
- Fixed bug involving trace register duplication

## Smaart v7.3.0

- Added Save Many (batch file save) feature for static data traces
- Added Delete Many (batch delete) feature for static data traces
- Added ASCII Import function for static data traces
- Added support for gain reporting input devices (Smaart will automatically adjust input calibration to reflect gain changes on supported devices)
- Added microphone sensitivity storage and assignment support for gain reporting devices
- New calibration dialogs and work flow
- Added Max SPL to Sound Pressure Level readout
- Added THD support for 1/12th - 1/48-octave banded spectrum traces
- Added configuration management capability (Load, Copy, Delete, Save As and Restore Default)
- Static data registers now have their own config file and will not be affected by main config changes such as Load/Save/Restore.
- Changed File Open and Save dialogs to OS-Native dialogs
- New user interfaces added to import/delete custom weighting curves.
- Custom weighting curves no longer stored in program files folder / application bundle -- existing user curves will be moved to the new location if found.
- Mic correction and weighting curve import now accepts both comma- and tab-delimited data lines and asterisk or semicolon ("\*" or ";") as comment line token.
- Added time zoom for Spectrograph via +/- keys
- Added capability to export a transfer function trace as a weighting curve
- Added the signal generator as an input source for Transfer Function measurements
- Added delay for spectrum measurements
- Added 1/4 height Coherence display option
- ASCII dumps of spectrum traces will have calibration offset applied if plotting calibrated
- Start/stop frequencies for banded pink noise can now be set in 0.1 dB increments (was limited to even integer dBs previously)
- Trace info dialog now shows calibration offset for averaged traces
- High contrast mode now stays set when you close the program
- Audio I-O device names are sorted alphabetically in all lists
- Sound level logging now turns off when you close the program
- Added instantaneous (no averaging) support to API
- Added support for retrieval of data subsets to the API
- Fixed Plot zoom bug for IR mode master window with invalid zoom markers
- Trace delete will now work for folders
- Fixed crash involving changing measurement signal
- Fixed bug setting calibration offsets from Audio Device Options
- Fixed bug where captured live avg traces were not storing calibration offset
- Fixed bug preventing averaged static spectrum traces from honoring calibration offset
- Fixed static trace register multi indent bug
- Fixed bug saving impulse responses with SR lower than 22050
- Fixed static data trace phase smoothing bug -- smoothing now correctly applied when toggling

between wrapped and unwrapped

### Smaart v7.2.0

-----

- Added support for Microphone correction curves (magnitude only in this release)
- Added Preferred Plots feature, allowing multiple graphs of same type to be displayed with a different set of data traces in each.
- Added show/no-show for all captured traces of a type (spectrum or transfer function)
- Added Data Exchange API v1.0
- Added peak tracking for spectrum and transfer function traces
- Added cursor readout for frequency wavelength and Note ID
- Added user-specifiable grid interval for RTA and Transfer Function (Magnitude and Phase) plots
- Reworked Audio I-O dialog to support new features and make its function clearer
- Renamed Audio I-O dialog to Audio Device Options to hopefully alleviate some confusion regarding it's function
- Renamed Group Manager to Measurement Config, to better reflect its function
- Cursor readout now tracks displayed magnitude inverted magnitude traces (instead of original uninverted values)
- Added General tab to Options dialog
- Moved Trace line thickness to General tab in Options dialog
- Moved speed of sound to General tab in Options dialog
- Overload Threshold changed to three or more consecutive  $\geq 99\%$  of full scale (was 100%)
- Signal Level/Sound level meter resets to 0.0 when device is changed to None
- Bug fix: Live Spectrum average measurements will now honor calibration offsets if all contributors are calibrated
- Bug fix: Corrected an off-by-one error in user-defined color swatch storage
- Bug fix: A problem with copy to ASCII function for averaged traces was corrected
- Bug fix: Capture averaged trace now works properly when selection includes both standard and live average transfer function traces
- Bug fix: Fixed bug regarding wrong trace being acted upon for show/hide changes

### Smaart v7.1.2

-----

- Fixed issue regarding generic USB Audio Codec devices on MacOS X 10.6.
- Fixed bug that caused reference trace files saved via Trace Info dialog in Data Manager to be deleted when the corresponding static trace object was deleted from the Data Manager panel.
- Added Reset Configuration function (accessible through File menu).
- Fixed issue with devices having a fixed sample rate set in hardware to anything other than 48k on MacOS X 10.6.5 or higher.
- Mac version now supports same sample rates as Windows (where applicable).

### Smaart v7.1.1

-----

- Resolved SPL/LEQ A weighting filter issue
- New CoreAudio layer
- Work around for CoreAudio bug in Macbook/iMac built-in line inputs
- Added hot keys for Load/Save trace and Hide All traces

- Added Backspace key as substitute for Delete key
- Fixed bug where user-created trace file(s) would be deleted when deleting trace objects(s) in Data Manager
- Fixed coherence-weighted average bug (static & live)
- Fixed weighting bug when SR is changed

## Smaart v7.1.0

-----

- Active measurement group now remembered on shut-down
- Added Min/Max SPL to LEQ logging
- Fixed Clear All dB Offsets hot key bug on Windows 7
- Fixed fractional-octave banding bug that could produce incorrect absolute levels on banded spectrum plots (relative levels were unaffected)
- Fixed Macbook external keyboard bug
- Added Machine ID to About (program info) screen
- Graph states now stored on shutdown and restored on start-up
- Increased Wave I/O buffer size (an issue on Vista only)
- Changed default live average and trace average for spectrum traces to Power instead of dB averaging.
- Global weighting changes no longer apply to static data traces
- Added Trace Info dialog for static data traces
- New data handling paradigm (see [Data Storage](#) topic for details)
- New trace averaging paradigm
- Added dB offset column to Group Manager overview tables
- Added Clear All dB offsets button to Group Manager
- Fixed rare case of Data Execution Protection (DEP) crash on Windows 7/Vista
- SPL/LEQ settings now properly applied when accessed via Options menu
- Added support for coherence-weighted static/live trace Transfer Function averages
- Added support for averaging static/live Spectrum traces in dB or power
- Added Copy to ASCII function
- Captured traces are now displayed at the back of z-axis stack upon capture instead of in front
- Improved the SPL calibration process
- Added weighting curve name to trace info on graph (if applicable)
- Added Peak to Delay button to Impulse Analysis mode
- Added Plot Calibrated Level function for spectrum plots
- Added Log & ETC views to live impulse response graph
- Changed magnitude thresholding for MTW
- Added delta delay (measured delay - current delay setting) to delay finder dialog window
- Refactored hot key handling -- accelerator keys now work regardless of UI focus
- Made "Spectrum" & "Transfer Function" invalid group names (case insensitive)
- If imported legacy trace has coherence values all equal to 0, we set them all to 1. (v5 trace edit wrote all 0s)

## Smaart v7.0.5

-----

- Added work-around to handle reactivation on blocked machine with deleted ticket
- Banded traces now honor the inverted weighting flag on initial capture
- Added deactivation success message

### Smaart v7.0.4

-----

- Fixed issue with loading reference files on Mac
- Made button down state brighter
- Added hash marks to measurement signal level meters
- Group manager tree now default opens both Spec & Resp nodes

### Smaart v7.0.3

-----

- Fixed performance issue introduced in 7.0.2

### Smaart v7.0.2

-----

- Fixed group copy crash
- Fixed averaging of unaveraged TF traces
- Added .aiff wildcard to the signal generator file browser
- Fixed crash when Transfer Function FFT size was smaller than the LIR FFT size
- Fixed Weighted SPL bug
- Fixed SPL time integration bug
- Fixed Windows 7/Vista startup issue
- Changed how phase is averaged for trace averaging
- Fixed crash opening Mac version stored traces on Windows and vice versa
- Changed default path for loading traces
- Added hotkey G for sig gen toggle
- Octave ruling for Transfer Function plots