Listen

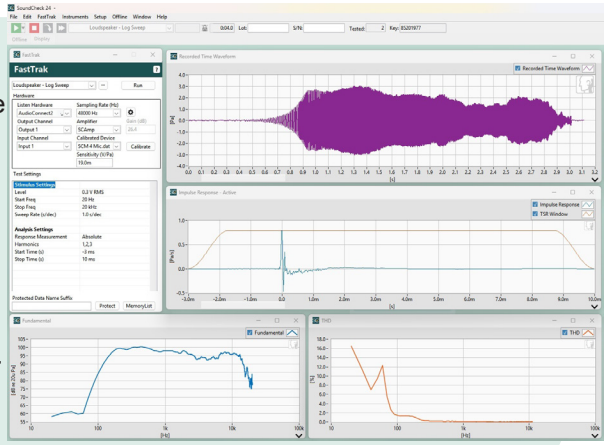
SoundCheck®
Audio Test and Measurement System

SoundCheck® 24 New Features

SoundCheck 24 shortens test development time and improves ease of use. A new streamlined interface enables quick measurements without configuring test sequences. Calibration and graphing updates accelerate workflow, and new algorithms and displays increase the capabilities of your system.

FastTrak

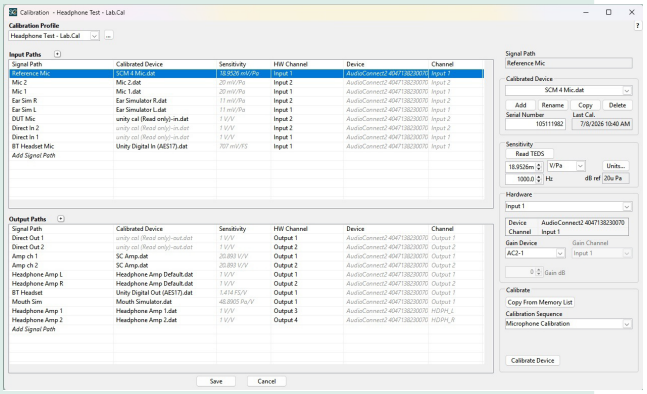
FastTrak is a new, streamlined interface for quick measurements with SoundCheck and Listen audio interfaces. It accelerates the learning curve and offers rapid data collection and comparison without the overhead of full sequence development. The entire test setup is managed from a single window, including hardware selection and configuration, microphone calibration, stimulus configuration, and measurement selection. Basic measurements such as frequency response, total harmonic distortion (THD), and rub and buzz are made using stepped sine or logarithmic sweep signals, and displayed on screen. Data can be saved and FastTrack tests can be exported to regular SoundCheck sequences if customization or additional test capabilities are required. This feature is initially focused on loudspeaker testing, with additional applications coming soon.



Streamlined Calibration Interface

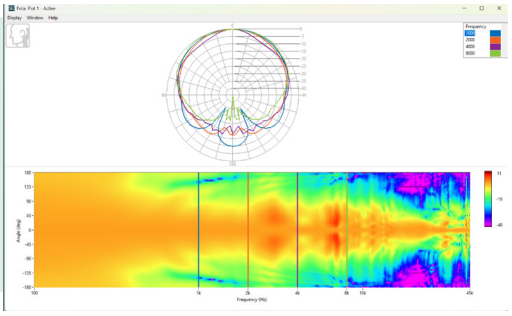
Calibration Profiles increase flexibility and ease-of-use when managing calibrated devices and signal paths across multiple test environments. Profiles can be created for different test rooms, fixtures, operators, or measurement applications. Each profile can assign different calibrated devices to the same signal path names, allowing the same sequences to be reused without modification while calibration assignments change. This avoids duplicating signal paths or manually changing calibration assignments when switching hardware. Profiles can also include only the signal paths required for a particular application, reducing clutter in Virtual Instruments and simplifying navigation.

A new unified interface streamlines calibration by combining the calibration table and signal path views into a single window. Selecting any signal path immediately displays its configuration for editing, making it faster to review and modify system settings without switching between views. New multi-selection options allow changes to be applied more efficiently across multiple signal paths, and additional context menu commands further simplify common workflows. A particularly valuable addition is ‘Read All TEDS Microphones’, which automatically reads TEDS information from every connected TEDS-enabled microphone and assigns the appropriate calibrated devices to their corresponding signal paths. Also new is the ability to calibrate any device in an open sequence directly from the setup menu.



Directivity Plots

Directivity Plots provide a new way to visualize directional measurement data. In addition to the traditional polar plot, showing level versus angle at selected frequencies, a Directivity Plot displays frequency on the x-axis and angle on the y-axis, with color representing the measured level. This shows the complete frequency and angular response at a glance, making it easier to identify directional behavior or areas of interest. The Polar Plot and Directivity Plot are fully synchronized; dragging cursors in a Directivity Plot automatically updates the Polar Plot frequency slices for more detail.

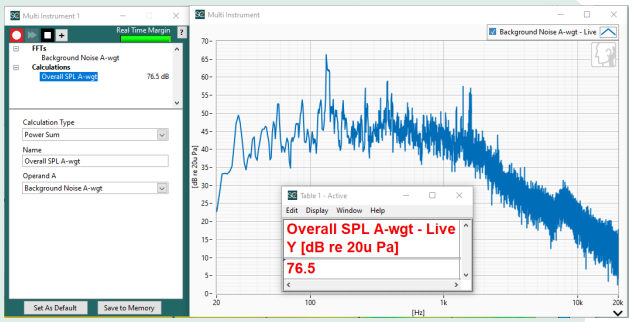


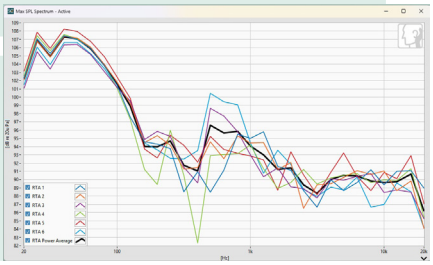
SoundCheck® 24 New Features (cont.)

Multi-Instrument Enhancements

New Multi-instrument functionality includes:

- A new Power Sum calculation to measure the overall level of a power-averaged spectrum in real time. This is useful for multi-channel applications such as automotive measurements, where the head unit's volume level needs to be adjusted to a target sound level.
- A new Track Maximum cursor automatically follows the dominant peak as it moves. The harmonic cursors will also update relative to the new peak , making it easy to monitor harmonics and THD in real time.
- A new method for handling grouped measurements in the multi-instrument for faster test development.



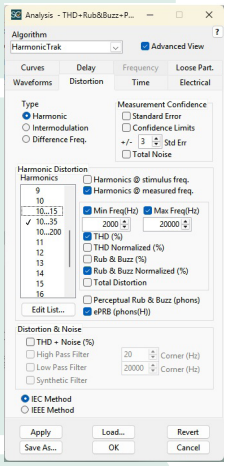


Enhanced Graph Legends and Curve Display

Graph legends may now be placed anywhere inside the graph area, allowing more screen space for the graph, while still keeping the legend visible. Curves can also instantly be shown or hidden by checking or unchecking the box next to each trace on the legend. This makes it faster to compare measurements, isolate individual traces, or temporarily hide outliers.

Updated Harmonic Analysis Options

Outputting harmonics to the memory list can now be suppressed, but still used for calculations such as THD and Rub & Buzz. This keeps the Memory List focused and clean, especially in applications with high channel counts or when analyzing many harmonics for Rub & Buzz calculations. Harmonic analysis minimum and maximum frequencies can also be set to restrict the range of harmonics that are included in analysis calculations such as THD.



Algorithm Enhancements

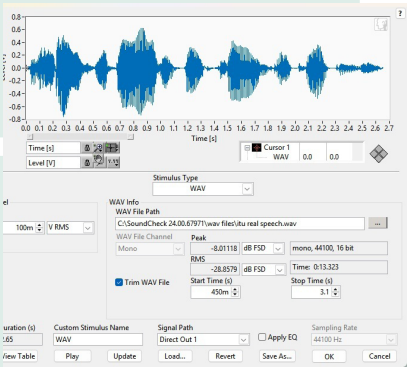
Algorithm enhancements include:

- Crest Factor calculations with continuous log sweeps in addition to stepped sine sweeps
- Maximum and minimum curve outputs from Crest Factor's high pass filter for looking at Impulsive Distortion Peak. With the high-pass filter disabled, it can also be used for looking at cone displacement max. and min. versus frequency.
- Extended bandwidth for Log Sweep distortion measurements up to the Nyquist frequency instead of the maximum stimulus frequency for users working with high sampling rates.
- User-configurable fade-in and fade-out duration for the Farina Log Sweep, to minimize ringing at the beginning or end of the sweep.

TCP/IP and Automation

New TCP/IP commands to simplify control of automated and headless test systems include:

- Hardware Refresh to trigger detection of newly connected devices through the TCP/IP interface.
- Support for new calibration features including updating calibrated device assignments, and reading all TEDS devices without opening the Calibration Table.



Additional Stimulus Flexibility

Stimulus options now include:

- WAV file start and stop times defined directly in the Stimulus editor, making it easy to play only the desired portion of a recording.
- A specified seed value for white and pink noise generation, ensuring the same noise signal is used for every measurement.

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