SoundCheck® 18.0 New Features

SoundCheck 18’s new features focus on automation and simplicity. Automation features include the ability to pass test configuration data to and from external programs, and control of MEMS interfaces via a sequence. Setup and test development is simplified with ‘plug and play’ functionality for Listen hardware, simplified gain control, and improved sampling rate management.

**Improved Automation Simplifies Test Sequences**

Soundcheck’s new sequence parameter feature allows the user to pass test configuration data into the memory list from external programs using TCP/IP commands. By externally storing parameters such as limits, test levels, and test signals, a single sequence can be used for multiple products, simplifying the number of sequences that a large organization needs to maintain, and reducing test configuration time.

It is also useful for applications where a sequence needs to be run many times with different parameters, for example, testing voice recognition with a range of voices or test levels. This functionality is particularly useful where SoundCheck tests are run as part of a larger automated test framework controlled using Python, C#, Visual Basic, LabVIEW, etc.

**Reduced Set Up Time with Plug and Play Listen Hardware**

Improved hardware setup enables you to plug in and make measurements faster. Listen and Portland Tool & Die Hardware are now true ‘plug-and-play’ which minimizes configuration time, particularly with multichannel interfaces. Simply connect your AmpConnect, BTC-4149 or other Listen interface via the USB cable and the software auto-populates parameters such as sampling rate and calibration values, and creates input and output signal paths.

Multiple hardware items are stored within the software, so that they are immediately recognized when connected, and the software will automatically default to the correct device.

When substituting devices of the same type, SoundCheck will re-use the configuration previously set up, either manually or during a sequence, so that signal paths and sequence configurations do not need to be updated. This makes deploying a sequence over multiple stations simpler and faster and will offer significant time-savings for large-scale operations who need to configure multiple stations or move hardware around between stations.

**Simplified Gain Control Selection**

Auto read and auto range gain settings are now easily accessible as drop-down options in the gain menu in the acquisition step editor, and auto-read is available in virtual instruments. Setting the gain to auto-read, means that SoundCheck will automatically adjust the gain based on manual input from the user, making it much faster to make quick gain adjustments while developing sequences.

When the gain is set to auto range, SoundCheck will automatically identify the correct level of gain to optimize the measurement signal to noise ratio. This makes it fast and simple to optimize tests in the R&D lab for the correct gain before transferring them to production.
**SoundCheck® 18.0 New Features (cont.)**

**Improved sampling rate management**
Many audio interfaces have a latency that is dependent on the sampling rate, and SoundCheck 18 brings improved communication with these devices. Firstly, for any hardware device, the user can specify the latencies for various sampling rates, either by entering them manually or importing from a file. SoundCheck will then automatically use the correct latency for any sampling rate specified in the stimulus editor. Secondly, the sampling rate can now be set in the stimulus editor. This is useful for users who need to do iterative tests involving multiple sampling rates and/or set the sampling rate via a sequence. Finally, when using WAV files, the sampling rate no longer needs to be manually set to match the sampling rate of the WAV file. This makes it simpler to switch between WAV files, and is useful for anyone making measurements with wave file signals such as speech or music.

**MEMS Interface control**
The Portland Tool & Die MEMS microphone interfaces can now be fully controlled from within SoundCheck. This offers faster setup of the measurement interfaces with SoundCheck as well as greater measurement reliability as the device settings can be built into the test sequence. Sequences using the R&D grade DCC-1448 interface will also work seamlessly with the production-grade PQC-1448, making it much simpler to transition sequences from the R&D lab to the production line.

**New Digital I/O Control**
Digital I/O control is now a separate message step. This means that all controls for I/O settings are completely separate from other AmpConnect settings, minimizing the possibility of other parameters such as gain or routing being accidentally modified. The new settings offer a uniform appearance and switching scheme across all devices with digital I/O control, so that sequences written, for example, with NI hardware, are easily converted to work with AmpConnect.

**TEDS support**
TEDS Support (with compatible Listen hardware) enables automatic identification, configuration and calibration of TEDS microphones and accelerometers, saving time on initial hardware setup and whenever hardware is changed.

**WASAPI Driver support**
SoundCheck 18 now includes WASAPI driver support in Windows 10. This driver offers full multichannel support, allowing each individual channel to display separately in the hardware editor, rather than as channel pairs.