

Hearing Aid Testing

Applications Include

- Complete characterization of analog and digital hearing aids
- AGC devices
- Hearing aids with telecoil
- Special use devices

Features & Benefits

Standardized Tests and Beyond

Listen offers a suite of pre-written sequences for ANSI S3.22-2003. This sequence bundle eliminates test development time and enables product testing to begin immediately. It is also a great enhancement for R&D to diagnose issues in QC or QA with the ability to exactly reproduce the same standardized tests. In development, real or artificial speech or other synthetic signals can easily be created for testing algorithms, subassemblies, or prototypes.

Stimulus

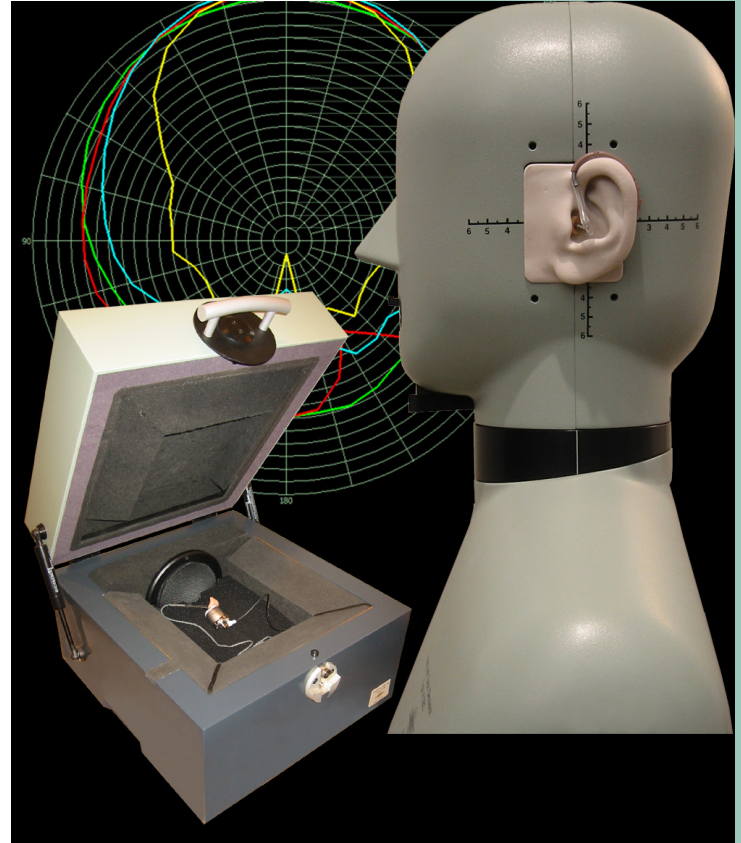
SoundCheck offers both standardized pure tone and noise stimuli as well as the freedom to use any WAV file as a source stimulus. This allows the user to test new signal processing algorithms with real-world signals like speech. These WAV files can be equalized to account for the response of the source speaker and provide a flat acoustical output. The result is a customized and fully calibrated stimulus, which can be analyzed using the 1/nth octave Real Time Analyzer or even a transfer function. This feature is available both in sequences as well as in the Virtual Instrument Signal Generator.

Virtual Instruments

In addition to the ability to write customized test sequences, SoundCheck features several stand-alone virtual instruments: signal generator, multimeter, spectrum analyzer, oscilloscope, and real time analyzer. These fast and powerful instruments are part of the system calibration, so that all inputs and outputs are consistent and accurate – and calibration only has to be performed once. This extra toolset enables engineers to perform quick real-time measurements without writing or running a test sequence.

Powerful Processing

SoundCheck contains all the tools an engineer needs to measure and analyze data. There are built-in tools for performing everything from simple functions like spectral power or dB summation, THD, curve smoothing, and



Industry Standard Tests

- OSPL
- Gain and Frequency Response
- Input Vs. Output
- Equivalent Input Noise
- Harmonic Distortion (THD)
- Attack and Release
- Current Drain
- Directional characteristics (polar plot)
- ANSI S3.22-2003, IEC 60118-7, JIS, Chinese National Standard GB 7263-87

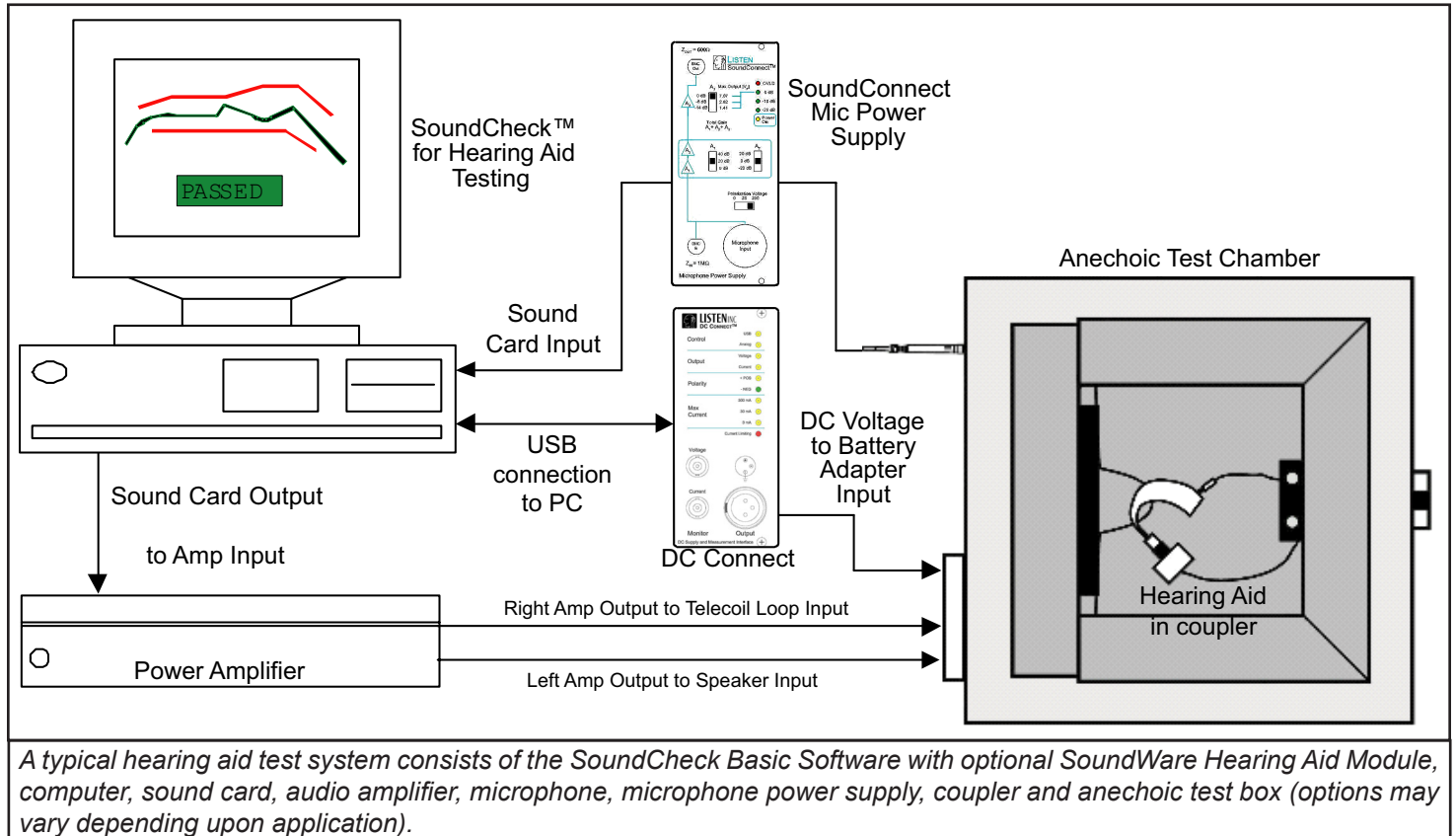


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SoundCheck® Application Note

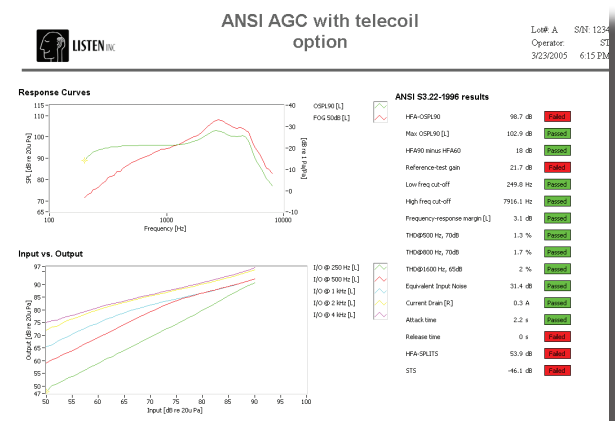
Hearing Aid Testing (cont.)

Typical System Configuration



tolerances to more complex operations like attack/release times and advanced statistical analysis. With the optional User Equation module SoundCheck users can input their own formulae to perform advanced calculations on data, e.g., Directivity Index. All of these functions can be placed in a test sequence for automatic calculation, as well as be used "offline" on data that is already collected. All data is easily saved and exported for analysis in other software like Excel or MatLab.

ANSI Test Report →



SoundCheck Options

Production:

- 1001 SoundCheck Hearing Aid Production

R&D:

- 1104 SoundCheck Hearing Aid R&D

Recommended Modules:

- 2005 Real Time Analyzer
- 2013 WAV File Equalization Module

Associated Hardware

- Reference Microphone
- Listen SoundConnect or AmpConnect
- Listen DC Connect
- Acoustic Calibrator
- Anechoic Test Box
- 2cc Coupler and/or Ear Simulator
- TMFS