

AUDIO TOOLBOX

Plus



Acoustic Audio Analysis

Portable

Multiple i/o

Signal Generator

Specifications

ACOUSTICS

SOUND LEVEL METER

Displays true RMS SPL using ANSI fast or slow averaging, impulse, or peak mode. Digital readout and analog-style meter. Peak hold. Also LEQ mode, 10s to 24 hours, and ANSI Noise Dosimeter with OSHA and ISO settings.

REAL-TIME ANALYZER

ANSI 1/3 octave filter-based RTA. Select full (20Hz to 20kHz) or low (10Hz-332Hz) range, and exponential decay, cumulative running average, or peak hold modes. Cursor reads out exact dB and frequency levels as it moves across the graph. 1/2 or 1dB per pixel vertical resolution. Display can be modified with A, C, or X-Band curves. Also shows frequency of loudest band or overall A, C, or flat SPL. Save results in 40 memories.

FFT ANALYZER

FFT provides Full, 1/3, 1/6, or 1/12 octave frequency resolution (up to 121 bands), same feature set as RTA.

REVERB DECAY TIME

Pink noise level and residual room noise are measured, then the time for a pink-noise burst to decay by 25-60dB is automatically computed and extrapolated to RT60. Octave and 1/3 octave band filters are available.

ENERGY-TIME GRAPH

Graphical display of Energy-Time decay curve in ms, feet or meters. Generates pulse, analyzes room reflections and computes delay for speaker array phasing. Interactive cursor readout. RT60 calculation using movable decay slope markers. Internal or external trigger. Octave and 1/3 octave band filters are available.

TEST FUNCTIONS

SIGNAL GENERATOR

Outputs sine waves, square waves, white noise, and pink noise (may be octave or 1/3-octave band limited). Also polarity waveform (square wave +, sine wave -). Measures actual loaded output. Includes Impedance Tester with wattage calculation at 25, 50, 70, and 100V.

LEVEL METER / FREQUENCY COUNTER

Stereo level meter reads in dBu, dBv, Vave, Vp-p or Vrms. Auto-ranges. Waveform frequency also displayed. Also DIN-standard VU bar meters with PPM and variable reference. Holds absolute maximum peak levels.

SIGNAL-TO-NOISE RATIO

Computes stereo signal-to-noise ratio for audio equipment. Generates an adjustable nominal 0dB signal and then reads residual noise level with signal turned off.

SWEEPS

Graphical display of 1/3 and 1/12 octave frequency response amplitude sweep and impedance sweep. Also programmable sine wave sweep. Cursor readout of results. Memory storage available.

DISTORTION METER

Computes THD+N. 63Hz, 1215Hz, 250Hz, 1kHz, 2kHz, and 4kHz frequencies. Measures speaker distortion through microphone, or signal distortion through line inputs.

SYSTEM TOOLS

RASTI

Rapid Speech Transmission Index. Computes RASTI by analyzing the modulation transfer function of 9 modulated 500Hz and 2kHz octave-band pink noise signals.

%ALCONS

Percent Apparent Loss of Consonants (Speech Intelligibility) is computed from the RT60 time of octave-band pink noise and room dimensions. The correct formula is selected based on the speaker-to-listener distance.

NOISE CRITERIA

Shows ANSI balanced NC curves. Displays limiting band and SPL by octave band. Includes Speech Interference Level mode.

POLARITY TESTER

Tests absolute speaker phase (polarity) by analyzing a proprietary waveform. Works up to 200' from the driver. Also tests microphones and equipment for inverted phase.

TIME CODE TOOLS

Dual Time Code Reader displays values, computes offset, and shows sub-frame lock. Generator supports 24, 25, 29.97, and 30 fps drop/non. Jam Sync w/offset corrects dropouts and damaged time code. Fault Detector finds damaged or duplicated frames. Frame Rate Reader shows rate of time code accurate to +/- .001 fps. Time Code Calculator adds or subtracts time codes.

SAMPLE SCOPE

Shows signal on an oscilloscope-like screen. Dual-trace, auto-triggering. X-Y mode for phase display. Line or mic in. Signal level meter included. Auto-triggering of repeating waveforms.

UTILITIES

HEADPHONE MONITOR AMPLIFIER

High-gain stereo headphone amplifier for signal tracing or monitoring. Line or mic in. Can output to built-in speaker.

CABLE TESTER

Test XLR, 1/4", and RCA audio cables in all combinations. Runs both logic and 1kHz and 20kHz audio tests. Graphical wiring display shows cross-wired cables. Audible tone "beep" confirmation. Also includes a continuity tester mode.

POWER TESTS

Check microphone phantom power voltage on both pins. Battery checker tests the internal battery voltage and shows remaining operation time.

COMPUTER INTERFACE

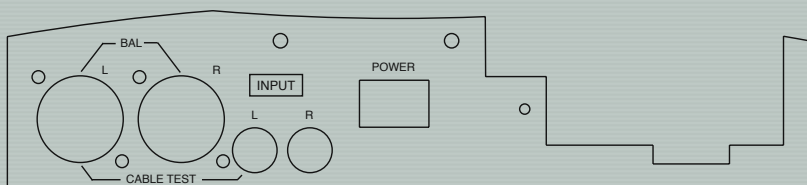
Transmit 40 non-volatile user memories to PC or Mac for printing or analysis using TerraLink. Uses computer's serial port.

SETUP & CALIBRATION

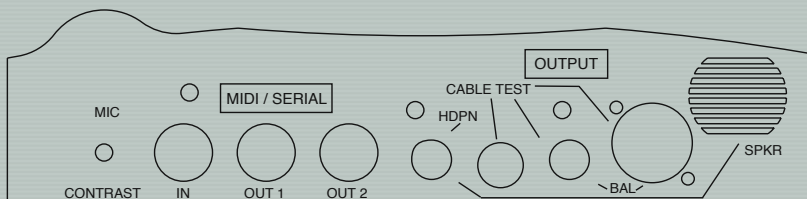
Store user preferences, check calibration calibrate external microphones.

ABOUT

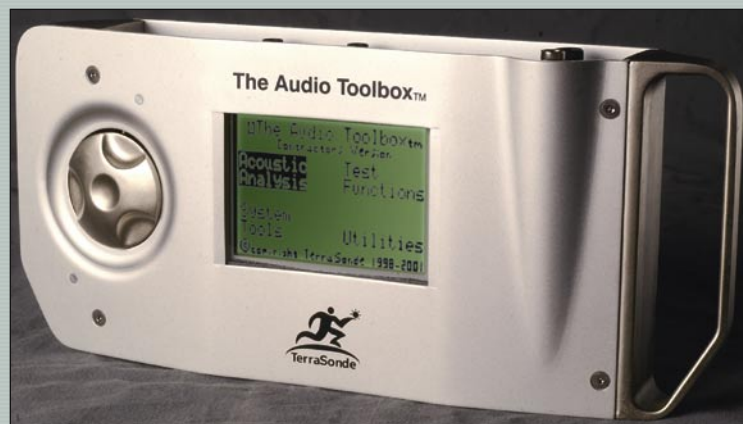
Software release version and technical support information is displayed.



Balanced XLR and 1/4" line level inputs, Unbalanced RCA line level inputs, Power Switch, Battery Access door



External Microphone, Speaker, Contrast control, 1/4" Headphone Jack, Balanced XLR and 1/4" line level outputs, Unbalanced RCA line input, MIDI/RS232 serial I/O connectors



The Audio Toolbox Plus combines the power of over twenty separate analysis tools in one handheld, self-contained, battery-powered device. Packaged in a sleek, durable aluminum and steel chassis, with balanced audio inputs and outputs, calibrated measurement microphone, large backlit LCD display, 40 non-volatile memories, computer interface and an internal speaker for signal monitoring, everything about the Audio Toolbox Plus conveys the look and feel of a sophisticated, professional test instrument. The Audio Toolbox Plus includes an external Type 2 measurement microphone, carrying case, rechargeable battery, user manual and all cables. MSRP \$1899.00

