Specification

The DigiSonic can be used with any computer sound card. We currently recommend using a YellowTEC PUC, because it provides calibrated inputs and outputs, and requires no supporting driver software. The PUC is a 16bit (24bit when used with AES3/EBU connections) 44.1/48kHz device and figures quoted in this specification are for the PUC.

Analyser

Inputs

Two channel balanced or unbalanced analogue (22kohm) and balanced (24 bit) AES3/EBU or (16 bit) SPDIF provided on a 25-way D-type connector.

Level Measurement

Two channel simultaneous bar graph and decimal readouts, -100dBu to +18dBu. Accuracy ±0.01dB @ 0dBu, with reduced accuracy at lower levels (±0.13dB @ -50dBu).

Option 1: Fast Quasi-Peak
Option 2: Super-fast Quasi-Peak
Option 3: RMS

Frequency Measurement

10Hz-20kHz left channel frequency measurement, digital readout, accurate to ±1Hz

Phase Measurement

±180º, 10Hz-20kHz with ±1º accuracy.

PPM (Peak Programme Meter)

Simultaneous two-channel display with PPM dynamics.

Option 1: IEC268 type 11 (BBC standard).
Option 2: Fast attack PPM (x10 attack time)
Option 3: Dual speed PPM (option 1 and option 2 displayed for left channel).

Noise Measurement

Residual Noise -66dBu (468-weighted) with analogue connections, -100dBu (468-wtd) with AES/EBU connections.

Option 1: 468 Quasi-Peak (fast decay)
Option 2: 468 Quasi-Peak (slow decay)
Option 3: Unweighted Quasi-Peak (22Hz-22kHz)
Option 4: Unweighted RMS (22Hz-22kHz)
Option 5: A-weighted Quasi-Peak
Option 6: A-weighted RMS

Distortion Measurement

Choice of Lindos-preferred Distortion Residue (468-wtd 1kHz), or traditional THD measurement.

Initially measures the incoming frequency and finds the nearest Lindos frequency (from 10Hz – 10kHz), then nulls the fundamental and measures distortion. Noise floor -66dBu (468-wtd) with analogue connections. Range -100dBu to +18dBu with digital connections.

Option 1: Distortion Residue 468-wtd Quasi-Peak @1kHz
Option 2: THD+N RMS (22Hz-22kHz)

Crosstalk Measurement

Measures weighted crosstalk, automatically muting the channel selected, while driving the other at the selected frequency and level.

Option 1: 468-wtd Quasi-Peak
Option 2: Unweighted Quasi-Peak (22Hz-22kHz)
Option 3: Unweighted RMS (22Hz-22kHz)

FFT mode

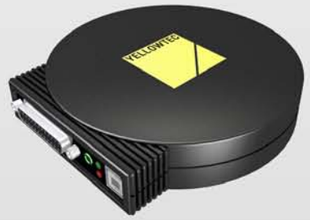
Two channel, real-time spectrum analysis of incoming signal in any mode. 10Hz-20kHz display, linear or log scale, windowing and averaging options.

Oscilloscope View

Two channel, real-time oscilloscope display with auto-trigger.

Sequence Mode

Available when controlled with Lin4WinXP, allows fully automated measurements of noise, distortion, phase and crosstalk to be made, and plots of frequency response, phase response, distortion response, noise against time and level against level. Results are displayed graphically for saving, printing, tolerance testing and on-line publishing.



Oscillator

Outputs

Two channel (load >600ohm) balanced or unbalanced analogue connections and balanced (24 bit) AES3/EBU or (16 bit) SPDIF provided on a 25-way D-type connector.

Output Waveforms

Sine, square, triangular, white noise source, pink noise source.

Frequency Range

10Hz – 21kHz, 1/3rd octaves or 1/12th octaves for all waveforms (uses Lindos-preferred frequencies).

Level Range

-66dBu to +18dBu in 1dB or 0.01dB steps, -100dBu to +18dBu with AES/EBU. Accuracy ±0.02 typical @0dB.

Distortion

Analogue output, -63dBu Distortion Residue (468-wtd) (-72dBu/0.02% THD+N) @ 1kHz (20Hz - 22kHz bandwidth). Digital output, -72dBu Distortion Residue (468-wtd) (-83dBu/0.006% THD+N).

Flatness

±0.02dB typical 200Hz-20kHz, -0.06dB @ 100Hz, -0.5dB @ 20Hz.

Mute

Mute, restore, and channel selection. Auto-mute on selecting noise. Auto source selection on crosstalk and distortion. Residual noise muted, analogue output -65 dBu 468-wtd, digital output -99dBu 468-wtd.

Frequency Accuracy

±0.1% of specified frequency 20Hz-20kHz.

Sequences

8 segments available, noise versus time, distortion at 6 different levels, swept distortion, frequency response plot etc.

General

Items Included

Manual, Lin4WinXP, USB Dongle.

Sample Rates Supported

44.1kHz and 48kHz.

Sample Resolution

16bit and 24bit.

System Requirements

1.5GHz processor is required for full FFT functionality. 800MHz upwards for all other features.

Operating Systems Supported

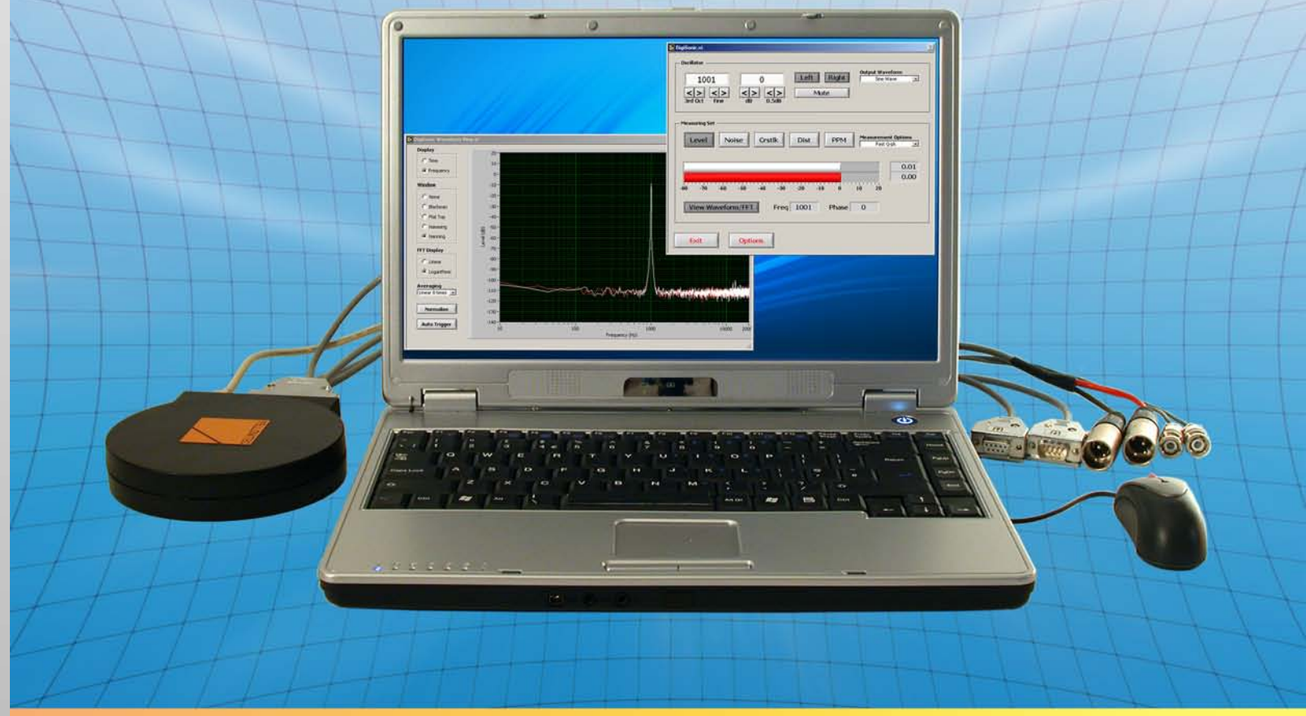
Windows 2000/XP.

Memory Requirements

256Mb RAM, 20Mb Disk space.

Lindos

FAST AUDIO TESTING SOFTWARE



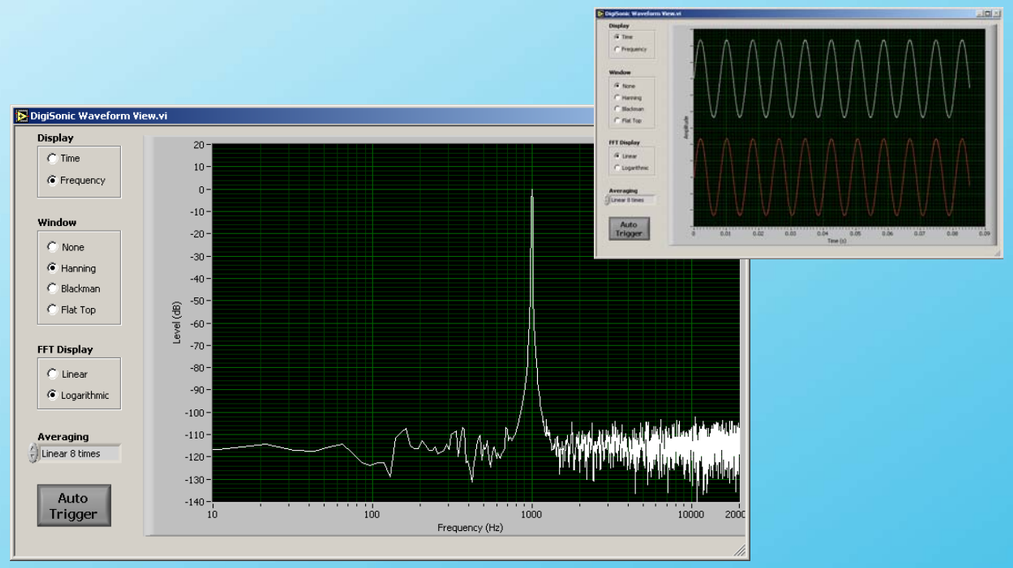
DigiSonic DS10

from the experts in audio

The DigiSonic is a Windows™ application that turns your PC sound card into a fully functioning audio test set. Our family of test solutions, whilst sharing a common concept and control layout, differ in terms of portability, precision, and functionality. Any Lindos user will instantly feel at home with the DigiSonic.

Features:

- **Measures audio quality in terms of frequency response, noise, distortion, crosstalk, headroom, and phase.**
- **Real-time oscilloscope view.**
- **Full real-time spectrum analyser** with windowing and averaging options.
- **Sequence compatibility with the MS10 and LA100.**
- **Analysis segments** providing graphs of level, distortion and phase against frequency, noise against time and headroom.
- **Balanced and unbalanced analogue and AES3/EBU digital audio interfaces** when used with a YellowTEC PUC**.**
- **Remote control over the Internet.**
- **Results management, and tolerance testing.**
- **Precision two-channel level measurement** (0.01dB resolution).
- **Noise and distortion measurements** with selectable weighting filters, including CCIR (IEC 268/ITU-R 468) and A-weighting.
- **Selectable meter dynamics** including Quasi-Peak, Fast Quasi-Peak, RMS and PPM.

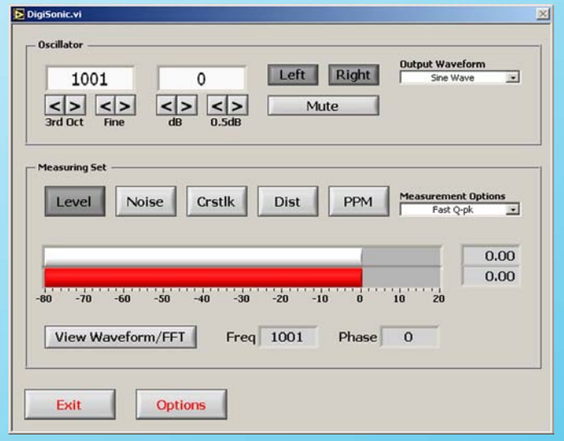


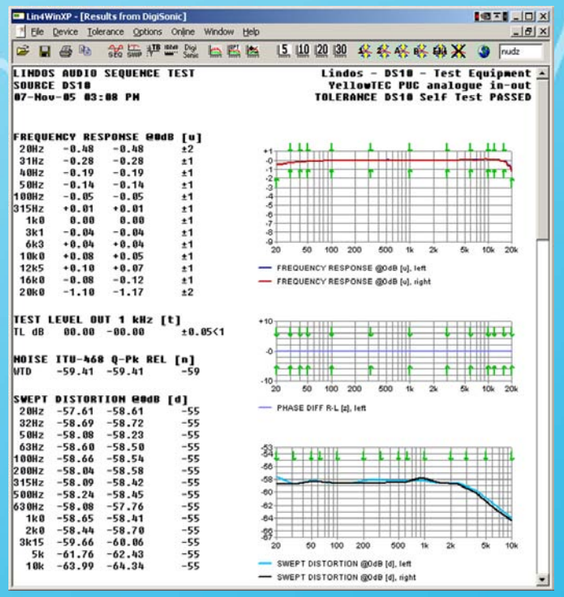
The **DigiSonic** can be operated stand-alone with its own control panel, or through **Lin4WinXP** in the same way as our hardware test sets. As well as providing a familiar interface across our family of products Lin4WinXP provides access to the sequence testing facilities built into the DigiSonic.

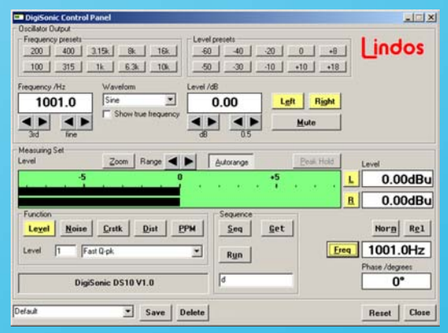
Sequence testing allows a user-defined series of measurements to be made by the DigiSonic with the click of a mouse. Synchronisation of the generation and measurement sides is achieved using FSK (frequency shift keyed) tones and full compatibility with the LA100 and MS10 is maintained.

This powerful system generates a complete **Lindos test report** within 30 seconds and its standardised presentation provides a permanent record, a basis for comparison and a valuable accompaniment to any quality product.

Sequence results are presented in Lin4WinXP with text and graphs on screen for viewing, tolerance testing, saving, printing and exporting to other applications. The graphs can be overlaid, customised, compared (sum and difference plots) and analysed point by point using the Graph Viewer.







The intrinsic **precision** of digital levels, free from analogue attenuator errors, makes the DigiSonic the ideal choice for **equipment calibration** and **production testing**.

Digital processing has enabled us to include **swept distortion** and **spectrum analysis**.

Because the DigiSonic and Lin4WinXP communicate using Internet protocols, remote controlled **audio lines and network testing** can be centralised and automated with ease.

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