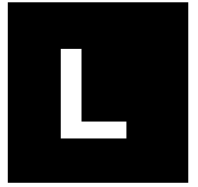


Line-level Test Module

option for
AIO Test System



The Line-level Test Module (AIO-L) is designed for making basic acoustic or electrical measurements of a device under test (DUT). AIO-L is a configuration option for the AIO Test System and requires the AIO chassis to operate.



HARDWARE FEATURES:

- Four mic/line inputs
- CCP/IEPE/ICP microphone power
- TEDS reader for microphone data
- Two balanced line-level outputs

KEY APPLICATIONS:

- Mobile devices
- Communications systems

MIC/LINE INPUTS:

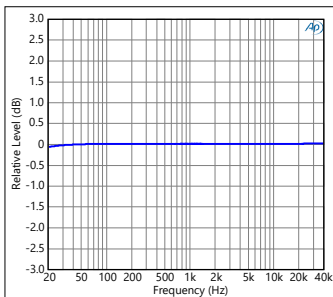
Four low-noise inputs accommodate a very wide range of input voltages, from dynamic microphones to line-level inputs. Features include adjustable gain, constant current power, and TEDS readers.

LINE-LEVEL OUTPUTS:

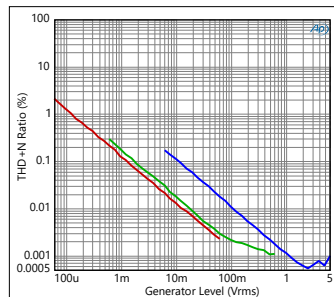
Two high-quality low-noise, low-distortion balanced line-level outputs.

PERFORMANCE GRAPHS:

Mic/Line Inputs

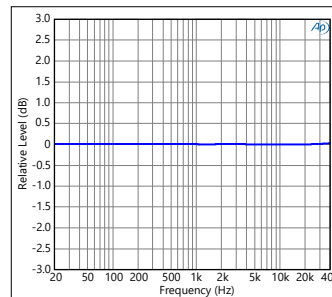


Frequency Response

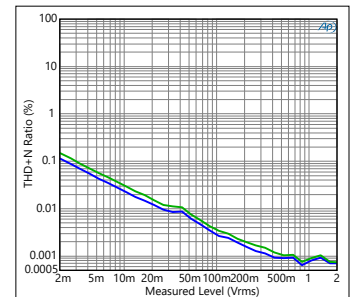


THD+N, A-wtd (gain 1x, 10x, 100x)

Line-level Outputs



Frequency Response



THD+N (A-wtd, un-wtd)

The Echo AIO™ is a modular audio test platform ideally suited for high-volume production-line testing and QA/QC verification. The AIO combines the functionality of multiple standalone devices into a single, integrated unit, making test stations both more reliable and less expensive.

LINE-LEVEL MODULE COMMON CONFIGURATIONS: (Other configurations may be available—check with your dealer.)

Model	Inner Module	Outer Module	Mic/Line Inputs	Line Outputs	Headphone Outputs	Amp Outputs	Impedance	Digital	5VDC & Battery Simulator	GPIO	PTH
AIO-L1	AIO-L		4	2							
AIO-L2	AIO-L	AIO-L	8	4							
AIO-LT	AIO-L	AIO-T	4	2				TDM 10/10			
AIO-SL	AIO-S	AIO-L	6	2		2	1				

SPECIFICATIONS:

Microphone / Line Inputs	
Input bandwidth	72 kHz
Input impedance	1 MΩ
Input gain	1x, 10x, and 100x
Full-scale input voltage (1x gain)	8.75 Vpk
Maximum input voltage	15 Vpk (do not exceed)
Dynamic range (1x gain, A-wtd)	> 110 dB
THD+N (1x gain, A-weighted)	< -95 dB (20 Hz – 20 kHz)
Frequency response	±0.5 dB (20 Hz – 20 kHz)
Constant current supply	CCP/IEPE/ICP, 4 mA
TEDS	IEEE 1451.4 Class 1

Line Outputs	
Minimum load	600 Ω
Full-scale output voltage	2 Vrms (+6 dBV)
Frequency response	±0.02 dB (20 Hz – 20 kHz)

Output bandwidth (-3 dB)	90 kHz
Dynamic range (A-weighted)	> 117 dB
THD+N (A-weighted)	< -100 dB (20 Hz – 20 kHz)

Interface	
Sample rates	44.1 kHz – 192 kHz
USB	USB 2.0 audio class compliant
Supported operating systems	Windows 10 or later, macOS
Audio APIs	ASIO, WASAPI, Core Audio
AC power	90 – 264 VAC, 50/60 Hz, 60 W

Dimensions and Weight	
Single unit	17.5" (44.4 cm) x 8.75" (22.2 cm) x 1.75" (4.4 cm), 7.2 lbs (3.3 kg)
Single unit boxed with cables	21" (53 cm) x 10" (25.4 cm) x 5" (12.7 cm), 8.75 lbs (4 kg)
Carton (4 units)	22" (55.8 cm) x 22" (55.8 cm) x 12.6" (32 cm), 42.5 lbs (19.3 kg)

AIO Test System

(see system datasheet for more details)



Shown: AIO-LC rear view with **L** line-level and **C** combo test modules.

FEATURES:

- High accuracy
- Cost effective
- Silent—no fan!
- Standard USB audio interface
- Wide test & measurement software compatibility
- ASIO, WASAPI, & Core Audio protocols



CONTROL PANEL SOFTWARE:

Provides comprehensive level monitoring and control over hardware settings, including transducer power, TEDS data, gain, TDM format, and calibration. Command-line and API access to settings is also available.

TEST & MEASUREMENT SOFTWARE:

Choose from a wide variety of third-party test and measurement software, including APx500 Flex, ARTA, LabVIEW, and MATLAB. The AIO system works just like a standard sound card for Windows, Mac, or Linux.

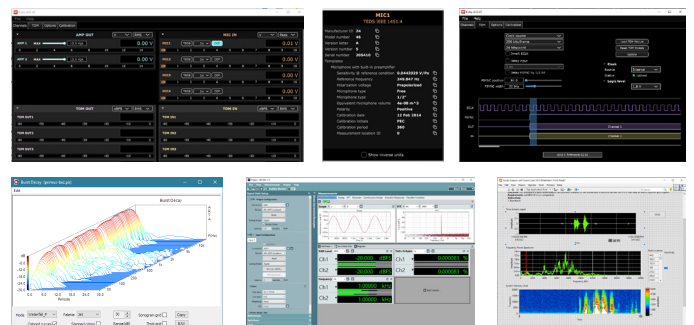
Echo Test + Measurement

402 E Carrillo St Ste A, Santa Barbara CA 93101 USA
 echotm.com sales@echotm.com +1 805-880-5590

MODULE OPTIONS:

(see individual datasheets for details and configurations)

- A Acoustic:** Four mic/line inputs with CCP, TEDS; two 10 W class-D amplifier outputs.
- C Combo:** GPIO; 5 VDC fixed supply; 5 VDC battery simulator; Pressure, temperature, and humidity sensor.
- H Headphone:** Four mic/line inputs with CCP, TEDS; two headphone/earbud outputs with impedance measurement.
- L Line Level:** Four mic/line inputs with CCP, TEDS; two balanced line-level outputs.
- S Speaker:** Two mic/line inputs with CCP, TEDS; two 10 W class-D amplifier outputs; built-in speaker impedance measurement.
- T TDM:** Digital TDM, up to 10 channels, 24 or 32 bit samples, 192 kHz.



Specifications are subject to change without notice. All trademarks or registered trademarks are the property of their respective owners. The AIO Test System is CE compliant.