



DC Connect™ DC Power Supply and Monitor



DC Connect

DC Connect™ is a USB controlled precision DC power supply and current monitor. It enables high resolution dynamic measurements of voltage and current consumption in portable electronic devices such as noise-cancelling headphones, hearing aids, microphones, smartphones and other battery powered electronic devices.

DC Connect is fully computer controlled via a USB port or via an AC voltage from an audio interface. Used in conjunction with SoundCheck® electro-acoustic measurement software it enables current or voltage measurement to be synchronized to an acoustical source. Since DC Connect can be fully controlled via the software, it greatly simplifies complex tests such as dynamic measurement of current consumption in portable electronic devices while continuously varying the frequency and amplitude of the signal. The output level can be rapidly changed by the computer, as may be required in fast, complex test sequences. It is ideal for both production line and R&D applications.

Connection to the device under test is simple using a single XLR, TRS balanced connector. A monitoring output enables

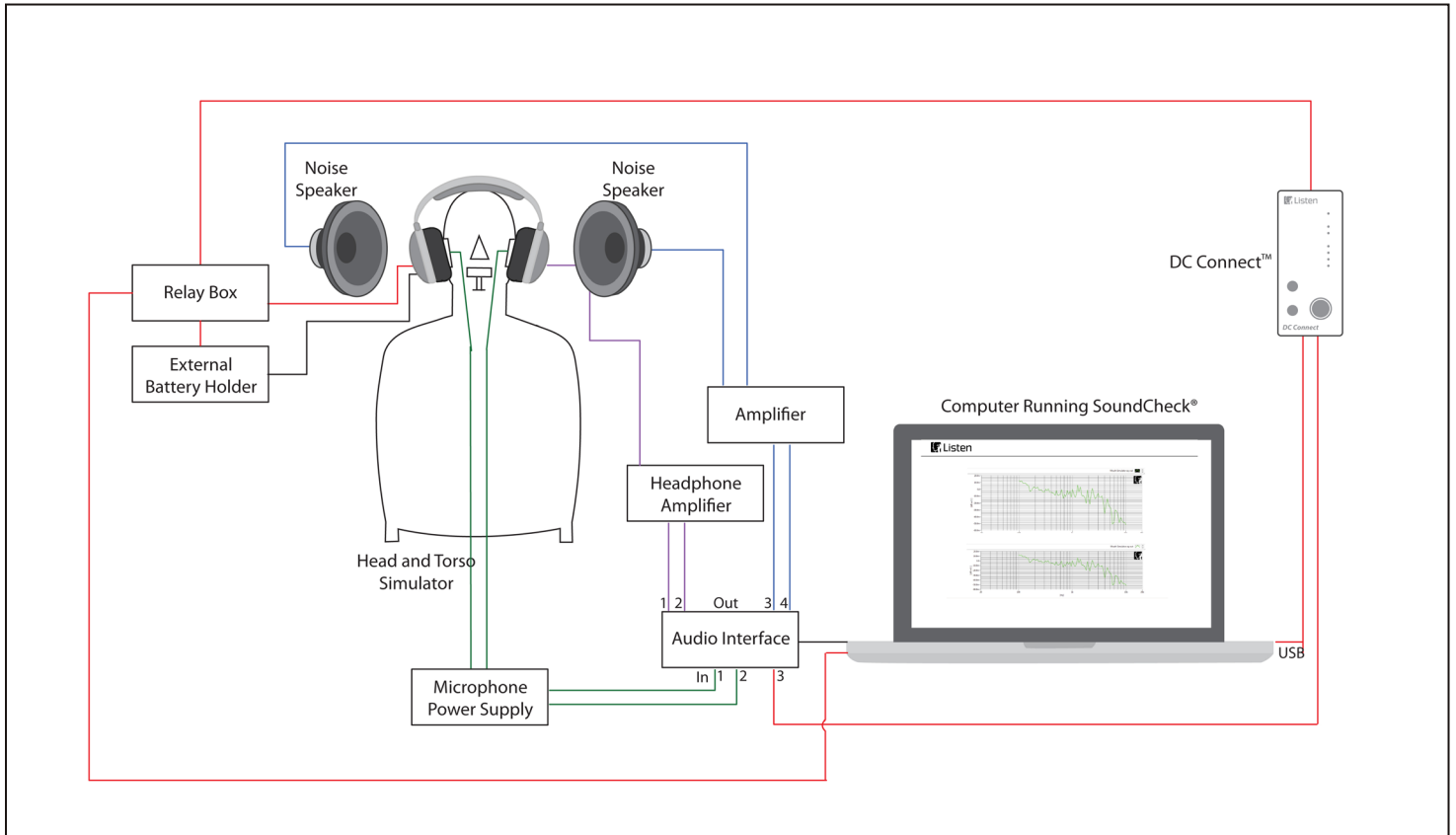
it to also be used as a stand-alone device. It can operate in 4 modes: DC voltmeter, DC ammeter, DC voltage source with current measurement and DC current source with voltage measurement.

Capabilities

- Measure current consumption of battery operated and other low voltage devices such as hearing aids
- Test a device over the voltage descent of a battery's lifetime
- Acquire the current vs. voltage characteristic curve of a device
- Apply a voltage or current ramp
- Measure resistance, capacitance, and inductance
- Measure current draw synchronized with an audio stimulus
- Acquire a current draw vs. audio level curve
- Measure the dynamic response of current draw to a step in audio level
- Monitor test point voltages and currents

DC Connect™ (cont.)

Setup Diagram



Measurement of performance with battery drain in noise-cancelling headphones using DC Connect

Specifications

Source or Monitor Type	Control/Monitor Method	Accuracy	Nominal Resolution
Voltage, 10 V max.	USB	$\pm 0.1\% \pm 1 \text{ mV}$	1 mV
Voltage, 10 V max.	Analog	$\pm 0.3\% \pm 1 \text{ mV}$	1 mV
Current, 3 mA max.	USB	$\pm 0.1\% \pm 1 \mu\text{A}$	0.1 μA
Current, 3 mA max.	Analog	$\pm 0.3\% \pm 1 \mu\text{A}$	0.1 μA
Current, 30 mA max.	USB	$\pm 0.1\% \pm 4 \mu\text{A}$	1 μA
Current, 30 mA max.	Analog	$\pm 0.3\% \pm 4 \mu\text{A}$	1 μA
Current, 300 mA max.	USB	$\pm 0.2\% \pm 20 \mu\text{A}$	10 μA

NOTE: Specifications are subject to change. Please contact Listen for current information or questions.