ULTRASOUND SPEAKER - ACOUSTIC LURE
L400

The L400 is a high-quality ultrasound speaker with built-in amplifier that can be connected to any device capable of playing ultrasonic signals, such as the D1000X ultrasound detector or a computer with a high sampling frequency sound card. It can be used for various playback experiments, as an acoustic lure and for teaching the use of bat detectors by listening to recorded bat calls through the speaker.

Specifications

Frequency range	10 kHz – 110 kHz (+/- 8 dB)
Max. output level	100 dB @ 1 m/60 kHz (28 V supply voltage)
Input impedance	50 kohm
Batteries	8 x AA cells or 12-28 V external power
Size	24 x 16.5 x 7 cm
Weight	1.6 kg

Pettersson since 1983

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The L400 is an ultrasound loudspeaker with built-in amplifier. The typical frequency response extends from 10 kHz to 110 kHz (+/- 8 dB).

The unit can be powered either from 8xAA batteries in the built-in battery holder or from an external battery/supply of 12-28 V with a current rating of at least 1 A. To access the battery holder, remove the two large screws on the side panel of the L400 and pull out the holder. In order to ensure the batteries stay in position, put the two battery holder covers back in position after having inserted the batteries. Be careful not to short-circuit the battery connector or to let any objects fall into the housing. Loose metal objects may cause a short-circuit with possible damage to the unit. Please also make sure that the battery polarity is correct. A reverse-polarized battery/external power supply is likely to cause the internal protection fuse to blow. This fuse is located behind the panel with the DC power jack and can be replaced if the panel is removed.

The “ON” indicator LED also serves as a battery indicator. It gradually becomes weaker as the battery voltage decreases and turns off at a battery voltage of ca. 10.5 V. The unit will still work at this battery voltage but with reduced performance.

In order to obtain maximum output power from the amplifier (14 W), the unit should be powered from an external battery/supply with a voltage of 28 V. The L400 amplifier is equipped with a thermal protection circuit that will automatically reduce the output sound level in case the internal temperature becomes too high.

An input signal level of ca. 350 mV rms is required to obtain maximum output signal level. Before turning on the L400, the volume control should be turned maximum counter-clockwise (minimum volume). After turning on the L400, increase the volume to the desired level. The four LED indicators show the approximate, relative signal level

LED level indicators, signal input jack and volume control.
When all four LEDs flash, the maximum signal level is reached.

Power switch and ON indicator (set switch towards text to turn on).

Jack for external power, 12-28 V/1 A
The center pin should be connected to the positive terminal.