

# WHISPER™ MK-I

MAN-PORTABLE LRAD

## THROW YOUR VOICE

The **WHISPER™ MK-I** uses modulated ultrasonic carriers to *make the air itself a speaker*. A tightly collimated 40 kHz beam demodulates into audible sound only along its path, delivering audio with laser-like precision while remaining silent outside the target zone.

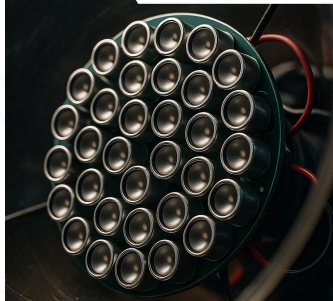
## SPECIFICATIONS

|                     |                                                       |
|---------------------|-------------------------------------------------------|
| PAYLOADS            | MP3 or WAV Audio File, passthrough mic                |
| RANGE               | 86m / 282.8ft (0.1±0.9° spread)                       |
| ENDURANCE / POWER   | 4+ hours continuous (twin 18650 Li-Ions)              |
| DIMENSIONS / WEIGHT | 600mm × 450mm × 250mm<br>6.8 kg (system with battery) |
| DECIBEL CONTROL     | 0 dB to 56 dB via DC Voltage Regulator                |
| ERGONOMIC PLATFORM  | Polymer Mock M4 w/ collapsible stock                  |

### PUSH-BUTTON SWITCH



### TRANSDUCER ARRAY



Ultrasonic transducers transmit modulated high-frequency waves “silently” through the air, maintaining a narrow beam profile.

## SOUND FROM SILENCE

### ULTRASONIC PWM ENCODING

Audible signals are encoded into two ultrasonic carriers using **Pulse-Width Modulation (PWM)**. These carriers propagate silently through air, a consequence of the linear behavior of ultrasound in gaseous media. When the beams encounter a nonlinear medium—such as a wall, an object, or even a human body—their frequencies mix and self-demodulate, reconstructing the audible sound. Critically, *the beam remains acoustically silent* at its point of origin, with maximum audible intensity often emerging at the locus of demodulation.

### VARIABLE OUTPUT

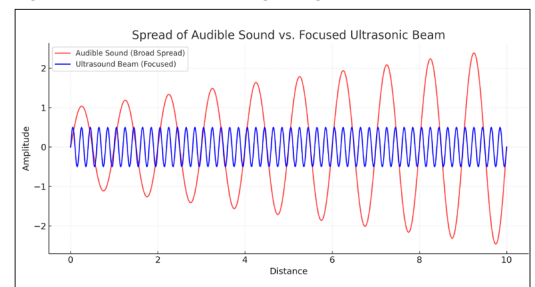
DC voltage regulator permits control of volume without altering audio quality or beam spread



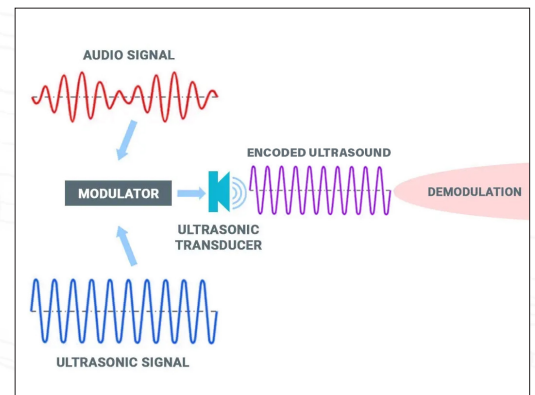
## ULTRASONIC PRECISION

### TRANSDUCER ARRAY BEAMFORMING

A dense ultrasonic transducer array emits modulated ultrasonic frequencies into a narrow, highly directional tight beam pattern for *long-range precision*.



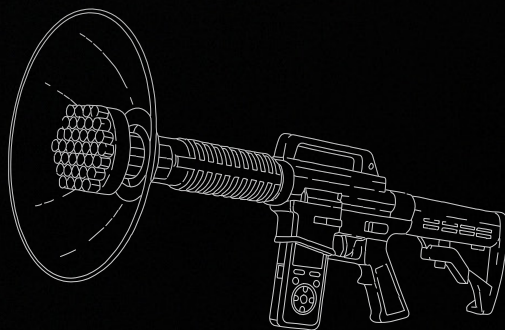
Pompei, J. *Holosonics Audio Spotlight*. 2001.



Norris, W. *LRAD Technologies & Applications*. 1996.



**THROW**



**YOUR**

**VOICE**

**WHISPER™ MK-1**