



The Xtal Set Society

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and experimenting,*

www.midnightscience.com

Press Release: May 21, 2010

Parabolic Dish Kit for 40 kHz Ultrasound Applications

After some months of research and design following the release of our popular Ultra-RX1, we're pleased to announce the availability of our Parabolic Dish Kit.

When trying to locate radio interference due to sparking of AC power distribution systems, to separate multiple biological sources at a distance, or to amplify a signal received, very narrow sensor beam widths are desirable. Our clear plastic 8-inch diameter 6-inch focal length parabolic dish is designed to work with a 400SR16 or similar piezo transducer (PZT). It achieves a pressure gain over the sensor alone at 40 kHz of 18 to 22 dB, and narrows the field of view from 50 to less than 3 degrees. The dish assembly can be used with our popular Ultra-RX1 receiver (shown with the dish assembly but sold separately) or our new Ultra-RX2 ultrasound receiver



A typical weak spark (generated by 400 volts on a AC power distribution line) or bat transmissions will produce pressure waves with an RMS pressure of roughly 0.5 to 5.0 Pa (75 micro-psi) at ten feet. The dish pinpoints the source location and an added receiver provides for recording and/or headphone reception.

The Parabolic Dish Kit includes the 8-inch clear plastic dish, a 400SR16 PZT, sensor PCB, 3 struts, instrumentation bracket, pistol grip, and hardware. The kit manual includes assembly instructions, mounting techniques for the Ultra-RX1 or Ultra-RX2, a discussion on parabolic dish gain, and references. Assembly time is about one hour for an experienced kit builder, requiring pliers, screw drivers, and soldering iron.

Parabolic Dish Kit, \$ 119.95

See our website for more details and to explore ultrasound. Orders may be placed by phone (405-517-7347) or via our website at www.midnightscience.com/ultrasonics.html The Xtal Set Society, Inc., PO BOX 3636, Lawrence, KS 66046.