

# Ultrasound EZ0



## Ultrasonic Range Finder - HRLV-MaxSonar-EZ0

These easy-to-use ultrasonic rangefinders from Maxbotix work the same way as the EZ line that you know and love, but this new high-resolution series features *1 millimeter resolution*! As with the rest of the Maxbotix range finders, these sensors feature Analog Voltage, RS232 Serial, and Pulse Width outputs making them easy to interface with any microcontroller. These sensors have a maximum range of 5000 mm (195 inches) with virtually no dead zone (although objects closer than 30 cm will typically range as 30 cm).

- Resolution of 1-mm
- 10Hz reading rate
- Internal temperature compensation
- 42kHz Ultrasonic sensor measures distance to objects
- Read from all sensor outputs: Analog Voltage, RS232 or TTL Serial, and Pulse Width
- Virtually no sensor dead zone, objects closer than 30 cm will typically range as 30 cm
- Maximum range of 5000 mm
- Tolerates outside noise sources
- Operates from 2.5V-5.5V
- Low 3.1mA average current requirement
- Operational Temperature from -0C to +65C
- Real-time automatic calibration (voltage, humidity, ambient noise)
- Firmware filtering for better noise tolerance and clutter rejection
- Widest beam of the HRLV-MaxSonar-EZ sensors

# MB1003

## HRLV-MaxSonar®-EZ0™ Beam Pattern

Sample results for measured beam pattern are shown on a 30-cm grid. The detection pattern is shown for dowels of varying diameters that are placed in front of the sensor.

**A** 6.1-mm (0.25-inch) diameter dowel

**B** 2.54-cm (1-inch) diameter dowel

**C** 8.89-cm (3.5-inch) diameter dowel

**D** 11-inch wide board moved left to right with the board parallel to the front sensor face.

This shows the sensor's range capability.

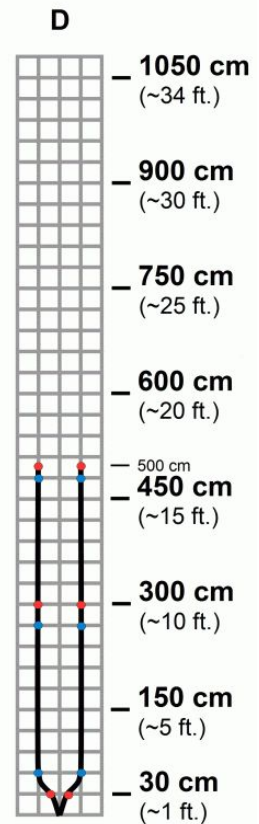
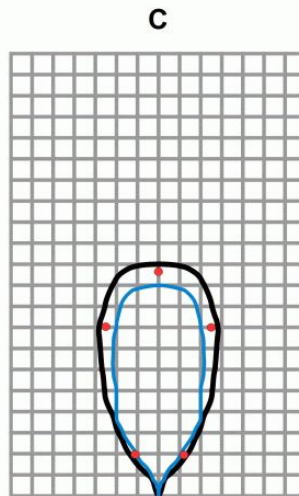
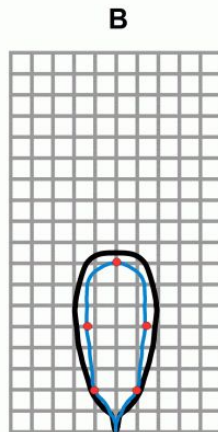
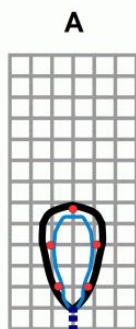
**Note:** For people detection the pattern typically falls between charts A and B.

■ ■ Partial Detection

— 5.0 V

● 3.3 V

— 2.7 V



**Beam Characteristics are Approximate**

Beam Patterns drawn to a 1:95 scale for easy comparison to our other products.

MaxBotix® Inc.

For more information or latest product datasheets visit: [www.maxbotix.com](http://www.maxbotix.com)

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