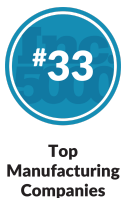


[Home](#)
[Sensor Selection Guide](#)
[Products / Buy Now](#)
[Documents & Downloads](#)
[Performance Data](#)
[Tutorials & Application Notes](#)
[Contact](#)
[News & Announcements](#)


MaxBotix Inc., Makes Inc. 5000 List For Second Time

Author: Kathy Kostal Date: 08-31-2016



Inc. Magazine Unveils 35th Annual List of America's Fastest Growing Private Companies—the Inc. 5000. MaxBotix Inc., Ranks No. 1752 on the 2016 Inc. 5000 with Three-Year Sales

Growth of 213%.
[Click here](#) for full article.

Raspberry Pi TTL Tutorial

Author: Cody Carlson Date: 08-02-2016



MaxSonar sensors offer a variety of outputs including TTL serial data. This tutorial guides you through the process of setting up your Raspberry Pi 3 with a MaxBotix sensor. [Click here](#) for full article.

Packaging Options for the MaxSonar Sensors

Author: Scott Wielenberg Date: 07-26-2016



MaxBotix offers an expanded range of packaging options for many of our sensors. Each option provides unique benefits to certain mounting integrations. This article provides a brief overview of each option. [Click here](#) for full article.

MaxSonar[®] Troubleshooting Guide

| Written By: Tom Bonar | Date Posted: 07-10-2012 | Updated: 10/23/2015



Troubleshooting the MaxSonar Sensor Family

Our sensors are improved to not allow unstable readings. Occasionally unstable range readings occur. Within this tutorial we will explain how to identify, troubleshoot, and eliminate the cause of unstable range readings. This will work for all sensor lines.

Start troubleshooting with a single sensor and this simple test. This test is designed to make sure the sensor is operating properly. First turn the sensor off and then place a piece of tape over the entire sensor face. Any tape will work for this part of troubleshooting. After you have placed a piece of tape over the sensor face, power up the sensor. With the sensor powered up, The outputs should report a consistent reading of the minimum or maximum reported distance.

Eliminating Electrical Noise

Unstable readings may indicate an electrical noise issue. If the sensor's reported range is stable jump to "[Eliminate Mechanical Noise](#)" and continue.

If the previous test continued to have unstable readings, there could be electrical noise. This section will typically eliminate any electrical noise that may be present. If you view Figure 1.1 through 1.3 you will see a power filter that helps eliminate electrical noise being introduced to your MaxSonar sensor.



Figure 1.1

[LV-MaxSonar-EZ Power Filter](#)



Figure 1.2

[XL-MaxSonar-EZ/AE Power Filter](#)



Figure 1.3

[XL-MaxSonar-WR/WRC Power Filter](#)

Eliminating Mechanical Noise

If eliminating electrical noise did not solve the unstable readings, you may have mechanical or acoustical noise that needs to be eliminated.

If the sensor is vibrating due to movement, try to use a foam or rubber mounting instead of a hard mounting.

If using a foam mounting doesn't solve the unstable range readings, look for other 35KHz-45KHz acoustical noises; some motors can cause both electrical and mechanical noise. The easiest way to know if there is 35KHz-45KHz acoustical noises is to isolate and remove the sensor from acoustical noise sources.

Getting Your Desired Output Working

For getting your desired output working, we suggest a hard flat target about 36 inches away that is not a carpeted floor. Please verify that you have done the steps that preceded this step.

If your TX output is not working, verify the equipment is set up to read the appropriate type of serial data: RS232 or TTL. The appropriate type will be noted in the datasheet. Also verify: a BAUD rate of 9600 (57600 for USB sensors), 8 bits, no parity, and one stop bit.

If your Analog Voltage data is unstable, you will have to filter the Analog Voltage output. We recommend using a Median Filter or a Mode Filter.

Optimizing Your Sensor for Your Application and Target.

If the target you're looking to detect is too small for the sensor you are currently using to detect you may want consider switching to a more sensitive sensor. An example of this is if you are using an LV-MaxSonar-EZ2, try using an LV-MaxSonar-EZ1. You may also want to consider using an XL-MaxSonar-EZ3

You will need to move the sensor until it is perpendicular to the target you are looking to detect if the target is flat and hard but off axis to the sensor. Because of the peculiar nature of ultrasonic waves, ultrasonic sensors

The MaxBotix RMA Process Guide

Author: Scott Wielenberg Date: 07-18-2016



When providing support, our technical support team may determine that further testing at our facility is the best way to help resolve the issue that you are facing. At this point, they will start the Return Merchandise Authorization (RMA) process. This article will explain what you can expect as your ultrasonic sensor travels through our RMA process.
[Click here](#) for full article.

Important Considerations for Using an Ultrasonic Sensor Inside of a Pipe

Author: Scott Wielenberg Date: 07-11-2016



Many customers have requested the option to mount an ultrasonic sensor in a pipe. During the testing and development cycle, we discovered a number of considerations and requirements that must be met for the application to be successful. When all of these are met, a user may be able to achieve the desired level of success for measuring the liquid level inside of a pipe.
[Click here](#) for full article.

Grand Opening of Facility Expansion

Author: Jenney Grover Date: 06-28-2016



On April 19th, we welcomed our supporters to join us for the Grand Opening of the Build Out. Bob and Nita Gross gave a tour of the build out and their vision for the space. We continue to be in awe of the support from our community, our employees, our distributors, and our customers. Thank you for the many years of support, and we look forward to serving you in the years to come.
[Click here](#) for full article.

News Archive

New Product Signup

Signup for notification of our exciting new products and periodic new letters. We are excited to provide the latest information from MaxBotix Inc.

Subscribe

require that a target be on axis.

If you have off axis targets that are getting ranged on all outputs, you may want to consider switching to a less sensitive sensor with a narrower beam pattern. An example of this is if you are using XL-MaxSonar-EZ3 you may consider switching to an XL-MaxSonar-EZ4 or LV-MaxSonar-EZ3.

If your target surface is soft, meaning it does not reflect a lot of acoustic sound back to the sensor you are using currently, consider using a more sensitive sensor.

If your intended target surface is uneven, you may need to use a more sensitive sensor. For example; the human body can reflect energy from many areas with clothing. This may cause apparent changes in measured distance.

Add Sensors if Needed

Please verify the steps above first before doing this step. If you are still not able to range to the intended target or targets, you may need to add more sensors to detect the target or targets you are looking to range to. If you choose to add more sensors we recommend using a [Chaining Method](#).

Products related to the Article Above

[LV-MaxSonar-EZ1](#)



[XL-MaxSonar-WRC](#)



[HRXL-MaxSonar-WR](#)



[Home](#) | [Distributors](#) | [FAQ](#) | [Downloads](#) | [Performance](#) | [Terms & Conditions](#) | [Privacy Policy](#) | [Site Map](#) | [Contact](#)

Copyright © 2016 MaxBotix Inc. All Rights Reserved. MaxBotix Inc. High Performance IP67 Ultrasonic Sensors

The names MaxBotix®, MaxSonar®, ProxSonar™, TrashSonar™, ParkSonar™, EZ0, EZ1, EZ2, EZ3, EZ4, AE0, AE1, AE2, AE3, AE4, WR, WR1, WRA, WRL, WRLA, WRM, and WRMA are trademarks of MaxBotix Inc.

Teflon® is a registered trademark of DuPont™

All other trademarks mentioned herein are the property of their respective companies.

website revision 4.17