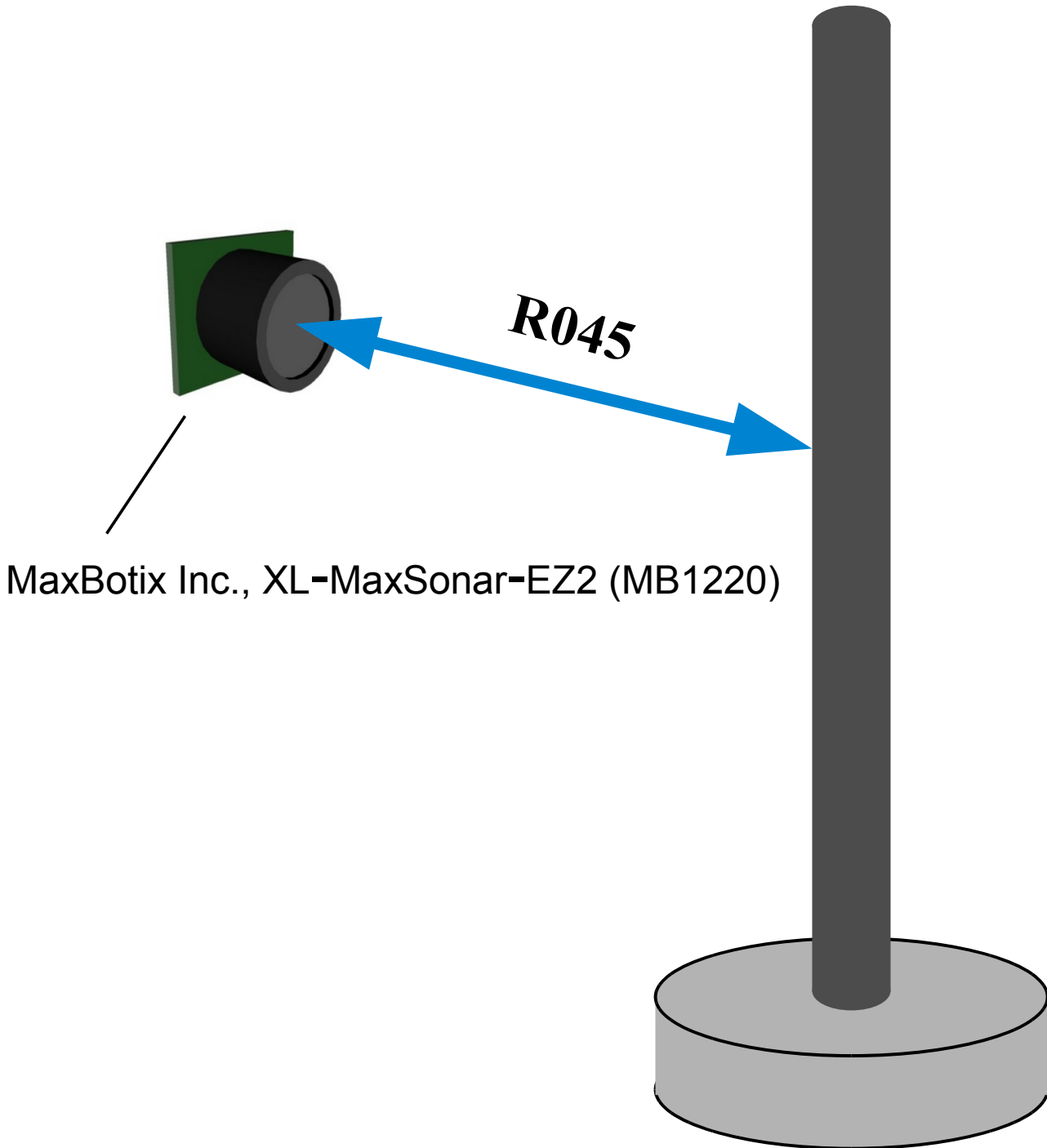
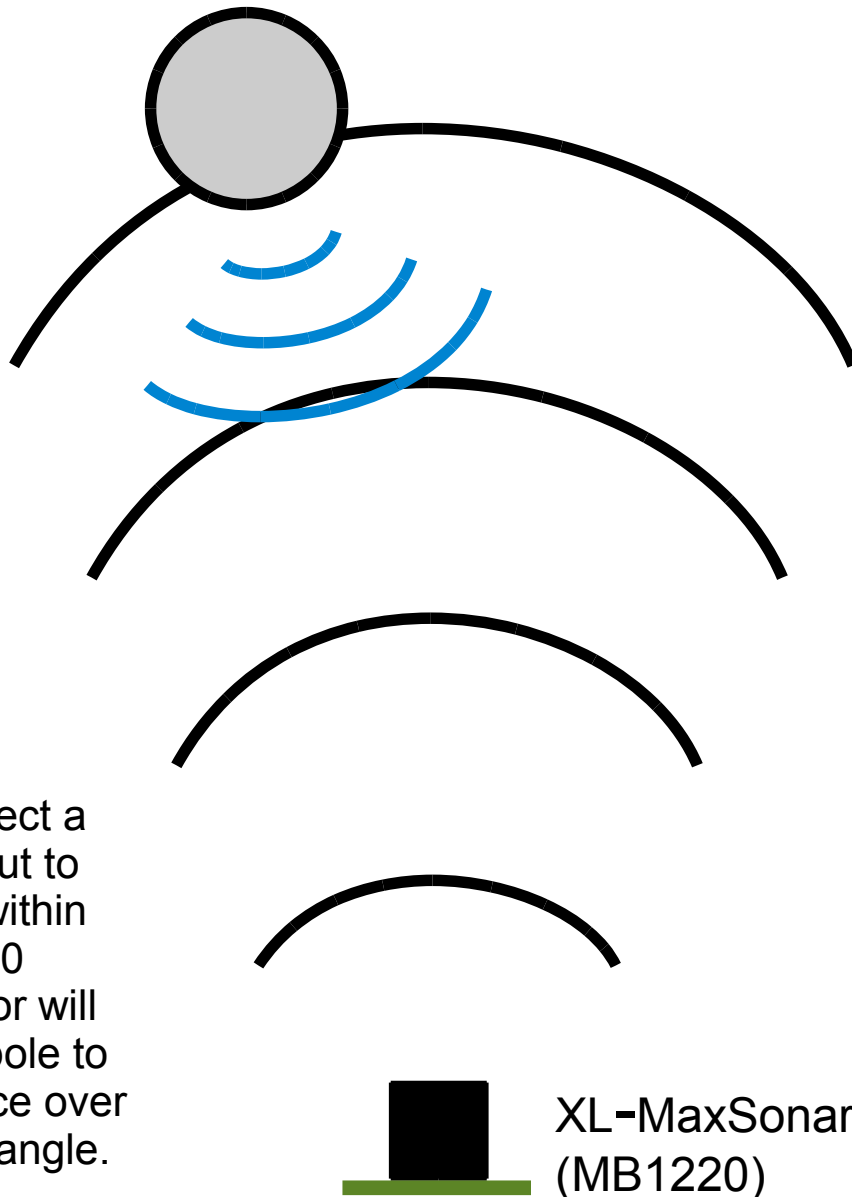


Using the MaxBotix Inc., XL-MaxSonar-EZ Ultrasonic Sensor to measure distance for minibot placement during the 2011 FIRST® Robotics Competition. The sensor can be used to assure the proper distance is maintained, until time to deploy the minibot .



MaxBotix Inc., XL-MaxSonar-EZ2 (MB1220)

The XL-MaxSonar-EZ sensors use ultrasonic sound to calculate the distance to objects 10 times every second. This easy to use sensors offer the perfect vision solution for finding the minibot post on the tower used for the end game in the 2011 FIRST® Robotics Competition. For this, and similar detection solutions MaxBotix Inc., recommends starting with the (MB1220) XL-MaxSonar-EZ2

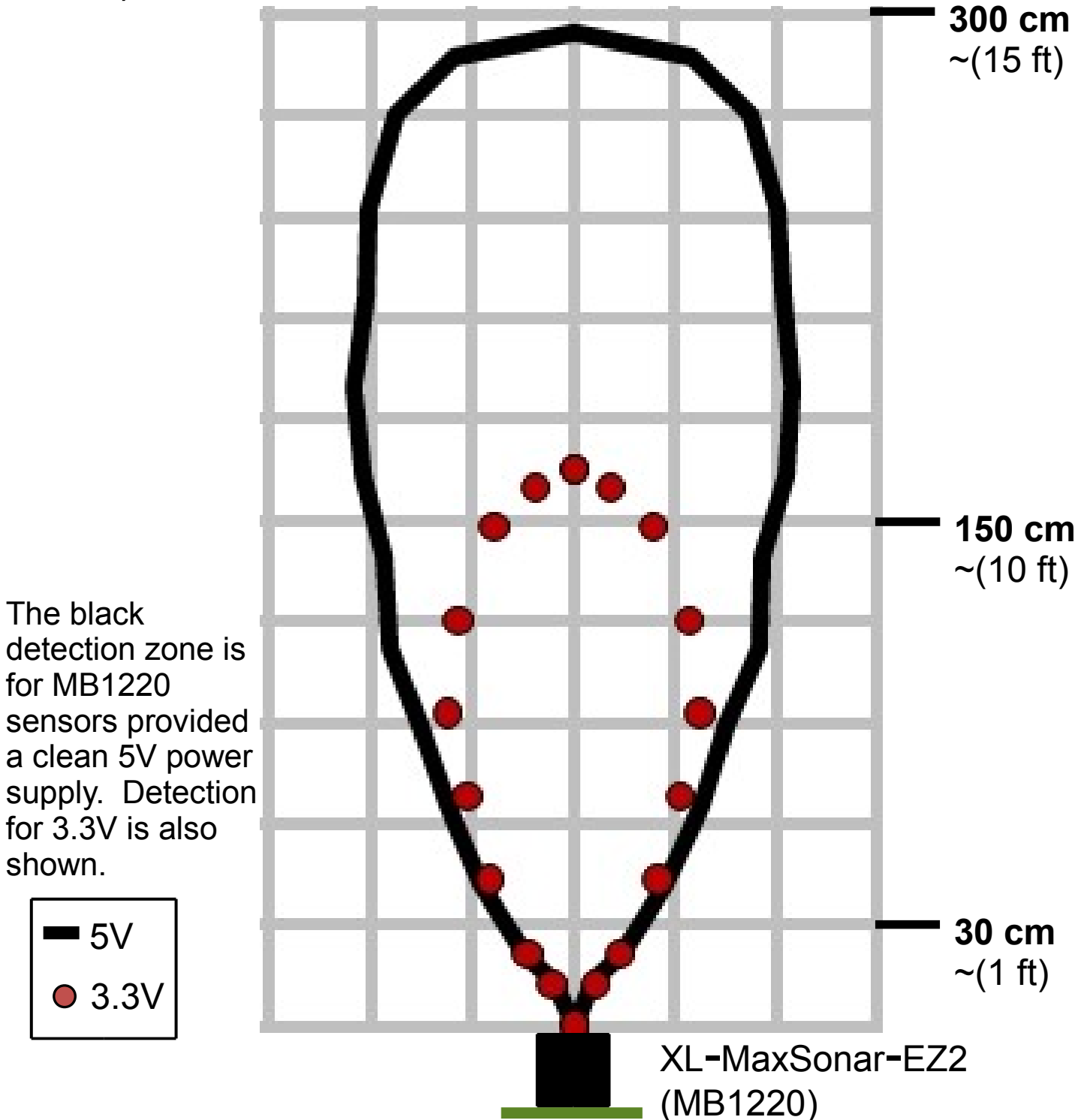


The MB1220 is calibrated to detect a 1.75" dia. pole out to 120 cm (~4 ft) within an angle of +/- 50 (deg) The sensor will also detect the pole to a greater distance over a smaller beam angle.

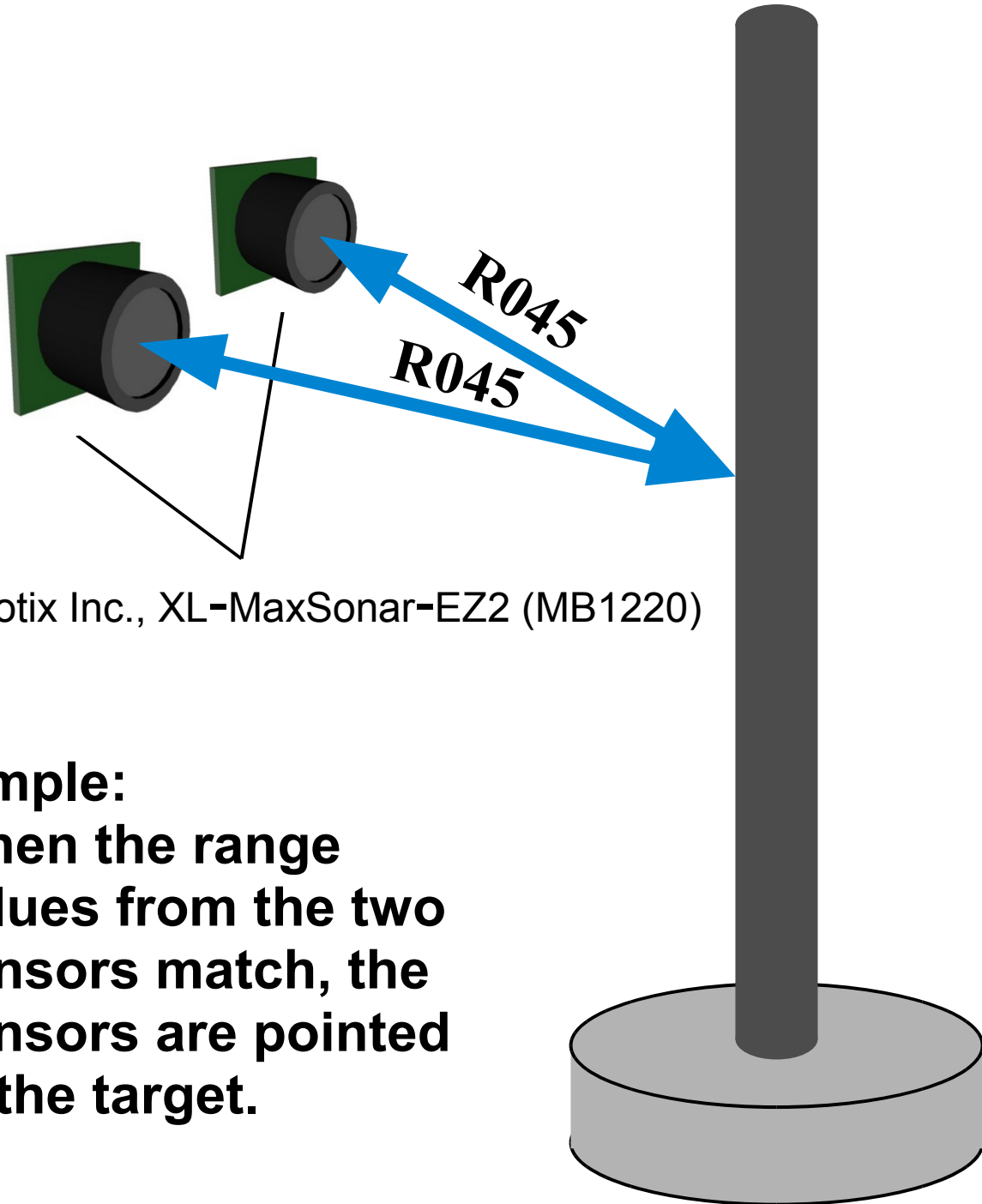
XL-MaxSonar-EZ2
(MB1220)

Direction and Distance to a Pole

The following diagram shows what distances an XL-MaxSonar-EZ2 will detect a 1" pole with 3.3V or 5V power. (A 1.75" pole will have a similar detection zone.)



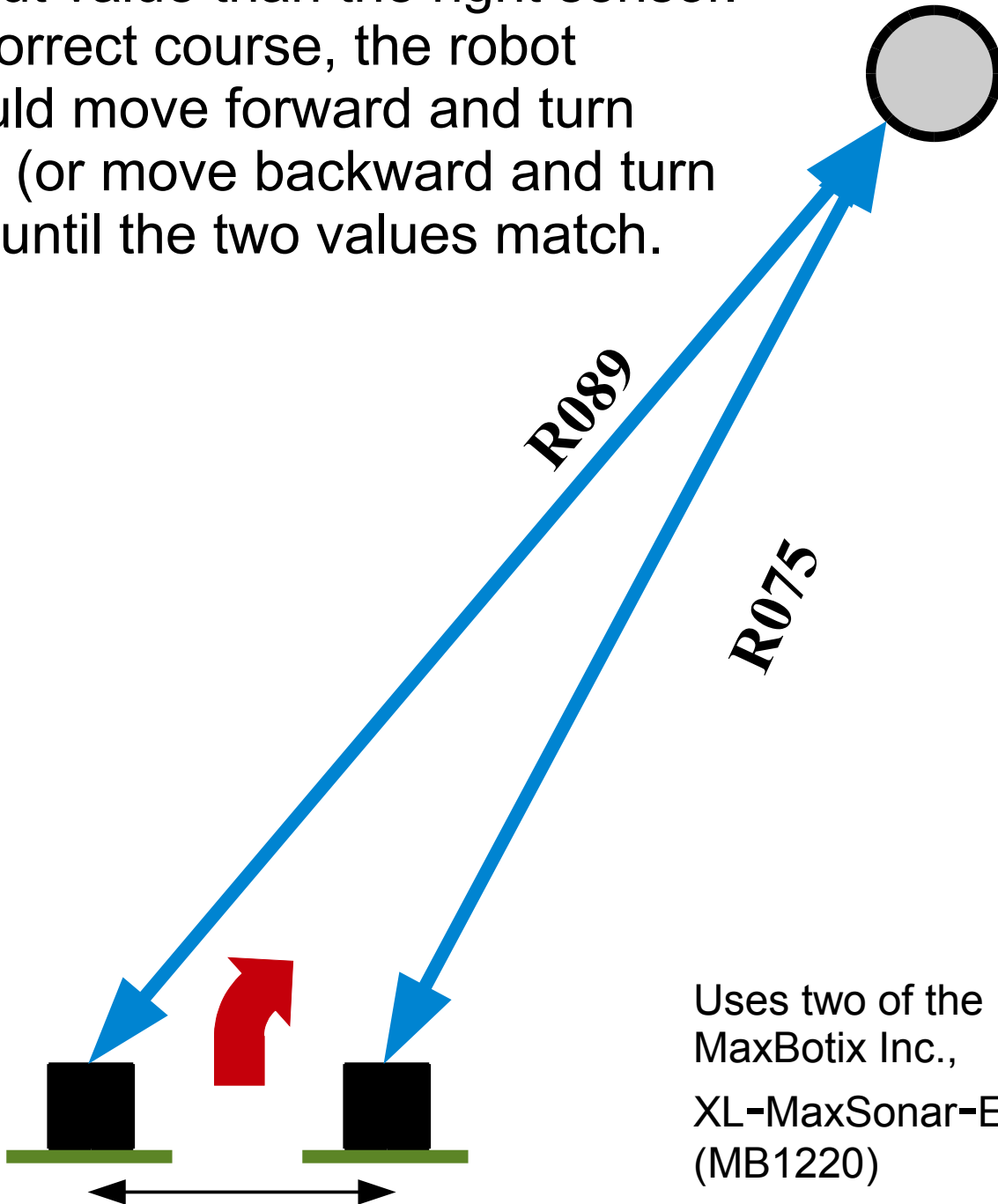
Using two of the MaxBotix Inc., XL-MaxSonar-EZ Ultrasonic Sensors to solve for distance, direction, and alignment.



MaxBotix Inc., XL-MaxSonar-EZ2 (MB1220)

Simple:
When the range values from the two sensors match, the sensors are pointed at the target.

Here the left sensor reads a high output value than the right sensor. To correct course, the robot should move forward and turn right (or move backward and turn left) until the two values match.



The distance the sensors are placed apart depends on your robot. Separation of the sensors will affect pole detection and alignment accuracy. When using more than one sensor, to prevent interference, use the RX pin and read the range on one sensor, then read the range on the next sensor. More to follow... Please Check back soon.

Direction and Distance to a Pole

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Questions or comments...
please email us at info@maxbotix.com

To place an order by phone, please call during our preferred business hours of 9:00am - 3:00pm CST, Monday through Thursday, 9:00am - 12:00pm Friday. Orders placed after 3:00pm Thursday typically ship the following Monday.

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