

Obstacle Detection: Sentry Challenge Phase 2

Obstacle Detection Challenge

Your company's prototype passed the first phase of testing! For the second phase, your robot must demonstrate the ability to detect and prevent collisions with people and objects along its route.

Rules and Procedure

- Build the board below, including the central building and surrounding fence.
 - You don't need a solid object for the building, just the cornerposts are sufficient.
 - The building should be rectangular in shape.
 - Posts are 1" diameter PVC tubing or cardboard paper towel tubes.
 - Obstacles can be anything you like, but must be detectable by the Ultrasonic Sensor.
- Your robot must complete two full laps around the building.
- Your robot must not come into contact with any of the posts marking the building or fence.
- Your robot must not come into contact with any of the obstacles!
 - Obstacles may be placed anywhere, at any time.
 - Your robot must wait for obstacles to be removed before continuing along its path.
- Complete two laps while encountering at least four obstacles to beat the challenge!
- HINT 1:** The rotation sensor "accumulates" rotations between loops and makes "until rotations" hard to use in this situation... the black lines may offer a useful alternative.
- HINT 2:** You don't need to detect obstacles while turning; the angle of the sensor isn't very good at it anyway.

