# Shotput

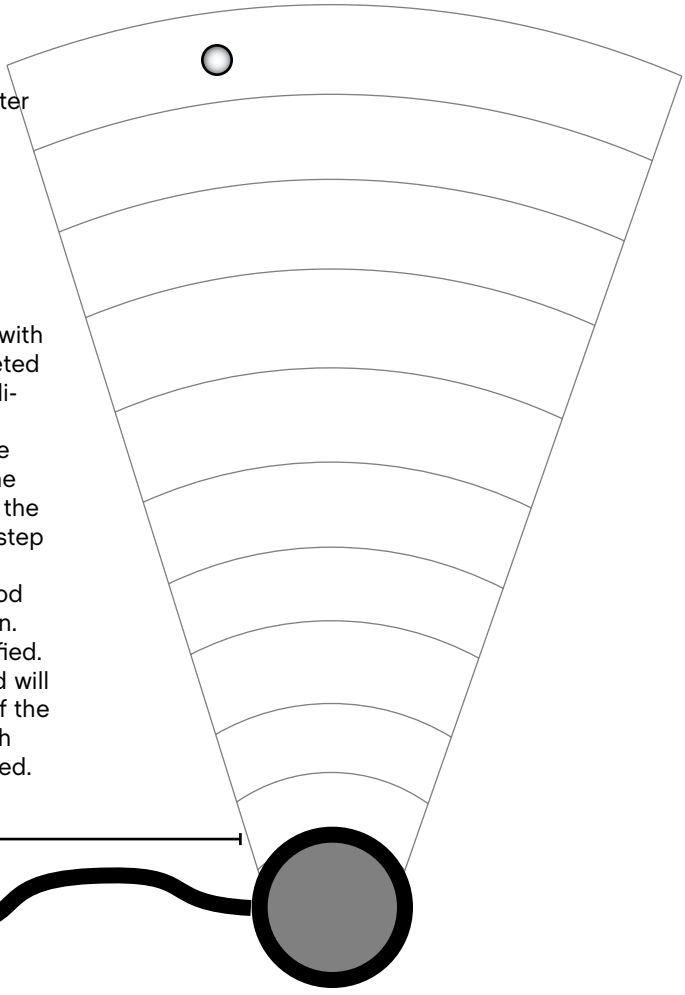
**Level:** Intermediate
**Number of robots:** 1 per participant
**Robot Dimensions:** A penalty will by applied if the Robot does not once fit in the 4 inch radius Starting Circle.
**Robot Control:** Autonomous
**Number of robots competing per round:** 1

**Playing field:** A four foot winding line of standard 3/4" black electrical tape with arbitrary curves ending in a 3 inch straight line. This straight line enters the Starting Circle, a 50% gray circle with a radius of 3 inches. 90° clockwise from the line will face a long alley (5'-7' long) along which the ball (a standard ping-pong ball coated in chalk) will be hurled.

## Summary:

The objective of this challenge is to launch a ping-pong ball as far as possible after navigating a series of prior steps. To receive full points, the robot must :

1. Successfully navigate winding track into the Starting Circle.
2. Fit within the Starting Circle
3. Turn 90 degrees
4. Launch a pingpong ball
5. Additional points are added to the contestant's score for each centimeter the ball travels before hitting the ground.




## Event Rules:

All robot contestants must :

1. Successfully navigate a 4 foot winding track into the Starting Circle.
2. Upon entering the circle, the robot should fit within the Starting Circle, with no appendages extending beyond its outer edge. If this step is not completed successfully, a penalty will be applied but the contestant will not be disqualified.
3. After a reasonable amount of time (at least 5 seconds) during which the judges will determine whether or not step 2 was successfully completed, the Robot may extend appendages beyond the edge of the Starting Circle, but the chassis must remain within the ring. If the wait is less than 5 seconds, the step 2 points are forfeited
4. Finally, the robot must turn toward the throwing area and, by any method possible, fling a preloaded ping-pong ball as far as possible in that direction.
5. If the robot fails to satisfactorily complete step 1 or 4, it will be disqualified. When the ball has come to a rest, the mark it left when it first hit the ground will be used to measure the thrown distance. Starting from the nearest edge of the Starting Circle and ending on the edge of the chalk mark nearest the launch site, the distance will be calculated in centimeters and points will be awarded.

## Scoring:

One point per centimeter hurled.

Five point penalty if the robot does not fit within the Starting Circle.

In the case of a tie, the robot to complete the challenge fastest will be named the winner (time will be calculated from the moment 'run' is pressed to the time the ball hits the ground.

* Developed by Austin McGee