

Wall Following Competition

(rule version 20180404)

Objective: The robot will travel around the walls of one side of the Can-Can Soccer arena without touching the walls or straying beyond 12 inches of the walls. The robot's path will include the interior and exterior side of the arena's walls. The course consists of 2 interior corners, 2 exterior corners, 1-180 degree turn, and 6 wall segments. The robot must start and return to a designated starting zone. Scoring is based on the robot's success in navigating the course.

Robot: Competing robots must run autonomously but are not required to be self-contained. Robot size is limited to 15x15 inches. Maximum robot weight is 10 pounds.

Self-Contained Definition: Self-contained means that all computing power used to run the robot is carried on the robot platform.

Run Definition: A run starts when the robot is placed in the starting area of the arena, given a signal from the judge, and moves. If the robot fails to move, the competitor can remove the robot and try again at the end of the round. If the robot doesn't move when given this 2nd chance, its run is forfeited. The run ends whenever the robot completes the objectives, or malfunctions after moving, or 3 minutes has elapsed. Each robot is allowed 1 run per contest round.

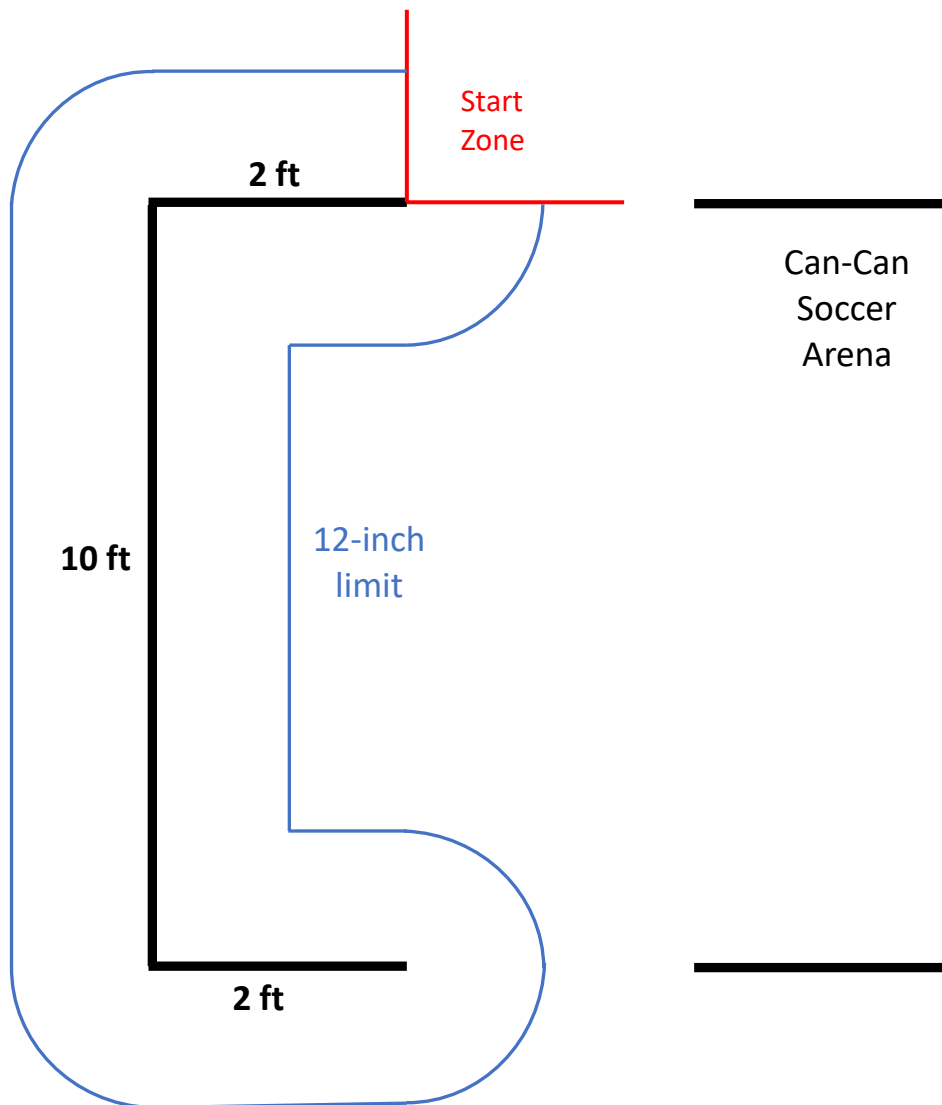
Round Definition: A round consists of a single run by each competing robot. The competition consists of 3 rounds.

Play: At the start of the competition, the robot may be placed anywhere in the start zone. The robot may be turned to any angle when initially placed.

The robot must travel from the starting zone following the walls of the arena and return to the starting zone. The robot is only required to pass the starting zone when completing the course. It is not required to stop. The robot may traverse the course either in a clock-wise or counter-clock-wise direction.

The robot must follow the walls without either touching the wall or having a distance from the wall of greater than 12 inches. The 12-inch limit is defined as the distance from the wall to the nearest part of the robot to the wall.

Beacons are not allowed.



Wall Following Course

Course: The course consists of the walls that make up one side of the Can-Can Soccer competition arena. The course has two 2-foot sections that are set apart by a 10-foot wall section. The 3 walls are connected at ~90 degrees.

A zone that is 12 inches from the wall segments will be marked by the judges with either chalk or $\frac{3}{4}$ " blue painter's tape. The start zone will be similarly marked.

Scoring: A robot's run score is the sum of the number of objectives scored. A point is scored for each objective completed. The top three scores will be awarded 1st, 2nd, and 3rd place in the

competition. Where scores are the same, the fastest run time will be used to determine the winner. The objectives are:

1. Follow a wall segment without touching the wall.
2. Follow a wall segment without straying further than 12 inches.

There are 6 wall segments. A perfect score is 12.

Judging: One or more judges will referee the contest. They will ensure the rules are followed and impose scoring penalties or remove a robot from competition if the robot is operating in an unsafe manner or not complying with the rules.

Safety: If the behavior of a robot is determined to be unsafe, the judge will withdraw the robot from the competition. The decisions of the judges are final.