



## Joystick Jamboree

Recreate the controls for the joystick on the One Stick Controller and drive the VEX AIM Coding Robot around an irregular race track!

### Step by Step

1. Set up the field as shown above.
  - Outline the race track on the field. The race track should be an irregular closed loop, including straight sections and turns.
  - Place the robot at the bottom-left corner of the race track, facing the top wall.
2. Use VEXcode AIM to code the robot to respond to joystick movements on the One Stick Controller.
  - Code the robot to drive at the same angle as the joystick is pushed.
3. Use the joystick on the One Stick Controller to drive the robot clockwise around the race track as quickly as possible.

### 'LEVEL UP'

- **Speed control** - Code the robot to use the joystick's position to determine its driving speed – push the joystick lightly to turn the robot slowly, and push harder to drive faster. Keep the rules the same. Drive the robot to complete the task as fast as possible. The fastest time wins!

### Pro Tips

- Use the **Controller axis position** command or block to get the position of the joystick along axis 1 or axis 2.
- Use the joystick positions with the **atan2** function to calculate the angle the joystick is pushed.

**Standard:** CSTA 1B-CS-02: Model how computer hardware and software work together as a system to accomplish tasks.

CSTA 2-AP-12: Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals.