Line Follower Rules

OVERVIEW

The goal of the competition is to build a robot capable of completing a line follower course as fast as possible.

A line follower classifies as a robot with sensors that allow it to follow a thin line without veering from the course, or using any additional means external to the robot to help it navigate the course. In order for a line follower to successfully complete the course, it must begin its travel at the start of the course, and successfully navigate along the line until reaching the end of the line. Up to one robot can be entered per participant.

CATEGORIES

The competition will have 3 categories:

1. Fastest **Non-LEGO** robot (*built from any components that are not LEGO, or LEGO compatible*)
2. Fastest **LEGO** robot (*built out of LEGO [or LEGO compatible], can have Non-LEGO electronics, but cannot have Non-LEGO structural pieces or gears*)
3. Fastest robot built by a participant under 12.

TECHNICAL SPECS

The robot must:

- Fit within 15x15cm (no height limit).
- Be capable of following the line by itself, without any remote communications.
- Have on-board power, with no external tethers or power sources.

RULES

- The robots must attempt to complete the track as fast as possible. Any run that takes longer than 5 minutes will be counted as DnF.
- Robots will be allowed multiple runs and the best time will be recorded.
- The robot cannot leave the track (the robot must stay on-top of the line, but it doesn't matter where the sensors are in regard to the line).
- Once a robot leaves the track, it will be the end of the run.
- If no robots make a complete run, the winner will be whoever made it furthest around the track before coming off the line.
- Robots must be battery-powered, and cannot have a tether or external cable connection.
- All robots must be autonomous, and cannot have any remote control. All processing must be done on the robot.
- All robots must drive around the track. Robots cannot fly over the track, even if they stay over the line.
    - Robots must have their weight fully supported by the track.
- No weapons/combustion devices on the robots (e.g. no jet engines or internal combustion engines)
- No bigger than 15x15cm
    - No height limit

EVENT

On the 22/2, you are invited to attend our first robotics challenge by ACRC. Visitors will be asked to make a donation to the club when they arrive. If you are entering a robot into the challenge, entry fees will be collected on entry (free for club members). We ask that you transport your vehicles delicately to the event, and you arrive a few minutes before the event starts.

Competitors should register their robots at the "registration desk", where the creators name, robots name will be collected for scoring. When it's your turn, you will be asked to set up your robot for line following. You will get a max of 3 minutes to turn on the robot and get it ready. The time will start once the robot leaves the starting zone.