

## LINE FOLLOWING BOT

### Bot Specifications:

1. Dimension 25cm x 25cm x 10cm and 1 kg limits for robots shall be strictly enforced.
2. Robots must have passed inspection prior to competing.
3. The bot cannot be constructed using readymade Lego kits or any readymade mechanism. But you can make use of readymade gear assemblies. Violating this clause will lead to the disqualification of the machine.
4. There can only be a single power source which should be included in the bot and should not exceed 12 volts at any time during competition

### Course Time:

1. Time is measured from the time robot crosses the starting line until the time it crosses the finish line.
2. A robot is deemed to have crossed the line when the forward most wheel, track, or leg of the robot contacts or crosses over the line.
3. A maximum of 5(\*) minutes is allowed for a robot to complete the course. A robot that cannot complete the course in the allotted time shall be disqualified.
4. Time shall be measured by an electronic gate system or by a judge with a stopwatch, based on the availability of equipment. In either case, the recorded time shall be final.

## Course Specifications:

The line following course shall traverse a white arena. The line shall be a black, X (\*) wide line traversing the arena from end to end. There shall be no crossovers (e.g. places where the line crosses itself). Switchbacks and hairpins are possible, but the adjacent sections of the line shall be no closer together than 15 cm when measured from the center of each line. The line course shall have 1 or more sharp right-angle, but no angle will be greater than 90 degrees.

## Autonomous Control:

Once a robot has crossed the starting line it must remain fully autonomous, or it will be disqualified.

## Arena Edges:

A robot that wanders off of the arena surface course must reacquire the line at the point where it was lost, or at any earlier (e.g. already traversed) point with +10 seconds penalty. A robot shall be deemed to have left the arena when any wheel, leg, or track has moved completely off the arena surface.

## Losing the Line:

1. Any robot that loses the line course must reacquire the line at the point where it was lost, or at any earlier (e.g. already traversed) point with +10 seconds penalty.
2. Any robot that loses the line course and fails to reacquire it will be allowed a single reattempt.
3. In case of reattempt, the robot must start the course again from the beginning and if it loses the line course on its second attempt it will be disqualified.