



# **«LINE FOLLOWER» GENERAL CONTEST RULES**

# Version 6.0 dated July 9, 2019

1. General Provisions	2
1.1. Task Description	2
1.2. Contest Categories	2
2. Requirements for the Robot	2
3. Specifications of the Field	3
4. Contest procedure	3
5. Disqualification	4
6. Scoring	4
7. Procedure for Determining the Winner	_

# **ROBOFINIST**

#### 1. General Provisions

The run is held by each team independently. One team plays one robot.

# 1.1. Task Description

The distance must be completed along the specified trajectory for a minimum amount of time.

## 1.2. Contest Categories

"Line follower" is held in the following categories:

- Wide Line Follower
- Narrow Line Follower
- Narrow Line Follower: Extreme
- Line Pro
- Legged Robots Marathon
- Segway Race

In addition, there may be a division into Educational, Age or Robot Design categories (see the General Competition Rules).

# 2. Requirements for the Robot

The robot must be absolutely autonomous; remote control in any form is prohibited. The program run by the robot must be written by the participant only.

The robot must be assembled from individual parts. Ready-made robots, including, but not limited to, Polulu 3pi, SumoBot by Parallax, Sumovor by Solarbotics, and / or having motion programs pre-installed by the manufacturer, are not allowed to participate in the competition.

The design of the robot must ensure the actuation of the "start-finish" system.

Tires and other components of the robot (while powered off) that come into contact with the field must not be able to lift and hold an A4 piece of paper (with an 80g/m2 density) for more than two seconds.

The height of the robot is unlimited.

The additional requirements for the robots are specified in each category.



# **ROBOFINIST**

The robot must not violate the established requirements after the start of the run, unless otherwise specified in the Contest Rules of the relevant category.

# 3. Specifications of the Field

The field is a flat rectangular white surface made of no particular material with a black line on it.

The relevant Contest Rules specify the geometric characteristics of the line for each category of the competitions.

The starting (finish) line is marked by a dash line perpendicular to the track line. It is two separate strips in the color of the track line, 10 mm wide, 50-75 mm long with a gap between them of half the maximum allowable width of the robot.

The relevant Contest Rules specify the size of the field for each category of the competitions.

# 4. Contest procedure

Before the run starts the robot is set at the starting area of the field so that none of its parts extend over the limits of such area.

Robot starts and finishes in the starting (finish) area.

The relevant Contest Rules specify the maximum allowable time of the run for each category of the competitions.

The run time is counted from the moment the robot crosses the starting line to the moment the robot crosses the finish line.

A robot is considered to have crossed the line when its projection crosses the line.

At the discretion of the Officials, time is fixed by the "start-finish" system or by the judge using a stopwatch. The fixed time is final and cannot be reviewed.

The attempt stops if the time allotted for the run is over.

Two robots are allowed to participate in one run at the same time. The opponent in the pair and the starting area for each robot are determined by the judge by random draw.

The composition of the pairs and the start area for each robot is determined by the judge by the draw method. Robots are installed at the starting lines in the same direction.



# **ROBOFINIST**

# 5. Disqualification

The attempt is disqualified if:

- the robot is not autonomous (the robot is under an external control);
- participant touched the robot or the field during the run;
- the robot left the field (any point of support of the robot touched the surface outside the field);
- the robot lost the line for more than 5 seconds;
- the robot did not complete the task in a specified time.
  The robot is considered to have left the line, when no part of it is above the line.

### 6. Scoring

N/A

### 7. Procedure for Determining the Winner

The winner will be the team whose robot has spent the minimum time for covering a distance or took first place in the tournament.

If two robots participates in the run, the winner will be the robot covered the distance faster than its opponent.

If one of the robots has lost the track or has obstructed the movement of the other robot, the last-mentioned is declared the winner.

The relevant Contest Rules may specify additional rules for determining the winner of a run for categories of the competitions.