



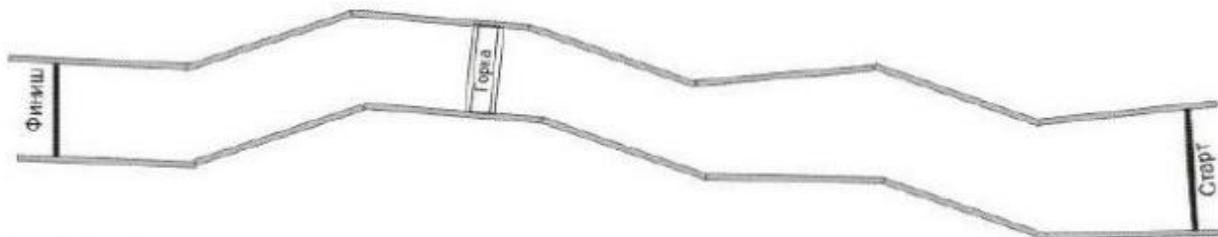
# ROBOFINIST

## Corridor rally

### 1. General

#### 1.1. Field

- 1.1.1. The field is a track enclosed with borders from both sides.
- 1.1.2. Track color – white.
- 1.1.3. Border color – white.
- 1.1.4. Track width – 2 m max.
- 1.1.5. Border height is 20 cm min.
- 1.1.6. It is allowed protrusions and openings with depth of 10 cm max.
- 1.1.7. It is allowed obstacles on the field with height of 5 cm max. and inclination of 35° max.
- 1.1.8. It is allowed gaps in the joints between borders with width of 7 cm max.



### 2. Robot requirements

#### 2.1. Basic specifications

- 2.1.1. In rally four-wheel cars take part with rear- or front-wheel drive and with steering front wheel. Steering wheels shall not be installed on the same axis.
- 2.1.2. When starting robot dimensions shall be 50 x 50 cm max.
- 2.1.3. Robot height shall be 50 cm max.
- 2.1.4. During movement robot's dimensions shall remain constant and shall not exceed 50 x 50 cm.
- 2.1.5. Robot weight shall be 10 kg max.
- 2.1.6. Robot shall be fully-autonomous.

### 3. Game

#### 3.1. Aim of the game

- 3.1.1. Robot shall reach finish zone for the least possible time.
- 3.1.2. The total task completion time must not exceed 2 minutes.

#### 3.2. Start

- 3.2.1. During the start, all parts of a robot must be located behind the start line.



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- 3.2.2. Robot shall be switched on or initialized manually at the competition start on referee command, after that it is not allowed to interfere its operation. It is prohibited the remote control or command issuing for robot.
- 3.2.3. During the competition, competitors are not allowed to touch the robot's body or the polygon.

### 3.3. Finish

- 3.3.1. The task is ended upon command of a referee after a robot crosses the finish line.
- 3.3.2. By the referee decision the try can be finished in advance.

### 3.4. Task execution stop

- 3.4.1. Task execution can be interrupted and the time can be stopped in the following situations:
  - If any of team member touches the robot body.
  - If penalty points number exceeds 2 (scoring rules see in Paragraph 4.2).<sup>1</sup>
  - If the finish conditions are fulfilled (see Paragraph 3.3)
  - If competition regulation is violated.
  - In case of elapse of time allotted for task execution.

## 4. Rules of winner definition

### 4.1. Competitions are conducted in two stages:

- The first stage – qualification;
- The second stage – paired heat.

### 4.2. The first stage:

- 4.2.1. At the first stage it is evaluated the robot capability to execute task. Robot shall ride past the track according to the Regulations.
- 4.2.2. For each wall touching it is added one one penalty point.
- 4.2.3. In case of wall touching penalty point is added per each 1 meter such a movement.
- 4.2.4. The robots fulfilled the finish terms (see Paragraph 3.3) are allowed to take part in the second stage.

### 4.3. The second stage:

- 4.3.1. At the second stage robots start in pairs.
- 4.3.2. Position<sup>2</sup> is pre-defined by drawing procedure.
- 4.3.3. Robot wins if it reaches the finish zone the first.
- 4.3.4. If no robot reaches the finish during the predefined time, the winner is the robot, that locates closer to the finish zone.

### 4.4. Depending on the total number of competitors the competitions are conducted according to the Olympic system or competitors compete with each other.

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<sup>1</sup> Related only to the first phase. See the detailed phase description in 4.1

<sup>2</sup> Meant from what side of the opponent's robot the competitor will start