

	<h1>FIRA RoboSot Race Competition</h1> <h2>Rules and Regulation for 2020</h2>
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2020.05.14

### Competition Rule

This is a small-sized soccer robot competition for wheeled platform. After the game starts, the robot must search for the color ball in the field and push the ball into the corresponding color area to get the score. The champion is who got the highest sum of the score.

For detailed regulations, please refer to the following rules.

1. Each team can use only one robot.
2. Teams participating in the competition must log in 3 hours before the competition and check the specifications of the robot through the referee. Those who do not meet the requirements must complete the modification 15 minutes before the start of the competition. If they cannot complete the modification, they will be deemed to have abstained.
3. Every team has 3 round to challenge, and it has 3 minutes per round.
4. Robot has to start from the start point. The start point is the middle point of the soccer field.
5. Referee will place twelve balls randomly in the field. There are three colors amount red, yellow and blue. Each color has four balls. As shown in the figure 1.
6. Referee will place sixth obstacles randomly in the field. The size of obstacles as shown in the figure 3.
7. Before the start of each round, the referee will draw out the specified color as the bonus. The specified color of each team in the round will be the same, and will not be redrawn until the next round.
8. Participants can get double score when their robot push the specified color ball into the corresponding area. Ex: Pushing the yellow ball into the yellow area.
9. After the game start, robot has to search the ball by themselves and push the ball into specified area automatically.
10. Each robot must be automatic in this competition. During the competition, human manipulation is not allowed, who violated the rule would be warned or deducted. If the situation is serious, the robot will lose their qualifications.
11. The competition begins when referee whistles. Do not active the robot until referee whistles. Violators will be warned and restart the competition. In severe cases,

eliminated.

12. Participants are not allowed to hinder the competition or postpone the contest, which violated the rule seriously would lose their qualifications.
13. The competition works are designed to meet the need of checkpoint. Therefore, the weight and the size can't affect or destroy the venue. If there are any influencers, they will be eliminated after verification.
14. Each team has to obey the judgment by the Conference Review.
15. The factors caused by venue that may disturb the competition must be solved by themselves.
16. The organizer preserves the right of interpretation for the competition's rule.
17. It has no limit of the robot to push the ball. Every team can design their robots by themselves.

## Playing Field & Size Restrictions

1. The playing field is the half of soccer field, and the size is 400 (L) x 300 (W) (cm). Otherwise, the goal is divided into 3 areas as shown in figure 1.
2. The size of robot is limited to 200 (L) x 220 (W) x 240 (H) (mm) in developed team. Moreover, it is allowed to add any mechanism, battery and sensor on the TB3 platform in application group, but the size of robot cannot exceed 180 (L) x 220 (W) x 240 (H) (mm).
3. The ball used in the competition is a plastic ball for children's ball pool. The diameter of the ball is about 68-70mm, as shown in the figure 2.
4. The obstacle is black, and the size as shown in figure 3.



Figure 1. Playing Field



Figure 2. Plastic ball for competition

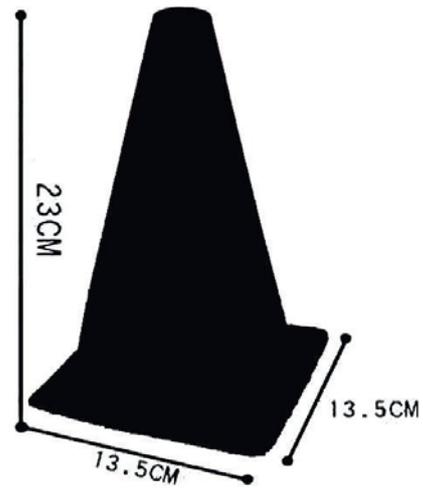


Figure 3. Obstacle for competition

## Score

1. Pushing or Kicking the ball into the correct area, designated ball can get 20 points, general ball only get 10 points.
2. Pushing the ball into the wrong area will deduct 5 point.
3. The robot will deduct 3 points when it hits obstacles.
4. The above conditions are judged by the referee.
5. Each round of scores will be calculated. The team which get highest sum of scores is the champion.
6. If two teams get the same score, the team that spends less time in three rounds wins.
7. The score of the champion must not be less than 0 points. If there are no top three teams in the first three rounds, two more rounds will be played on other days.