

SoccerBot Radio-controlled

Challenge Rules

1 Challenge Overview

Design, build, and program two radio-controlled robots with the objective of playing “SOCCER.”

2 Division & Age Requirements

Refer to the following table to decide which division / weight class you wish to compete in:

800 gr

ES

MS

These categories may be added at the discretion of the Event Directors.

Note: If fewer than 5 teams are registered in any division, the Event Director has the option to combine divisions.

Requirements

Two radio-controlled robots, any platform, with a cost of USD \$500 or less, and compliant with the following design restrictions, which will be verified during robot check-in:

- Maximum dimensions: 15 x 15 x 15 cm. No tolerance will be allowed.
- Size and mass restrictions are strictly enforced throughout the entire event to ensure fair competition for all participants.
- Parts of the robot that may come into contact with opposing robots must be strong enough not to break easily.

The use of shooting, grabbing, kicking, clamping mechanisms, sticky materials, solenoids, or any system that pushes or holds the ball is prohibited. The robot may deploy components once the match has started.

- Robots must be battery powered. External power via cables is not permitted.
- Each robot may enclose the ball by a maximum of 30% of the ball’s total volume, with the remaining 70% exposed outside the robot. ◦ (Ball diameter: 35.5 mm; approximate weight: 40 grams; 30% reference: 10.65 mm). ◦ To ensure fair play, exact measurements and weight checks will be performed. Any robot that does not meet the specifications will not be allowed to compete.
- It is strictly prohibited to glue, adhere, or use suction or adhesive mechanisms to keep the ball attached to the robot.
- Robots must be clearly marked with the team name and a number. Robots may not be shared between teams.

General Rules

The following actions are considered violations of fair play and will be sanctioned by the judges with a goal awarded to the opposing team:

- Taking more than 30 seconds to restart the match after a stoppage.
- Doing or saying anything that compromises the integrity of the competition or the organization. In this case, the offending team will be disqualified.
- Deliberately controlling the opposing team's robots. In this case, the offending team will be disqualified.
- Deliberate interference with robots by a team not currently competing or by a spectator. In this case, the team that benefits from the action will be disqualified.
- Use of flammable devices. In this case, the offending team will be disqualified.
- Deliberately causing damage to the field or the event setup. In this case, the offending team will be disqualified.
- Insulting the referee or members of the opposing team. In this case, the offending team will be disqualified.

Group Assignment

Groups will be determined by random draw or alphabetical order, depending on the number of participants.

- Each group will consist of four (4) teams.
- Each match will have a maximum duration of three (3) minutes.
- A round-robin format will be used within each group.
 - The top two teams from each group advance to the next round, followed by single elimination matches.
- Each match lasts a maximum of three (3) minutes, divided into two halves of one and a half minutes (90 seconds) each.
 - At the end of the first half, teams switch sides, with a maximum of 30 seconds to do so.
- There is no extra time, time-outs, or stoppage time.
- Game time stops when the ball leaves the field and restarts when the ball is back in play.
- Game Play Points Allocation
 - Three (3) points to the winning team for scoring more goals.
 - Three (3) points if the opposing team cannot continue competing due to damage or battery depletion, even if that team was leading.
 - Three (3) points if the opposing team does not appear in the play area (win by walkover), and three goals are awarded to the winner.
 - One (1) point for a scoreless draw or a draw with equal goals.
 - Zero (0) points if both teams are unable to continue competing (the match must have been in progress).
 - Zero (0) points for the losing team.
 - Zero (0) points if neither team appears for the match.

Note ▬

If there is a tie in the final standings during the group stage, the winner will be determined by the highest number of goals scored.

- If the tie persists, the winner will be decided by a coin toss
- If there is a tie during the single-elimination stage, play will resume and be decided by a golden goal

Field / Track:

The tracks are typically printed on durable paper, PVC vinyl backing, or 3 mm Trovicel (120 cm x 180 cm). Dimensions:

The SoccerBot (radio-controlled soccer) challenge field measures 1.20 m x 1.80 m, and the goals measure 0.50 m

