

# RoboSoccer

## Event Description

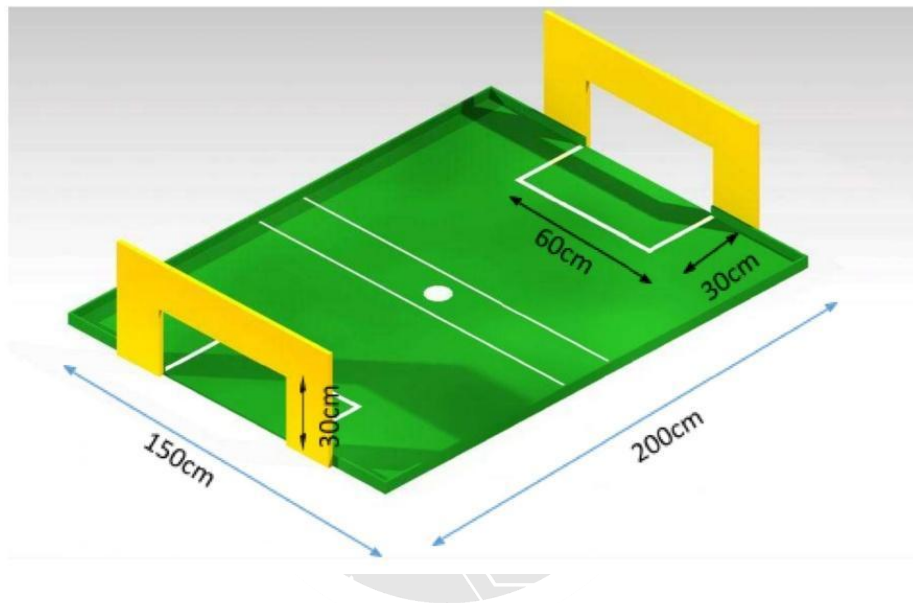
Make a wireless or wired manual robot which can compete in a one-on-one soccer match, hitting the ball to score goals and the same bot has to prevent the opponent from scoring.

## Gameplay

- The Bot has to score a goal and has to prevent the opponent team from scoring a goal. The team with the maximum number of goals wins.
- The match will consist of two halves of 3 minutes each.
- No damage to the arena is accepted.
- The robot cannot hold the ball for more than 2 seconds.
- Before the starting of the match and after a team scores a goal, the Bot will be placed behind the centre lines in their arena halves.
- To score a goal the Bot must kick or hit the ball from beyond the Goal Box.
- The Soccer Bot of both the teams are not allowed to enter the Goal Box of the opponent team.
- Giving penalties for any wrong action rests with the judge of the match.
- Only 50% of the size of the ball can enter inside the bot.
- The match referee's decision will be the final judgement.

## Arena

- The arena is based on the football field. It has two goal posts for the two teams. The dimension of the field is 200cm X 150 cm (l X b).
- The yellow line is the Goal Box. The dimension of the Goal Post is 60cm X 30 cm (l X b).
- The ball will be of the size of 70mm (Sponge ball) weighing less than 100g.



## Team Specifications

- Any student of different colleges can participate in Robo Soccer.
- A team must consist of a maximum of 4 participants. The participants of the team can be of the same or different institutions.
- The team must submit valid contact details like phone no, email ID at the time of participation.

## Robots' specification

### **Dimensions and Fabrications**

- The robots (Soccer Bot) should have maximum dimensions of 30cm X 30cm X 25cm (lxbxh). i.e., height should not exceed 25 cm. The dimensions are the same for both the robots and can be used according to the robot's requirements. The dimensions will be checked during the match. Deduction of 2 points will be made for a per cm increase in the dimensions. If the robot dimensions exceed 35cm the team will be disqualified.
- The external device used to control the robot-like wires, is not included in the size constraint.
- The robot should not exceed 5 kg of weight. All mechanisms and batteries are being considered. Weight of the remote controller is not included.
- The robot cannot be intentionally split into parts or detach from the robot at any point of the match.

### **General Construction**

- The robot considered may be wired and wireless.
- Any on-board equipment that could require attention between the match such as battery, controller, mechanism or any repair of the robot should be easily and quickly accessible i.e. the team can quickly repair their robot within two minutes.
- No modifications or adding of extra components are allowed between the matches. Such violation will lead to disqualification of the team.
- EMPs, signal jammers or wire cutting mechanisms, grippers or actuators are strictly not acceptable. Such a method will lead to disqualification of the teams.

### **Mobility**

- All robots must be easily visible and controlled in order to compete.
- Method of mobility must be rolling (wheels, tracks, omni-wheels or the Whole robot).
- Use of planetary gearbox motors is not allowed.
- Jumping, hopping or flying is not allowed.

## ***Power Supply***

- The machine can be powered electrically only. Use of an IC engine in any form is not allowed.
- On board batteries must be sealed, immobilized electrolyte types (such as gel cells, lithium, NiCad, NiMH, or dry cells).
- The electric voltage between 2 points anywhere in the machine should not be more than 15V DC at any point of time. For using transformers as source, they should be verified by the organizers and output cannot be greater than 15V. (A variance of 2V would be considered due to batteries not being exactly equal to said voltages).
- *The teams are requested to bring their own adapters.*
- All efforts must be made to protect battery terminals from a direct short and causing a battery fire, failure to do so will cause direct disqualification.
- Use of damaged, non-leak proof batteries may lead to disqualification.
- Special care should be taken to protect the on-board batteries. If judges found that the battery is not properly protected, then the team will be disqualified immediately.
- Change of battery will not be allowed during the match. It is suggested to have extra batteries ready and charged up during competition so that on advancing to the next level, you don't have to wait or suffer due to an uncharged battery. If teams don't show up on allotted slots, they will be disqualified.

## Registration

Register your team at [jecroboworld.in](http://jecroboworld.in) or on spot registration before the start of the event on 31<sup>st</sup> March 2023. Only the team leader should register for the team. Registration fee is Rs. 300/- per team.

## Certification policy

Top two teams will be given the certificate of excellence along with the prize money on-spot of the event. Rest of the teams will get an e-certificate of participation.

## Prizes

**1<sup>st</sup> prize:** Rs.4000/-

**2<sup>nd</sup> prize:** Rs.2000/-

And more exciting prizes await.

**Date: 31st March and 1st April, 2023; 11:00 am onwards**

**VENUE: Cycle stand,  
Jorhat Engineering College, Jorhat**

## Contacts

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