



# Robo Soccer



## INTRODUCTION

Long has the time gone when only humans used to play soccer. It's the era of technology where not humans but even robots will play soccer! **MNIT BLITZSCHLAG** presents the Idea of **PRIMITIVE ENGINEERING** where a bot engineered by you will play the primitive game of **SOCCER!!**

It is a Manual Robotics event in which participants are needed to build a manually controlled bot which is capable of playing **SOCCER** in a sense that it will guide or shoot a ball to perform a goal. There will be two teams playing against each other in a match. The team which shoots the max. no. of goals wins. "Champions are made of something deep down inside of them: a desire, a dream and a vision".

**It is an event full of fun, excitement and of course involves technology. It is open for all and it is a place where you can exhibit your real talent**

## PROBLEM STATEMENT

Create a manually operated wired or wireless robot that can move and hit (push) and compete against others in 1-1 matches.

## SYNOPSIS OF THE GAME

- The robot has to play the basic game of **SOCCER**.
- The game will last for 5min.
- In case of jam up of robots for than 30 sec., the robots will have to kick- off again at the order of the referee.
- Each team will have to defend the goal on its side as well as score the goal on the opposite side.
- Each goal scored by a team by rolling the ball on the ground will fetch the team by 1 point. (\*or, Point description will be disclosed on the spot before commencement of the event.)

## RULES & REGULATIONS

- Only one of the team members will be as marshal in the arena except the controller
- Bot must not cause any damage to the arena by any means
- Team members are not permitted to touch either their machines or those of their opponents once the game begins (unless there is need to lift the machine. The penalty for doing so is disqualification.
- The participants should not use the wire to pull the robot.
- The robot must not detach itself during any part of the game.
- **Maximum 3 robot can play from one side/team.**
- Use of readymade kits or LEGO-KITS is strictly prohibited, exception being gear mechanisms and geared motors and commercial wireless modules available in markets.
- In case of entanglement of wires, the match will be paused by the referee and the match will continue from the previous position.
- For any other violation during the course of the match, the final decision rests with the referee.
- Damage to the arena will lead to direct disqualification.
- Any violation of the above rules shall lead to direct disqualification.
- The organizers' decision is final and binding.
- The game will start at the count of 3 given by referee followed by whistle. In case a team starts its robot before the whistle, the game will be restarted and a team making this mistake for more than 3 times will be disqualified.

## BOT SPECIFICATIONS

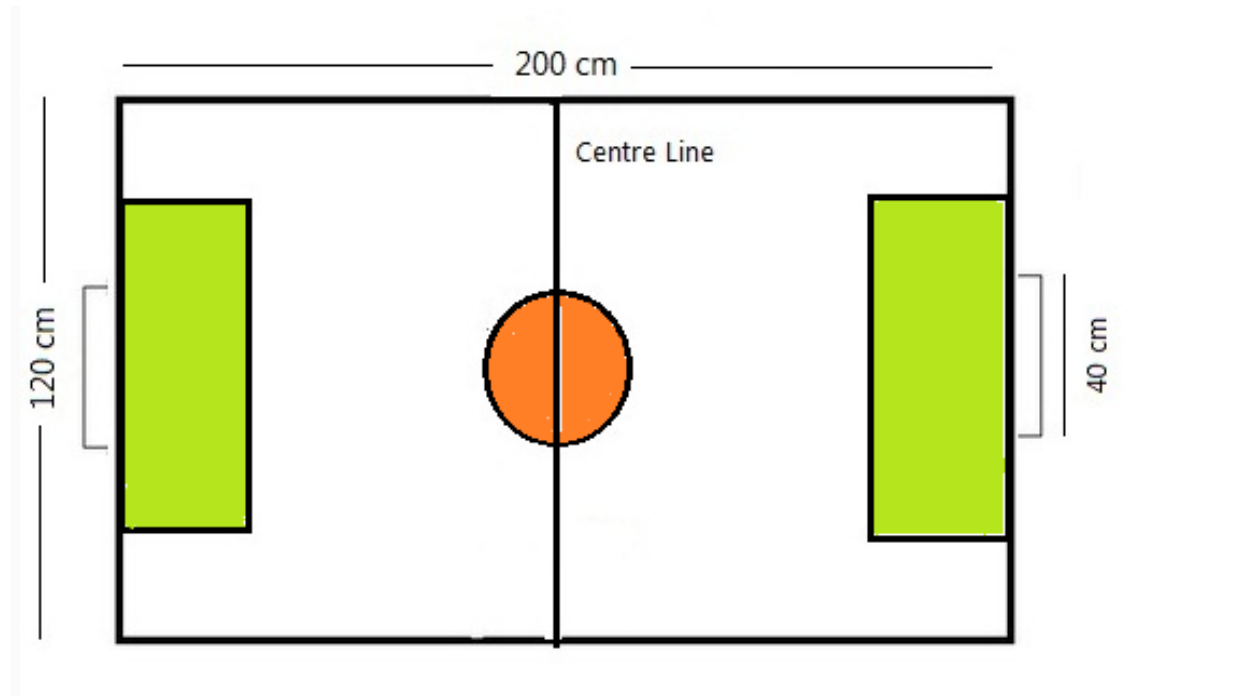
### Dimensions and Weights

1. The weight limit of the robot for this competition is 5 kg.
2. Each robot should not exceed by max 30cm.
3. The start zone for the single robot is 500mm x 500mm.
4. The robot can extended to a dimension of 500mm x 500mm x 500mm max (independently) once it crosses the start zone.
5. The robots are not allowed to use grippers or actuators which are intended to harm the opponent's robot.
6. Robot must not:
  - Emit smoke or fire.
  - Leak, stain or soil.
  - Spray, throw or use projectiles.
  - Jam, shock or electronically interface.

### Batteries and Power:

1. Each team must have their own batteries to power their bots.
2. Maximum battery voltage is 12V.

## Arena



1. The soccer field will be 200cm long and 120cm wide.
2. Plastic ball will be used.
3. Goal posts will be 40cm wide.
4. A semicircle will be drawn with radius 15cm, with centre of the semicircle at the centre of the goal. This semicircle will be for penalty shots.
5. The height of the wall is 12cm.

NOTE: The arena shown in the figure is only a sample version. Actual arena may differ slightly in dimensions from the one shown in figure.

## Team Specifications

1. A team may consist a minimum of 3 and a maximum of 4 participants. Register your team at [www.blitzschlag.org](http://www.blitzschlag.org)
2. Students from different educational institutes can form a team.
3. All students with a valid identity card of their respective educational institutes are eligible to participate in the event.
4. No person shall be a member of two teams.

## Prizes

Prizes worth **12000** INR

## Coordinators

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## Schedule

Will be updated on website : [www.blitzschlag.org](http://www.blitzschlag.org)