



Mech Tech Meet

Season-8

March 3rd-4th, 2017



ROBO SOCCER

(MY GOAL IS TO STOP YOURS)

INTRODUCTION

Here comes an event to show your passion of soccer in a technical way. Attend this season of MTM and feel the football fever. Participants are required to build one manually controlled bot capable of playing soccer on arena specially designed for robotic soccer match.

PROBLEM STATEMENT

Goal is to design such a robot which is capable to direct the ball in the goalpost.

RULES

Bot specifications

1. Each team is allowed to have only one bot.
2. Table tennis ball will be provided for the game play.
3. The bot must fit into a cube of (30*30*30) cm all the time. It may not expand at any time during the match beyond this size even for hitting the ball. Violating this will lead to immediate disqualification.
4. The bot should be controlled manually using wired or wireless remote control.
5. The bots can have on board as well as off board battery or AC adaptor.
6. The maximum potential difference b/w any two points on the bot should not exceed 24 volts.
7. Flippers or dozers can be used in bots with suitable mechanism so that not to damage the arena.
8. Maximum weight of the bot is 5Kg (including battery or adaptor, if on-board)
9. 5% tolerance allowed in any one dimension otherwise a penalty will be awarded to the opponent.



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10. Grabbing the ball is not allowed. So bots should not have any kind of grabbing mechanism.

11. All the students with a valid identification card of their respective educational institute are eligible to participate. A team should consist of 2 or 3 members. Students from different educational institute can form a team.

General rules

1. Teams will have to report 15 minutes before the beginning of the event, failing to do so will result in disqualification.
2. Ready-made kits are not allowed.
3. Each team can take 1 TIMEOUT of 2 minutes during the match.
4. In case of any discrepancy, **referee's** decision will be final.

Disqualification

1. If a team violates the bot's size specifications.
2. If a team damages the arena in any way.
3. If a team commits the repeated foul.
4. If a team's bot becomes inactive during the match and their time out is already used.
5. If a team fails to report on time.
6. If a team tries to intervene the game play without permission of the referee.
7. Arguing with the organizer will lead to immediate disqualification.

GAME PLAY

1. 1.5 minute (90 seconds) of setup time will be provided to each team for pre-game setup and testing.
2. Fixtures will be designed by match referees.
3. First round will be **QUALIFYING ROUND**. Each match of qualifying round will consist of 2 halves of 2.5 minutes (150 seconds).
4. Each match will be a **KNOCKOUT** match. Winning team will qualify for the next round.



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5. Further rounds will consist of knockout matches having 2 halves of 3 minutes (180 seconds).
6. Total number of rounds will depend upon total number of participating teams.
7. Game will start by placing the ball at the centre and bots out of the centre circle in their respective halves.
8. If there is entanglement between the wires of the bots then match will be restored from the centre without stopping the time.
9. After the first half goals will be swapped.
10. In case of a tie, 1.5 minutes (90 seconds) extra time will be given.
11. If there is a tie even after extra time, the winner will be decided by the penalty shoot-out each team will be given 3 penalty strokes and the best will be counted.
12. If the ball completely crosses the line then only the goal will be considered.
13. Team who scores the maximum goals would be the winner of the match.

Fouls

1. Intentionally damaging the opponent's bot will be counted as foul and free kick will be awarded.
2. Intentionally grabbing the ball will be considered as foul, free kick will be awarded to the opponent.
3. Any foul inside D area, penalty will be awarded to the opponent.

Free kicks and penalties

1. In free-kick, the bot of the foul committing team would freeze for 5 seconds and placed at centre. The ball will be placed at the foul position and given to opponent.
2. In penalty, the bot of the foul committing team will be placed out of the arena. The ball will be placed in between centre line and goal post i.e., 75 cm from goal post. The opponent's have to push (throw) the ball. Any type of dragging is not allowed, only pushing is allowed otherwise penalty will be cancelled.

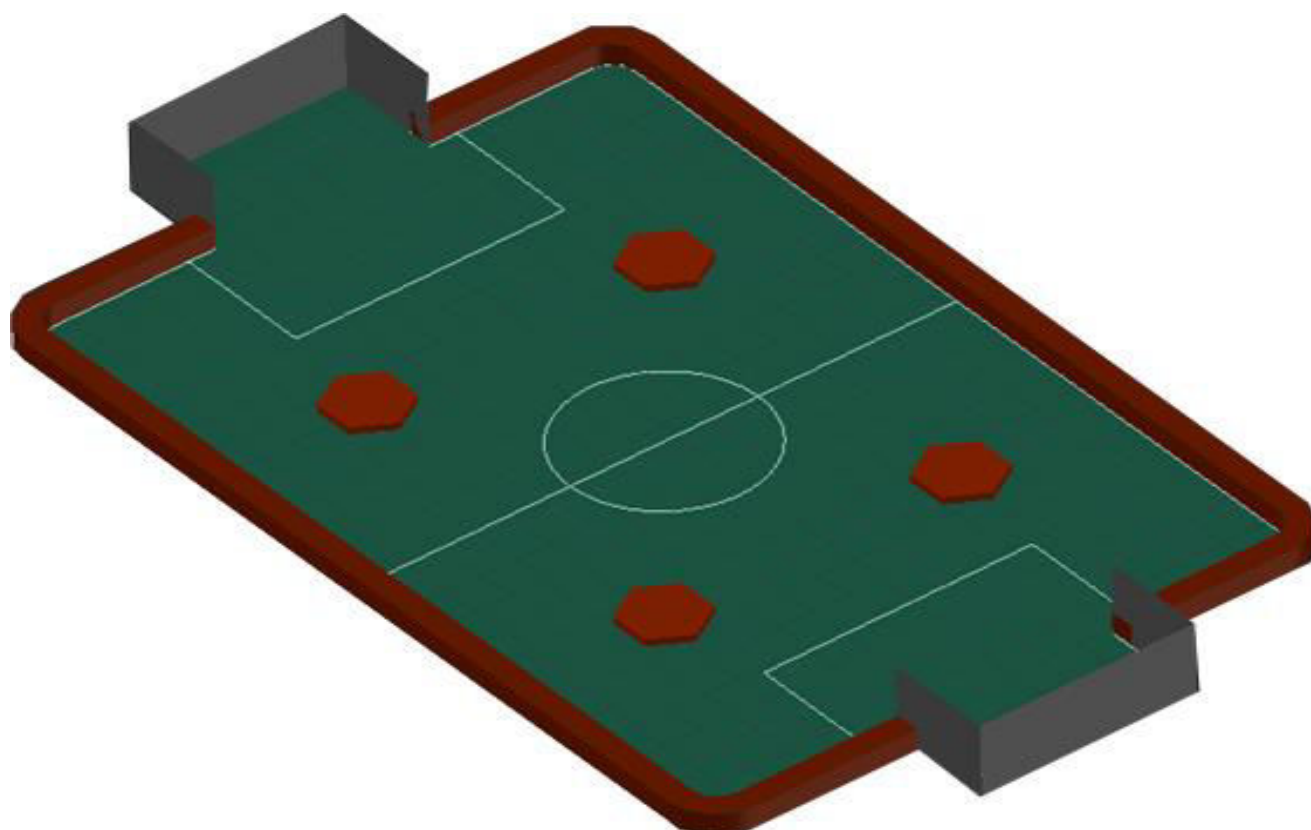


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ARENA SPECIFICATIONS





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(All dimensions are in cm)

★ **Playing area dimensions:-**

Length of arena = 300 cm

Breadth of arena = 200 cm

★ **Goal post dimensions:-**

Length of goal post = 40 cm

Breadth of goal post = 30 cm

★ **D dimensions:-**

Length of D = 90 cm

Breadth of D = 50 cm

➤ Hexagonal obstacle = 15 cm * 6 sides