



JUNIOR ROBOCON 2019

Regular Category

Category B

Game play, Rules and Scoring

ROBO-SPORTS

HOCKEY



MIT

Academy of
Engineering

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1. INTRODUCTION

The growing popularity of computer, video games and television make the children very inactive in their lifestyles. The time spent in these things may be spent in some physical activities. Participation in sports and other physical activities can have many benefits for children. Participation in organised sports offers the chance for youth to enhance their physical and social skills. A balance should be maintained that matches the child's maturity, skills, and their interests with their sports participation. Sports offer children a change from the monotony of their daily life. It is also a useful means of entertainment and physical activity for them.

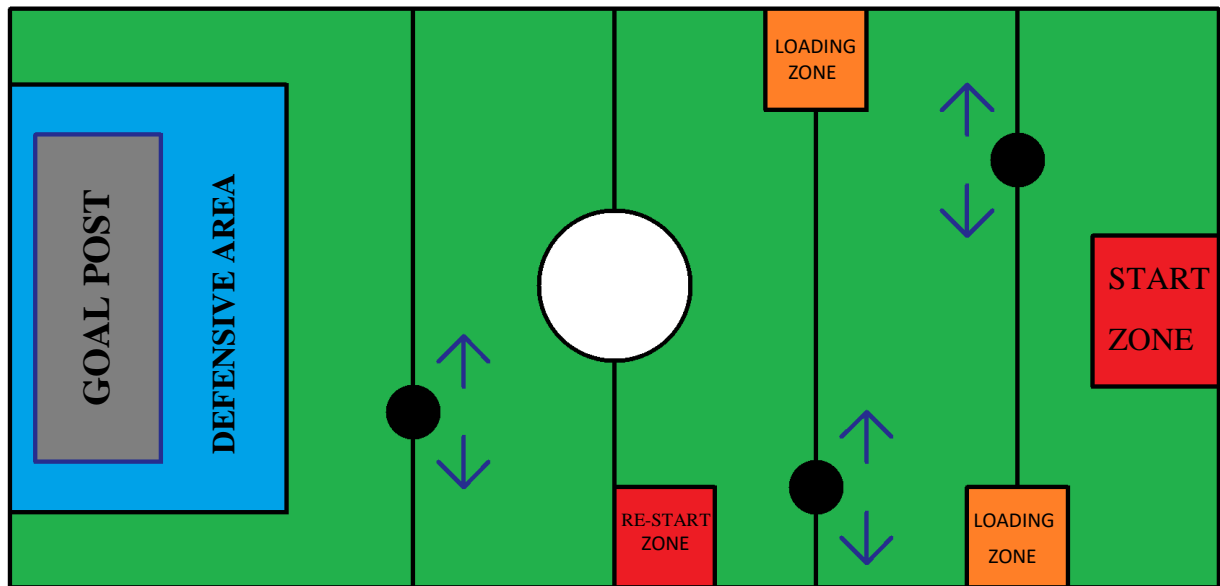
Hockey is considered as the National Sport of India. Nowadays people in India are not aware or not even bother about this sport. Since 1923 to 1952, India have won 8 Gold Medals.

This game of category B, based on the game of hockey is a small initiative of junior robocon team, to make the kids aware of about this game and build up interest in hockey, make them engage themselves in sports rather than videogames.

2. GAMEPLAY & ARENA

Hitting: Robot should start from the Red zone and load the ball from orange zone(Load Zone). Robot can hit from green zone for a successful goal.

Defending: Defending should be completely automatic. The robot can move in any direction inside the blue zone and defend the hitting robot from doing successful goal.



2D-VIEW

3. GAME RULES & SCORING

- The game duration will be 4 minutes.
- 2 minutes will be given for defending and another 2 minutes for hitting the goal.
- There will be 5 balls in each game.
- Defending is completely automatic. It can be in any path Ex. zigzag, infinity, straight etc. Robot is not allowed to exceed defensive area of their particular goalpost while defending.
- Hitting bot cannot enter the defensive area while hitting.
- Total points: 200 points.

- SCORING:

HITTING -

1. If hitting robot successfully makes a goal, +20 points each ball will be given.
2. If hitting robot successfully makes a goal from white zone, +30 points each ball will be given.
3. If ball gets in to blue zone after hitting +10 points will be given.
4. Hitting robot gets into the blue zone 5 points will be deducted.

DEFENDING –

1. If defending robot stops the goal + 20 points each will be given.
2. If defending robot gets out of blue zone 5 points will be deducted.

4. ROBOT DESIGN

- The robot assembled during the boot camp must be used during the competition.
- Modification in the mechanical structure is allowed to be done by the participants.
- Following parts should not be replaced/removed irrespective of anything:
 1. All four Motors.
 2. Rechargeable battery given in the kit.
 3. Arduino Controller board.
 4. Encoder sensors attached on two motors.
 5. Bluetooth module
- No electronic part must be added to the robot unless it is meant for decorative purpose only (eg. blinking LEDs).

5.DISQUALIFICATION

A participant would be disqualified in the following conditions:

- If a parent/coach/teacher guides/signals the participant during the gameplay warning shall be given.
- The participant is bound to get disqualified if the instructions given by the referees are not followed.
- Any other electronics part other than the parts given in the kit are used. Electronic parts include Nano Controller board, motors, encoder sensors, battery, Bluetooth module etc.

6.ARENA SPECIFICATIONS

