

Robo Hockey

Task:

1. Team should build a manually controlled bot that can hit the ball to score a goal and can defend from opponent's bot to score a goal.
2. The bot can be wired or wireless. In case the participants use wireless controls, then any interference in signals will lead to disqualification of the teams.
3. To avoid interference, participants can use dual frequency remote or some mechanism to avoid interference.

Arena:

- 1) Arena dimension : 100cm x 150cm (breadth x length)
- 2) The boundary of the arena will be made of bricks plastered with POP
- 3) The ground will be green coloured.
- 4) There will be 2 goal posts placed symmetrically at centre on boundaries.
- 5) The dimensions of the goal posts will be 50cm x 10cm (width x height).
- 6) The arena will be divided into two equal halves.
- 7) Each half will have marking to represent the initial positions of the bots.
- 8) An image of arena is at end of the file.

NOTE: The dimensions of arena will be accurate to within 5%.

Bot Specifications:

1. The dimension of bot should not exceed 40cm x 20cm x 20 cm (L x B x H). Non adherence to the dimensions will lead to outright ousting from the event with no exceptions.
2. The minimum width of the bot should be 15 cm.
3. The dimensions of remote are not included in the size constraints of the bot.
4. The weight of the robot should not exceed 2 Kg's.
5. There is no constraint to number of motors used in the bot.
6. If the machine is wired then the wire should remain slack under all circumstances during the competition. All the wires coming out of machine should be stacked as single unit. The wires must be properly insulated.
7. In case of wireless control, participants should have some mechanism to avoid interference. If the signals interfere between the match the team will lead to disqualification of the teams
8. Use of LEGO kits is strictly prohibited and using any such kit will lead to disqualification of the team. However participants are allowed to use readymade gear assemblies.
9. The upper limit for motor capacity is 500 RPM.

Power Supply:

1. Participants can use either external power supply or an on-board power supply.
2. In case of external power supply the wire should remain slack under all circumstances.
3. The potential difference between any two points in the circuit should not exceed 18 Volts.

Game Play:

1. The competition will be tournament based i.e. two teams will be playing at a time and the winner will proceed to next round.
2. The ball will be placed at the centre of the arena.
3. As soon as the timer starts the bot should score a goal by hitting the ball into the opponent's goal post.
4. After a goal the ball will be placed in the middle of other half of the team that scored the goal.
5. The team should be able score as many points as possible in given amount of time(5 min but may change according to participation)
6. The team with max number of points will be the winner and will proceed to next round.

Game Rules:

1. The competition will tournament based i.e. two teams will playing at a time and the winner will proceed to next round.
2. Irrespective of mechanism used only one person will be allowed to control the bot during the game. However others can guide him/her from distance.
3. A goal adds 3 points to the respective team.
4. The bot should not go the opponents half. If it passes the line '1' point will be deducted as penalty from their total.
5. If the ball stays on one side of the arena for more than 10-sec '1' point will be deducted for each '3' sec count after that from the team corresponding to that side and any goal was scored at the same hit will not be considered.
6. If the bot stops working in the middle of game due to any reason (other than external power supply) the team will be disqualified in any round and the opponent will be declared winner.
7. The players will be able to touch the bot if the ball get stuck in the bot due the design, but '1' point will be deducted as penalty from the teams score.
8. Each team should have its own programmers and components, no programmers or components will be made available by the coordinator during the event.
9. The final match will be the best of three. (only the final match)

General Rules:

1. The teams must adhere to the spirit of healthy competition.

2. Each team can have maximum 5 members.
3. Any team that is not ready at the specified time will be scratched from the competition automatically.
4. The score calculated by any contestant by any means will not be accepted.
5. Judges' and coordinators' decision shall be treated as final and binding on all.

Scoring:

1. 3 points will be awarded for a goal.
2. 1 point will be deducted for entering into opponent's side.
3. 1 point will be deducted if the ball stays in a side for more than '10' sec and 1 point for every 3 sec count after that.
4. Total score will be counted at the end of the game and the winner will be decided by score.
5. In case of tie, the winner will be decided according to the design of the bot.
6. Judges' and coordinators' decision shall be treated as final and binding on all.

The co-ordinators reserve the right to change any or all of the above mentioned rules as they deemed fit. Change in rules, if any, will be highlighted on the website and notified to the registered participants.

Co-ordinators-

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