



FOR
ROBOVANZA 7.0

LINE FOLLOWER

THE MANUAL TO MASTER YOUR METAL



ROBOTICS_CBIT

1.GAME:

- The goal of the competition is to use an autonomous bot to finish the path by following a black line on a white background, staying on the line, and navigating multiple turns in the quickest amount of time.

2.TEAM INSTRUCTIONS:

- A team consists of a maximum of 4 members from any institution or organization or individuals may participate.
- Members of different organizations can form a team.
- A team may only have two people stay in the playing field at a time (for calibration and assistance).
- All students having a valid identity card/ enrolment proof are eligible to participate.

3.ROBOT SPECIFICATIONS:

- All participants' bots must be wireless outside the main body.
- The dimensions of the bot should not exceed 30cm * 30cm * 30cm (length * breadth * height).
- Maximum weight of the bot should not exceed 3kgs (including batteries).
- Batteries must be sealed, immobilized electrolyte type. The battery voltage should not exceed 12.56V DC at any given point of time.
- The robot must be autonomous (wireless and should not be controlled externally).
- Robots must be constructed and programmed in a way that their movement is not limited to only one dimension and must move in all directions.
- The bot should be programmed entirely by the team.
- It is necessary to clarify any doubts regarding the robot's construction and design with the event managers prior to the event.
- Prior to their race, each robot will be examined by the event managers to ensure it complies with the rules; if the criteria are not met with, the team may be disqualified. The final say in this matter will belong to the referees or event managers.

4.ARENA SPECIFICATIONS:

- The surface of the track will be white with black lines marked on it.
- There will be a start and an end point.
- The track may consist of crossed, curved and discontinuous black lines or all of them.
- The width of the black strip will be 3cm to 4cm.
- The length and the path of track 2 will only be revealed after the completion of round 1.
- The track design for Round 2 will be more intricate and challenging than it was in Round 1.

5. GAME ZONE:

1. Game Zone Regulation:

- A designated area surrounding the field is allocated as the GAME ZONE. Access to this zone is restricted to robot handlers and referees exclusively during the competition.

2. Traversal Requirement:

- Robots must successfully traverse the entire track, commencing from the START point and concluding at the END point within the allocated maximum access time.

3. Time Limits:

- Round 1 allows a maximum of 5 minutes for completion of the track. Round 2 reduces the time limit to 3 minutes.
- Teams exceeding the specified time limits will face disqualification from the competition.

4. Penalty System:

- Manual touch more than twice administered to the robot incurs penalties in time.
- Each penalty accrues additional time, the precise duration of which will be announced during the event.

5. Checkpoint Requirement:

- In round 1, robots are required to successfully cross 4 checkpoints along the track to meet competition criteria.

6. GAME PLAY:

1. Event Structure:

- The competition consists of two rounds where robots are assessed based on the time taken to complete the path.
- Robots must start at the "START" tile and traverse the path following the black lines to reach the "END" tile in the shortest time possible.

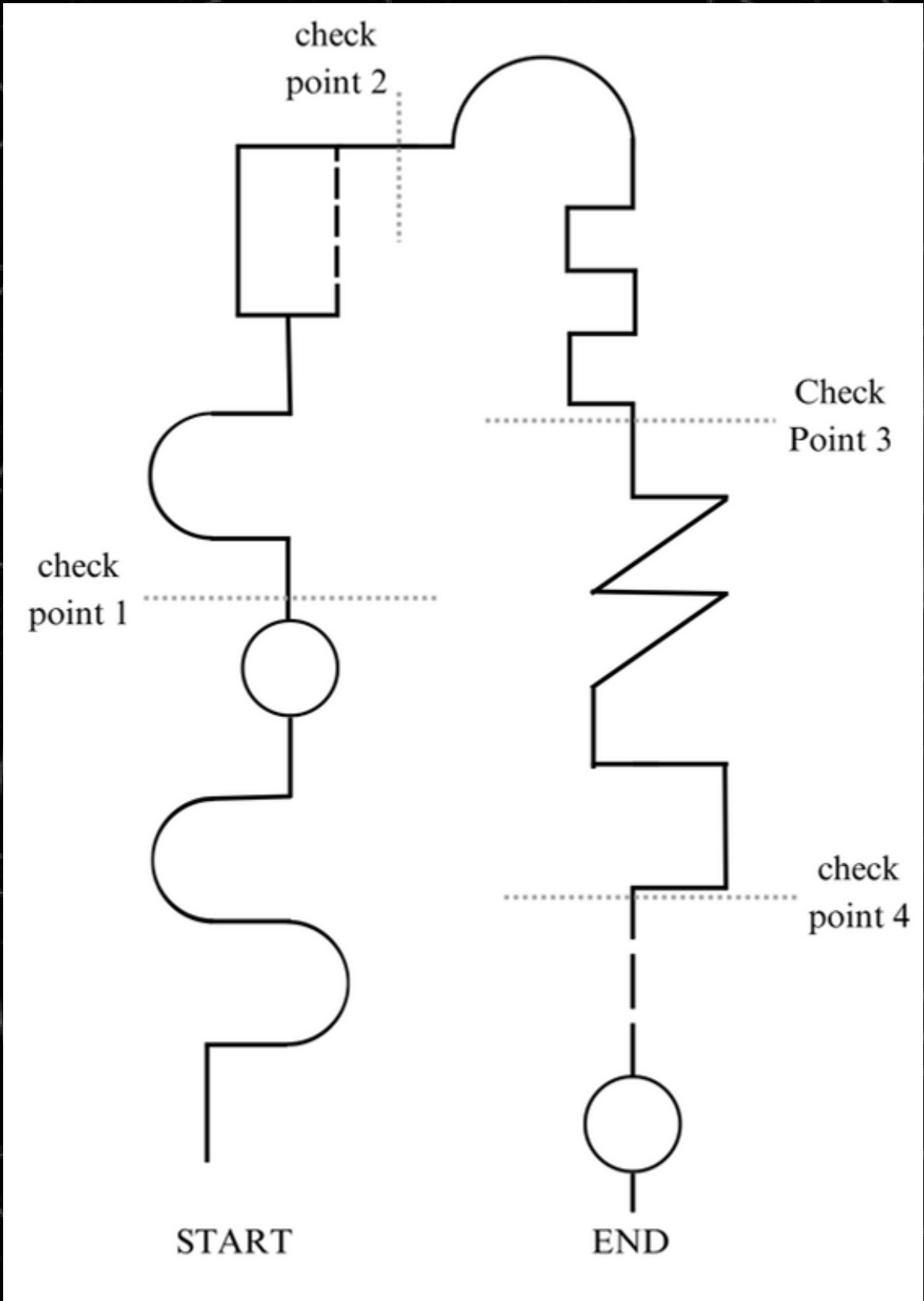
2. Run Evaluation:

- Each robot is granted 2 runs per round, with the shortest time from the two runs considered for evaluation.
- If a robot becomes immobilized or experiences infinite looping, the team leader may, with referee permission, relocate the bot to a previously successful part of the track. Referees will determine the position, and the timer will continue during this process. This opportunity is available only once per run.
- Even after the relocation, if the bot remains immobilized, the team may skip the run rendering the total run void.

3. Round Advancement:

- Top qualifying teams proceed to round 2. The exact number of advancing teams is determined by event managers.

7.PATH(ROUND 1)



8.DECISION MAKING:

- Teams will be evaluated based on the time taken by their bot to successfully complete the designated track.
- A shorter completion time demonstrates efficiency and precision in the robot's line-following capabilities.
- The team with the shortest completion time will be declared the winner of the competition.
- In the event of a tie, precedence will be given to the time taken to complete the first checkpoint, followed by subsequent checkpoints if necessary, to determine the final ranking. In addition, penalties for any manual touches administered to the robot will be taken into consideration during a tie.
- For addressing equity concerns, participating teams have the option to engage with the Human Resources (HR) department for guidance, support, and resources. This approach can help ensure fairness, diversity, and inclusivity within the event.

9.DISQUALIFICATIONS:

- Size Limitation: Exceeding the maximum dimensions of the bot will result in disqualification.
- Arena damage: Robots must not cause damage to the arena; any such damage will lead to instant disqualification.
- Non-Compliance: Failure to comply with the rules of the event will result in disqualification from the competition.
- Misbehavior: Any form of misbehavior will not be tolerated. Teams engaging in misbehavior will face disqualification from the event.
- Prohibited Materials: The use of LEGO kits is strictly prohibited and will result in disqualification.
- Team Members: Only two members of the team are allowed on the ground during the competition.
- Adjustments During Competition: Once the Competition begins and the robot is on the track, it may be adjusted or lifted only twice throughout the round. Any further adjustment will result in disqualification.
- Non-Interference Requirement: The robots must not impede or hinder the performance of any other bot during the competition. Any instances of interference will be strictly prohibited and may result in penalties or disqualification, as determined by the event coordinators or judges.

10.GENERAL DETAILS:

- All participants will receive a certificate of participation. Winners and runner-up will be awarded with certificates of merit.
- Members who have participated in one team cannot join another team for the same event.
- We earnestly request all participants to thoroughly review this rule book. Every point outlined here is non-negotiable and must not be compromised under any circumstances.
- We recommend all participants to keep a copy of this rule book handy during the event.
- Disclosures of the event will be taken prior to starting the round.

11.REGISTRATION DETAILS:

- Registration details will be announced on our Instagram page.
- Link: [robotics_cbit](#)
- PRIZE POOL: ₹10,000/-

12.CONTACT :

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