

# Robo-Race

## Manual (Rules & Description)



### Student Coordinators

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**URL: <http://www.mit.asia/technomillennium.aspx>**

**TECHNOMILLENNIUM 2010**

**Machine Specifications:**

- The machine should fit in a box of dimensions 250mm X 250mm.
- The external device used to control the machine or any external tank is not included in the size constraint.
- The machine should be controlled by a wireless remote control mechanism or wired one throughout the race.
- The machine must not be made from Lego parts, or any ready-made kit, if we find such machine it will be disqualified.
- The weight of machine should not exceed then 5kg.
- If the machine is wired then the wire should remain slack under all circumstances during the competition. All the wires coming out of the machine should be stacked as single unit .The wires should be properly insulated.

**Batteries & Power:**

- The machine must be powered electrically only. Use of IC engine is not allowed.
- Batteries must be sealed, immobilized electrolyte types (gel cells, lithium, NiCad, or dry cells).
- The electric voltage anywhere in the machine should not be more than 24V DC at any point of time.
- On board power supply of 24V DC will be provided.

**Arena:**

- The arena will consists of slopes (up to 30deg.), slits, rotating platform, slippy surface, muddy, water showers, rollers , sharp turnings, narrow bridge etc.
- Exact track will opened on the event day, as it is subjected to change & will be informed to participants before commencement of the event.

## **Rules & Regulations:**

### **Game Rules:**

- The competition is based on time trial system. There will be a qualifying round for each team.
- The top teams from qualifying rounds make it to the final round on basis of time trials.
- Two hand touches are allowed for qualification with penalty of 2secs. For each hand touch, which will be added further to overall time required by machine for completion of specified round.
- Teams with top timings will be selected for final round.
- In the final round maximum three hand touches are allowed with penalty of two (2) sec. for each hand touch ,which will be added further to overall time required by machine for completion of specified round.
- The machine will have to follow the provided track.
- If any of the machines starts off before startup call, the counter would be restarted and the machines will get a second chance. However, if any machine starts off before the startup call for a second time, it will be disqualified.
- The track will have check points at regular intervals. If a machine tumbles, or halts, or goes off the arena at any point on the track, one of the participants is allowed to lift it up and place it at the nearest checkpoint behind that point. The time shall still be running in the meantime.
- The machines are not allowed to leave any loose parts on any part of the arena. Any machine disintegrating during the race will be disqualified.
- Teams are not allowed to purposefully damage the machine of the opponent's team. If found doing so on track (while racing), the concerned team will be disqualified. Execution of this rule will be subjective and relies completely on Judge's discretion.
- One operator will operate only machine in the event.
- Judges decision shall be treated as final and binding on all.

### **General Rules:**

- Any team that is not ready at the time specified will be eliminated from the competition automatically.
- The teams must adhere to the spirit of healthy competition. The teams must not damage the opponent's machine in any way. Judges reserve the right to disqualify any team indulged in misbehavior.
- The name of your machine must be prominently displayed on the machine.

**Judging Criteria:**

- Teams will be judge on the basis of time trials.
- Judges decision shall be treated as final and binding on all

**Team Specification:**

- A team may consist of a maximum of 4members.
- Students from different educational institutes can form a team.

**Eligibility:**

- All students with a valid identity card of their respective educational institutes are eligible to participate in the event.
- Students should carry their identity card at time of reporting.

**Certificate Policy:**

- Certificate of Excellence will be awarded to all winners.
- Certificates of Participation will be given to all the teams that will participate in the event, but not to the teams which get disqualified due to disobeying any of the competition rules.

**Registration Fee:**

- Limited Entries are available.
- Early Bird registration fee is Rs. 200 per student up 31<sup>st</sup> August 2010
- Regular Registration fee is Rs. 250 per student from 1<sup>st</sup> September to 15<sup>th</sup> September 2010.

### **Registration Procedure:**

- Download registration form- at <http://www.mit.asia/Technomillennium3.aspx#Downloadable>
  - Print the form and fill the necessary information and take the bonafide certification from the head of your institute on the same filled hard copy registration form.
  - You can use the single form for the each team. Write the name of all team members on the same registration form.
  - There are two modes for paying registration fees. I) Cash and II) DD.
  - If paying Cash, contact at our contact address and issue proper cash Receipt and confirm your registration by submitting filled registration form.
  - If paying through a demand Draft (DD), issue a DD of amount equal to the registration fees needed for a team or individual from any nationalized bank in the favor of “**The Principal, MIT, Aurangabad**”, payable at **Maharashtra, Aurangabad**. Write your name & Name of competition on the back of DD.
  - Make the photocopy of DD and Filled registration form and keep this set for your reference. Send both the DD and Filled registration form (Both original) to the following contact address- (Convener, Technomillennium 2010, MIT, Beed By Pass, Satara Village Road, Aurangabad, Maharashtra, India - 431028).
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➔ *Robot Race is a race game in which each player attempts to be the first to touch a series of flags by maneuvering a robot across a dynamic race course.*