

# ROBO WAR



**Ramgarh Engineering College, Ramgarh**  
Run and Managed by Techno India under PPP



**Government of Jharkhand**



## TECHFIESTA'18

A science and technology festival

### About

Magnetized with the world of bots? Want to outbreak into the TerrrOBotic world of Real Steel? It's time for you to make your mind as you enter the battlefield with your robots equipped with weapons. Hold your nerves and enhance your moves to eliminate your opponents out of the battleground. Get ready to embrace the sound of roaring engines, firing weapons and protect their pride in the ultimate battle of supremacy. Evolving from the era of battle of HomoSapiens, drift into the war of RoboSapiens

### Task

Design and construct a manual controlled robot (wired control) capable of fighting a one on one tournament.

### Specifications

#### Dimensions and Fabrications

1. The machine should fit in a box of dimension 500mm x 500mm x 500 mm (l x b x h) at any given point during the match. The external device used to control the machine or any external tank is not included in the size constraint.
2. The machine should not exceed 10kg and should be more than 1.5 kg of weight including the weight of pneumatic source/tank. All pneumatic tanks/source should be on board. Weight of remote controller will not be counted.

# Mobility

All robots must have easily visible and controlled mobility in order to compete. Methods of mobility include:

1. Rolling (wheels, tracks or the whole robot).
2. Non-wheeled robots having no rolling elements in contact with the floor and no continuous rolling or cam operated motion in contact with the floor, either directly or via a linkage.
3. Jumping and hopping is not allowed.
4. Flying (using airfoil, helium balloons etc.) is not allowed.

# Robot Control and Power Supply

1. The machine can be controlled through wired remote only.
2. The machine can be powered electrically only. Participants may use on-board power supply. Only 220V/ 50 Hz power supply will be provided by the organisers.
3. Use of an IC engine in any form is not allowed.
4. The electric voltage between 2 points anywhere in the machine should not be more than 24V DC at any point of time.

# Weapons Systems

Robots can have any kind of magnetic weapons, cutters, flippers, saws, lifting devices, spinning hammers etc. as weapons with following exceptions and limitations:

1. Liquid projectiles.
2. Any kind of inflammable liquid.
3. Flame-based weapons.

# Event Structure

The event will consist of one-on-one matches between the teams. Thereafter, winning team proceeds to next round and losing team will be eliminated from the competition. The process will continue until a single team capture the winner's title.

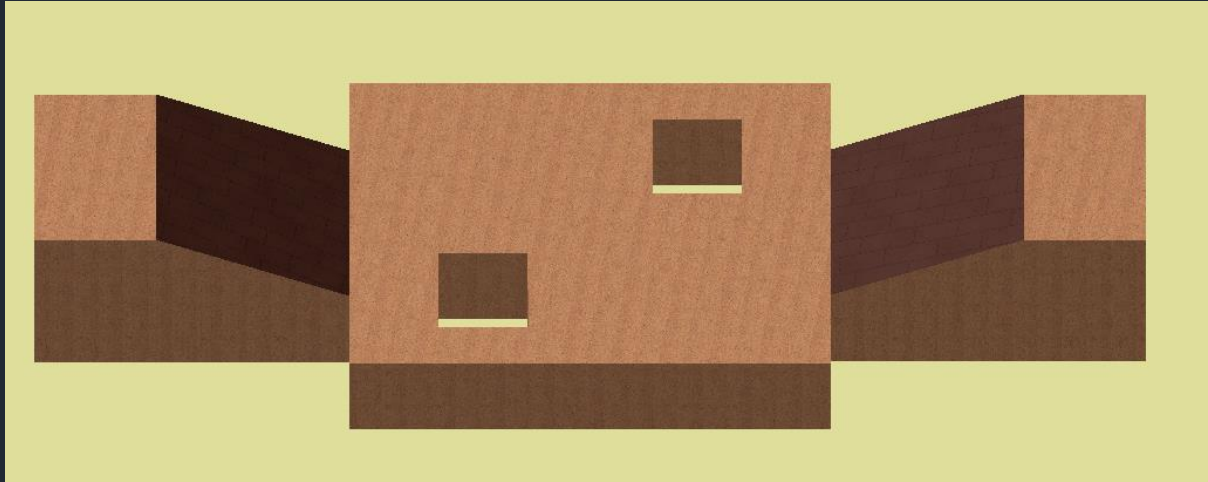
Rules and Regulation

1. The aim of every match is to demolish and immobilize the other bot out of the arena completely.
2. Participants will be disqualified if their do not make contact with in commencing one minute
3. Game play is divided into three sets and the team winning the most, will be raised to the next level.
4. In-boxing the opponents or forcing them out of the arena, concludes the set.
5. Each set is timed for 3 min.

# The Arena<sup>1</sup>

## Dimension of main arena

(250cm x 200cm) Dimension of holes: 50cm x 50cm



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<sup>1</sup> Dimension of arena may be changed during the event.