

# ROBO WARS

## Introduction

## Problem Statement

The objective is to engineer a bot that can throw the opponent out of the ring or immobilise it and can at the same time maintain its stability and be immune to fire and water.

## Competition Rules

- A team may consist of a maximum of 4 members.
- Power supply will be provided in the event premises and needed to be checked by the team itself.
- Spectators must not be harmed with the weapons.
- If wires get entangled no extra time would be provided and the game would continue.
- Damaging opponent's control wires is not allowed.
- Use of any unfair practices during the competition will lead to disqualification.

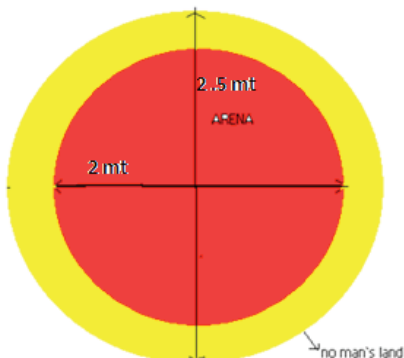
Sample arena is provided for reference

## ROUND SPECIFICATIONS

### Round 1

- A maximum of 4 minutes would be given in the first round.
- Two robots anonymously selected will be made to compete inside the arena at a time.
- The team which throws the other bot out of the ring or immobilise it in minimum time will qualify to the next round.

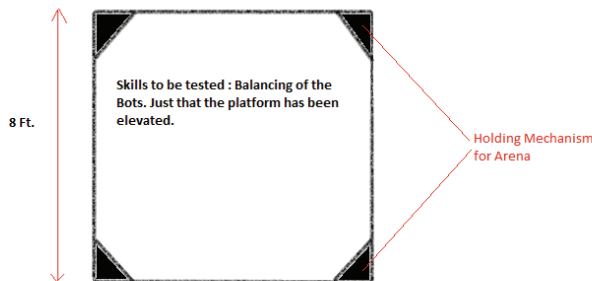
### Arena



## Round 2

- A maximum of 5 minutes would be given in the second round.
- Two of the robots will be allowed inside the arena at a time to compete with each other.
- The arena would be a hanging platform bound at the four corners by some holding mechanism.
- Besides fighting with each other, the bots have to ensure that they can balance themselves on the hanging platform.
- If no one is able to complete the task then there will be a two minutes knock out.

## Arena



Further rounds would be conducted on the same lines except that the bots would have to face difficulties of fire, water and different terrains while fighting the other bot.

## Robot specifications

- Robot must fit inside a box of dimensions 50cm x 50cm x 50cm during the whole course of run and have a maximum weight of 15 kg at the start of the event, violating which would lead to disqualification.
- The machine should not harm the track. Constantly harming the arena upon may lead to disqualification.
- The external wired/wireless remote control used to control the machine manually is not included in this size constraint
- If the machine uses an externally placed power supply, the dimensions of the power supply are not included in the size constraint. However, in case of an onboard power supply, the machine along with the power supply should follow the dimensional criterion as discussed in previous point.
- During the game, the machine cannot detach itself into multiple parts.
- Machine cannot be constructed using readymade Lego kits or any readymade mechanism. Violating this clause will lead to the disqualification of the machine.
- The machine has to be necessarily controlled by some wired/ wireless remote control mechanism at all stages of the game...
- In case of wireless mechanism, to avoid frequency interference between the competing machines,

each machine must have two remote control circuits (or a dual frequency remote control circuit) which can be switched to either frequency before the start of the game.

- In case of wired mechanism, the wire must be slack for the duration of the game. The total length of wire extending from the remote control to the machine must be a minimum of 5 meters. The participants must ensure that the wire does not get entangled with the opponent's machine during the game.

## **Power Supply and Propulsion**

- The machine can use an externally placed or on-board electric or non-electric power supply. However the power supply must be non-polluting and must satisfy the safety constraints determined by the judges. In case the machine is using a non-electric power supply, kindly get it approved from the organizers beforehand via email. Organizers are not responsible for inconvenience if approval is not sought.
- The method of propulsion is at the discretion of the builder, provided it does not damage the track in any way and it satisfies the safety constraints determined by the judges.
- The organizers will provide a standard single phase, 230V, 50 Hz AC power supply. Any extension cords, eliminators, adaptors etc required will have to be arranged by participants themselves.

## **General Rules**

- The teams must adhere to the spirit of healthy competition. Judges reserve the right to disqualify any team indulging in misbehaviour.
- Any team that is not ready at the time specified will be disqualified from the competition automatically.
- Judges decision shall be treated as final and binding on all.
- The organizers will not hold any responsibility for any damage/loss sustained by the machine/team during the game.
- The organizers reserve all rights to change any or all of the above rules as they deem fit. Change in rules, if any will be highlighted on the website.

