



# Robo War



## INTRODUCTION

It's not a contest, it's a War. Here is a nice platform for you to show your warrior attitude. This is not a war between evil and God, but for the great techno-minds, who design the robots.

The challenge is to create a robot (manually controlled / autonomous) whose sole purpose is to push, throw, flip, drag, or otherwise move your opponent out of the arena within a stipulated time. This event aims to test your Robot against another in a field of combat where brute strength and cat-like reflexes hold the key to success.

## GENERAL RULES

- The participants are required to bring their robots to MNIT Jaipur. Teams may be provided with technical assistance and help from technical store at reasonable prices.
- The teams shall be given ample chance for trials in designated slots. No requests for trials shall be entertained after that.
- The teams are required to strictly abide by the rules of the competition, the specifications of the robot, the handling of the same, the power source specifications and other general rules at all point of time failing which they stand disqualified.
- All teams must be present before the commencement of an event. Teams will be disqualified if they do not turn up during the slot allotted to them.
- **The team can comprise of a maximum of 6 students** from the same institute or other institutes as well. Register your team at [www.blitzschlag.org](http://www.blitzschlag.org)
- The teams must adhere to the spirit of healthy competition. The teams must not damage the opponent's bot in any way. Judges reserve the exclusive rights to disqualify any team indulging in misbehaviour.
- The organizers reserve all rights to change any or all of the above rules. Change in rules, if any, will be highlighted on the website.
- All rounds of the event will be held at MNIT Jaipur during Blitzschlag '17.
- Judges' decisions on any matter will be considered final and shall not be argued upon in any case. However, the teams are definitely allowed to complain against any irregularity in the event.
- While one person is at the arena, other members of the team are not allowed to come inside the arena.
- The teams are not allowed to tamper with the opponent's robot or hinder at their time of the competition.

## TERMINOLOGY

- **Disabled:** A robot is not functioning correctly due to either an internal malfunction, or contact with the opposing robot or Arena Hazard.
- **Disqualification:** A Robot is no longer permitted to compete in the current robowar tournament.
- **Immobilized:** In Judge's opinion, a robot is not responsive for a specified period of time.
- **Knockout:** Occurs when the attack or deliberate actions of one robot causes its opponent to become immobilized.
- **Lifting:** Occurs when one robot controls an opponent's translational motion by lifting the drive mechanism of the opponent off of the Arena floor.
- **No Contact:** Occurs when neither robot makes contact with each other for a specified period of time.
- **Pinning:** Occurs when one robot, through sheer force, holds an opponent stationary in order to immobilize it.
- **Non-Responsive:** In a Referee's opinion, the robot cannot display some kind of controlled translational movement along the Arena floor.
- **Restart:** Occurs after a Fault or a Timeout has been declared and the competing robots are ready to continue.
- **Tap-Out:** Occurs when a Robot's Operators decide that they no longer want to continue the Match, and concede the win to the opposing Team.
- **Technical Knockout:** Occurs when a robot wins due to immobilization of its opponent even though, in the Judges' opinion, no action of the winning robot caused the opponent's immobilization.
- **Timeout:** A temporary halting of a Match. Timeouts are usually called to separate robots, but can be called for other reasons as well.

## BOT SPECIFICATIONS

### BOT DIMENSIONS

- The machine should fit in a box of dimension 750mm x 750mm x 1000 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.
- The machine should not exceed 45 kilograms of weight excluding the weight of pneumatic/hydraulic source/tank and batteries, if any. 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:
  - Rolling (wheels, tracks or the whole robot).
  - Jumping and hopping is not allowed.
  - Flying (using airfoil, helium balloons, ornithopters, etc.) is not allowed.

## BOT CONTROL SPECIFICATIONS

- The machine can be controlled through a wired/wireless remote. Power supply may or may not be on board. Refer below for further details on battery and power.
- If using a wireless control, there should be binding capability between transmitters and receivers. The remotes with such facility will only be allowed. The team must have at least four frequency wireless remote control circuit or two dual control circuits which may be interchanged before the start of the race to avoid frequency interference with other teams.
- The case of any interference in the wireless systems will not be considered for rematch or results.
- Remote control systems from toys might be used. Remote control systems available in the market may also be used.
- Team should pair up the wireless remote with the machine before putting it into the arena.

## BATTERY SPECIFICATIONS

- The machine can be powered electrically only. Use of an IC engine in any form is not allowed. On board batteries must be sealed, immobilized-electrolyte types (such as gel cells, lithium, NiCad, NiMH, or dry cells).
- AC power supply will also be provide if required by the team.
- The electric voltage between 2 points anywhere in the machine should not be more than 36V DC at any point of time.
- All efforts must be made to protect battery terminals from a direct short and causing a battery fire, failure to do so will cause direct disqualification.
- Use of damaged, non-leak proof batteries may lead to disqualification.
- Special care should be taken to protect the on-board batteries. If judges found that the battery is not properly protected, then team will be disqualified immediately.
- Change of battery will not be allowed during the match.

## WEAPONS

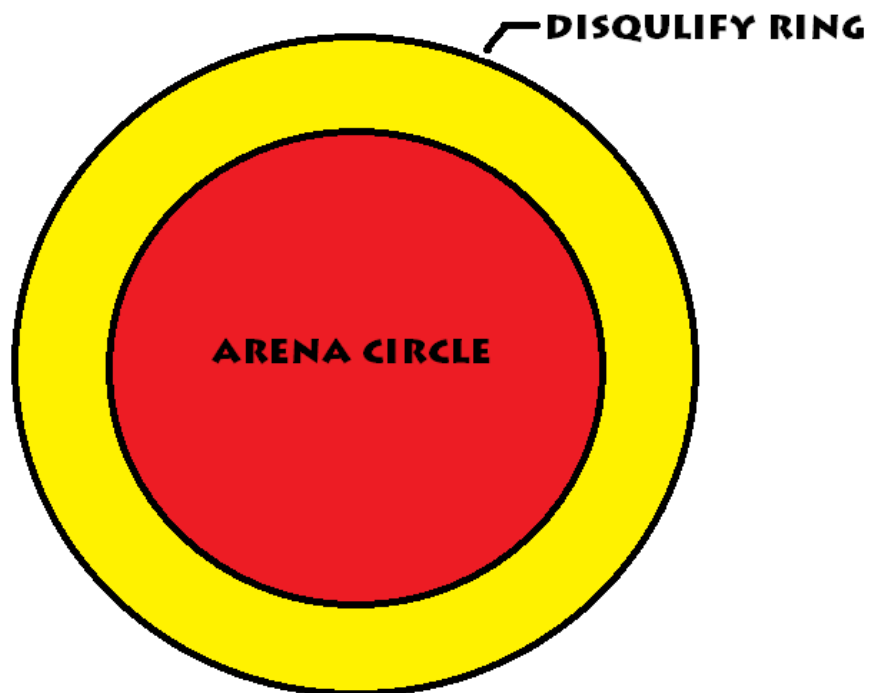
Robots can have any kind of magnetic weapons, cutters, flippers, saws, lifting devices, spinning hammers etc. as weapons with following exceptions and limitations:

Liquid projectiles.

Any kind of inflammable liquid.

Flame-based weapons.

## SAMPLE ARENA



## PRIZES

Prize worth **15000** INR

## CONTACT US

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## SCHEDULE

Will be updated on website : [www.blitzschlag.org](http://www.blitzschlag.org)