

# RADIX – ROBO WARS

## Dawn of Justice

### Problem Statement

The Battle between the Kryptoninans has left Metropolis in ruins. People who thought Superman was God have now started fearing him. Batman has decided to bring Superman down to show the world that he's no God and can be beaten. He has fashioned himself a suit which can take on Superman, but Batman being Batman, always thinks a few steps ahead. He needs backup in case he fails and has thus asked for an ultimate robot which could fearlessly face the Man of Steel. It is going to get dirty so go ahead and add whatever you can to your robot's arsenal, be it water guns, fire expellers, smoke bombs, and even Kryptonite!

Are you going to hide in your cave or come out and battle it out with others to claim your Mean Machine's supremacy? Can you make the God bleed?

### Competition Rules

1. A team may consist of 5 members at most.
2. Teams can be made from different years and colleges as well.
3. Power supply will be provided in the event premises and needs to be checked by the team itself.
4. If wires get entangled no extra time would be provided and the game would continue.
5. Damaging opponent's control wires is not allowed and grounds for disqualification.
6. Use of any unfair practices during the competition will lead to disqualification.

### Robot Specifications

1. The robot must fit inside a box of dimensions 75cm x 75cm x 75cm during the whole course of run and have a maximum weight of 40 kg at the start of the event, violating which would lead to disqualification.
2. The machine should not harm the arena. Harming the arena in any way may lead to disqualification.

3. The external wired/wireless remote control used to control the machine manually is not included in this size constraint.
4. 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 on-board power supply, the machine along with the power supply should follow the dimensional criterion as discussed in previous point.
5. During the game, the machine cannot detach itself into multiple parts.
6. Machine cannot be constructed using readymade Lego kits or any readymade mechanism. Violating this clause will lead to the disqualification of the machine.
7. The machine has to be necessarily controlled by some wired/ wireless remote control mechanism at all stages of the game.
8. 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.
9. 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 7 meters. The participants must ensure that the wire does not get entangled with the opponent's machine during the game.
10. The machine can use an externally placed or on-board electric or nonelectric 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.
11. 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.
12. The organizers will be providing a standard single phase, 230V, 50 Hz, 10A AC power supply.
13. Any extension cords, eliminators, adaptors etc. required will have to be arranged by participants themselves.

## Power Supply and Propulsion

1. The machine cannot use an externally placed power supply but only on board power supply. No external power supply will be provided. The on board power supply used must be non-polluting and must satisfy the safety constraints determined by the judges.
2. In case the machine is using a non-electric power supply, the team must get it approved from the organizers beforehand via email. Organizers will not be responsible for inconvenience if approval is not sought.
3. Maximum permissible DC Voltage that can be used is 24V.

## General Rules

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

Please regularly check the website for further updates on the competition and the change in rules and regulations, if any. For any queries, mail to us at [radix.troika@gmail.com](mailto:radix.troika@gmail.com)

All the Best!

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