



RULES
BUMPERBOT



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1. Summary

The main objective in BUMPERBOT is to create and / or program a robot that removes a series of 10 obstacles from a track, in 120 seconds, without leaving the track while doing so.

All teams will solve the challenge live on the day of the event. There will be one qualifying round for all teams, a second round for the best 10 teams in the first round and a final round for the best five on the second round. Each obstacle removed has a value of 10 points, and one point will be assigned for each second not used, in case the 10 obstacles are removed before the time is up. **In case of having 10 or less registered teams, the teams will do the 3 rounds.**

The competition is open to participants of any age. Each registered team can have a maximum of 3 members and a mentor. If all the 3 members are under the age of 18, the mentor must be 18 y/o or older and must act as the adult responsible for the team.



2. Registration

All the information regarding registration can be found in <http://robojam.live/>

3. Rules Clarification

All those circumstances not foreseen in this set of rules, will be up to the judges and/or the tournament staff to solve. They will have the final decision on it and cannot be appealed.

By registering the team and paying the registration fee, the team understands and accepts all the rules presented here.

In case of being disqualified, or not showing up to the event, there will be no reimbursement of any kind for the team.

Rules could be modified until the registration due date. However, if there is any need to clarify one of the rules before the event, the teams will be notified

4. Challenge Setup

The team is responsible to get and organize all the elements necessary to participate.

It is strongly recommended to check the internet access and bandwidth ahead of time, along with all the devices (laptop, tablet, Cell phone, etc.) the team will use to stream the challenge.

5. Robot

- a) Any type of platform or kit can be used. The design of the robot is free.
- b) The maximum size of the robot is 20 cm long x 20 cm wide (7.8 x 7.8 inches), without height restriction. Any element that detaches from it, can be consider an extension of the robot. The robot must not exceed these measurements at any time.
- c) The team must demonstrate that the robot is autonomous and capable of performing on the track no matter where it starts. **Cannot Use any type of external help from participants (Gestures or movement,RC, light guidance, etc)**
- d) **The robot must use sensors to stay inside the track. Needs to show that it senses the line in the center as well as the border line, by turning or driving forward when it detects it.**
- e) Since the obstacles simulate an opponent, there must be physical contact with the object. The use of fans, bullets, water cannons, or other similar elements, are not allowed.
- f) You must have a non remote switch to turn the robot on and off .

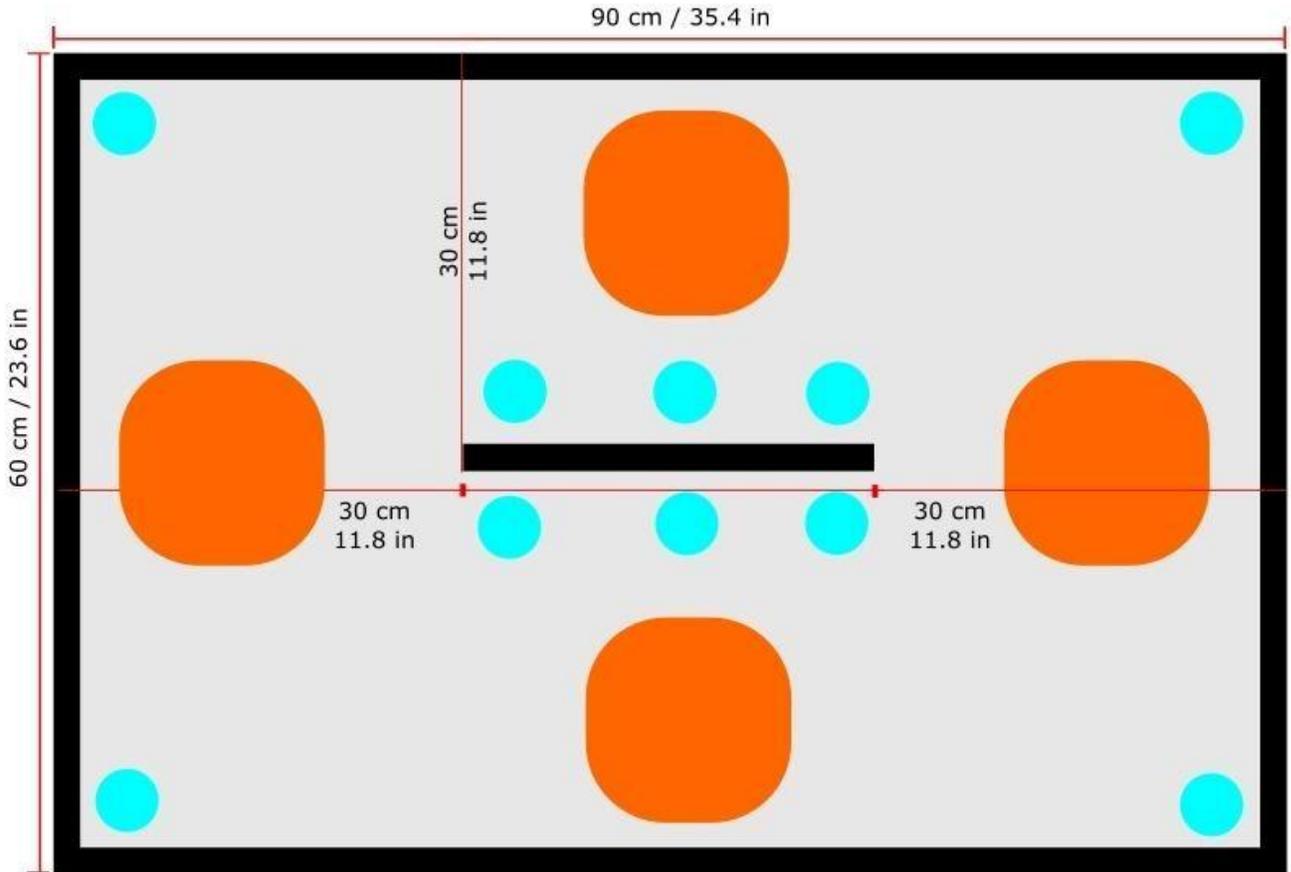


g) We want to clarify, these requirements are mandatory in order for the robot to participate. In case a team starts competing without complying with any of them the round will be considered null and the team can even be disqualified.

6. Competition

- a) Attending the captains meeting is mandatory and it is scheduled to take place one hour before the competition, in order to homologate the tracks and the robot. Failure to connect to the meeting prior to the start of the challenge may have a time penalty.
- b) All teams will have one classifying round.
- c) Rounds will have a maximum of 2 minutes.
- d) The robot must remove a series of 10 obstacles from a track, in 120 seconds, without leaving the track, through physical contact with the robot or other obstacle, in a maximum time of 120 seconds.
- e) Each obstacle removed has a value of 10 points, and one point will be assigned for each second not used, in case the 10 obstacles are removed. Obstacle must leave the track completely. In case of getting out and coming back in, it is considered still inside. The only exception will be the last obstacle.
- f) Team members cannot touch the obstacles or the robot, even if they are outside of the track, once the round starts. In case of doing it, the round will end
- g) The robot must start in the position and direction indicated by the judges. Time ends once the robot takes all the obstacles out or after 120 seconds. In case of getting out of the track, the round ends, but the points gotten up to that point will be counted, but no bonus points will be given.
- h) Best 10 teams (10 highest scores) in the first round will classify to a second round. Best 5 teams (5 highest scores) in the second round will classify to a Final round. In case of having 10 or less registered teams, the teams will do the 3 rounds and the score of the 3 rounds will added.
- i) In case of a tie in the last position that gives classification (10th place in the first round or 5th place in the second round), the teams involved will move to the next round, without doing a tie break.
- j) For in person competitions, the organizer may have qualifying rounds and then final matches. If this is done, it will be informed to the teams ahead of time.
- k) In case of a tie in any of the first 3 places in the final round, another round will be done as a tie breaker between the teams involved.
- l) In case of calling a team, and not showing up, the team will be given until the end of the round to be able to show up and make their attempt. Otherwise the round will be declared Invalid.

7. Track



The blue circles represent the obstacles and the Orange squares the robot's possible starting spots

- The track has a length of 90 cm with a width of 60 cm (35.4 x 23.6 inches) with a white background.
- There is a 30 cm BLACK line (11.8 inches), right in the middle of the field (See the drawing).
- The thickness of the BLACK border line is about 2cm (0.8 inches). You can use black electrical tape, or any other element to mark it.
- You can trace the track on the floor, cardboard, or any other element that contrasts.
- The track must be raised from the surface at least 5 cm, and must have the track exact measurements. If it is not elevated, it must have an outer strip of at least 20 cm on each side, of the same color as the field.
- 10 7-ounce cups will be used as obstacles. 1 in each corner and 6 in the middle (See the drawing- blue circles). *the obstacles position is based on the drawing above and is approximate*. In case of having of transparent or white cups, they need to be painted with a color that contrasts with the track, to facilitate visibility.
- The robot must start in the position and direction indicated by the judges, at the beginning of each round. The possible starting spots are shown in the image.



8. Penalties

Teams may receive a time penalty for not complying with any of these regulations. The points penalties are -50 points for each foul.

The judges and / or the staff can disqualify any team, at any time, for any fault that in their opinion is serious and is against the respect, ethics and education that is sought in the event. This includes, but is not limited to, any of the following situations:

- a) Fraud in the information shared with the organization or in the competition
- b) Dishonesty in the challenge, deliberately breaking the rules.
- c) Disrespect to judges or participants, during the competition or in the comments during the live streaming.

9. Claims

- a) The captains can file a claim in front of the judges, in case of having any disagreement.
- b) The final decision on any claim is at the discretion of the judges and / or the organizer, who are considered the last instance in the resolution of this situation and their decision is final, cannot be appealed.

10. Prizes

The first 3 places will be awarded with credentials for a ROBOJAM event. All other teams can request participation certificates.

Other additional prizes, such as cash prizes or sponsor gifts, will be assigned and communicated by the organizer at his own discretion, after the registration due date, but before the competition date.

Any question, please send us a message to

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ANEXO TAMAÑO

