



2nd Baguio City Robotics Cup Open

Game Description, Rules and Mechanics

Robot Float Parade [Elementary]

April 26, 2020

St. Vincent Gym, Naguillian Rd., Baguio City

Version 1.1 January 2020

1. Overview

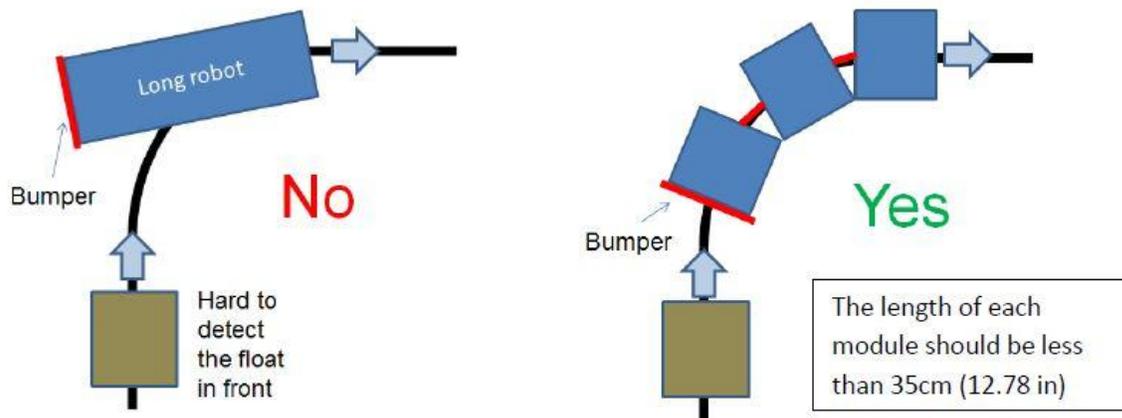
The parade features robot floats constructed and programmed by student participants. Attendees will be able to watch fully autonomous robot floats follow an indoor parade route while detecting other robots in front of them.

2. Objective

The robot floats are programmed to stop and start without human help. It is a great STEAM (Science, Technology, Engineering, Arts, and Math) learning opportunity for young students. The themes for the floats are viable solution to a pressing problem in our cities. An example of possible entries are projects that address the lack of energy, pollution, traffic, housing congestion, lack of trees and vegetation and flood.

3. Robot Specifications

- a. The robot must be autonomous. Robot must be self contained, and not externally operated by wire or by remote radio control during the parade.
- b. Number of robot controllers, sensors, or motors: unlimited.
- c. Each robot is required to carry a small flag with a number, which will be given during the competition proper.
- d. The robot must not damage the field or endanger the spectators in any way.
- e. The robot must have a start and/or stop button.
- f. Each robot may have sponsor logos (to be given during the competition day by the host or organizer).
- g. There is no limitation on height or weight.
- h. Width should be less than 35cm (13.78 in).
- i. The rear of the float must have a flat bumper at least 6.35cm (2.5 in) tall and 12 cm (5 in) wide and be 2.54cm (1 in) off the ground so that the robot behind is able to sense your robot using its sensors.
- j. There is no limitation on length, however: if overall length is longer than 35cm (13.78 in), it must have train-like flexible bending structures at curves as shown below.



4. Programming Requirements

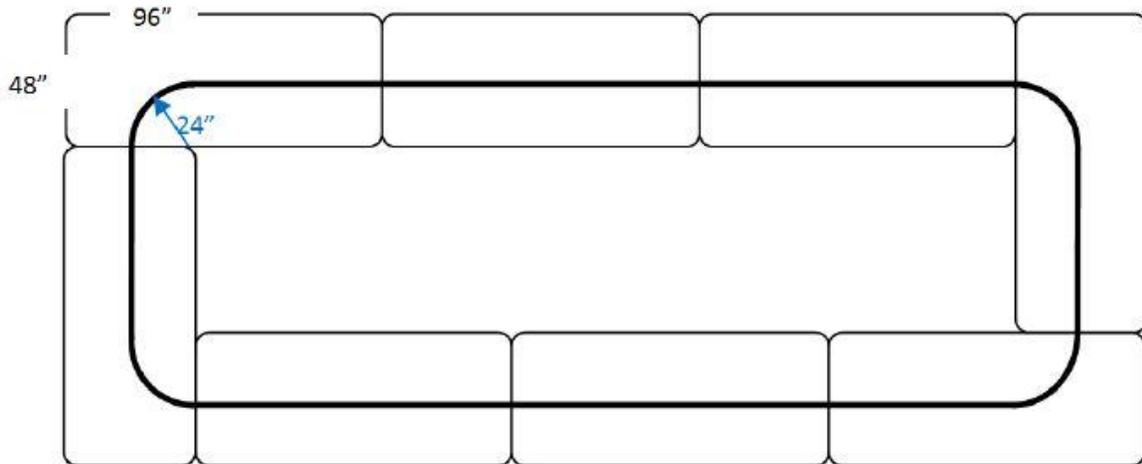
- Robot must have a reliable program to follow a black line on a bright surface.
- Direction of the parade route may be clockwise or counter-clockwise.
- Robot must have the ability to detect a vehicle in front of it and stop; then automatically re-start when the vehicle in front has cleared.
- Wireless interaction between the robot and team players using sound, ultrasonic, or light sensors is encouraged.
- Robot speed must be between 9 cm/sec and 18 cm/sec.
- The robot must display the current speed. Recommended the display interval is 1 second. (Optional)

5. Participants

- A team can enter only one robot float. If a coach has multiple floats, please register multiple teams.
- A team can have 2 to 3 team members.
- Students in grades 3-6 in the month of the event may participate.

6. Parade Route

Teams may use plastic folding tables to construct a practice parade route. Tables can be placed on the floor on crates without legs. Alternatively, a table covered with white paper or white vinyl table cover can be used. Standard black electrical tape can be used to make a closed rectangular shape with 4 rounded corners as shown in the picture below. 2" wide masking tape can be used to connect and hold tables together.



7. Judging

- a. A panel of judges will score the team's performance using a rubric by observing teams all day and especially for official parade times.
- b. Judges will interview teams.
- c. Winners will be awarded based on the overall scores.
- d. Special award may be given to recognize an extraordinary aspect of a parade float.

8. Flexibility of Rules

As long as the concept and fundamentals of the rules are observed, these rules shall be flexible enough to encompass the changes in the number of players and of the contents of matches. Modifications or abolition of the rules can be made by the local event organizers as long as they are published prior to the event, and are consistently maintained throughout the event.

9. Power of Officials

- a. If a robot or a participant violates the rules, the referee may disqualify them from the competition.
- b. The organizers reserve the right to make changes to any of the above in the interest of fair play and sportsmanship, and to ensure that all competitors have an enjoyable competition.

- c. In the event of ambiguity, the organizers' interpretation of any clauses of the rules shall prevail.
- d. The organizers may change the rules without prior notice, e.g. based on number of participants, local conditions etc.

10. Awarding

- a. All contestants are requested to be there to receive their awards.
- b. The awards are as follows:
 - 1. Champion
 - 2. 1st Runner-Up
 - 3. 2nd Runner-Up

11. Declaring Objections

The coach of a team can present objections to the Marshall, before the attempts is over, if there are any doubts in the exercising of these rules.

12. Liability

- a. Participating teams are always responsible for the safety of their robots and are liable for any accident caused by their team members or their robot.
- b. MGE Advance Computing Solutions and the organizing team members will never be held responsible or liable for any incidents and/or accidents caused by participating teams or their equipment.
- c. MGE Advance Computing Solutions and its partners and sponsors shall not be responsible for any lost and stolen models during the competition.