



# **Challenge: Robot Combat**

**100 points**

***Remote control MUST be used***

The goal is to build a robot to pop a balloon on your opponent's robot and prevent your opponent from popping the balloon on your robot. The combat zone is circle measuring 6 feet in diameter. There is a 2-minute time limit per match. Contestants may play up to three matches against three different robots. If a contestant is present and there is no other team present, an opponent robot will be provided and controlled by a staff member.

Safety limitations:

- 1) Robots will not be allowed to employ fire, projectiles or high speed rotational or kinetic weapons (rotational rates should be less than 100 rpm should you choose a spinning weapon; linear actuated weapons should not exceed 12 inches per second).
- 2) Any sharp or pointed weapons must be covered until the robot enters the arena and then safely covered once the match is over. Example: pieces of rubber or cork over pointed weapons.

Robot requirements:

- 1) The boe-bot frame, servos and basic stamp controller should be used by all contestants.
- 2) The robots are required to fit into a footprint no larger than 12 inches in diameter (with their weapons undeployed). For example, a weapon may reach beyond the 12 inch footprint when it is deployed in combat.

Scoring:

- 1) A one-time 25 points for building a robot and participating in at least one match
  - 2) 25 points for popping opponent's balloon (possible 75 with three wins).
  - 3) If the robot tips and falls on its side the match is lost.
  - 4) If the 2-minute time limit runs out, the team with the most number of attacks wins.
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