

SARL Rules of Engagement

Addapted from S.W.O.R.D.

Generic Robot Rules

- A. No robot may, under any circumstances, present a hazard to the judges, spectators, or operators. No robot may in its operation cause damage to anything other than the opposing robot or the combat surface. Any robot that imperils the viewing areas will be ruled ineligible for competition.
- B. All entries must conform to the general rules of the facility (Venue Name) and the event.
- C. All robots will be subject to a technical inspection prior to combat. Failure to disclose any operating principle will be grounds for immediate disqualification. The event safety coordinator may restrict any function deemed excessively hazardous.
- D. All robots must have a master kill switch or easily accessible removable link that deactivates the robot immediately. This is for the safety of the audience and the other competitors.
- E. Robots must properly fail-safe when their transmitter is switched off.
- F. Robots are required to have a digital transmitter/receiver combo, 2.4ghz, spectrum, Wi-Fi, Bluetooth, etc. Infrared and 49/27mhz are not allowed. Homemade transmitters must be approved by the event safety coordinator
- G. All robots should be electrically powered. No internal combustion engines will be allowed. All power sources must be 100% contained in the robot and packaged appropriately for the expected abuse (no using batteries as armour).
- H. Liquids may not be used in combat situations. If any substance coming from a robot cannot be completely cleaned up after combat, the robot will be declared ineligible.
- I. No flammable fuels, liquid, gaseous or solid, may be used in combat situations.
- J. Jamming your opponent's controller or robot, either electronically (radio jammer) or physically (entanglement), is prohibited.

- K. Robots must, at full extension, be able to fit through the arena pushout in any orientation. The standard pushout width is 18”.
- L. No projectiles, tethered or untethered.
- M. All robots with active weapons must have a weapon lock. A weapon lock prevents the weapon from spinning up or being activated.
- N. All robots must, at the beginning of each match, be capable of movement of at least one foot beyond the base radius of the robot within ten seconds.
- O. Only competing teams and individuals registered to a team may power on or drive a robot.
- P. All active weapons will remain locked with a functioning safety bar at all times while outside of an event-designated safety area. Any attempt to power up a weapon outside these designated safety areas will result in a team being disqualified.
- Q. Flammable weapons are not allowed. Any fire in the arena will constitute a knockout and the fire will be put out. (Our arena is made of wood)

Please consult the design rules to ensure that your robot meets the requirements for entry and contact the event organisers with any questions or concerns that you might have.

Robot Weight Allowances

- A. Beetleweights must weigh in at or under 3 lbs, Antweight class must weigh in at or under 1lb and Fairyweight Class must weigh in at or under 150g. We suggest that your design comes in at least 5g-10g under the weight limit to account for differences in scale and added repair weight.
- B. Walkers will receive a 100% weight bonus. Walkers must have no parts normally in contact with the ground undergoing continuous rotation (ex. Rickety Cricket).
- C. Fully autonomous robots will receive a 100% weight bonus. They must be able to be activated and deactivated remotely.
- D. Shufflers will receive a 50% weight bonus. A shuffler is a robot that uses a system of mechanical devices such as cams or crankshafts to generate reciprocating motion of driving parts from one or more continuously rotating drive shafts (ex. Pitter Patter).

- E. Harbor Freight NiCad drill battery packs (or cells from them) do not count towards your weight limit as long as they make up the sole power supply for your robot. The battery cannot weigh more than 50% of your robot's total weight.
- F. Weight bonuses do not stack. An autonomous shuffler would only get a 100% weight bonus.
- G. In order to complete a robot with a weight bonus, it must be approved by the event safety coordinator prior to the event date.

Fight Procedure

- A. Upon arriving at the fight box, each team will present the referee with their bot's safety card. The referee will check to ensure that the bot has passed the relevant safety and weight checks and the bot will be placed into the designated starting square in the fight box.
- B. Once the box has been securely closed the referee will instruct the teams to do a pre-match twitch test. No engagement with the other bots will be allowed at this time.
- C. The bots will power down in their designated starting boxes in preparation for the fight.
- D. The referee will ensure that each team is ready and begin the match. The robots may now engage
- E. Each fight lasts up to 3 minutes. If the three minutes elapse before the fight has been won the result will go to a judge's decision.
- F. At the 2-minute mark (1 minute remaining) a trap door will be opened by the referee, falling into this trap area is considered as your bot being knocked out and you lose the match.
- G. The result of each fight will be recorded on each of the bot's fight cards.
- H. At the referee's signal the bots will be powered down and safely removed from the box so that it may be prepped for the next fight.

Rules of Engagement

A. No bot will be allowed to enter the fight box without proof of the required safety passes.

B. There are 3 valid ways to win a fight:

Through Knock out (by rendering the other team immobile)

Through Tap Out (By the forfeiting team pressing the tap out button)

Through judges decision

C. As the fight box floor is made of wood. Any fire will constitute the end of the match. (if your bot catches on fire or there is a suspected lipo fire) you will forfeit the match by knockout.

D. Your bot may not enter the box with any exposed power sources.

E. If at any time the bots become stuck together, the fight will be stopped and the bots will be detangled. Once detangled the fight will resume. This detangling may only occur once per match, following which the match will go to a judge's decision.

F. A bot may pin its opponent against the side (curb) of the box for a maximum of 10 seconds to show control. Likewise, a bot may only carry an opponent around (or suspend off the floor) for 30 seconds before releasing and disengaging.

Competition Rules

If we have more than 16 teams bots will compete in three-way fights for at least 2 qualifying rounds. The matchups are generated randomly. They will earn points which decide whether they will compete in the elimination bracket. Points are earned in the following ways:

Participating in a fight – 1pt

Knocking out another robot – 1pt

Finishing in 3rd – 1pt

Finishing in 2nd – 2pts

Finishing in 1st – 3pts

After the three qualifying rounds, the 16 robots with the most points (Ties will be broken by picking one of the robots at random) will enter a single elimination bracket. The quarterfinals will be four two-way fights, the Semifinals will be two two-way fights, and the final will be one two-way fight.

In the event that we do not have qualifying rounds, we will move directly to a randomly generated bracket an example of which is depicted below. This system ensures that each team will have at least 2 fights.

Rule Adjustments

These rules are merely a set of guidelines. They can be amended to adjust to changing technology and venue conditions. If possible, feedback will be requested from contestants and spectators to make the rule changes as fair as possible, but the final decision rests with the event organizers.

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