Combat robot (907 g, Beginner) rules

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1. Description

The combat robot discipline involves battles between remote-controlled robots in a controlled environment. The goal of the competition is to defeat the opponent's robot by pushing it out of the battle area. The Beginner category has been created with the aim of ensuring equality in robot components, to reduce the advantages of more expensive robots.

2. Competition rules

2.1. A participant may only operate one robot per competition.

2.2. Battles between robots must not exceed 3 minutes.

2.3. Each robot battle consists of one round.

2.4. If there are pits on the field, touching the bottom of a pit results in the robot losing the battle, except in the case of a multi-robot*.

2.5. If a robot stops on the field or becomes uncontrollable, the referee may allow 10 seconds to regain control of the robot. Without regaining control, the robot loses the battle.

2.6. At any point during a battle, the robot's operator may choose to forfeit. In such a case, the battle is considered lost.

2.7. If robots become entangled during a battle, the referee may require them to disengage, giving them 5 seconds. If the opponents do not back away from each other, the battle will be paused and the robots will be returned to their starting positions. The battle will then be resumed.

2.8. If it is established that a robot was not switched on but had already collided with the opponent's robot, the battle may be stopped and repeated, if the referee so decides.

2.9. If no winner can be determined during a battle, the referee decides subjectively by their own criteria - for example, the most interesting, the most aggressive, the most active, etc.

2.10. If it seems to the referee that the result of a battle will be a draw, the referee may end the battle early without waiting for the maximum time allowed.

2.11. The robot must be placed in the battle area and be ready to fight at the time specified by the competition organizer, from the moment it has been called to the battle. Otherwise the battle is lost.

2.12. After the battle ends, only the robot operator or the referee may remove the robot from the field. It is the operator's responsibility to ensure that their robot is in a safe state before lifting it. If the robot has active combat tools, they must be turned off after the battle.

2.13. If the referee suspects cheating, they are entitled to inspect the participant's robot (by opening it). Refusal of this inspection or the discovery of cheating will result in disqualification.

2.14. The referee's decision or the result may only be contested at the end of the specific attempt. Complaints will not be considered afterwards. Once a dispute is resolved, the referee's decision cannot be changed.

3. Robot

3.1. The robot's maximum size and weight:

Size	Weight (g)
Unlimited * * Take into account the size of the arena door, which is different for each organizer	Traditional mode of movement - 907 Non-traditional mode of movement - 1300

Table 1. Robot's maximum parameters

3.2. Outside the arena, all sharp edges must be covered with a protective shield.

3.3. Robot limitations:

- Weight 907g, when using a non-traditional* mode of movement - 1300g
- Up to a 3S (12.6V) LiPo battery
- Electronics and wires necessary for operation. Wires and electronic boards must not be used as a weapon or as protection against a weapon. The voltage in any part of the circuit must not exceed 12.6V.
- Metal parts are prohibited. The exceptions are motors and their original mounts, electronics, elements that enable the weapon's movement (e.g., gears), screws and springs, which are not used as attack or protection elements.
- It must be possible to disconnect the power with a switch, without additional tools (pulling out a connector does not count).
- Efforts must be made to build the robot safe. If the referee considers the robot too unsafe for itself or others, it may be disqualified.
- If a robot is built to intentionally exploit a loophole in the rules that is contrary to the objective of the discipline, for example, a large heatsink attached to the motor controller to use as a chassis, then the robot may be disqualified.
- Permitted remote control frequencies: 5.8 GHz, 2.4 GHz, 868 MHz and 433 MHz.

*A non-traditional mode of movement is one in which the robot moves without freely rolling elements, using mechanical steps, pushing or other direct-motion mechanisms that do not rotate continuously against the ground. For example, tracks and wheels are a traditional mode of movement, whereas a mechanism that shifts weight with the help of a rotating motor, imitating the movement of legs, is a non-traditional mode of movement.

* Robots consisting of physically separate independently controllable parts are called multi-robots. As long as any part of the robot is still capable of movement, has not become stuck and has not fallen into a pit, the robot can be considered "alive."

3.4. Prohibited to use as a weapon:

- Weapons that cause invisible damage.
- Liquids.
- Adhesives and sticky weapons.
- Ropes and entangling-type weapons.
- Heat and flame weapons.
- Explosive weapons.
- Magnetic / induction weapons.
- Pneumatic weapons.
- Projectile / ammunition weapons that detach from the robot.

4. Arena

4.1. The minimum area is 2 m^2.

4.2. In undefined places, pits of various shapes may be placed with a small barrier in front; a robot getting into a pit is considered a loss.

4.3. Various other traps or moving objects that can damage the robot may also be placed in the arena.