Antweight 200 g and 454 g Robot Combat Rules

1. Definitions

Antweight 200 g – a robot with a total mass, including all components, not exceeding 200 g.

Antweight 454 g – a robot with a total mass not exceeding 454 g.

Rolling robots – robots that move using wheels, tracks, or other rotating elements.

Walking robots – robots that move using legs or other mechanisms without wheels or tracks.

Multi-robot system – a combat entry consisting of two or more independent robots fighting as one team.

Arena – an enclosed combat area with a protective enclosure.

Immobility – a state where a robot can no longer demonstrate controlled movement and the judge begins a 10-second count.

2. Movement types

Robots may be:

• Rolling robots – using wheels or tracks.

• Walking robots – moving with mechanical legs or other non-wheeled methods.

• Multi-robot systems – two or more independent robots competing as one team, provided their combined weight fits within the class limit.

3. Weight limits

Robot dimensions are not restricted. The robot must comply with the 200 g or 454 g weight limit and fit inside the arena.

Walking robot weight calculation:

Walking component weight = 1.5 × (rolling robot limit – rolling component weight)

Maximum weight for 100% walking robots:

• 200 g class – up to 300 g

• 454 g class – up to 681 g

4. Construction safety

Robots must be designed so as not to endanger spectators, judges, or the surroundings. Damage to opponents during combat is allowed; however, all hazardous parts must be completely safe outside the arena.

Robots must not break into dangerous fragments. Partially detached weapon elements are allowed only if they remain securely tethered by cord or line, and the tether is not used as an entanglement device.

5. Rotating and stored energy weapons

Rotating weapons, flywheels, and other stored energy weapons must have a clearly visible mechanical locking device. The locking device must be easy to identify, in a contrasting colour, and securely fitted so it cannot be removed accidentally.

Locking devices must be demonstrated during technical inspection. Robots without locking devices will not be allowed to compete.

6. Control

Use of 2.4 GHz control systems is recommended.

IR controllers that cannot be reliably paired to a single robot are not permitted.

If control signal is lost, the robot must stop automatically (automatic stop on signal loss).

7. Power on/off

Each robot must have a reliable method of switching power on and off, allowing power to be cut quickly and safely. When switched off, both drive and weapon systems must stop.

8. Batteries

Batteries must not contain liquid electrolyte.

Maximum permitted voltage is 50 V.

LiPo batteries must not be left unattended while charging; the use of LiPo charging bags is recommended.

If a battery becomes exposed during a fight, the match is stopped and the robot loses the fight.

9. Weapons

Prohibited weapons include:

• liquids, glues, foams, powders;

• fire, explosives, chemical weapons;

• lasers and strobe effects;

• electromagnetic interference devices;

• entanglement devices (nets, cords, etc.).

Permitted weapons include:

• rotating weapons;

• impact weapons;

• lifting and pushing mechanisms;

• partially detached elements, provided they remain safely secured.

10. Pneumatics

Only non-flammable gases are permitted – CO_2, air, nitrogen.

All tanks must be securely mounted.

Pneumatic systems must be checked before fights.

11. Arena

Robots may only be activated in a fully closed arena.

Only judges may open the arena.

Spectators must not touch the arena during fights.

12. Combat rules

Match duration is 2 minutes (unless the organiser specifies otherwise).

If a robot enters a pit, the judge starts a 10-second count. If the robot does not escape the pit and regain controlled movement within this time, it is declared the loser; if it escapes and regains control, the fight continues.

If a robot becomes immobile, the judge starts a 10-second count.

Contact with the opponent cancels/resets the count.

A robot may surrender by clearly announcing it.

Maximum holding time is 10 seconds.

Holding is defined as actively restraining, pinning, or trapping the opponent so they cannot move freely or disengage, regardless of whether the restraint is caused by a weapon or by drive.

After 10 seconds, the judge will give a verbal instruction to disengage. If the robots cannot separate on their own, the match is paused briefly and the judge separates them.

A multi-robot system loses when all robots within the system have been eliminated.

If a robot leaves the arena before first contact, the fight is started again (maximum 2 restarts).

If both robots enter a pit or leave the arena at the same time and the fight ends as a result, judges will apply the aggressor rule if the aggressor is clearly identifiable. If the aggressor cannot be determined, the fight is started again without repairs.

13. Judging

Judges evaluate:

• aggression,

• control,

• damage,

• mobility.

In close situations, a common-sense decision may be used, awarding the win to the robot that clearly dominated the fight.

14. Organisational rules

Competitors must follow organiser instructions.

Robots will be inspected before the competition.

Teams may not share transmitters or robots.

Robots must be ready to fight within 5 minutes of being called.

Robots with dangerous weapons may only be tested in the arena or a designated test box.

Neither competitors nor spectators may touch the arena during fights.

Random compliance checks may be carried out at any time.

15. Technical inspection

Technical inspection will check:

• weight,

• control system and failsafe (automatic stop on signal loss),

• battery safety,

• weapon locking devices,

• structural integrity,

• pneumatics (if applicable).

16. Responsibility

Competitors are responsible for the safety and construction of their robots.

Organisers are not responsible for damage to robots or equipment if the rules are not followed.