

# RULES OF ROBOTIC TOURNAMENT

## “XIV Robotic Arena”

### Drone Stunt

“KoNaR” Student Interest Group  
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#### Section I

##### General

###### § 1

1. This document regulates rules of the tournament in category “Drone Stunt”.
2. In case of 3 or less robots, the category is played as a demonstration and no prizes will be awarded for it.

#### Section II

##### Robot specification

###### § 2

1. Robots can be pre-built, commercial construction.
2. Remote control can be applied using Bluetooth, infrared or radio communication.
3. Remote control receiver and transmitter must operate within frequencies legal within Poland:
  - (a) 26,995 MHz,
  - (b) 27,045 MHz,
  - (c) 27,095 MHz,
  - (d) 27,145 MHz,
  - (e) 27,195 MHz,
  - (f) 34,995 - 35,225 MHz,
  - (g) 40,665 MHz,
  - (h) 40,675 MHz,
  - (i) 40,685 MHz,
  - (j) 40,695 MHz.

- (k) 2,4 GHz - only for control and fpv system,
- (l) 5,8 GHz - only for control and fpv system,
- 4. Robots can't weigh more than 2000 g extended by precision of a measuring equipment.
- 5. Robots may be type of a fixed wing ( plane, glider), rotorcraft ( helicopter, multicopter ), ornithopter (moving wings) or a blimp.
- 6. Ready to fly robots must fit in given dimentions:
  - (a) 1 x 1 x 2 m cuboid for blimps.
  - (b) 1 x 1 x 1 m cube for the rest.
- 7. Robots cannot have any sharp edges or other potentially hazardous elements with exception to propeller blades.
- 8. Any flaming devices are not allowed.
- 9. Any devices that could emit gas, fluids or powder are not allowed.
- 10. Any devices that require flammable gases are not allowed.
- 11. For safety reasons constructor has to have an option of taking direct remote control over the robot at any point in time.
- 12. Robots functionality cannot be dependent on varying environment during tournament, such as lighting (from dusk to bright reflectors), smoke, loud music or laser effects. The show may be lit by regular lightbulbs, halogens, energy saving lightbulbs, fluorescent lamps, LEDs and other lightsources common in households. Organizers have no control over street lighting near windows of the building. During the show it will be forbidden to use camera flashes and other intense light.

### **Section III**

#### **Route Specification**

##### **§ 3**

- 1. Route is in a shape of a lemniscate, 10 m long and 5 m wide.
- 2. Route contain his own enviroment with holes, bridges etc.
- 3. Any holes will be at least 100cm in diameter.
- 4. There will be safety net extended around the route.

### **Section IV**

#### **Competition and Winner Selection Rules**

##### **§ 4**

- 1. Points are awarded by competition judges.
- 2. The robot that earns most points within their designated 10 minutes will be the victor.
- 3. Points are earned for style.
- 4. Robot can start and stop anywhere.
- 5. The robot must stop before time runs out.
- 6. Each safety net touch ends competitions, points do not expire.
- 7. Robot can touch ground and enviroment but cannot destroy it.