

DRONE RACE CIRCUIT

[FPV]

RULES & REGULATIONS

ROBOVISIONÄR'26 // MISSION M-03 // 24-25 SEPTEMBER 2026

First-person flight through a gated circuit. FPV only.

ENTRY FEE	TEAM	EXTRA MEMBER	PRIZE POOL
₹1,500	1-3	+₹250	₹60,000

// SECTION 01

GENERAL RULES & TEAM STRUCTURE

- 1.1** A team typically consists of up to 3 members (1 Captain / Pilot + up to 2 Operatives). Additional members are permitted for an extra fee of ₹250 per member. E-certificates will be provided for them.
- 1.2** One member must be explicitly designated as the **Drone Pilot** prior to the start of the competition. Only one pilot per team can operate at a time.
- 1.3** The team must construct their own drone and possess a deep technical understanding of all onboard hardware and aerodynamics.
- 1.4** The Drone Pilot relies strictly on First-Person View (FPV) goggles. Line-of-sight flying to navigate the circuit is prohibited.
- 1.5** Pre-programmed flight paths, GPS positioning, or automated height correction are strictly prohibited. Drones must be fully manually controlled.

// SECTION 02

THE DRONE SPECIFICATIONS

PARAMETER	SPECIFICATION
Configuration	Tri, Quad or Hexacopters. No commercial / pre-built drones. Max 4 propellers for quads.
Weight limit	No limit
Battery	Minimum 3S, Maximum 6S
Propellers	Minimum 3 inch, Maximum 6 inch. Any material except carbon fiber and full metal.
Antennas	Circular antennas only on quads, and must be in good condition
Launchpads	Custom launchpads allowed, provided they impart no kinetic energy

- 2.1 FPV goggles or an FPV screen are compulsory. Line of Sight (LOS) flying is strictly prohibited.
- 2.2 Turtle Mode is permitted during the race to flip and recover the quad after a crash, provided it is manually activated.
- 2.3 All frames must pass a safety and airworthiness inspection by the referee prior to entering the flying zone.
- 2.4 Once the airframe has been checked and approved, it must not be modified or changed, or it will require immediate re-inspection.

// SECTION 03

RADIO & FREQUENCY CONTROL

- 3.1 **Analog FPV:** VTx rating must be switchable 25 mW / 200 mW on 5.8 GHz, supporting at least 40 channels. The VTx and VRx must support Raceband (5658, 5695, 5732, 5769, 5806, 5843, 5880, 5917) and channels 5645, 5740, 5800, 5860, 5945.
- 3.2 **Digital FPV:** Only DJI O3, DJI O4, HDZero and Walksnail digital FPV systems are allowed. Maximum transmission power must be capped at 700 mW.
- 3.3 Radio systems must not cause interference with other frequency users on the grid. Jamming or external interference is grounds for immediate disqualification.
- 3.4 Pilots must set their frequencies, VTx output levels and LEDs according to the Event Pilot Roster before entering the pit area or racetrack.

// SECTION 04

THE FLYING ZONE

PARAMETER	SPECIFICATION
Arena dimensions	100 – 150 square metres
Track width	2 metres (approximately)
Obstacles & markers	LED-lit race gates, illuminated pylons and directional arrows
Flight features	Sharp turns, hairpin bends, straightaways and elevation changes
Pit stops	Specific checkpoints designated for battery swaps and sensor calibration

// SECTION 05

COMPETITION TIMING & RACE SCENARIOS

- 5.1 Game Clock:** Each team is granted a maximum access time of **5 minutes** on the grid. The clock starts when the referee commands the round to begin.
- 5.2 Run Time:** The run time starts the exact moment the drone takes off from the launch pad and stops when the drone lands successfully past the finish zone.
- 5.3 Missed gates:** If a pilot misses a gate or obstacle, they must turn around and retry. Failure to clear an obstacle results in disqualification for that lap.
- 5.4 Crashes & collisions:** If a drone crashes, the pilot must disarm immediately. In the event of a mid-air collision the race continues, unless the drones become non-operational.
- 5.5 Out of bounds:** If a drone flies out of the designated track boundary, it must return immediately. Repeated track violations will lead to disqualification.
- 5.6** A restart may be requested if the drone crashes, loses video feed, or misses a mandatory LED gate. False starts will incur a 5-second penalty or force a restart.
- 5.7** There is **no limit** on the number of restarts, provided the 5-minute Game Clock has not expired. The Game Clock does not stop during restarts.

// SECTION 06

SAFETY, CONDUCT & PIT AREA

- 6.1** Pilots must carry a minimum of 2 batteries and their own battery chargers. Charging points will be provided. All batteries must be stored in LiPo-safe bags or fireproof containers when not in use.
- 6.2** Pilots must bring their own soldering irons and repair materials. Unauthorized soldering outside the designated repair zone is not allowed.
- 6.3** Powering up a drone in the pit area without explicit clearance from the referee is strictly prohibited.
- 6.4** No team member may deliberately touch, handle or interfere with another team's drone, transmitter or equipment.
- 6.5** Pilots must land and disarm only in the designated landing zone. Unruly behaviour, belligerence, or failure to comply with safety directives will result in immediate expulsion.

// IN SHORT

You get a maximum of **5 minutes** on the grid (Game Clock). You can crash and restart as many times as you need within that window. Your score is the **fastest single continuous flight from takeoff to landing** (Run Time). Pre-built commercial drones are banned.

// CONTACT

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// COMMUNITY

Live updates, briefings and Q&A run in the participants' WhatsApp community. **Join here** ↗