



DRONE RACING

By

IDRL(Indian Drone Racing League)

Total Prize Pool: INR 75,000/-

- **Dates of the Event**

- A. 1st Feb 2019 - 101 (IDRL Beginner + BITS Goa participants) Race and Selections.
- B. 2nd Feb 2019 - Pro Class Practice Day.
- C. 3rd Feb 2019 - Pro Class and Selections Race Day.

- **Total Prize Money for top 3 winners of the event will be Rs. 75,000/ Distribution will be:**

- 1st - Rs. 35,000/-
- 2nd - Rs. 25,000/-
- 3rd - Rs. 15,000/-

- **Total Travel Reimbursement of Rs. 12,000/-** will be reserved for pilots positioned from 4th to 7th in the event. Each pilot will be reimbursed a maximum amount of Rs. 3000/- upon submitting proof of travel to Bits Goa.



Official IDRL Rulebook v2.1 | Last Updated: Dec 13th, 2018

Important terms:

- **DNS:** Did Not Start
- **DNF:** Did Not Finish
- **DQ:** Disqualified
- **OOB:** Out of Bounds
- **E:** Eliminated from the entire race

General Rules

1. Pilots must show Fail Safe and Arming/Disarm Working at Registration Desk
2. Drone Specs:
 - Upto 6 inch props.
 - 6" max frame size
 - 2, 3 or 4 blade max.
 - FPV goggles / FPV screen compulsory. No Line of Sight Flying allowed.
 - Any material for props but not Carbon Fiber.
 - No Weight Limit
 - VTx Rating = Switchable 25mW/200mW 5.8 GHz for FPV with at least 40 channels with support for Raceband Channels.
 - These channels need to be supported on VTx and VRx:
 - **Raceband Channels (5658, 5695, 5732, 5769, 5806, 5843, 5880, 5917) and Channels 5645, 5740, 5800, 5860, 5945**
 - 4S Max Battery Pack
 - **Turtle Mode is allowed at IDRL** to flip and recover your quad.
3. Pilots will carry a minimum of 2 batteries
4. Pilots will carry their own battery chargers, charging points would be provided.
5. Pilots should bring their own soldering and other materials.
6. All frames must pass a safety and airworthiness inspection. Once the airframe has been checked and approved, it must not be modified or changed, or it will need to be re-inspected.
7. Pilots are allowed to bring their own launch pads to races.
8. Pilots will only use the circular antenna on quads and antenna must be in good condition.

Venue Rules

1. Pilots must adhere to all rules within the competition venue, and will not fly in any other part of the venue unless it is a designated flight zone.
2. Pilots must arrive at the venue with their complete setup 1 hour before the official race time and must be in complete READY-TO-GO state 15 mins before race time.



3. Pilots will NOT be given any practice sessions during the 15 mins before the race starts.
4. Pilots who are not in READY-TO-GO state 15 mins prior to race start will be disqualified from participating in the race.
5. Pilots MUST NOT assume any change of race time until it is officially announced by the organizers.
6. Pilots must contain all equipment and airframes within the pilot pit area and must not solder, weld or cause any spark within the pit area. There will be established workbench areas for soldering, repairs, and modifications.
7. A charging station would be provided with power points.
8. General charging of electronic devices including radios or any device with a self-contained power supply is permitted.
9. All batteries must be stored in a LiPo-safe bag or in an approved, fire-resistant container.

Race Rules

1. Pilots must stay within all prescribed flight paths.
2. Pilots must keep all aircraft in the disarmed state until they have been given the "ARM" signal. This will happen only when the aircraft has been placed on the starting deck.
3. All pilots will be allotted their respective frequencies and split into heats well before race day. Frequencies will be primarily allotted from Raceband Channels (5658, 5695, 5732, 5769, 5806, 5843, 5880, 5917) or from 5645, 5740, 5800, 5860, 5945 in case of certain situations where Raceband is problematic.
4. Hard 3 min Pilot seated Goggles Down Timeout Timer with drone placed on race pod or ground. No excuses tolerated for even 1 extra sec. DQ for heat if timeout and E if complaining further and delaying others.
5. In event of unexpected media intervention while Timeout timer, timer paused and resumed on the announcement.
6. E for any nonflying pilot discovered to have plugged in at the pits during any heat.



7. 1 Race of 4 Pilots for Finals with winners based on First Finish order.
8. Any heat including finals will restart only if there is a false start or contact between any two drones resulting in a crash previous to the start gate.
9. No assumptions for any new rules tolerated until incorporated in the Official IDRL Rulebook.
10. Given race circumstances, all pilots have to say yes to a suggested modification for the rule to be applied to that race.
11. Pilots will **NOT be given any Retries**
12. Pilots will be given best of 3 rounds max. in which to record their best lap time in the Qualifier Rounds. 1 round is mandatory while 2 rounds are optional if the pilot is happy with his/her lap time in any of the 3 rounds max.
13. Pilots must adhere to the prescribed launch sequence. No movement before the starting signal. False starts will incur a penalty.
14. Pilots must maintain control of their aircraft at all times and only fly within their skill level. Any pilot who exhibits unsafe flying procedures may be disqualified at any time.
15. Once pilots have successfully completed all laps, they must return to the start/finish pad, land and DISARM.
16. Pilots that have crashed at any point during the heat and are unable to resume racing must DISARM their aircraft and wait until the heat is over.
17. Racetracks would have gates, pilots must successfully fly through all gates, around the flags, and other obstacles (if any) on the course. If a pilot misses an obstacle or gates, they must safely turn around and attempt the obstacle again. If they don't turn around and continue to race, that entire heat would not be counted.
18. If a pilot due to any reason, knowingly/unknowingly/accidentally goes out of bounds then pilots first priority should be to get the drone back in the bounds. And continue to race. If such incident occurred multiple times then organizers have full right to disqualify the pilot from heat or whole event.
19. In the event of a crash or the inability to resume flight safely, the pilot must immediately DISARM their aircraft and give the Thumbs Down signal. For that heat, the pilot is deemed as DNF.



20. Pilots may have multiple airframes, and each airframe must pass all safety and airworthiness checks before flying.

21. Modifications to any of above or new Race Rules require a majority vote in the IDRL Premier X Group.

Judging Rules and Race Format

- All races will be governed by an appointed team of judges/organizers.
- All races will follow the general rules and regulations of the competition.
- Each race will be monitored by judges, cameras, timing/lap systems and volunteers to maintain fair and accurate competition.

The Race Format will be as follows:

1. There will be 2-3 Rounds of Qualifiers with pilots categorized into multiple heats.
2. Each Heat will run for 3 laps which usually lasts for 3-4 mins.
3. In the Qualifiers, each pilot will be given a chance to set their fastest recorded time.
4. Top X number of pilots (usually 8 pilots where X is dependent upon the number of attending pilots) based on their fastest time set in the Qualifiers will progress through to the A-Main Round.
5. Pilots ranked beyond 8 in the Qualifiers will go into the B Main Round.
6. One Pilot from B Main Round based on fastest lap timing will join the 8 pilots into the Semi-Finals which will have a total of 9 pilots.
7. 1 or 2 Rounds of Semi-Finals will then be held depending upon the available time during the day with 4 pilots qualifying into the Finals based on fastest lap timing.
8. All 4 pilots will go at once in the Final Race with the first to complete 3 laps winning the competition and the others ranked according to their respective finishes.



9. Beginner Race Selections for Pro Race: Top 3 Pilots from Beginner Race automatically qualify for Pro Race. The remaining pilots are individually judged by the race judges on various parameters of flying such as speed and control of their drone to see if their skills can enable them to run the Pro Race and are accordingly qualified or disqualified. There is a “feel” system employed where the judges need to become confident of the beginner's ability to qualify for the Pro Class.
- In the event of a mid-air collision after the start gate, pilots can resume the race if they are able to take off again without intervention, otherwise, their heat is considered a DNF.
 - Any practice or behavior deemed unsafe, (i.e. flying above the max ceiling height) will result in an immediate disqualification.

Sample Race Spreadsheet: <https://goo.gl/cMu9wt>