DSI International Drone Sports Championship 2018

2018. 9. 15~16

DSI International Drone Sports Championship Race Rules

1. Quad Specs

Weight
- Minimum 600g
- No restrictions on battery & motor

Frame
- Minimum 250mm (9.84in)

Propeller
- 152mm (6in) max. in diameter
- Metal propellers prohibited

Fail Safe
- Pilots must be able to shut off motors (shut off power) immediately upon emergencies.

VTX
- ImmersionRC Tramp HV, TBS UNIFY 5G8, FURIOUS FPV Stealth Race. Standard 25mw.
- Pilots are encouraged to use personal receivers. If using a receiver provided by the organizers, pilots must bring their own cables and adapters (see image below) to fit their goggles and monitor, as these will not be provided by the organizers.

Antenna
- 5.8GHz RHCP

Video (OSD)

- Video settings must be preset to show the pilot's call name or name (must be identical to the name printed on pilot's uniform) on the screen.

HD Video Camera (Action Cam)

- Weight of Action Cam must be at least 40g (1.4oz) with an image quality of at least 1080p. If the Action Cam weighs under 40g, additional weights must be added to meet the criteria.
- SD cards must be formatted beforehand to store footage from that day only.
- Pilots must submit SD cards after the race.
- Submitted video footage may be used by organizers to promote DSI and IDSC. Permission from the organizers must be attained in order to use footage for any other promotional/commercial purposes.

LED

- A total of 40 LEDs must be attached to the quad: 8 on each arm – 4 on top and 4 on the bottom – plus 8 on the body (see image below).
- LEDs must be set to alternate between 4 colors – blue, green, red, and yellow.

2. Race Rules

- All pilots must sign the Agreement of Race Participation.
- All pilots may register up to 5 quads, which shall be kept in the storage area.
- Repairing of quads may take place only within a designated area (quad storage area).
- Battery, VTX, and LED checkups shall take place in the waiting area before the race.
- If during the race a pilot not participating in that particular heat turns on his/her quad, he/she will be disqualified (DQ).
- All pilots may appoint a helper to assist his/her flight. Helpers may not put on FPV goggles.
- Practice flights may only take place at the time and place designated by the organizers; all pilots shall be given an equal amount of practice time.
- Timing shall be done in two ways – electronically and manually (as backup).

- Pilots may start the race only upon hearing the Starter's signal.
- Any pilot who fails to start within 30 seconds after the start signal is sounded shall be DQ.
- Pilots starting before the sound of the signal shall be DQ.
- A 3-minute rule applies to each race (duration from waiting until start must be 3 minutes or less).
- Pilots must pass through all obstacles. For each obstacle that the pilot fails to pass there will be a penalty of an added 5 seconds.
- If a pilot intentionally crashes into another pilot's quad during the race, the initiator of the crash shall be DQ and the disadvantaged pilot may be granted a rematch if the judges deem necessary.
- Video noise issues are to be decided by the Chief Judge, and if certain of an external cause a rematch may be granted.
- If a pilot wishes to submit an objection, he/she shall do to the Chief Judge so after the current round is over. Submitting an objection while the race is still ongoing is thought to be a disturbance for which the pilot may be DQ and deprived of the right to participate.
- The organizers shall record each race, but if unable to record the race due to a technical mishap, pilots' footage may be used as a basis for judgment.
- Quads which break away from the course, are incapable of normal flight due to uncontrollable movements or repeated breaking of the video feed, and thus pose a security problem, may be ordered by the judges to land.
- All problems caused in relation to the outdoor race shall be dealt with by the Chief Judge's decision. The management of the race and detailed schedule are subject to change depending on onsite circumstances.

3. Race Operation
* Group Formation for Preliminary Race (henceforth "Preliminary Race")
- The Preliminary Race consists of 3 rounds with 3 laps in each round.
- The highest score out of the 3 rounds is the final score of the Preliminary Race.
- 4 pilots compose 1 group for the Preliminary Race.
- Groups for the Nationals Division and Clubs Division are formed based on Preliminary Race scores.

* Nationals Division (Individual Race) – e.g. Race of 45 pilots
1) Group Formation – Groups are formed based on Preliminary Race scores.   (example)

Group A	Group B	Group C	Group D	Group E	Group F	Group G	Group H	Group I	Group J	Group K	Group L
1st	2	3	4	5	6	7	8	9	10	11	12
24	23	22	21	20	19	18	17	16	15	14	13
25	26	27	28	29	30	31	32	33	34	35	36
			45th	44	43	42	41	40	39	38	37

   a) If pilots of the same nationality are put into the same group, one of the pilots shall switch groups with the pilot of the next ranking.

b) If the number of participants is not a multiple of 4, the number of pilots in each group shall be reduced starting from the top group and so on.

2) Knockout Round for Round of 16
 a) 3 or 4 pilots form one group and the highest ranking pilot in the group shall advance to the Round of 16.
 b) If there are not enough pilots eligible to advance to the Round of 16, pilots ranking second place in each group shall advance to the Round of 16 in the order of their scores. (Pilots ranking third may not advance to the Round of 16 regardless of their scores.)
 c) Each race is composed of 3-5 laps.

3) Round of 16 – Finals
 a) Groups of 2 pilots compete in tournament format with the winner advancing to the Finals.
 b) Each group participates in 1 race. The Finals are 3 consecutive matches to decide the winner.

* Clubs Division (Team Race) – e.g. Race of 15 clubs
1) Group Formation – Groups are formed based on Preliminary Race scores
 a) The club to which 1st-8th ranking pilots belong decides the starting group and designates a club from the remaining to race against in the first round.
 b) If the number of participant clubs is an odd number, the club to which the highest ranking pilot belongs advances to the next round with an unearned win and the 2nd place pilot's club selects its opponent.

2) Race Process
 a) Each club team is composed of 3 pilots.
 b) All races are in tournament format.
 c) Each race is composed of 3-5 laps.
 d) Each club races against its opponent club 1:1 for a total of 3 times, and the club which wins 2 out of these advances to the next round.
 e) Each pilot may only race once per round.
 f) Each club must submit the order in which its pilots will race to the Chief Judge at least 30 minutes before the start of the round. This information remains unrevealed until the start of the race. Changes to the order cannot be made once the race starts. However, if a technical glitch occurs that makes it impossible for the race to progress, the overall order of groups may be modified.
 g) Even if one club wins twice and it is revealed who will advance to the next round, the third race shall still take place.

3) Tournament Regulations
 a) Tournaments are set up so that after the first round the Round of 8 may commence.

b) If the number of clubs is insufficient to form a Round of 8 structure, some of the eliminated teams may advance to the next round in order of the teams with the best score.

c) If the number of clubs exceeds that which is needed to form a Round of 8 structure, some of the winning teams may be eliminated in order of the teams with the lowest score.

* Slalom Race

- All pilots shall participate. The race is held in individual format.
- 3 pilots shall form one group, with each starting in sequence.
- Pilots shall zigzag through the flags placed throughout the race course. Rankings shall be decided in order of the shortest lap time.
- Missing a flag will be given a penalty of an added 5 seconds (backtracking is not allowed.)
- Flying over a flag will be given a penalty of an added 5 seconds (backtracking is not allowed).
- If a pilot crashes into another pilot while re-entering the course after breaking out of it, the former shall be DQ.