



*Fédération  
Aéronautique  
Internationale*

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# **2019 World Drone Racing Championship Grand Final Sporting Rules**

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*Maison du Sport International  
Av. de Rhodanie 54  
CH-1007 Lausanne  
Switzerland  
Tél. +41 (0)21 345 10 70  
Fax +41 (0)21 345 10 77  
E-mail: [info@fai.org](mailto:info@fai.org)  
Web: [www.fai.org](http://www.fai.org)*

## **FEDERATION AERONAUTIQUE INTERNATIONALE**

**Maison du Sport International, Avenue de Rhodanie 54, 1007 LAUSANNE, Switzerland**

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The rules for the World Drone Racing Championship (WDRC) Grand Final are based on the F9U (RC Multi-Rotor Drone Racing) class rules.

**Note:** F9U class rules are part of the FAI Sporting Code - Section 4 Aeromodelling - Volume F9 Drone Sport.

Multi-rotor Drone Racing consists of several multi-rotor model aircraft flying together through a closed racing circuit.

**Note:** A multi-rotor is a rotary wing radio-controlled model aircraft equipped with at least three power driven propeller devices.

The generic term 'model' will be used in the present document.

Each model is operated by an FPV (First Person View) pilot who is considered as the competitor. The FPV pilot is equipped with a headset goggle that allows him(her) to pilot from the video picture of the onboard camera which is transmitted in real time on his(her) headset goggle.

The FPV pilot is assisted during the race by one and only one helper who stays next to him during the whole flight. The helper is mandatory.

The main task of the helper is to keep the model in visual line of sight. He must inform the FPV pilot of anything occurring that can affect his(her) piloting, especially about safety. If the helper requests the FPV pilot to land or to cut off the motors, he must do it immediately. In case of emergency, the helper is authorized to shut off the transmitter in order to trigger the fail-safe device.

## 1. PARTICIPANTS

### 1.1. Individual competitors qualified from the 2019 World Cup results

The 16 best placed competitors in the 2019 Drone Racing World Cup ranking will be directly qualified to participate as individual competitors to the WDRC Grand Final.

In addition, will be also qualified the competitors who have been placed:

- 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> in a Drone Racing Masters World Cup Series event,
- and/or 1<sup>st</sup> in a Drone Racing Challenger World Cup Series event subject 40 competitors minimum have effectively flown in the event.

Those individual competitors compete for the individual classifications (overall and where appropriate Junior and Women).

**Note:** Only the individual competitors registered in addition in their national team will be considered for the national team classification.

### 1.2. National teams

Every National Airsport Control (NAC) may enter a team consisting of three competitors extended to:

- four competitors providing at least one is a junior (age limit 18 years in the year 2019) or female;
- and to a maximum of five competitors providing at least one is a junior and one is female.

NAC's are encouraged to consider for their national team the individual competitors from their country who will be eventually qualified from the 2019 World Cup results (See 1.1).

**Note:** A team manager must be registered for each national team. The team manager may be a dedicated person or one of the competitors of the national team.

In addition to the national team classification, every competitor of a national team also competes for the individual classifications (overall and where appropriate Junior and Women).

### 1.3. Other individual competitors

Host NAC will be entitled to issue, in addition to its national team, three individual invitations (wild cards) for competitors from the host country.

FAI may also issue invitations (wild cards) to any international drone racing league of its choice.

All individual competitors will only compete for the individual classifications (overall and where appropriate Junior and Women).

### 1.4. Helpers

Any competitor may be helper of other competitors. The team manager may also act as helper.

Additional helpers may be registered subject to limit to one helper per competitor.

## 2. RACING CIRCUIT

The racing circuit will be outdoor.

The design will be approved by FAI, and will be made public and published about two months before the WDRC Grand Final.

## 3. GENERAL SPECIFICATIONS FOR MODELS

A 1 % tolerance is applicable for inaccuracy of the measurement devices for size, weight and battery voltage.

The model must be equipped with a fail-safe device, the triggering of which stops the motors.

The following are strictly forbidden:

- Pre-programmed manoeuvring device.
- System for automatic positioning and/or path rectification in longitude, latitude or height.

**Note:** *Software recovery modes such as 'anti Turtle' or 'anti crash' and automatic system or which can be activated by the pilot in order to level back the model after a crash are permitted.*

### 3.1. Weight and size

The total weight of the model including all equipment necessary for flight (including batteries) shall not exceed 1 kg.

The axes of all motors must fit within a circle of 330 mm diameter.

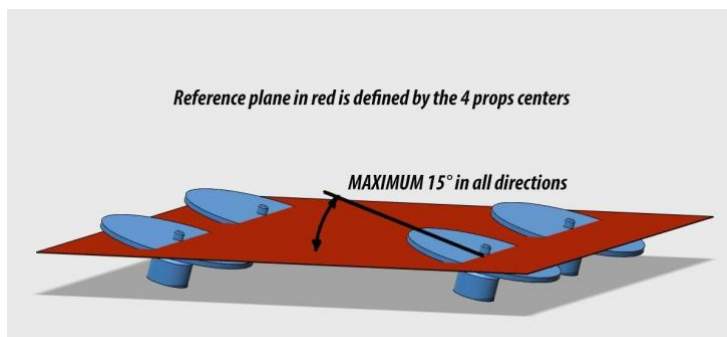
### 3.2. Motorization

Only electric motors are allowed.

The maximum voltage of the flight battery must not exceed 25.5 volts (6S). The voltage measurement will be done before the flight.

The reference plane is defined with propellers centres. Each motor can be tilted up to 15° maximum angle in each direction.

On a tri-copter, the inclination of a motor in flight is only allowed with the yaw order.



### 3.3. Propellers

Maximum diameter: 6 inches (15.2 cm).

Full metal propellers are forbidden.

Any propeller protection device is forbidden.

### 3.4. Analog video system

The analog video system will be used for piloting and will be operated on 5.8 GHZ band.

Are only authorised the three following video transmitters (VTX):

- TBS (Team BlackSheep) Unify Race.
- ImmersionRC Tramp.
- Furious Stealth Race.

The VTX must be set with a 25 mW maximum power emission.

In order to limit risk of potential problems during the races with unwanted emission, the organizer may define restrictions for use of video transmitters outside the racing circuit.

In case of non-authorized activation of a video transmitter, a penalty going up to disqualification from the contest may be imposed to the concerned competitor by the contest director, with the consent of the FAI Jury (see Volume CIAM General Rules paragraph C.19.1).

### 3.5. Digital video unit

In order to satisfy live streaming and TV broadcasting quality requirements, competitors may be requested to install in addition on their model an 'all-in-one' digital video unit.

### 3.6. Radio control (RC) equipment

Regarding the frequency band used for the digital video signal transmission, there is a risk of interference with signal loss on a 2.4 GHz RC equipment. So, use of a TBS Crossfire module (868 MHz / 915 MHz) or any other 900 MHz module on the RC equipment is strongly recommended

Use of 2.4 GHz RC equipment will be possible under entire responsibility of the competitor.

**Note:** 433 MHz frequency is not authorised in China.

In order to limit risk of potential problems during the races with unwanted interference, the organizer may define restrictions for use of RC systems equipment outside the racing circuit.

In case of use of non-authorized RC equipment, penalty going up to disqualification from the contest may be imposed to the concerned competitor by the contest director, with the consent of the FAI Jury (see Volume CIAM General Rules paragraph C.19.1).

### 3.7. LED light device

In order to provide for the public the best view of the models during the races and to facilitate the task of the judges, each model must be equipped with a LED light device including possibility to choose the colour so that each model in flight has a different colour.

The goal is that every model must be viewable from every direction and angle.

#### LED light device requirements:

- 40 LED's minimum (4 on bottom and 4 on top on each of the 4 arms of the model + 8 on the sides of the body).
- RGB controller to program the assigned colour before each race.
- Mandatory colours: Blue - Green - Orange - Pink - Purple - Red - Yellow

Competitors must strictly respect the requirements and take care the device allows to change easily the colour just before the race.

The competitor may be requested to use the LED light unit supplied by the organiser in case his(her) own device is not considered compliant with requirements or with an acceptable brightness.

**Note:** In order to simplify organisation and improve the understanding of the races by the public, the colour, such as the video frequency, will be assigned for each race according to the draw order in the group.

### 3.8. Identification mark

Each model shall carry the 3 (three) letters national identification mark followed by the FAI Sporting Licence (or whenever possible, Drone Permission) ID number.

The letters and numbers must be at least 6 mm high and appear at least once on each model.

## 4. NUMBER OF MODELS

Each competitor may use a maximum of 3 (three models) for the entire contest.

A model can be used by only one competitor during the contest.

In case of an infringement to that rule, the concerned competitors will be disqualified from the contest by the contest director, with the consent of the FAI Jury (see Volume CIAM General Rules paragraph C.19.1).

The competitor can change the model:

- before the start of the race as long as the competitor hasn't left the preparation area,
- or between two rounds of the qualification stage and elimination stage.

## 5. MODEL PROCESSING

A model processing will be done by the organiser in parallel with the official practice session.

Each competitor can register up to three models.

For points which will be checked at the model processing, see the Processing Form in Annex 1. This form may be subject to changes.

The organiser will mark each registered model with a visible and difficult to falsify marking.

When, after the model processing a model is lost or damaged, the competitor shall have the right to present a further model for checking up to one hour before the official starting time of the championship.

During official competition time, a random spot-check may be organized following any race to check the most important characteristics of a model.

A competitor whose model wouldn't be compliant may be disqualified from the contest by the contest director, with the consent of the FAI Jury (see Volume CIAM General Rules paragraph C.19.1).

## **6. PRACTICE FLIGHTS**

An official practice session will be organised in parallel with the model processing. The organiser will define the conditions of the practice session according to the available time and the number of competitors.

Practice flights on the venue other than those authorised by the organiser are strictly forbidden under threat of being disqualified from the contest.

## **7. CONTEST ORGANISATION**

The start of the race will be done as follows:

The contest will be organized on the basis of three stages:

- Qualification stage (rounds for qualification for the elimination stage).
- Elimination stage (to qualify for the final stage by successive elimination rounds).
- Final stage.

Each round for the qualification stage and the elimination stage is organized by groups (subdivision of the round corresponding to the number of pilots flying at the same time in the same race).

### **7.1. Timekeeping**

Every race will be timed with an electronic timing system provided by the organiser. The organiser will supply for free to each competitor the eventual chips to install on the models.

For the elimination and final stage, timekeeping is triggered at the start of the race done by the starter.

For the qualifying stage and the additional rounds sequence, timekeeping is triggered for each model when the model passes the timekeeping sensor. In that case, each pilot must go directly after the start where the timekeeping sensor is positioned without possibility to do flight recognition of the track.

### **7.2. Procedure for the start of the race**

The start of the race will be done as follows:

- After the models have been placed on the start area, the starter will request the pilots if they are ready to start.
- When the starter considers that the pilots are ready, the starter will announce clearly 'Arm your quads'.
- About 3 seconds after this announcement and taking care of an equivalent time for all races, there will be a brief and intelligible sound signal for the start of the race; no countdown (3, 2, 1) will be done before the start signal.

The starter must immediately stop the race and do a new start when he considers that:

- the start procedure has not been done properly;
- or a pilot has jumped the start and a decision is justified to disqualify him(her).

Before the restart, the pilots will be given the opportunity to change the battery pack on their model.

### **7.3. Qualification stage**

Each competitor will be entitled to participate to 3 (three) qualification rounds.

Qualifying rounds will be run with 6 (six) pilots per group.

Composition and flight order of the groups will be determined with a blind draw. The draw will be different for each qualifying round.

Each qualification round will be done with a maximum allocated flying time of 4 (for) minutes.



After the start, 3 (three) consecutive laps will be timed. After the 3 laps are finished, the pilot must land the model.

Reflights will be flown at the end of the concerned round.

Races with less than 6 pilots, for example in case of withdrawal of a pilot, will be put at the end of the draw of the round, in order to allow a complete pilots race with pilot(s) that have been granted a reflight in the round.

If necessary, the last groups of each qualifying round may be rearranged by the supervisor judge (under supervision of a FAI Jury member) in order to achieve as much as possible a minimum of 3 pilots per group.

The result of each competitor for the qualification stage will be the average of the 3 (three) best times recorded to perform one valid circuit lap taking in account all the qualifying rounds. Those best times may be done in the same qualifying round or in different ones.

A provisional ranking will be established at the end of the qualifying stage, taking in account the result obtained by each competitor. In case of a tie for the last place(s) for selection to the elimination stage, the 4<sup>th</sup> best time recorded to perform one valid circuit lap result will be considered to split the tie, and then if necessary the 5<sup>th</sup> one, and so on. In case the times are not sufficient, a tie-break flight will be organized between the competitors still concerned by the tie.

When the number of competitors required for the elimination stage is not reached with the competitors getting 3 (three) times, competitors getting only 2 (two) times to perform one valid circuit lap will be considered taking in account the average of their 2 times. If it is still not sufficient, competitors getting only 1 (one) time to perform one valid circuit lap will be considered.

When the number of competitors required for the elimination stage is still finally not reached, an additional qualifying flight will be organized for the competitors who have not been able to set a time at that stage. This will be repeated until the appropriate number of competitors for the elimination stage is reached.

In any case, the competitors who need an additional qualifying flight to achieve a time to be selected for the elimination stage will be placed after those who are already selected, and then those who need a second additional flight, and so on.

#### **7.4. Elimination stage**

All elimination rounds will be run with 4 (four) pilots per group.

64 competitors will be selected for the elimination stage, from the qualification stage.

All races of the elimination stage will be run on a defined number of laps taking in account the performance achieved during the qualification stage. Except under exceptional circumstances, the number of laps will be identical for all rounds of the elimination stage.

The placing for each race is determined taking in account the time achieved when the number of laps is completed.

Those who will not finish their flight will be ranked considering the distance completed (number of laps and part of the last lap completed), disqualified competitors being placed at the end.

The two best placed will be directly selected for the next round. In case of a tie for the second place, the placing in the provisional ranking established at the end of the qualifying stage will be considered to define who is selected for the next round.

##### **Double elimination**

Instead of direct elimination of the competitors placed third and fourth in each race of any elimination round, the double elimination sequence will be applied.

This sequence allows competitors eliminated in elimination rounds to continue to fly still getting possibility to access the final.

Competitors placed third and fourth in any race of the double elimination sequence are definitively eliminated.

##### **Organisation of the races**

For the first elimination round, the composition of the groups for the races is defined considering the provisional ranking established at the end of the qualifying stage.

The organisation of the rounds up to the final and the composition of the races for the first elimination round are detailed in Annex 2.

## 7.5. Final stage

All finals will be run with 4 (four) pilots per group.

In any final, those who will not finish their flight will be ranked considering the distance completed (number of laps and part of the last lap completed), disqualified competitors being placed at the end.

### Overall final

The two best placed in the last elimination round (one race) and the two best placed in the last round of the double elimination sequence (one race) are selected for the final to determine their final ranking from 1<sup>st</sup> to 4<sup>th</sup> place.

### Junior final

A junior final will be organised subject junior competitors from at least four nations participate to the WDRC Grand Final. The four best placed juniors in the overall individual classification are selected for this final to determine their final ranking from 1<sup>st</sup> to 4<sup>th</sup> for the junior individual classification.

*Note: Organisation of a specific junior final may be reconsidered if three or four juniors are selected for the overall final.*

### Women final

A women final will be organised subject female competitors from at least four nations participate to the WDRC Grand Final. The four best placed women in the overall individual classification are selected for this final to determine their final ranking from 1<sup>st</sup> to 4<sup>th</sup> for the women individual classification.

*Note: Organisation of a specific women final may be reconsidered if three or four women are selected for the overall final.*

## 7.6. Additional rounds sequence

All competitors not selected for the elimination stage (competitors placed over 64 in the qualification stage ranking) will be entitled to participate to 2 (two) additional rounds to determine their final placing from the 65<sup>th</sup> place to the end.

Those additional rounds will be run with 6 (six) per group.

Composition and flight order of the groups will be determined with a blind draw. The draw will be different for each additional round.

Each additional round will be done with a maximum allocated flying time of 4 (four) minutes.

After the start, 3 (three) consecutive laps will be timed. After the 3 laps are finished, the pilot must land the model.

Reflights will be flown at the end of the concerned round.

Races with less than 6 pilots, for example in case of withdrawal of a pilot, will be put at the end of the draw of the round, in order to allow a complete pilots race with pilot(s) that have been granted a reflight in that round.

If necessary, the last groups of each qualifying round may be rearranged by the supervisor judge (under supervision of a FAI Jury member) in order to achieve as much as possible a minimum of 3 pilots per group.

The placing for the additional rounds sequence will be done taking in account for each competitor his(her) best registered time to complete 3 consecutive laps.

The registered time to complete 2 consecutive laps will be considered for the placing of the competitors who did not succeed to complete 3 consecutive laps. For those who did not succeed to complete 2 consecutive laps, it will be considered the registered time for their first lap.

Competitors with 3 consecutive laps will be placed ahead of competitors with 2 consecutive laps, which in turn are ranked ahead of competitors with one lap only. Competitors which have not been in situation to complete one lap will be placed at the end.

In case of ties, the placing in the provisional ranking established at the end of the qualifying stage will be considered to split the tie for the concerned competitors.

## 8. FLIGHT OCCURRENCES

### 8.1. Obstacle damaged or destroyed during the race

When an obstacle is accidentally damaged or destroyed during a race, the pilots will be informed as soon as possible of the incident by the starter, and how to proceed.

In the case where it concerns an obstacle to be crossed (air gate, tunnel, ...), the decision may be to continue to cross the obstacle, or to give permission to bypass it, or to stop the race. When bypassing

of the concerned obstacle is authorized, pilots must do their best not to take advantage of the situation.

In case it concerns an obstacle to be avoided, the race will continue except if it is decided differently considering for example that safety is impacted. When race continues, pilots must do their best to follow the track and not to take advantage of the situation.

## **8.2. Faults and penalties**

In the case an obstacle that needs to be crossed is not effectively crossed, the pilot may try to execute a manoeuvre to cross the obstacle again. If during this manoeuvre the pilot has a collision with another model, the pilot will be disqualified for the race. If the pilot does not cross an obstacle to be crossed, the corresponding circuit lap will not be validated by his(her) assigned judge.

In the case of a circuit cut (for example during a turn), the pilot may execute as soon as possible a manoeuvre to come back into the circuit where he left it. If his(her) assigned judge considers that the pilot has not made the manoeuvre with sufficient urgency, the judge can decide that the corresponding circuit lap is not validated. If during this manoeuvre the pilot has a collision with another model, the pilot will be disqualified for the race.

In both cases, the pilot whose model has been collided into may be granted a reflight if he(she) is considered no longer able to continue his(her) flight in a competitive way. In that situation, the pilot must stop his(her) flight as soon as possible after the collision and say it clearly. The reflight will be granted subject to the corresponding judge confirming that the collision has clearly penalised the pilot. If the pilot decides to continue to fly, a reflight may not be considered.

## **8.3. Disqualification from the race**

A pilot may also be disqualified from a race in the following scenarios:

- a start before the start signal if it is considered that this early start gives a clear advantage to the concerned pilot;
- a circuit exit (crossing of the safety line);
- a celebratory manoeuvre, especially after the pilot finishes.

The disqualification is decided at the discretion of the judge assigned to the concerned pilot.

The judge can also pronounce a disqualification if the judge considers that:

- the pilot flies so high that the performance of the pilot on the track cannot be judged;
- the piloting is hazardous or if safety is compromised.

When a pilot is disqualified, he must land as soon as he has been informed. In any case, the result of the pilot for the race will not be validated. If the pilot is considered not being sufficiently cooperative to land, the concerned pilot may be disqualified from the event by the FAI Jury on request of the assigned judge.

## **8.4. Crash**

When a model crashes, the concerned pilot can resume if the model is in a situation to do so.

When the model cannot go on, it must stay on the ground with motors cut off until the end of the race. The pilot must clearly say that he has stopped flying.

## **8.5. Safety occurrence**

The pilot can be requested to stop the flight if it is considered the model no longer meets acceptable safety standards. It could be for example the case when a model is damaged after a collision or after a crash, or when the battery is dangling.

In such a situation, a reflight for the concerned pilot may not be considered.

# **9. REFLIGHTS**

## **9.1. Causes for reflight**

Incidents during races such as a collision with an obstacle or a collision between models cannot justify a reflight, except in the specific situation defined in 8.2.

When a pilot gets a video problem that he(she) considers will prevent him(her) from continuing the flight, he(she) must immediately say it clearly. A reflight will only be considered if the pilot has used the video from the organizer's receiver and if the problem is confirmed by the judge.

In addition, a reflight may be considered when:

- Either the model cannot start or the flight cannot be made in normal conditions because of an unexpected cause beyond the pilot's control.
- For a reason of safety, either the model cannot be prepared or the flight cannot be made in the allotted time limit or when either is disrupted by an external interference.
- For a reason independent from the pilot's will, the pilot has been forced to land by request of an official. Failures of the model, motorization or radio cannot be considered as reasons independent from the pilot's will.
- The chair of the pilot clearly affects his(her) flight; if the helper of the pilot is the cause of the problem then a reflight cannot be granted.

Noise in the environment of the pilots (noise in the public, noise from other competitors, ...) cannot justify a reflight.

For any pilot being granted a reflight, the original flight for which the pilot has been granted the reflight is then definitively cancelled.

## **9.2. Organization of the reflights**

Reflights for individuals are permitted for the qualifying stage and, as such, reflights may be organised separately or as part of any races that have fewer than the required number of pilots.

The same applies for the additional rounds optional sequence (See 7.6).

### **Elimination and final stages**

It is not possible to organize an individual reflight for elimination stage because the placing in the race determines the selection for the next round so the race must be restarted when a reflight is granted.

The same applies for the final stage.

It is desirable to stop the race as soon as possible once an incident occurs that may justify a reflight. The restart will only concern the pilot who has been granted a reflight and the pilots who were still in the air when the stop of the race has been announced.

The starter is in charge to stop the race when necessary and to inform consequently the pilots.

In the case where the race has not been stopped and that subsequently a reflight is granted, a new race will be organized. This new race will include only the pilot who has been granted a reflight and the pilots who have finished the original race (or placed first or second at the end of the original race for those who don't finish it). Instead of participating in the new race, a pilot may choose to keep the time he got in the original race; in that situation, his(her) placing will be considered by comparing his(her) time in the original race against the new times of the pilots who participate in the new race.

## 10. FINAL CLASSIFICATION

### 10.1. Overall individual classification

The individual overall classification concerns all competitors (including juniors and women) and will be established as described in the following table.

Place	
1	1 <sup>st</sup> in final
2	2 <sup>nd</sup> in final
3	3 <sup>rd</sup> in final
4	4 <sup>th</sup> in final
5	3 <sup>rd</sup> in race 61
6	4 <sup>th</sup> in race 61
7	3 <sup>rd</sup> in race 59
8	4 <sup>th</sup> in race 59
9 to 12	3 <sup>rd</sup> and 4 <sup>th</sup> in races 57 and 58 with final placing according to provisional ranking after qualifying stage
13 to 16	3 <sup>rd</sup> and 4 <sup>th</sup> in races 53 and 54 with final placing according to provisional ranking after qualifying stage
17 to 24	3 <sup>rd</sup> and 4 <sup>th</sup> in races 49 to 52 with final placing according to provisional ranking after qualifying stage
25 to 32	3 <sup>rd</sup> and 4 <sup>th</sup> in races 41 to 44 with final placing according to provisional ranking after qualifying stage
33 to 48	3 <sup>rd</sup> and 4 <sup>th</sup> in races 33 to 40 with final placing according to provisional ranking after qualifying stage
49 to 64	3 <sup>rd</sup> and 4 <sup>th</sup> in races 25 to 32 with final placing according to provisional ranking after qualifying stage
65 and beyond	Placing resulting from the additional rounds sequence. In case of ties, provisional ranking after qualifying stage will be considered to split the tie for the concerned competitors.

### 10.2. Junior individual classification

The junior individual classification will be done considering:

- placing in the junior final (or in the overall final) for the concerned juniors;
- ranking in the overall individual placing for the other juniors.

**Note:** According to the CIAM General Rules, the title of Junior World Champion will be awarded only if junior competitors from at least four nations participate.

### 10.3. Women individual classification

The Women individual classification will be done considering:

- placing in the women final (or in the overall final) for the concerned women;
- ranking in the overall individual placing for the other women.

**Note:** The title of Women World Champion will be awarded only if female competitors from at least four nations participate.

### 10.4. National team classification

The national team classification will be established by adding together the numerical final placing of the three best placed members of each national team considering the overall individual classification reconsidered without taking in account the individual competitors.

Teams will be ranked from the lowest numerical places to the highest, with complete three competitor teams ahead of two competitor teams, which in turn are ranked ahead of one competitor teams.

In the case of a tie, the best individual placing decides to split the tie for the concerned national teams.

## **11. OFFICIALS**

### **11.1. FAI Jury**

The three members of the FAI Jury shall be of different nationalities.

The FAI Jury will be selected by the organizer according to the CIAM General rules.

The FAI Jury composition shall be proposed in Bulletin 1 and must be approved by the CIAM Bureau.

### **11.2. Key other officials**

The following key officials will be selected by the organiser according to the CIAM General rules:

- Contest director.
- Starter.
- Judges.

The list of judges shall be proposed in Bulletin 1 and must be approved by the CIAM Bureau.

### **11.3. Judges**

In each race, each pilot will be scored by a judge standing behind him(her).

The judge will be equipped with a video screen connected on a video output of his(her) pilot receiver allowing him(her) to follow the flight of his assigned competitor sharing all the time the same video picture.

The judge will monitor that the pilot follows the circuit and crosses every gate and obstacle correctly.

The judge will inform the pilot when he(she) is disqualified or must stop the flight considering the model no longer meets acceptable safety standards. He(She) may optionally notify the competitor at the moment of any infringement or if a lap is not validated but is not required to do so.

The judge must be satisfied that any undertaking by the pilot to re-attempt a missed gate, obstacle or circuit cut is conducted in compliance with the rules and that any competitive advantage has been forfeit.

At the end of the flight, the pilot will be informed if the flight is considered to be valid or if a disqualification has been pronounced; in the case of disqualification, the number of circuit laps done at the moment of the disqualification will be communicated to the concerned pilot and recorded.

A supervisor judge will be appointed.

## **12. INTERRUPTION OF THE CONTEST**

The competition should be interrupted or the start delayed by the contest director in the following circumstances:

- Wind continuously stronger than 9 m/s measured at 2 m above the ground near the preparation area for at least one (1) minute.
- Due to atmospheric conditions (rain, stormy condition, ...) in which it would be dangerous to continue to fly.
- Other exceptional circumstances such as for example incident affecting safety or requiring access for emergency services.

When an interruption occurs during an official flight, this flight is cancelled.

If the event cannot go on, the final ranking will be the last available provisional ranking.

**- ANNEX 1 - Processing form**

**Competitor's FAMILY and First name:** .....

**Country:** ..... **FAI ID:** .....

**Radio control equipment:**

Reference of the RC equipment: .....

2,4 GHz  Other frequency (precise the frequency): .....

If appropriate, reference of the 868 MHz and/or 915 MHz module: .....

**Reference of the headset goggle:** .....

**Number of models processed** (3 maximum): .....

**Weight** (1 kg maximum including batteries and all on-board devices)

**Model A:** ..... **Model B:** ..... **Model C:** .....

**Batteries references** (25.5 V max for 6S):

**Model A:** .....

**Model B:** .....

**Model C:** .....

**Model A**

**Model B    Model C**

**Identification mark** (minimum 6 mm high)

**Size** (distance between axes less than 330 mm)

**Prop size** (not more than 6")

**Test of the fail-safe device**

**Reference of the VTX used on the model:**

TBS Unify Race

ImmersionRC Tramp

Furious Stealth Race

**LED light unit**

**Organiser marking of the model**

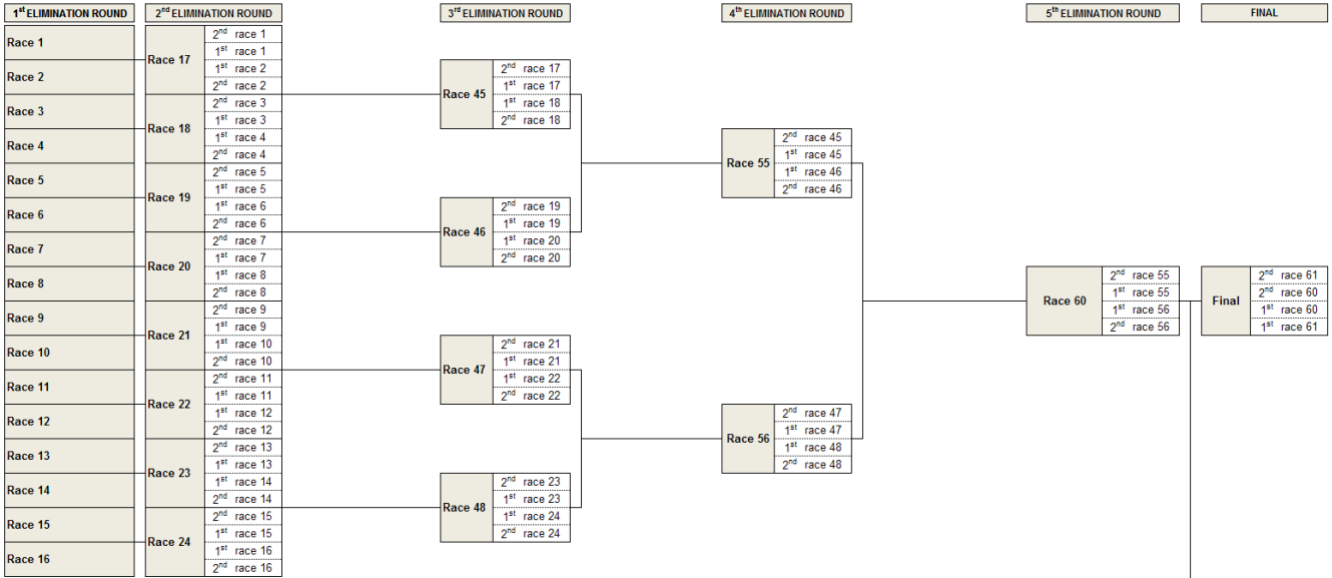
**Name of the controller:** .....

**Signature of the controller:**

.....

## - ANNEX 2 - Organisation of the elimination stage

### 1- Organisation



DOUBLE ELIMINATION SEQUENCE			
Race 25	4 <sup>th</sup> race 1 3 <sup>rd</sup> race 2 3 <sup>rd</sup> race 3 4 <sup>th</sup> race 4 4 <sup>th</sup> race 5	Race 33	3 <sup>rd</sup> race 17 2 <sup>nd</sup> race 31 1 <sup>st</sup> race 32 4 <sup>th</sup> race 18 3 <sup>rd</sup> race 19
Race 26	3 <sup>rd</sup> race 6 3 <sup>rd</sup> race 7 4 <sup>th</sup> race 8	Race 34	2 <sup>nd</sup> race 29 1 <sup>st</sup> race 30 4 <sup>th</sup> race 20
Race 27	4 <sup>th</sup> race 2 3 <sup>rd</sup> race 1 3 <sup>rd</sup> race 4 4 <sup>th</sup> race 3	Race 35	3 <sup>rd</sup> race 18 2 <sup>nd</sup> race 32 1 <sup>st</sup> race 31 4 <sup>th</sup> race 17
Race 28	4 <sup>th</sup> race 6 3 <sup>rd</sup> race 5 3 <sup>rd</sup> race 8 4 <sup>th</sup> race 7	Race 36	3 <sup>rd</sup> race 20 2 <sup>nd</sup> race 30 1 <sup>st</sup> race 29 4 <sup>th</sup> race 19
Race 29	4 <sup>th</sup> race 9 3 <sup>rd</sup> race 10 3 <sup>rd</sup> race 11 4 <sup>th</sup> race 12	Race 37	3 <sup>rd</sup> race 21 2 <sup>nd</sup> race 26 1 <sup>st</sup> race 25 4 <sup>th</sup> race 22
Race 30	4 <sup>th</sup> race 13 3 <sup>rd</sup> race 14 3 <sup>rd</sup> race 15 4 <sup>th</sup> race 16	Race 38	3 <sup>rd</sup> race 23 2 <sup>nd</sup> race 28 1 <sup>st</sup> race 27 4 <sup>th</sup> race 24
Race 31	4 <sup>th</sup> race 10 3 <sup>rd</sup> race 9 3 <sup>rd</sup> race 12 4 <sup>th</sup> race 11	Race 39	3 <sup>rd</sup> race 22 2 <sup>nd</sup> race 25 1 <sup>st</sup> race 26 4 <sup>th</sup> race 21
Race 32	4 <sup>th</sup> race 14 3 <sup>rd</sup> race 13 3 <sup>rd</sup> race 16 4 <sup>th</sup> race 15	Race 40	3 <sup>rd</sup> race 24 2 <sup>nd</sup> race 27 1 <sup>st</sup> race 28 4 <sup>th</sup> race 23
Race 41	2 <sup>nd</sup> race 35 1 <sup>st</sup> race 33 1 <sup>st</sup> race 34 2 <sup>nd</sup> race 36	Race 49	3 <sup>rd</sup> race 45 2 <sup>nd</sup> race 43 1 <sup>st</sup> race 44 4 <sup>th</sup> race 46
Race 42	2 <sup>nd</sup> race 33 1 <sup>st</sup> race 35 1 <sup>st</sup> race 36 2 <sup>nd</sup> race 34	Race 50	3 <sup>rd</sup> race 47 2 <sup>nd</sup> race 41 1 <sup>st</sup> race 42 4 <sup>th</sup> race 48
Race 43	2 <sup>nd</sup> race 39 1 <sup>st</sup> race 37 1 <sup>st</sup> race 38 2 <sup>nd</sup> race 40	Race 51	3 <sup>rd</sup> race 46 2 <sup>nd</sup> race 44 1 <sup>st</sup> race 43 4 <sup>th</sup> race 45
Race 44	2 <sup>nd</sup> race 37 1 <sup>st</sup> race 39 1 <sup>st</sup> race 40 2 <sup>nd</sup> race 38	Race 52	3 <sup>rd</sup> race 48 2 <sup>nd</sup> race 42 1 <sup>st</sup> race 41 4 <sup>th</sup> race 47
Race 53	2 <sup>nd</sup> race 51 1 <sup>st</sup> race 49 1 <sup>st</sup> race 50 2 <sup>nd</sup> race 52	Race 57	3 <sup>rd</sup> race 55 1 <sup>st</sup> race 53 2 <sup>nd</sup> race 54 4 <sup>th</sup> race 56
Race 54	2 <sup>nd</sup> race 49 1 <sup>st</sup> race 51 1 <sup>st</sup> race 52 2 <sup>nd</sup> race 50	Race 58	3 <sup>rd</sup> race 56 1 <sup>st</sup> race 54 2 <sup>nd</sup> race 53 4 <sup>th</sup> race 55
Race 59	2 <sup>nd</sup> race 57 1 <sup>st</sup> race 57 1 <sup>st</sup> race 58 2 <sup>nd</sup> race 58	Race 61	3 <sup>rd</sup> race 60 1 <sup>st</sup> race 59 2 <sup>nd</sup> race 59 4 <sup>th</sup> race 60

### 2- Composition of the races for the 1<sup>st</sup> elimination round

Race 1	Placed 1	Placed 17	Placed 33	Placed 49
Race 2	Placed 16	Placed 32	Placed 48	Placed 64
Race 3	Placed 8	Placed 24	Placed 40	Placed 56
Race 4	Placed 14	Placed 30	Placed 46	Placed 62
Race 5	Placed 4	Placed 20	Placed 36	Placed 52
Race 6	Placed 12	Placed 28	Placed 44	Placed 60
Race 7	Placed 6	Placed 22	Placed 38	Placed 54
Race 8	Placed 10	Placed 26	Placed 42	Placed 58
Race 9	Placed 9	Placed 25	Placed 41	Placed 57
Race 10	Placed 5	Placed 21	Placed 37	Placed 53
Race 11	Placed 11	Placed 27	Placed 43	Placed 59
Race 12	Placed 3	Placed 19	Placed 35	Placed 51
Race 13	Placed 13	Placed 29	Placed 45	Placed 61
Race 14	Placed 7	Placed 23	Placed 39	Placed 55
Race 15	Placed 15	Placed 31	Placed 47	Placed 63
Race 16	Placed 2	Placed 18	Placed 34	Placed 50