



2018 World Drone Racing Championships Sporting Rules

1st March 2018

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CONTENTS

1. RACING CIRCUIT	5
2. GENERAL SPECIFICATIONS FOR MODELS	5
2.1. Weight and size	5
2.2. Motorization	5
2.3. Propellers	6
2.4. Radio control equipment	6
2.5. Video system	6
2.6. On-board camera	6
2.7. LED light unit	6
2.8. Identification mark	7
3. NUMBER OF MODELS	7
4. MODEL PROCESSING	7
5. PRACTICE FLIGHTS	7
6. CONTEST ORGANISATION	7
6.1. Timekeeping	7
6.2. Procedure for the start of the race	8
6.3. Qualification stage	8
6.4. Elimination stage	8
6.5. Final stage	9
6.6. Second chance sequence	10
6.7. Additional rounds sequence	10
7. FLIGHT OCCURRENCES	11
7.1. Faults and penalties	11
7.2. Disqualification from the race	11
7.3. Crash	11
7.4. Video issues	11
7.5. Reflight	12
8. PARTICIPANTS	12
8.1. National teams	12
8.2. Individual competitors	12
9. CLASSIFICATION	12
9.1. Individual classifications	12
9.2. National team classification	13
10. OFFICIALS	14
10.1. FAI Jury	14
10.2. Key other officials	14
10.3. Judges	14
11. INTERRUPTION OF THE CONTEST	14
ANNEX 1- DRAWS SCENARIO A (4 pilots per group and 1/16 th final round as first elimination round)	15
ANNEX 2- DRAWS SCENARIO B (6 pilots per group and 1/8 th final round as first elimination round)	18
ANNEX 3- DRAWS SCENARIO C (6 pilots per group and 1/16 th final round as first elimination round)	20

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The proposed rules for the 2018 FAI World Drone Racing Championships are derived from the F3U (RC Multi-Rotor FPV Racing) class rules which are used for the FAI Drone Racing World Cup events.

Note: F3U class rules are part of the FAI Sporting Code - Section 4 Aeromodelling - Volume 'F3 Radio Control Drone Racing' (2017 Edition effective 15 March 2017).

Multi-rotor FPV (First Person View) 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 pilot who is considered as the competitor. The FPV pilot is equipped with a headset goggle which allows him to pilot his model from the video picture of the onboard camera which is transmitted in real time on its headset goggle.

The FPV pilot is assisted by one and only one helper who stays next to him during the whole flight. The main task of the helper is to keep the model in visual line of sight. Besides that, the helper must inform the competitor of anything occurring that can affect his piloting, especially about safety. If the helper requests the competitor to land or to cut off the engines, he has to do it immediately. In case of emergency, the helper is authorised to shut off the transmitter in order to trigger the fail-safe device.

1. 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 championship.

2. GENERAL SPECIFICATIONS FOR MODELS

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

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

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 authorised.

2.1. Weight and size

The total weight of the model including batteries and all on-board devices shall not exceed 1 kg.

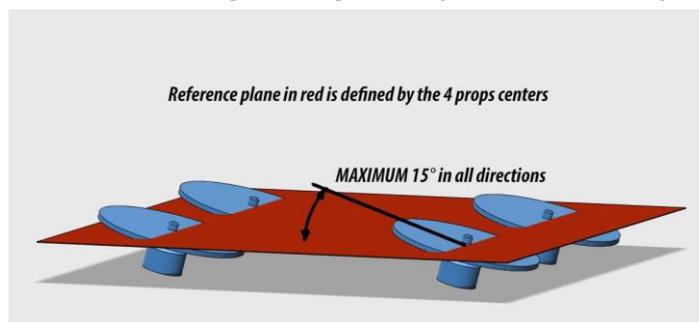
Distance between axes of the engines shall be less than 330 mm. This distance is measured on the diagonal of the engines' axes.

2.2. Motorization

Only electric motors with a maximum voltage of 17.0 volts (4S) are allowed. The voltage measurement is 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 an engine in flight is only allowed with the yaw order.



2.3. Propellers

Maximum diameter: 6 inches (15.2 cm).

Full metal propellers are forbidden.

Any propeller protection device is forbidden.

2.4. Radio control equipment

Frequencies and emission power can only be those authorised in People's Republic of China.

Any 2.4 GHz spread spectrum technology radio control equipment may be used.

Competitors may be authorised to use other equipments, such as for example 868 MHz and/or 915 MHz TBS Crossfire module, as long as it is compliant with Chinese frequencies regulations. Such an authorisation must be requested prior the championship.

In order to limit risk of potential problems during the races (signal loss, frequency interference,...) with unwanted emission, the organizer may define restrictions for use of radio control systems equipments outside the racing circuit.

Any competitor using a forbidden frequency may be disqualified from the contest by the contest director.

2.5. Video system

The video system will be selected by the organiser together with FAI in order to also permit live transmission of the pilot view on large screens for the spectators and media production with the appropriate quality.

Authorised video transmitters (VTX):

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

Competitors are allowed to use their own equipment subject to respect authorised VTX.

The organiser may supply VTX and antenna to any competitor who will do the request. A deposit may be requested and returned on restitution of the devices. The reference of the VTX supplied by the organiser will be mentioned in Bulletin 2.

Note: *Digital VTX instead analogic could be possibly required if technical tests which will be done on site in April show unacceptable interference problem in the stadium.*

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

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

2.6. On-board camera

PAL encoding format is required for the on-board cameras.

Note: *Equipment of the models with a camera GoPro Session could be possibly requested to satisfy TV production needs.*

2.7. LED light unit

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 will be equipped with a LED light unit 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 unit 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 are allowed to use their own LED light unit subject to strictly respect the requirements and as long as they can change easily the colour just before the race.

The organiser may supply LED light units to any competitor who will do the request. A deposit may be requested and returned on restitution of the devices. The reference of the LED light unit supplied by the organiser will be mentioned in Bulletin 2.

The competitor may be requested to use the LED light unit supplied by the organiser in case his 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.*

2.8. Identification mark

Each model shall carry the national identification mark followed by the FAI Sporting Licence ID number (or the National FAI licence). The letters and numbers must be at least 6 mm high and appear at least once on each model.

3. NUMBER OF MODELS

Each competitor may use a maximum of 3 (three) models.

The competitor can change his model:

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

4. 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 and additional spare parts.

A processing form will be attached to each model and its spare parts. It will be requested to transmit to the organiser the processing forms prior to the arrival.

The processing form template will be published as a supporting document of Bulletin 2.

Checking done at the model processing will concern the following main points:

- Identification mark.
- Weight and size.
- Motorization and batteries.
- Fail-safe and associated device to cut off the engines.
- VTX and camera.
- LED light unit

The organiser will mark each registered model and spare parts 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.

The organizer will appoint processing officials to process at random the important model characteristics of at least 20 % of competing models during the official contest time.

A competitor whose model wouldn't be compliant may be disqualified from the contest by the contest director.

5. 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 racing circuit other than those authorised by the organiser are strictly forbidden under threat of being disqualified from the contest.

6. CONTEST ORGANISATION

The championship will be run with three stages: qualification, elimination and final.

Rounds in every stage will be organised by groups of 4 (four) or 6 (six) pilots. The pilot's number per group may be different for qualifying rounds but will be the same for all elimination and final rounds.

6.1. 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 chips to install on the models.

Except when specified differently, timekeeping is triggered at the start of the race done by the starter.

6.2. Procedure for the start of the race

The start of the race will be done by the starter as follows:

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

If the starter considers that he has proceeded wrongly, he may then immediately stop the race and do a new start. Before the new start, the competitors will have the possibility to change the battery pack on their model.

6.3. Qualification stage

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

For each qualifying round, the composition of the groups, the order in each group (for positioning on the start line) and the flight order of the groups will be determined with a blind draw. The draw will be done so that one competitor only per country may be in the same group.

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

For each model, timekeeping is triggered when the model passes the timekeeping sensor. After the start of the flight, each pilot must go directly to the first air gate where the timekeeping sensor is positioned without possibility to do flight recognition of the track.

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

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

Races with fewer than the required pilot's number (4 or 6), 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 chief judge (under supervision of a FAI Jury member) in order to get as far as possible a minimum of:

- 3 pilots per group when the required pilot's number for the round is 4.
- 4 pilots per group when the required pilot's number for the round is 6.

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. The 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 into account the result obtained by each competitor. In case of a tie for the last place(s) for selection to the elimination stage, the 4th best time recorded to perform one valid circuit lap result will be considered to split the tie, and then if necessary the 5th one, and so on. In case the times are not sufficient, a tie-break flight will be organised between the competitors still concerned by the tie.

If 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.

If the number of competitors required for the elimination stage is still finally not reached, an additional qualifying flight will be organised 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.

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.

6.4. Elimination stage

The elimination stage will be organised according to one of the three following scenarios:

- A- 4 (four) pilots per group with 1/16th final round (16 groups) as first elimination round (64 competitors selected from qualification stage).
- B- 6 (six) pilots per group with 1/8th final round (8 groups) as first elimination round (48 competitors selected from qualification stage).

C- 6 (six) pilots per group with 1/16th final round (16 groups) as first elimination round (96 competitors selected from qualification stage).

The choice will be done before the beginning of the competition considering in particular the available time and the number of competitors.

All races of the elimination stage will be run on a defined number of laps taking into consideration 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.

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

Races with fewer than the required pilot's number (4 or 6), for example in case of withdrawal of a pilot, will be put at the end of the draw of the round in question, 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 chief judge (under supervision of a FAI Jury member) in order to get as far as possible a minimum of:

- 3 pilots per group when the required pilot's number for the round is 4.
- 4 pilots per group when the required pilot's number for the round is 6.

The placing for each race is determined taking into account the time achieved when the number of laps is completed. For those who will not finish their flight, placing will be done considering the distance completed (number of laps and part of the last lap completed) when they stop their flight, *competitors* disqualified being placed last.

When in a race, none of the competitors of the group has been in a situation to finish his flight (crash or other reason), a new flight is immediately organized for this group.

Modalities of selection for the next elimination round

The two best placed will be directly selected for the next elimination 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 directly selected for the next round.

When the elimination stage is organised with 6 (six) pilots per group, other competitors necessary to get the required competitor's number for the next round will be selected considering times achieved in the round (identified T_n in the annexes).

Organisation of the races

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

For the different elimination rounds, composition of the groups for the races and order positioning on the start line are defined in:

- Annex 1 for scenario A (4 pilots per group and 1/16th final round as first elimination round).
- Annex 2 for scenario B (6 pilots per group and 1/8th final round as first elimination round).
- Annex 3 for scenario C (6 pilots per group and 1/16th final round as first elimination round).

6.5. Final stage

In scenario A, the two best placed competitors in each of the two semi-final round flights are selected for the final to determine their final ranking from 1st to 4th place.

In scenario B or C, the three best placed competitors in each of the two semi-final round flights are selected for the final to determine their final ranking from 1st to 6th place.

The other competitors from the semi-final round will fly a small final to determine their final ranking.

The order positioning on the start line is defined according to the following tables.

Note: For the small final with 6 pilots per group, competitors are identified Tn considering times they achieved in the semi-final round.

Elimination stage with

4 pilots per group (Scenario A)

SMALL FINAL	4 th semi 1
	3 rd semi 1
	3 rd semi 2
	4 th semi 2
FINAL	2 nd semi 1
	1 st semi 1
	1 st semi 2
	2 nd semi 2

6 pilots per group (Scenario B or C)

SMALL FINAL	T12 semi-final
	T10 semi-final
	T8 semi-final
	T7 semi-final
	T9 semi-final
FINAL	3 rd semi 1
	2 nd semi 1
	1 st semi 1
	1 st semi 2
	2 nd semi 2

The number of circuit laps to complete may be increased for the final (not applicable for the small final) but cannot be more than twice the number of circuit laps retained for the evaluation stage. It is defined by the contest director taking into consideration the autonomy of the batteries to guarantee safe flights.

Those who will not be able to finish the final or the small final (crash or other reason) will be ranked considering the distance completed (number of laps and part of the last lap completed) when they stop their flight, disqualified competitors being placed at the end.

6.6. Second chance sequence

Instead a direct elimination, pilots not selected for the next evaluation round will be entitled a second chance.

Composition of the groups for the races and order positioning on the start line for the second chance sequence are defined in the annexes 1 to 3.

Complementary rounds will be organised as necessary in order to define the final placing of the remaining competitors.

6.7. Additional rounds sequence

All competitors not selected after the qualification stage for the first evaluation round will be entitled to participate to 3 (three) additional rounds for their final placing.

For those additional rounds, the pilot's number per group will be the same as for the evaluation stage.

For each additional round, of the groups for the races, order positioning on the start line and flight order of the groups will be determined with a blind draw. The draw will be done so that one competitor only per country may be in the same group.

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

Races with fewer than the required pilot's number (4 or 6), for example in case of withdrawal of a pilot, will be put at the end of the draw of the round in question, in order to allow a complete pilots race with pilot(s) that have been granted a reflight in that round.

When finally at the end of the round, a race does not contain the required pilot's number (4 or 6), volunteers (from different nations) will be requested to allow the remaining race to start with four pilots. If there are too many volunteers, the chief judge (under supervision of a FAI Jury member) will conduct a blind draw to determine the necessary volunteers and then a separate draw for the order in each group (for positioning on the start line).

If there are insufficient volunteers, the race will start with fewer than the required pilot's number (4 or 6).

The volunteer(s) shall not be eligible to have their result registered or to be granted a reflight from this race.

At the end of each race, each pilot is awarded as follows a number of points corresponding to his place:

- a) **Required pilot's number per group of 4:** 1 point for the first placed, 2 points for the second, 3 points for the third and 4 points for the fourth. When a pilot does not fly in a race or does not finish it, he gets 5 points. When a pilot is disqualified, he gets 6 points.

- b) **Required pilot's number per group of 6:** 1 point for the first placed, 2 points for the second, 3 points for the third, and so on. When a pilot does not fly in a race or does not finish it, he gets 7 points. When a pilot is disqualified, he gets 8 points.

The final placing will be done taking in account for each competitor the sum of the points he get in all the additional rounds, the competitor with the lower number of points being placed ahead, and so on.

In case of a tie, 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.

7. FLIGHT OCCURRENCES

7.1. Faults and penalties

In case an air gate or an obstacle that needs to be crossed is not effectively crossed, the pilot may try to execute a manoeuvre to cross the air gate or the obstacle again.

If during this manoeuvre the pilot has a collision with another model, he will be disqualified. The competitor whose model has been collided may get a reflight if his assigned judge considers that this collision has clearly penalised him.

If the pilot does not cross an air gate or an obstacle to be crossed, the corresponding circuit lap will not be validated by his assigned judge.

Note: *If an air gate or an obstacle is accidentally broken during a race, the race will continue and every pilot must do his best to follow the track and not ake advantage of this situation.*

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

7.2. Disqualification from the race

A competitor may also be disqualified in case of:

- a start before the starter signals if it is considered that this early start gives a clear advantage to the concerned competitor;
- a circuit exit (crossing of the safety line);
- a celebratory manoeuvre especially after he finishes his race.

The disqualification is decided at the discretion of the judge in charge of the competitor.

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

- the competitor flies so high that it does not allow his performance on the track to be judged;
- the piloting is hazardous or if safety is involved.

When a competitor is disqualified, he must immediately land. In any case, his result for that flight will not be validated. If the competitor is considered not being sufficiently cooperative to land, he may be disqualified from the contest by the FAI Jury on request of the assigned judge.

7.3. Crash

When a model crashes, the competitor can go on again if he is in a situation to do so. However, the judge in charge of the competitor can request him to stop the flight if he considers that the model no longer meets acceptable safety standards.

When the model cannot go on, it must stay on ground with engines cut off until the end of the race: the competitor cannot request a reflight.

7.4. Video issues

When a pilot gets a video problem which leads him to consider he is not able to continue his flight, a reflight can only be granted if it is proved that the problem is caused by an identifiable external cause. In any case, the competitor cannot turn against the organiser.

In case of a failure of the video system which does not allow the judge to perform his task:

- In a qualifying flight, the flight is cancelled and the competitor is granted a reflight.
- In any flight in the elimination stage, the judge allows the flight to finish without reporting the problem and does his best to judge and validate the circuit laps. When the result of the competitor permits him to be selected for the next elimination round (or for the final), the flight is then cancelled and the competitor is granted a reflight.

- For the final, the judge allows the flight to finish without reporting the problem and does his best to judge and validate the circuit lap. If the competitor is in the three first places, the final is then re-run; this does not concern the small final.

7.5. Reflight

Apart from the possibilities of obtaining a reflight mentioned above, a reflight can be granted when either the start of the model or the flight cannot be done in normal conditions because of an unexpected cause beyond the pilot's control.

A reflight can be granted when, for a reason of safety, either the preparation of the model or the flight cannot be made in the allotted time limit or when either is disrupted by an external interference.

A reflight can be granted if, for a reason independent from the competitor's will, he has been forced to land on request of an official.

Failures of the model, motorization or radio cannot be considered as reasons independent from the competitor's will.

Incidents during races such as collisions between models or with obstacles cannot justify a reflight.

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

A reflight may be considered in case of a rush of a competitor or of his chair clearly affects his flight. If the helper is at the origin of the problem, a reflight cannot be granted.

Granting of a reflight is the responsibility of the chief judge. For the competitor being granted a reflight the flight for which he has been granted the reflight is considered as cancelled.

8. PARTICIPANTS

8.1. National teams

Every National Airsport Control (NAC) may enter a team consisting of:

- A team manager.
- Three competitors extended to a maximum of five competitors providing at least one is a junior (age limit 18 years in the year 2018) and at least one is a female.
- Helpers (one permitted for each competitor).
- Supporters.

8.2. Individual competitors

As organiser, Aero Sports Federation of China (ASFC) will be entitled to issue three individual invitations (wild card) for competitors from People's Republic of China in addition to the national team.

FAI may also invite individual competitors especially when a NAC does not recognize or has dedicated structures for Drone Racing. Those competitors must have been placed in 2018 FAI Drone Racing World Cup events and will be considered as FAI.

All individual competitors compete for the individual classification but not for the team classification.

Each individual competitor is permitted to have one helper.

9. CLASSIFICATION

9.1. Individual classifications

The individual general placing will also include juniors and females.

The specific junior classification will be done considering ranking obtained by the juniors in the individual general placing.

The specific female classification will be done considering ranking obtained by the females in the individual general placing.

The individual general placing will be established as follows:

A- 4 pilots per group with 1/16th final round as first elimination round

- a) 1st to 4th places - Ranking according to the result of the final.
- b) 5th to 8th places - Ranking according to the result of the small final.
- c) 9th to 64th places - Ranking according to the second chance sequence results (see 6.6):

- At the end of the first round (races 17 to 24), competitors not selected for the second round will be placed from 49th to 64th places according to the provisional ranking after the qualifying phase.
- At the end of the second round (races 33 to 40), competitors not selected for the third round will be placed from 33th to 48th places according to the provisional ranking after the qualifying phase.
- At the end of the third round (races 45 to 50), competitors not selected for the fourth round will be placed from 21th to 32th places according to the provisional ranking after the qualifying phase.
- Remaining competitors will be placed from 9th to 20th places according to the results of the complementary rounds organised in the second chance sequence.

For each round, competitors who finished their flight will be placed before those who did not finish and competitors who has disqualified will be placed at the end. Then, placing will be done according to the provisional ranking after the qualifying phase.

- d) 65th place and beyond - Ranking according to the additional rounds sequence results (see 6.6).

B- 6 pilots per group with 1/8th final round as first elimination round

- a) 1st to 6th places - Ranking according to the result of the final.
- b) 7th to 12th places - Ranking according to the result of the small final.
- c) 13th to 48th places - Ranking according to the second chance sequence results (see 6.6):
 - At the end of the first round (races 9 to 12), competitors not selected for the second round will be placed from 37th to 48th place according to the provisional ranking after the qualifying phase s.
 - At the end of the second round (races 17 to 20), competitors not selected for the third round will be placed from 25th to 36th places according to the provisional ranking after the qualifying phase.
 - Remaining competitors will be placed from 13th to 24th places according to the results of the complementary rounds organised in the second chance sequence.

For each round, competitors who finished their flight will be placed before those who did not finish and competitors who has disqualified will be placed at the end. Then, placing will be done according to the provisional ranking after the qualifying phase.

- d) 49th place and beyond - Ranking according to the additional rounds sequence results (see 6.6).

C- 6 pilots per group with 1/16th final round as first elimination round

- a) 1st to 6th places - Ranking according to the result of the final.
- b) 7th to 12th places - Ranking according to the result of the small final.
- c) 13th to 96th places - Ranking according to the second chance sequence results (see 6.6):
 - At the end of the first round (races 17 to 24), competitors not selected for the second round will be placed from 73th to 96th places according to the provisional ranking after the qualifying phase.
 - At the end of the second round (races 33 to 40), competitors not selected for the third round will be placed from 49th to 72th places according to the provisional ranking after the qualifying phase.
 - At the end of the third round (races 45 to 50), competitors not selected for the fourth round will be placed from 31th to 48th places according to the provisional ranking after the qualifying phase.
 - Remaining competitors will be placed from 13th to 30th places according to the results of the complementary rounds organised in the second chance sequence.

For each round, competitors who finished their flight will be placed before those who did not finish and competitors who has disqualified will be placed at the end. Then, placing will be done according to the provisional ranking after the qualifying phase.

- d) 97th place and beyond - Ranking according to the additional rounds sequence results (see 6.6).

9.2. 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 individual general 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.

10. OFFICIALS

10.1. FAI Jury

The three members of the FAI Jury will be appointed by FAI and shall be of different nationalities.

10.2. Key other officials

The following key officials will be appointed by the organiser with an FAI approval:

- Contest director and contest director assistant.
- Starter and assistant(s).
- Officials responsible for model processing.
- Judges.

10.3. Judges

For each race, each FPV pilot will be accompanied by a judge standing next to or behind him. The judge will be equipped of a video device allowing him to follow the flight of his competitor in real time sharing the same video receptor.

The judge must inform the competitor loudly when an air gate or an obstacle is not considered to be crossed, or of a circuit cut. He will monitor that the competitor goes back and crosses the gate or the obstacle correctly, or comes back to the point where the cut happened.

At the end of the flight, the judge informs the competitor 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 mentioned by the judge to the competitor and registered.

An additional judge as chief judge will be appointed.

11. INTERRUPTION OF THE CONTEST

The contest director may interrupt the competition or delay the start of a race if the wind is continuously stronger than 9 m/s measured at two (2) metres above the ground near the preparation area for at least one (1) minute.

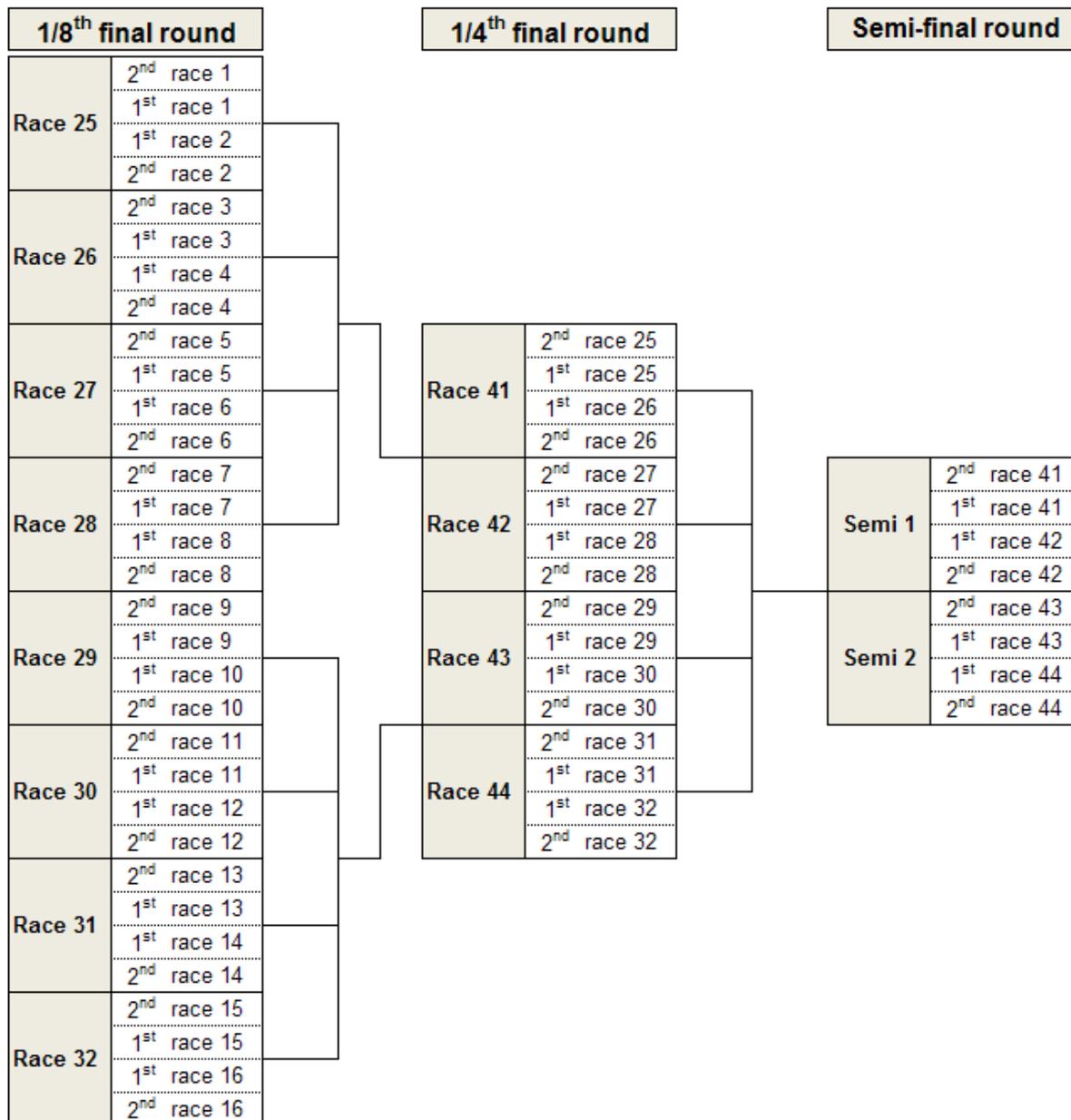
When interruption occurs during an official flight, the flight in question is cancelled.

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

ANNEX 1

Draws scenario A (4 pilots per group and 1/16th final round as first elimination round)

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



SECOND CHANCE FLIGHTS DRAW

Race 17	4 th race 1
	3 rd race 2
	3 rd race 3
	4 th race 4
Race 18	4 th race 5
	3 rd race 6
	3 rd race 7
	4 th race 8
Race 19	4 th race 2
	3 rd race 1
	3 rd race 4
	4 th race 3
Race 20	4 th race 6
	3 rd race 5
	3 rd race 8
	4 th race 7
Race 21	4 th race 9
	3 rd race 10
	3 rd race 11
	4 th race 12
Race 22	4 th race 13
	3 rd race 14
	3 rd race 15
	4 th race 16
Race 23	4 th race 10
	3 rd race 9
	3 rd race 12
	4 th race 11
Race 24	4 th race 14
	3 rd race 13
	3 rd race 16
	4 th race 15

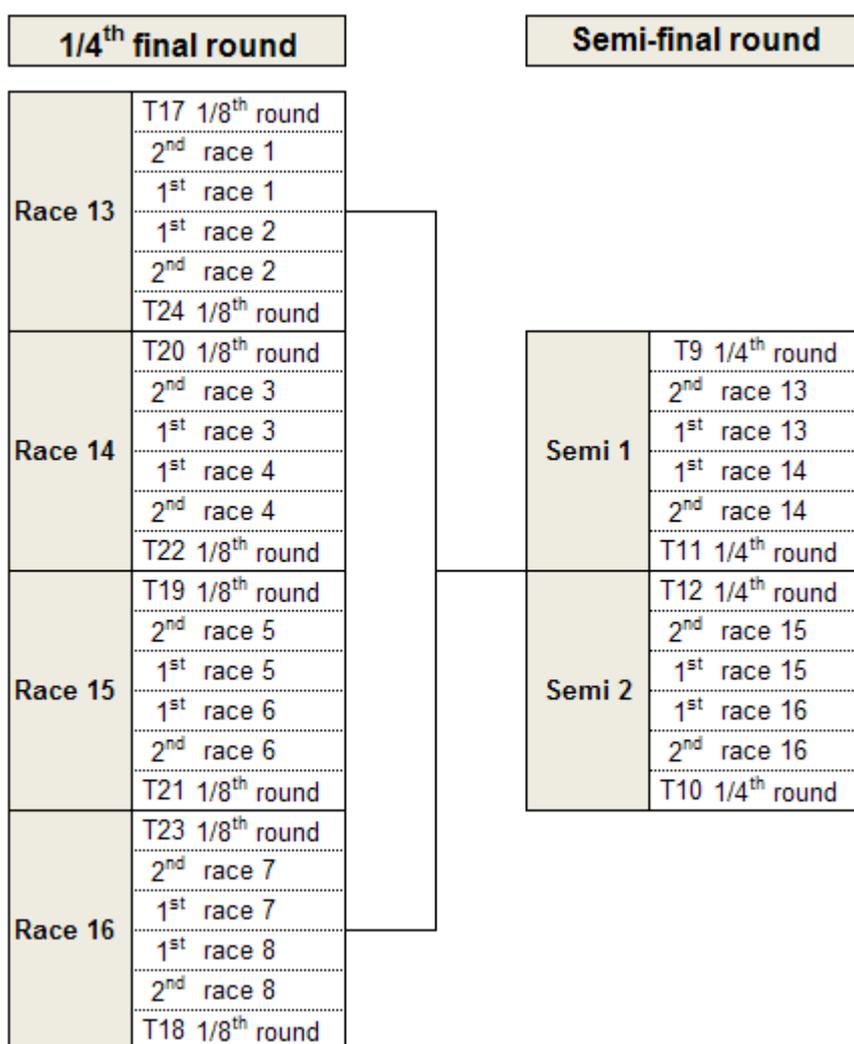
Race 33	3 rd race 25
	2 nd race 23
	1 st race 24
	4 th race 26
Race 34	3 rd race 27
	2 nd race 21
	1 st race 22
	4 th race 28
Race 35	3 rd race 26
	2 nd race 24
	1 st race 23
	4 th race 25
Race 36	3 rd race 28
	2 nd race 22
	1 st race 21
	4 th race 27
Race 37	3 rd race 29
	2 nd race 18
	1 st race 17
	4 th race 30
Race 38	3 rd race 31
	2 nd race 20
	1 st race 19
	4 th race 32
Race 39	3 rd race 30
	2 nd race 17
	1 st race 18
	4 th race 29
Race 40	3 rd race 32
	2 nd race 19
	1 st race 20
	4 th race 31

Race 45	3 rd race 41
	2 nd race 33
	1 st race 40
	2 nd race 34
Race 46	3 rd race 42
	2 nd race 35
	1 st race 39
	2 nd race 36
Race 47	4 th race 42
	1 st race 38
	1 st race 37
	4 th race 43
Race 48	4 th race 41
	1 st race 36
	1 st race 35
	4 th race 44
Race 49	3 rd race 43
	2 nd race 37
	1 st race 34
	2 nd race 38
Race 50	3 rd race 44
	2 nd race 39
	1 st race 33
	2 nd race 40

ANNEX 2

Draws scenario B (6 pilots per group and 1/8th final round as first elimination round)

Draw for 1/8 th final round						
Race 1	Placed 1	Placed 9	Placed 17	Placed 25	Placed 33	Placed 41
Race 2	Placed 8	Placed 16	Placed 24	Placed 32	Placed 40	Placed 48
Race 3	Placed 6	Placed 14	Placed 22	Placed 30	Placed 38	Placed 46
Race 4	Placed 4	Placed 12	Placed 20	Placed 28	Placed 36	Placed 44
Race 5	Placed 3	Placed 11	Placed 19	Placed 27	Placed 35	Placed 43
Race 6	Placed 5	Placed 13	Placed 21	Placed 29	Placed 37	Placed 45
Race 7	Placed 7	Placed 15	Placed 23	Placed 31	Placed 39	Placed 47
Race 8	Placed 2	Placed 10	Placed 18	Placed 26	Placed 34	Placed 42



SECOND CHANCE FLIGHTS DRAW

Race 9	T45 1/8 th round	Race 17	T21 1/4 th round
	T37 1/8 th round		3 rd race 10
	T29 1/8 th round		2 nd race 11
	T25 1/8 th round		1 st race 12
	T33 1/8 th round		T13 1/4 th round
	T41 1/8 th round		T17 1/4 th round
Race 10	T46 1/8 th round	Race 18	T22 1/4 th round
	T38 1/8 th round		3 rd race 12
	T30 1/8 th round		2 nd race 9
	T26 1/8 th round		1 st race 11
	T34 1/8 th round		T14 1/4 th round
	T42 1/8 th round		T18 1/4 th round
Race 11	T47 1/8 th round	Race 19	T23 1/4 th round
	T39 1/8 th round		3 rd race 9
	T31 1/8 th round		2 nd race 12
	T27 1/8 th round		1 st race 10
	T35 1/8 th round		T15 1/4 th round
	T43 1/8 th round		T19 1/4 th round
Race 12	T48 1/8 th round	Race 20	T24 1/4 th round
	T40 1/8 th round		3 rd race 11
	T32 1/8 th round		2 nd race 10
	T28 1/8 th round		1 st race 9
	T36 1/8 th round		T16 1/4 th round
	T44 1/8 th round		T20 1/4 th round

ANNEX 3**Draws scenario C (6 pilots per group and 1/16th final round as first elimination round)**

Draw for 1/16 th final round						
Race 1	Placed 1	Placed 17	Placed 33	Placed 49	Placed 65	Placed 81
Race 2	Placed 16	Placed 32	Placed 48	Placed 64	Placed 80	Placed 96
Race 3	Placed 8	Placed 24	Placed 40	Placed 56	Placed 72	Placed 88
Race 4	Placed 14	Placed 30	Placed 46	Placed 62	Placed 78	Placed 94
Race 5	Placed 4	Placed 20	Placed 36	Placed 52	Placed 68	Placed 84
Race 6	Placed 12	Placed 28	Placed 44	Placed 60	Placed 76	Placed 92
Race 7	Placed 6	Placed 22	Placed 38	Placed 54	Placed 70	Placed 86
Race 8	Placed 10	Placed 26	Placed 42	Placed 58	Placed 74	Placed 90
Race 9	Placed 9	Placed 25	Placed 41	Placed 57	Placed 73	Placed 89
Race 10	Placed 5	Placed 21	Placed 37	Placed 53	Placed 69	Placed 85
Race 11	Placed 11	Placed 27	Placed 43	Placed 59	Placed 75	Placed 91
Race 12	Placed 3	Placed 19	Placed 35	Placed 51	Placed 67	Placed 83
Race 13	Placed 13	Placed 29	Placed 45	Placed 61	Placed 77	Placed 93
Race 14	Placed 7	Placed 23	Placed 39	Placed 55	Placed 71	Placed 87
Race 15	Placed 15	Placed 31	Placed 47	Placed 63	Placed 79	Placed 95
Race 16	Placed 2	Placed 18	Placed 34	Placed 50	Placed 66	Placed 82

1/8th final round

1/4th final round

Semi-final round

Race 25	T33 1/16 th round
	2 nd race 1
	1 st race 1
	1 st race 2
	2 nd race 2
	T48 1/16 th round
Race 26	T44 1/16 th round
	2 nd race 3
	1 st race 3
	1 st race 4
	2 nd race 4
	T37 1/16 th round
Race 27	T42 1/16 th round
	2 nd race 5
	1 st race 5
	1 st race 6
	2 nd race 6
	T39 1/16 th round
Race 28	T46 1/16 th round
	2 nd race 7
	1 st race 7
	1 st race 8
	2 nd race 8
	T35 1/16 th round
Race 29	T41 1/16 th round
	2 nd race 9
	1 st race 9
	1 st race 10
	2 nd race 10
	T40 1/16 th round
Race 30	T43 1/16 th round
	2 nd race 11
	1 st race 11
	1 st race 12
	2 nd race 12
	T38 1/16 th round
Race 31	T45 1/16 th round
	2 nd race 13
	1 st race 13
	1 st race 14
	2 nd race 14
	T36 1/16 th round
Race 32	T47 1/16 th round
	2 nd race 15
	1 st race 15
	1 st race 16
	2 nd race 16
	T34 1/16 th round

Race 41	T17 1/8 th round
	2 nd race 25
	1 st race 25
	1 st race 26
	2 nd race 26
	T24 1/8 th round
Race 42	T21 1/8 th round
	2 nd race 27
	1 st race 27
	1 st race 28
	2 nd race 28
	T19 1/8 th round
Race 43	T22 1/8 th round
	2 nd race 29
	1 st race 29
	1 st race 30
	2 nd race 30
	T20 1/8 th round
Race 44	T23 1/8 th round
	2 nd race 31
	1 st race 31
	1 st race 32
	2 nd race 32
	T18 1/8 th round

Semi 1	T9 1/4 th round
	2 nd race 41
	1 st race 41
	1 st race 42
	2 nd race 42
T11 1/4 th round	
Semi 2	T12 1/4 th round
	2 nd race 43
	1 st race 43
	1 st race 44
	2 nd race 44
T10 1/4 th round	

SECOND CHANCE FLIGHTS DRAW

Race 17	T89 1/16 th round
	T73 1/16 th round
	T57 1/16 th round
	T49 1/16 th round
	T65 1/16 th round
	T81 1/16 th round
Race 18	T90 1/16 th round
	T74 1/16 th round
	T58 1/16 th round
	T50 1/16 th round
	T66 1/16 th round
	T82 1/16 th round
Race 19	T91 1/16 th round
	T75 1/16 th round
	T59 1/16 th round
	T51 1/16 th round
	T67 1/16 th round
	T83 1/16 th round
Race 20	T92 1/16 th round
	T76 1/16 th round
	T60 1/16 th round
	T52 1/16 th round
	T68 1/16 th round
	T84 1/16 th round
Race 21	T93 1/16 th round
	T77 1/16 th round
	T61 1/16 th round
	T53 1/16 th round
	T69 1/16 th round
	T85 1/16 th round
Race 22	T94 1/16 th round
	T78 1/16 th round
	T62 1/16 th round
	T54 1/16 th round
	T70 1/16 th round
	T86 1/16 th round
Race 23	T95 1/16 th round
	T79 1/16 th round
	T63 1/16 th round
	T55 1/16 th round
	T71 1/16 th round
	T87 1/16 th round
Race 24	T96 1/16 th round
	T80 1/16 th round
	T64 1/16 th round
	T56 1/16 th round
	T72 1/16 th round
	T88 1/16 th round

Race 33	T41 1/8 th round
	3 rd race 22
	2 nd race 23
	1 st race 24
	T25 1/8 th round
	T33 1/8 th round
Race 34	T42 1/8 th round
	3 rd race 24
	2 nd race 22
	1 st race 23
	T26 1/8 th round
	T34 1/8 th round
Race 35	T43 1/8 th round
	3 rd race 21
	2 nd race 24
	1 st race 22
	T27 1/8 th round
	T35 1/8 th round
Race 36	T44 1/8 th round
	3 rd race 23
	2 nd race 20
	1 st race 21
	T28 1/8 th round
	T36 1/8 th round
Race 37	T45 1/8 th round
	3 rd race 18
	2 nd race 21
	1 st race 20
	T29 1/8 th round
	T37 1/8 th round
Race 38	T46 1/8 th round
	3 rd race 20
	2 nd race 17
	1 st race 19
	T30 1/8 th round
	T38 1/8 th round
Race 39	T47 1/8 th round
	3 rd race 17
	2 nd race 19
	1 st race 18
	T31 1/8 th round
	T39 1/8 th round
Race 40	T48 1/8 th round
	3 rd race 19
	2 nd race 18
	1 st race 17
	T32 1/8 th round
	T40 1/8 th round

Race 45	T19 1/4 th round
	3 rd race 38
	2 nd race 39
	1 st race 40
	2 nd race 37
	T13 1/4 th round
Race 46	T20 1/4 th round
	3 rd race 37
	2 nd race 38
	1 st race 39
	2 nd race 40
	T14 1/4 th round
Race 47	T21 1/4 th round
	3 rd race 39
	1 st race 38
	1 st race 37
	3 rd race 40
	T15 1/4 th round
Race 48	T22 1/4 th round
	3 rd race 34
	2 nd race 35
	1 st race 36
	2 nd race 33
	T16 1/4 th round
Race 49	T23 1/4 th round
	3 rd race 33
	2 nd race 34
	1 st race 35
	2 nd race 36
	T17 1/4 th round
Race 50	T24 1/4 th round
	3 rd race 35
	1 st race 34
	1 st race 33
	3 rd race 36
	T18 1/4 th round