

Official Luxembourgish Drone Championship Rules

The basis for this set of rules is the following document:

FAI Sporting Code

Section 4 – Aeromodelling

Volume F3 Radio Control Drone Racing

2018 Edition

Effective 15 March 2018

and the amendments for the Luxembourgish Drone Championship (LDC) 2018 below.

Volume F3 Radio Control Drone Racing	Luxembourgish Drone Championship 2018 and International Open Race – July 21 st – 22 nd 2018
<p>A. DRONE RACING WORLD CUP RULES</p>	<p>Deleted – not valid as the LDC is a national event</p>
<p>B. F3U (PROVISIONAL CLASS) - RC MULTI-ROTOR FPV RACING</p> <p>B.1. 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: <i>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.</i></p> <p>----</p> <p>B.1.4. Radio control equipment Any 2.4 GHz spread spectrum technology radio control equipment may be used. Competitors may be authorised by the organiser to use other equipments, such as for example 868 MHz and/or 915 MHz TBS Crossfire module, as long as it is compliant with frequencies regulations of the organiser country. This possibility must be available well before the contest. Frequencies and emission power can only be those authorised in the organiser country. Any competitor using a forbidden frequency may be disqualified from the contest by the contest director. In order to limit risk of potential problems during the races (signal loss, frequency interference,...) with unwanted emission, the organiser may define restrictions for use of radio control systems equipments outside the racing circuit.</p> <p>---</p> <p>B.1.5. Video system The organiser must inform before the contest about the video system that will be used for races. The organiser may define a list of authorised video transmitters (VTX) in order to minimize risk of video problems and/or permit live transmission of the pilot view on large screens for the spectators and/or media production with the appropriate quality. The list of authorised VTX must be available well before the contest. Note: The organiser may not restrict to only one VTX. The list must not be defined with commercial consideration.</p>	<p>B.1. 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: <i>Software recovery modes such as 'anti crash' are not authorised.</i></p> <p>---</p> <p>B.1.4. Radio control equipment Any 2.4 GHz spread spectrum technology radio control equipment may be used. Competitors may be authorised by the organiser to use other equipments, such as for example 868 MHz and/or 915 MHz TBS Crossfire module, as long as it is compliant with frequencies regulations of the organiser country. This possibility must be available well before the contest. Frequencies and emission power can only be those authorised in the organiser country. Any competitor using a forbidden frequency may be disqualified from the contest by the contest director. In order to limit risk of potential problems during the races (signal loss, frequency interference,...) with unwanted emission, the organiser may define restrictions for use of radio control systems equipments outside the racing circuit.</p> <p>---</p> <p>B.1.5. Video system The organiser must inform before the contest about the video system that will be used for races. The organiser may define a list of authorised video transmitters (VTX) in order to minimize risk of video problems and/or permit live transmission of the pilot view on large screens for the spectators and/or media production with the appropriate</p>

The organiser may also request use of a certain type of VTX antennas with the appropriate polarization.
In order to limit risk of potential problems during the races (signal loss, frequency interference, ...) with unwanted emission, the organiser may define restrictions for use of video transmitters outside the racing circuit.
Frequencies and emission power can only be those authorised in the organiser country. Any competitor who does not respect the maximum emission power or other restriction for use of the video transmitters defined by the organiser may be disqualified from the contest by the contest director.

B.1.6. LED light unit (optional 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 clearly recognisable with, for example, a brightly coloured part of the frame or a custom canopy.
In addition, the organiser may request the competitors to equip their models with a LED light unit including possibility to choose the colour so that each model in flight has a different colour. In that situation, the organiser must define well before the contest the specifications of the LED light unit (minimum number of LED's, mandatory colours, RGB controller) or a list of authorised devices.
Note: In case a LED light unit is requested, the colour and the video frequency, may be assigned for each race according to the draw order in the group. This will simplify the organisation and improve the understanding of the races by the public.

B.3. NUMBER OF MODELS

Each competitor can register and use 3 models for the entire contest.
A model can be used by one competitor only in the same contest.
In case of an infringement to that rule, the concerned competitors will be disqualified from the contest by the contest director.
The competitor can change the model:
- before the start of the race as long the competitor hasn't left the preparation area,
- or between **two rounds of the qualification stage and elimination stage.**

quality. **The authorised systems are: Immersion RC Tramp, Team Black Sheep Unify and Furious Stealth.**

Note: The organiser may not restrict to only one VTX. The list must not be defined with commercial consideration.

The organiser may also request use of a certain type of VTX antennas with the appropriate polarization.

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

Frequencies and emission power can only be those authorised in the organiser country. Any competitor who does not respect the maximum emission power or other restriction for use of the video transmitters defined by the organiser may be disqualified from the contest by the contest director.

The used frequencies are: Raceband 3,4,5 and 6, as well as Fatshark 1,3,5 and 7.

Recommendation: Pilots should be able to quickly switch frequencies in a given time (+/- 30 seconds)

B.1.6. LED light unit (optional device)

LED light units are not required.

B.3. NUMBER OF MODELS

Each competitor can register and use 3 models for the entire contest.
A model can be used by one competitor only in the same contest.
In case of an infringement to that rule, the concerned competitors will be disqualified from the contest by the contest director.
The competitor can change the model:
- before the start of the race as long the competitor hasn't left the preparation area,
- or between two **heats.**

B.4. MODEL REGISTRATION AND PROCESSING

Each competitor can register up to three models. The organiser will mark each registered model with an easily visible, difficult to falsify identification such as a sticker.

During registration, the specifications of the model may be checked by the organiser. It is then recommended to check the following 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 if such a device is required by the organiser.~~

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 contest.

Random processing of models could be made after flights in any round.

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

B.5. PRACTICE FLIGHTS

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

~~A practice session will be organised at the beginning of the contest. Each competitor will only enter this practice session when he/she has finished models' registration and processing.~~

~~The organiser defines the conditions of the practice session according to the available time and the number of competitors. The conditions must be announced before the contest.~~

~~It can be a free practice session organised by groups with an allocated time identical for each group. The allocated time and the number of competitors per group are defined by the organiser.~~

~~The practice session can also be organised together with the first round of qualifying flights. Each group will be granted one or more practice flights of 3 minutes each. The number of practice flights is defined by the organiser and must be the same for all groups. After its last practice flight, the group will stay on the circuit for its first qualifying flight; a three minutes break to change the battery pack of the model or to change the model is given before the start of the qualifying flight.~~

~~In any case, each competitor can do during the practice time allowed as many circuit laps as the competitor wants. Once the practice time is over, competitors still in flight can complete their ongoing circuit lap before landing.~~

B.4. MODEL REGISTRATION AND PROCESSING

Each competitor can register up to three models. The organiser will mark each registered model with an easily visible, difficult to falsify identification such as a sticker.

During registration, the specifications of the model may be checked by the organiser. It is then recommended to check the following points:

- Identification mark.
- Weight and size.
- **Propellers** and batteries.
- Fail-safe and associated device to cut off the engines.
- VTX and camera.

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 contest.

Random processing of models could be made after flights in any round.

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

B.5. PRACTICE FLIGHTS

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

In case of a crash, and when the model cannot go on, the model must stay on ground with engine cut off until the end of the practice session. The competitor cannot request another practice time except if the reason for the crash cannot be attributed to him.

B.6.1. Timekeeping

It is recommended to use an electronic timing system whenever possible instead manual timekeeping.

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

B.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, the starter will announce clearly 'Arm your quads'.

- In less than five seconds after this announcement and taking care of an equivalent start time for all races, the starter 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.

When the starter considers to proceed wrongly, he/she 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 or their model.

B.6.3. Qualification stage

The number of qualifying rounds is defined by the organiser *according to the available time with, whenever possible, 3 (three) qualifying 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. *Wherever possible, 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 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 contest director (under supervision of a FAI Jury member) in order to get as far as possible a minimum of:

B.6.1. Timekeeping

There will not be any timekeeping devices.

B.6.2. Procedure for the start of the race

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

- The race director initiates a 3 minute countdown. During that countdown the pilots are supposed to be ready for take off. (The correct video frequency must be set within this period of time)

- When the starter considers that the competitors are ready, the starter will announce clearly 'Arm your quads'.

- In less than five seconds after this announcement and taking care of an equivalent start time for all races, the starter 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.

When the starter considers to proceed wrongly, he/she 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 or their model.

B.6.3. Qualification stage

The number of qualifying rounds is defined by the organiser *according to the number of participants and will be announced before the start of the race.*

If the number of pilots is smaller or equal to 16, for the first 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 following qualifying rounds will be rearranged by the race director in order to guarantee that every pilot will be able to fly in a heat with each other pilot. Wherever possible, 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), 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 contest director (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.~~

Each qualification round will be done on a number of circuit laps defined by the organiser. The recommended number of circuit laps is 3 for an outdoor field and 5 for a short circuit. The number of circuit laps must be announced before the start of the contest.

a) Electronic timekeeping

~~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.~~

~~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.~~

b) Manual timekeeping

~~For each competitor, the result of the qualification round corresponds to his/her registered time to complete the required number of laps increased when required according to the time penalties as defined in B.7.1.~~

~~A provisional ranking will be established at the end of the qualifying stage, taking into account the best result obtained by each competitor on its qualifying flights. In case of a tie for the last place(s) for selection to the elimination round, the 2nd best result will be considered to split the tie, and then if necessary the 3rd result. In case the results of the qualifying flights are not sufficient, a tie-break flight will be organised between the~~

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

Each qualification round will be done on a number of circuit laps defined by the organiser. The recommended number of circuit laps is 3 for an outdoor field and 5 for a short circuit. The number of circuit laps must be announced before the start of the contest.

competitors still concerned by the tie.

If the number of competitors required for the elimination stage is 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.

In any case (electronic or manual timekeeping), 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.

B.6.4. Elimination stage

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

- Scenario A - 4 (four) pilots per group with 1/4th final round (4 groups) as first elimination round (16 competitors selected from qualification stage).
- Scenario B - 4 (four) pilots per group with 1/8th final round (8 groups) as first elimination round (32 competitors selected from qualification stage).
- Scenario C - 4 (four) pilots per group with 1/16th final round (16 groups) as first elimination round (64 competitors selected from qualification stage).
- ~~- Scenario D - 6 (six) pilots per group with 1/8th final round (8 groups) as first elimination round (48 competitors selected from qualification stage).~~
- ~~- Scenario E - 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 contest considering total number of competitors and video system restriction on pilot's number per group. 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 contest director (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

B.6.4. Elimination stage

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

- Scenario A - 4 (four) pilots per group with 1/4th final round (4 groups) as first elimination round (16 competitors selected from qualification stage).
- Scenario B - 4 (four) pilots per group with 1/8th final round (8 groups) as first elimination round (32 competitors selected from qualification stage).
- Scenario C - 4 (four) pilots per group with 1/16th final round (16 groups) as first elimination round (64 competitors selected from qualification stage).

The choice will be done before the beginning of the contest considering total number of competitors and video system restriction on pilot's number per group. 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), 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 contest director (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.

The placing for each race is determined taking into account the *points* 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 it (crash or other reason), a new race 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 Tn 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 2 for scenario A (4 pilots per group and 1/4th final round as first elimination round).

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

- Annex 4 for scenario C (4 pilots per group and 1/16th final round as first elimination round).

~~- Annex 5 for scenario D (6 pilots per group and 1/8th final round as first elimination round).~~

~~- Annex 6 for scenario E (6 pilots per group and 1/16th final round as first elimination round).~~

B.6.5. Final stage

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

~~In scenario C or D, the three best placed competitors in each of the two semi-finals 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.

Elimination stage with

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 it (crash or other reason), a new race 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.

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 2 for scenario A (4 pilots per group and 1/4th final round as first elimination round).

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

- Annex 4 for scenario C (4 pilots per group and 1/16th final round as first elimination round).

B.6.5. Final stage

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

Elimination stage with

**4 pilots per group
(Scenario A, B or C)**

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 D or E)**

SMALL FINAL	T12 semi-final
	T10 semi-final
	T8 semi-final
	T7 semi-final
	T9 semi-final
	T11 semi-final
FINAL	3 rd semi 1
	2 nd semi 1
	1 st semi 1
	1 st semi 2
	2 nd semi 2
	3 rd semi 2

**4 pilots per group
(Scenario A, B or C)**

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

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

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.

B.7. FLIGHT OCCURRENCES

B.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, the pilot will be disqualified for the race. The pilot whose model has been collided may get a reflight if his/her assigned judge considers that this collision has **clearly penalised the pilot.**

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/her 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 the best to follow the track and not take advantage of this situation.

In case of a circuit cut (for example during a turn), the pilot must execute as soon as possible a manoeuvre to come back into the circuit where the pilot left it. If his/her assigned judge considers that the pilot has not made the manoeuvre with

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.

B.7. FLIGHT OCCURRENCES

B.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.

For the qualification stage: If during this manoeuvre the pilot has a collision with another model, the pilot will be disqualified for the race. The pilot whose model has been collided may get a reflight if his/her assigned judge considers that this collision has **caused the pilot to crash and not be able to fly anymore. During the elimination stage - the pilot that caused the crash is automatically placed on the 4th place of the heat.**

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/her assigned judge **and an additional round will have to be flown. Should the pilot not be flown, the pilot will automatically be placed on the last place of the heat.**

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

In case of a circuit cut (for example during a turn), the pilot must execute as soon as possible a manoeuvre to come back into the circuit where the pilot 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. The pilot whose model has been collided may get a reflight if his/her assigned judge considers that this collision *has clearly penalised the pilot.*

~~Indoor circuit with numerous structural elements or circuit in woods:~~

~~In case doing a U turn because of missing an obstacle or making a circuit cut can be a problem for safety, above rules may be replaced by time penalties added to the result of the flight and by circuit lap penalties.~~

~~The penalties for faults (air gate not crossed or obstacle not crossed or circuit cut) are defined as follows:~~

- ~~- 1st fault: 10 seconds.~~
- ~~- 2nd fault: 20 seconds (in addition to the 1st time penalty).~~
- ~~- 3rd fault: 30 seconds (in addition to the previous time penalties).~~
- ~~- 4th fault: 1 circuit lap removed (in addition to the previous time penalties).~~
- ~~- 5th fault: 1 more circuit lap removed (in addition to the previous penalties).~~
- ~~- And so on until a circuit lap is remaining.~~

~~When the assigned judge considers that a circuit cut is a voluntary cut to reach the finish line faster, then the judge can decide that the corresponding circuit lap is not validated rather than to give a time penalty for the fault.~~

~~When this system of time penalties is used, all flights need to be timed.~~

~~**Note:** Both systems (requirement of a manoeuvre and time penalty) cannot be mixed~~

B.7.2. Disqualification from the race

A pilot may also be disqualified in a race in case of:

- a start before the starter 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 in charge of the concerned pilot.

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

- the pilot flies so high that it does not allow to judge the performance's pilot on the track;
- ~~- the piloting is hazardous or if safety is involved.~~

When a pilot is disqualified, the concerned pilot must immediately land. In any case, the result of the pilot for the race will not be validated. If the pilot is

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. The pilot whose model has been collided may get a reflight if his/her assigned judge considers that this collision *has caused the pilot to crash and not be able to fly anymore.*

B.7.2. Disqualification from the heat

A pilot may be disqualified in a race in case of:

- a start before the starter 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 in charge of the concerned pilot.

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

- the pilot flies so high that it does not allow to judge the performance's pilot on the track;

When a pilot is disqualified, the concerned pilot must immediately land. 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

considered not being sufficiently cooperative to land, the concerned pilot may be disqualified from the contest by the FAI Jury on request of the assigned judge.

B.7.4. Video issues

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

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

- In a qualifying flight, the concerned pilot is granted a reflight.
- In any flight in the elimination stage, the judge lets his/her assigned pilot finish the flight and does best to judge and validate the circuit laps. When the result permits the pilot him to be directly selected for the next elimination round (or for the final), *the concerned pilot is granted a reflight.*
- For the final, the judge lets his/her assigned pilot finish the flight and does best to judge and validate the circuit laps. If the pilot is placed in the three first, the final is re-run; this does not concern the small final.

When a pilot is granted a reflight, the flight for which the pilot gets the reflight is then definitively cancelled.

B.8. CLASSIFICATION

~~When both second chance sequence (B.6.6) and additional rounds sequence (B.6.7) are applied, the individual general placing will be established as follows.~~

B.9. OFFICIALS

B.9.1. Officials needed to run the contest

The running of a contest requires the following officials:

- Contest director in charge of preparation, organisation and oversight of the contest. The contest director has especially to ensure compliance with the applicable rules and safety during the whole contest.
- Starter and assistant in charge of calling competitors for racing, of conditions under which models are prepared and of checking their preparation, of checking flight times; for oversight of the models during transfer to the take-off area, and of giving the start signal for each flight with an audible device (whistle, foghorn, ...).
- Judges (one per pilot) in charge of checking all aspects of the pilot's racing on the circuit ~~and of timekeeping.~~
- Official responsible for checking the models' weights and identification marks (number and height of lettering).
- Official responsible for score sheet gathering.

disqualified from the contest by the FAI Jury on request of the assigned judge. *If there are several disqualifications in one heat, the sanctions will be applied in the chronological order of events.*

If the judge considers that the piloting is hazardous or if safety is involved, the pilot is disqualified from the whole event.

B.7.4. Video issues

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

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

- In a qualifying flight, the concerned pilot is granted a reflight.
- In any flight in the elimination stage, the judge lets his/her assigned pilot finish the flight and does best to judge and validate the circuit laps. When the result permits the pilot him to be directly selected for the next elimination round (or for the final), *the heat will be repeated.*
- For the final, the judge lets his/her assigned pilot finish the flight and does best to judge and validate the circuit laps. If the pilot is placed in the three first, the final is re-run; this does not concern the small final.

When a pilot is granted a reflight, the flight for which the pilot gets the reflight is then definitively cancelled.

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- Judges (one per pilot) in charge of checking all aspects of the pilot's racing on the circuit.
- Official responsible for checking the models' weights and identification marks (number and height of lettering).
- Official responsible for score sheet gathering.

- Official responsible for results accounting.

~~When the timekeeping is done manually, one timekeeper per pilot is recommended in addition to the judge.~~

According to the contest standing and the number of competitors, some official tasks may be assumed by the same person.

- Official responsible for results accounting.

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