



FPV SPORTING RULES HUNGARIAN CHAMPIONSHIP 2020.01.08.

DERIVED FROM THE FAI F9 DRONE SPORTS RULES

TECHINCAL SPECIFICATION

Maximum Cell Count (Voltage)	6S (25.5V)
Maximum Prop Size	6 inch
Maximum AUW	1 kg
Maximum size	330 mm (diagonal m2m)
RC Link	Digital only, 2.4 GHz @ $\leq 100\text{mW}$ or 868 MHz @ $\leq 25\text{mw}$.
VTX Power	25mW
VTX Frequencies	R1/R3/R6/R8
VTX Brands	TBS, ImmersionRC, Rush FPV, Furious FPV, DJI (DIGITAL FPV SYSTEM only)
Antenna	Circular Polarized (no linears allowed)
LED	Minimum 16 pieces of RGB LED diodes (4*4 arrangement is preferred) with selectable colours of red, green, blue and white/yellow. Colour changes must be quick and effortless.
ID Mark	Each model should carry the three letter national identification mark followed by the FAI Sporting Licence number. The letters and numbers must be at least 6 mm high and appear at least once on each model.
Timing Tag	Models should be able to mount the KTS Timing TAG as per appendix 1.
Max. number of models per pilot	3

The organisers reserve the right to disqualify any drone from a race at any time, based on builders' negligence.

EVENT SPECIFICATION

Timing	Absolute, starting at once
Evaluation	Based on DKO and CTA as per appendix 2
Minimum # of heats in a race	2
Maximum # of heats in a race	5
Minimum # of practice heats	2
Minimum # of laps for a round	3
Rerun:	In the event of a crash before or in the second obstacle* *
Complaints	All complaints must be filed with the inclusion of DVR footage
Result publishing	http://racetimer.hu
Entry fee	1500HUF/5EUR

* **These VTX frequencies are mandatory to all pilots.**

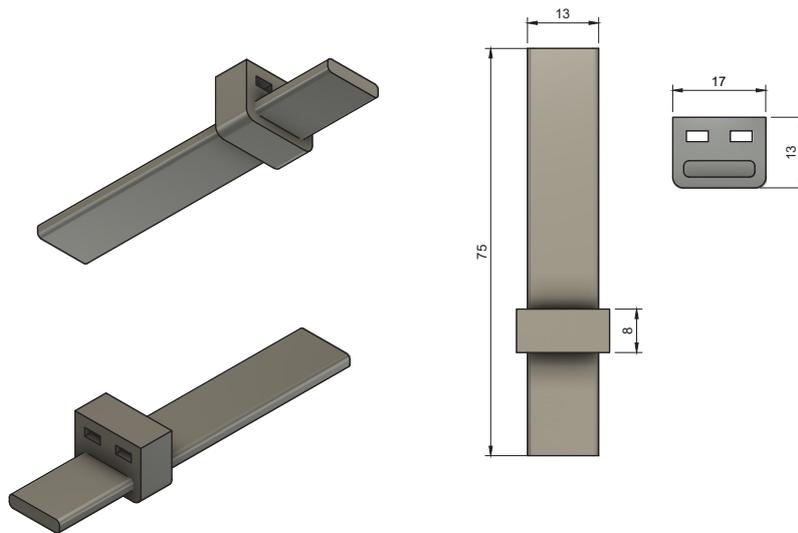
** **The obstacle in question will be designated at the start of each event, to avoid misunderstandings. All other cases of reruns are evaluated individually.**



APPENDIX 1

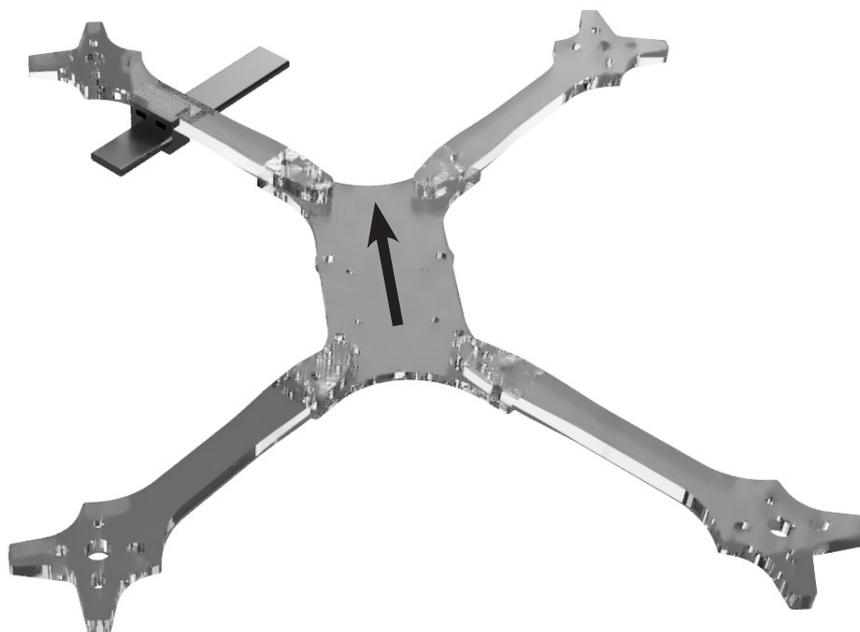
Timing Tag Dimensions

(mm)



Mounting

front left arm towards the end





APPENDIX 2

CALCULATING POINT BASED RANKING

After every heat(h) there is an absolute order generated, based on the achieved limit times. The position (s) in this temporary result list defines the number of points(p) given to each pilot, where the maximum number of points equals to the number of pilots(n) who participated in the heat. These points are cumulative, and after the last heat they give the final result(R) based on the points gathered.

If you are not able complete the limit (usually 3 laps), but you've passed the start gate at least once, you get 1 point. If someone participates in two rounds in the same heat (e.g.: rerun), then the better limit time is taken into consideration. In case of point equality the person who gathered the points from less heats will get the better position.

$(R=h*p, \text{ where } p=n+1-s)$

DKO

Qualifying stage

The organizer defines the number of circuit laps to complete and the time allowed for that. For each competitor, the result of the qualification round corresponds to his(her) registered time to complete the required number of laps. A provisional ranking will be established at the end of the qualifying stage, taking in account the best result obtained by each competitor on their 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 organized between the competitors still concerned by the tie. When the number of competitors required for the elimination stage is 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.



DKO

Elimination stage

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

- Scenario A - 64 competitors selected from qualification stage.
- Scenario B - 32 competitors selected from qualification stage.
- Scenario C - 16 competitors selected from qualification stage.

The choice of scenario will be done by the organizer before the beginning of the event considering the total number of competitors in order to give possibility to a maximum of competitors to fly the elimination 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 are 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 sequence

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

This sequence is optional. The organizer must inform the competitors at least one month before the event if double elimination sequence will be applied or not. This optional 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.

CTA

The final round will be repeated until somebody wins at least two times. The remaining 3 positions will be distributed by point based ranking achieved in the CTA session.



APPENDIX 3

Recommended equipment

Choosing video transmitter antennas

Choose antennas with low gain ($\leq 3\text{dBi}$) and axial ratio as close to 1.0 as possible. The low gain will help with lowering the size of the antenna's dead zone, while near perfect axial ratio will prevent you from receiving reflected thus distorted video signals or signals transmitted by other pilots using the opposite polarization.

If you don't care about how antennas work, just choose something from the list below:

- TrueRC Singularity
- TBS Triumph Pro
- VAS Minion series
- Lumenier Axii series

Cheaper options (used by many pilots with great success, but your mileage may vary):

- Foxeer Lollipop
- Furious FPV Air