ROTOR CROSS

LADDER (BRACKET) RACE FORMAT

This format has been developed to give pilots of all skill levels a great day of close, competitive racing.

A further benefit of this format allows us to fill up heat brackets to allow more racing for all, avoiding 2-3 pilot races.

The primary goal of each pilot is progression on the ladder and where you finish versus your previous position.

RACE SETUP

Practice

Practice brackets are to be determined by the number of pilots registered for the race and are seeded by the last race meets ladder. Channel allocation for these brackets will be R1, R2, F2, F4, R7 and R8

Brackets for the number of pilots registered are to be as follows.

Number of pilots	Number of groups	Number of pilots in each group
1	Not run, run as fun fly	
2	Not run, run as fun fly	
3	Not run, run as fun fly	
4	1	4
5	1	5
6	2	3,3
7	2	4,3
8	2	4,4
9	2	5,4
10	2	5,5
11	3	4,4,3
12	3	4,4,4
13	3	5,4,4
14	3	5,5,4
15	3	5,5,5
16	3	6,5,5
17	3	6,6,5
18	4	5,5,4,4
19	4	5,5,5,4

20	4	5,5,5,5
21	4	6,5,5,5
22	4	6,6,5,5
23	4	6,6,6,5
24	4	6,6,6,6

Table 1.

We will run four (4) practice heats.

You will have three (3) minutes per practice heat.

A staggered start is recommended to avoid accidental entanglements.

It is recommended to only use one battery pack per practice heat. If you have a minor fault on the starting blocks, at the Race Directors discretion you may make a quad swap if it is safe to do so.

Qualification

Your qualification seeding is determined by your two (2) best consecutive laps over all practice heats.

Tie breakers will be resolved by best single lap, and rock, paper scissors after that.

Bracket Seeding

Each bracket will consist of up to six (6) pilots and will be determined by the number of pilots registered (see table 1 above for bracket

groups and number) starting with the fastest pilots moving down with an emphasis on avoiding three (3) pilot brackets where possible.

Racing Heats

You will race against the same pilots in your brackets for the first three (3) heats.

Assigning places and overall points as per scorecard (refer Table 1 below).

After the first three (3) heats the highest and lowest scoring pilot from each bracket are promoted and relegated accordingly based on the accrued Championship points (refer Scoring and Ladder).

The top bracket can only relegate one pilot, and the bottom bracket can only promote one pilot.

Tie breakers will be fastest total race time across the first three (3) heats.

This provides the best performing pilots a greater challenge and ability to earn more Championship points. This also allows pilots having a bad day or having technical issues a chance to earn points in an easier bracket.

Channels will be assigned by points accrued in the first three (3) heats, new channels will automatically be assigned by the racing format sheet. Any changes to these channels should be avoided if possible, if changes had to be made the pilots points would need to be checked.

Pilots will take their accrued points to their new position in the scorecard, to ensure the calculations are correct.

The last three (3) heats of the day will settle positions for the final scorecard and finishing Championship positions for the day, and positions for finals.

Brackets and channels for the finals will be assigned by points accrued in the all racing heats, new channels will automatically be assigned by the racing format sheet. Any changes to these channels should be avoided if possible, if changes had to be made the pilots points would need to be checked

Finals will determine the final order for the race day, and the position finished will give a bonus added lot of championship points to the pilots scorecard (refer Table 3 below). Finals will be three (3) race heats, positions finished in each race heat will assign places and overall points as per scorecard (refer Table 2 below). Tie breakers for finals will be the fastest total race time across the first six (6) heats.

SCORING AND LADDER

The Championship points system allows points to be awarded to the first 20 pilots on the day. It is tiered and weighted towards the highest performing brackets as per other race systems.

Ideally, you want to be competing in the highest bracket you can, to gain the most points. Pilots in the top bracket earn the most. A pilot who finishes 5th in a top bracket heat will earn more Championship points than a pilot who finishes 1st in the bracket

below (effectively 6th). This method of scoring flows down the brackets.

The Championship points system works by awarding points after each heat based on your overall position versus all the pilots competing that day.

Position	Points	Position	Points	Position	Points	Position	Points	Position	Points
1	40	6	22	11	11	16	5	21	0
2	36	7	19	12	9	17	4	22	0
3	32	8	17	13	8	18	3	23	0
4	28	9	15	14	7	19	2	24	0
5	25	10	13	15	6	20	1	25	0

Table 2.

Position	Points	Position	Points	Position	Points	Position	Points	Position	Points
1	50	6	28	11	14	16	5	21	0
2	45	7	25	12	12	17	4	22	0
3	40	8	22	13	10	18	3	23	0
4	36	9	19	14	8	19	2	24	0
5	32	10	16	15	6	20	1	25	0

Table 3.

The scoring positions flow down the brackets regardless of how many pilots are in each.

Pilots that Do Not Start (DNS) in a heat earn no points (Refer DNS rules below), the next pilot in line takes those position points and flows down from there.

After all race heats have been completed each pilot's accrued Championship points are added to finalize the ladder.

This total will be added to each pilot's Championship points on the overall season ladder.

There will be no dropped round for the season.

SUPPLEMENTARY RULES

Race Restarts

During a heat each pilot has one chance to false start. A false start is defined by a quad leaving the starting blocks prior to the start horn for any reason.

A false start will be called by the Race director and the race will be reset and restarted.

Two false starts by a pilot in a single heat will result in a 10 second time penalty added to the pilots total race time in that heat and final position in the heat will be changed to accordingly.

A Knockdown (KD) is defined as a quad hitting the ground after a collision with another quad prior to entering the timing gate for the first time that heat.

Any KD will result in the race being reset and restarted.

If a KD quad is damaged the pilot is permitted to swap to a backup quad prior to the restart.

All Quads should pass through the timing gate under their own power as cleanly as possible. Knocks and bumps that don't cause a KD are allowed, it's part of racing.

A single quad KD by racing collision between the timing gate and the designated obstacle is not a restart. The designated obstacle is decided on race day by virtue of track design (usually 1-2 obstacles after timing gate). 2 separate Quads that are both KD by racing collision BEFORE the designated obstacle is a restart, hitting the denoted obstacle and then crashing does not count.

A denoted line by the race director specifies what is BEFORE the designated obstacle.

The Race director has the final decision on all false starts and KDs.

Race Obstacle Failure

If a pilot is found to miss an obstacle during a race by accident and not on purpose then a 5 second time penalty will be added (for each obstacle miss)to the pilots total race time in that heat and final position in the heat will be changed to accordingly. If they are found that they did it on purpose then they will be disqualified from that heat and there will be no point awarded to that pilot.

DNS (Did not start)

Pilots will be awarded no points if their quad cannot make the timing gate under its own power (some exemptions apply, e.g. props on backwards. These will be determined case by case. If someone knowingly places a quad on the line that they know will not make the timing gate just to get points a DNS will be applied to their points, but if they unknowingly place a quad on the line with a fault then their position points will still count). You must pass through the timing gate flying clean. Hitting the ground unforced and tumbling through does not count if your quad is no longer able to fly afterwards.

If a restart from a KD occurs that damages your last functioning quad and you cannot make it flyable within two minutes it will be considered you have 'started' if you made the timing gate prior to the restart. If you attempt to restart and the damaged last quad fails, you will still be counted as 'started'.

Started means you will not incur the DNS penalty of no points for that heat.

Quad failure on the start line prior to race start you have ONE chance to replace it with a flight worthy quad, PER RACE DAY, and it must be done promptly. Failure to do so, or having already used your one chance, is a DNS.

Race director has final say in all judgements, but pilots may plead their case with evidence via DVR and/or spotter.

Heat Finishing Order

A pilot's final position during a heat is based on the order in which they complete all laps for the race.

If several pilots crash out and are unable to complete all laps their final position is based on the number of laps they have completed.

If they all crashed out on the same lap their final position is based on the last obstacle each has successfully completed.

If they all crashed out on the same obstacle the final position is based on the distance to the next obstacle.

If they all have an equal distance to the next obstacle the final position is based on who can throw their quad further.

External Video Interference Protest

If a pilot experiences interface of their video feed caused by an outside source during a race heat, they may call a protest after the race is complete.

The race may be restarted if the pilot is able to provide evidence that:

- Their quad video output power is 25Mw (Tested by Race Director using IRC Power meter)
- Their quad is on the correct channel (Tested by Race Director using RF Explorer)
- The pilot's goggles and module/base station is working correctly and on the correct channel
- DVR of the interference (Review of ROX DVR)

If a pilot is unable to show any of the evidence above, the protest will be denied, and no restart will be awarded.

If a protest is successful, the Race Director will need to investigate the cause of the interference prior to the restart.

Any quad found outputting more than 25Mw or not on the correct channel will need to be replaced or resolved within two (2) minutes or the pilot of the faulty quad will receive a DNS.

The Race director has the final decision on the restart.

Obstacle Failure during Race

If an obstacle such as a gate or flag has been knocked over during a race heat, the Race Director will advise all pilots immediately.

If the obstacle is a gate or tower, they are to fly over the top of the obstacle instead.

If the obstacle is a flag, they are to fly around the flag as if it was still there.

If the obstacle was knocked down by a pilot, it is their responsibility to fix it after the heat.

Seasonal Championship Tie Breaker

If there are pilots on equal points at the end of the season, they will square off in a chase-the-ace race off,

Chase-the-ace is defined as the first pilot to win two races and will be given the higher position on the ladder.

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