



Dutch Drone Squad

The next race 2019

Information and regulations

Latest update: November 18 2019

Info

Dutch Drone Squad organizes a massive fun race on **Sunday 24 of November 2019**. The winner will take home a cash prize.

In this document you will find information on rules, location, catering and more. Please take time to carefully read this document.

See you all!

Dutch Drone Squad

List of changes

- Version 1.0, set-up rules for DDS competitions
- Version 1.1, updating the rules for the new season
- Version 1.2, clarification of rules regarding cheating and match fixing
- Version 1.3, TBS Crossfire version to a minimum of 2.93
- Version 1.4, TBS Crossfire version 3.23 required (not higher or lower)

Date

Sunday 24 November 2019, 9:00 AM – 7:00 PM

Location

The race will take place at Sportpaleis Alkmaar: <https://goo.gl/maps/xPHuYMwL3DP2>
Terborchlaan 200, 1816 LE Alkmaar

Parking: Free parking outside the gate in front of the location. As soon as you enter the velodrome, keep to the right and follow the tunnel to the centre part.

Dress appropriately: The temperature in the velodrome can vary, take this into account.

Food and Drinks

A packed lunch will be offered to each pilot by Dutch Drone Squad. **Alcoholic drinks and drugs are not allowed during the race.** Smoking is allowed outside at the designated area.

Time Table

Arrival / pilot registration / gear check (failsafe etc)
Announcements and walking the track

Practice Round (32 pilots in 8 heats)

1st Qualifying Round (32 pilots in 8 heats)

2nd Qualifying Round

3rd Qualifying Round

4th Qualifying Round

5th Qualifying Round

6th Qualifying Round

7th Qualifying Round

8th Qualifying Round

Quarter Finals (16 pilots in 4 heats, 3 rounds)

Semi-Finals (8 pilots in 2 heats, 3 rounds)

Finals (4 pilots in 1 heat, 2-5 rounds)

Prize ceremony

In between we try to keep GoPro rounds. If you want to make use of it, please indicate when registering on the day itself.

Registration and gear check

Doors are open at 9 AM. Be ready to have your drones checked. We will test the failsafe and check VTX power(maximum 25mW), we can perform random checks during the race and if it is determined that you are outputting a power level of more than 25mW, you will be disqualified.

At the failsafe check make sure that your props have been removed (do this at home already, so that checking also runs smoothly) and that your failsafe is set to disarm the motors within one second.

If you use a TBS Crossfire, update your firmware to the correct version (see version at quad spec.) and set it to 25mW. You may use telemetry but if there are any failsafe issues during the event we can demand **ALL** pilots to disable telemetry.

Every pilot must have insurance to fly. Please show your insurance certificate for drone inflicted damage. See also the quadcopter requirements below.

Race Flying Format

Practice and Qualifying

There are 32 pilots divided into 8 heats of 4 pilots. There will be flown of 3 minutes per heat, with a minimum of 3 laps if you want to set a valid time. Max 2 minutes is held between races

There will be one practice heat: the best lap time determines your position for qualifying rounds. Pilots are divided according to the skill level: the fastest 8 are divided over heat 1-8, and so on. There will be approximately 9 qualifying rounds. Your qualifying time is your top 3 consecutive times.

Times, rankings and the live stream will be available on:

<https://dutchdronesquad.livefpv.com/live/>

Knockout 1: quarter-finals

The top 16 pilots make it to the quarter finals. Pilots are classified as in the qualification phase: the top 4 pilots get divided over heat 1 to 4 and so on. Three laps will be flown. During the quarterfinals there will be flown in 4 heats and each heat is flown 3 times.

You can earn points in every heat:

Position:	Points:
1 ^{ste}	3
2 ^e	2
3 ^e	1
4 ^e	0

Per heat the two pilots with the highest score after the 3 rounds will continue to the semi-finals. If there is a tie, the pilot with the fastest top three consecutive during the quarter-finals will rank higher.

Knockout 2: semi-finals

8 pilots make it to the semi-finals. Pilots are classified as in the qualification phase: top 2 pilots go to heats 1 and 2 and so on. Three laps will be flown. During the semi-finals there will be flown in 2 heats and each heat is flown 3 times.

You can earn points in every heat:

Position:	Points:
1 ^{ste}	3
2 ^e	2
3 ^e	1
4 ^e	0

Per heat the pilots 2 with the highest score after 3 rounds will continue to the finals. If there is a tie, the pilot with the fastest top three consecutive during the semi-finals will rank higher.

Finals: chase the ace

The 4 remaining pilots will battle for first price in the chase the ace format. In each round, three laps will be flown. *The first pilot who win two heats will be the winner of the day.*

For places two to four, points totals will be calculated as in the quarter-finals and semi-finals. If there is a tie, the pilot with the fastest top three consecutive during the finals will rank higher. The finals will have a minimum of two rounds and a maximum of five rounds. If no pilot has two wins, first place will also be determined according to points totals.

Timing system

For timing the Delta 5 / RotorHazard racetimer is being used. Please make sure you are using a good quality VTX and antenna for optimal performance. The frequencies used for the race are raceband 1, 3, 6, and 8, make sure your VTX supports those channels.

Race Rules/Infringements & Event Protocol

1. The timing of events will be strict. A race lasts **3** minutes and there will be **2** minutes between races. If you have technical problems and you cannot take off at the start of the race, you must leave the track with your quad and forfeit the lap
2. Every pilot is the spotter for the previous race. Spotters must be on time for the start of the race. If you are not ready in the pilot area at the start of the race you have to spot you are **NOT** allowed to start in your heat. Every pilot must be ready and waiting at the entrance to the pilot area before the race they have to spot.
3. Have your quad land as quickly and as safely as possible in the designated landing zone after your race, so that we can prepare for the next race.
4. Please pick up your quad after each race and unplug your battery as quickly as possible. If your quad is stuck in the netting and cannot be removed in time, the quad **MUST** be **unplugged** or put into **PIT-Mode** and can be removed from the nets **after** the race
5. If a lap does not cover the entire length of track at the end of the race, the incomplete lap will not be counted in the score.
6. Pilots who take advantage of a jumpstart will immediately lose this advantage by waiting next to the starting line until the other quads have passed (and only if entering again can take place safely).
7. Turtle mode and launch control are allowed, provided that other quads are not obstructed and that your maneuver will not damage the track or cabling.
8. Please keep the race management and pit lane free of obstacles to enable the race director to see and hear everything that is happening and can communicate with the pilots if necessary.
9. Pilots must be able to fly their race undisturbed at all times.
10. Flying outside the designated area will immediately lead to disqualification for the rest of the competition.
11. Failure to comply with safety rules on or off the track will result in immediate disqualification for the rest of the competition.

12. We will use a split screen system to tune into your racing frequencies and record DVR for livestreaming. In the event of a dispute, the pilots are responsible for supplying their own DVR footage to the Race Director.
13. We can check VTX power output during the race. Every drone who transmits a signal stronger than 25 MW will be disqualified.
14. Every participant must be familiarized with changing VTX channel quickly because it will be necessary during the race. If you are not on the right frequency on time, this means that you are not allowed to fly.
15. Do NOT activate video transmitters unless you are racing. Activating video transmitters will result in immediate disqualification for the rest of the competition.
16. Any act of cheating and/or match fixing by intentionally losing or tampering with video channels and/or output power will lead to being disqualified from the competition.
17. There will be no re-starts for midair collisions if it happened after the first gate (timing gate). If you have video problems, we must see corresponding evidence on our video equipment before considering a re-run.
18. Remember that we are in an indoor location, so don't expect a fantastic video. We have flown for years in 'Het Sportpaleis' with diversity ground stations and modules. We recommend using an ImmersionRC RapidFire or Clearview. Ground stations and/or modules are **NOT** provided
19. Entering the race course is strictly forbidden unless a member of the racing staff has given permission
20. Only charge your batteries in the specified charging area and follow all safety precautions.
21. Please respect the Pitts Areas, keep them clean and tidy and do not take up too much space.
22. Do not leave trash anywhere.
23. By registering you agree to our privacy statement and you have no objection for photo and video recordings.
24. Dutch Drone Squad cannot be held responsible for loss, damage or theft of your property.
25. For everything that is not explicitly mentioned in this document, we rely on version 0.6 of the national Dutch drone racing regulations of Platform Drone Racing NL. These can be found at: http://bit.ly/pdrnl_reglement_2019

Quadcopter requirements

- **Frame dimensions:** Maximum 350 mm
- **Props:** Maximum 6"
- **Batteries:** Maximum 6s HV. It is not allowed to charge more than 4.35v per cell
- **VTX:** Maximum 25mW. Must support raceband frequencies. IRC tamps or TBS VTX advised.
- **Timing:** Delta 5 / RotorHazard race timer (Good quality VTX and antenna advised)
- **LEDS:** A minimum of three LEDs is mandatory on your quad. Preferably ones you change the color of.
- **RC Link:** 2.4 GHz or a TBS Crossfires at 868 MHz at 25mW (Firmware 3.23), telemetry is allowed but In case of failsafe issues we can demand all pilots to switch off telemetry.
- **Video format:** PAL or NTSC cameras are both allowed.
- **Insurance:** Every pilot must have insurance to fly. Please show your insurance certificate for drone inflicted damage.

