BDRA
BRITISH DRONE RACING ASSOCIATION

British Drone Racing Association
September 20th-21st 2025
British Championships Pilot Pack

Dates & Timings

Saturday 20th September - Qualifying Heats
****PLEASE NOTE THE UNUSUAL LATE
START/FINISH TO THE 1st DAY****

Pilots Arrival From	11:00
Pilots Check-In	11:30
Pilot Briefing	12:30
Qualifying Heats *(8 rounds)*	13:00
Race Day End *(latest)*	19:00

Sunday 21st September - Qualifying Heats and Finals

Pilots Arrival From	09:00
Qualifying Heats *(4 rounds)*	09:30
Lunch/Drone Finals Preparations	12:30
Final Rounds	13:30
Prize Ceremony	16:00
Track Teardown	16:30

All timings are approximate and weather dependent - we will of course do our upmost to run heats as fast as possible.

It is your responsibility to be ready for each race and these will run without you if not present.

NOTE: Races may still be run in inclement weather at the Race Directors discretion. Please ensure that suitable measures are taken to protect your drones from water ingress to non-waterproofed components.

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Event Location

https://maps.app.goo.gl/2cCUdb782GbYDAtq7

Yate Outdoor Sports Complex, Broad Ln, Yate, Bristol BS37 7LB

Site Layout

Full site layout - including pilot entry route, parking, race administration, pits and camping area are shown below:

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Camping

- Camping is included within the cost of the event and includes tents, camper vans or motorhomes *(caravans could prove difficult for entry to the site).*
- This will be available from the Friday afternoon *(19th Sept)* through to the Sunday morning *(21st Sept).*
- Toilets and Showers (with mains running hot and cold water!) will be made available *(Toilets 24hrs - Showers available from 8am).*
- **Please ensure the BDRA are informed on the nights you wish to camp so numbers can be communicated to the venue and event organising team.**

Other Venue Details

- Yate Outdoor Sports Centre (YOSC) is well equipped, and versed, in hosting international level sporting events.
- Please ensure that site rules are followed at all time, these can be found at the entrance gate to the site. Any competitor found violating any of these rules will be asked to leave.
- As you can see, our designated track area is surrounded by a specialist red tarmac running surface. Although robust, it may not withstand drones arming/turtle mode'ing upon it.
- **Due to this, if a drone crashes on the red running surface it must be disarmed immediately and must not be attempted to re-arm, even if it is the correct way up.** Any damage caused to this surface through negligence will be at the Pilots expense to resolve with the venue.
- Due to this you will find a **fully stocked bar and on site Cafe** *(with a selection of both hot and cold food)* to keep you fueled throughout the day.
  NOTE: No alcohol, past the legal limit allowed for driving, should be consumed during the race day. Any Pilots who may have consumed over this limit will be asked to not compete for the rest of that day.
- Outside of Cafe opening times food ordering via JustEat, UberEats, Deliveroo *(and other food delivery apps)* gives plentiful choice in the area and delivers to site.
- If you need any other local recommendations then please approach any of the Race Admin Team who will be able to point you in the direction of a local Pilot.

- **YOSC is a no smoking and/or vaping site - and is strictly prohibited within the main venue area.**
    - Any smoking/vaping must take place in the dedicated area which will be announced during the Pilot briefing.

- **YOSC does not have any facilities to dispose of any damaged Lipo batteries.** It is the Pilots responsibility to bring equipment (i.e. lipo safe bags) to ensure they can safely be transported home for disposal.

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Joining Instructions

When you arrive, feel free to find a space in the pit area to set up your equipment, please be mindful of other people's belongings.

Indoor pits area(s) are provided but please bring your own tables and chairs (as per a normal race event) to ensure that you have adequate space.

- **Saturday Pit Area** - **Overflow pit area** with 'Staging' in **main Cafe area**
- **Sunday Pit Area** - **Main Cafe area**

NOTE: As this is a public venue you should ensure that your equipment in the pit area is not left unattended. The BDRA will not take responsibility for any losses.

Mains power will be available for all Pilots - all charging will be in a designated area outdoors (sheltered from the elements) - no charging within the indoor pit areas is permitted. **Please do bring your own extension leads as this may be required to facilitate charging for all. Due to this - no generators will be permitted to be run on site.**

As soon as you arrive please go and check in your equipment with the Race Admin Team. Please make sure the following is completed before coming to check in:

1. Your **VTxs are set to 25mW** and to the correct channel as indicated on the **heats list.** *NOTE: Any HDZero VTX's set to 200mw and scaled down via settings will not be permitted.*
2. Ensure the **props are off your quad(s)** to complete the failsafe check
3. That any 2.4GHz or 868MHZ control systems are set at **no more than 100mw of output power**
4. Make sure that each quad you are checking in has your **CAA Operator ID clearly labelled upon it (under 18's need also need proof of a valid Flyer ID and each drone carrying an Operator ID registered to their parent/guardian).** *NOTE: The BDRA reserve the right to check at random the validity of these credentials.*
5. Ensure you have your **insurance documents (BMFA only) or have arranged temporary insurance directly with the BMFA ahead of the event -** **no other insurance providers will be accepted at this venue**. If you have not uploaded the correct documentation from the BMFA to iFPV, or cannot prove this at check-in, then you will not be allowed to compete in the Championship event.

Once the pilot briefing is finished - then the first heat of racing will begin - so pilots in Heat 1 and Heat 2 spotters should ensure they are ready.

Race Format

- The race will be run in accordance with the current BDRA 2024/25 ruleset which can be found here: **https://bdra.uk/current-rules/**. Please familiarise yourself with these ahead of the event.

- To maximise throughput and simplicity, you will remain in the same qualifying heats and use the same video frequencies throughout the event.
- Heat lists will be published before the event on iFPV and will be available on **dhes.livefpv.com** throughout the weekend.
- Seeding will be completed using the 50/50 ELO method - using a Pilots up-to-date ELO rating on iFPV to ensure that the fastest 50% of Pilots are not placed in heats with the slowest 50% of Pilots.

- Qualifying heats will consist of a maximum of **6 pilots** and will be labeled numerically *(1, 2, 3, etc. **This is based on the pilot order, NOT VIDEO FREQUENCY**)* - please remember and listen for your **heat number** so that you are ready in plenty of time for your races.

- During qualifying you will have **2 minutes** to set your **fastest 3 consecutive lap time** and you will have **30 seconds** to finish the remainder of your current lap. Laps completed after the remaining 30 seconds will not count.
- There is no 'lap cap' placed in qualifying - but we ask all Pilots to fly within the limits of their setups and to not continue to fly laps which could end in battery fires.

- Once the timer has elapsed the timing system will announce **'<Pilot Name> Done'** - it is the pilot, and their spotters, responsibility to then get the drone landed in the specified landing area whilst other pilots finish their heat.

- After each round, all pilots will be sorted by their **current fastest 3 consecutive lap time.**
- If a pilot has not managed to complete 3 consecutive laps then they will be **ordered by max number of laps (up to 2) completed vs time taken to complete these laps.**

- We aim to be running **12 heats of qualifying** over the 2 race days - this may change depending on how fast things run (you being organised gets more flying time!), at **least 50% of these rounds will be carried forward and used to determine the overall qualifying positions** - this number will vary depending on the total amount of qualifying rounds.

- Finals will run in the **Triple Finals For All** format. Each of the 3 final rounds will be the **first to a set number of laps** (decided using the methodology in the current BDRA ruleset) - these laps could vary between final groupings.
- **Points gained from all three finals will count towards the final finish positions.**

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Infringements

- If you are unable to attend the Championship race once confirming your place, please contact the BDRA Secretary as soon as possible.

- Competitors who miss a gate must make an attempt to retry that gate in a safe manner, giving priority to any other competitor on the track whilst doing so.
- Competitors who gain advantage through a shortcut or jumped start must forfeit that advantage immediately by waiting off the racing line and rejoining at their appropriate position (and only when it is safe to do so).

- **Standing up after crashing out, or finishing your laps, during a race could result in a deduction of your best qualifying or finals round.**
- **This is unfair on the other pilots, causing loud noise and moving past them is extremely off-putting, this will be taken seriously and failure to listen to this rule further could result in disqualification.**

- If a competitor is flying in a dangerous manner then they will be subject to a forfeit, this decision is up to the Race Director. *For example: Not disarming after a crash which leads to a further collision.*
- Repeated violations will result in a score of zero for that round and possible disqualification from the event.
- Failure to comply with safety rules or announcements will result in instant disqualification from the event.

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Request for Judges Review

- Requests from Spotters/Pilots to the Race Admin Team for review may be made for the following:
    - Incorrect reporting of a pilot lap count/finishing time by the timing system
    - Incorrect flight of a pilot. *(Missing a track element or flying elements incorrectly or in the wrong order)*
- The Race Director may at their discretion request the Race Admin Team to review any incidents that they require further information on to arrive at a decision. This discussion will remain in confidence between the Race Admin Team.

- Requests will be submitted in writing to the Race Admin Team via a dedicated sheet on the edge of the Race Control Area. All details must be filled out accurately to be investigated. Any entries left incomplete will not be reviewed.
- Judges review requests for incorrect lap count/finishing time will be submitted by a jointly from the Pilot concerned with the agreement of their designated Spotter - both must be named on the request form.

- The 'Reporting Window' for a heat is open for **10 minutes** from the end of the heat in question *(approx 2 heats)*. After this window the heat result is final.
- No 'Trial by Livestream' will be accepted once this 10 minute window has passed.
- The Race Admin Team will accept reporting of 'Incorrect Flight' from another competitor - even if they were not the spotter and/or not involved in the heat. This must however take place within the 10-minute window specified above.

- Any required adjustments to results will be made at the soonest possible opportunity by the Race Director in such times when it will not adversely affect the running of the event. It is caveated that this could be at the end of the race day, or before generating finals heats, in a worse case scenario.
- The Race Admin Team have access to their own, directly recorded, feed to make decisions around the requested Judges review from. Should it be required to see other feeds, such as DVR from Pilot(s) involved, then it will be requested.

- **The Judge/Race Directors decision is final.** The Race Admin Team will not accept any further requests to re-review a decision once it has been made.
- No other persons, apart from those a part of the Race Admin or Event Organisation Team, will be allowed to be involved in the Judges Review decision making process.

NOTE: Any competitors trying to get involved in this process, who could be seen to be attempting to influence a decision, may be seen in breach of BDRA rules and may be asked to leave the event.

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Construction Rules

Frame dimensions	280mm maximum diameter (across motor shaft centres)
Props	No maximum - (plastic only)
AUW	No limits (max or minimum)
Battery Limits	**6S Limit**, High Voltage is allowed (all batteries must be charged safely and within manufacturers' guidelines)
FPV Cameras	Both PAL / NTSC cameras are allowed for this event.
Turtle Mode	The use of turtle mode **is allowed on grass areas only (not the red tarmac)**, please be sensible and do not cause damage to the ground or your equipment through excessive usage - this can be called by the Race Director when applicable.
Control Systems	Any control systems in use **must be set to a maximum of 100mw of output power**
VTX's	**Analogue and HDZero video systems are supported at this event. 25mW maximum output** with support for **ALL 8 Race & FS/IMRC frequencies** (see appendix for the channels being used). Race Control will have a Frequency Monitor in place which can test VTX's if there is an issue. **NOTE:** In line with current BDRA guidance we **will not be accepting any other digital video systems** (DJI/Walksnail).
Failsafes	All competitors must set up failsafes to cut motors COMPLETELY in the event of signal loss. If your flight controller has a condition for receiver connection loss then that should also be set to cut motors.
Lap Timing	We will be using a **Livetime/ImmersionRC LapRF** VTX timing system at this event - so no transponders will be required. All results will be posted on **dhes.livefpv.com**, which you can check via your mobile phones, **please do not harass race control for times**.

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Event Protocol

- **The track is strictly off-limits** unless **Race Control** explicitly declares it safe to enter.
- The pilot briefing will be held once **all pilots** are checked-in and failsafes have been checked - please ensure your props have been removed prior to attending failsafe checking.
- You will not be permitted to fly until after you have attended the pilot briefing - please don't be late as this will reduce the flying time of the day *(see timings on page 1)*.
- A race **will only be stopped by the Race Director** **with the air horn** *(not via a microphone announcement)* as demonstrated in the pilot briefing. If anyone other than the race director says to stop flying, **ignore them until the race director has made a decision.**
- Familiarise yourself with setting your VTX to the **8 Raceband & FS/IMRC frequencies** and expect to be asked to change if necessary.
- **Do NOT power up any video transmitters** unless you are racing, this could result in **immediate disqualification**.
- Please be ready for your race before the previous one ends. You will be **spotting** for the race **before** your own! If you cannot see the feed of the Pilot you are spotting
- If you have a technical difficulty during setup that cannot be fixed before the 10s countdown then you must leave the track with your aircraft powered off and forfeit the round, we will make some exceptions if deemed fair.
    - Due to this it is recommended that each Pilot take at least 2 drones out to the track area for ease of swap-out should a setup become faulty at plug-in
- After your race is over, please land your aircraft as quickly as possible **in the landing area (it will be marked)** so that we can prepare for the next race, **no freestyle or showboating** please.
- There will be a **"Arming Safety Zone"** surrounding the start grid (it will be marked), this is in place to keep pilots safe whilst putting their quads on the starting blocks, there is to be **NO ARMING (Quads with propellers spinning)** if anyone is within this zone. Failure to comply with this could result in losing a round or disqualification - this is for pilots safety.
- Make sure you fulfil the role of '**spotter**' for the race immediately before your own. Competitors in the first race in each round should spot for the last race. Your job, as a minimum, is to **count laps** and **inform pilots of any missed gates and track elements**.
- Spotters and Pilots may wish to liaise with each other at their first meeting of the event to ask if they would like further assistance whilst flying. **Any additional assistance is at the discretion and agreement of both Pilot and Spotter** past the minimum role listed above.
- Some competitors may choose to have a certain individual as their spotter, please be respectful of this.

Event Protocol (cont.)

- Please **do not fly anywhere outside of the dedicated track area** without express permission from the Race Director (which will only be granted in exceptional circumstances) this includes Tiny Whoops!
- During a heat if you crash and are unable to recover and continue flying, no matter how frustrated you may be, **sit in your designated seat and wait until the round finishes, any shouting or distracting other pilots will result in the penalties stated before.**
- Please keep race control and the pilot stations clear of distractions so that the Race Director can see and hear everything that is happening, and can communicate with the spotters when necessary.
- We would ask that, if possible, pilots help with the 'teardown' process of the event.

Spectators and Commentary

- Coloured props, LEDs and coloured turtle mode fins will help spectators and commentators to identify your quads as they fly around the track, however they are not required.
- We will be using a HDZero EventVRX system to tune into your race frequencies so that online spectators can see the view from your goggles. It would be great if you set a callsign *(e.g "Knighthawk")* on your FPV camera to help us correctly identify you from your feed.

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Appendix: Frequency Management

We will be using the following frequencies for this event:

- Raceband 1 - 5658
- Raceband 2 - 5695
- Raceband 3 - 5732
- Raceband 4 - 5769
- Raceband 5 - 5806
- Raceband 6 - 5843
- *Raceband 7 - 5880 (Spare)*
- *Raceband 8 - 5917 (Spare)*

Please be familiar with setting each of these frequencies in your video transmission equipment, as you may be asked to change between them during the event. We will be running a spectrum analyser throughout the event and we will use it to monitor the 5.8 frequency band before and during each race.

It is **your responsibility** to ensure that your video transmitter is **below the 25mW limit.** We also have the ability to check the output power of any suspected quad with our own ImmersionRC power checker, if video issues are apparent, and constantly throughout the day with a RF Explorer.
We will try to allow time for solving video issues, however ongoing problems will be left with the pilot to deal with.

Any competitor found causing another competitor to lose video through negligence or willful sabotage *(including use of the wrong frequency or exceeding power output levels)* could be disqualified from the competition.

<u>Absolutely no illegal substances to be used during this event</u>
Anyone breaking this rule will be asked to leave immediately and their attendance at future events may be at risk.

Any queries before the event, or on the event days, please contact the BDRA through our Facebook page, Discord or email to <u>committee@bdra.uk</u>.