

WARE-FPV® Whoop Championship “Official Rule Book”

Sponsored by



ABOUT WHOOPTOPIA

Whooptopia is the world's largest Whoop Racing Competition and takes place every January in the Valley of the sun in Phoenix Arizona. This highly successful competition is now in its 6th year of running and organised by the Team at Rippin AZ. Many would argue that this event alone, has been responsible for changing the sport of Whoop Racing and inspired many racers on to the Whoop track.

WareFPV® are honoured to be working with Whooptopia and the now infamous **AyyyKayyy**. An enormously talented Competitor and Architect of many of the world best drone racing circuits both in the Simulator and In-Real-Life

For this competition AyyyKayyy has designed the WARE FPV® Whoop Championship racing circuit and official Velocidrone track that's available for all competitors to train on at "**WareFPV Champs By AK**".

WareFPV® OUR ETHOS

At WareFPV® we keep things friendly, simple, and easy to understand. Like you, we're passionate about our hobby and want to promote that hobby to a larger audience and grow competition levels across the United Kingdom.

We aim to maintain consistency with an already established set of global Drone Racing Rules and we've adopted known and proven competition standards set by MultiGP, FAI, Velocidrone and Whooptopia.

We'll not deviate from the rules. Nor will there be any ambiguous 'on-the-day-surprises', or 'random-rules' introduced for the sake of novelty. We keep things simple, professional, easy to understand, predictable, racer focused and FUN!!

Finally, it goes without saying that proper sportsmanship, and competition fairness is a given at any WareFPV® Drone Racing event.

THE RACING CIRCUIT

Race Gates - For Whoop Racing we have standardised all internal gates sizes to be 19" x 19" (48cm x 48cm) with gates configured as single, double, or triple gates. The same dimensions have already been proven to work and used by the successful team at Whooptopia. We've also adopted standardised dimensions for our hurdles, tunnels, flags, and 'h' gates.

The Racing circuit - The racing circuit is in a large basketball court, sized hall. The hall has no windows, no external light, and the interior lights will be switched off to maximise the effect of the LED illuminated gates (as adopted by Whooptopia). All gates will be mains powered with all wires, cable and power leads taped to the ground to minimise entanglement and interference of your Whoop while racing. The wires are also tapped down to reduce tripping hazards while walking on the racing circuit. The Racing circuit space itself will use 50% of the Basketball Court.

THE PIT SPACE

The Pits - The "Pit Space" will use the remaining 50% of the basketball court (and surrounding space). The pits space walls are equipped with a dozen or more double mains power sockets, and we ask competitors to bring their own extension leads, chairs, tables (ideally 180cm folding tables) and we recommend you bring a small folding table lamp (Drevet LED Desk Lamp from Amazon at £18) to illuminate your pitting area. Running water, toilets and changing room facilities will be available for anyone attending the event. All racing will be viewable and projected onto a large screen in the pitting area and streamed live.

LOCATION AND PARKING

Racing circuit Location - The racing circuit is located inside a large Secondary School in Ware, Hertfordshire, United Kingdom. Ware is a charming town, brimming with restaurants coffee shops and pubs along the lovely River Lea. Access by car is easy and parking is plentiful. The racing circuit is located within 5 min walk from Ware Train Station with a Premier Inn hotel and Beefeater restaurant next to the station.
<https://www.facebook.com/WareFPV>

Local Airports – Ware Town is a 20min drive from London Stanstead Airport and a 20min train journey to London, making it the perfect short stay vacation location for international Competitors travelling from abroad. We recommend you attend the race

and visit the City of London at the same time. We can also arrange for a Taxi to collect you from the track and take you to the airport.

1. THE RULES

- 1.1. **These are the WareFPV® Drone Racing Competition Rules** - They are set in place to ensure fair competition for all Competitors competing in this race. These rules ensure the event always runs safely and smoothly so that competitors gain the maximum number of flights.
- 1.2. The rules are full and final to give all Competitors and Spectators a clear understanding of what is, and is-not allowed, at this competition and the venue used to host the competition.
- 1.3. The rules apply to Competitors, Spotters and Spectators - Always listen to and follow all (emphasis added) instructions provided by any (emphasis added) Race Officials.
- 1.4. These rules also define the specification of Whoop that can and cannot be flown at this competition.

2. WHOOP SPEC REQUIREMENTS

- 2.1. **Allowed Whop Specifications** - This competition is run for Tiny Whoop class micro 1s FPV Drones that are commercially available as Bind-And-Fly (BNF) and or Ready-To-Fly (RTF) drones made by BETA FPV, HappyModel or others. For the sake of these competition rules, they will be referred to as "Whoops".
- 2.2. Additionally, Competitors can build their own custom Whoops using any commercially available parts and there is no minimum or maximum weight requirement.
- 2.3. In the event a Competitor's Whoop does not meet the minimum requirements for this competition, that Whoop may be deemed non-compliant and cannot not be used during the competition. Competition Whoop specifications are listed below as:
- 2.4. **Frame Specifications** - Any 65mm Frame, or 65mm 'Pro' Frame with full ducted propellor guards. Popular options include BetaFPV Meteor65 frame, NewBeeDrone Cockroach frame, WeBleed Crown frame, Fractal Engineering Frame, or other similar frames.
- 2.5. **Propeller Specifications** - We only allow the use of 31mm propellers. These can be two-blade, three-blade, or four-blade propellers and must not exceed 31mm (That means no 35mm propellers are allowed on 'Pro' sized frames).

- 2.6. **Motor Specifications** - Any brushless motors of 0802 or 0702 stator size can be used with no minimum or maximum KV requirements.
- 2.7. **Battery Specifications** - Any commercially available single 1s battery between 200mah to 400mah. Max Battery charge limit is 4.35v. Any Race Officials may do a battery check at their discretion at any given time. If a competitor is caught overcharging their battery, they will be disqualified from the event.
- 2.8. **Camera Specifications** – You can use any commercially available camera and any camera mount you like (including custom 3D prints).
- 2.9. **Flight Controller Specifications** - There are no specific Flight Controller requirements for this competition. (NOTE: Some Flight Controllers with integrated VTX's may fail Tech Inspection as they're unreliable in terms of mW output and/or transmitting on the correct channel).
- 2.10. **Antenna Specifications** - There are no specific antenna requirements at this event, meaning you can run linear or circular polarized antennas. Having no antenna is not acceptable, unless it has been damaged, or fallen off while racing.

3. TECH INSPECTION

- 3.1. Each Whoop is required to complete a tech inspection prior to flight to ensure it meets the above-mentioned requirements that are summarised as:
- 65mm Frame size (including 'Pro')
 - 31mm Propeller size (No 35mm allowed)
 - A single 1s battery is used (Between 200mah to 400 mah)
 - Your VTX is transmitting on 25mW as a maximum
 - Competitors are on their assigned channel for practice, qualifying and or finals.

4. VENUE GUIDELINES

- 4.1. At WareFPV® safety is our number one priority, and we ask that you respect the venue and follow the rules set in place. If any Competitor is not able to comply with the given rules that Competitor may be subject to removal from the event and the event venue.
- 4.2. Fire Hazards - A fire extinguisher will be kept on site and easily accessible by a Race Officials in the event of a fire. The hall is also fitted with multiple fire alarms, exit doors and smoke detectors in the case of an emergency.

- 4.3. Toilets and washroom facilities are provided on site. Please ensure that you respect the venue and leave the toilets as you would intend to find them before you used them.

5. RACING CIRCUIT SAFETY

- 5.1. No Competitor or Spotter or Spectator is allowed to walk onto the racing circuit at any given time unless instructed by Race Officials.
- 5.2. Competitors and Spotters must always have a clear view of the entire racing circuit from the flight line.
- 5.3. If a racing circuit feature (including but not limited to race gates, flags, poles or other) has fallen over or become damaged please report it to a Race Official who will fix or adjust the racing circuit accordingly.
- 5.4. Spectator safety is crucial and spectator areas will be roped or blocked off to prevent any foot traffic on the racing circuit at any given time.
- 5.5. Safety - If any WareFPV® Race Official notices any Competitor or Spectator is not complying with the event safety requirements, then they are authorized to discuss the issue with the individual to prevent any further occurrences. If a Competitor or Spectator is unable to follow the rules set in place, that Competitor or Spectator will be asked to leave the venue.
- 5.6. No alcohol or illegal drugs are allowed on site. Anyone found breaching these rules will be asked to leave the venue immediately.

6. COMPETITORS FLIGHT RULES

- 6.1. The flight line is in place to mark where the Competitors and Pit Space area ends, and the racing circuit begins. The flight line is not to be crossed by anyone, at any time unless instructed by a Race Official. When flying the racing circuit, competitors are required to fly from the designated flight line only.
- 6.2. When flying only fly in the designated flight area and only when you are instructed to fly by a Race Official.
- 6.3. When finishing a race, competitors are required to land their Whoop at the designated landing area advised to you prior to the race.
- 6.4. When a competitor retrieves their Whoop after a race has finished, the competitor is to power off their Whoop immediately upon retrieval. Competitors are not allowed to leave the designated racing circuit area with their Whoop still powered up and plugged in to a battery.

- 6.5. Only power up your Whoop once instructed to do so by a Race Official. No participant should ever power up their Whoop unless they are in a specific racing heat, practice run or final. If you need to power up your Whoop to test its working or change a VTX channel, please speak to a Race Official.
- 6.6. Competitors must respect those competing within their heat by not shouting, yelling, crying, screaming, or holding conversations with other Competitors, Spotters or Spectators during in a practice heat, race heat or final, at any given time. Competitors are also required to wait until the heat has finished before any celebration or raising any official complaints except for race start issues occurring before or at the Start Gate.
- 6.7. If a competitor fails to comply with any of these rules, they may be disqualified from that heat by Race Officials.
- 6.8. Harassment, bullying, intimidation or other types of similar toxic or negative behaviour will not be tolerated. The Race Director or Race Officials reserve the right to disqualify and remove any troublesome Competitors from the event and event venue.
- 6.9. Any Competitors attempting to win the competition by irregular means or cheating will also be subject to disqualification.

7. SPECTATORS

- 7.1. This competition is fun to watch and fun to discuss. However, we ask that all Spectators stay away from the competitors while they are flying (unless you are acting as a spotter or coach). Clear communication is essential with the competitors for accurate lap scoring, penalties, and hazard warnings.
- 7.2. At no time should any spectator attempt to interfere with any competitor, or a competitor's equipment while that competitor is racing.
- 7.3. The race organiser reserves the right to remove any spectator from the event and event venue. **YOU HAVE BEEN WARNED.**

8. RACE DIRECTOR & RACE OFFICIALS

- 8.1. Race Director - The Race Director for WareFPV® racing events is an unpaid volunteer. We believe Race Directors should be passionate about the growth of our hobby, and our racing community while being free of any conflicting interests.
- 8.2. Race Officials - If a participant has any questions, queries or other issues, they should be directed towards the WareFPV® Race Officials in the first instance. Please do not interrupt the Race Director

- 8.3. We ask that you respect all decisions made by our team of volunteer Race Director and Race Officials so we can run a fun and safe event with the least amount of complexity and maximum flying time. This is especially important as they're working to create a positive, fair, and neutral racing environment for the Competitors, Spectators, and Racing Community at large.
- 8.4. Race Management Roles - The Race Director performs many of the following tasks but reserves the right to delegate these tasks to other Race Officials as and when required, and at his or her own discretion. These include but are not limited to.
- Timing & Scoring
 - Safety Officer
 - Announcer
 - Tech Inspector
 - Flight Line Manager
 - Review Specialist
 - Live Stream Specialist
- 8.5. Appeals Process, and Decision Reviews - If a decision review is needed, the Race Director, one(1) Race Official, and one(1) Competitor Representative will second review the decision on appeal and collectively have the final say on that decision being reasonable and correct. This is to ensure a fair unbiased competition for all competitors.
- 8.6. Timing & Scoring - The Race Director will have the final say in the event of any misreads on the timing system. At WareFPV® we can play back video in the event a competitor's lap times are not being recorded to ensure fairness for all competitors.
- 8.7. Announcers - Competitors or Spectators are not allowed to distract the announcers at any given time.
- 8.8. Flight Line - Any WareFPV® Race Official or Race Director can act as Flight Line Manager. If any issues arise on the flight line, they have the authority to properly handle those issues. Safety is paramount at WareFPV® race events and those issues may result in disqualification of a participant if they are unable to comply with the line managers directions and rules of the race event.
- 8.9. Live Stream - No Competitor or Spectator is to interfere with the live stream at any time.

9. FREQUENCY MANAGEMENT

- 9.1. The safety and competitiveness of a drone race event revolves around having clear, uninterrupted video feeds for all Competitor or Spectator. Often there are issues that may impact video reception that are out of the organizer's hands, for example, a noisy video transmitter or a competitor with poor or

damaged antennas. The following rules are designed to ensuring good frequency management and safety are required:

9.2. **No VTX Broadcasting during a race (IE Powering-on).** It is strictly forbidden to broadcast any video signals in or around the venue unless consent is given by the Race Director. **If a competitor or Spectator is found to be broadcasting video during a race, it will be considered grounds for disqualification, and they will be removed from the event.**

9.3. **Frequency Assignments** - All Competitors will be provided with their frequency assignment prior to the event. This will allow Competitors plenty of time to arrive at the event on their assigned channel which will allow Tech Inspection to go smoothly and efficiently.

9.4. **Frequency Profiles** - Frequency profiles are set groups of frequencies in the 5.8ghz band that are spaced apart to minimize RF interference of video signals. The WareFPV® race event will use the following channels: (*Channels may be subject to change*).

- **Raceband 1**
- **Raceband 2**
- **Raceband 6**
- **Raceband 8**

10. RACING CIRCUIT RULES

10.1. **Racing Circuit** - the WareFPV® racing circuit will consist of LED illuminated race gates, flags, ladders, and tunnels. Each feature of the racing circuit is strategically placed to ensure Competitors have a clear understanding of the direction of the racing circuit, as well as each individual gate and flags. If a competitor were to miss a gate or other obstacle, they must go back and fly pass through the missed gate, or around the missed obstacle. If a competitor were to proceed on the racing circuit without going back for a missed gate, that specific lap will be disqualified for incomplection.

10.2. **Passing Through a Gate** - The front plane of a gate is defined as the interior perimeter of the opening. The entirety of the Whoop must completely make it through and out of the gate to count. Hitting a gate and bouncing off the gate will not be counted as "Passing Through" a gate. Hitting the gate while passing through the interior of the gate, will be counted as "Passing Through". If in doubt, it's always best to fly through the gate again.

10.3. **Flags** - Flags are designed to be flown around and the hight of the gate is a 'virtual line' that extends infinitely into space. Therefore, a competitor cannot skip a flag obstacle by flying over the flag where the flag is intended to be flown around. It is advised Competitors navigate near to, and no high than the flag so that Race Officials can accurately assess the turn. A competitor

must always pass on the designated side of the intended racing circuit flag. All flags will be illuminated with LED's.

- 10.4. **Hurdles** - A Hurdle is intended to create an elevation change where the Competitor is required to go directly above the hurdle in the correct direction advised. Competitors are not permitted to fly under, or around a hurdle.
- 10.5. **Before A Race Starts** - Before A Race Start is defined as the time between each heat where a competitor is preparing to race in their designated heat.
- 10.6. **Launch Pads** - WareFPV® provides launch pads at its events in which Competitors have the choice to use them or not.
- 10.7. **VTX Pit-Mode** - WareFPV® suggests that all Competitors utilize a VTX Pit-Mode switch to prevent the potential of overheating their VTX on the launch pads prior to the start of a race.

11. STARTING A RACE & RERUNS

- 11.1. WareFPV® intends to operate quickly between races, so please be prepared! When one race is deemed completed a one-minute timer will begin in which the next race will launch thereafter. The clock waits for nobody, and we can assure you that if you miss a heat, you will never miss another!
- 11.2. **Arming Period** - While armed, if a competitor were to fall off the launch pad prior to the start tone going off, that competitor is required to turn back around and ensure they do not pass the launch line until the start tone has gone off. If a competitor fails to turn around and continues prior to the start tone, the Competitor will be disqualified for that heat.
- 11.3. **Race Starts** - Competitors will be asked to give a thumbs up to confirm they are ready. If a competitor is not ready, they are to immediately speak up and make that known to a Race Officials before the race begins. If in doubt, SHOUT!!
- 11.4. **Not Ready in Time** - Again, at WareFPV® we intend to move through the races quickly and the clock waits on nobody! In the event you are not prepared to launch in the allotted time, you will not be able to race in that heat.
- 11.5. **Mid-air crashes and Holeshoot Rule** - Only during finals will this rule be in effect. If two or more Whoops collide or crash with one another the race will be restarted. The mid-air may be prior to passing through the start gate or in the start gate itself. **NOTE: If a mid-air crash happens 'after' the start gate the race will commence as usual.**
- 11.6. **Video loss due to someone powering up a VTX that is not racing in your race** - In the event a Competitors claims that someone has "stomped on"

or “plugged in” on their channel, a DVR review will be completed by the officials. If it is deemed that someone “plugged in” on that competitor, then that race will be a rerun.

- 11.7. **Damage/Unable to Start Race** – For this race we have adopted the “Whooptopia Eedok Rule” - If a heat has started and a competitor is unable to race, whether it be one motor not spinning, not able to arm, or any other potential reason. And they’re unable to take off before 3 of the 4 Competitors get through the start gate, then this will be deemed an automatic rerun. However, there may only be one rerun per race heat or final.
- 11.8. **Reruns** - Reruns will start immediately, and we will not wait for you to repair your Whoop. So please have a spare ‘working’ Whoop and battery ready to race. We always suggest you arrive at the flight line prepared and bring two(2) Whoops and three(3) batteries.

12. QUALIFYING RULES

- 12.1. When qualifying for finals each Competitors will receive a minimum of Eight(8) qualifying rounds followed by three(3) x three(3) legged Finals organised as C1,B1,A1 then C2,B2,A2 then C3,B3,A3.
- 12.2. Finals will be based on 4 Competitors per final. Competitors ranked 1 to 4 will be placed into the A-Final, followed by competitors ranked 5 to 8 placed into the B-Final and this will continue through to C,D,E,F,G,etc until all competitors are placed into their respective finals.
- 12.3. There will be a one(1) minute timer between each heat and each final, that allows us to move quickly to ensure the maximum amount of flying for each competitor throughout qualifying.
- 12.4. **Flight Duration for Heats & Finals** – In both qualifying and finals competitors will fly for two(2) minutes, followed by a maximum of 30 seconds to complete the lap they are on.
- 12.5. If a competitor fails to finish that lap by 30 seconds, then they will be asked to land in the designated landing spot. If they’re unable to land because their battery is flat, they will be as asked to land immediately and given permission to collect their Whoop from the racing circuit.
- 12.6. **Qualifying Ranking Process** - Competitors are ranked on their single fastest three(3) consecutive laps performed during any of the eight(8) qualifying rounds. This means seven(7) of those qualifying times will be discarded, giving you plenty of rounds to learn the racing circuit before you’re fully up to speed. This is the same as the leader board system used in the Velocidrone Racing Simulator where all Competitors are ranked accordingly from fastest to slowest in descending order.

- 12.7. **Consecutive laps are defined as** – any three laps performed together (IE - Laps 1,2,3 or Laps 2,3,4). It does not mean non-consecutive laps (IE - laps 1,3,5).
- 12.8. Competitors must wait and remain seated and quiet until all four(4) Competitors have finished racing. Once those Competitors have finished, they will be asked to collect their Whoop from the designated landing zone.
- 12.9. We take racing and safety seriously and we do not tolerate any form of distraction to your fellow Competitors. Examples include Yelling, Screaming, Kicking, Punching, Stomping or other similar behaviour. Competitors will receive a verbal warning if they do not comply. If it were to happen a second time, the Competitors may be subject to disqualification.

13. FINALS RACING FORMAT

- 13.1. The finals winner will be based on the overall finishing format of all three finals combined using a points system that will be added together to determine your final position as follows:
- 10 points for 1st
 - 7 points for 2nd
 - 5 points for 3rd
 - 3 points for 4th
- 13.2. If there is a tie breaker situation, the competitor with the highest-ranking position will be placed first.

14. CONTROL LINK REQUIREMENTS

- 14.1. **FrSky / FlySky / Redpine / Spektrum** - There is nothing a competitor is required to change if you use FrSky / FlySky / Redpine.
- 14.2. **ELRS / Express LRS** - If you are using ExpressLRS / ELRS please ensure you meet the following requirements: Max Packet Rate: 500hz. Max Power: 100mW.
- 14.3. **Tracer / Ghost / Crossfire** - If you are using Tracer / Ghost / Crossfire, please ensure you meet the following requirements: Max Power: 100mW.