

MDL THE FINALE'23 RULES AND GUIDELINES

UPDATE #1 - 10 NOV 2023

1. KAACK Firmware and RPM Limit

- a. All drones must have a working KAACK Firmware installed.
- b. All drones must have "RPM Limit" turned **ON**.
- c. The maximum RPM Limit for this race event is **24,000**. Drones are allowed to use lower RPM Limit eg 21,000/ 18,000 if pilot choose to do so.
- d. Any drones not complying to the above requirement will not be allowed to enter the race/ or removed from the heat.
- e. Note: Race controller will confirm that all powered drones at the starting block show the **"RPM Limit On 24,000"** before allowing race/ heat to start.



- f. Race Director/ Race Controller will use the active "Debug RPM Limit" reading from the drone OSD to check compliance to the 24,000 RPM Limit during the race. During race, **motor RPM should not exceed 26,000** as indicated in the "Debug" OSD. Race Director has the right to disqualify pilot if drone is shown of not complying to this requirement.



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2. Crash Recovery: Turtle Mode and Perimeter Netting

- a. **TURTLE MODE IS STRICTLY PROHIBITED/ NOT ALLOWED**: In the event the drone crashes and ends up in the **UPSIDE DOWN** position, pilot is not allowed to engage "Turtle-Mode" and attempt to recover/ re-arm the drone.
- b. **ARMING DRONE STUCK AT PERIMETER NETTING IS STRICTLY PROHIBITED/ NOT ALLOWED**: In the event the drone crashed into the perimeter netting and get stuck in the netting, pilot are not allowed to arm and try fly the drone out from from the netting.
- c. Any pilot attempting to recover the drone from the crash using "Turtle Mode" or from the netting will **BE DISQUALIFIED FROM THE RACE/ HEAT**. Pilot must wait until the end of race/ heat for Race Marshall to retrieve the drone from the track.
- d. If a drone crashes on the track but still ends up in an **UPRIGHT** position (or slightly angle), the pilot is **ALLOWED** to take off and continue with the race.

3. Mandatory OSD Element and Standard Position on Display

The following OSD element must be shown with the respective position on the drone FPV display:

- a. Pilot Callsign: **Bottom Left of Display**
- b. VTX Band, Channel and Power Level: **Bottom Right of Display**
- c. Debug RPM Limit: **Bottom Left 1 row above "Pilot Callsign"**



D. Drone LED Requirement

- a. All drones must be installed with a minimum total of 6 (six) LEDs (Recommended at least 3 LEDs on each rear arm).

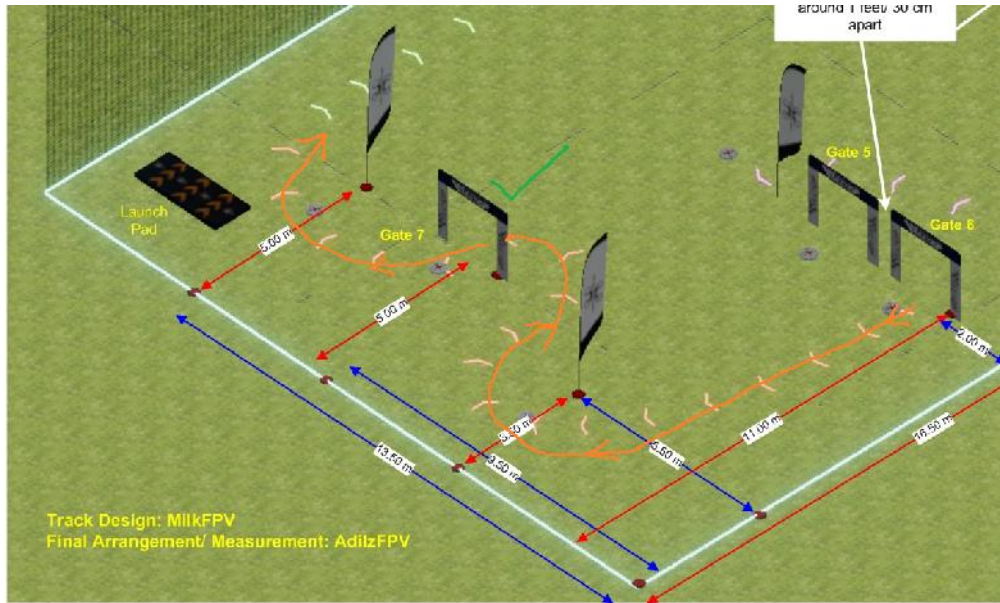
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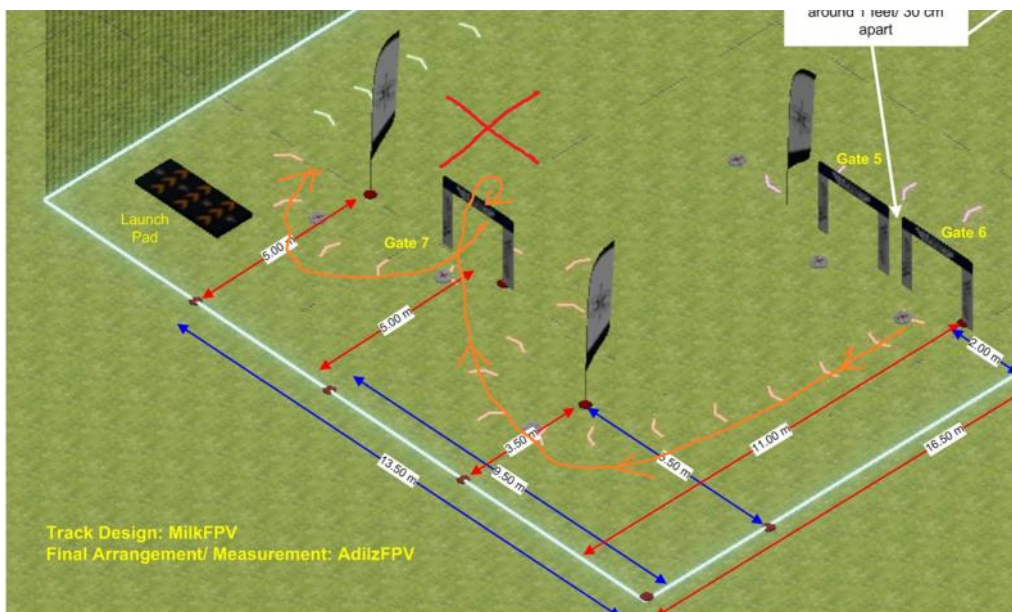
- b. Drones without the 6 LEDs at the rear will not be allowed to enter the race/ heat.
- c. Drone can be installed with more LEDs and is highly encouraged.

E. Track Layout and Racing Lines

-) Approach to Gate 7: Drone must fly using the following racing line, ie sharp turn right around the flag and then sharp turn left into Gate 7 as below.



Drone is **NOT ALLOWED** to fly over Gate 7 and do Split-S manoeuvre into Gate 7 as below.



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F. Event Attire, Code of Conduct and Others

- a. All pilots are required to wear the MDL The Finale T-Shirt on 2nd day of race ie Sunday, 26-Nov 2023.



- b. Pilot are free to wear any other attire/ clothing on Saturday, 25-Nov-2023, but highly encourage to wear drone/ FPV related t-shirt eg MDL or sponsorship t-shirt.
- c. All pilots must wear shoes at the venue. No sandals or slippers allowed.
- d. Pilots to take note that the event will be inside an indoor sport hall with air-conditioning. Temperature can be cold.
- e. No smoking or vaping is allowed inside the venue.
- f. Only drones in the race/ heat are allowed to be powered on. Other drones are not allowed to be powered on during that period (battery pack plugged in or powered USB connection to FC), even in VTX pit mode/ 0mW power mode. Race Controller will provide specific period for pilots to power on drones to change VTX channel or drone settings.
- g. To ensure smooth transition and turnaround between races where VTX channel changes are required, pilots are highly recommended to ensure that pilots are able to change VTX channel via Betaflight Menu or ELRS Backpack. Changing VTX channel via physical buttons on VTX is not recommended.
- h. Race controller expect 2 minutes turn around between heat races. Pilots must check heat schedule and be ready to be called for their respective heat/ race (ie fully charged battery pack and proper VTX channel set). Any pilots who are late may not be allowed to start the race, at the discretion of Race Director.

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