

# FAI F3K Rules Deviations for GDSHS F3K / e-F3K Contests

The following is an adaptation of an original document prepared by the South West Soaring Society (SWSS). This document is based upon the experience they gathered flying mixed launch F3K contests for several years. We at GDSHS give full credit to SWSS for their work in creating the basis for these rules.

## Why Combine F3K / e-F3K into Same Contest?

The primary goal is to promote F3K through increased participation. e-F3k (electric motor launch) allows pilots to overcome physical limitations they may have competing in a traditional hand launch F3K contest. Pilots who fly in events where F3K and e-F3K are combined should consider what has been learned regarding the advantages and disadvantages of hand launch versus electric motor launch:

	Advantages	Disadvantages
<b>F3K</b>	Unlimited launch height	Launch height can vary based on skill
	Higher launches in wind	Less ability to maintain horizontal position when launching in wind
	No prop hazard	High-speed, spinning launch is riskier to others on the field
	Quicker turnaround possible	High-speed launch is much riskier to plan
	Ability to achieve lighter wing loading	
	Less complexity (no battery/prop/motor to manage)	
<b>e-F3K</b>	Consistent launch height regardless of launch skill	Some F3K pilots can launch higher than e-F3K plane's motor-limited height
	Can maintain horizontal position better when launching into wind	Can't take advantage of higher wind-assisted launches
	Motor can save plane (forfeits remaining flights in round)	Typically higher wing loading (lower performance in light air)
		Prop hazard risk
		More complexity to manage (battery/prop/motor)

## e-F3K Participant Requirements

1. Use a maximum 2s LiPo battery to power the motor.
2. Launch and keep an upward climb angle of about 45° or more until the motor cuts off. You can turn left or right during launch.

3. e-F3K pilots MUST land their plane during turnarounds. No catching of an electric plane is allowed during the competition.
4. e-F3K pilots may restart their motor to avoid landing out of bounds. Doing so will automatically zero the current flight score.
5. If an e-F3K pilot restarts the motor during a task, their round immediately ends. In tasks with multiple flights, any scores from before the restart are kept.
6. The CD can check any plane's Altitude Limiting Device flight logs and/or settings to ensure the proper motor run time and altitude cut-off is set. If the CD determines that a check is to happen, it will be done between rounds and will pause the event. If settings are wrong the CD may in his discretion, zero any or all flights or rounds flown with that plane. Also at the CD's discretion, the pilot may be allowed to fix the settings to comply with the rules and continue to fly the contest.

### **REQUIRED Altitude limiting device settings for e-F3K Planes**

**The launch height is limited to 50 meters.**

**The motor run time is limited to 7 seconds**

(The power system is limited to a 2S battery, making antizoom features unnecessary.)

To compete in GDSHS F3K/e-F3K contests, it's important your plane's Altitude Limiting Device be set up correctly. Make sure that the foregoing settings are properly configured. If your device allows it, make sure that you can turn the motor back on should you need to for safety reasons. Also, if your device allows it, make sure it is set up to allow multiple launches, (with the proper launch settings), without having to manually reset the device. If need be, manual resetting of the device is allowed.

### **TEST YOUR SETTINGS!**

Before coming to a GDSHS F3K/e-F3K contest, you need to test your Altitude Limiting Device settings to confirm your motor run time, motor cut-off and motor restart are all working properly.

Begin testing by launching upward (about 45° or more) and maintain that angle until the motor cuts off. Once the plane's powered launch is over and it has leveled off, bring the plane back down and land. Perform at a minimum, three launches like this to ensure proper operation.

### **General Rules for GDSHS F3K/e-F3K Contests**

1. GDSHS F3K/e-F3K contests follow the latest FAI F3K rules with one exception; we allow test flying up to the last minute before the window horn sounds.
2. The flying field will be marked with four large flags at the corners. Generally, there are also short flags along the lines between the larger corner flags. The imaginary lines between the flags may not be perfectly straight but they constitute the actual boundary of the flying field.
3. All planes must take off and land inside the field boundaries to earn points in a round. If any part of the plane lands inside the imaginary line between the two flags adjacent to the plane, it's considered to have landed in bounds.
4. A minimum of 6 rounds will be flown in GDSHS club F3K/e-F3K contests, unless the Contest Director (CD) decides to end it sooner due to weather or some other unforeseen situation.
5. If the CD judges that a competitor is not following the spirit of F3K/e-F3K they may receive a zero score for any or all rounds. For example, flying below the required 45° launch angle to gain distance before climbing, or formulating an electric power system that allows the plane to zoom up well past the intended 50m launch height limitation. The spirit of intent here is to allow people that cannot otherwise throw a plane to a reasonably competitive altitude to have an electric power system that will get their plane up there. It's not to allow people to come up with a launch height/distance advantage in their workshop.

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