

Flying FAI Events at CMMF XIII

You may have noticed that most of the competition events planned for CMMF XIII are based on FAI requirements. Why this is happening is covered here <http://www.psc473.org/PDFs/The-NAR-and-FAI.pdf>. The purpose of this note is to highlight the key requirements for each CMMF FAI event and offer some tips to help you build competitive models. Let's start with a reminder of the CMMF FAI events:

- FAI 1/2A Parachute Duration (S3)
- FAI 1/2A Streamer Duration (S6)
- FAI 1/2A Helicopter Duration (S9)
- FAI A Rocket Glider Duration (S4)

Each of these events are described more fully in the FAI Sporting Code for Space Models (https://www.fai.org/sites/default/files/sc4_vol_s_space_2025_v2.pdf). FAI competition will challenge you with new model types and flying strategies!

1. FAI 1/2A Parachute Duration (S3)

The key points for this competition are:

- Motor impulse is 1/2A. Your motor choices here are the Estes 1/2A3-2T and 4T.
- Your model must be at least 40mm in diameter for at least 250mm of its length (generally this is the payload section for the parachute), and must have a minimum overall length of 500mm.
- In FAI International competitions, your model must not weigh more than 60 grams, however for CMMF this won't be considered. It's in your interest to build your model as light as possible!
- You will want to pack the largest mylar parachute that you can into the payload section.
- Recovery wadding/plug must stay with the model. Most folks accomplish this by attaching the recovery plug to the shock cord.
- You will be allowed up to three flights, and up to two models to make those flights. The best time of the three flights will be your score.

If you're new to FAI you may wonder how best to make a competitive model that meets the minimum size requirements. Well, the good news is FAI-compliant models are commercially available as a kit, and are an excellent way to get you started. Check out the FAI model kits at Galactic Manufacturing here:

<https://galacticmanufacturing.com/collections/fai-competition-supplies>

Other manufacturers, such as Apogee, J&H Aerospace (gliders), and Aerospace Specialty Products, also offer FAI kits.

2. FAI 1/2A Streamer Duration (S6)

This event uses models with the same size requirements as Parachute Duration. But in this event the deployment device is a streamer. FAI has size requirements for the streamer:

- The streamer must be a single homogenous unperforated rectangle of flexible material i.e. fabric, tissue or plastic foil (like mylar) with a length-to-width ratio of 10:1 minimum.

Galactic Manufacturing offers Streamer Duration kits.

3. FAI 1/2A Helicopter Duration (S9)

This event also uses models the same size as those used in the Parachute Duration event. Competitive S9 kits can be purchased at Galactic Manufacturing and Apogee Components.

4. FAI 1/2A Rocket Glider Duration (S4)

This event involves the launching of a glider by way of an integral rocket motor, which, following motor burnout, will have the glider return to earth safely. If you're so inclined you're allowed to use radio control to activate an on board dethermalizer to terminate the glide, but most folks (and certainly new competitors!) don't bother with this. This event is basically same as NAR rocket glider competition.

J&H Aerospace offer two competitive FAI glider kits, called the Switchblade – check them out here:

<https://jhaerospace.com/product-category/rocket-gliders/page/2/>

The NAR offers an abundance of FAI competition instructional resources on the NAR Forum, and these can be found here:

https://narocket.clubexpress.com/content.aspx?page_id=2155&club_id=114127&item_id=1686832

Note that to access these NAR resources you must be an NAR member.

Locally, PSC members have access to a couple of World Champion experts – Rod Schafer and Steve Foster. So should you have any questions, or would like some advice or construction pointers, don't hesitate to track down these guys at one of our launches or email them. They would welcome the opportunity to discuss FAI with you!