***2013 SAM Octoberfest, Barkston***

I have made some progress formulating the rules for the Rapier duration and Jetex/Rapier profile and 'authentic scale' events. The Rapier duration will be a 'one motor' competition.

I have acquired a good number of L1 motors, which according to my time/thrust graphs delivery a steady 100 mN for 15 sec, and these will be supplied to all competitors. Any constructive comments on the draft rules below are very welcome

**Rapier Duration**

**1**. Models can be of any type of construction, and be propelled by a single reaction motor of the Rapier L-1 type (see (3) below).

**2**. The contest is open to all who pay and register upon arrival. Contestants must be current BMFA members.

**3**. L1 type Rapier motors will be supplied by the organiser. No others will be allowed and motors may not be modified in any way apart from, if necessary, minimal 'boring out' to aid ignition. Ignition may be electronic or by fuse. A supplied motor may be rejected by a competitor if he or she is not happy with the nozzle alignment.

**4**. All motors shall be mounted in a tube or clip securely attached to the model. Note the motors have a diameter of about 10.2mm. Mounting tubes should have a wire retaining clip to prevent the motor from slipping out during launch or separating from the model during the gliding phase of the flight. The Contest Director (CD) reserves the right to bar any model he considers unsafe.

**5**. Models will be launched by hand; no catapult assisted launching is permitted. If a competitor is using a fuse, the model may not be launched before motor is ignited.

**6**. An official flight occurs when the model remains in the air for 15 seconds or more. Flights less than 15 sec will be classified as an attempt. Six attempts are allowed. Re-flights in the event of, for example, a collision of models will be allowed at the CD's discretion.

**7**. Scoring time shall be the total elapsed time of three official flights in seconds with all fractions of a second dropped. The maximum will be two minutes. If a contestant's flight time exceeds two minutes the score will be '120'. A competitor's best three official flights will count towards the final score.

**8**. In the event of more than one competitor posting a maximum of 360 seconds, a 'one off' unlimited 'fly-off' will decide the winner. No 'attempts' will be allowed in the fly-off. The score will be the total flight time or time to OOS.

The profile scale and 'authentic scale' (for built-up models) competitions will be judged by Brian Lever using rules, or rather guidelines, he used with great success at *Peterborough Flying Aces*. An example of a score sheet (below) will, I hope, help explain these:

| **Profile/true scale Score sheet** | **Competitor:** | **Model:** |
|---|---|---|
| **Static scores, marks out of ten:** | | |
| **Accuracy to plan*** | | |
| **Detail** | | |
| **Finish**** | | |
| **Workmanship** | | |
| **Total (out of 40)** | | |
| **Flight scores, marks out of ten:** | | |
| **Flight 1** | **Launch/take off** | |
| | **Cruise** | |
| | **Landing** | |
| **Total (out of 30)** | | |
| **Flight 2** | **Launch/take off** | |
| | **Cruise** | |
| | **Landing** | |
| **Total (out of 30)** | | |
| **Flight 3** | **Launch/take off** | |
| | **Cruise** | |
| | **Landing** | |
| **Total (out of 30)** | | |
| | | |
| **Grand Total** (static plus best of the three flights) | | |

**Rules Guidance:**

**1.** Any reaction motor, Jetex or Rapier, is acceptable, but note rule (4) of the duration event. Jetex motors must be secured to the motor mount with fine fuse wire.

**2.** An 'official flight' will be 15 seconds or greater. Flights under 15 sec are classed as 'attempts'.

**3. *** Models are judged on accuracy to the plan provided. No published 3-view of the prototype is required except if the model was built from this. For profile models like vintage Veron 'Quickys' or Keil Kraft 'Shadows', accuracy to the original model is looked for. A template is useful here.

**4. **** A photo indicating the markings or colour scheme of the full size prototype is helpful. As CD, I have told Brian that lumps of Blu-tac or Plasticine as noseweight will be heavily penalised, but trim tabs, etc, are acceptable.

**5.** Flights will be scored according to: a smooth but not too steep climb out, a steady straight or circling cruise (though loops and wing-overs are acceptable, 'fugoids are not); a smooth transition to the gliding phase and a nice safe landing from which the pilot can walk away**.**

I fear I may have over-complicated and over formalised what is intended to be as friendly and relaxed an event as those at *Peterborough Flying Aces*, where, in practice, it all works very well.