Proposals for new F2D rules.

There are proposals for new F2D Combat rules that will be voted on at next years FAI/CIAM Plenary Meeting in Lausanne. This document is intended to explain why the proposals exist and also give some explanations about the proposals.

Some year back, after a request from the F2 Subcommittee chairman, a F2D Work Group was formed by 5 F2D Judges and 6 F2D Pilots. The mission given to the Work Group by the Subcommittee was mainly to come up with suggestions of how to reduce noise in F2D. Soon it was included to rewrite the complete F2D rules as the existing rules had not been rewritten for over 20 years. Due to a long history of changes introduced over these years, the rules became disorganized, unnecessarily complex, and in some places ambiguous or contradictory; a major revision was clearly necessary. In addition a Judges Guide was written and the Group believes that by rewriting the rules and providing the explanatory text in the Judge's Guide, the rules will be easier to understand and to follow.

Let us first explain how FAI is organised (in case you don't know). FAI is the International organisation for all Air Sports where most countries in the world with Air Sport activities are members. It is divided into Sub-groups where CIAM is the commission for Aeromodelling. Each Aeromodelling discipline has a Subcommittee to deal with matters specific for that discipline. For Control Line we have the F2 Subcommittee consisting of 26 members (from 26 countries). Each year (in March-April) the CIAM delegates from the member countries meets in Lausanne at the Plenary Meeting to discuss and vote on new rule proposals etc. Proposals to the Plenary Meeting can be given by each member country or by any of the Subcommittees.

Noise levels have become a problem within different activities in many countries in the world, aeromodelling being one such activity. In FAI the work of reducing noise has been going on for several years (for combat it started some 10-15 years back when the silencer and the 4 mm venture was introduced). This works include all "noisy" aeromodelling classes and not only combat. Keep in mind that most of our audience and authorities don't make any difference between our classes, it is just aeromodelling….. By getting noise down to acceptable levels FAI/CIAM helps aeromodelling enthusiasts throughout the world to continue with their sport without being banned by the authorities.

The Combat community had two alternatives to choose between;

1. Sit down and do nothing (put the head down into the sand and pretend that it is raining). In this case people not knowing anything or little about Combat would probably make the decisions for Combat. The opinion of the F2D Work Group is that this is not a good alternative.

2. Try to find rule changes that can be accepted by many pilots (it is impossible to find changes that can be accepted by ALL pilots). This thesis formed the work of the F2D Group.

Apart from the Group's own knowledge and experience, opinions from the larger combat community have been gathered through a questionnaire (in 2006) and, importantly, via the F2D seminar held in Belgrade this summer. The Seminar attracted some 35 persons, and covered most issues surrounding the rules. Input from the Seminar has formed the basis of the new rules proposal. It can be noted that the Seminar overwhelmingly was in favour of

technical specifications instead of a dB limit to get the noise level down. This was also fully supported by Rob Metkemeijer (who attended the Seminar and briefed the participants on technical details). For those of you not knowing Rob he is a professional Sound Engineer.

Over to the comments on the rule proposals (the complete proposals can also be found at www.f2d.dk)

a. Reduce the start period from 1 minute to 30 seconds. The one minute period was introduced years back when the diesels needed warm up. Today most pilots wait 30 seconds before starting the engine so this change shouldn't cause problems.

b. Looking at combat today there is a lot of ordered level flying just because all streamers are gone (=Unnecessary flying). After the 4 minute heat there could also be several minutes of level flying before the bladder is empty. To stop the heat and ask the pilots to land when there is no more streamer left would reduce the noise exposure time by 60-70% (from statistics made by the Judges over the past years). It will also save time on contests. And most but not the least it will make the engines last longer. Who is interested of just flying level, wearing out the engine and wait for the model to land? Some may oppose and say that in an equal situation in a heat the bladder can break or the engine stops thereby avoiding a reflight. True, but this equals out in the long term and it also happens very seldom.

c. Increase the pull test on lines from 150N to 200N. This has been tested already in some countries and it works as both models and lines can take this load. But bad or damaged lines may be sorted out thereby increasing safety.

d. Reduce the outlet of the silencer from 8 to 6 mm. This will reduce the noise level and can be implemented on existing engines with very little impact. On existing silencers an insert can be made at small cost.

e. Yellow card system for warnings/penalties and disqualification. Not so much change from today where a pilot who behaves badly can get -100 points penalty or a dq. With the yellow cards these cards follow the competitors through the contest. The first card is -40 points (or a dq if it is severe), second and third cards are a dq.

f. New third circle at 22 m. It will also not be allowed to run around circle with models. In the old rules there have been complaints about two things; First that the mechanics get a dq if they jump over the opponents lines. And secondly about the rule that the spare model must be placed 0,5 m outside the flying circle. Now these two rules are gone. Instead the area between the 20 and 22 m circles are called the pitting area and the team can place the model wherever they like at the spot they stay. All running (with streamer for instance) must take place outside the 22 m circle. For safety reasons running with models is now forbidden. And the time a team gain by running with the model is so few seconds so nobody really can have objections to this.

g. At a fly-away the pilot can not ask for a reflight if the model is outside the fly-away area. If the shut-off works the model should land quite close to the circle. The judges have the possibility to grant a reflight under special circumstances, for instance if the model lands high up in a tree or in a safety net.

h. For easier calculation of the score the ground time is taken away. Instead the pilot gets 2 points per second in the air. This really changes nothing in the scoring. Instead of moving between -240 and 240 we now move between 0 and 480.

i. Before moving the streamer to the spare model all line tangles must have been cleared. This has been used at Euro and World Champs for some years and works ok. Earlier some teams first prepared the spare model to be ready for take-off and left the untangling to the other team. Having both teams to untangle before servicing is fairer to everybody.

j. The pilot can not get a reflight if the streamer fails to unroll. It is now the responsibility of the teams to make the streamer is unrolled before take-off.

k. The judges/organisers can choose to use an official video recording to be a help in judging and making decisions. Hopefully this can help in making better decisions.

The suggestion is that these proposals will be valid from January 1st 2011. It is also proposed that from January 1st 2013 two more things will come in effect. First an effective multichamber silencer and second a minimum propeller diameter. As it is the intention that all pilots should be able to use their existing engines these proposals need more testing before any specifications can be made and that is also why the date is set for 2013.

At last some words about shut-offs. Around one year ago there were many negative comments that it would never work with shut-offs in combat but we think most pilots can agree on the fact that it really works. Looking at this year contests very few pilots has been disqualified due to a malfunction of the shut-off. Today there are several types (both mechanical and electronic) available and some that could be made by the pilot himself for a low cost. We also think that the pilots, by experience, have learnt that they need to trim and adjust the shut-offs and also learn how they work. As they have to do with everything else they use……

The primary reason for introducing shut-off was not to protect people close to the circle (even if it helps here too) but to protect people more far away from getting a loose model in their head (or damage property). No doubt that the combination of safety nets together with shut-offs has taken combat to a better safety level than before.

Introducing the rule that the pilot must be able to stop the engine at will (well, he can still choose to land his model and maybe ruin a propeller) put more demands on the construction of the shut-off. For electronic shut-offs this possibility exists already today but the mechanical ones need some extra changes. By visiting www.f2d.dk you can find the proposals, how-to-tips and other useful information.

If you have questions, comments or want any clarifications don't hesitate to send a mail to mailto:f2d_group@controlline.sk.

On behalf of the Combat Work Group

Ingemar Larsson