Meadow Flyer
Newsletter of The Oxford M.F.C.

Christmas 2023

Richard Fryer launches his FK1 Coupe d'Hiver [Andy B]

In This Issue

Editorial

A quick scan of this issue will reveal that much of it is oriented towards Free Flight; this isn't because of any innate bias on the part of the editorial team (we all fly radio), it's just that we simply get sent more stuff by the free-flighters. This is a strange thing because according to the membership statistics, there are roughly as many people interested in RC as FF. Of course, it may be that the RC members are quite happy with things the way they are, but it would be nice to occasionally hear something about what the RC contingent are doing…?

There's a lot of coverage of free-flight A1 class gliders in this issue of the newsletter, which seems to have come about because someone (I think it was Gary Law) had the bright idea of having a club Vintage/Classic A1 competition next year and then everyone we spoke to said "Yes, that's a great idea" or "I've got one of those in the loft somewhere". It looks as though it's an idea whose time has come.

I'd like to thank David Lovegrove, Bob Lee, Chris Brainwood, Steve Edwards, Andrew Longhurst, Sten Persson, Andy Crisp, Simon Milan, Gary Law, Simon Burch, Ivan Taylor, Jim Paton and Ian Melville for providing content for the newsletter.

Chairman's Chat – David Lovegrove

My oh my, doesn't Christmas come around quickly? If you've already got it all sorted – presents, Christmas tree, salty snacks, booze, etc., – congratulations. As usual, I'm well behind the curve with all that. But let that not get in the way of wishing all of you, my esteemed Oxford MFC colleagues, a very happy, healthy and peaceful time over the coming holiday period. And fingers crossed that 2024 turns out to be much drier than 2023 (it could hardly be wetter!). Our hobby is all about fun and fellowship; may we have lots of both.

On another topic, I'm afraid that on the personal front there's bad news from me. As some of you already know, I suffered a stroke back at the beginning of November. As strokes go, it wasn't a particularly serious one, as it has affected only my sight, so I count my blessings in that respect. The big problem is, it has meant that I've had to stop driving.
That was a huge blow as in addition to the usual day-to-day running about, I can no longer drive to Club Meetings, or to Port Meadow or anywhere else to enjoy flying my models. With my ability to join Club activities thus taken away from me, I've reluctantly had to concede that it's impossible for me to function as Club Chairman. I'm therefore made the decision to step down with immediate effect.

The King is dead; long live the King! And the hole thus created must be filled, so Club Secretary Bob Lee is taking the Chair temporarily. Then, in the medium term, the plan is that our Membership Secretary, Simon Burch, will take up the reins. But he's snowed under with Membership renewals until around mid-January and can't take over until that's completed. Now is a tricky time for the Club. Bob and Simon are already very busy dealing with their respective jobs and to put it bluntly, help is urgently needed! The rest of the Committee are already tasked with other responsibilities, so we need to ask for willing volunteers to step forward to shadow both their roles. Naturally, to ensure a smooth transition, help and guidance will be given throughout.

I was hoping to be staying "in post" for at least a few more years, and I'm devastated to have been forced to make this decision. But it has highlighted the fact that if the Club is to survive going forward, there is a pressing need for Members to step up to the plate and offer their services.

Please consider, seriously, whether *you* could do something to ease the strain.

And again, merry Christmas!

David

From the New Chairman – Bob Lee

Well, becoming Chairman again, if only 'acting' (or for those of you that have been following the Shetland TV series, 'temporary') wasn't something that I expected.

I am sure that all members will join me in wishing David well. This will have been a great shock to him and has greatly affected his lifestyle and activities. His service to the club has been greatly appreciated and he will be missed; he has made significant contributions to the club. Hopefully in the future the situation may improve, and he can re-join the fold.

So, as David has said, I'll be taking the reins again, at least for a while, until Simon's workload of membership renewals eases off, hopefully sometime in January. What this has shown is

the need for a strong committee with people willing and with some experience, ready to step into the breach when needed. The existing committee can't keep doing the job forever so as David has said, what we really need is some people to step forward, maybe 'shadowing' the existing key members and learning the ropes, so they know what's involved when the time comes for a change.

I don't have any radical plans for what I hope will be a short term in the job. The winter programme is all set and we have some exciting plans for summer competitions, at least for free flight. We do need to explore ideas for some RC competitions.

I hope that you all have a good Christmas, don't eat or drink too much and that you get some nice modelling related presents. On a personal front, you will have seen my recent build of an Airfix, 1/72nd Hurricane. I don't plan to join the 'dark side' of plastic modelling just yet but I have put in a request to Santa for the Airfix 'Battle of Britain Memorial Flight' kit, comprising a Lancaster and two Spitfires. It will probably be next Christmas before they get built, squeezed in between models that hopefully fly.

Bob

Autumn Duration Competitions & Fun-Fly – Chris Brainwood

[Note: pictures by Chris unless indicated]

The Autumn Duration Competitions and Fun Fly were blessed with some lovely calm weather, perfect for long flights and short retrievals but was also predicted to be the hottest day of the year with temperatures in the 30C 's. A decision was made to start early at 8:15am before it got too hot and finish earlier at 11:15am.

Action on the flight line. Andy Crisp can be seen on the left.

Around 17 flyers took advantage of the cool and calm conditions to fly in the 4 classes. The early start worked very well with competition all over by lunchtime and competitors retiring to the sanctuary of their air-conditioned cars.

Coupe d'Hiver Competition
The most popular class was for Coupe d'Hiver. These are rubber powered duration models built to a min weight of 70g and allowed 10g of rubber to power them. They are essentially a powered glider so tend to be slow flying floaters.

There's more information about Coupes in the Postal Competition section of the club's website - https://oxfordmfc.bmfa.club/p30-and-coupe-dhiver-postal/

Entries in the Coupe class ranged from the up-to-date F1G design of Richard Fryer's FK1 to vintage Coupes like Bill Dennis's Les Trumeaux and my Etienvre with some own design models too. Andrew Longhurst entered his Couper S, while Andy Crisp and Ben Hobbs both flew models of their own creation.

Ben Hobbs' OD Coupe climbing away. Coupes in flight are very impressive. [Andy B]

The max was set at 90 seconds with anything over 10s counting as an attempt. The conditions were pretty ideal with almost zero drift at times and thermal lift around, so some lovely flights were made by all. There's not much of a nicer sight in aeromodelling than several Coupes gently floating around above you in the warm air. Andy Crisp's OD Coupe was floating around rather too well and after the DT failed was last seen high above the meadow.

Chris Brainwood's Etienvre Coupe. Good beginners' model.

My own competition began with fitting a 12 strand motor to my Etienvre, thinking that was the one I used last; it wasn't, and the fierce power produced something of a series of height destroying power stalls. Who said you should trim the model before the competition! The correct 10 strand motor produced a much better climb in the second flight and some further refinement and perhaps some better air for the 3rd flight which gave me a max and a big smile to go home with.

Andrew Longhurst suffered an early set back when his torque meter broke. He borrowed another but the unfamiliarity led to some safer winding. It didn't hold him back *too* much though as he was one of three flyers who managed maxes in all 3 rounds. A fly off was flown in which Richard Fryer won out with his FK1 over Andrew Longhurst and his Couper S. Bill Dennis took the third spot with his Les Trumeaux.

Coupe Winner Richard Fryer

Andrew Longhurst was 2nd

Bill Dennis came 3rd

Kit Scale Duration Competition

Bob Lee prepares his enlarged Veron Auster AOP9 for the Kit Scale Duration competition.

Kit Scale saw 6 models competing with a variety of different types from Andrew Longhurst's enlarged Comper Swift to Chris Brainwood's traditional KK kit 18″ Piper Super Cruiser. It was flown to a 60s max over 3 rounds with plenty of timers on hand to record the flight times.

David King's Chambermaid put in some lovely flights but neither it nor Andy Blackburn's KK Stinson Flying Station Wagon could beat Andrew Longhurst's big Comper Swift for outright duration. The Comper flies remarkably like a cabin duration model and looks very stately in the air. The unique nature of this competition though, is that it has a bonus system to level the playing field.

Bonuses applied saw Andy's Stinson come out on top followed by the Comper Swift of Andrew Longhurst and the Chambermaid of David King. My own KK Piper Super Cruiser struggled to get above 30s but the bonus system saw its score boosted to something much closer to the Chambermaid.

Andy Blackburn's OD BA Eagle (now available as a plan in July 2023 Aeromodeller) was going particularly well with 3 maxes, quite remarkable for a small low wing model. As it wasn't a kit it was in the Open Class but unfortunately it was the only entry.

The class is a great way to get into scale flying as the bonus system helps provide a leveller to the field so almost any rubber scale model can stand a chance in the competition. Just don't enter a Lacey or Fike as there is a 100 point penalty!

FROG Senior Duration Competition

Almost the full range of FROG Senior models from Simon Rogers

The FROG Senior duration was well supported and became a battle of the Redwings versus the Linnets. Interesting data for anyone thinking of building a FROG Senior for next year's competitions.

The competition proved quite close with just 10s after three flights separating 1st from 3rd. In the end, David King's Redwing won out by just 6 secs overall over Simon Milan's Linnet. Kudos to Simon Rogers who as well as flying his Linnet in the competition, brought along the full range of FROG Seniors. Simon had both a Heron built from the OuterZone plan and a

Heron from the new VMC kit. The Kit version is some 10g heavier than the one he built using his own wood.

VMC Pilot Duration Competition

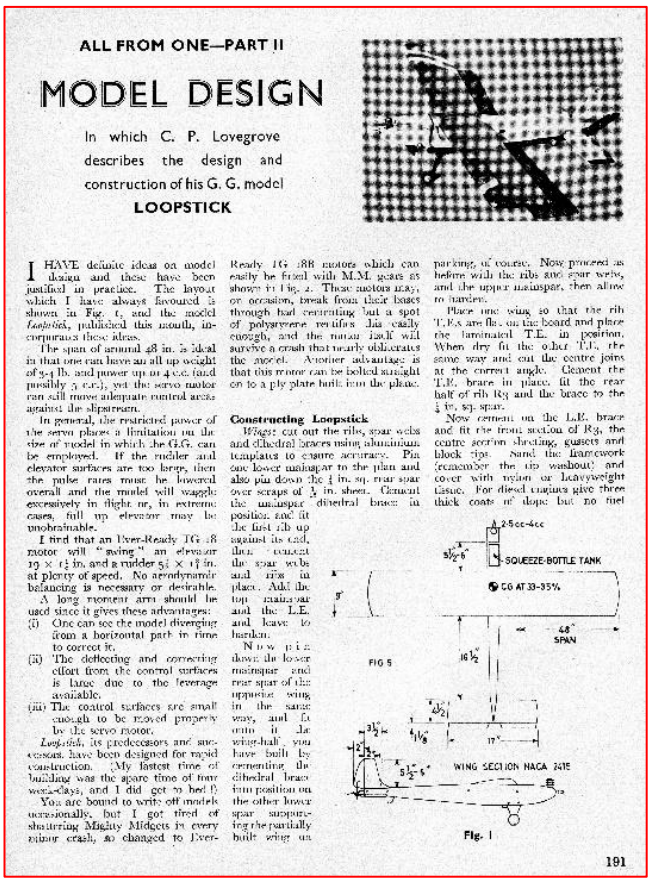
The VMC Pilot was the club's group build for 2023 with many members tackling one over the winter. A Postal duration competition was run over the summer for them and in addition a class was added to the Autumn Duration Competition.

The duration competition was flown to a 60s max but no one got close to that. Chris Brainwood showed the way with 3 flights over 40s with Gary Law not far behind.

There was plenty of fun flying too during the meeting with Simon Rogers and Steve Edwards flying a variety of models and several members took advantage of the conditions to set times in other OMFC postal comps.

The meeting ended with a prize giving and thankful return to the shade, I'm sure the ice cream van did a roaring trade. It was an excellent competition with a lovely, relaxed feeling thanks to CD Gary Law. Many thanks to the organisers Gary and Andy Blackburn and huge thanks to Alan Trinder who not only helped set up and spent much of his time timing other flyers but also helped pack up and even provided a jump start to Gary's car. Events are already being planned for next year, if they are anything like this Autumn Comp they are well worth attending even if it's just to spectate and soak up the atmosphere.

When I Was Seventeen – David Lovegrove



ALL FROM ONE—PART II

MODEL DESIGN

In which C. P. Lovegrove describes the design and construction of his G. G. model

LOOPSTICK

I HAVE definite ideas on model design and these have been justified in practice. The layout which I have always favoured is shown in Fig. 1, and the model *Loopstick*, published this month, incorporates these ideas.

The span of around 48 in. is ideal in that one can have an all up weight of 9-9½ lb. and power up to 4 c.c. and possibly ⅓ c.c.), yet the servo motor can still move adequate control areas against the slipstream.

In general, the restricted power of the servo places a limitation on the size of model in which the G.G. can be employed. If the rudder and elevator surfaces are too large, then the pulse rates must be lowered overall and the model will waggle excessively in flight or, in extreme cases, full up elevator may be unobtainable.

I find that an Over-Ready TG 18 motor will "swing" an elevator 19 × 1½ in. and a rudder 5½ × 1⅞ in. at plenty of speed. No aerodynamic balancing is necessary or desirable.

A long moment arm should be used since it gives these advantages:

(i) One can see the model diverging from a horizontal path in time to correct it.

(ii) The deflecting and correcting effort from the control surfaces is large due to the leverage available.

(iii) The control surfaces are small enough to be moved properly by the servo motor.

Loopstick, its predecessors and successors have been designed for rapid construction. (My fastest time of building was the spare time of four week-days, and I did get to bed!).

You are bound to write off models occasionally, but I got tired of shattering Mighty Midgets in every nose crash, so changed to Over-Ready TG 18S motors which can easily be fixed with M.M. gears as shown in Fig. 2. These motors may, on occasion, break from their bases through bad centreing but a spot of polystyrene retifoil has easily enough, and the nylon Tail will survive a crash that nearly obliterates the model. Another advantage is that this motor can be bolted straight on to a ply plate built into the plane.

Constructing Loopstick

Wings: cut out the ribs, spar webs and dihedral braces using aluminium templates to ensure accuracy. Pin one lower mainspar to the plan and also pin down the ¼ in. sq. rear spar over scraps of ¼ in. sheet. Cement the mainspar dihedral brace in position and fit the first rib up against its end, then connect the spar webs and ribs in place. Add the top mainspar and the L.E. and leave to harden.

Now pin down the lower mainspar and rear spar of the opposite wing in the same way, and fit onto it the other half. You have built by cementing the dihedral brace into position on the other lower spar, supporting the partially built wing on parking, of course. Now proceed as before with the ribs and spar webs, and the upper mainspar, then allow to harden.

Place one wing so that the rib T.E.s are flat on the board and place the laminated T.E. in position. When dry fit the other T.E. the same way and cut the centre joins at the correct angle. Cement the T.E. brace in place, fit the rear half of rib R9 and the brace to the ¼ in. sq. spar.

Now cement on the L.E. brace and fit the front section of R9, the centre section sheeting, gussets and block tips. Sand the framework (remember the tip washout) and cover with nylon or heavyweight tissue. For diesel engines give three thick coats of dope but no fuel proofing.

FIG 5

Fig. 1

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A while ago, *AeroModeller* Editor Andrew emailed me to say that he'd been flicking through some old copies of *Model Aircraft* (edited by his late father, Boddo, I think) and in the July 1960 issue, he'd spotted an article written by C.P.Lovegrove. This had piqued his curiosity. The surname, like his, is relatively uncommon and he wondered if I might be related. Incidentally, if you're interested, the model plan is still on Outerzone, 63 years on!

Anyway, I was instantly pitched into a space/time wormhole. Back in 1960 I was just 15 years old and already utterly in thrall to this wonderful hobby. P.C.Lovegrove (the initials in the article were in the wrong order) is my elder brother Peter, and it was he who was principally responsible for this lifelong addiction of mine.

At this distance in time my recollections may be a bit wobbly but for sure, he'd started *his* involvement with the hobby in the usual way in that post WW2 era – that is, freeflight, followed by control-line. Born in 1931, he'd experienced the war years as a youngster and, with several active RAF, USAAF and RNAS camps surrounding our little town in the Thames Valley, he'd been infected with that "air-mindedness" which had seized the imaginations of tens of thousands of kids during those years.

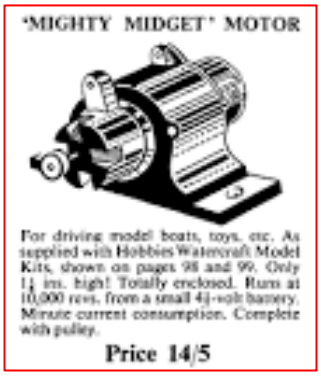
Peter was ambitious and technically-minded. Initially unsure of his destination in life, after finishing at the local grammar school he made a short-lived foray into pathology at a local hospital. There he quickly learned that this ostensibly glamourous profession had a more unexpectedly pungent aspect to it than he could tolerate! From there he joined the exciting world of pure science.

AERE Harwell was starting to develop on the site of the old RAF Chilton ex-wartime RAF base just a few miles from our home. These days, of course, it's a vast hub of scientific endeavour; back then, it was just getting into its stride. And Peter was in his element. After ONC and HNC courses at night-school, he was awarded a scholarship and bursary to study at Durham University and spent the next few years gaining the two degrees that would set him up for the rest of his eventful and hugely enjoyable professional life.

After university he returned to Harwell but sometime in the mid-1960s, having taught himself electronic engineering along the way, he was tempted away by the offer of a job with a fledgling company at Hounslow called Radio Control Specialists (RCS). As Production Manager he was responsible for developing new products and overseeing manufacture. That was an especially busy period in his life, during which he somehow also found time to gain a PPL at White Waltham!

Eventually the excitement of all this activity began to pall and he decided to return to work at Harwell until retirement. It was still hardly a restful time though, because he then became heavily involved with the emerging Microlight Aircraft Association, where he was responsible for organising a cadre of airframe inspectors. He did this busy, unpaid job for ten years, on top of the day job! As they say, if you want a job done, ask a busy man . . .

This leads on to my first serious involvement with r/c models, because it was in about 1964 that Peter, then still employed at RCS, made me the quite stupendous gift of a *Galloping Ghost* (GG) transmitter and receiver*. I'd previously had a short flirtation with reeds but hadn't got on with it at all. The subsequent opportunity to try GG - the forerunner of modern digital r/c - was to set the course for the rest of my model flying life.


'MIGHTY MIDGET' MOTOR

For driving model boats, toys, etc. As supplied with Hobbies Watercraft Model Kits, shown on pages 98 and 99. Only 1¼ ins. high! Totally enclosed. Runs at 10,000 revs. from a small 4½-volt battery. Minute current consumption. Complete with pulley.

Price 14/5

[*This is going to be difficult to explain, but here goes! Imagine a model where any one control surface has just two positions – full up (or down, or left or right, but not both) and neutral. GG was developed from the earlier Single Channel RC sets which did just that.

This original so-called "bang-bang" control system was converted into a quasi-proportional system by making that Mighty Midget motor oscillate about its central or neutral position, restrained by the humble rubber band. The oscillations were achieved by constantly reversing the current fed to the motor. The SPEED of those oscillations could be varied from fast to slow and this translated to elevator control. At the same time, the oscillations could be made to "dwell" on one side or the other, so that the output shaft effectively spent more time, *on average,* oscillating more on one side than the other. This equated to rudder control. These simultaneous control inputs were transmitted to the rudder and elevator via a wire contraption at the tail end of the model known as a "bird cage".

I told you this would be difficult! It was fiendishly clever, whilst being simultaneously very simple. Need I mention that it was invented by the German war machine during WW2?

Reeds was in many ways simpler than GG but more complex, technically, in others. The model RC transmitter's carrier signal was modified /modulated by superimposing a tone (like ships'

Morse Code signals). The receiver had a bank of 6 to12 steel reeds (rather like a harmonica) that would vibrate in sympathy with the transmitter's different transmitted frequencies. Rather like a set of tuning forks, all working at slightly different frequencies. The reeds' vibrations would be amplified to energise individual relays which in turn would drive motorised actuators operating the model's control surfaces. All very heavy and complicated but, in the right hands, capable of near-proportional control!

Both these antiquated control systems are still in use, kept alive by enthusiasts of those systems, although these days, the unreliable electronic and electro-magnetic components are emulated with absolute reliability by modern electronics!]

There was initially very little commercial involvement in producing a typical airborne GG set-up. What would baffle most modern r/c flyers is that although the receiver might be (but wasn't necessarily) a commercial item, the rest of it was often all homemade. That little actuator/servo was made from just two components - the little *Mighty Midget* electric motor and an artfully-placed elastic band! There were no LiPo batteries back then, so the power packs (two of them – one for the receiver, another for the actuator) also had to be soldered up from dry cells, together with connectors. All this was about as far from plug-and-play as you can imagine, and a serious test of one's soldering ability!

My aerial testbed for this Heath Robinson lash-up was a *Veron Robot*, a design that had quickly gained a reputation as a superb trainer. Up at the sharp end was a brand spanking-new *McCoy 19 Redhead* glow motor. Although once a pre-eminent producer of excellent model racing engines, you can forget any notions of a rip-roaring powerhouse suggested by the *McCoy* moniker. That engine was a plodder; utterly pedestrian, but thankfully it proved to be the perfect match to the *Robot* and its tyro pilot. Together, we spent many enjoyable hours on the riverside. A few years ago, I built another from the plan on Outerzone. It was delightful and is still flying, much enjoyed by a modelling friend. That old *Robot* flew beautifully. It had excellent, gentle and progressive responses and it was utterly reliable. Okay, there was that one occasion when we overcooked the downwind pass, ending in the arms of a conker tree, but the *Robot* was easily retrieved and had suffered no damage. So that was okay. I should also mention that there was no motor control, so all this flying was done with the *McCoy* flogging its puny guts out! Thank goodness it wasn't any better than it was. I remember meeting a sometime modelling friend at this time, who had evidently got wind of "someone flying a radio-controlled model at the riverside". Not knowing that this someone was me, he was gobsmacked when I showed him well the innovative Galloping Ghost gear worked.

There was also the brief flirtation with model boats: hardly surprising when you consider the large body of water on my doorstep. The venerable "*Huntsman*" was the one I remember best. Powered by a water-cooled *ED Racer*, it too was a bit of a plodder, but very attractive and reliable (still available from SLEC, I believe) and, unlike some, never ended up unreachable on the far side of that wide river. Thank goodness for that. But for me the boats never quite had the pzazz of the aeroplanes, which moved (usually) in three dimensions as opposed to two and I soon returned to the path of righteousness…

When I think about it, I can't remember what happened to most of the hundreds of models I've built, a steadily increasing number of which survived the steep learning curve. I can only imagine they were sold on to finance new projects, as they certainly didn't hang around for too long.
My memories comprise a vast repository of models and personalities accumulated over these many years – so much enjoyment; such a fulfilling and therapeutic hobby; so many interesting personalities. I really can't imagine a better way to have spent that time. Hopefully, younger OMFC Members will get as much pleasure from their aeromodelling as I have.

Letters to the Editor

Dear Editor,

I have an idea for a simple competition for gliders.

Much as I enjoy F/F gliders I find walking after them too tiring, So I suggest a one model competition for rudder only lightweight radio. The weight payload should be much the same as a D/T.

The model should be towed by a high start system and each flight would be timed with maxes of say 2 minutes followed by a fly off. My preference would be to go for one model say the KK Dolphin built to the original kit size although you could extend it to any semi scale model from KK Frog or Veron subject to a maximum span of 36".

I think these types of models would also be great for simple sport flying where absolute performance is not required. If we limited the choice to kits supplied by VMC the club may be able to secure a discount. A further advantage of such a competition is that it might appeal to those in both the R/C and F/Camps.

I look forward to hearing from you.

Cheers
Steve

Naturally, I took the opportunity to delegate upwards. Here's what our Chairman thought:

Dear Editor

I like Mr. Edward's suggestion very much. However, as the gliders he mentions are all quite small, might I respectfully point out that

their performance would probably be dented somewhat by the addition of (relatively speaking) quite a lot of extra weight? Granted, the radio gear would not normally be considered as excessively heavy - we're only talking of perhaps 35 to 40 grams - but as these are very lightweight gliders, that would constitute a not-insignificant burden.

To address this, could I advocate broadening the choice of glider to include wingspans of up to 60", i.e., like the A1 gliders listed *[See Later – Ed]* by Andrew Longhurst? That size of model would easily carry the additional load. I would also counsel that the selection of a subject with a thinnish, flat-bottomed wing section would help with penetration in windy conditions. Otherwise, without the benefit of ballasting or elevator control, all gliders will undoubtedly struggle to make headway in any sort of breeze. Since I believe the prime objective of Mr Edward's suggestion is to eradicate lengthy retrievals, that would be counter-productive.

Furthermore, whilst it is entirely possible to squeeze the radio components into very small spaces, I think that in order to attract others, the task should not be made more difficult than necessary. In that respect, choosing a larger model makes sense.

Respectfully yours,

David Lovegrove (Chairman and Polemicist, OMFC)

So – what do the rest of you think? Is it a good idea? The Meadow Flyer Mailbox is always open…

Club Competitions – Andy Blackburn

It has probably not escaped your notice that there seem to be a fair few competitions planned for next year, all of them – so far – are for free-flight classes. The committee ***have*** been looking at some possible RC competitions but for some reason the cohort of OMFC members who fly RC don't seem to be very competition-focused. Earlier this year we did explore the idea of a 2 metre electric thermal competition with very simple rules, but only 4 people expressed any sort of interest, and 3 of those were on the committee!

It remains to be seen whether Steve Edwards' "Single Channel RC Assist for FF Gliders" idea (see "Letters to the Editor" above) gets any support – personally, I think it has potential, particularly as none of us is getting any younger. If you think Steve's idea is worth pursuing, please write in and let someone on the committee know. Or you could even write to the Newsletter…?

So, why are we looking at holding competitions on the meadow and trying out various postal competitions?

Well, firstly, some people actually *like* competitions and we feel that we ought to be providing members with things that they like, if at all possible.

And secondly, practising for competitions and flying competitions tends to get people out on the meadow, which is always a good thing for all sorts of reasons; it's always better to fly with your friends and other fellow club members, and turning up to fly sport models when there's a competition on is always an interesting experience.

And it's great for renewing acquaintances - One of the most gratifying snippets of conversation I overheard at the recent Autumn Duration competition (17+ attendees) went something like this "Oh, hello Bob (not his real name), I haven't seen you on the meadow for ages – how are things?"…

How do we decide what competitions to run? Well, it's all a bit hit-and-miss, if I'm honest 😊. The problem is that club members come and go, and in any case members' interests change over time, so we're never quite sure how much support a particular competition class might have. And there is the odd surprise, such as the large number of people attending the Autumn FF Competitions.

What we tend to do is to try something once and if it has some level of support, we'll try it again. Here's where we are with various events planned for next year:

- P30 seems to have hard-core support from half a dozen regular practitioners, and it's an easy class to get into (the Sweet P30 kit available from Free Flight Supplies and Spencer Willis is very good with a 9.5" Peck/VMC prop and 6 strands 3/32").
- E20 is a bit of a risk, but we have seen a couple of models being flown and in any case The Chairman likes it, so it's worth a punt.
- 36" Glider only had 4 entries last time, but we're hoping that people might use scale gliders that they're building for the Scale Glider competition on Scale day. We're not sure about the level of support, 4 people is OK but if it turn out that support is dropping off we might have to re-think.
- Frog Senior is popular with half a dozen people regularly having a go, and they're nice models to build and fly. We have high hopes for Frog Senior in 2024.
- Rubber Scale Duration usually has 5 or 6 entrants. For some reason, this event seems to be much more exciting and interesting than the usual outdoor kit scale precision event.
- Scale Glider (bungee launch) is entirely speculative, but we have seen some scale gliders being flown and it has already stimulated some interest in builds.
- Scale Flying Only is the primary event for the Scale Day and is well-supported.
- Vintage and Classic Glider is a risk because it's not been tried recently, but not a big one as – judging from reaction so far – we expect quite a lot of support.
- Coupe d'Hiver was the best-supported class with 8 entrants, with more expected next year.
- Vintage & Classic British Rubber Kit Revival is another experiment. No idea if this is a goer or not, but it's worth a punt.
- Catapult glider only had 3 entrants last time it was held, which is really the bare minimum; on the other hand, it's probably the cheapest and quickest class to enter and we might be able to get a bit of interest if someone could perhaps write something for the newsletter.

Obviously we'll carry on with the Under 25" Vintage Rubber Postal, but we'll have to have a think about when and how we do the P30/Coupe postal – the fly-off seems to have straddled some really good and some really bad weather, which isn't ideal – see page 46.

The History of A1 Gliders – Andrew Longhurst & Sten Persson

Our committee have decided to run a nostalgia (pre 31/12/59) event for A1 gliders, so where did this class come from?

The coveted trophy in today's F1A glider class is still referred to as the Nordic Cup and that says it all when it comes to the origin of the A1 (F1H) and A2 (F1A) glider classes. During the 1930s largish gliders, mostly of German origin, dominated the modelling scene in Sweden. Around 1940 rubber models quickly gained in popularity but the subsequent rubber shortage which affected neutral Sweden gave birth to the glider classes that we still have today.

The specifications of the earliest forerunner of today's F1A class were laid down in 1942. This class was called S2 but, after some minor rule changes, the A2 designation was adopted. For some time, it was referred to as S-Int (S=sailplane, Int= international) but after the first (unofficial) international glider contest in 1950 the A2 designation seems to have been universally accepted. Much later it was changed to F1A.

The origin of the A1 class seems to be less well documented. This type of small glider (18dm2 or 279sq.ins wing+tail) with a span around one metre also became very popular in Sweden about the same time as the S2 class emerged.

Designated S1 models (of which Sigurd Isacson's "Sunnanvind" is a typical example – scan here is from Outerzone) had many look-alikes with enhanced performance thanks to the modern aerofoils that were the results of F.W. Schmitz's research. After the war there was an effort to adopt common rules for all Scandinavian models and in the Swedish 1946 rule book the small glider class is called A1 for the first time.

Eventually, A1 size models became popular outside Scandinavia, not least in the Netherlands and in Czechoslovakia. In the January 2001 issue of Aviation Modeller International, Andy Crisp takes a look at "Nostalgia Gliders" and, according to him, the A1 class was introduced to British modellers by Ron Moulton in 1955. A comprehensive article on, "The A1 class model sailplane" by J. Van Hattum in the 1955-1956 Aeromodeller Annual seems to confirm the date. Turning to the USA, the Zaic Year Books do not show specific A1 designs until a spate of them appear in the 1957-58 edition.

Although quite a short period is allowed for the models eligible for our event, the Aeromodeller and Aeromodeller Annual supply rich pickings. The Aiglet is the best known British A1 and kits are available from Spencer Willis.

A1 Gliders: An Introduction - Andy Crisp

As there are rumours that the Club may be putting on an event such models next year, your esteemed Chairperson has asked me to write “something about A1 gliders”.

To explain, the A1 glider first came about in 1940s in Scandinavia, but I guess it came to British attention via seminal articles written by the late Ron Moulton in *The Aeromodeller* edition of June 1955, and by Just Vam Hattum of Holland in the *Aeromodeller Annual* of that same year.

A year or two ago Stuart Darmon of the Birmingham Club sought to revive early A1s of the “Classic” period (1950 – 1960) by sponsoring postal competitions which were quite successful. People seemed to gravitate to the *Aiglet* design which was given away as a free plan in the *Aeromodeller* of December 1956. It’s a pretty little model and a good flier, but you don’t *HAVE* to build what everyone else does! There are loads of plans out there that cry out to be reproduced. Be creative! In other categories it’s a bit boring to keep churning out *Senators, Tomboys* and *KK Caprices*!

If you’re lucky enough to have access to *Aeromodeller Annuals* of the ‘50s or, even better, *Frank Zaic Year Books* of the time, there is an excellent choice of designs, most of which are easy to scale up on a piece of scrap wallpaper, using a good straight-edge and a bit of imagination for the wing sections. The sole of the shoe comes in handy here . . .

Tips and Hints

Here are some useful towline glider tips gained from experience.

1. Strengthen the Wing

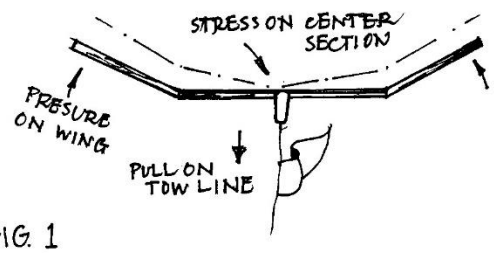


FIG. 1

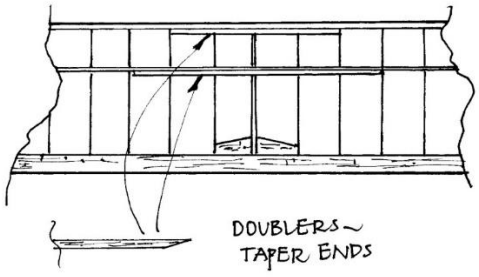


FIG. 2

When towing in any sort of wind, the stress on the wing is placed upon the centre section. Most old plans show the same spar size right across the wing. This can lead to a fold-up in the middle with too-enthusiastic running. Use spruce spars in the centre section and double them up for 6” or so from the centre line.

(As an aside, the BMFA rules for Vintage and Classic models allow you to “beef up” structures so long as you keep the plan’s spar positions, wing tip shapes, etc. You can’t change the basic outline shape.)

2. Make the Tow-Hook Adjustable

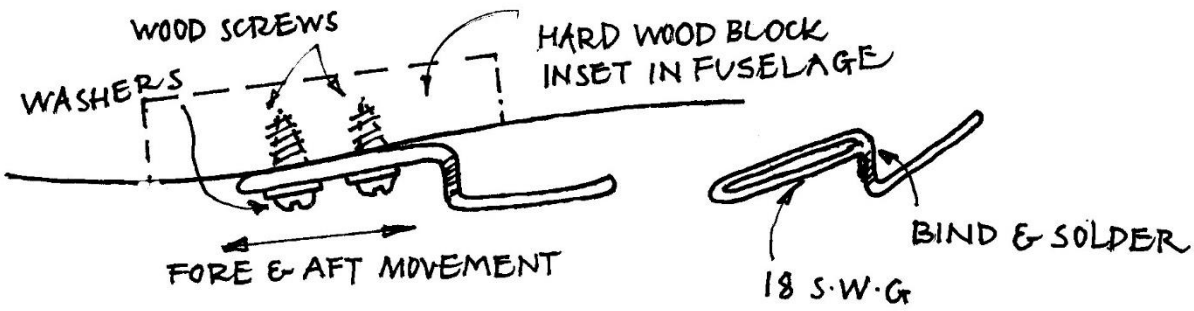


FIG.3 ADJUSTABLE TOWHOOK

Make the towhook adjustable fore and aft. In general, A1 gliders want the towhook about ½” in front of the Balance Point (CG), which should be around 50% - 55% of the wing chord. Don’t try to fly the model outside of these limits. Alter the tail incidence if it dives or stalls. I start with about +2 degrees on the wing and -1 degree on the tailplane.

3. Gadgets Must Be Reliable
Make sure that the gadgetry – auto rudder, timer start, etc. – all work well. Have some means of adjusting the rudder positions for tow and glide.

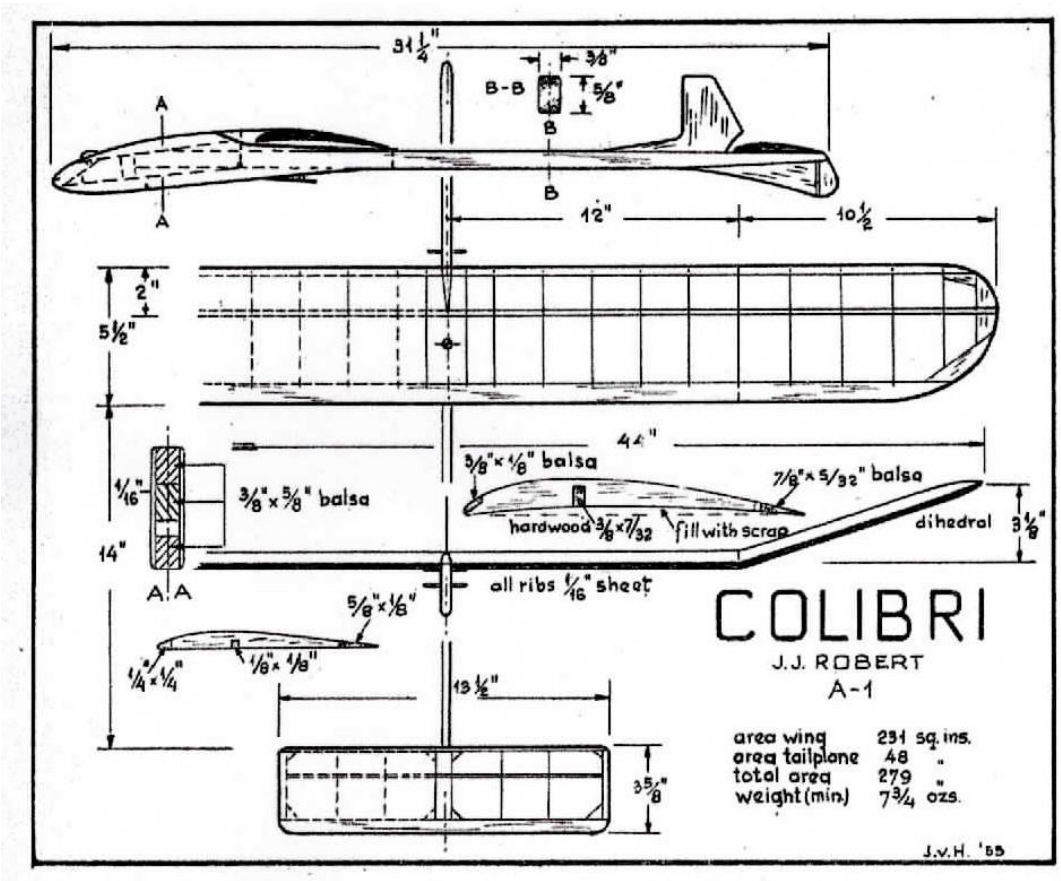
4. Build as Neatly as You Can
Build neatly and accurately. Don’t force parts together when glueing. Always slot trailing edges where possible, but not leading edges. It gives bit of plus and minus for tissue shrinkage when the glue dries.

5. Tissue is Best
Don’t cover the model in plastic film, e.g., Oracover, Solarfilm, etc. Good ‘ole tissue in some form or other adds rigidity to the wing and tail.

6. Fix the Warps
Don’t tolerate unwanted warps. Remove them by holding and twisting in the steam from a kettle. And mind your fingers!

7. Name and Address…
Put your name and address on the model. It might fly well enough to be lost!

My Experiences with A Classic A1 Glider



I have four modern Circle-Tow A1 (now F1H) gliders so last year, for a change, I thought about making a “classic” job and chose the *Colibri* which is featured in both the Aeromodeller Annual in imperial dimensions and in the 1955-56 *Frank Zaic Year Book* in metric dimensions. It was designed by J.J. Robert of Leiden, Holland, although it looks very Scandinavian in its lines (see drawing).

I carry my A1s around in an old trombone case (as you do . . .) which is 32” long, I made the wing of the *Colobri* two-piece. I used a single 10SWG (3mm) wire joiner. I doubled up the spruce spar around the middle and epoxied the tubes to take the joiner to this (Fig 4).

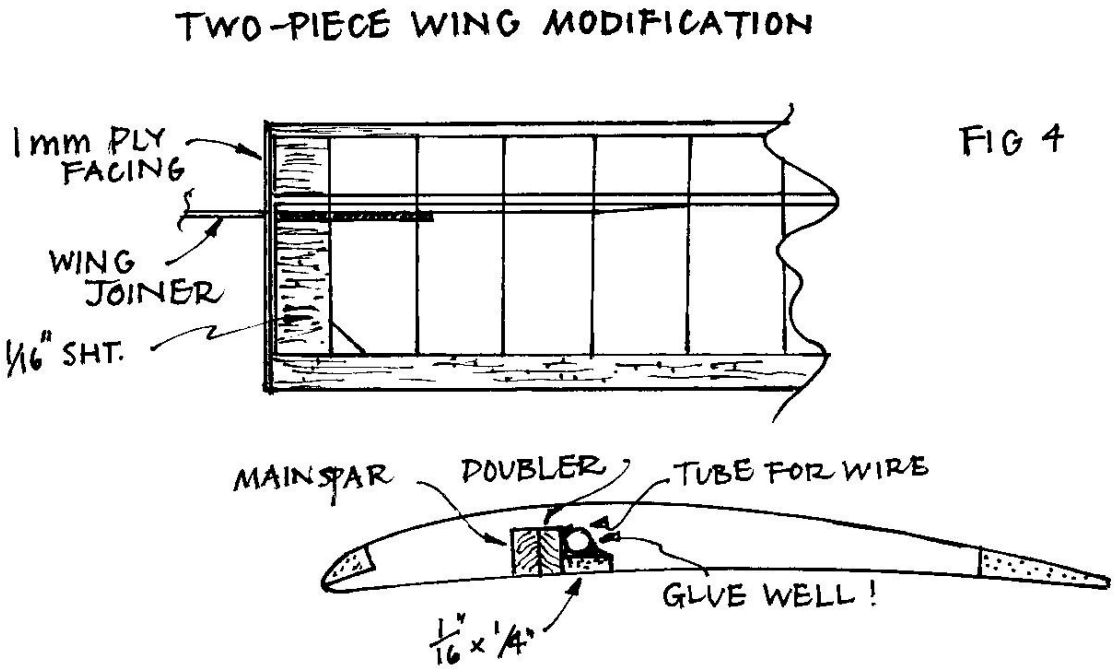


FIG 4

I am fortunate, being a fisherman, to have access to lots of carbon fibre rod tip offcuts which, although having a very slight taper, serve the purpose. Ali Tubing would do just as well. Note that I only use one joiner. This bands down onto the wing platform okay. If you use two joiners and they don't line up properly, you could get an unwanted incidence difference across the wings.

My precious spruce for the mainspar only comes in 36" lengths, so to make up the 22.5" semi-span, I spliced a bit of the same size balsa onto the spruce, adding lightness in the right place!

I have a number of building jigs for undercambered wings (see Fig, 5), so I selected a suitable one on which to build the Colibri's wing. The wingtips, instead of being built up from pieces of 1/8" sheet, are laminated from two bits of soft 1/16" sheet and curved to the undercamber before the glue dried. Then on the jig they fitted nicely to the underside of the section.
The tail I made "as per", knowing full well that it would warp upwards with the tension of the covering, allied to the widely spaced ribs and a bottom spar. It did!

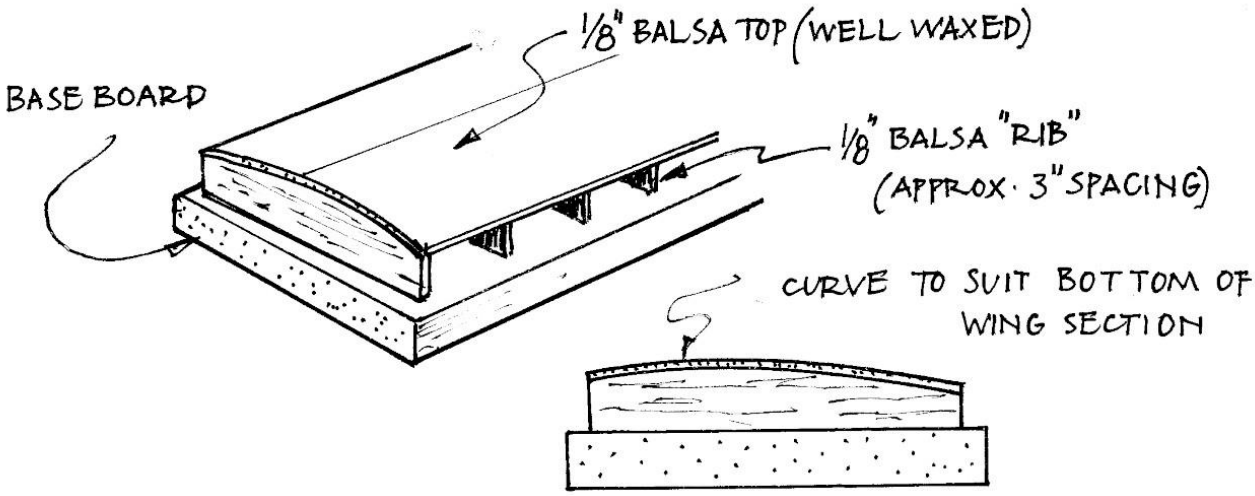


FIG 5

UNDERCAMBERED WING BUILDING JIG

The covering for the flying surfaces was the standard *"Saltzer"*, a.k.a. *Polyspan*, from Mike Woodhouse, heat shrunk with two coats of 50/50 dope/thinners. This might be thought to be too heavy for a small model (in glider terms) but, ready to fly, Colibri came out at 5.75 ounces /162 grams.

The fuselage is made from mostly 3/8" balsa with 1/16" sides at the front. I cheated a bit here, as most of my 3/8" balsa was on the soft side and would need stripping from sheet. I therefore made up the boom from 1/16" x ¼" spruce, top and bottom, and sheeted the sides with 1/16" balsa to make up the plan's 3/8" thickness. I also put in tapered 1mm ply doublers for 3" aft of the wing – an area of great stress if you hit the ground!

The actual turning rudder on the 1/8" underfin I enlarged slightly, as I don't like large angles here.

For the towhook, the plan shows a piece of glued-in 1/8" diameter wooden dowel. Not very strong or adjustable. I used the system described previously in Fig. 3.

My model's body is covered in black and red lightweight lightweight *Modelspan*, contrasting with the white wings. These have tissue decoration with cut-out BMFA numbers and the name, Colibri. The wing tips have a light spray of day-glo red for visibility both in the air and on the long grass of the Meadow!

I use a KSB (clockwork) timer for the dethermaliser (D/T), triggered by the auto-rudder release pin. Modern electronic buffs amongst you may wish to fit Radio D/T and a tracker. Personally, I like a good chase!

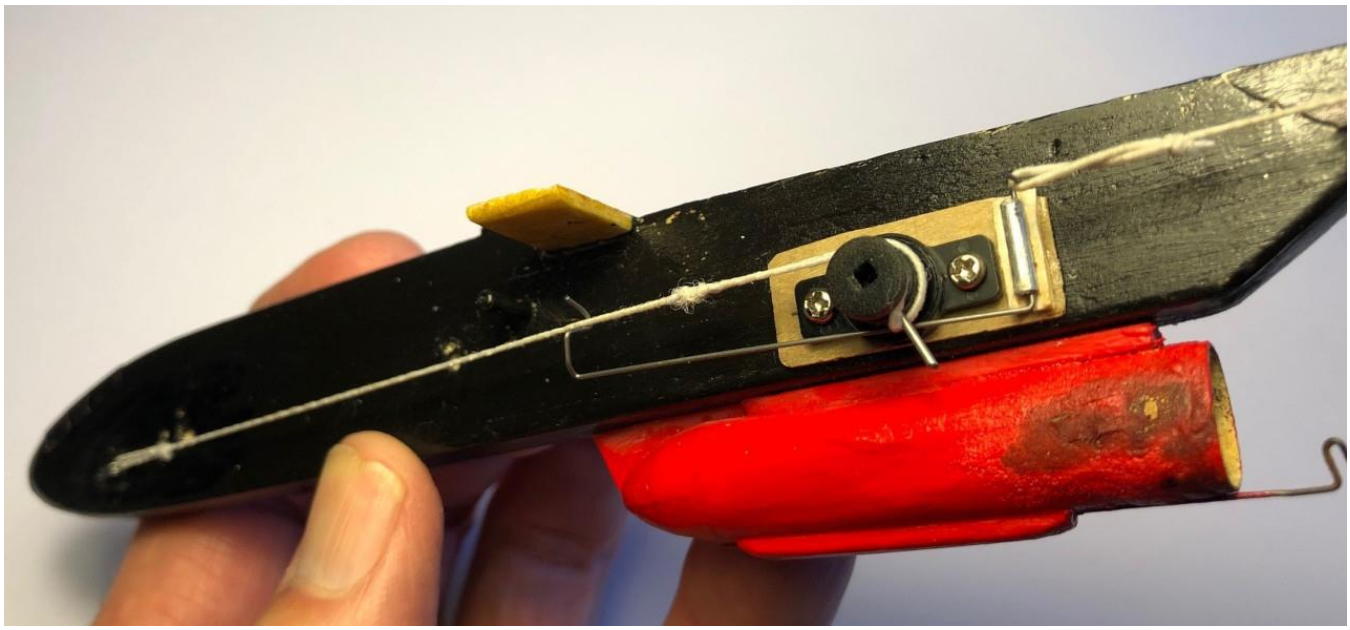
Finally, with all the bells and whistles fixed and working, make sure that the CG is in the right place. I bash (technical term) a piece of lead to fit in the front nose compartment and seal it in place with scraps of white foam and a generous squirt of PVA glue.

Flying
You will need a towline. For a model of A1 size, 20-25 pound breaking strain nylon monofilament should be okay. Go much lighter and it is too stretchy to launch properly, and it gets tangled in the foliage. If you can run to it, braid is much better but a little more expensive. Incidentally, the rules say that for safety you must remove the line from the winch when towing. This is to prevent flyers throwing it and causing injury, should the model get into difficulty.

A cheap, large fly-fishing reel makes quite a good winch but, unfortunately, they are not usually geared. Always wind in the towline - it's not a good idea to leave lines laying around in the grass for people to get tangled up in!

A trimming article might follow if this one hasn't been too daunting.

Viscous DT Installation Modifications - Simon Milan



Although some of MF's cheerful readers may already be aware of this idea via the internet, I thought it worth sharing with the non-Googling FF fraternity.

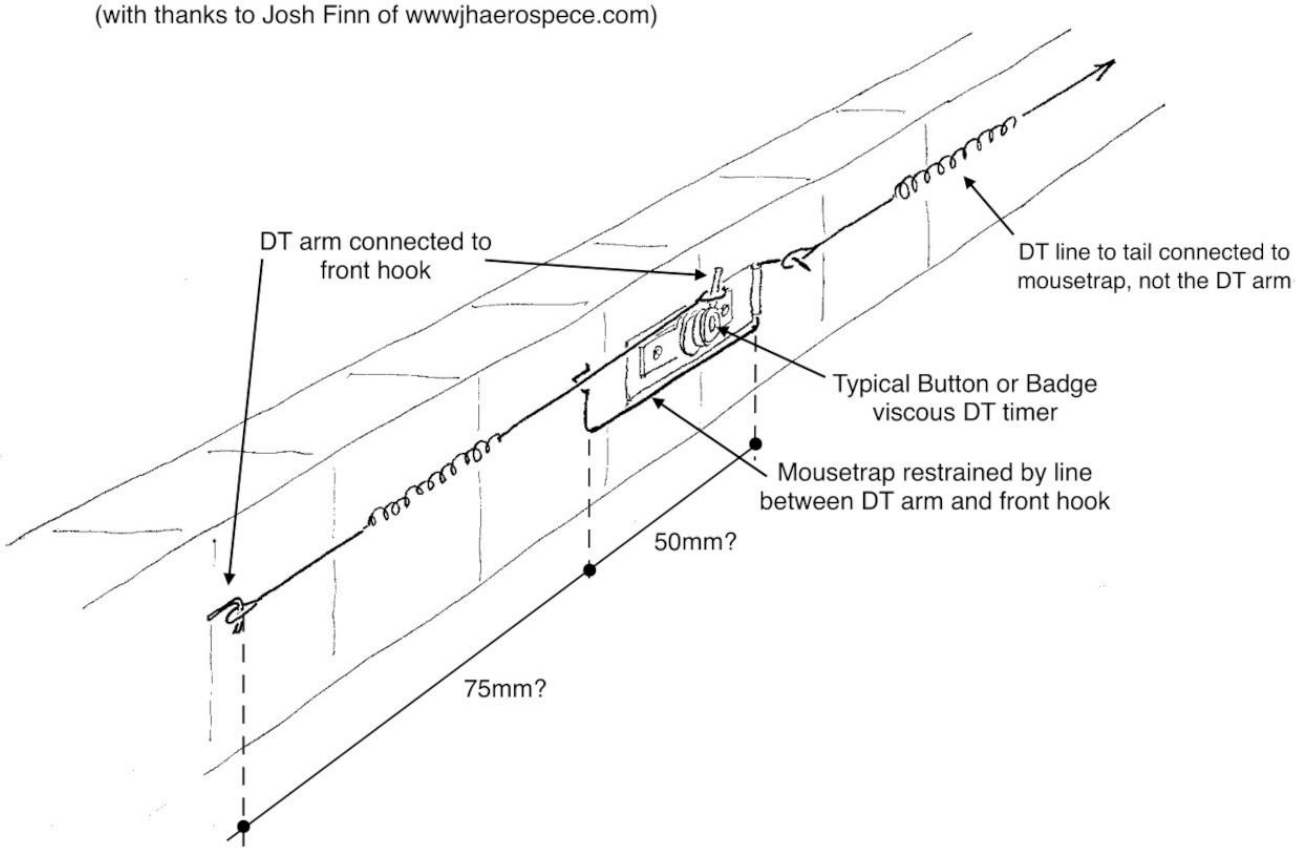
For my smaller FF models I have tended to fit viscous DT timers like the little Badge and Button timers supplied by Mike Woodhouse. Very cheap, simple and light, though never to be compared with current RDT technology. Never mind, horses for courses…?

For whatever reason I found that I had difficulty in getting my latest viscous timers to perform properly as I often found that the spring /band tension needed to hold the tail down caused the DT arm to unwind far too quickly. Conversely, a lower-tension connection to the tail to achieve a decent flight time, meant that the tail wasn't always seated securely on its mount, resulting in all kinds of unwanted flight patterns.

In the search for a solution, I found this idea in a YouTube clip from Joshua Finn of J & H Aerospace. It separates the lower tension needed to rotate the DT arm to achieve a sensible DT duration from the higher tension needed to hold the tail in place.

Viscous DT Timer Modifications

(with thanks to Josh Finn of wwwjhaerospece.com)



It's maybe a bit 'agricultural', but having tried it on my R20 model, I can confirm it works fine. Also installed on my o/d tailless P30 – but more of that bit of eccentricity on another occasion!

Making Small Rubber-Powered Kit Scale Models Fly – Andy Blackburn

The Author's Keil Kraft Stinson Flying Station Wagon was originally built for indoor Kit Scale. It's a very good flier as are most of the Keil Kraft/Veron high-wing models. It's getting a bit dog-eared now, though, and is due for replacement.

Introduction

I had a good day at the Rubber Scale Duration competition at the Autumn duration events - I'd found some good air and managed to get to the top step of the podium - so it seems fair and reasonable to explain how this was done. And I've been building small rubber-powered flying scale models for (on and off) over 50 years so I thought I might as well do a brain dump on how to make them fly for a decent amount of time. This piece might therefore turn out to be a bit long, for which I apologise in advance.

Background

We're mainly talking here about models of around 16"-21" span that were sold in the olden days by Keil Kraft (the Keil Kraft Flying Scale series) and Veron (the Veron Tru-Flite series), as well as the more recent offerings from the Vintage Model Company (Magnificent Flying Machines) and more specialist kits such as the WW1 kits available from DPC Models /Aerowerkes.

All these can be made to fly in some fashion, but models of this size usually require a logical and methodical approach to trimming – one of my mates is in the habit of declaring that "Test glides are for girls"[1], but in this case, test glides are mandatory, and short-cuts usually turn out not to be.

[1] The editor would like to make it completely clear that he does not believe that test glides are for girls and would like to emphatically disassociate himself from any such suggestion.

A Real Life Example
My 20” span Stinson Flying Station was originally intended for the indoor Kit Scale class so was – unusually for me – originally built exactly as per the plan. Some care was taken to properly align all the flying surfaces and build the model warp-free. It originally weighed about 27g (0.95 oz) empty and after several repairs this went up to about 30g (1.05 oz). It has a 6” Peck-style propeller from VMC and a long (23+”) loop of 3/16” rubber. In this state it will fly outdoors for about three-quarters of a minute without thermal assistance.
The important performance metrics for this model are:

1. It was built straight with correctly aligned flying surfaces with no unintended warps, the noseblock and rear peg were a tight fit and the decalage was checked and found to be OK (i.e. 2-3 degrees).
2. The empty weight is as low as reasonably practicable.
3. The length of rubber was as long as I thought I could get away with.
4. The propeller/rubber combination was reasonably well matched – that is, they were known to work together for a model of about (in this case) an ounce.
5. The prop hook worked every time, and
6. The freewheel arrangement was reliable.

1. Straight and Square

Strictly speaking, this isn’t really a performance metric; models can usually be made to fly quite well even if all the flying surfaces are warped and the wings and tail are well out of alignment – however, it’s then unlikely to be an easy process because most changes made during trimming will tend to have an unexpected secondary effect.

You’ll have a much easier life if the flying surfaces are warp-free and square – non-shrinking dope is a godsend for lightweight surfaces. Also, consider lightly steam-shrinking tissue rather than spraying with water. Partially pre-shrinking tissue on a balsa frame is also highly recommended[2].

The noseblock needs to be a tight fit because it must stay in place whilst under strain from the rubber motor, and the rear peg needs to be a reasonably good fit so that it doesn’t come out when removing the model from the stooge.

One other thing to check, particularly with the Veron designs, is that there is a reasonable degree of decalage (difference between wing incidence and tailplane incidence); the wing generally needs 2-3 degrees more incidence than the tailplane. Failure to correct this will mean that the power/glide transition may be abrupt, and stability may be compromised.

2. Minimal Empty Weight

This is probably the most important performance metric. Excess model weight usually has three main causes:

a. Over-engineered and robust structure.
b. Too much weight at the tail.
c. Covering and finish is too heavy.

[2] Make a balsa frame from 3/8” or 1/2" square balsa, stretch the tissue over the frame and stick on with a glue stick or similar, making sure that it’s taut and there are no slack areas. After water-shrinking, some – but not all – of the available shrinkage will have been used up and the tissue folds/wrinkles will have disappeared. Just cut it off the frame and use as normal.

2.1 Over-Engineered Structure

We live on a small windy island and calm, continental-style weather is very rare, so UK-designed kit models typically have an extremely robust construction which means that an un-modified model built from a kit will usually weigh 1.5-2 oz empty, so will usually fly for only 25-30 seconds.

The relatively large-section balsa strip commonly used (3/16” x 1/16”, 1/4” x 1/16”, etc) is rather bigger than what’s really needed for the average design, considering that the normal grade of medium or medium-hard (9-11 lb/cu ft) balsa supplied in most kits.

The obvious solution is to replace at least some of the supplied wood with lighter balsa; I recommend forking out for some competition-grade balsa from The Balsa Cabin – it’s more expensive than ordinary balsa, but you won’t regret buying it. Also, not all balsa of the same weight is created equal, you want the stiffest wood for the longerons and wing spars - for 1/16” square, roll it between your thumb and fingers to gauge the stiffness.

Ideally you should probably be looking at about 6 lb cu/ft balsa for the ribs, formers and large-section parts such as wide leading and trailing edges, wingtips, etc., and 9-11 lb cu/ft (1/16” square needs 11 lb cu/ft) balsa for longerons and main spars. You can probably get away with about 8.5-9 lb cu/ft for stringers, as long as they’re stiff.

Veron and Keil Kraft designs sometimes have the biplane cabane structure from 20 swg (0.9 mm) wire (!!!) this is a) very heavy, b) often inaccurate and c) unnecessary; use hard balsa struts instead.

Chris Brainwood's 18" Keil Kraft Piper Super Cruiser - a lovely little design, can be built very light with the wood sizes on the plan just by selection of light balsa for everything except longerons and wing spars.

2.2 Heavy Tail Structure

The usual problem is that the relatively short nose of scale models and robust construction with heavy balsa will all conspire to increase the amount of nose-weight required out of all proportion to the original minor excess at the tail, so an extra gram at the tail end might require (say) 3 grams nose weight to balance, total cost 4 grams.

The best thing to do is to have a really good look at the tail end and think carefully about where you could usefully save weight. Here are some examples:

a. Replace all the solid-sheet parts with a built-up structure unless you have somehow managed to acquire some 4-5 lb/cu ft balsa. In this case you should firstly consider yourself to be very lucky, and secondly you can use it for solid sheet tail surfaces and fuselage sides.
b. Tail structures are sometimes far too robust; it's very rare that you will need the fin and tailplane to be built from anything bigger than 1/16" square.
c. Tailwheel assemblies are sometimes shown as being made from wire with a rotating wheel, or even (shudder) entirely bent from wire. You don't need anything like as strong as this – try a cocktail stick, a bit of balsa for the (non-rotating) tailwheel and a bit of paper for the detail. The simplest representation of a tailwheel is a piece of very thin acetate with the tailwheel simply drawn on.

Some of the more modern kits (e.g. VMC) have the motor peg moved forwards to just behind the cockpit so that there is less rubber behind the c.g.; this is a reliable way of reducing the amount of nose-weight required

2.3 Heavy Covering and Finish

With any scale model the temptation is to do a proper job on the colour scheme and spray-paint the thing so that it looks worthy of an IPMS exhibition. In most cases, however, coloured tissue is more than good enough to suggest that a model looks like the real thing – it doesn't have to be perfect, it just needs to be convincing enough that the finished model takes on a character of its own and looks "real" even though it might be missing lots of fine detail; this is what Bill Hannan used to call the "Stained Glass Window Effect".

If you can't find the correct colour of tissue then some artistic license can be employed – for instance, a WW1 biplane might have PC10 upper surfaces and natural linen lower surfaces, but dark brown and off-white domestic tissue will probably be close enough.

You *can* colour the back surface of the tissue with pastel chalks (for instance, yellow tissue with some pale brown chalk on the back produces quite a good WW2 desert sand/mid stone colour), and there are several online resources explaining how to do this.

If it's a complex colour scheme (e.g. WW1 lozenge camouflage) then printed tissue is a possible way forward and can be extremely effective. Again, there are several online resources explaining the process, but requires you to produce or source some artwork. Be careful with shrinking the tissue if the ink isn't waterproof (try steam-shrinking) and consider spraying dope rather than brushing.

Finally, if all else fails and you really can't avoid paint, be very, very careful how much paint goes onto the surface – if you have an airbrush, try and ensure that the layer of paint is translucent – if it goes opaque, you've probably put too much on!

Spray cans are just about useable if there's no other option, but the problem is that allthepaintcomesoutinarush so it's very easy to put too much paint on; you need to hold the

model much further away from the spray can than you might think (slightly more than arm's length!), and apply multiple very light, "dust" coats of paint rather than one thick coat

The Author's DPC Models Pfalz D.III is OK outdoors but is too heavy for indoor use – notice how opaque the painted black tail bands are compared to the tissued wing insignia. Oh dear…

A Real-Life Example
I have a DPC models 16" span Pfalz D.III which had an empty weight before balancing of a little less than 27 grams – not too bad, you might think, until you discover that it required almost 10 grams of nose weight to get the c.g. in the right place! The model weighs about 36 grams empty and will normally fly for about 35-40 seconds in still air. There were several mistakes here:

a. The kit wood was used because I just wanted to get building and didn't want to make new formers. The wood should really have been replaced with something much lighter as described above.
b. The rear motor peg had been moved forwards, but not far enough.
c. The tail and rear fuselage has black paint from a spray can, the model was held slightly too close and there's far, far too much paint on the model behind the c.g.; Should have used black tissue…

3. Long Rubber Motor

Obviously, you want as many useful turns from the rubber motor as possible, and since the number of turns is proportional to the length, you want the motor to be as long as possible. However, there are limits – the longer the motor, the greater the chance of it bunching up somewhere along its length (usually at the back, where the fuselage is narrowest) as it unwinds. This traps some potentially useful turns in the bunched motor, and (more importantly) moves the c.g. aft and ruins the glide.

The biggest ratio of rubber length / hook-to-rear-peg length that I've ever got away with is about 3:1. Usually it ends up at about 2.8:1 and if the fuselage narrows significantly, about 2.5:1. Most models will tolerate 2.5:1. It's possible to use longer rubber than this but it'll probably require the use of a bobbin on the rear peg, or a wobbly rear peg – both of which are outside the scope of this article.

Also, find out how many turns your motor should take (a copy of "Rubber Powered Model Airplanes" by Don Ross is invaluable), and then only wind to 80% of break turns. If you pre-tension the rubber (recommended), remember to allow for the number of turns of pre-tension when working out the break turns – so if the motor breaks at (say) 1400 turns and you have 100 turns pre-tension, the break turns are now effectively 1300 turns, so 80% will be 1040 turns.

4. Matched Prop/Rubber Combination

All models are different, and models built from the same plan may vary in weight by quite a lot. Getting a suitable propeller/rubber combination that will work with your model is half the battle – too little power (rubber too thin or prop too big) and it won't get much higher than head height, too much power (rubber too thick or prop too small) and it'll be very difficult to control the initial power burst and will require a lot of side and down thrust. However, I can tentatively offer the following prop/rubber combinations for various example airframes as a starting point:

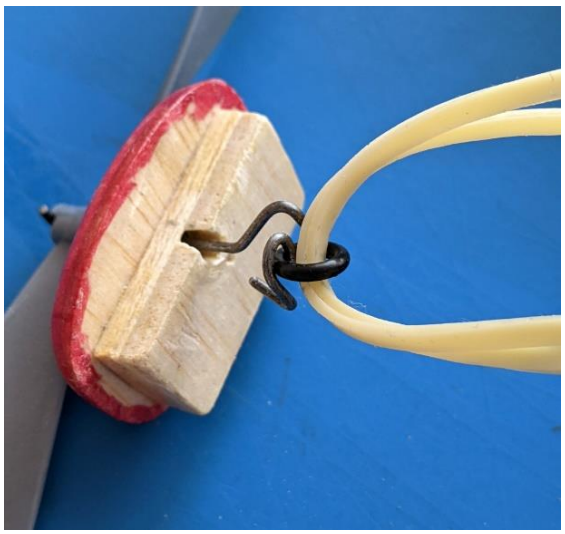
Model	Span	Approx Empty Weight	Rubber	Propeller	Notes
KK Stinson	20"	1 oz	2 strands 3/16" (4.76mm)	6" Peck/ VMC	About 45 seconds duration.
KK Stinson	20"	1 oz	2 strands 3/16" (4.76mm)	7" Peck/VMC cut down to 6.25"	About 50 seconds duration, same length rubber as above.
Veron Comper Swift	18"	1 oz	2 strands 3/16" (4.76mm)	6" Peck/ VMC	About 45 seconds duration.
DPC Pfalz D.III	16"	1.3 oz	4 strands 0.085" (2.16mm)	6" Peck/ VMC	Loads of nose weight. About the maximum power for the airframe. 35-40 seconds.
VMC Spitfire	18"	1.65 oz	4 strands 0.100" (2.54mm)	6" Peck/ VMC	Vast amounts of nose weight. Loads of down and side thrust. About 30 seconds duration max.

5. Reliable Prop Hook

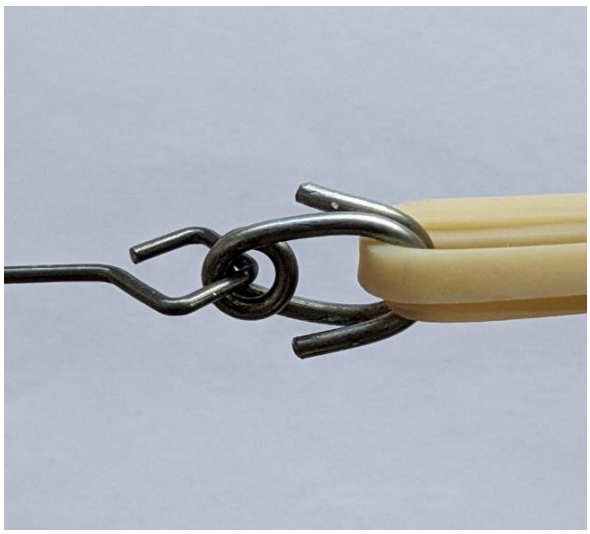
The usual details of the propeller and prop hook shown on the plan will probably work for a few hundred turns on a relatively short and tight rubber motor, but as we're using much longer motors with over a thousand turns, an ordinary hook just won't do the job because the rubber will just crawl forwards on the hook, coming off at worst and unbalancing the prop assembly at best, which wastes energy.

There are a couple of options available for the prop hook:

a. A reverse S-hook
b. A Tim Grey hook or similar (e.g. crocket hook)



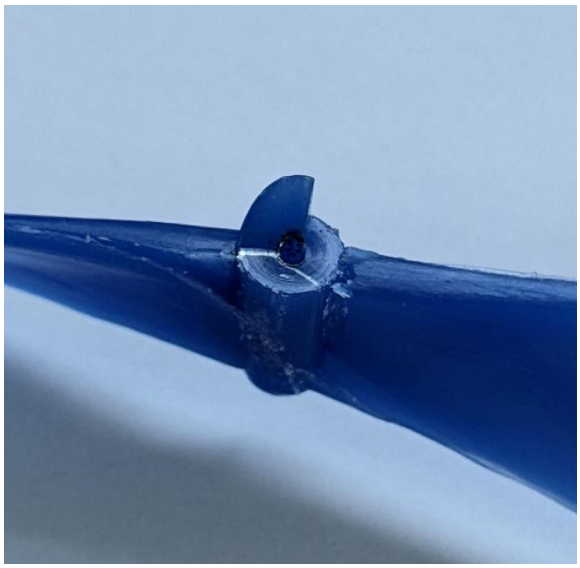
A reverse-S hook with the rubber captured by an 'O' ring so that the prop assembly can be easily detached for winding. Check The Internet for instructions on how to make one.



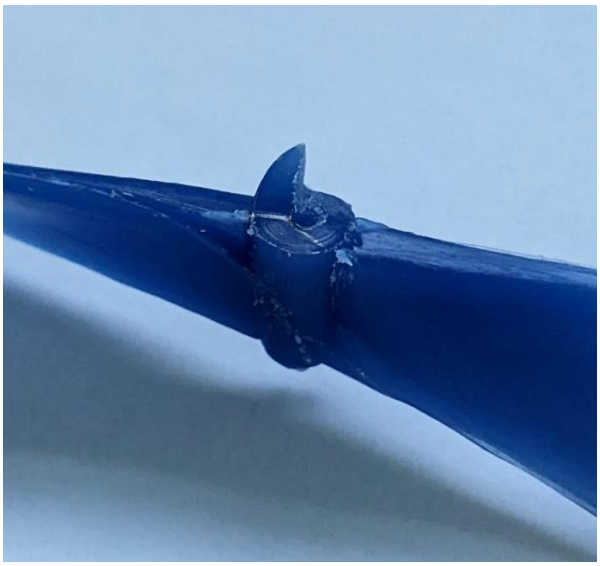
A Tim Grey hook on a standard diamond shape prop shaft. Tim Grey Hooks are available from Free-Flight Supplies and are probably the best solution if you have enough space in the nose area.

6. Reliable Propeller Freewheel

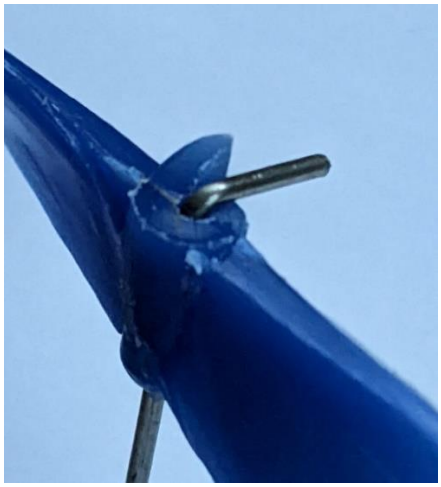
A reliable freewheel mechanism is vital for an outdoor model; the traditional rubber model freewheel is a one-way arrangement such as a Garami clutch, although the plastic freewheel ramps on most moulded plastic propellers are perfectly useable if you're prepared to do a few minute's work with a modelling knife and file; the following pictures should explain what needs to be done:



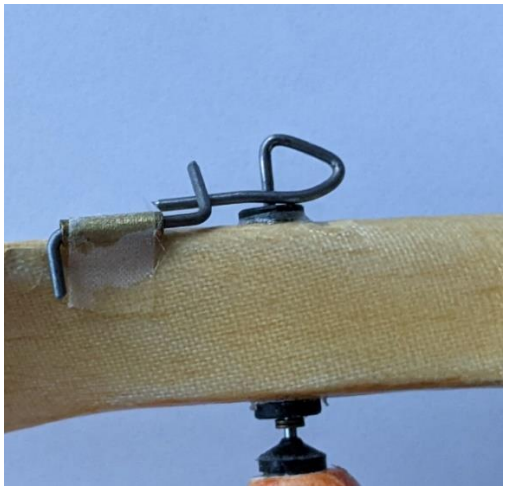
A standard commercial ramp-type freewheel - the flat edge of the ramp is aligned with the middle of the prop shaft hole rather than the edge, and the hole is square-cut so that a bent piece of wire will not fit properly.



After a few minutes work with a file and scalpel, the edge of the ramp has been cut back so that the prop-shaft will fit properly, and the edge of the hole has been rounded so that a bent piece of wire will fit.



A modified freewheel ramp with a prop-shaft installed. Note how the prop shaft has been bent to slightly more than 90 degrees so that it fits the sloping ramp.



A Garami clutch shown in the engaged position. The engagement is very positive, but the lever-in-tube part of the mechanism must be manually engaged as the winder is removed.

Common Modifications

There are a couple of additional things that you can do to increase your chances of easy trimming and good performance.

Have a look at the dihedral on the plan – for some unknown reason, many of the "traditional" Keil Kraft and Veron designs have less dihedral than scale (madness - I have no idea why this was done)! The best thing to do here is to make sure that low-wingers have 9 degrees of dihedral, and that high-wingers have at least 3 degrees – or a bit more if you can get away with it.

If your model has a tapered wing or has an elliptical wing, then the loading at the tip will be higher and it will be inclined to tip-stall. In this case it will benefit greatly from some washout – this will make it less likely to tip-stall[3] and will also improve the lateral stability[4].

Finally, for outdoor flying the undercarriage just adds weight and drag and is one more thing to get knocked off and cause problems. If the undercarriage is retractable, the best thing to do is to leave it off (note: not always allowed for the Masefield Trophy – see later)

Trimming and Test-Glides

The very first thing to do is to check that the flying surfaces are straight and square, and that no unintended warps have crept in; steam out any unwanted warps before heading to the flying field.

The basic principle of trimming is that the glide is controlled by warps, trim tabs and deflected control surfaces, and powered flight is controlled by adjusting the thrust line. I normally try and fly rubber scale models left under power and left on the glide because it seems to be much more reliable for airframes with relatively low lateral stability (so, most scale models and ***all***

[3] No, you will not make it any less efficient than it is already; the tip is operating much nearer the stall than the root (which is inefficient) and will stop working (stall) first unless you do something about it.

[4] Because the wing on the outside of the turn will be moving faster than the inside wing and will therefore (all other things being equal) tend to roll the model out of the turn.

scale low-wingers!), and since the free-wheeling propeller will naturally make the model want to turn right on the glide, it's much easier to stop the model spiralling in on the glide if you're turning left[5].

If you're going to do this (and I recommend that you at least try it) then the best trim seems to be to have a right-rolling wing warp (washin on the port wing and washout on the starboard), which will reduce the amount of right-thrust that will be required and will produce more drag on the port wing as the model tends to roll right. This is then balanced by a reasonable amount of left rudder, which will normally nudge the model into a straight or slight left turn on the glide; a rudder with stiff hinges is invaluable, but you can always bend the rudder by making a groove along the hinge line with a thumbnail. If your model needs washout (e.g. Spitfire – the full-size had 2.5 degrees of washout), to get the right-rolling effect just keep the washout on the port wing and use more washout on the starboard wing.

The glide trim will influence the power trim, so always try and do several test-glides; some people have problems with launching and there's often a tendency to launch too slowly. I've found the best way is to hold the model at shoulder height, bring the arm back, *watch the model* and as you do so, smoothly accelerate it forwards, aiming at a point about 20 feet in front of you. Keep launching and adjusting the nose weight until you're reasonably happy with it and you have a repeatable glide; you probably won't be able to see whether you have a good or merely average glide from a hand launch, but it's important to get a reasonable glide before trying flight under power because the glide trim influences the power trim.

Author's Pseudo Dime Scale B A Eagle is built from heavy (12 lb cu ft) strip wood and light (6 lb) sheet, weighs about 12 grams empty including nose weight, flies for 60+ seconds on 1200 turns.

[5] This is because the propeller is spinning to starboard when freewheeling and the spinning mass tends to take the model with it (heavier and/or low pitch plastic props are worse in this respect). Once established in the right-hand turn the gyrocouple tends to drag the nose down, airspeed increases, the prop spins faster, the nose-down pitch gets stronger and (to misquote F1 pundit Martin Brundle) we fly straight to the scene of the accident.

After that it's a matter of adjusting the down and side thrust in the normal way. I should point out, however, is that performance is quite sensitive to the amount of downthrust; if the model is flying around quite fast in left-handed circles and not gaining a great deal of altitude, the chances are that it's got a little too much downthrust – a very small reduction in downthrust (<=1/64" on an average-sized nose block) can make quite a difference – try reducing the downthrust until it stalls a bit, then put the last bit of downthrust back.

A Real-Life Example
I have a Pseudo Dime Scale B.A. Eagle 1 that was very easy to trim, but getting the best from it took a bit of thought. It would fly for 48-50 seconds easily but it didn't look right and wasn't gaining much height on the initial power burst, so it looked as though it probably had too much downthrust. The addition of an extremely thin bit of card (no more than about 0.3 mm) on the bottom of the noseblock to add upthrust has transformed the performance – it will now climb strongly and flies for about 60 seconds in still air.

Summary
So, all you have to do to give yourself a decent chance of success is:

- Check the decalage (longitudinal dihedral) and correct if necessary. Build it straight and square, steam out any warps that (despite your best efforts) have appeared. Make sure the noseblock is a tight fit.
- Replace any wood that is too heavy, remove as much weight from the tail as possible and build as light as possible.
- Use a long rubber motor, pre-tensioned.
- Use a matched prop and rubber combination; for an 18"-20" span model that weighs about 1 ounce empty, a loop of 3/16" flat will work nicely with a 6" prop if it has a reliable freewheel.
- Use a reverse 'S' hook and 'O' rings, or a diamond-shaped hook with a Tim Grey hook. Take the propeller assembly off for winding.

Additional Notes for Competitions

The only duration competitions for rubber scale models in the UK are those run locally by OMFC and the Masefield competitions at the Peterborough Flying Aces and Old Warden meetings. They seem to be quite a bit more fun than the usual Rubber Scale Precision event, so we tend to have more than one over the course of the year.

Choice of Model – Masefield Trophy Rules
The Masefield Trophy rules are owned by SAM 35 and have a 60 second max, three rounds of 3 flights, two flights and finally one flight (rubber motor changes will be required), some reasonably specific rules for fidelity to the original plan and what looks like an arbitrary set of bonuses, so if you select just the right subject you'll have a very good chance of walking away with the silverware.

I really shouldn't be encouraging any of you to indulge in the sport of gleefully taking advantage of rules loopholes, gratifying though it may be, but if (hypothetically) a keen competitor were so inclined then they might care to consider the following:

a. A 16" span Dime Scale biplane with decent wing area (e.g. Beech Staggerwing) will have a **60% bonus** and an expected flight time of about a minute.
b. Just about any Dime or pseudo Dime scale low-wing monoplane (e.g. 16" span B A Eagle plan published in Aeromodeller July 2023) will get a **50% bonus** and if built to 11 or 12 grams will fly for over a minute without really trying.
c. A 28" span Piper Navajo Chieftain twin from Outerzone will have an **80% bonus** and is expected to fly for 50-60 seconds.

Choice of Model – Oxford MFC Rules
The essence of the Oxford rules is that there is no static marking and flight scores are a total of three flights plus some bonus points; the bonus system is based on wingspan and weight, and is designed to give smaller models a reasonable chance of getting on the podium – it should be possible to pick any model you like and if you're sufficiently skilled or sufficiently lucky, you should expect to be on the podium.

At first sight, it might appear that the best model to use is a big one, but that's not always be the case. Granted, if thermals are difficult to find on the day (e.g. wet grass, no direct sunlight, etc.) then you're probably better off flying a larger model (say around 30") that can score maximum flight points (60 seconds per flight = 180 points for three flights) without thermal assistance.

However, if lift is relatively easy to find (and in summer, it usually is, even for me) then you'll probably do better with a model of around 18-20" simply because there will be bonus points available that can easily take the final score over 200 points if you can find at least *some* lift on every flight.

Preparation
You don't want to be fixing niggling little problems with the model when you're out flying, because it gets in the way of having a good time, so try and check everything over several days before you want to fly the model. If you do nothing else, I recommend that you make up and pre-stretch a new rubber motor – rubber is funny (as in odd), pernickety stuff, the motor you have in the model might survive the day's exertions but if you put a foot wrong with it (put on too many turns, not leave it long enough between flights, etc.) it'll throw its toys out of the pram (it'll "get tired") and will refuse to work properly. If your model suddenly doesn't gain the altitude that it did on the previous flight, this is usually the problem – change the motor and all will – probably – be well.

Also, rubber motors will tend to pick up small nicks and scratches as they're used which can easily turn into a broken motor. I'm sure nobody wants to spend a morning fishing a tightly-wound motor out of a fragile fuselage when they could be flying, so the best thing to do is to hang the expense and use a new motor at the start of the day. Keen duration (P30, Coupe, etc.) competitors will of course have made up a batch of new motors for use during the day, and each one will be used on just <u>one</u> official flight, wound to within an inch of its life.

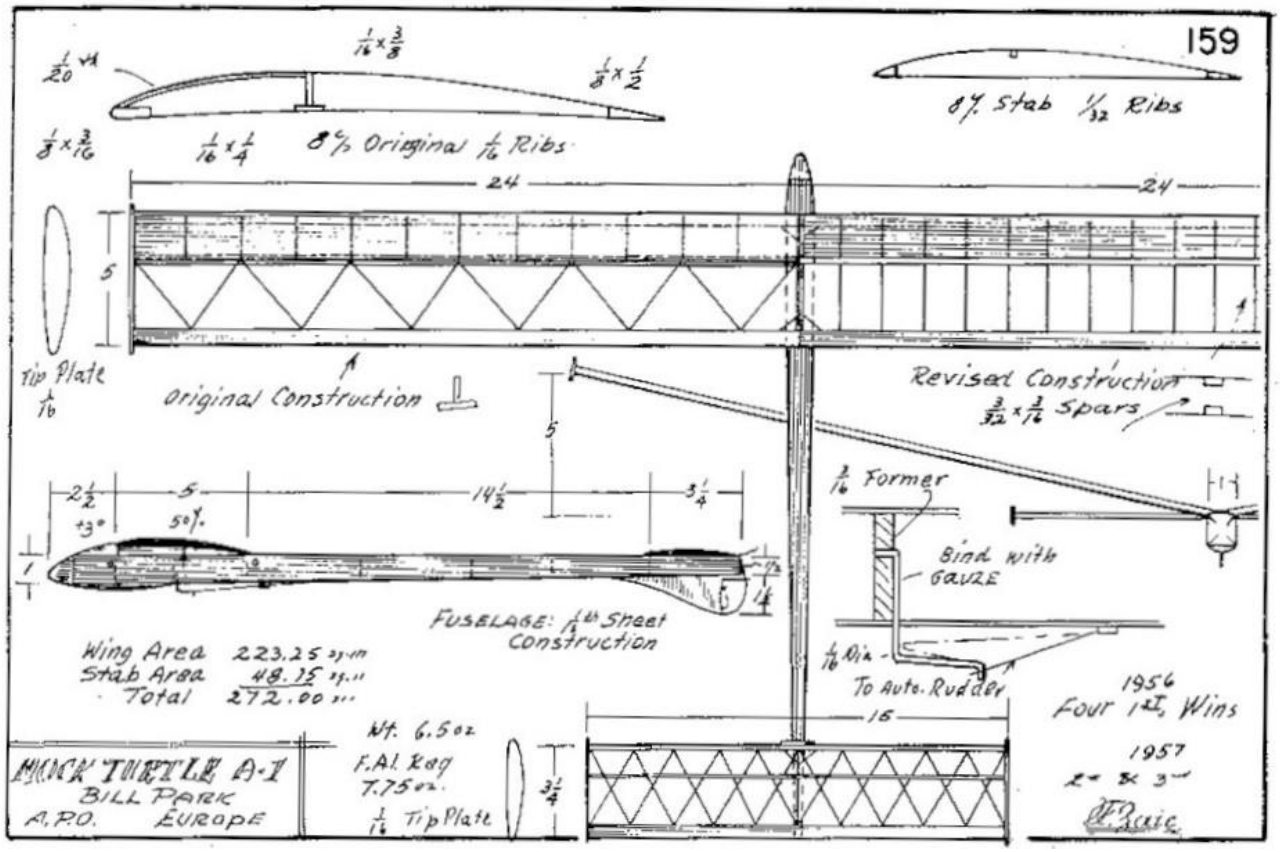
For competitions, I make up and pre-stretch (buy the Don Ross book!) one motor for every two flights that I expect the model to make. The first competition flight is carefully wound to 80% max (stretch *at least* 3x motor length, wind at least 50% turns, then walk in whilst winding the remaining turns). The motor is rested for about 15 minutes and then the next flight is wound to 85%-90% max, depending how the motor feels. Then the motor is changed.

Dethermalizers
With larger models it's very sensible to fit a modern battery-powered DT, it'll cost you nearly 5 grams but if it's a large model that won't be a problem. A Viscous Button timer might be useable for smaller models and will cost about a gram, although they tend to run at different speeds as conditions change and it can be difficult to get a reliable run.

However, a simpler way of getting out of a thermal which – so far 😊 – has always worked for me is to make sure that the glide is a) straight, or nearly so, and b) a little steeper and faster than the normal “floaty” glide that we usually aim for; the model will happily circle within the thermal as long as it’s under power but when the power runs down the glide trim takes over and it executes a fast (=inefficient) glide (almost a shallow dive) to safety.

Mock Turtle A1 - Simon Milan

My early aeromodelling years were inspired by the wonderful Frank Zaic Yearbooks containing his 3-views of contest FF models and related articles on many aspects of contemporary free flight theory and practice from around the world. I still have them.



So, when I first heard of Stuart Darmon’s proposal for a Classic A1 (ie a design published between Jan 1951 & Jan 1961) postal contest, I thought I’d have a go at something slightly different and reached for my 1957-58 Frank Zaic Yearbook as it contained a plan I’d always liked - It was the Mock Turtle by a Bill Park, an American modeller based in Europe.

Mock Turtle is a straightforward ‘V’- dihedralled A1 with options for its wing construction. OK, it has a very short nose requiring significant nose weight to get the CG in the right place, but this would have been less important way back then when there was a minimum weight of 7.75 oz for “official” A1s.

There is no minimum weight for the current “Classics” so the amount of the Mock Turtle’s nose weight will almost certainly mean that it’s unlikely to compete on equal terms with such lighter models such as the APS Aiglet, but, hey, why build something that may well be many other people’s first choice? And there’s always the chance of some good air…

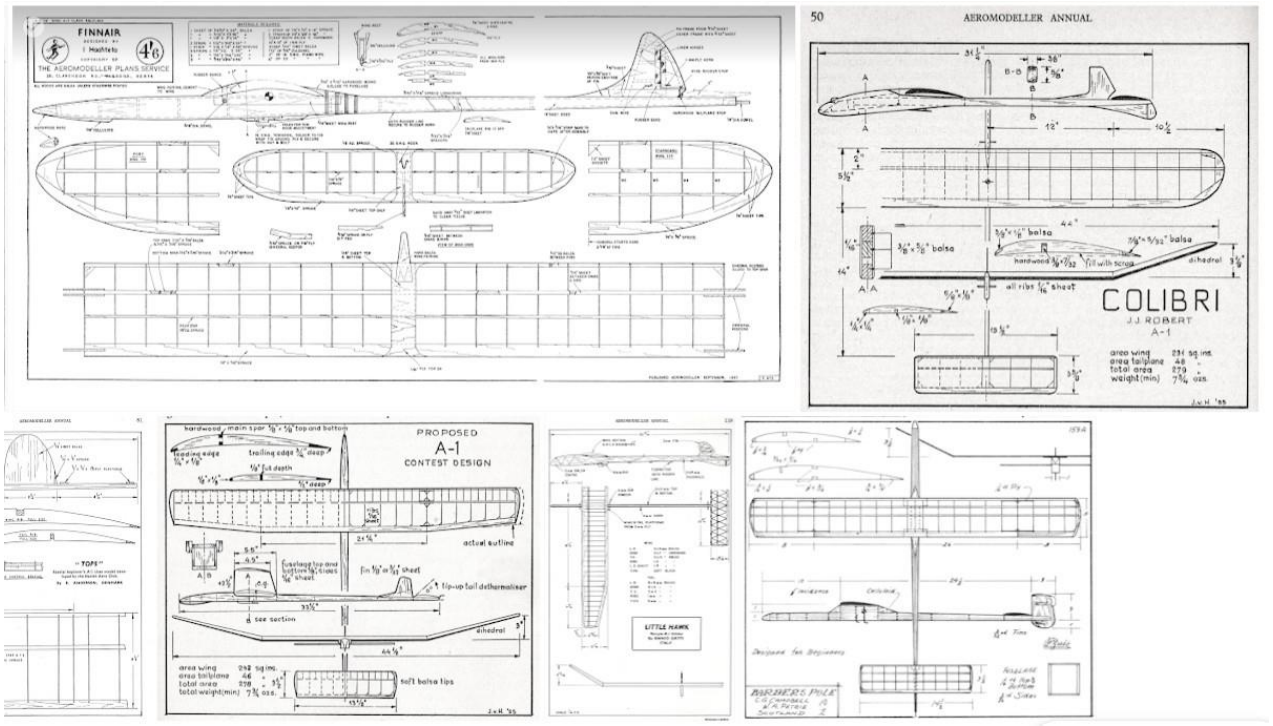
Anyway, I finished it in early 2020 (using the slightly simpler “Revised Construction” non-Warren girder alternative wing). Based on his drawings over the years, I knew that Frank Z’s interpretation of wing sections wasn’t always too accurate so rather than use his drawing I chose something similar from a Spanish F1A flown in the 1979 World Champs as illustrated in the 1979 NFFS International Plan book (very kindly given to me by Andy Crisp).

I test flew it on the Meadow as soon as lockdown restrictions permitted. At that time the Classic A1 rules only permitted towline launching and having last tried this with an Inchworm around 1961, my results with the Mock Turtle were infinitely depressing! So my thoughts about entering Stuart D’s contest were shelved, though I did more or less sort out the Turtle’s trim via my Hi-Start bungee – involving a number of minor repairs, some local reinforcements and odd bits of Gurney flap (to get it to circle other than to the left!). A slightly enlarged fin helped this as well.

However, my enthusiasm has been rekindled now that bungee launching off a 50m line is permitted for this class of model and that it’s on the cards for inclusion in OMFC’s 2024 programme. Roll on the day and fingers crossed for some decent lift!

A1 Glider Plans – Andrew Longhurst

Andrew has very kindly scanned all his Aeromodeller Annuals between 1955 and 1961 for A1 gliders and has made them available in an Aeromodeller A1 Gliders google photo album; here's a taster:



Andrew built this "Barbers Pole" A1. No word yet on how it flies

Indoor Flying at Henley-on-Thames Leisure Centre – Chris Brainwood

[Pictures by Chris]

Henley Leisure Centre

During the winter months many of our members have been flying indoor free flight models at the monthly meetings organised by OFMAC at Berinsfield. Due to forthcoming building works at Berinsfield the event has been moved to Henley-on-Thames for this season. The Henley Leisure Centre is a similar size to Berinsfield but much lighter and warmer with the centre's coffee machine on hand too.

Bob Lee releasing his Jaberwocky

The November meeting saw a few Oxford members taking advantage of the event . Bob Lee's Jaberwocky was flying very well after some trouble with a broken motor.

The new motor from a different rubber batch was massively down on power and normality was only resumed after another new motor was made up from a different rubber batch. I've not come across such a dramatic difference in rubber quality, a good reminder that not all rubber is the same.

Steve Haines launching his Embraer Ipanema

Dave Monk's almost vintage cabin duration model

Steve Haines was flying his Embraer Ipanema crop sprayer and a new Malmstrom Wren which was going very well. Dave Monk had his now 35 year old condenser paper covered cabin duration model flying very well and I was having fun with a new Malmstrom twin Miss Starstuck. David Lovegrove was flying some FROG designs and his KK Elf

There's usually a variety of models from duration designs like Ian Pearce's Legal Eagle to John Whatmore's BMFA Rookie, scale rubber models to chuck gliders, rubber power to electric and CO2 which makes for great meeting.

Mick Langford's Bucker Jungmann

Pete Brown's nice Peck Piper Cub

There were lots of interesting models flying around. Mick Langford had a few scale models circulating nicely, his Bucker Jungman was flying particularly well, and Pete Brown had some great flights with his Piper Cub from the Peck Polymers kit. Pete has printed the markings and the yellow colour onto the tissue before covering and it gives a very crisp appearance to the model.

There's a video on Youtube of the November meeting or search 'OFMAC Henley Nov 23'

Are You Flying Lawfully? – Simon Burch

(A Guide to Registration and Competence Requirements)

For years, model flying was largely left untouched by the costly hand of State bureaucracy. Of course, we were always subject to the law, but compliance was the individual flyer's responsibility. Those days are gone and they won't return; the increasing use of unpiloted aircraft in new roles, the proliferation of mass-market drones, and some high-profile examples of irresponsible drone flying have seen to that. Two important aspects of the law concerning model flying are Registration and Competence, and it is our responsibility to comply with the BMFA's Article 16 Authorisation regarding both of these. The rules are potentially confusing, so the aim of this article is to provide an easy reference, using a set of tables, to help us comply.

I've tried to keep things simple, but there are so many variables that any 'simple' guide is likely to be an incomplete guide. However, I hope that it should be relatively straightforward to use the reference tables to work out whether you need to register with the Civil Aviation Authority (CAA) to obtain an Operator Identification (Op ID), and/or take an online test to obtain a CAA Flyer Identification (Flyer ID).

Using the Tables

There are four separate tables: Table 1 (FF); Table 2 (RC); Table 3 (Multi-rotors); Table 4 (CL/RTP). They are, I hope, simple and self-explanatory; however, just to be sure, here are a couple of examples. You'll need to know the mass of your model at launch, whether it has an autonomous or automatic flight capability (excluding stabilisation systems and dethermalizers), and whether or not it is fitted with a camera or other data-gathering device (not including telemetry).

Example 1. RC Model, Mass 3.5kg. You have an RC model that weighs 3.5kg with no camera and no automatic flight capability. Go to the RC Table (Table 2), use the model's criteria to determine which row to use (in this case Row 3), and you'll see that you need both an Op ID and a Flyer ID, and that your model does not have a height restriction unless you are operating inside a Flight Restriction Zone (FRZ).

Example 2. Multi-rotor, Mass 240g, With Camera and Autopilot. You have a multi-rotor (ie more than 2 lifting rotors), with a camera and autonomous flight capability. Go to the Multi-rotor Table (Table 3) and use its criteria to determine the appropriate row (in this case Row 2). You'll see that you require both an Op ID and a Flyer ID, and that you are restricted to a height of 400ft agl.

Example 3. FF Model, Mass Below 250g. I've included this example because it's probably the most complicated, and it's one that many of our flyers might encounter. Also, it contains an anomaly which might be addressed in future (see notes in the table) but, in the meantime, we'll need to comply with the rules as they stand. Let's say that you have an FF model that weighs under 250g. It has no dethermalizer, no camera fitted and no autopilot facility. You'll need to decide whether it is likely that your model will exceed 400ft above ground level (agl), taking into account its performance, any thermal activity, how long the dethermalizer is set for (if one is fitted) and so on. Go to the FF Table (Table 1), look at the left-hand column to find the criteria that apply to your model. If you decide that it won't exceed 400ft agl, Row 1 is appropriate: you do not require an Op ID, but you do require a Flyer ID. If you decide that your model will probably exceed 400ft agl, Row 2 is appropriate. You'll see that you need both an

Op ID and a Flyer ID, and that you should not operate inside an FRZ unless you have specific permission to exceed 400ft.

List of Abbreviations Used:

agl: Above Ground Level
CAA: Civil Aviation Authority
CL: Control Line
FF: Free-flight
Flyer ID: Flyer Identification (obtained via BMFA RCC or CAA DMARES online test)
FRZ: Flight Restriction Zone
Op ID: CAA Operator Identification (obtained by registering with the CAA on payment of fee)
RC: Radio Control
RTP: Round-the-Pole

Table 1: Free Flight Models

	Model Type	ID Type(s) Required		Height Limit	Notes
		Op ID	Flyer ID		
1	**Mass at Launch: Under 250g** ***- Unlikely to exceed 400ft agl*** ***- No autonomous or automatic flight capability**** ***- No camera***	**No**	**Yes**	**400ft agl**	
2	**Mass at Launch: Under 250g** ***- Likely to fly above 400ft agl*** ***- No autonomous or automatic flight capability**** ***- With or without camera***	**Yes**	**Yes**	**None**	(i) Article 16 Anomaly (see Section B Para 2). Note that for RC models weighing less than 250g and without a camera, Op ID is not required for flight above 400ft agl. (ii) Limited to 400ft agl inside an Aerodrome FRZ unless specific permission granted.
3	**Mass at Launch: 250g - 7.5kg** ***- No autonomous or automatic flight capability**** ***- With or without camera***	**Yes**	**Yes**	**None**	Limited to 400ft agl inside an Aerodrome FRZ unless specific permission granted
4	**Mass at Launch: Over 7.5kg - 25kg** ***- With or without autonomous or automatic flight capability**** ***- With or without camera***	**Yes**	**Yes**	**400ft agl**	

*Stabilisation systems and dethermalizers are not considered autonomous or automatic flight capability. Models with autonomous or automatic flight capability are limited to 400ft agl

Table 2: Radio Control Models (Fixed Wing or Helicopter with a Maximum of 2 Lifting Rotors)					
Model Type		**ID Type(s) Required**		**Height Limit**	**Notes**
		Op ID	Flyer ID		
1	**Mass at Launch: Under 250g** ***- No autonomous or automatic flight capability**** ***- No camera***	**No**	**Yes**	**None**	(i) Limited to 400ft agl inside an Aerodrome FRZ unless specific permission granted (ii) FPV restricted to 1000ft agl**
2	**Mass at Launch: Under 250g** ***- No autonomous or automatic flight capability**** ***- With camera***	**Yes**	**Yes**	**None**	(i) Limited to 400ft agl inside an Aerodrome FRZ unless specific permission granted (ii) FPV restricted to 1000ft agl**
3	**Mass at Launch: 250g – 7.5kg** ***- No autonomous or automatic flight capability**** ***- With or without camera***	**Yes**	**Yes**	**None**	(i) Limited to 400ft agl inside an Aerodrome FRZ unless specific permission granted (ii) FPV restricted to 1000ft agl**
4	**Mass at Launch: Over 7.5kg – 25kg** ***- With or without autonomous flight capability**** ***- With or without camera***	**Yes**	**Yes**	**400ft agl**	(i) Slope-soaring gliders weighing up to 14kg may be flown up to 400ft above the level of the remote pilot (ii) Site Permit or Display Permit may allow certain flights above 400ft agl. See Article 16

*Stabilisation systems and dethermalizers are not considered autonomous or automatic flight capability. Models with autonomous or automatic flight capability are limited to 400ft agl

** Article 16 Anomaly: rotary-wing FPV with more than one lifting rotor limited to 400ft agl

Table 3: Multi-rotors (ie More than 2 Lifting Rotors)					
Model Type		**ID Types(s) Required**		**Height Limit**	**Notes**
		Op ID	Flyer ID		
1	**Mass at Launch: Under 250g** ***- With or without autonomous or automatic flight capability*** ***- No camera***	**No**	**Yes**	**400ft agl**	
2	**Mass at Launch: Under 250g** ***- With or without autonomous or automatic flight capability*** ***- With camera***	**Yes**	**Yes**	**400ft agl**	
3	**Mass at Launch: 250g – 25kg** ***- With or without autonomous or automatic flight capability*** ***- With or without camera***	**Yes**	**Yes**	**400ft agl**	

Table 4: CL and RTP Models					
Model Type		**ID Type(s) Required**		**Max Line Length**	**Notes**
		Op ID	Flyer ID		
1	**Mass at Launch: Below 1kg** ***- Line length less than 25m***	**No**	**No**	**Less than 25m**	
2	**Mass at Launch: Below 1kg** ***- Line length 25m or more***	**No**	**Yes**		
3	**Mass 1kg to less than 7.5kg**	**No**	**Yes**		
4	**Mass 7.5kg to 25kg**	**Yes**	**Yes**		

The Flyer ID Tests. By looking at these tables, you'll see that, in all cases, a Flyer ID is required to operate under Article 16. There are two ways to obtain a Flyer ID: (i) directly from the CAA, by taking the CAA's online Drone and Model Aircraft Registration and Education System (DMARES) test and (ii) by taking a BMFA Recognised Competency Certificate (RCC). I strongly recommend that all of our members should take the BMFA RCC, because the test contents pertain to the BMFA's Article 16 Authorisation – ie the rules that almost always apply to us. The CAA DMARES test pertains to the guidance laid out in Civil Air Publication (CAP) 722, which differs markedly from Article 16 and could be a source of confusion.

Those of you who passed BMFA Achievement Scheme Tests prior to 31 December 2020 are exempt from the requirement to take either test. However, I strongly recommend that you do so. Those flyers who took BMFA Achievement Scheme tests prior to 2020 would have answered their 'Mandatory Questions' based upon the old CAP658 regulations. The new regulations are very different, especially for Free-Flight - which was barely regulated at all. If you take the RCC Test, at least you would be aware of what the new regulations cover, even if you don't remember the exact details. It's interesting to note that, following some embarrassment where candidates knew the new regulations and examiners didn't, the BMFA now insists that examiners take the BMFA RCC.

Remember that the BMFA RCC Test is free, you can take it as many times as you like, and you can refer to documents throughout. The BMFA almost previews the RCC test in its updated '20 Mandatory Questions'; if you have the answers to those available, and the Article 16 document open while you take the test, it's hard to fail it – and if you do, you can take it again.

https://achievements.bmfa.uk/mandatory-questions

https://rcc.bmfa.uk/article-16

A note for Junior Members: under 18yr-olds are not permitted to hold Operator IDs, so a 'responsible adult' will need to hold it on your behalf. It's worth asking them to sit alongside you while you take the BMFA RCC Test, especially if they have little or no knowledge of model flying. That way, they too will have some idea of the rules that you need to comply with.

Finally, note that you will need to tick the 'CAA Flyer ID Data Exchange Consent' in the BMFA Membership Portal to enable you to be issued with a CAA Flyer ID. To do this:

- Log on the BMFA Membership Portal:
- Go to My Profile
- Click on the 'Opt Ins' panel
- Tick the appropriate box

On the Workbench

Ivan Taylor's Meteor is around 30" span and has two Knight & Pridham 32mm EDF units; it has about the same wing area as Ivan's TSR2 but is 100 g lighter, so performance should be pretty good. [Ivan Taylor]

Andrew Longhurst built this Veron Lynx Cub. I have to say that the grass looks perfectly manicured, I do hope that mowing has not eaten into building time. [Andrew Longhurst]

It's my own fault, of course – I sent Jim Paton an email asking if he had any pictures of planes that he had recently built… [Jim Paton]

We're apparently trying to work out which connectors go where – or so I am assured… [Jim Paton]

Club And Other Local events, 2023/24

Forthcoming OFMAC Meetings – note new venue & times (thanks to Ian Melville)

OFMAC

2023-2024 Season Dates
Indoor Model Flying

Funfly for all. Freeflight, Rubber, CO2, Electric

Venue:
Henley Leisure Centre
Gillotts Lane
Henley-on-Thames
Oxfordshire
RG9 1PA

Dates:
Sundays 10:30 to 16:30
1st October 2023
5th November 2023
3rd December 2023
7th January 2024
4th February 2024
3rd March 2024
7th April 2024
5th May 2024
2nd June 2024

Contact:
Ian Melville
07545158177
ofmac@redkite.aero

Club Meetings at Begbroke

Wednesday Dec 20 2023 Club Night – Fish N Chip supper plus Quiz.

Wednesday 17 Jan 2024 Club Night – Indoor flying with the club's 'duration' foamies.

Wednesday 21 Feb 2024 Club Night – Bring a Model evening. Bring along your latest creation to display/show off/chat about. We would also like to see all those VMC Pilots (doesn't matter if it flies or not) for a Concours D'Elegance competition. There will be prizes…

Wednesday 20 March 2024 Club Night - Guest Speaker, Tony Gaunt, 'The History and Development of the Martin Baker Company'. Martin Baker are famous for their ejector seats and early aircraft so this promises to be an interesting evening. Feel free to bring a guest along so we have some good numbers for this.

Wednesday 17 April 2024 Club Night – Fun Flying on the Begbroke Field.

Competitions on Port Meadow for 2024

(The “Peterborough” bungee = 7.5m of 1/8 rubber and 22.5m of line.
TOTF = Total of Three Flights + Fly-off if required)

Spring Duration + Fun-fly (~April)
P-30: 30” max span & length, 40g min empty, 10g motor, max 9.5” plastic prop. TOTF.
E20: 20” max span & length. Any motor, battery, and timer. Max motor run 8 secs. Score is TOTF.
36” Glider: Any glider max 36” span launched by 30m (Peterborough) Hi-Start bungee. TOTF.
Frog Senior: Duration competition for Frog Senior models (see http://www.houseoffrog.co.uk), no bonuses, TOTF.
Rubber Scale Duration: Simple TOTF duration competition for rubber scale models + bonuses, no flight or static judging. Kit and Open classes.

Midsummer Scale (open to BMFA members) + Fun-fly (~July)
Scale Glider: TOTF duration, launched by 30m (Peterborough) Hi-Start bungee. No static judging.
Rubber Scale Duration: Simple TOTF duration competition for rubber scale models + bonuses, no flight or static judging. Kit and Open classes.
Flying Only: IC/CO2/Electric/rubber, Flying Only rules (judged flight, no static judging).

MMILOCT Cloud Tramp & Fun Fly (Saturday 3rd August)
A fun-fly afternoon on the meadow with Cloud Tramp mass launch at 5 pm.

Autumn Duration + Fun-fly (~September)
Vintage & Classic Glider: Two classes (55” Span Open and A1) for kits and designs first published pre-1961, launched by either 50 m Hi-Start bungee or towline. Re-issued kits (e.g. Spencer Willis Aiglet A1, Ripmax KK Caprice & Invader) are allowed. TOTF.
Coupe D’Hiver: Standard coupe - 70g empty, 10g motor, TOTF.
Vintage & Classic British Rubber Kit Revival: 30”-34” British rubber kits pre-1961, also open to re-issued Ripmax/KK kits. TOTF.
Catapult Glider (e.g. Oxcat): max 2 gm rubber (e.g. 12” x 1/8”) on a 6"max handle., 9 flights, best **6** to count.
Rubber Scale Duration: Simple TOTF duration competition for rubber scale models + bonuses, no flight or static judging. Kit and Open classes.

The **2024 Under 25” Vintage Cabin Postal Competition** will be run in three Rounds.
Round 1 (Spring) runs from 1st May to 30th June.
Round 2 (Summer) runs from 1st July to 31st August.
Round 3 (Autumn) runs from 1st September to 31st October.
For full details see the Club website https://oxfordmfc.bmfa.uk/2022-under-25-vintage-rubber-postal/. In case of questions/issues, the Virtual CD is Andy Blackburn.

Completed Postal Competitions

P.30 and Coupe D'Hiver Postal
Congratulations to all competitors in the 2023 P.30 and Coupe D'Hiver Postal for staying the course and being patient whilst we got the Fly-Offs done. The final results are:

Position	Name	Model	Class	Score (seconds)	Location	Fly-Off (seconds)
1	Simon Richardson	Ephemeral	P30	270	Hazelhead, Aberdeen	331
2	Simon Milan	Skyscraper	P30	270	Port Meadow	143
=3	Andrew Longhurst	Piffle	P30	270	Port Meadow	0
=3	Andy Blackburn	Sweet P30	P30	270	Port Meadow	0
4	Chris Brainwood	Etienvre	Coupe	253	Port Meadow	
5	Gary Law	Etienvre	Coupe	213	Port Meadow	
6	Gary Law	Sweet P30	P30	104	Buckminster	

Prizes are due as follows:

1. Overall Winner: Simon Richardson with an Ephemeral P30
2. P30 Winner: Simon Milan with a Skyscraper P30
3. Coupe D'Hiver winner: Chris Brainwood with an Etienvre Coupe.

All winners are due some Tunnocks comestibles, and as the overall winner Simon R will be the recipient of a "Completely Useless but Mildly Decorative" trophy as specified in the rules as soon as I can get one organised.

We will be running a repeat of this event next year but I think we're probably going to change the way that it's done, because running a fly-off during November and December seems to have been a bit of a lottery.

What we'll probably do is borrow the process used by Stuart Darmon in the International A1 postal competition as follows;

The maximum for the first flight of each entry will be 90 seconds. If this is achieved, the entrant is permitted a second flight of maximum 120 seconds, and so on, the maximum increasing in increments of 30 seconds until either a max is not achieved, or flying cannot continue (e.g. because the model is lost or damaged). The score for the entry is the total flight time including the sub-max final flight.

Scores must be submitted in the form of an addition of all the flight times and a final flight time total, e.g. 90+120+150+102 = 462.

Classified Ads

PHOENIX 2400 ELECTRIC SOARER
BRAND NEW / STILL IN THE BOX!

I BOUGHT THIS LOVELY FOAMY SOARER ABOUT 3 MONTHS AGO BUT UNFORTUNATELY A RECENT SIGHT PROBLEM MEANS I'M NOW UNLIKELY TO BE ABLE TO FLY IT.
MY LOSS COULD BE YOUR GAIN – I'M OFFERING IT AT A SUBSTANTIAL REDUCTION TO OMFC MEMBERS.
THE COST TO ME - £175 - TO YOU, JUST £99**.**

COLLECTION ONLY, CONTACT ME HERE: chairman@oxfordmfc.bmfa.uk
David

Contributions to the Newsletter

We're always looking for contributions to the newsletter and almost anything relating to aeromodelling will be most welcome. Please let me have your contributions by the first week in March for inclusion in the Spring 2024 newsletter. Send them to: Andy Blackburn at *newsletter@oxfordmfc.bmfa.uk.*

If submitting lots of photographs (which we all enjoy) it's best to send the files separately, using www.wetransfer.com. However, anything less than 20 MB is usually OK on email.