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

Spring 2025

Alan Trinder about to launch his R/C Club Build Lulu (see https://oxfordmfc.bmfa.club/lulu-club-build-2025/ for club build info).[Photo by Gary Law]

In This Issue

Editorial

A lot of people have contributed to this newsletter (for which I am very grateful) and I'm struck by how many projects people have just got on with and finished over the winter compared to my own feeble efforts – the fact that it's still the indoor flying season probably doesn't help, but the real problem seems to be that – conventionally – one should build summer outdoor models over the winter indoor flying season and indoor models during the summer, but for some reason I seem to want to do things the other way round…

I'd like to thank (deep breath) Gary Law, Simon Burch, David Lovegrove, Alan Trinder, Andrew Longhurst, Steve Edwards, Bob Lee, David Thurling, Paul Thomas, Andy Crisp, Chris Brainwood, Dave King, Simon Milan, Peter Brown, Ivan Taylor and Ian Melville for providing services and content for the newsletter.

Chairman's Chat – Simon Burch

Despite the poor weather, it has certainly been a busy start to 2025. Our 'foamie warbird challenge' in January was a great success, attracting some interesting entries. The 'trial' indoor flying sessions at The Oxford Academy sports hall in January and February were also both well attended; with considerate flying, we were able to mix FF and RC with no difficulty; however, we might need to introduce slot times in future should the number of attendees increase. We'll be looking to hold more of these indoor sessions later in the year, perhaps in the larger Indoor Sports Centre (while the temperature permits). If you haven't experienced indoor flying, it's worth coming along if only just to watch. Thank you to Paul Thomas for organising these sessions.

Our weekly RC training sessions have continued despite less-than-ideal weather conditions, and flooding on the Meadow, and I'm hopeful that we'll be able to hold a BMFA Achievement Scheme testing session in early Spring. Finally, it's great to see the Lulu Lite club build project progressing so well, with some good-looking models appearing on the WhatsApp group. I look forward to seeing them in the air.

My own current project, a Bambina from the RCME plan, is progressing at a snail's pace. For such a simple model, it's proving to be quite a challenge, with several errors on the plan and sketchy/non-existent construction details. Admittedly, I've complicated it by adding demountable 'David Boddington' type wire undercarriage and a two-piece wing, but it's a frustrating build even without those modifications. Fortunately, the RCME Forum has a thread which includes a build blog and, luckily, I found it before cutting out the incorrectly drawn wing ribs. Reports indicate that it flies well, so I remain hopeful...

Safety Thoughts

At the risk of upsetting our more 'traditionalist' flyers, I'd contend that electric power is superior to I/C in almost every respect…but not safety. After all, an I/C engine will not burst unexpectedly into life at full power. An electric motor certainly can and, last month, while testing a buddy lead system on a member's new electric model, it happened to me.

Perhaps it was not entirely unexpected; after all the battery was connected and I was messing around with the RC system. As recommended in the BMFA Handbook, I had secured the model at the tail using a 'U' shaped stake and kept well clear of the prop…so the model stayed where it was despite the motor running at max chat.

Worryingly, neither closing the throttle on both TXs nor activating the 'throttle cut' switch had any effect. The only quick way to shut down the motor remotely (ie not attempting to disconnect the battery on the live, running model) was to turn off the TX and thus activate the

failsafe; that did the job. Unfortunately, it also meant that I couldn't analyse what had happened, and I still don't know. After that, we gave up with the buddy lead!

The important message is that this can, and does, happen - so treat live electric models with extreme caution. Keep clear of the prop, don't loiter in its arc, and secure the model properly when testing the controls. If you're working directly on a live model, it's best to remove the prop before connecting the battery.

Regulation Update

What is a model aircraft? It's a simple question, but it's surprisingly hard to answer. You might ask 'who cares'? To an extent, we all should. With no agreed definition for 'model aircraft', we not so long ago found ourselves subject to the Civil Aviation Authority (CAA)'s highly restrictive Unmanned Aircraft Systems (UAS) regulations.

Of course, the introduction of the BMFA's Article 16 Authorisation eventually addressed most of the issues that arose from that, allowing us to fly more-or-less as we did before, but a proper definition that differentiated model aircraft from other UASs might have made our lives easier. Now, you'll be delighted to know that the latest amendment to the Article 16 Authorisation includes definition of a 'model aircraft'. Here it is:

'An unmanned aircraft used for sporting and recreational purposes, flown by direct control inputs made by the remote pilot without any autonomous capability other than for flight stabilisation purposes. A model aircraft may be flown under the auspices of an association, or individually'.

As I'm sure you'll have spotted, the definition doesn't include Free Flight models. Free Flight models are defined separately, and even more wordily, as follows:

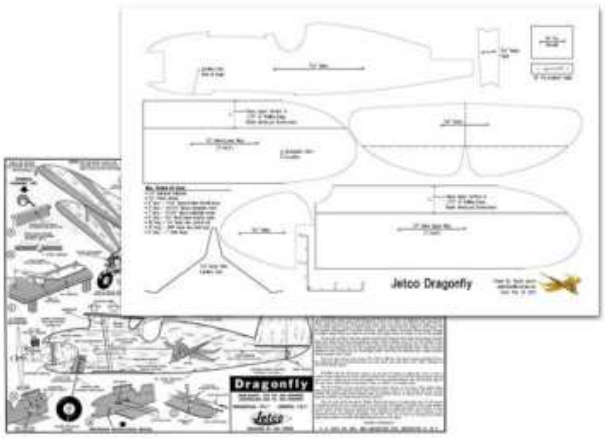
'A free-flight model aircraft cannot be remotely piloted and does not have software or systems for autonomous control of the flight path. A flight termination device may be fitted. The aircraft trim is adjusted prior to flight. The aircraft is trimmed (and fuelled if applicable) with the intent that it will follow a substantially circular path relative to the air and ultimately glide to a low velocity landing. A free-flight unmanned aircraft will drift relative to the user depending upon the speed and direction of the wind. The person in charge of the free-flight unmanned aircraft is deemed to be the remote pilot for the purposes of this authorisation'.

How does this affect the average RC or FF sport flyer? For most of us, the answer is 'not much'; however, if you fly a fixed wing, rotary-wing or multi-rotor model that has an autonomous flight path control capability (I know there are some of you out there!) it's important to understand that if you use it, you are definitely not flying a 'model aircraft', and you cannot fly it under the Article 16 Authorisation. Instead, you must fly under CAP722 regulation.

While Article 16 permits certain failsafe modes, the status of common automatic facilities such as 'return to home', 'panic buttons', automated aerobatics etc, is less clear. Unfortunately, our club rules presently stipulate that flying at Port Meadow must take place under Article 16 so, technically, these facilities should not be used. The Committee will look at this issue in more detail in due course. In the meantime, don't hesitate to use your 'panic button' or other failsafes, but please avoid using unnecessary autonomous flight path control facilities at the Meadow until we've sorted this out.

Nice Things Come In Small Packages – David Lovegrove

It was a Club evening out on the Begbroke Village Hall playing field and OMFC clubmate Roger Matthews was flying this neat little freeflight biplane model of an Ebenezer-style design called the Jetco Dragonfly. It was originally designed as a "U-Control ship" from which you might guess it emanated from the good ol' US of A, in this case from the pen of one Bill Siegel, via the sainted Frank Zaic's Jetco kit company. And, as you'll see from the photo hereabouts, that was as a control-liner. But, as we all know, there are few absolutes in this hobby.



Powered by a small electric motor, and with a span of 19.5", this diminutive charmer flew like a bird. I was hooked. Roger subsequently sent me the plan (it wasn't long before I discovered it was also available on the excellent Outerzone site, under reference oz7169).

The die was cast. But before starting to chop balsa, another sneaky thought wormed its way into my noddle. Why not also build Joe Wagner's similarly-proportioned and equally perky little Dakota? In reduced size, of course (the original was 23" w/s).

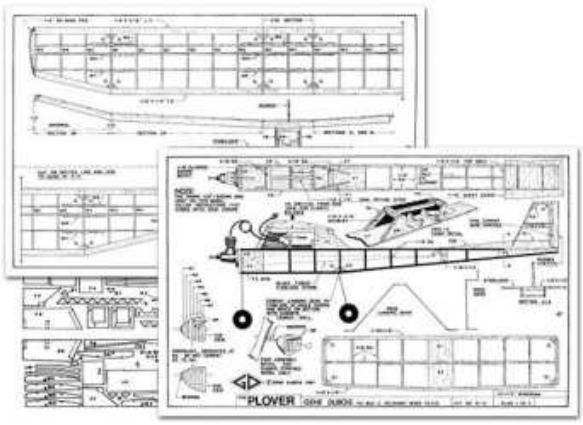
I still have a dinky little half-size CO2-powered version of this iconic small-field flyer, built several years ago from a BMJR kit, so I know the concept works well. Too well! That model once exited a thermally Old Warden and came down to roost five miles away! But I love its pugnacious, compact good looks. The photos will show you how it ended up.

Powered by a 5-Farad Super Capacitor gleaned from a chinois cheepo foamie, it's probably best described as a "busy" flyer – it needs calming down a bit. But then, on the day of its autumnal inaugural flights, it was quite breezy out on Pinkney's Green, so maybe it wasn't the kindest baptism for the little chap!

In the past few years, I've really got hooked on electric power for small models: clean and flexible, it's the ideal source of "thrunge" (blame Charlie Newman for that word) for the sort of tiddlers I've become fond of.

There are two different power options to go with it - LiPo or supercapacitor - and they both work well. My preference is for 8.5mm x 20mm coreless motors direct-driving 65mm Gemfan props., as pictured above. Alongside a 160-260 Mah Lipo, this is also the current favourite set-up for the emerging E.20 class of small field duration models. BMK supplies all this stuff, together with a bunch of other electronic gizmos and hardware, designed to facilitate electric flight. Have a look at https://bmks.co.uk/.

Anyway, this time, my memory took a step backwards in time to a model I'd built years ago from a US Gene Dubois kit.

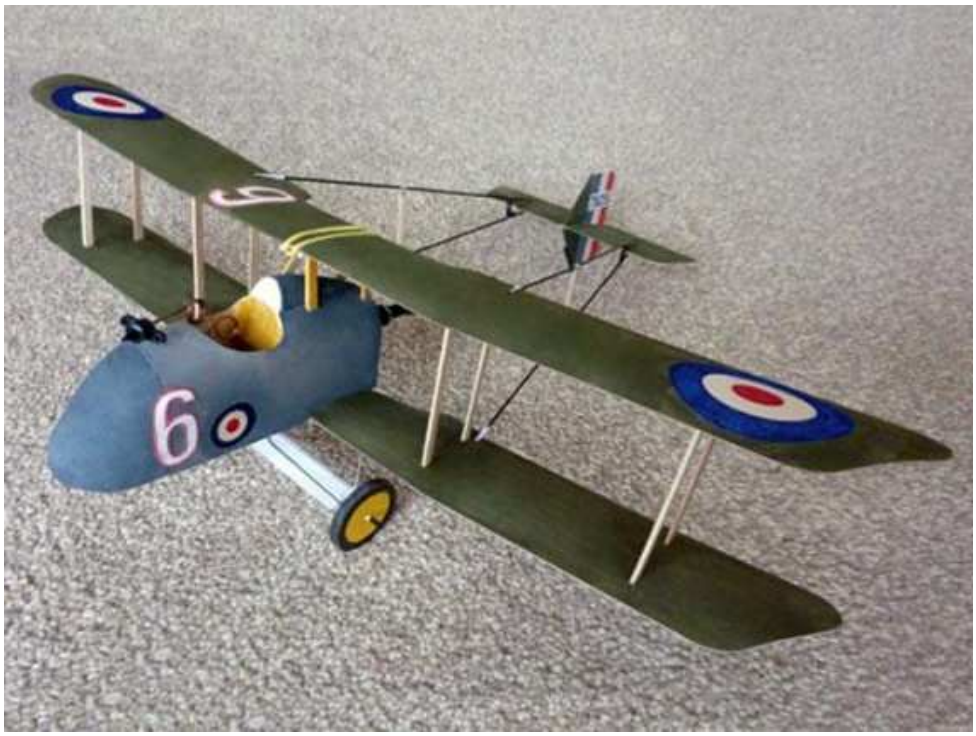


The Plover was a simple cabin/pylon job, originally intended for CO2 power. A moment's thought and teeth-sucking confirmed it would be an easy conversion to electric, again employing the 8.5 x 20mm coreless motor and a single-cell, 260 Mah LiPo. An Atomic Workshop 'Zombie' flight controller would look after the aerial timings.

Apart from a few tentative glides in the back garden, the Plover has yet to spread its wings in anger but, as soon as the weather bucks up, we'll be out on Pinkney's Green to check it out.

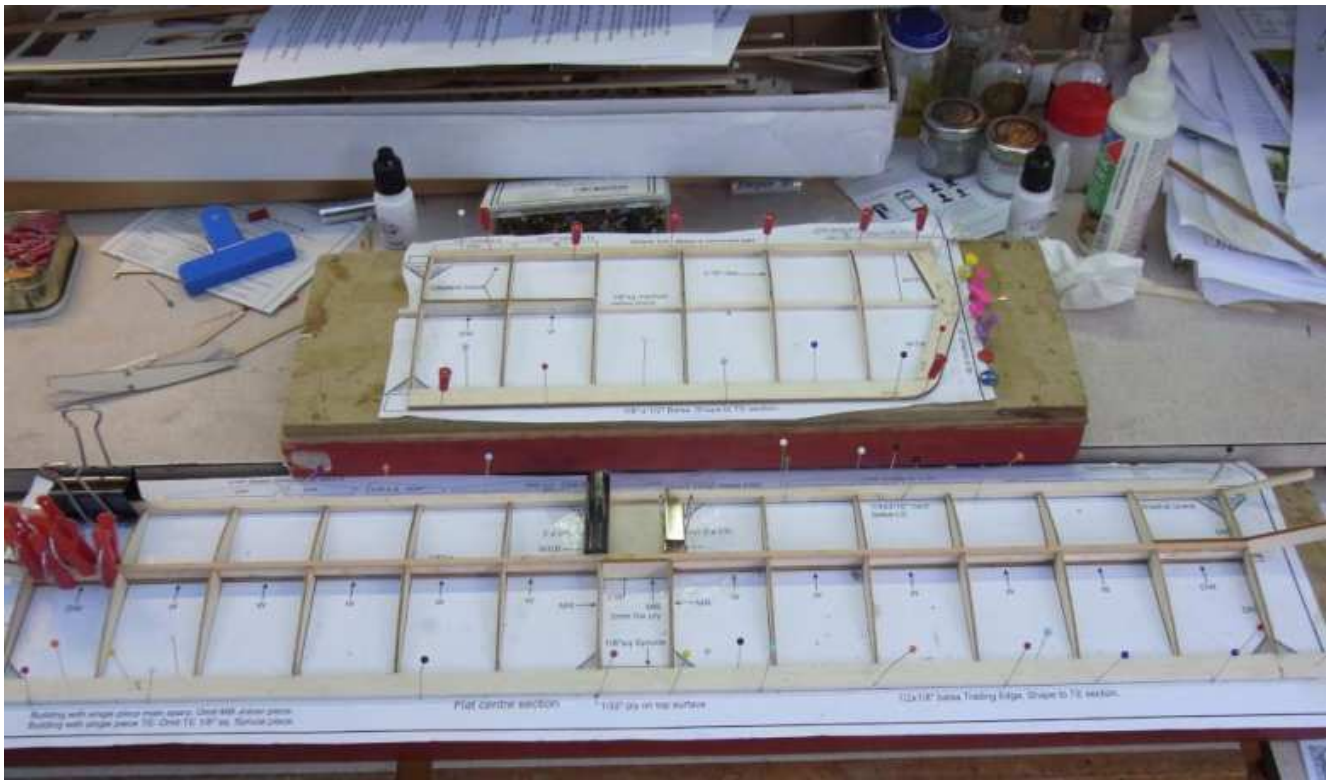
That's really it, but it's also worth mentioning that these little motors are feisty little blighters, easily capable of propelling an E20 duration model to a decent height in short order. And away from pure duration, they'll power a sport model of around 20" wingspan. Cheap too . . . what's not to like?

To wrap things up, I'm currently eyeing an 18" all-balsa scale version of the Royal Aircraft Factory WW1 pusher FE8. The design is by that prolific northerner, John Watters, and the plan appeared in the July/August 2013 edition of the AeroModeller. It's another of those slightly offbeat subjects I find so irresistible. I'll be installing the same coreless motor/LiPo combination that has worked so well for me in the past. And who knows: this one might even get a dash of colour?



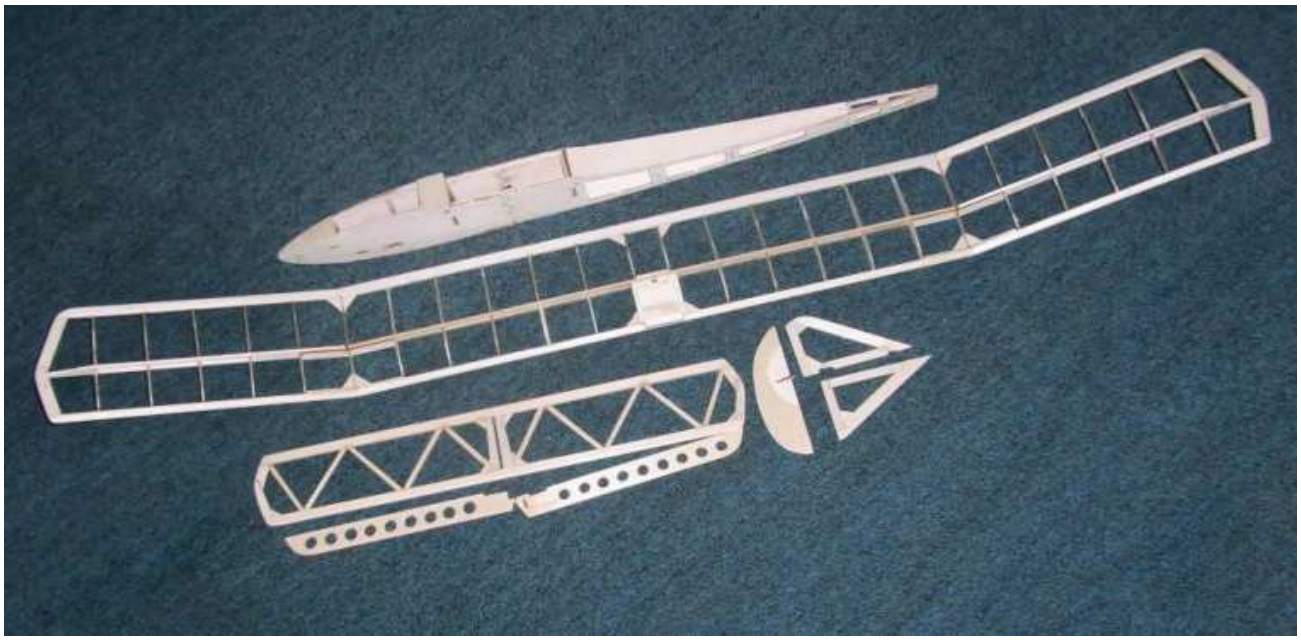
Club Build Lulu – Alan Trinder

I was very impressed on opening the box, the contents were comprehensive even down to rubber bands for wing fixing. Not so encouraging were the cut components, the wood for fuselage sides, elevators and rudder seems to have been chosen for lightness rather than strength. Both fuselage sides snapped during handling (O.K. I may have thick clumsy, certainly old, fingers) but I am reasonably well experienced in handling balsa. The fuselage sides were rejoined and used but new elevators and rudder constructed.

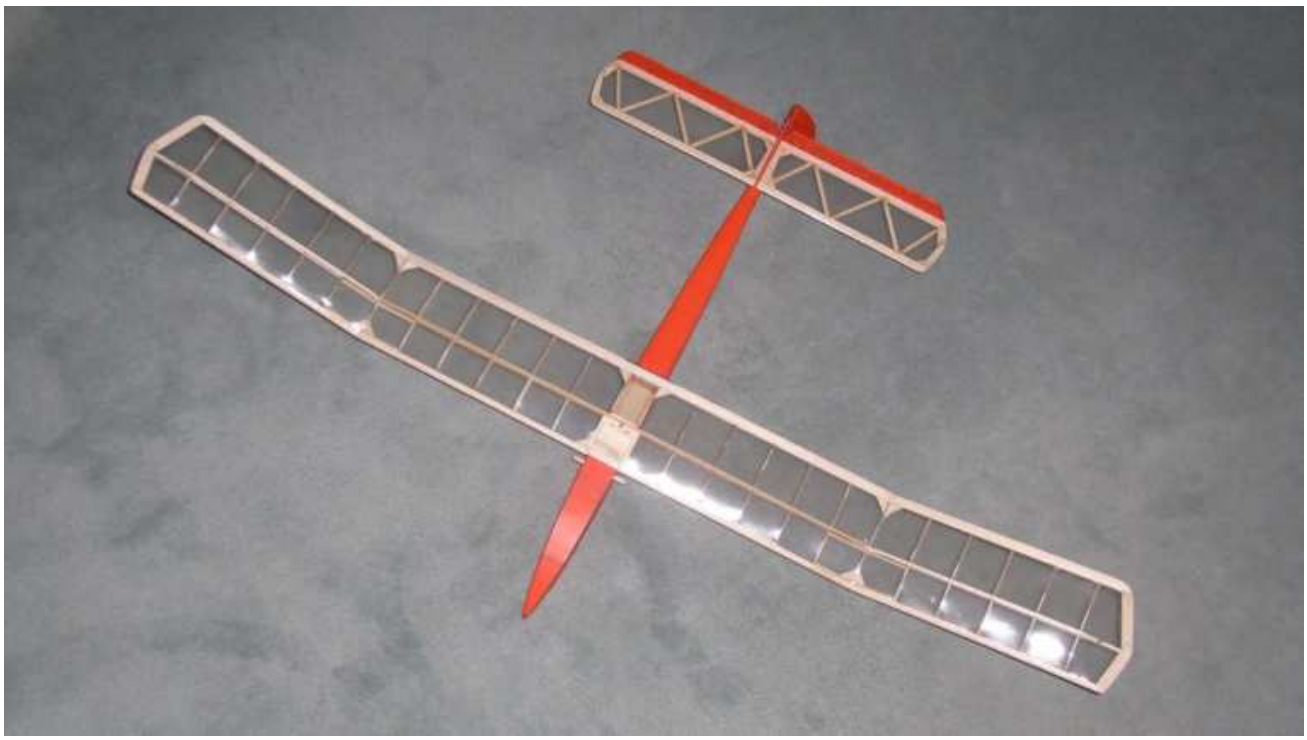


However, I wasn't happy with spars, leading and trailing edges all being joined at the centre. I managed to find full length spruce spar and leading edge and scarf-joined trailing edge away from wing centre.

The fuselage went together eventually. The laser-cut formers all snapped but easily replaced. (Grain running vertically didn't help). The servo mount for suggested 9g servos had to be modified; the servos are a snug fit side by side but there’s insufficient room for the servo arms to move. I therefore modified the mount to "staggered" servo positioning. (Not straightforward). The fin design with half above and half below fuselage made accurate gluing in place difficult (For me anyway).

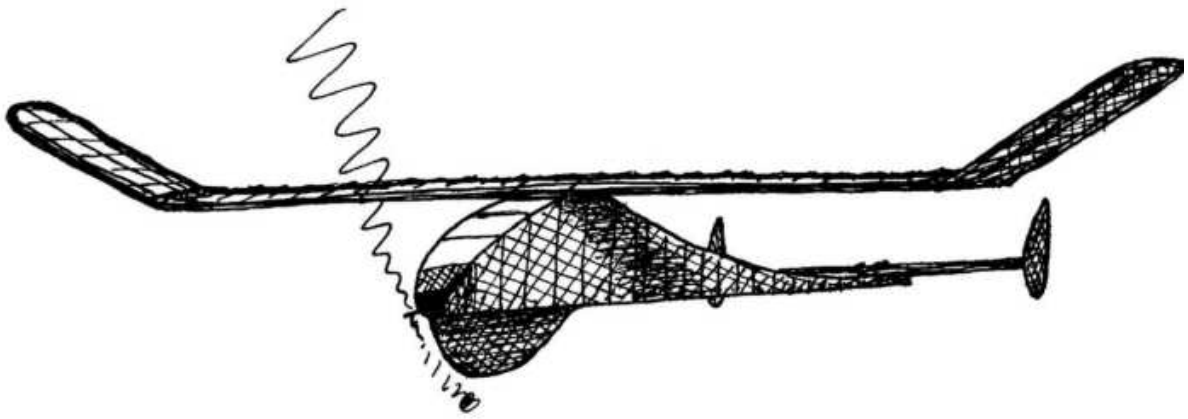


This is the basic framework ready for covering, shows my preferred arrangement of tailplane "ribs" which are from stiffer balsa than that supplied.



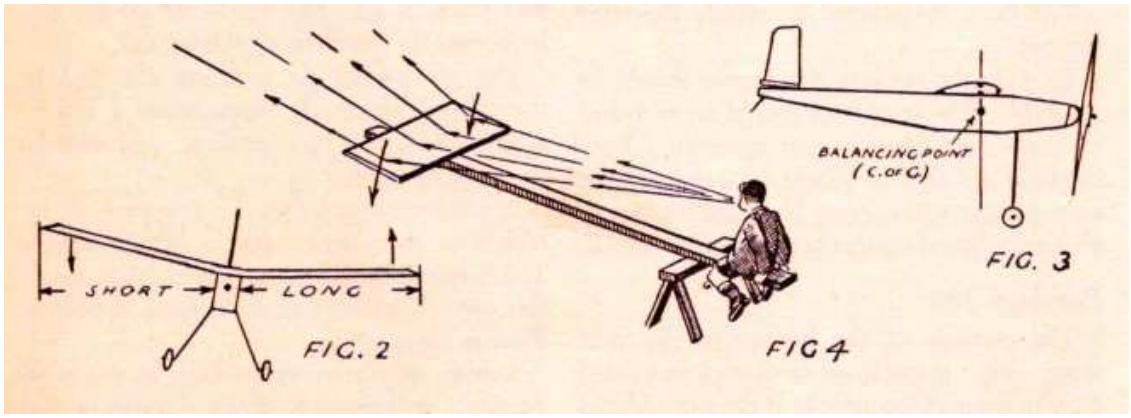
Model is covered and is now awaiting electronics and control links. The wing and tailplane covered in Doculam, this is my first model covered in this material. I'm having significant difficulty in joining control surfaces to servos. Will probably use thin piano wire rather than the cord supplied.

The Bagatelle and a Ramble Through the Past – Andrew Longhurst

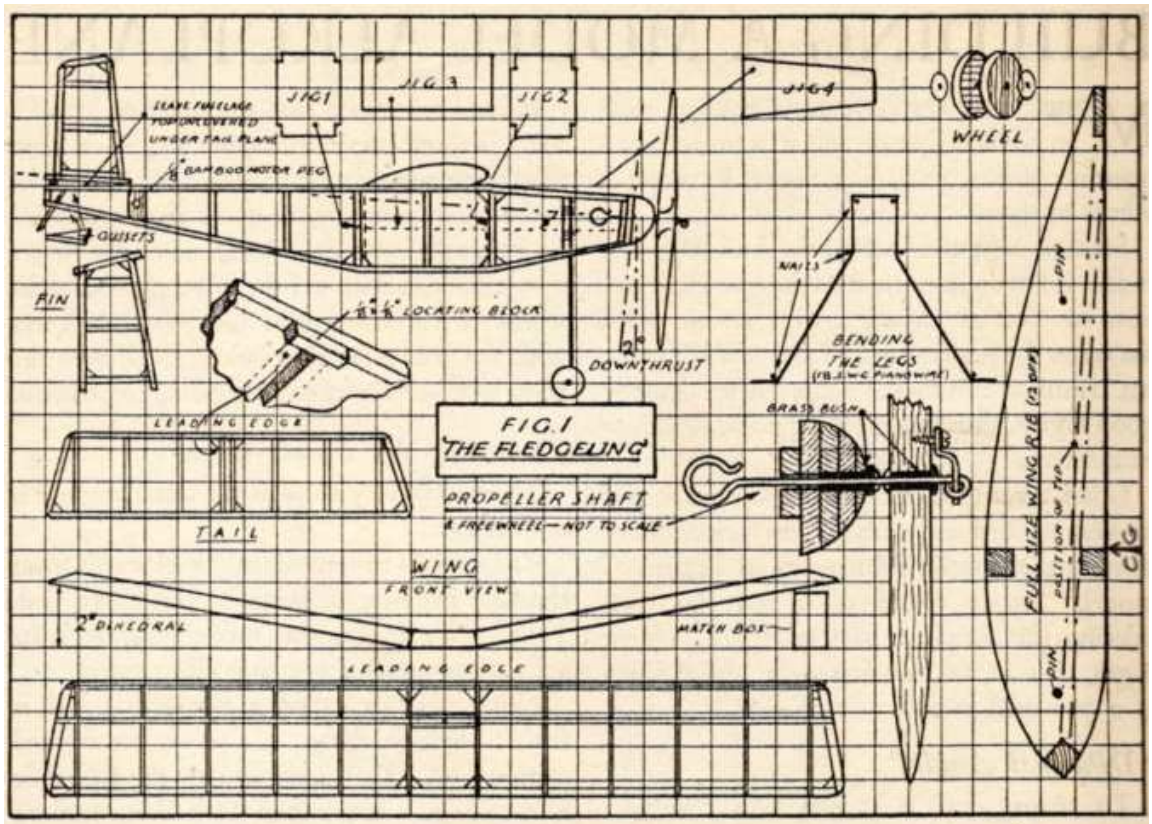


Your editor asked me to write something about my illustration of the Bagatelle vintage Coupe *[What can I say – I like pencil and ink drawings – Ed.]*. This was a popular competitor in the noughties, and I still have one in my shed. I made a pencil sketch of it during a boring meeting at work then inked it in when I got home. I have used it since to illustrate how dihedral works.

I'm now about to go on a ramble so skip the rest if you like. About 1960, I was twelve and when on a visit to my uncle he gave me his "pre-loved" copy of the 1948 Boys Book of Flying. As my dad drove us home in our all black Ford Popular (without optional heater!), inside my over-large Duffle coat I hugged the new book to my chest with unbridled glee. I had noticed that it had a chapter on model aircraft. In it I read that, "The model is kept on an even keel by tilting the wings upwards. It will be seen from fig.2 that when the model banks the lower wing appears to lengthen and the upper wing shorten, and this has a strong corrective tendency".



I believed this for at least 40 years until I came across the more up-to-date theory. The boys book explanation ignores forward motion. As the model leans over it goes into yaw, or more correctly more yaw because without any aileron offset, FF models spend their whole flight yawing as they turn. When they sideslip downhill the yaw increases, and the sketch shows the lower wing tip increases its angle of attack to return the model to a level attitude. It also explains why tip dihedral is so much more effective than straight dihedral because the leverage of the correcting force is so much greater.



THE FLEDGELING can be built cheaply, and all the necessary working drawings are on these pages. Above are details of the principal assemblies, drawn against a background of 1-inch squares

But this is all boring, there is this charming little plan in the book, I built one and it flew. Not well because the section is far too thick, but it flew. Do you know why modern fly-by-wire passenger jets have so much dihedral when they also have loads of sweep back which should be enough on its own never mind computer stabilisation? It's usually just to avoid the tips scraping the ground in a side wind landing.

Performance Kits: An Appreciation – Stephen Edwards

For many readers of a certain age our enthusiasm and inspiration for model aircraft stemmed from the kits of Keil Kraft and the designers Albert Hatful and Bill Dean. In my case this lifelong hobby was inspired by the lesser-known firm of Performance Kits; I can't remember (and I am 70) living in a house without model boats, trains and mainly model aircraft being built.

My first aeromodelling memory is of my father building and flying a Keil Kraft Ace. This and a few other models came and went, enjoyable but not life changing. Then when I was about 10 years old an uncle took me out for the day, and we visited Marshall's the cycle shop in Beaconsfield.

Performance Kits Kingfisher - the model that started it all

As was common in those days cycle and photographic shops also sold a modest amount of model aircraft kits, balsa and so on. Generally, the offering was Keil Kraft kits but Marshall's only had a handful of Performance Kits that I had never heard of.

My uncle kindly bought me the Kingfisher, a 30" rubber powered model. This was to be the first model that I was able to build entirely by myself. I'm sure it was a bit rough and ready, but it flew beautifully and had endless, fantastic flights.

We now move forward a couple of years to 1968 when I was taken by my dad to Old Warden for the first time to an event that was branded the Performance Kits Vintage Rally. The first thing that I noticed was huge free flight models being launched with what I now know to be spark ignition engines. These models were mainly of American design that nearly 60 years later I'm afraid I can't recall the names of, except for a truly enormous brown and cream model called Kovell Grant. None of this would now be possible in today's health and safety and litigious culture.

Knowing a bit about Performance kits with the success of my Kingfisher I was delighted to meet its owner; step forward an impressive but very old fashioned figure dressed in grey flannels, highly polished brogues, knitted waistcoat, tweed sports jacket, shirt and tie with an enormous pipe (occasionally used to emphasise a point) jutting accusingly out of the corner of his mouth, the owner of Performance Kits O.F.W. Fisher who preferred to be called Peter as he did not like his Christian name Ocean.

An Old Etonian, full of self-confidence holding forth to a group of enthusiasts, he flew a number of his own models that day, all of which had an idiosyncratic look that was quite different to any of the more mainstream offerings from Keil Kraft or Veron.

Inspired by this day and the earlier success of my Kingfisher I built several of the other Performance Kit offerings including the Apex, Oclet, Owl and Wasp.

All flew perfectly. Over the last 50 years or so I have built and flown model aeroplanes pretty much non-stop and every now and again my thoughts turned to the Kingfisher and I casually

thought I must build another. I half- heartedly looked for plans but to no avail, then, a couple of years ago, a friend contacted me to say there was a Kingfisher kit for sale on eBay. I bought it and built it in record time (to a much better standard than before). Thank goodness that it flew as I remembered it.

Apex - a bargain from Cocklebarrow

Dynos - a great flier, bought at Old Warden

This triggered the building or acquiring of more Performance Kits models. A (pre-built) Dynos was acquired at Old Warden for a modest amount and it also flies really well. Then an Apex was purchased at Cocklebarrow which I have repaired and have installed rudder only RC. This is currently waiting for some calm weather.

Then a friend, knowing of my love for Performance Kits gave me a very nicely built rubber powered Pulex, an Aeromodeller plan, again waiting for calm weather. Finally my winter build has been the Sunduster, a 62” span model for rudder, elevator and throttle with a Saito 30.

Pulex - a gift from a friend

Sunduster - my latest build and first effort with Eze tissue over laminating film

In summary I continue to build Peter’s models because they are quite quirky and, in my experience, all fly really well. Over the last few years most of his designs have become available on Outerzone and I intend to carry on building where plans are available.

I would encourage Oxford members to have a look at Performance kits plans on Outerzone and perhaps we could have a fun competition for the Kingfisher this summer.

Bitty120 – Bob Lee

Bob's new Bitty120

You will have read in the Christmas issue of this esteemed publication of the work that Paul Thomas is doing on the *Bienchen* and the *Bambino* as potential club builds as small field models suitable for flying from the Begbroke playing field. My contribution to this is to build a model which I am called the *Bitty120* as another candidate.

The *Bitty* has long been on my 'build list'. The original *Bitty* plan was first published in RCM&E in the Dec 2016 edition then then later in a 2019 plans special edition. In its original form it was a glider with a 25 in wingspan intended to be launched piggy-back from a larger model, a WOT 4 in fact. However, this is clearly a model that is just screaming out for an electric motor in the front and in fact the article does suggest that in this form it would be a good park flyer.

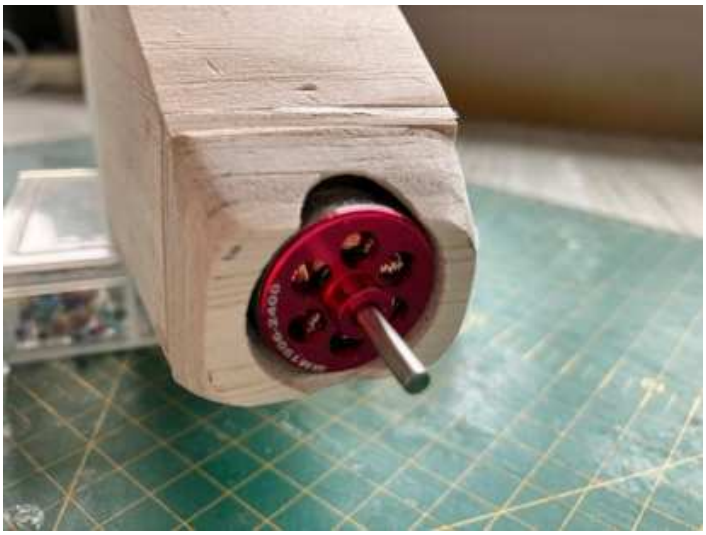
My chosen battery is 2S 450 mA/h since I have several of these already. Simply placing a battery over the plan showed that I would have a very limited number of places that it would fit and I had no idea of where it would have to go to get the model to balance in the right place. I copied the front part of the plan on my printer at 120% and suddenly there seemed to be no issue with the battery position. So the decision was made to build the Bitty at 120% (30 inch span), hence the *Bitty120* was born.

The first thing I needed was the full plan at 120% and my local copy shop turned up trumps here. They scanned the plan and printed two copies at 120% for £6.60. The printed plans where much cleaner than the original, the fold marks from the original have all but disappeared and it's on much better-quality paper. I imported the scan file into my CAD system (DraftSight)

and resized it to 120%. By adding layers above the scanned image I was able to trace over the original and make whatever changes were needed.

The major change of course was to the nose in order to be able to fit the motor. I had to move the front bulkhead back a little to get the width I needed and also added some down thrust. The fuselage build was very straightforward, it's basically a square box. I did 'beef up' the floor in the area that I expect the battery to be and drilled the new front bulkhead to suit the motor mount and epoxied 2.5mm nuts on the back so that they are captive.

You sometimes see simple models with the motor simply mounted on the front bulkhead, hanging out in the breeze. OK, it's great for cooling but to my mind it looks horrible, so it needed some sort of cowling to enclose the motor.



After some work on the CAD system, I came up with a cowling made up of 5 layers of 3mm balsa (actually two of these are two layers of 1.6mm cross grained), the sizes stepped in order to form the basic shape and the internals shaped to clear the motor.

After a bit of sanding and cleaning up, it looks pretty good (well until I have to change the thrust angles). The cowling is retained by a couple of 3mm magnets which I think will be OK, ideally these would have been 4mm but there really wasn't much room left at the edges for the magnets.

The final job at this stage was to add the front hatch, this is simply retained by a lip at the back and a pair of magnets at the front.

The wing build is pretty straightforward. I did have to redraw the ribs because the plan has been enlarged but in order to still use stock sizes the LE and TE are the original sizes. Using the ribs as supplied would mean that the wing chord would be about 3mm short, and the ribs would be a tiny bit high when they meet the LE & TE. OK, I could leave it at that but that's not in my nature. If a job is worth doing, it's worth doing properly and there are only really three rib

shapes to alter by a small amount to maintain the original chord and meet the LE and TE properly. The only part of the wing build that should pose any problem is at the very tips where the LE, TE and spars all taper down to 1.6mm. It needs a few minutes' thought but is actually very rewarding when the correct shape is achieved. The wood sizes here are somewhat bigger than I normally work with and I bought a razor plane which made the job of shaping the LE very easy.

Nothing much to say about the fin and tailplane, just cut from light 1.6mm balsa. I did make one addition to the elevator; this in effect is two halves joined by a very thin piece of balsa in the middle. In order to ensure that both haves actually moved by the same amount (rather than one half twisting) I added a thin wire torque rod between the two halves, epoxied into place.

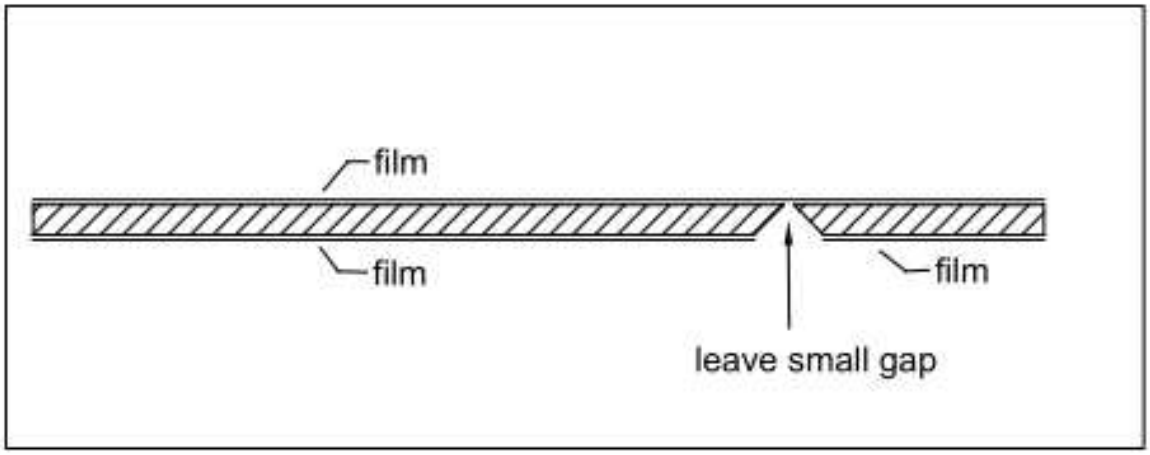
The power train is from 4-Max and uses a PPOM-2314- 2400 motor. On a 2S battery and 6 x 3 prop this should produce about 60W which should be more than adequate, and I am hoping that a 450mA/h battery will give a reasonable flight time given that it should cruise on a whiff of power.

The ESC is a 15A unit, from the same place and again more than adequate. Staying with 4-Max I used two 5 gram servos which are metal geared units, these produce twice the torque of the cheaper servos for a few quid more and no extra weight. My transmitter is Spektrum and I used a Lemon LM0080, second generation, full range receiver.

To finish the model, I covered the wings in Oralight. Anyone that has ever looked at this product will be struck by the cost, the best price I could find was £24(plus postage), which buys a 2m x 60cm roll. No chance of a two-tone colour scheme then! The transparent Oralight is 35 gm/sq metre but I opted for a solid colour which is 45g/sq m, I figured there weren't enough square meters of extra weight to worry about. I have covered in mylar and

other films in the past so have some experience and had no issues at all using the Oralight, so despite the cost I would recommend its use.

I used Oralight on the tail feathers and at Simon's suggestion made film hinges for the evaluator and rudder but with film on one side of the hinge only, the diagram should make this clear.



The Bitty120 flew successfully in early March - very easy to handle, no big issues, need to reduce the amount of rudder throw and limit the motor to about 60% which gives a nice comfortable climb out. Had 44% battery left after two flights of 3-4 mins each so very happy all round.

Drones Seeking New Homes – David Thurling

The Club's two Hubsan X4s have spent too long in a storage box and are longing to see the light and get some exercise. If you would like to give one of them at least a temporary home and some exercise they will be delighted. They make ideal introductions to drones for newcomers. If you eventually feel that you are no longer able to offer one a home then hopefully another club member will be able to do so.

If interested in helping out please let me know and I will arrange for you to be introduced to one.

David Thurling
mailto:djthurling@gmail.com

Indoor event at the Oxford Academy – Paul Thomas

The first indoor event was held in the main sports hall of the Oxford Academy on 22nd January, 8:00-10:00pm. The cost of the hire of the hall was to be underwritten by the Club. However, eleven flyers attended, which meant that the £10 charge ensured break-even and confidence that future meetings could be run successfully.

Although the event was intended primarily for RC flyers, several of the attendees flew FF models. The group photo shows that planes ranged considerably in size and shape. The large, slow foamies were very well suited to the 10m ceiling height and swanned majestically around the hall.

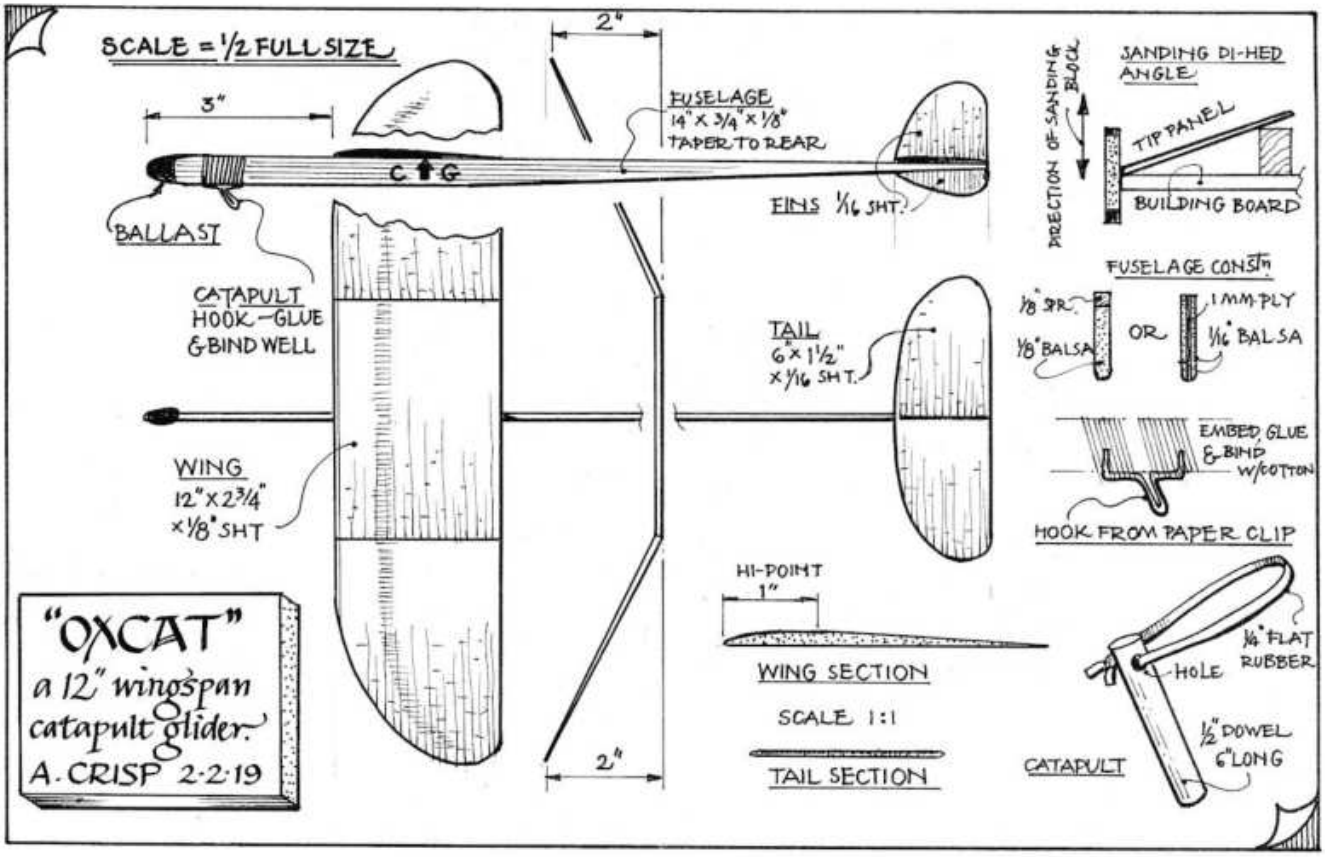
At the other end of the scale, the red Pitts Special proved that relatively fast flight was possible in competent hands and demonstrated spectacular floor to ceiling loops.

An uncharacterizable, ground effect thingy scudded around the floor for most of the evening. The FF models seemed to mix well with the RC, given that there were convenient lulls in RC activity. One of Bob Lee's models seemed to show that the blue paint on the walls have a partial repulsive property.

All in all, this was a very successful and enjoyable evening. The repeat event on 12th February was equally successful, even though Bob couldn't make it. Unfortunately, the Oxford Academy now has no suitable availability until the autumn. As soon as the next Committee meeting gives the green light, bookings will be made from October onwards so get those indoor models ready!

The Twelve Inch Version - Andy Crisp

[The following article is from The Meadow Flyer published in February 2019 and is re-published here at the suggestion of Gary Law who thought that readers might be inspired to have a go at the Catapult Glider competitions due to be held at the Spring and Autumn duration flings on Port Meadow (Saturday 31 May, Saturday 2 August); plan downloads are available at https://oxfordmfc.bmfa.club/oxcat-12-span-catapult-glider-by-andy-crisp/. I'm indebted to David Thurling for recovering the article from the dusty corners of his hard drive. – Ed]



We are always told that modelling should be fun and a challenge at the same time. A catapult glider absolutely fits the bill and is relatively cheap into the bargain. Imagine a nice calm day – hot or cold – on the Meadow. All you need is a catapult, a blob of Blu Tack and some glue to mend the inevitable cracks, and you can be totally absorbed trying to get that rocket climb and transition into the perfect glide; and think of the exercise you'll get running after it!

Oxcat construction and flying instructions and guidance

Wing Try to find a nice, softish piece of 1/8" (3 mm) sheet for this. If you're keen, glue a very hard piece of 1/16" x 1/8" along the leading edge (LE) to prevent dents etc. It should sand into the aerofoil section easily enough.

Cut the blank to shape and mark the high point of the section with a soft pencil. NB: Do all your work on a folded-out newspaper to avoid dents from the blobs of glue on the typical workbench.

Start sanding with a fairly coarse sandpaper from the high point to the trailing edge (TE). Use progressively finer sandpaper (or wet and dry paper) until a reasonable finish develops. Don't

sand the TE too fine. Now sand in the front curved portion from high point to LE. Sand all over with fine wet and dry to get a very smooth finish.

Tail and fins You can hardly expect to get much of a section on 1/16" sheet, so sand well and round off the leading and trailing edges.

Finish Shake some fine talcum powder (fragrance optional) on your finger tips and rub into the grain of the wood. Give a coat of thin dope (50% dope + 50% thinners) and leave to dry for half a day. Rub down with the finest wet and dry. Repeat a couple more times on the wing. One coat should be OK for the tail surfaces. Polish up the whole with really worn wet and dry and then the finish should be like a baby's bottom!

Putting in the dihedral This is the one difficult bit in the construction. Again, using a soft pencil, mark the position of the joints and cut through the wood using a fine modelling saw or very sharp balsa knife. Place a block under the tip at the correct dihedral height (2"). Arrange the joint line to be on the edge of your building board and carefully sand up and down with medium paper on a sanding block (see diagram on plan). Keep on until you make a nice joint with the centre section. Now do the other tip.

Gluing With a fine bradawl, or similar, poke holes down the grain of the panels to be joined. This will create tiny glue 'dihedral braces' and strengthen the joints no end. Place thin polythene on the bench then weight down the centre section and offer up the tips at the correct angle. I use 5-minute epoxy here. Use sparingly, working into the wood grain. When dry, blend in another thin coat top and bottom with a damp finger. You should now have a wing which does not come apart! If necessary, tidy up the joints with fine wet and dry paper.

Fuselage It must be said that the original model had a carbon fibre boom (from an old fishing rod tip), but a wooden body would be just as good. A really hard piece of balsa would be OK, but a combination of hard and soft material works better. You could cut a profile of the fuselage from 1 mm ply, then glue, using PVA, 1/16" sheet balsa either side. Press overnight then sand at your leisure. Or, you could laminate 1/8" square spruce (or equivalent) with balsa. Both methods are shown on the plan.

Assembly Glue the components to the body using 5-minute epoxy. If you are right handed, make sure that the left side of the tailplane is slightly tilted up (say 1/8") to give left glide turn – reason explained later! Make sure that the catapult hook, bent up from a paper clip, is well secured by insertion, gluing and cotton binding, likewise the underfin which takes the strain on the launch. Add glue fillets to the wing/fuselage joint, smoothing with a damp finger.

Flying Add weight to the nose in the form of lead, Plasticine or Blu-Tack so that the model balances 11/2" from the LE of the wing (55% of the root chord). This is important and a good starting point.

Catapult You might as well use the official BMFA size, i.e. 2 g rubber attached to a 6" stick. This works out at a loop of 1/4" flat approximately 6" long. A large band, conveniently dropped by the postman, would do at a pinch (or stretch!). If you are right handed, hold the stick in your left hand and pull back the hooked up model with your right hand. Ideally, if you are right handed, your model should fly to the right on 'power', i.e., under the action of the catapult, and to the left on the glide. If you try both the same way you end up with big holes in the ground.

So, try a few hand test glides for starters. Tweak the back of the top fin to give a touch of left rudder, and go from there. Throw firmly into the wind with the nose slightly down. Do this

several times to get the 'feel' of the model. If it seems 'nose heavy' tweak up slightly the TE of the tail. If it stalls, give more rudder and add nose weight.

Now to the catapult launch. The legendary soft grass, or Meadow mud, is a good requisite if anything goes wrong! Hook up the model to the rubber. Stretch back and aim into the wind making sure that there is nobody in the way. The ship should shoot up and surprise you with its speed and the height it gains.

If it goes straight up and straight down, try banking the model to the right to encourage a spiral climb. Don't be afraid to really stretch the rubber – as far apart as your arms will go! The wing can take it. A good model could make 40-50 metres in altitude. Alterations to perfect the glide can be made by adding or subtracting minute amounts of nose weight.

I must admit that all this adjustment is not easy but, when you DO get it right, it's a wonderful feeling when the model rolls off the top into its glide. If you find it in the long grass on the Meadow, that's a good feeling as well!

Printed Tissue Covered foamy SE5a – Chris Brainwood

Tissue-covered foamie SE5a

Printing directly onto tissue and covering your model can produce a very crisp and attractive finish and has become much more popular and easier to achieve in recent years. The skilled and time-consuming part is the design of the tissue skin so when fellow Trinity flyer Lee Bates offered the files for a printable skin for the SE5a I had to have a go at printing onto tissue.

Lee's models, mostly peanut sized indoor rubber models are made from wall foam with the tissue skin glued to the foam. They are wonderful and very detailed models that fly very well too.

Lee Bates' Pfalz D.IIIa

…and his SE5a

A couple of years ago I made a foamy SE5a out of wall foam, it's proved a consistent and wonderfully slow flyer it's also peanut size so an ideal basis for Lee's tissue skin.

SE5a tissue patterns

Printing onto tissue proved to be more straight forward than I feared as well. I used a very basic Canon inkjet printer, this is fine for indoor use as the ink is not waterproof so flying outside on damp grass will end in a very blurry mess on the model

I used wet strength tissue from Carnival Papers, it's very cheap at about £10 for 60 sheets but is slightly heavier than Esaki or Asuka. It has a nice shiny surface which takes ink well. I used a setting of plain paper and high quality and got good results. I suspect the wet strength is more robust when using the water-based inks in the inkjet printer. The tissue was cut to A4 size and stuck to a sheet of ordinary printer paper which had been given the lightest possible spray of 3M Spraymount and allowed to dry. Waving the can vaguely above the paper to give a very light mist seemed to work well - it needs to be just enough to tack the tissue to the paper so it can be peeled off again. The same sheet of plain paper could be used to print several sheets of tissue this way.

Construction in progress

To mount the tissue to the foam I again used 3M Spraymount, just the standard blue label Spraymount seemed fine. The Spraymount was sprayed to the tissue and left for a few minutes for the solvent to evaporate before applying to the foam. The solvent in Spraymount will melt the foam so you do need to spray it on the tissue (not the foam) and you do need to let it evaporate before application.

Once attached to the foam I found the tissue/foam/tissue composite much easier to handle than just foam alone. Bending the sections around a dowel to get the curves in the fuselage was much easier but it does blunt scalpel blades even quicker so worth having a new blade for the important bits.

Tissue skin version alongside the original

Construction was fairly straightforward following the original foamy SE5a plan, although I did have to adjust the fuselage to fit the scale top decking. The final model came out 2g heavier than the original version due to the tissue covering but it flies nicely, if slightly faster than the original.

There are some trimming flights on YouTube along with other models at Berinsfield here https://www.youtube.com/watch?v=L_HoYlYcz3U

Foamie Experiments – Bob Lee

As a result of our Foamie Design Challenge last year and our Foamie Warbird Challenge this year, a number of you will by now be familiar with working in 2mm wallpaper insulating foam. This must be the lightest building material available and is superb for making small, indoor rubber powered models. When you first met it you probably wondered how it is possible to make a model airplane from something so insubstantial, but as you well know it can be done and produce very good results.

How about a foam material for something a bit bigger? Depron is one solution. This used to be available in a wide range of thickness down to 0.5mm but is now only available in 3,6 and 9mm sizes and is sold by Sarik. It was and still is a very good building material. For a while we also had Graupner Vector Board. This was available in a wide range of thicknesses but is no longer available after the collapse of Graupner. I do have a stock of Vector Board but to be honest it isn't a patch on Depron, it feels soft and is floppy. I have built models from it (and have had a plan published) but it's not my favourite material.

Looking for other suitable foams I came across Diall Polystyrene Board which is sold by B&Q. This is one of many insulating foams so be sure to get the correct one, with the description just given. You can find it at:-

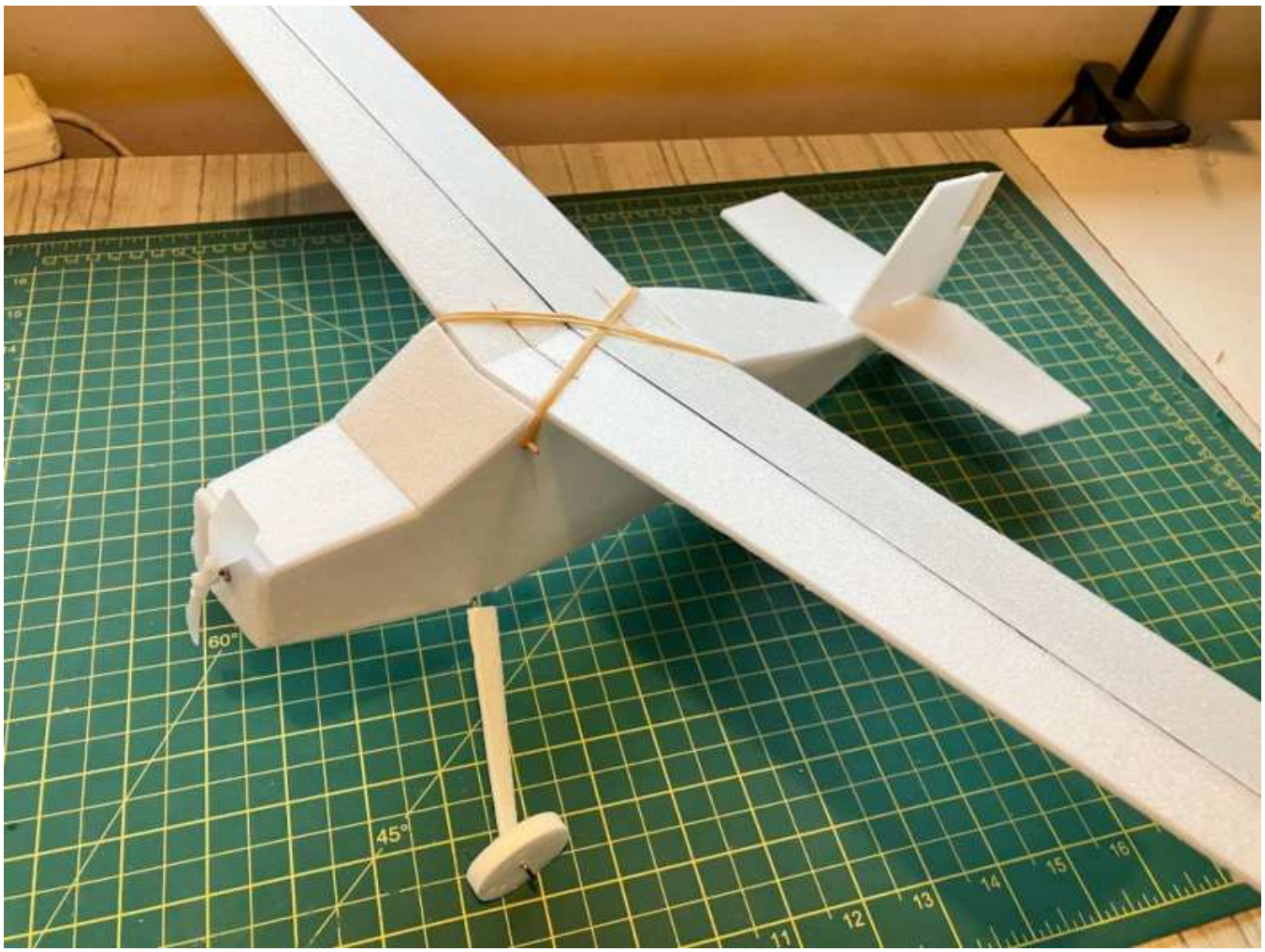
https://www.diy.com/departments/diall-polystyrene-3mm-insulation-board-l-0-8m-w-0-6m-pack-of-8/1906879_BQ.prd

This stuff is available in 3,6 and 9mm thickness. I bought a pack of 3mm and for £11 you get eight sheets, each 60cm by 80cm, so it's not going to break the bank. First impressions were very favourable, its clearly very light and is crisp and firm with (to mine mind at least) a lovely and very uniform surface finish. I had the foam, now all I needed was a model to build with it.

For the Foamie Design Challenge I designed a model called the Biffy (Basic Instructional FfoamY) which had a wingspan of 13 inches. Since it used 2mm foam I just enlarged the plan by x1.4 to give me an 18-inch model in 3mm foam.

I have to say this material is a joy to use. There is no discernible 'grain' (it bends equally well along its length or width). It cuts to a crisp, sharp edge with a new scalpel blade and can easily be sanded, there were no problems using it at all once I had decided how to build the wing.

I was going to use a simple curved piece of foam but decided it was a bit too firm for that in this sized model. I could probably have heat formed it to a curve and will investigate that in the future but settled instead on a Jedelsky wing section. I simply scored the upper surface at 1/3 chord and then then gently cracked it along the length to produce roughly the correct shape. I cut some triangular ribs from the foam material and glued these on the underside, this left a gap in the upper surface which was just the right size to insert a length of 1mm carbon fibre rod to form a spar to stiffen the wing. After joining the wing halves, I added a couple of dihedral braces made from 0.8mm balsa (the only balsa in the model).



With the wing made, the rest of the model was very straightforward and was as the original Biffy, you can find my build blog for the fuselage at the link below. It's built the same just a different material:-

https://oxfordmfc.bmfa.club/wp-content/uploads/2022/11/Basic-Foamie-Fuselage.pdf

Previously I had used a mix of PVA and UHU Por as adhesives, Por when I needed an instant joint and PVA when I needed to be able to re-position it. I have heard a lot about Deluxe Materials Foam 2 Foam as an alternative to Por so I thought I would give that a go. My first impression was that it was ****(add your own expletive here!) expensive at £9.50, then they wanted £6 postage. I actually bought it from Amazon where the postage was cheaper, but it's still expensive, a tube of Por is just over £5. So, was it worth it? Actually, in my view it's like a thinner version of Por and I will grant you is a bit less messy and stringy. You do get a short repositioning time (with Por its zero) and the joint is pretty much set in a few minutes(again, zero for Por). Overall, I will admit that it's probably better than Por and that we should think ourselves lucky that we have Deluxe Materials that make such a wide range of products for us, even if they are a little pricy.

The model is going to be supercap powered and the plan is to use a direct drive motor rather than a geared motor which I have used in the past. I am still experimenting with this, and it will probably be a subject for the next edition of Meadow Flyer.

Low Aspect Ratio P30s – Andy Blackburn & Andrew Longhurst

Andy B Writes:

All this low-aspect-ratio stuff started because – not to put too fine a point on it - I am not good enough at picking lift to get on the top step of a P30 competition; My Spencer Willis designed Sweet P30 weighs about 53 grams and usually does about 1:15 in still air, which isn't really good enough given that the max is usually 1:30 or 2:00. It's difficult to get down to the target weight of 40 grams and any detail reduction in drag seems to be completely drowned out by the vast amount of drag produced by the freewheeling propeller.

However, I happened to read a couple of things in Free Flight Quarterly:

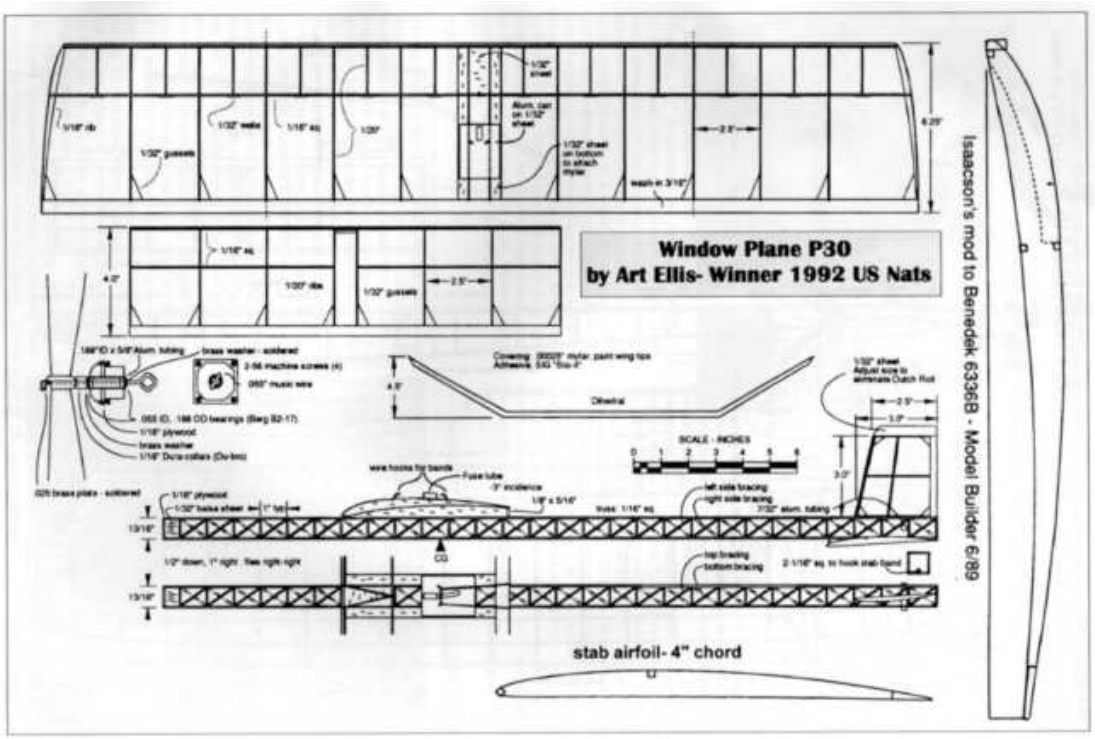
FFQ Gem #1 - Bill Henn' Rule of Thumb

Firstly, Bill Henn: *"... the completed weight of the model (27.6" span Messerschmitt bf109H) without rubber was 36.5 grams, somewhat heavier than my last few models but still within my self-imposed limit of 0.4 grams/ square inch. It has been my experience that the glide of scale models with relatively large freewheeling props deteriorates rapidly as that limit is exceeded."*

So although this is a scale model with a relatively large fuselage cross-section and lots of drag-causing furniture, it seemed plausible that there might be a similar effect for duration models…

FFQ Gem #2 - Window Plane

Secondly, FFQ also did a "P30 Special" issue which covered Art Ellis' very low aspect-ratio Mylar-covered "Window Plane" of 1993 which showed that 2+ minutes in still air is possible if the model weighed about 40 grams empty.



Increasing the wing chord sounds like a great idea, but there are consequences:

- As the wing chord is increased it reduces the aspect-ratio resulting in the wing-tip

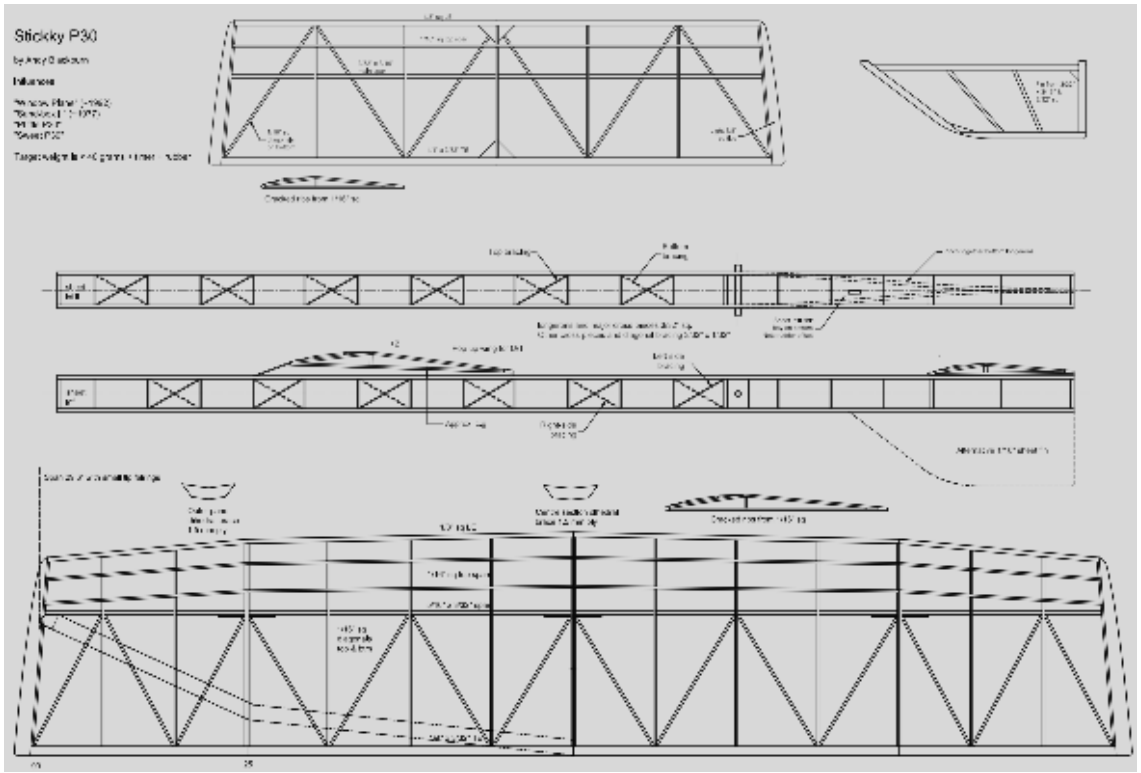
vortices getting larger and stronger causing the lift-dependent drag to increase.

- The lift-curve slope also reduces so to get the same lift, there will be more drag. Consequently, the glide slope (the Lift/Drag ratio) will get steeper.
- However, all other things being equal the wing loading of a lower aspect-ratio wing will be lower, so the flying speed will be lower, which will reduce the minimum sink.
- The Reynolds number of a low aspect-ratio wing will increase, potentially reducing the drag.
- We can - theoretically - reduce the drag on the climb by reducing the camber and thickness of the airfoil, but this might also damage the glide to some extent.

There are many effects in opposition here because it's a complicated thing, and since we haven't got a wind tunnel, we can't tell whether the total of all those effects will be good or bad, so we have to try it and see. However, we are aware that several people have tried low aspect-ratio P30s without success.

One additional factor is that - empirically - the airfoil on P30s seems to have very little (if any) effect on how good the model is, presumably because (as discussed above) any reduction in drag on the glide produced by a high-efficiency airfoil is minimal when compared to the drag produced by the freewheeling propeller.

Stickky MkI P30

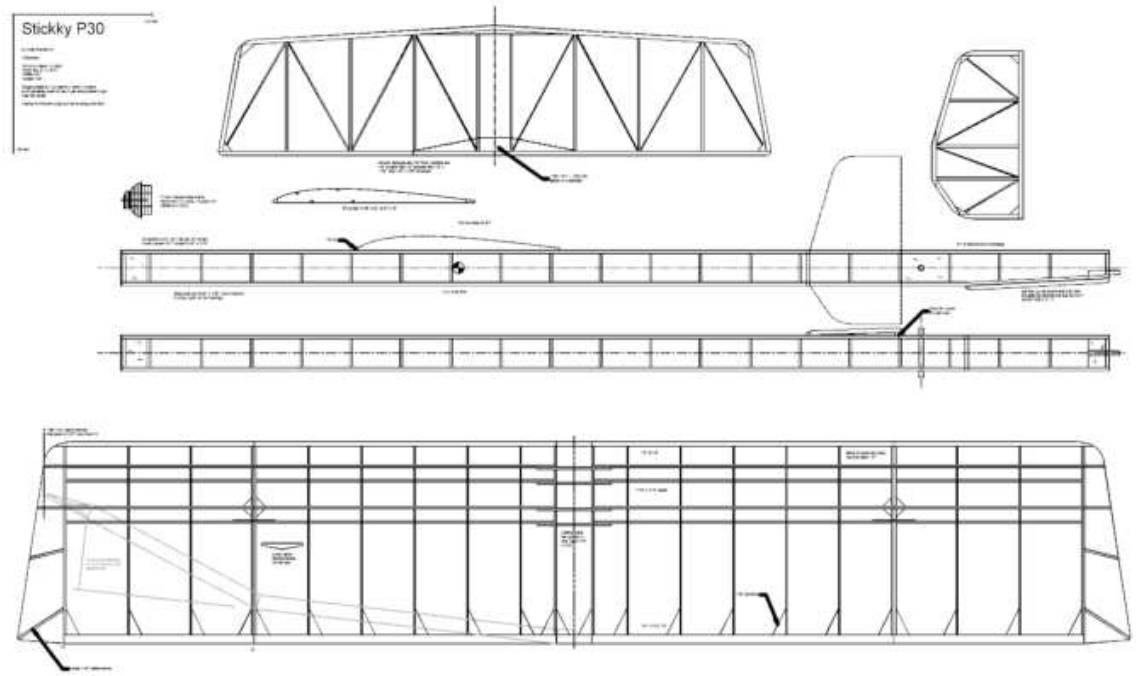


The basic idea of Stickky (the name comes from the plan starting life with a cracked-rib wing, but there are then a lot more parts) was to try and push the edges of the wing-area envelope in order to reduce the wing loading to the point at which the drag from the free-wheeling prop didn't wreck the glide quite as much as it did before. Stickky was designed with the thinnest airfoil I thought I could get away with in order to reduce the drag on the climb. Needless to say, it’s not a recognised airfoil and was drawn up to be easy to build.

The fuselage is a very basic and simple 1” square rectangular box, which means that the wing and tailplane can be simply banded in place (saving the weight of a wing pylon - thanks to Andrew for the idea), as can the fin which means that experimenting with different-sized fins and underfins is straightforward. The fuselage could maybe be reduced in cross-section by a small amount, but I am wary of going any smaller than about 7/8" (~22 mm) square.

The polyhedral (rather than tip dihedral) wing is partly to move the flying surfaces a little higher to give the effect of a pylon and help put the stabiliser in the correct place under the wing downwash, and also because it might make the model groove a little better in the climb as polyhedral was thought to be a little more effective than the more normal tip dihedral.

Stickky MkII P30



After an email conversation with Andrew L, a MkII version of the plan was drawn up which had a parallel chord wing of conventional construction and a reasonably large flat-plate tailplane.

The conservative 50% CG was a conscious decision because all sorts of stuff might happen during the early part of the climb when the model is in low-level turbulence, the torque is quite high and the model is almost hanging on the prop, so you want a strong nose-up correction if the climb goes flat and a strong nose-down correction if the climb gets too steep - there's no time or space for half-measures because if it all goes wrong at the start that's a potential max gone down the drain. So, the tailplane needs to be big, and it needs to be set (with the CG and static margin) to produce corrections of the required magnitude. It's a flat plate because it's easy to build, it works, and we know where the zero-lift line is on a flat tail (0 degrees).

If it was a more traditional lifting section tail then the zero lift line would be less (that's what camber does), possibly something like -2 degrees. This means that to get the same stabilising effect as a flat-plate tail with (say) a 3 degrees negative incidence on the tail (assuming the same CG and static margin), a lifting section tail would have to be say -5 degrees. Under those circumstances it’s not clear that the drag of the lifting section tail will be any better than the flat plate.

The other advantage of a flat-plate tail is that it's dead easy to mount the tail on the bottom, moving the wing and tail apart vertically and (as discussed above) providing a similar effect to that of a wing pylon without the weight. It's entirely possible that the tailplane isn't *quite* big enough, but we shall see. The plan shows the approximate decalage needed for the CG.

Andrew L Writes:

When Andy B sent me the Stickky Mk1 plan for comment I was casting around for some winter building projects. This seemed perfect but rather than thinking of it in performance terms I just thought that with the wing loading it would look fantastic drifting down on a glorious spring day at no more than walking pace. Well, maybe a little more.

Before I got started, Andy B revised the plan to a Mk II version with a conventional rectangular wing of 5.7 ins chord and a revised stab and fin. To get over the problem of a 10g motor driving a 9.3ins prop faced with the drag of such a large wing an ultra slim section was proposed similar that used by chuck and catapult gliders. This sounded like it was a worthwhile experiment, and it didn't take long to knock one up. One modification I made was to use the underfin of the Mk1 mounted on a low-slung carbon tube to drop the flat plate stab below the wing wash rather than have it underslung on a sick and tissue structure. This was personal preference and probably of no consequence to weight or flying characteristics. The Mk II wing was used with slightly tapered ribs because I cut some a bit short!

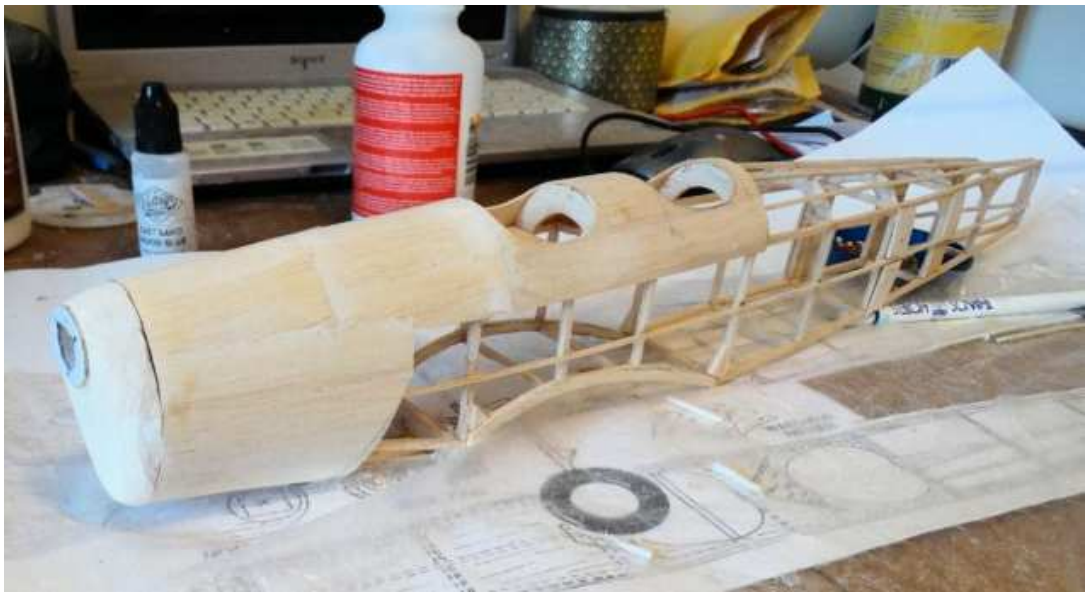
Weights of the finished model were:
Uncovered: Wing 12.0, Fuselage 8.5, Tail 3.5, Prop 10, Total 34.0g
Tissue Covered: Wing 19.0, Fuselage 13.0, Tail 4.5, Prop 10, Total 46.5g
The weight was a little more than hoped for but not bad for such a relatively big job.

Let's say its 10% heavier than an on the limit P30 can be, but its 20 to 30% bigger in terms of wing area. I note that F1G Coupe flyers use very large but consequently heavy models on nice days. So P30 could be the same. Incidentally, the prop I used is an Easy Built 9ins job from the US where it is the latest craze in P30. It has a little more pitch than the Peck but it's a gram heavier. Can't wait to fly it!

Earl Stahl's Miles Magister – Dave King

In the early 80's whilst flying RC models (no facilities where we lived in Kent for FF) I came across the plan for Earl Stahl's Magister. At the time I was looking at the plan for Dennis Bryant's Maggie as it was an aircraft I really liked, and Stahl's plan looked like it could be a candidate for flying in the evening at the RC Nationals or at Old Warden. As it happened, I built neither, being sidetracked by something or other.

So this winter, after forty years, I finally got around to building my Stahl Maggie. I used the plan from Outerzone and if cut out accurately the parts all fit as well as a Bryant plan.



The model is a normal build with two fuselage sides built over the plan and then joined by cross pieces. The nose area is sheeted in with 1/16". I then used 160-gram paper sprayed with Ford Silver spray from Halfords to depict the aluminium cowl. The motor peg was moved forward by two bays.

The centre wing ribs line up with the fuselage wing mount and to ensure correct alignment I glued three tabs on each of the mounts that fitted inside the ribs which saved me having to measure each wing tip to rear fuselage to make sure all was square. The wing is a straightforward build with a flat centre section and dihedral added at the two outer panels.

I decided to try the method of a torsion bar u/c rather than just binding one piece of wire to the u/c spar. The two ali tubes are epoxied to a flat 1/16" sheet plate and the assembly glued into place in the wing. Seems to be fairly strong and works OK. The wheels are 3 layers of 1/8" balsa with 1/64"ply hub plates, temporarily mounted on a 6 BA bolt to do the shaping with a Dremel. Plastic electrical outer was used on the u/c wire.

The fin and tail are both symmetrical section which does seem to be the thing with the larger FF models of this era. The end result does seem to be quite strong.

I used a Gizmo Geezer nose plug, as the adjustment available saves messing about with shims to adjust the thrust line, the model just needs to be to take a 3/8” hole to take the nose plug. The prop is a Peck P30 9.5” prop cut down to 9”.

As a colour scheme I went for the Irish Air Corps scheme (all yellow is boring and camouflage too much messing about with masks for colours and roundels). The wing tissue is VMC silver **(**with zero wet strength**)** doped with 50/50 Banana Oil and the fuselage is normal black tissue.

The fuselage numbers are cut from architect’s layout paper with the Celtic boss (roundel) printed on the same paper. Wing markings were thinly brushed on via Tamiya masking tape over a square of airbrushed white.

To balance the empty model at the cg needed 7.80 grams of lead in the nose-block giving a total empty weight of 76 grams. No doubt further ballast will be needed when the motor is added.

I'm not sure about the rubber to be used at the moment. Stahl advises either 6 x 3/16” or 10 x 1/8” but with modern rubber I think I’ll try 4 x 3/16”.

No ~~Country~~ Models for Old Men – Simon Milan

A while back, our esteemed Editor asked if any of us would like to share the whys and wherefores of any models we might have built over the winter ("no matter how ordinary"), for inclusion in the Spring issue of MF. This is my submission *[Just made it in - Ed]*

To explain: Over the winter I fly a variety of indoor models at the monthly meets at RAF Shawbury in Shropshire, thanks to the sterling efforts of John Minchell, who negotiates the annual Shropshire Indoor Flyers Licence Agreement with the bureaucratic powers that be.

So about a year ago, inspired by Andy B's article in the Aeromodeller describing his No-Cal Bf109, I built a NoCal Short Seamew. Lots of wing, a decent size tail and a reasonable length of nose, it seemed to be ideal for this class. Building it was pretty straightforward though fiddly. When it came to the covering, not having any other suitable graphics software – or CAD skills - to draw up the colour scheme for printing the pre-shrunk tissue on my Brother inkjet printer, I managed to get a reasonable semblance of the scheme using Microsoft PowerPoint. I drew the panel etc lines with a fine-tipped pen.

I made a couple of "bend round a bottle" balsa props (6" and 8") a la Andy's plan, and starting with the motor sizes suggested by Andy for his Bf109, initial flights were promising. Nice and steady left-hand circles, hardly competitive duration-wise but very encouraging.

I then parked the Seamew for the summer as Shawbury and also the other West Midlands venue at Sneyd had closed.

Around this time, Peter Thompson, a local member, suggested we might all build NoCal Fikes (with their huge flat very low aspect ratio wings) as a sort of one-model class. I respectfully declined as I think Fikes and the not-dissimilar Laceys are foul-looking creations, notwithstanding their eminent suitability for this class of model – demonstrated by Fikes coming 1st and 2nd in the No-Cal class at the 2024 Indoor FF Performance Nats at Daventry!

Instead, I decided to build a favourite of mine, the Martin-Baker MB-5. Another model with a long nose, a low aspect ratio wing and a decent size tail. As No-Cals are limited to 16" wingspan, this still meant the MB-5 would have a nice long fuselage, and therefore (in theory) a nice long motor length. I finished it in the autumn, complete with markings and grey-green camouflage, again using Powerpoint to print the tissue.

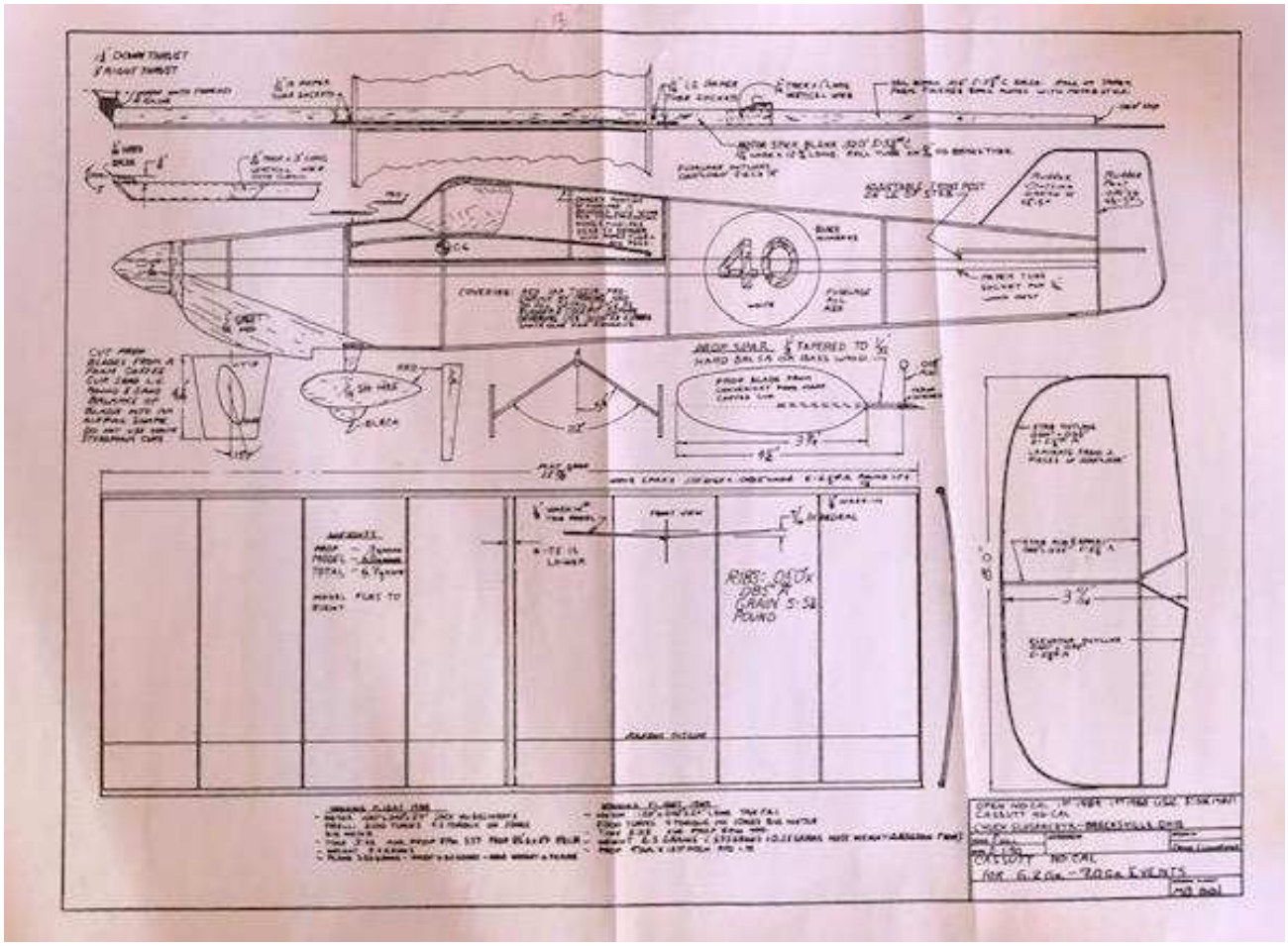
Explaining how a single "Print" command delivered tissue for (eg) the fuselage complete with 2 camouflage colours, RAF roundels, yellow P for prototype and the black registration, not to mention all the panel lines would take another article in itself. I was quite pleased with the outcome. Minus motor and prop it weighed just under 6g.

So when Shawbury opened up again last autumn, I took both the Seamew and MB-5. The hangar was (very?) cold with no heating. Loading the MB-5 with a 16"loop of 1/16" rubber with an 8" prop and winding on about 500 turns produced nothing but a huge stall and slow descent to the ground, due mostly, I'm sure, to the CG being way behind where it should have been.

Lesson 1: Make sure that half the distance between prop and rear hook approximates to the correct CG position.

I then tried the Seamew, using the same size rubber and (6") prop all as previously. Result? Hopeless; powered glide/dive into the ground. Tried my 8" prop; not much better – if at all. More of an uncontrolled dive plus side slip? Was the prop too heavy? Went home puzzled.

As an aside, at the Shawbury meeting in November, Peter Thompson brought some plans of a US contest-winning No-Cal model of the very low aspect ratio Cassutt Racer, as an alternative to the Fike, no doubt. I bought one with no real intention to build it – though from my point of view, it's certainly more attractive than a Fike!



Anyway, before the next Shawbury meeting in January this year, I cut 3" off the rear end of the MB-5's motor support tube and tried again. The hangar was, if anything even colder. I tried various combinations of props, thrust line settings and rubber, stuck a small gurney flap the right wing to counteract a small warp which was rolling it left, but it still wouldn't fly properly. Either power-dived into terra firma and/or stalled under power followed by wing drops and side slips etc. Tried the Seamew again with no more success than before. More head scratching.

At the next meeting, Mark, another Midlands indoor adherent brought a No-Cal Cassutt which he'd recently finished and said that at another West Midland venue it had flown for well over a minute. What motor size, I asked. "A 27" loop of 1/8" was the answer. 1/8"? For a No-Cal? Even more head-scratching. OK, due to its very low aspect ratio wing, a No-Cal Cassutt will a bigger and therefore heavier model than my MB-5, but, hey, I fly my outdoor 25" span cabin model, which is no lightweight, on a single loop of 1/8"!

So, before packing up I made up a loop of old fairly tired 1/8", wound on 300 turns, bent in a bit of right side-thrust (to counteract the warp in the right wing) and the MB-5 did a single stable

and gentle right-turn circle. Great! I resolved to make up some more 1/8" - and 3/32" - motors and maybe a new prop in time for the next session – though still very puzzled why 1/8" rubber should be necessary when my Seamew had trundled around quite happily 9 months previously on 1/16" rubber.

Anyway, I duly returned to Shawbury at the end of February with a couple of new 1/8" motors and a new wing-ding yogurt pot prop. Shawbury was still cold, and the interior environment wasn't helped by the latest fire safety edict apparently requiring the big hangar doors to be left partially open whenever anyone was using the building. Common sense soon prevailed.

I tried my MB-5 with the new 1/8" motors and with new and old 8" props. No success…. Gentle dives plus other cavorting. I simply couldn't reproduce the gentle right turn circle I'd achieved at my last visit. More in frustration than expectation I fitted my Seamew's original 6" bottle-bent prop and wound on 600 turns of 1/8". The MB-5 shot up to the 8m high roof structure, bounced around the girders and descended to ground in a steep spiral! Other options of larger props and different size and length of motors were tried still with no real success. Likewise, the Seamew refused to repeat its very satisfactory initial flights of earlier last year.

Discussing the situation with Mark reinforced the obvious need - apart from anything else - for prop pitch, diameter and motor sizes all to be tuned as necessary to get the best out of the model being flown. OK, completely agree, but to my mind the failure to drill down this far doesn't explain why my Seamew simply refused to repeat its earlier successful flights when in the interim nothing had really changed - apart from the effects of the inevitable (for me) minor CA repairs mostly caused by aged, cold and fumbling fingers.

So… (and remembering the title of this piece):

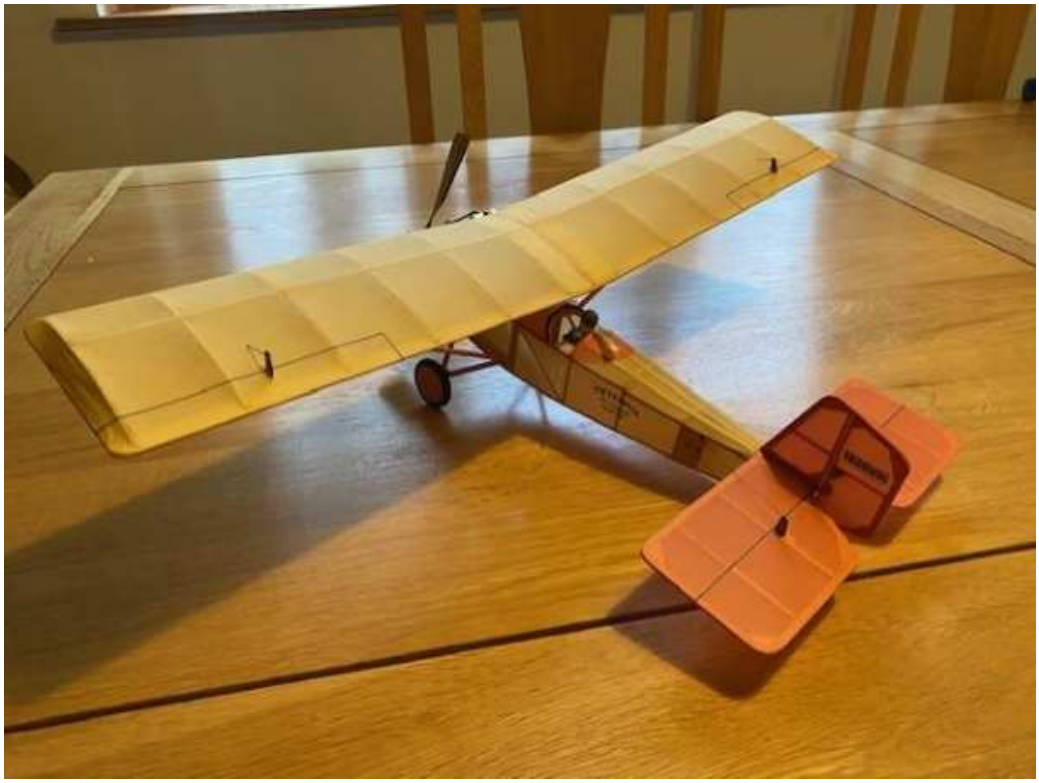
1. I can only assume that the stark differences between how my Seamew flew earlier last year compared with my most recent visits to Shawbury have been as much due to the cold and damp (unheated) conditions as to my own ineptitude! Yes, some of my bottle-bent props may have straightened out a bit over the past 9 months (and I do need to make myself a decent pitch gauge), but surely not to the extent of changing current flight charactistics o drastically? The odd warps have crept in, but nothing too aerodynamically alarming.

2. Why the MB-5 refuses to fly properly irrespective of changes to prop size, pitch and motor sizes remains a mystery – to me anyway. I guess cold damp conditions don't help these undoped and highly absorbent tissue-covered models, and neither do they help the rubber to perform properly. Mark admitted that his Cassutt had flown better at another West Midlands venue. So, maybe the onset of spring will make a difference to both the MB-5 and the Seamew. I guess I'll just have to wait and see.

3. So far as my ineptitude is concerned, yes, I've always been a bit of a bodger, which hasn't obviously been a problem with my outdoor duration models, but bodging is hardly conducive to creating even half-serious indoor duration models. Seems to me that building and flying Indoor duration models of any sort is the kind of delicate, precise and disciplined business requiring much care and attention to detail. These were never my forte, and it certainly feels now as if owning a pair of 82+ year-old hands accompanied by an 82+ year-old brain doesn't make these tasks any easier!

Nevertheless, I intend to persist – and sometime wonder how well a No-Cal biplane might work. Would I have to include all those struts? Hmmmm.

Winter Builds – Peter Brown



Pietenpol Aircamper rubber powered from Dumas kit

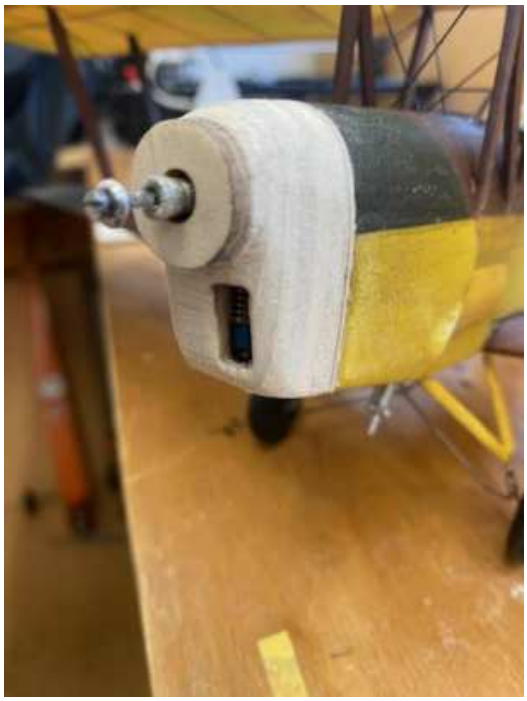
Pietenpol engine detail

Micro Runt slope soarer from Angelwings, can be bungeed. Flysky 2ch aileron and elevator

VMC Tiger Moth Conversion – Peter Brown

First, saw off the nose with a razor saw (!!)

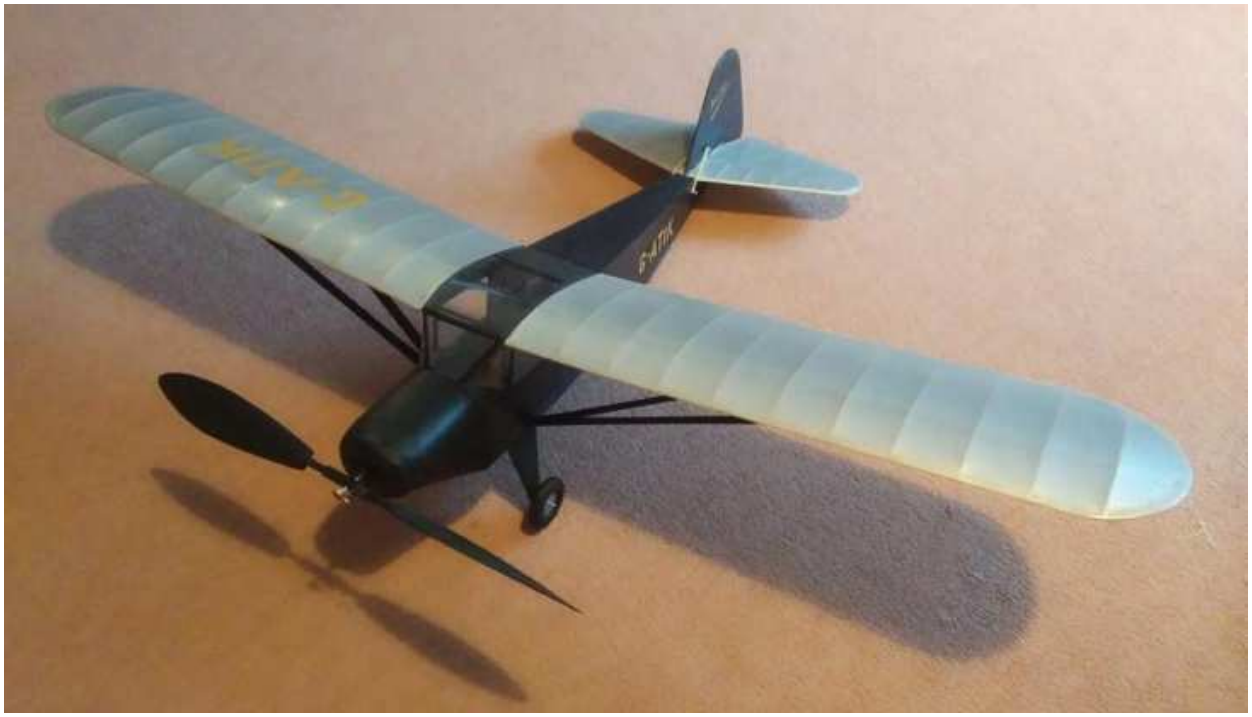
Then install the motor (Gasparin GM 63) on a ply plate, CO2 tank sits behind cowl, filler is between UC legs



Make a new cowl to fit, held on by magnets.

The finished article, re-covered and painted.

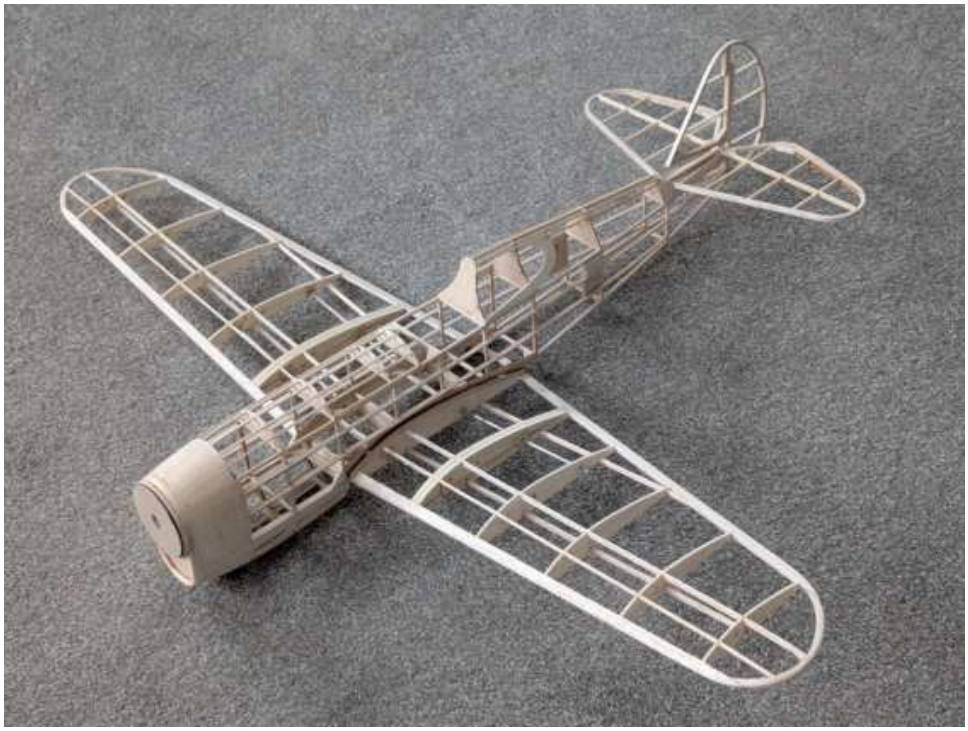
Winter Build – Ivan Taylor



Just finished my enlarged KK Auster Arrow which has been built for the new rules for the Oxford duration scale contests. It has a wingspan just under 36" and weighs 65g without motor, which will probably be around 15g. I've equipped it with a Tomy timer for DT. Hoping to get it flying soon. Very excited with duration scale to our Oxford rules.

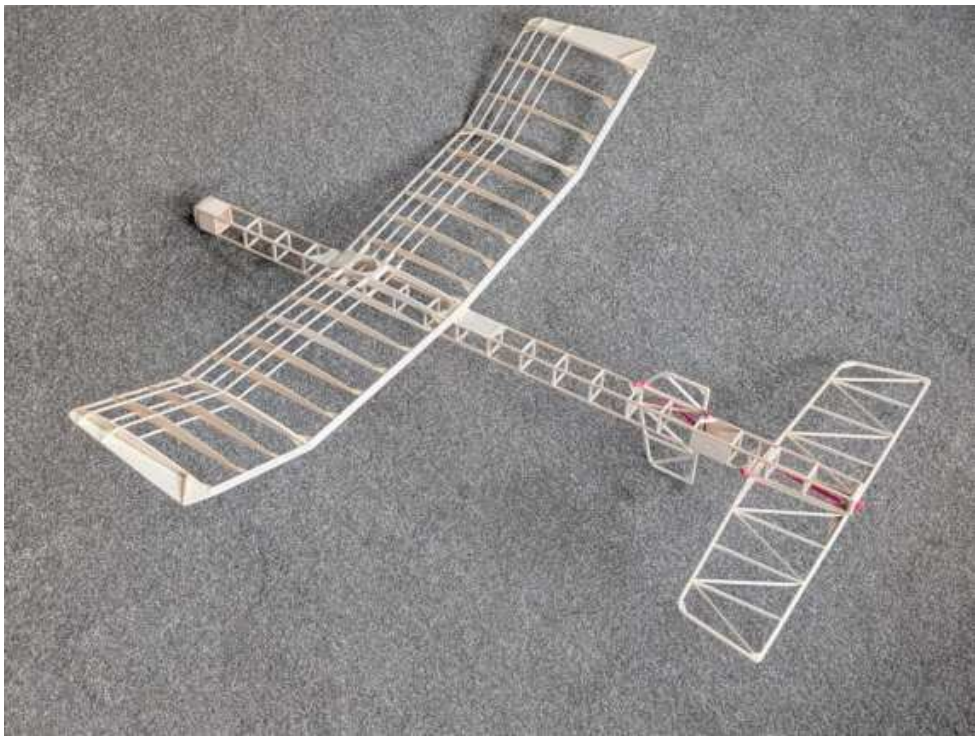
Planning to try a 36" KK chipmunk next as that and the Auster were my two favourites of the KK flying Scale kits in the mid 50's.

Winter Builds – Andy Blackburn



I started this 28" span Curtiss P40-F Warhawk (from a Mike Midkiff short kit) before Christmas and construction has been on/off/on/off as other more immediate projects required attention.

I haven't weighed it yet because I'll only get depressed; the removable wing panels added more weight than expected. However, I'm very pleased with how it looks, and it's a really nice build. The lower cowling will be removable for access to the D/T mechanism, and I was going to experiment with a moveable rudder as a D/T but sanity has prevailed and the tailplane will be pivoted on a bit of 1/16" carbon rod so that it'll pop-up in the conventional manner. It won't beat Ivan's enlarged KK Auster unless I get very lucky, but it will lose with ***style***, which is the important thing… 😊



This own-design P30 (Stickky 2) was one of the reasons that P40 was taken off the building board – I was stung into action after Andrew Longhurst built his own version.

Much use was made of thin CA applied with a Zap flexi-tip and a piece of kitchen roll to mop up the excess – works well if you're quick. See pages 26-29 for the reasons why it looks the way it looks.

I did take some care with the wood selection and in an unexpected and startling break with tradition it looks as though this one might actually be somewhere near the minimum weight of 40 grams. It does feel a bit fragile, though.

Club And Other Local events, 2025

(Note that OFMAC Meetings are now back at **Berinsfield**!)

OFMAC

2024-2025 Season Dates

Indoor Model Flying

Funfly for all. Freeflight, rubber, CO2, Electric

Venue:
Abbey Sports Centre
Green Furlong
Berinsfield
Oxfordshire
OX10 7NR

Dates:

Sundays 09:00 to 15:00
6th October 2024
3rd November 2024
1st December 2024
5th January 2025
2nd February 2025
2nd March 2025
6th April 2025
4th May 2025
1st June 2025

Contact:
Ian Melville
07545158177
ofmac@redkite.aero

Club Meetings at Begbroke

Club Nights are held at Begbroke Village Hall, Begbroke Lane, Kidlington, OX5 1RN, 7.30 p.m. - 10p.m. Club business (if any) commences at 8 p.m., unless otherwise stated.

Wednesday 19 March 2025	**Club Night:** Bring a Model evening. Bring along your latest creation to display/show off/chat about.
Wednesday 16 April 2025	**Club Night**: Fun flying on the Begbroke Field
Wednesday 21 May 2025	**Club Night**: Fun flying on the Begbroke Field

Competitions on Port Meadow for 2025

Definitions:

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

Saturday 31 May 2025 **Spring Duration Competition**:- Port Meadow :-

E20 – Total of three flights, 20s motor run, 60 s Max.
P30 – Total of three flights, 90 s Max.
36" Hi-Start glider – Peterborough bungee, Total of three flights, 60s Max, RC allowed but clock stops on first control input
Under 25" Vintage Rubber Cabin – Total of three flights, 90 s Max.
Classic Rubber Kit Scale – rules as per Winter Postal (https://oxfordmfc.bmfa.club/wp-content/uploads/2024/10/OMFC-Classic-Rubber-Kit-Scale-Postal-Rules-v1.4.pdf) but Total of three flights, 60s Max
Catapult glider – 60 s Max, total of 5 flights.

Rules for all classes at https://oxfordmfc.bmfa.club/event-rules/

Saturday 12 July 2025 **Summer Scale Competition** -Port Meadow:-

OMFC Scale Rubber Duration - max span 36" monoplanes, 30" multi-wing, no static judging, 90s Max, **best** of three flights + bonuses count. Flyoff if necessary. Rules at https://oxfordmfc.bmfa.club/wp-content/uploads/2024/10/OMFC-Scale-Rubber-Duration-Rules-V1.1.pdf
Flying Only – IC/CO2/Electric/rubber. Traditional rules, no static judging)
Hi-start Scale Glider – Peterborough bungee, Total of three flights, no static judging.
Frog Senior – 60s Max, Total of three flights

Rules for all classes at https://oxfordmfc.bmfa.club/event-rules/

Saturday 2 August 2025 **RC Party Games + Fun-Fly + MIMLOCT**:-Port Meadow:-

CD is David Lovegrove, competitions are TBD but are expected to include the legendary spot-landing game and may well include events such as RC Rudder-Only, Hi-Start Glider and other similar pastimes. Cloud Tramps may be launched from the FF area as this is MIMLOCT (Memorial International Mass Launch of Cloud Tramps) Day. Fun-flyers are welcome.

Saturday 30 August 2025 Autumn Duration Competition (Includes Southern Coupe League), Port Meadow:-

Vintage/Classic A1 Glider – 90s Max, total of three flights.
Vintage/Classic Glider – 60 inch span limit, 90s Max, total of three flights .
(For both the above, launch using either the supplied bungee (10m of 3/16" rubber and 40m of line) or a 50 metre towline, at the discretion of the entrant)
Coupe d'Hiver – Total of three flights, 90s Max.
Catapult glider – 60s Max, total of 5 flights
OMFC Scale Rubber Duration – max span 36" monoplanes, 30" multi-wing, no static judging, 90s Max, best of three flights + bonuses. Flyoff if necessary.
E20 – Total of three flights, 20s motor run, 60s Max

Rules for all classes at https://oxfordmfc.bmfa.club/event-rules/

Saturday 27 Sept 2025 **BMFA Scale Competition**, Port Meadow:-

BMFA Flying Only (IC/CO2/Electric/rubber) to new BMFA rules – includes some minor static + workmanship marks
OMFC Hi-Start Scale Glider – Peterborough bungee, total of three flights, no static judging.
OMFC Scale Rubber Duration - max span 36" monoplanes, 30" multi-wing, no static judging, 90s Max, best of three flights + bonuses. Flyoff if necessary.

Postal Events

V20 – SAM 35 rules, 2 rounds April 1st – June 30th and July 1st – Sept 30th. For rules see:- https://sam35.org.uk/wp-content/uploads/Rubber-Vintage-V20-rules.pdf

Classic Rubber Kit Scale Indoor/Outdoor – Restricted model choice (see, rules below), variable Max + bonuses, multiple entries allowed (indoor + outdoor), Jan 1st – April 30th. For full rules see:- https://oxfordmfc.bmfa.club/wp-content/uploads/2024/10/OMFC-Classic-Rubber-Kit-Scale-Postal-Rules-v1.4.pdf

Coupe/P30 postal – September 1st to October 31st. Total of three flights, 90 second Max, entrants submit three times to Max + unlimited fly-off time, all flights must be on the same day. Send your times to webmaster@oxfordmfc.bmfa.uk . For rules see:- https://oxfordmfc.bmfa.club/wp-content/uploads/2023/12/P30-and-Coupe-Postal-rules-v1.2.pdf

Tailpiece

This is the Christmas Quiz about to get under way at the 2024 Fish Supper. The maximum possible score was 53 points, the actual scores were:

One Wing Low	37	Tie break answer: 4200
Mel's Mob	37	Tie break answer: 1200
Team Aeromodeller	35	
Triple A B	33	
Team Lewis	30	
The Honest Team	27	

Tie break question: How many McDonnell Douglas F-4 Phantom IIs were built? (Ans: 5,195)

Contributions to the Newsletter

Please let me have your contributions by the end of May for inclusion in the Summer 2025 newsletter. Anything aeromodelling-related would be of interest.

Send contributions to: Andy Blackburn at *newsletter@oxfordmfc.bmfa.uk.*