NEW Clarion

SAM 1066 Newsletter

Society of Antique Modellers Chapter 1066

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I Pad users: If you are having trouble opening the New Clarion, hold your finger on it to display a menu, then select "open in new tab". You will find the new tab to the right of the SAM1066 tab.

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Editorial

Here is something to get you all thinking: It has been suggested by Doug Hunt (SAM35) that consideration be given to the idea of amalgamation of the two Vintage modelling societies here in the UK, Sam35 & Sam1066. *(Perhaps SAM1101 ?)*

Personally the idea has been a hope of mine for several years now and I trust our committee will give the matter some thought. **Any members thoughts on a merger? Please write in.**

Indoor meetings, will some of you pen a few words on your indoor activities, Nick regularly writes something but we could do with another point of view.

What's in this issue?

- Leading off is a superb article on the build of a superb Coupe by Alan Brocklehurst. It's his latest iteration No.C-05 and all details and plan are published.
- Pylonius writes a bit of a thesis on modellers being booted off flying fields and offers a few suggestions. He also has a pop at Russian models and the reeds that are used in their construction.
- Next it's me digging into my picture files. This time it's Indoors in Cardington.
- Wikipedia provides details of a UK seaplane 'The Saunders-Roe SR.A/1' of the same era as the US one in the last issue.
- Next it's me again, this time digging out one of my epistles from the 2004 Clarion.
- Roger's North Wales Notes has quite a bit on Phil Smith and his Queens Cup model, a bit on ducted fan models, finishing up with gliders.
- Here and There in Model Aircraft December 1950 discusses US nationals. Advises that the '51 Wakefield contest will probably be in Finland. Reminds of rule changes and offers thoughts on team selection.
- Nick Peppiatt writes of Bostonians and the indoor competition held at Trinity in Newbury on the 11th October. He supplements his article with his usual pictures of some of the models and competition results. It does not escape your editors attention that Nick triumphed, gaining first place with his 'Sorta Senator'.
- Engine Analysis is the Byra 2.5.
- Our Membership secretary found an email/article in his junk folder on a 'Viking' Build by New Zealand's Alan Teal.
- From Model Aircraft December 1955 I reproduce a bit of humour by L Ranson. He tells of his nemesis Froggy Manners whose unavoidable yuletide attentions he is unable to dodge. Froggy issues a challenge in the shape of an R/C models race to Southend.
- Our secretary Ray winds up this issue with his Notes for Xmas 2025.

- Roger presents his plans of the month:
  - Woody's Wagon - a small power sportster
  - Welshman - a tailless glider
  - Phil Smith's Queens cup winner - a competition winner.
- Followed by the usual bevy of adds.

Finally can I draw your attention to the 2026 MAY WELSH promoted by our membership secretary, details in the adds.

Editor

My New Coupe, C-05

Background

My new Coupe, C-05, is now ready to be flown and added to my fleet of 3 other Coupes, C-02, C-03 and C-04. The new model has been developed from its predecessors with refinements to the structure and an increase in span.

Coupe d'Hiver, or F1G, is an interesting class to build and fly, thanks to the rules being nice and simple (70gm minimum airframe weight and up to 10gm of lubricated rubber motor).

Building a reasonably sized model (with modern e-timer/RDT and a tracker) down to this weight is a challenge and one which I continue to enjoy. It is probably the only F1-class where home-built wooden models can still compete well against carbon developments.

My first Coupe d'Hiver, C-01, was built back in 1976 and served to test the Opt-Prop propeller theory, Ref 1. This model had a wing structure influenced by Bob White's Coupes and featured a rolled sheet fuselage and fuse D/T. Over the years, the Opt-Prop theory was applied to several Open Rubber model props and, after I retired in 2011, I used it to design a new prop for my Coupes, C-02 and C-03. The construction of C-03, along with the plan and the propeller geometry was described firstly in the B&W Newsletter and later in FFN and FFQ, Refs 2, 3 and 4. I built C-03 (the red one) in what now seems like no time at all, choosing a rigid egg-box construction and an AB503507G aerofoil on a chord of 108mm (4.25"). The 'G' in the aerofoil designation refers to a thickness distribution which has a reasonably practical thickness at the trailing edge. This model, with its light-weight Tomy timer, has served me well over the years and is still regularly flown in competitions.

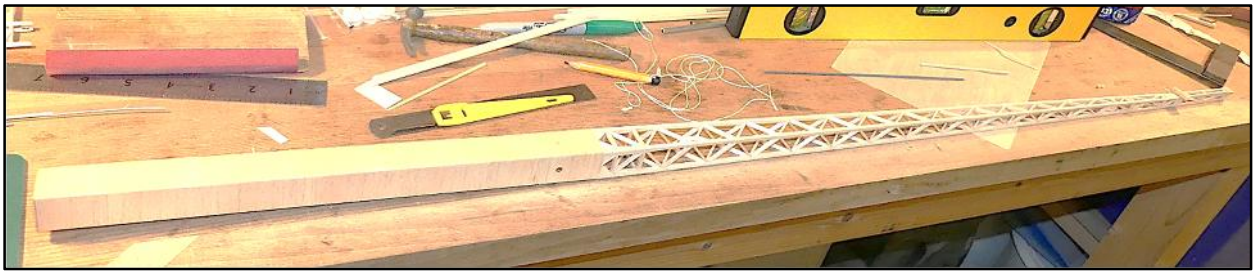
A few years later, in 2015, C-04 was constructed with the same 108mm inboard chord and a slightly larger span wing, using a similar 7% aerofoil at the root, reducing to 6% at the tip, but with a 'C' thickness distribution which was slightly thinner towards the trailing edge. This was done in an effort to improve the performance and used softer wood for the ribs in order to save weight. C-04 incorporated a Dan Kennedy e-timer and a Leobodnar RDT and initially used a Pym Ruyter radio tracker. Nowadays, all my Coupes are flown with BMK GPS trackers! Just as I was getting C-04 nicely trimmed, it encountered some trees on Salisbury Plain and wasn't retrieved until the next day. A night out in the rain left it worse for wear (with faded orange tissue), though largely intact. After that, I found it was difficult to maintain trim until I stiffened up the wing with some external carbon cap strips. Carbon caps were similarly retro-fitted to C-02 (which also had a thin wing) and now both these models fly much more reliably! C-03 continues without having had this treatment. In its reserve role, C-02 has had 42 competition flights. C-04 has been well used for 124 comp flights. However, C-03 remains my favourite and has accumulated 182 flights over the last 13 years. I have been lucky not to lose any of them!

I started building C-05, in Nov 2021, a couple of years after I presented a paper at the Free Flight Forum entitled 'How Big Shall I Build My Next Coupe?', Ref 5. Thinking to myself that I really ought to get on with it and actually build a another Coupe, I interrupted the construction of a RC Thermal Soarer with 'something that I could build *quickly* on the kitchen table', as it was rather too cold to work in the garage at the time! While I pondered the wing design, I started by building the fuselage which was to be slimmer and lighter than before. I then continued with the fin and tail, again with the aim of saving some weight.

Unfortunately, life interrupted me and I found myself with a certain amount of 'non-building' time available to further agonise about how large I should actually make the wing! Could I make a larger wing light enough? Should I follow Peter Hall and Roy Vaughan's lead and take on the challenge of developing a thin carbon wing? Or, should I build one just large enough in balsa? The desire to make a larger, higher aspect ratio and thinner wing for improved aerodynamic performance certainly pushes the structural design! In the end I opted to continue to enjoy building with balsa, after all, my existing models have stood me in good stead. I also thought long and hard about the size of the propeller, but in order to move things forward, eventually decided to re-use the existing design and jig.

Fuselage

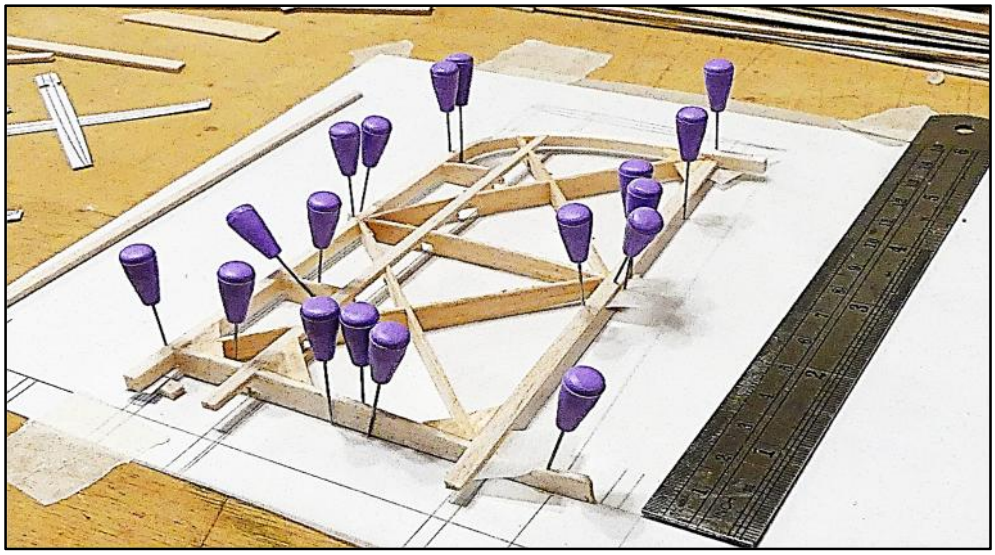
I find that using a square section fuselage makes it so much easier to control and maintain the side and down thrust to keep the model on trim. For this model, I decided to simply slim down the motor section by 1mm each side, to 26mm square, to both reduce drag and save a little weight. I chose light 3/32" square for the longerons and used really light 1/32" sheet for the top, bottom and sides. Since I have been happy that my built-up tail-booms have proved strong enough and give a good degree of stiffness, I retained this type of structure and was simply very careful in choosing the wood for the longerons which taper towards the rear. The spacers are also from lighter stock and their cross section reduces in sympathy with the longerons.



Completed fuselage with sheeted motor section and built-up tail-boom

Even though this fuselage isn't as small as some 'modern' Coupes, I still found myself concerned about the space remaining inside the fuselage for the front hook and Delrin bobbin when using up to 4 degrees side-thrust, so I designed a new bobbin with just enough space for the rubber, but with a smaller diameter and slightly greater width than the small white ones from FF supplies which I usually use.
The new black Delrin bobbins, which my son made for me on his lathe, are also fractionally lighter. An alternative would have been to use VIT/wing wiggler, or auto-rudder, but I find locked-down models so much easier to cope with out on the field! Like its predecessors, C-05 will be trimmed to fly in a right-left pattern.
Without the pylon, the fuselage, fin, tail-boom and motor-peg came out with a weight of 16.8gm, fully covered and doped.

Fin



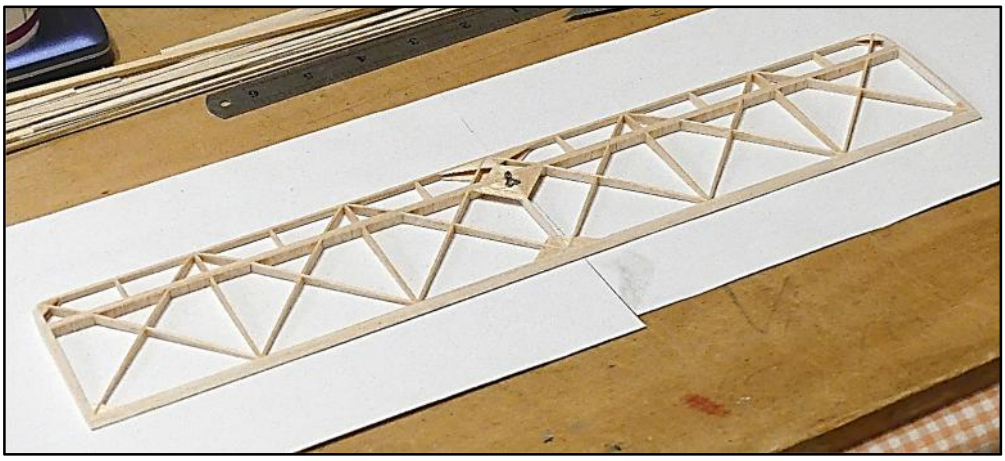
Fin under construction

There is little change to the fin, I just made it a bit lighter! I used 3 laminations for the leading edge rather than 4 on the previous models, slightly thinner spars, very light wood for the ribs and very light-balsa sheet for the rudder. The weight of the structure was 0.94gm prior to covering. Since the fin was glued to the fuselage before covering, I don't have a final weight!

Tailplane

All components were the subject of a detailed weight breakdown before they were built and the tailplane lead the way in optimising the structural layout. I changed from egg-box to reduce the weight of the ribs, going to full diagonals plus straight ribs for a geodetic style of construction with fewer riblets at the leading edge. I also followed this style of construction for the wing.
As before, the trailing edge is laminated to help keep it straight and robust and I found white-glue, thinned and used sparingly was the best solution. The leading edge is from very soft balsa and the spars are tapered and webbed at the rear.
I was tempted to go to a thinner aerofoil for the tail, but finally selected AB2030065G, which is 6.5% thick, to provide sufficient stiffness and rigidity.
The uncovered structure weighed 2.30gm.
The tail was covered with the lightest Jap tissue I could find, attached with minimal cellulose dope and afterwards I applied two thin coats of dope for weather proofing. At 3.74gm, it maybe not be as light as others tell me they can achieve, but I was reasonably happy with it!
Certainly a little Dayglo on the tips of the tail is useful in finding the model and I gave the tail a 'light-dusting' of white primer and orange Dayglo spray at the tips. Perhaps I was a little

heavy handed with the spray-can, as the new tail is now up to 4.12 gm, slightly more than I had been hoping for, but a little lighter than its predecessors.



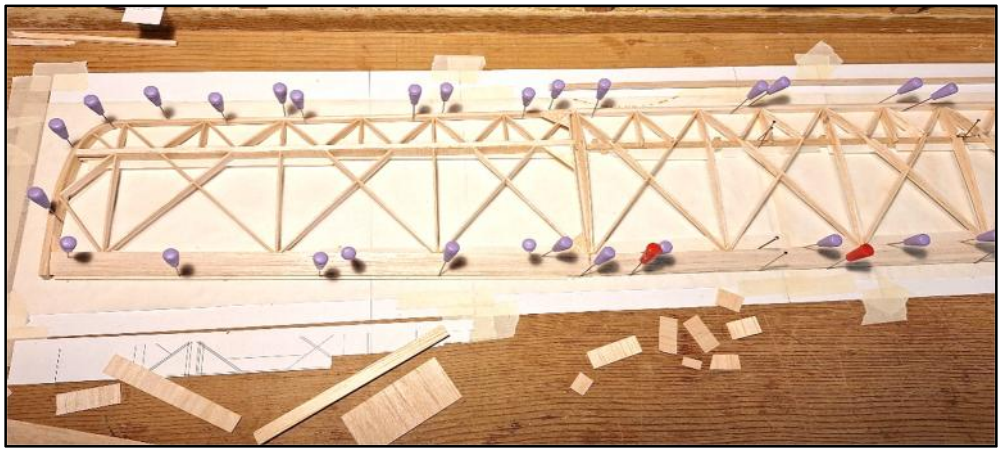
Tailplane structure ready for covering

Wing

At the outset, my intention was to build a Coupe wing which came close to the optimum size which I had previously calculated should be about 200in^2 (12.9dm^2), or perhaps a little more, with an aspect ratio approaching 13, Ref 5.

But, could I really build such a large, high aspect ratio wing with a thin section (ideally 5.5%, but more practically 6.5% thick) and keep the weight to 80gm? If I went to carbon, could I build it light enough? If I used balsa, would it be strong and stiff enough? This challenge forced the design of C-05 through several iterations, guided by detailed weight breakdown, until I came to a more practical solution, but one which would be a step up from my previous models.

Finally, the wing panels were drawn with lengths of 360mm and 260mm, with an inboard chord of 104mm (4.094"), just over the 'magic' 4", and tapering to 88mm at the tip. This gave a wing (panel) area of 193.4in2 (12.48dm2) and a span of 1240mm (48.8"), with an aspect ratio (based on the panels) of 12.32, slightly short of my target, but much more practical. I chose to retain a 7% aerofoil at the root, but gradually reduced the thickness/chord ratio along the span to 6.5% at the dihedral break and 5.5% at the tip. The cross-section of the spar also tapers from root to tip and is webbed over most of the span and uses thinner and softer material toward the tips to save weight, while the webs help keep it stiff. As for the tail, I went away from egg-box to full-diagonals and straight ribs and also used some straight and diagonal riblets at the leading edge. I like the surface irregularities caused by the riblets as they probably have a slight turbulating effect.



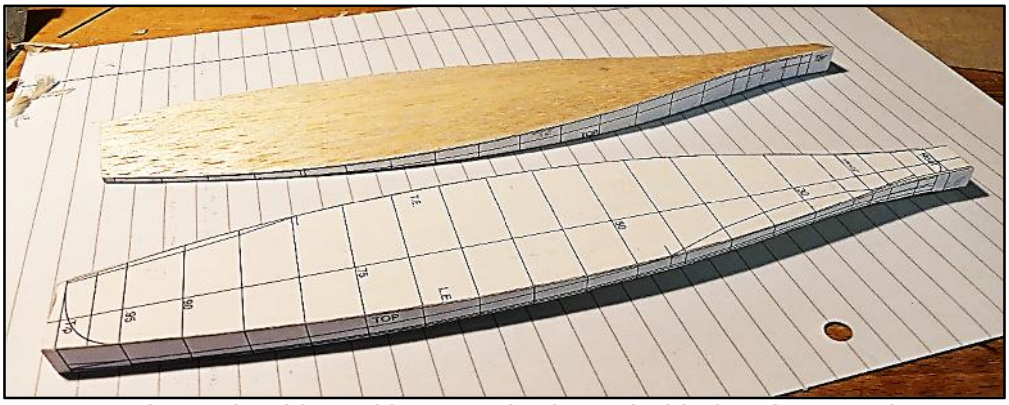
Wing under construction showing diagonal and straight ribs and riblets

Following my usual practice, the wing was drawn in Rhino (3D solid modelling CAD software) and the plan was printed out on several A4 sheets, carefully trimmed and placed end-to-end on the building board. I was lucky that I had some nice, light, quarter-grain 1/32" sheet available for the ribs and web, but struggled to find really perfect material for the leading and trailing edges and spar, but even so the weight came out at 16.85 gm before covering, compared to my prediction of 16.42gm. The wing was covered with Jap tissue and given a couple of coats of dope. From a practical point of view, I find having Dayglo tips on the model is extremely useful when looking for the model in the long grass of Salisbury Plain, but judicious use of the spray can is required to minimise the extra weight! Final weight is 23 gms, which I think is quite reasonable for a wing of this size (currently without carbon caps, although I have some 0.10mm x 1mm strips to hand, if required!).

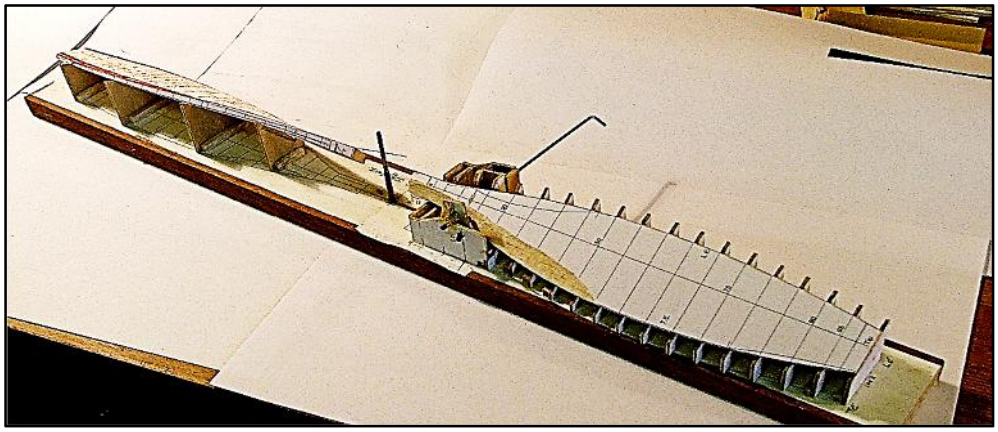
Propeller

Since I have been happy with how my existing Coupe propeller design has performed over recent years, and rubber energy has remained more or less constant, I could see no reason to change the already optimised prop design, so I simply decided to make another Coupe prop the same as before, as described for C-03 in Refs 2, 3 and 4. At 490mm (19.29") diameter and P/D=1.282, the current Opt-Prop design gives a motor run of about 55 secs on a 'thinner', longer rubber motor, or about 48 seconds, or so, on a 'thicker', shorter one, the latter giving a faster climb which is useful in breezy conditions.

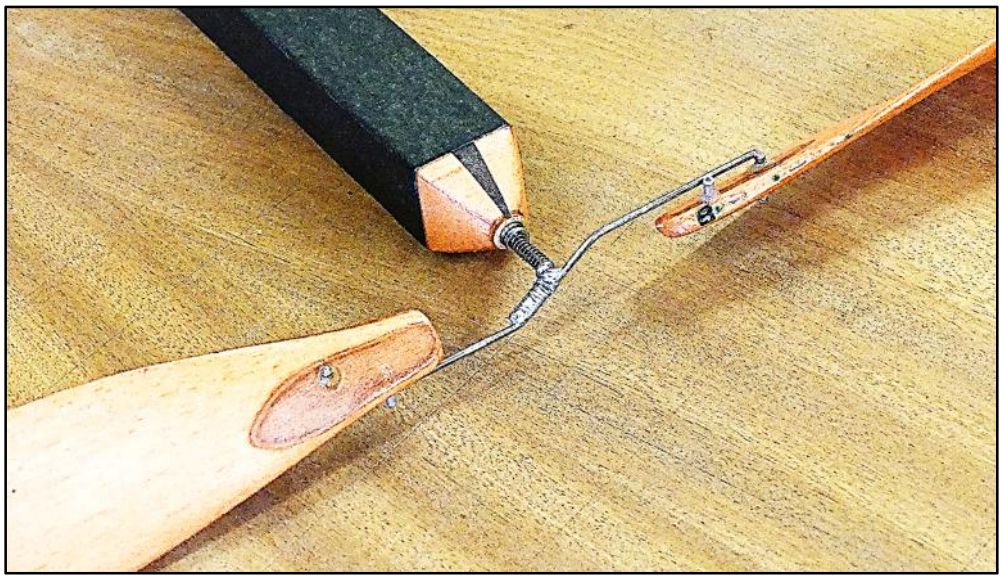
I had been saving some nice soft, 1/4-grain, 7.5 lb/ft^3 wood for the blades of C-05. As shown in the photo below, using computer generated templates and checking against the existing jig made carving easy. The blades, which are hinged at 22.5%R to avoid clearance issues, came out at about 3gms each, as expected. The final total weight of the nose-block and propeller is almost exactly the same as that of C-04 at 17gm. The nose block, with its (2mm bolt) 'wood-screw' stop, could be a little lighter, but there is no real gain unless I can somehow save significant weight at the tail.



Templates printed from Rhino were glued onto the blanks prior to carving



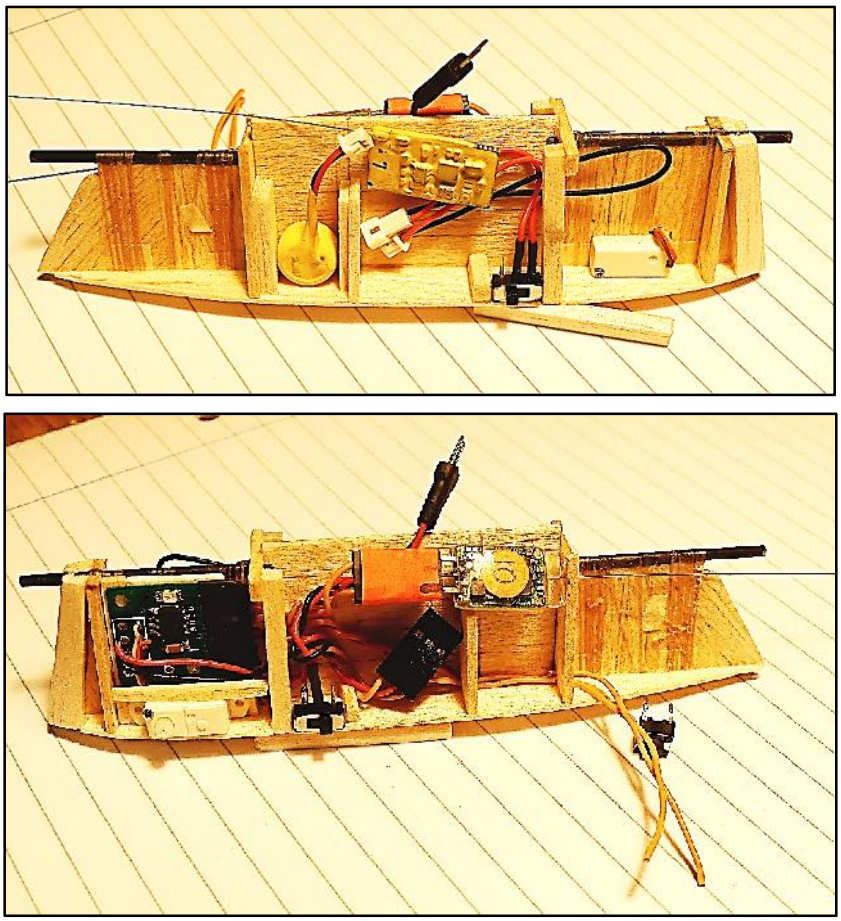
Blades with undersurface carved were checked on the prop jig



C-05 Prop assembly with freely floating hinged blades

Pylon

Considering the amount of electronic gadgetry in the pylon, there is no wonder that the finished component totalled 12.6 gm. Most of this weight is due to the Li-Po batteries, e-timer, servo, RDT, GPS-tracker, plugs, wiring and a couple of miniature slide switches (much more convenient to be able to switch-off, rather than have to remove the wing to unplug to save battery life). Cramming all the electronics into the pylon isn't my favourite occupation, but I found it a little easier this time around, having drawn it all out in Rhino beforehand. The following photos show how the electronics were squeezed into the pylon (before sheeting), leaving just enough space for batteries, with perhaps some scope for the tracker to be tried in different orientations, whilst the electronics are all sheltered from the weather.



C-05 Pylon structure and electronics being fitted before adding external sheeting

After covering and doping, and checking that all the electronics were working, the pylon was held in place temporarily with rubber bands while the whole model was balanced on a U-shape piece of plywood (with rounded ends) held in the vice. The position of the pylon was then adjusted until the CG was located at exactly 68% chord. The position of the pylon was marked and later glued in place, and the CG checked again. Adding the timer-start push-button external to the pylon, with a bit of araldite and balsa fairing, robbed me of another gram or so, but hopefully the installation will be sufficiently waterproof to give long service.

Pylon on finished model showing servo D/T release, on/off switch, push button start switch and window to view the e-timer bright-blue LED.

The Finished Coupe, C-05

The complete model is illustrated on the following dimensioned drawing, printed from Rhino. The nose length and tail arm reflect the final position of the pylon to give the desired CG of 68%. I am happy to share either the CAD files or plan and prop templates should anyone like to use them.

The model has been set up similarly to my other Coupes, for a right-left flight pattern, so I am hoping it will be straight-forward to trim.

At the time of writing, the model hasn't been flown! Unfortunately, I wasn't able to go to the recent 8th Area event which had light wind conditions that would have been ideal for trimming, so I look forward to test-flying my new Coupe whenever a calm day presents itself next season.

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1. Brocklehurst, A:
"Opt-Prop: An Extension of the Schwartzbach Approach to the Design of a Propeller with an Optimum Loading Distribution", 10th Symposium Report of the NFFS, 1977.

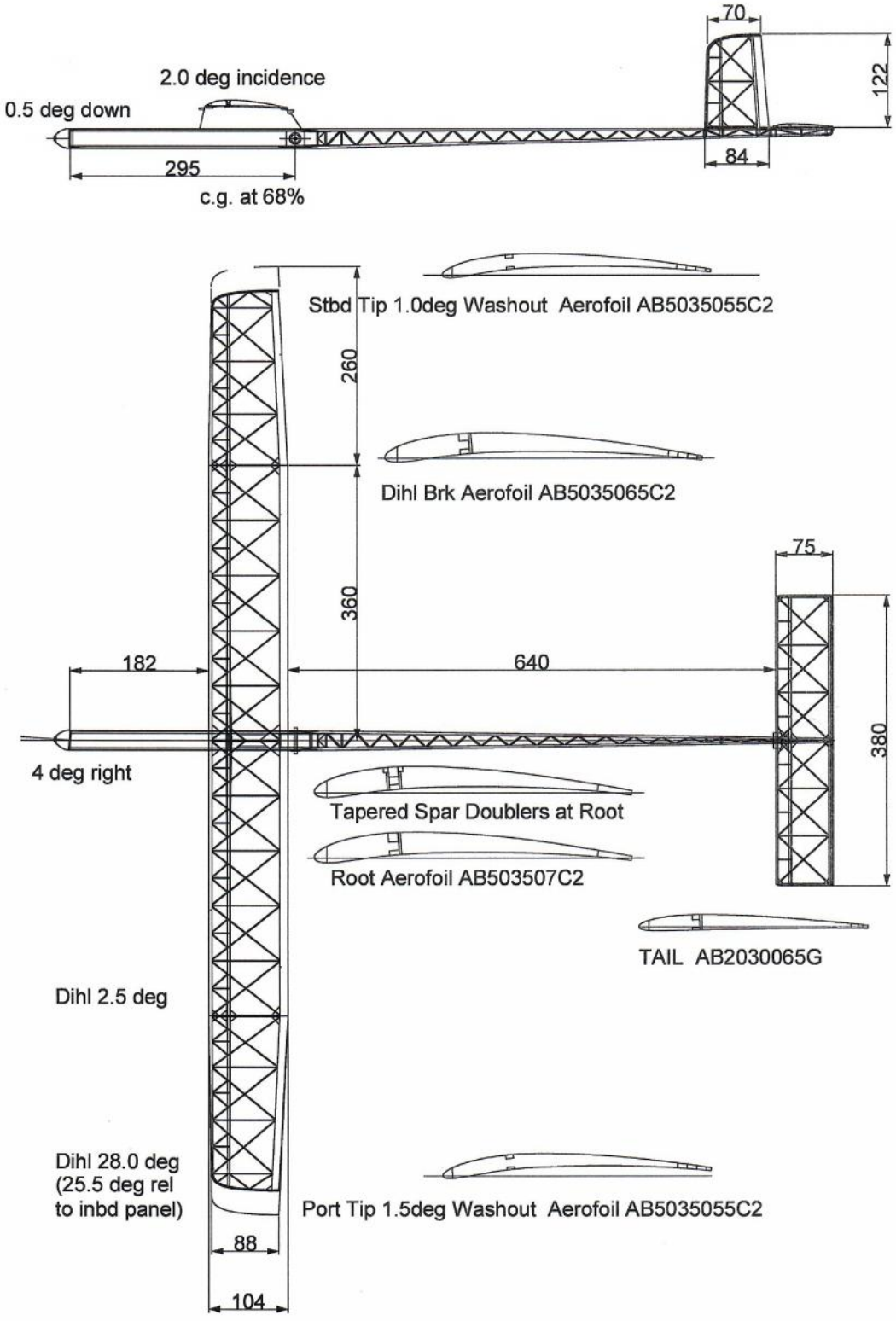
2. Brocklehurst, A:
"Coupe C-03" Bristol and West Newsletter, Issue 81,December 2013.

3. Brocklehurst, A:
"C-03 (F1G)" Free Flight News, 1503, pp20-25, March 2015.

4. Brocklehurst, A:
"C-03, A New F1G Design", FFQ, Issue 56, July 2015.

5. Brocklehurst, A. "How Big should I build my next Coupe? " Presented at the 35th Free Flight Forum, 17 November 2019. Published in the 35th Free Flight Forum Report 2020.

C-05 by Alan Brocklehurst



Alan Brocklehurst

Model Aircraft December 1956

Topical Twists by PYLONIUS

Taking the Field

A writer to this journal seems to be sore about being booted off other people's flying fields. And we must have every sympathy with him, for constant bootings off is enough to make anyone sore about. He argues, quite commendably, that it's high time we modellers did a bit of land grabbing ourselves, so that we might do a bit of booting off ourselves for a change. After all, if the undersized backstreet kids can have National Playing Fields, why not National Flying Fields for us overgrown, backward kids? But before I get carried away (not literally, you hopefuls) I might explain, for the benefit of Londoners and other such underprivileged peoples, what a flying field really looks like. Any open space is, of course, fair game to the model flyer. Parks, for instance, make ideal flying sites. The only snag is the ever vigilant park-keeper, backed up by the local council, and a threatening populace. The alternative is the Public Common. They are, however, affected by some curious law of spatial mathematics which decrees that any point of the common from which a model is launched is exactly one minute's flying time from an impenetrable cornfield. This law remains constant whatever the wind speed or direction. To complicate matters the old ladies who stitch the red cotton spacers through our lampwick D/T have, alas, only a 90 second hour glass by which to work.

A few flights can be made across the common during the brief lulls that occur in the bitter warfare over commoners' rights. Motorists stand bumper to bumper to preserve the sanctuary of this rural car park ; horse riders are prepared to trample all opposition underfoot ; and family cricket parties are uncompromising in pursuit of their games of bat and bawl. All, however, are firmly united against the beleaguered model flyer. Some hostile factions even employ specially trained dogs, which slaver at the mouth at the very sight of a crisp, crunchy model. More fiendish still are the equally well trained tiny tots who are turned loose to inflict model carnage under the cloak of baby curiosity. Ultimate triumph, though, is often secured by the Electricity Board, who, at the slightest provocation, will plant a monster pylon plumb in the centre.

Another, more rare, type of flying field is the airfield proper. Generally these can be freely used by the public without let or hindrance. The model flyer, however, is specially privileged ; he has proper permission to use the field, and has only to observe a few minor rules, such as carrying an identity card and £25,000 insurance coverage, to enable him to mingle on equal terms with the dog walkers, footballers and horse-riders.

So let us have a flying field that is all our very own. But where to site it? If it's too near habitation you'll have the inmates turning down the volume control knobs of their radios so that the neighbours, too, will be able to complain about the noisy models. Why! the Liberace-loving people will have you turfed out before you could say Davy Crockett. If, on the other hand, you opted for some rural backwater you'll sure to be treading on somebody's corn, and you'll be ploughed up before you could say Dan Archer.

There remain, alas, only two practical alternatives : the Gobi desert and Chobham Common, the latter having the slight advantage of being nearer home.

* * *

The Re(e)d Peril

In Britain model flying comes under the kitchen table category of a hobby; on the Continent it is quaintly referred to as a sport ; but what they call it in Russia, apart, perhaps, from an extra-Komsomol activity, is a complete mystery (which is possibly a good thing, as my ancient typewriting machine doesn't print P's backwards). No doubt the Russians have a name for it (see a 'Guide to Russian modelling—Steppe by Steppe') as, possibly, they have for that queer reed like stuff with which they build their Wakefields.

This reed, it is reputed, grows in treacherous profusion in the shallows of the Volga, and though the very vocal boatmen must have a name for it I couldn't publish it even if my typewriter were able to print P's backwards.

We must all have felt a pang of sympathy for our Soviet comrades upon learning that a Wakefield of the wonder reed takes a whole year to construct. This, by strange coincidence, is exactly the time it takes me to build one of balsa—but, then, I have the excuse of being married. The wag who asked if the building procedure might not be shortened if a razor blade were used instead of a hammer and sickle was coldly informed that the hammer and sickle were used only to cut the stuff from the river bed.

But twelve months to build a model! No wonder the five year agricultural plans go haywire. With all those manski hours at stake, little Ivan isn't going to stand on ceremony over a few ears of corn, and the collectivised peasantry regard the model invader as a greater scourge than the wild Cossack of yesteryear.

Happily, a new type of reed has now been discovered which will allow a model to pass through a combine harvester without damage.

* * *

Over the Radlett field I scoured
With desperate intent
By models diesel and rubber powered
And a few with ducted vent.
By gliders circling on the wing
And radio jobs galore,
By engines twirling on a string
And many, many more.
But where I looked I looked in vain
For the magic words to grace
The flank or wing of some proud plane,
Taking pride of place.
But as I drooped in blank despair
For mods so lost of soul
I glimpsed at last the sight so rare
A job called 'Rock 'n Roll.'

* * *

We are advised of the recent publication of a handy little book called 'Know Your Airliners.'

Should come in useful for all you lucky owners of airliners.

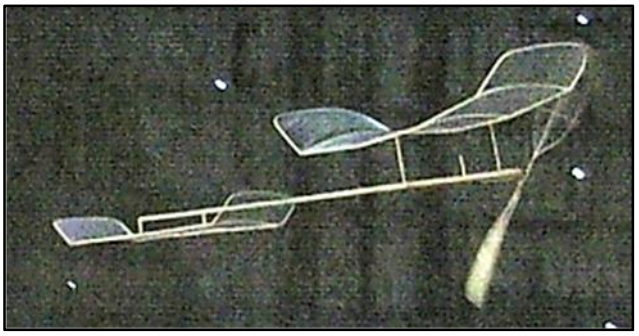
* * *

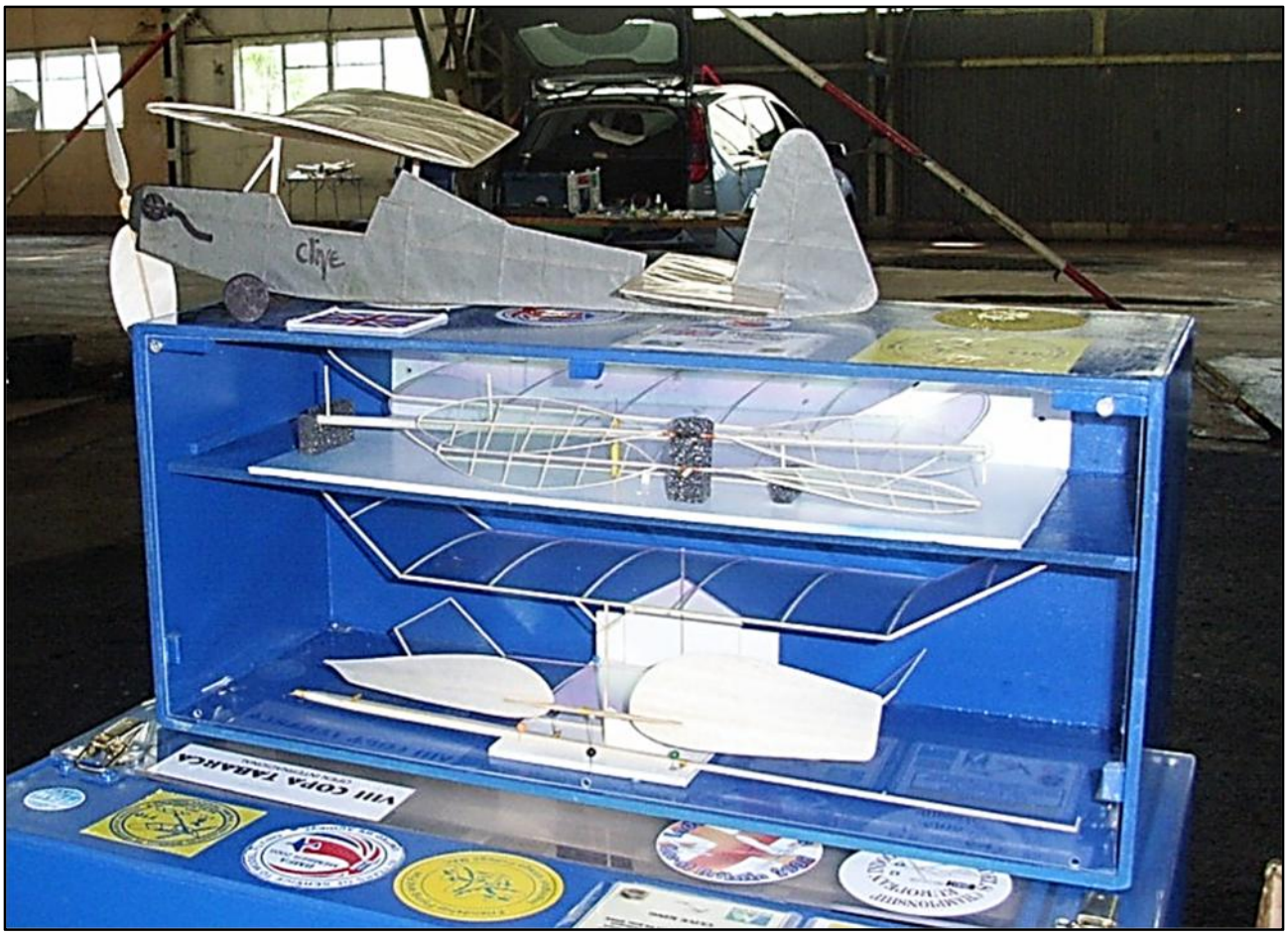
And just a last word. I wonder why our artist friend, Ray Malmstrom, depicts his 'Aerobods of Note' with such large heads. Surely a few of them must be modest creatures?

Pylonius

Cardington Pictorial - John Andrews

Just a few random pictures from my files when we were indoor active in one of the Mighty Airship Hangars at Cardington in 2008/09.





John Andrews

Saunders-Roe SR.A/1: - Wikipedia

The Saunders-Roe SR.A/1 was a prototype flying boat fighter aircraft designed and built by British seaplane manufacturer Saunders-Roe. It was the first jet-propelled water-based aircraft in the world.

The concept behind the SR.A/1 originated during the Second World War as a reaction to Japan's successful use of military floatplanes and the emergence of the turbojet engine. Saunders-Roe presented an initial proposal of their jet-powered seaplane concept, then designated **SR.44**, to the Air Ministry during mid-1943. In April 1944, the Ministry issued Specification E.6/44 for the type and supported its development with a contract for three prototypes. Development was protracted by Saunders-Roe's work on other projects, the war having ended prior to any of the prototypes being completed.

On 16 July 1947, the first prototype made its maiden flight. The SR.A/1 was evaluated by the Royal Air Force (RAF), who concluded that the design was incapable of matching up to the performance of land-based designs. Despite interest from foreign governments, including the United States, no orders for the SR.A/1 materialised. As such, it never entered volume production or saw service with any operators. While interest in the SR.A/1 programme was briefly revived following the start of the Korean War, the aircraft was considered to be obsolete by that point and was again rejected.

SR.A/1

TG263 on the water

General information	
Type	Flying boat fighter
Manufacturer	Saunders-Roe
Status	Experimental
Primary user	Marine Aircraft Experimental Establishment
Number built	3
History	
First flight	16 July 1947
Retired	1951

Design and development

Origins

The SR./A.1 was directly inspired by the modest successes experienced by the Imperial Japanese Navy in using seaplane fighters, such as the Nakajima A6M2-N (an adaptation of the Mitsubishi Zero) and the Kawanishi N1K. Seaplanes had performed successfully during both of the world wars although, according to author H. F. King, their achievements were often not highly publicised or well known. Prior to the introduction of the Gloster Gladiator, every British shipborne fighter was designed with an interchangeable wheel-or-float undercarriage. In theory, seaplanes were ideally suited to conditions in the Pacific theatre of the Second World War, and could turn any relatively calm area of coast into an airbase. Their main disadvantage came from the way in which the bulk of their flotation gear penalised their performance compared to other fighters.

Both immediately prior to and during the war, Britain made very little use of seaplane fighters, instead relying upon aircraft carriers and land-based fighters as the basis of their military operations, despite the concept having remained popular with other powers, including Japan, Italy, and France.
Proposed seaplane conversions were produced for both the Hawker Hurricane and the Supermarine Spitfire to meet operational needs in the Norwegian Campaign, but were largely curtailed following the rapid German victory in this theatre.
No quantity production of seaplane fighters followed. It was in this backdrop that British seaplane manufacturer Saunders-Roe recognised that the newly developed turbojet engine presented an opportunity to overcome the traditional performance drawbacks and design limitations of floatplanes. By not requiring clearance for a propeller, the fuselage could sit lower in the water and use a flying boat-type hull. The prospective aircraft's performance when powered by Halford H.1 engines was projected to be 520 mph at 40,000 ft.
Saunders-Roe speculated that, as floatplanes could have staging grounds nearer to their objectives than land-based counterparts, both the time and effort involved in mounting missions, particularly offensive ones, could be reduced. Early jet aircraft were typically restrained in terms of their range due to the high fuel consumption involved, a factor which could be overcome by bringing forward their staging areas, something which a floatplane would be readily capable of doing. Re-basing to virtually any body of water could also be performed with little in the way of setup or ground preparation, according to the company.

Order and production preparations

Saunders-Roe first presented their idea, then designated as the *SR.44*, to the Air Ministry during mid-1943. Criticisms of the design were produced by Ministry officials, included the observation that the wing thickness/chord ratio was considered to be too high for a high-speed fighter when operating at a high altitude. In response to these criticisms, the seaplane's design was modified and refined. During April 1944, the Air Ministry issued Specification E.6/44 in direct response to the modified design. In the following month, an accompanying development contract covering the production of three prototypes was issued to Saunders-Roe.
At this point, there were intentions for the SR.A/1 to be used in the Pacific theatre against Japan; as such, there were measures taken even at an early stage of development to support immediate quantity production. However, shortly following the end of the Pacific War in August 1945, Saunders-Roe opted to concentrate its efforts on the Saunders-Roe Princess, a long-range civilian flying boat project, a choice which caused development of the fighter to slip behind. Due to the war's end, pressure for the commencement of the type's production had lessened significantly.

Flight testing and cancellation

On 16 July 1947, the first prototype, piloted by Geoffrey Tyson, conducted its maiden flight. Barely two weeks later, Tyson flew the fifth flight for a crowd of officials representing multiple organisations, including the Royal Navy, the Royal Air Force, the Royal Aircraft Establishment, Saunders-Roe, Metropolitan-Vickers and at least one unidentified foreign government. Subsequent flight testing with the prototypes revealed that the SR.A/1 possessed a relatively good level of performance and handling. Its agility was publicly displayed when Tyson performed a demonstration of high-speed aerobatics and inverted flight above an international audience at the 1948 Farnborough Airshow while piloting the type. During the flight test programme, two of the three prototypes suffered accidents, leading to an interruption in the trials and modifications being made to the remaining intact aircraft. TG263 appeared in a Pathé Newsreel in July 1947. TG271 appeared in a BBC Newsreel in August 1948.
The SR.A/1 possessed a somewhat small and heavily framed cockpit canopy, which provided the pilot with a poor view outside the aircraft, a particularly negative feature for a prospective fighter aircraft. Despite this, the pressurised cockpit was relatively spacious, providing enough room to accommodate an additional crew member potentially; an observer could also have been seated in a more rearward position. As a measure to increase survivability, two of the SR.A/1 prototypes were fitted with the first two production Martin-Baker ejection seats to be built. An automatic mooring system was incorporated, allowing the pilot to moor the aircraft without any external aids or even having to leave the cockpit. The air intake for the engines was extendable to minimise the ingestion of seawater during takeoffs, although testing revealed only minor performance decreases due to this factor. To reduce drag, the floats could be retracted during flight.

A fundamental problem that emerged during development was that the Beryl engine, which powered the type, had ceased production when British manufacturing conglomerate Metropolitan-Vickers had decided to withdraw from jet engine development, leaving only a limited number of engines

available. For any production to have proceeded, an alternative powerplant would have to have been acquired.

Despite possessing some favourable qualities, officials judged that the need for such aircraft had completely evaporated with the end of the war. Furthermore, the success of the aircraft carrier in the Pacific had demonstrated a far more effective way to project airpower over the oceans, though Saunders-Roe argued that carriers and their escorts were still very vulnerable to aircraft or other vessels.

Due to a lack of orders, work on the project was suspended, leading to the remaining prototype being placed into storage in early 1950. During November 1950, shortly after the outbreak of the Korean War, interest in the SR.A/1 programme was briefly resurrected. This interest was not just confined to Britain; data on the project was also passed onto the United States. However, it was soon recognised that the concept had been rendered obsolete in comparison to increasingly capable land-based fighters, together with the inability to solve the engine problem, forcing a second and final cancellation. During June 1951, the SR.A/1 prototype (TG263) flew for the last time. It is now in the Solent Sky Museum in Southampton, UK.

Although the aircraft never received an official name, it was commonly referred to by company workers as "Squirt".

TG263 at Solent Sky in 2011

A Metropolitan-Vickers F.2/Beryl turbojet engine

The first prototype, serial number *TG263*, has been preserved and is on display at Solent Sky aviation museum in Southampton. Both other aircraft (*TG267* and *TG271*) were lost in accidents during the four-year flight test programme.

Specification (SR.A/1) *Data from* British Flying Boats**General characteristics**

- **Crew:** 1
- **Length:** 50 ft 0 in (15.24 m)
- **Wingspan:** 46 ft 0 in (14.02 m)
- **Height:** 16 ft 9 in (5.11 m)
- **Wing area:** 415 sq ft (38.6 m^2)
- **Empty weight:** 11,262 lb (5,108 kg)
- **Gross weight:** 16,000 lb (7,257 kg)
- **Max takeoff weight:** 19,033 lb (8,633 kg) max. overload weight with slipper tanks[23]
- **Fuel capacity:** 424 imp gal (509 US gal; 1,930 L) internal fuel,[24] provision for two 149 imp gal (179 US gal; 680 L) slipper tanks[23]
- **Powerplant:** 2 × Metropolitan-Vickers Beryl MVB.2 turbojets, 3,850 lbf (17.1 kN) thrust each

Performance

- **Maximum speed:** 512 mph (824 km/h, 445 kn)
- **Endurance:** 1 hr 48 min
- **Service ceiling:** 48,000 ft (15,000 m)

Armament

- **Guns:** 4 × 20 mm Hispano Mk 5
- **Rockets:** 8 × rockets[23]
- **Bombs:** 2 × 1000 lb (455 kg) bombs

Wikipedia

John Andrews – Engines 1 – etc.

I've just come back indoors with the heady smell of diesel fuel fresh in my nostrils, you can't beat it. I'm hoping my activities in the garage will help me to overcome the inertia in my winter building programme.

My winter building programme has been virtually non-existent. Well, that's not strictly true, I did have a programme but acting upon it has been significantly less than dynamic.

It was my hope to expand my power model stable, all I've got is my STOMPER No.2 and the TOMBOY, that's more akin to a hitching rail rather than a stable. I had been looking for a vintage pylon job and managed to acquire the plans for the JIMP. To my eyes the JIMP has a real vintage look to it but I did not have an engine with a similar vintage look. All I had at the time was a couple of Frog 249BB's which I did not think suited the design, so I put the JIMP on the back-burner and looked for something else.

I'd seen Andy Crisp flying a MALLARD and, until then, it hadn't registered that it was vintage. I decided that the MALLARD would be much more suitable for one of my 249BB's and decided to look for a plan. Being a regular visitor to David Baker's Hanger Meetings at his home, I did not have to look very far. My enquiry about the plan for the MALLARD met with more than a little success. David disappeared into his backroom, emerged some minutes later and casually dropped a dusty grey kit box onto the table. Not only the Mallard plan, but the complete kit. The wood was all grey and dusty like the box but there were all the marked out sheet parts, what a find. David offered to get the plan reproduced and I took the rest of the kit home and scanned all the sheet parts onto my computer. I now have all the details on file, ready to print out and start work.

The intention was for this epistle to be about engines, but you know I digress. Selecting an engine for the MALLARD is not as easy as I might have lead you to believe, I now have four Frog 249BB's to chose from. "How come?" you might ask. I'll tell you.

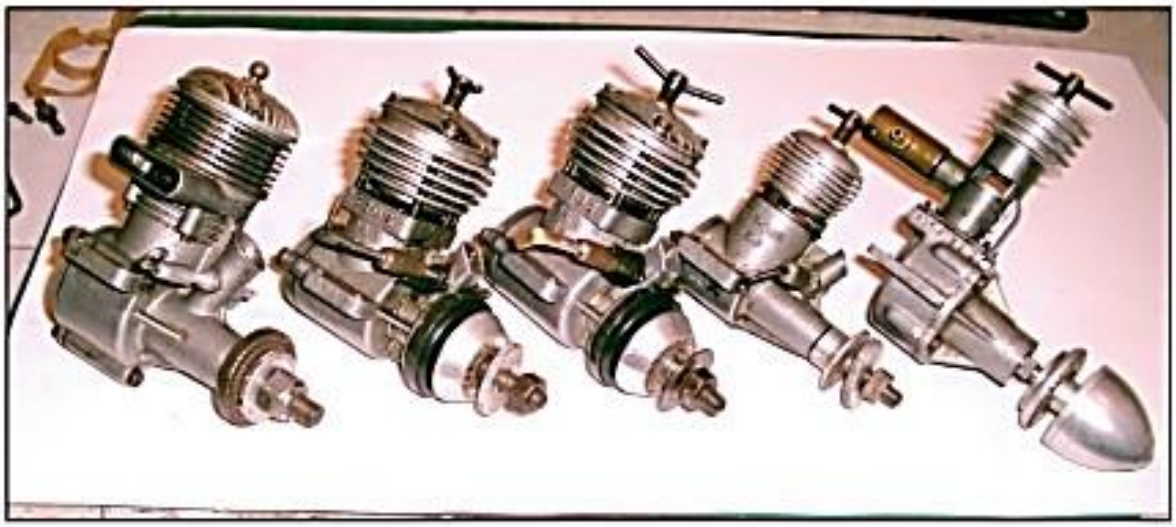
Historically I have one of my own from the control-line combat days. I have another, with smaller cooling fins, that was John Bickerstaffe's team race engine. The other two arrived as follows.

Late last year I made contact with my number one flying buddy from the fifties Ian Lomas and, after a couple of meetings, he came round one Saturday and we went indoors to Alumwell then back to my place in the evening for a curry supper and to renew his acquaintance with Bickerstaffe. Ian brought with him a bumper gift parcel.

First item was my old Frog 500, I have wondered on and off where it went too, now its back home. In the old days we all bought engines, but it was more of a pool that we all dipped into as required. It was much the same when we went to combat meetings, we all started off with our own models but if one of us got through the early rounds we rarely had more than the remnants of one model left for the finals.

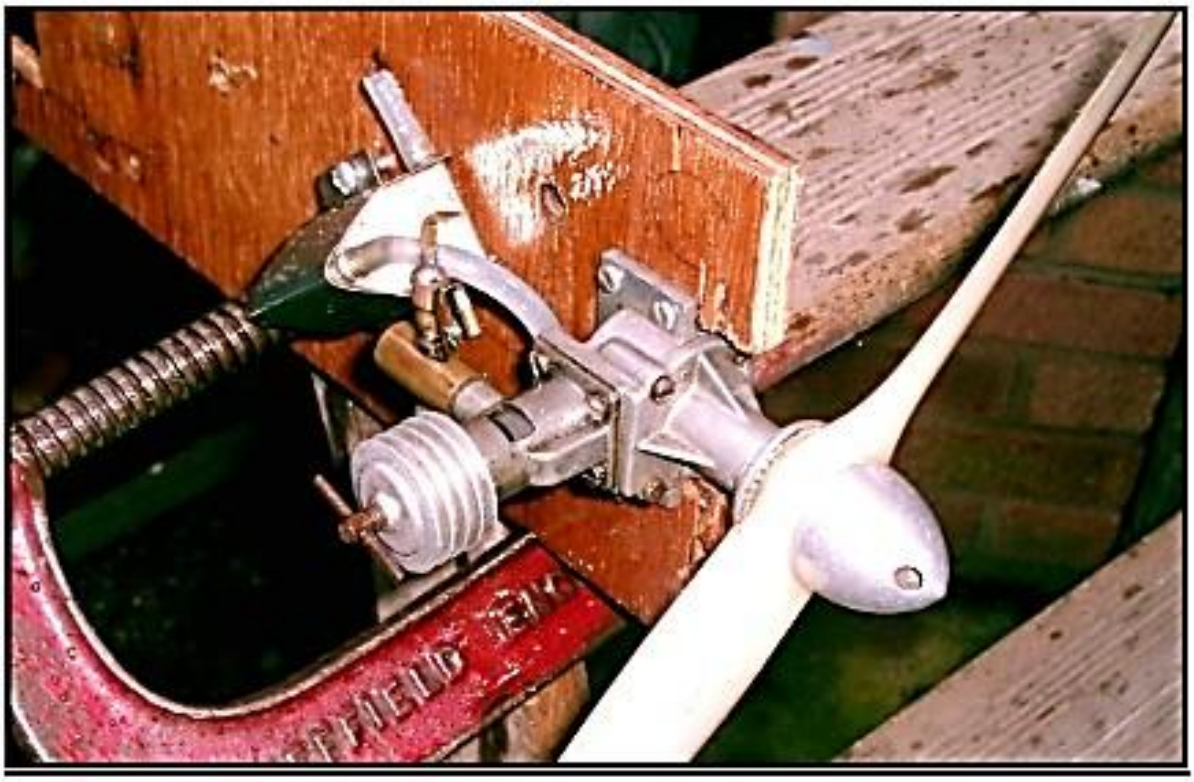
Next out of the bag, two Frog 249BB's. Ian thought one was mine, but I still had mine, so whom the extra one belongs to is anyone's guess.

There followed a nice example of a Frog 149 that would be much more fitting for my STOMPER than the PAW 1.5 that's in it at the moment.



Contents of Ian Lomas's Gift Bag for the author

Finally, the pick of the crop emerged, an ED Competition Special. The Comp was without the tank and was fitted with a homemade venturi and a spraybar containing a long straight tapered needle that must have come from a Frog 500. Not standard but it works, more of that later.



ED Competition Special awaiting test run

Going through the engines with good old WD40, to loosen them up, provided me with the kick-start for the winter building programme. I mentally took the JIMP off the back-burner, as the ED Comp would be the ideal power plant.

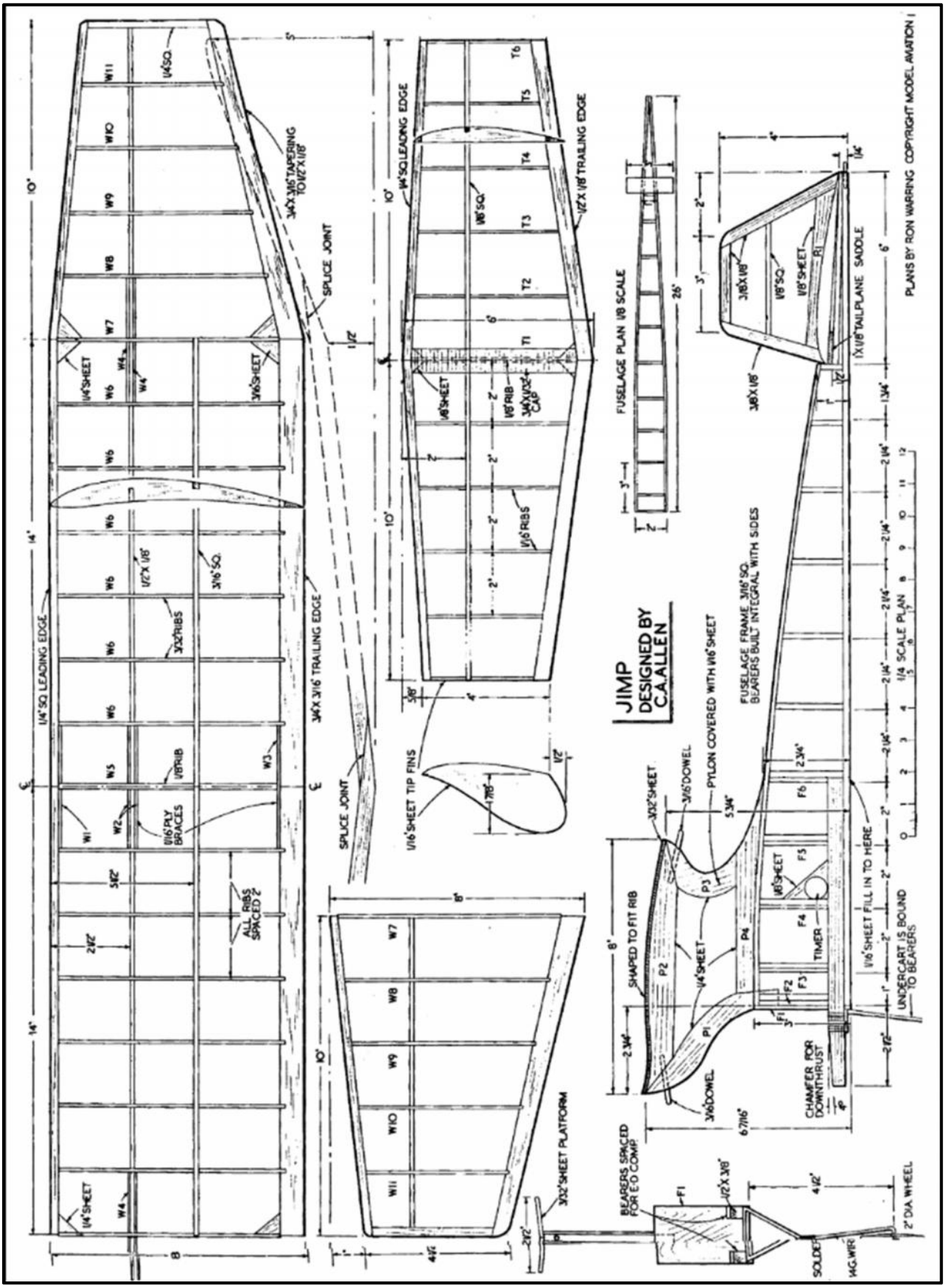
First things first, I screwed the Comp to a piece of plywood and repaired to the back yard for testing. I normally clamp the test engine ply mount in my workmate but I haven't bothered to test run any engines for some time. The workmate was now holding up one end of a scrap door in the garage on which my model boxes reside, so needs must and I clamped the test piece to the side of a pair of stepladders with a large g-cramp as in the photo. That's me all over, crude but serviceable. The engine had arrived from Ian together with an old 9x6 Frog white nylon prop, a real vintage set-up all ready to go.

I filled the old stunt tank that was screwed to the test bed, opened the needle on the ED three turns and started flicking. I squitted some fuel at the exhaust opening and carried on flicking but no joy. The engine felt quite good so I then started winding up the compression and about one turn latter Pop!. A couple of flicks more and away she went. I closed down the needle and backed off the compression and the ED was running as sweet as a nut.

My memories of the ED Comps of the fifties, is of sergeants stripes on the back of the flicking finger but there was no sign of this one biting me at all. I backed the compression right off and the engine ticked over beautifully with the characteristic bark of the open exhaust diesel. The engine stopped and I idly turned the prop and away she went again. I could not believe this, so I pinched the fuel line to stop it again, and one half hearted flick and away she went again. I repeated the exercise two or three times more and the restarts were faultless. Just you wait until I get it in the JIMP, that'll cure it. One final quirk happened before I called it a day. The ED was running as slow as I could get it when it went pop but carried on running. Looking at the exhaust I noted it was blowing the other way. The engine had reversed itself and being a side port, was merrily carrying on backwards. Imagine the JIMP on a low power test flight about 30 feet up and pop, the engine reverses, food for thought.

A few days later I got the urge to smell diesel fuel again so I put one of the Frog 249BB's on the ply and out came the stepladders and the G-cramp. Using the same 9x6 prop, I opened the needle three turns, filled the tank, primed the exhaust and two flicks it was running. As I peaked it out it occurred to me that this motor had not been run for well over 40 years. Flushed with success I mounted another Frog on the test bed and although it took a few more flicks, I soon had No.2 going, MALLARD Hoh!

Left, a prototype Frog 249BB perhaps (next time)



From old paperback Clarion 2004

John Andrews

Notes from North Wales - Roger Newman

Occasional Notes from North Wales Dec 2025

What triggers themes in these notes? All sorts of things - this month it was an archive black/white photo from the early '50s of Mrs Phil Smith (he of Veron fame) "launching" Phil's Lavochkin 17 ducted fan free flight design, powered by an Albon Dart, at Langley Airfield. Model aircraft events in those days had quite a high profile; the then Queen and Princess Margaret visited the Northern Heights Gala at Hawker's airfield at Langley in 1948 & presented Phil with a Queens Cup for his comp win. Hawker Aircraft Ltd had purchased land at Langley in 1936 and built a factory and airfield. By 1938 the factory was completed and producing one Hurricane a day, rising to five a day in 1942. During 1941/42 a few Typhoons were built. The site continued in use after the war but testing of aircraft was hampered as it was only a few miles from London Airport. In 1950 the company acquired the tenancy of Dunsfold airfield in Surrey and vacated Langley.

Mrs Phil Smith & LA17

Phil Smith, Queens Cup & Model of same name

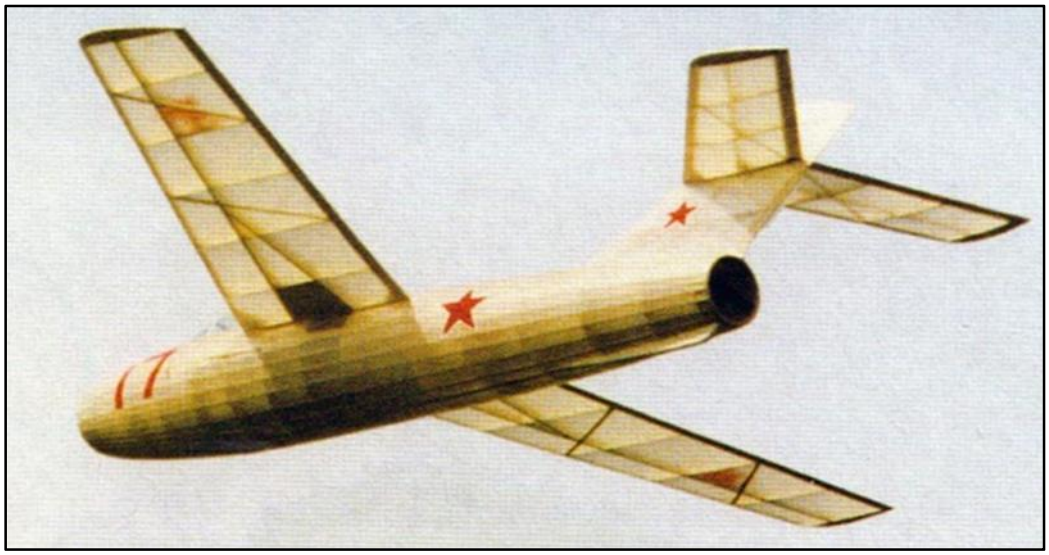
The same model(s) appeared on the front cover of the January1953 Model Aircraft mag.

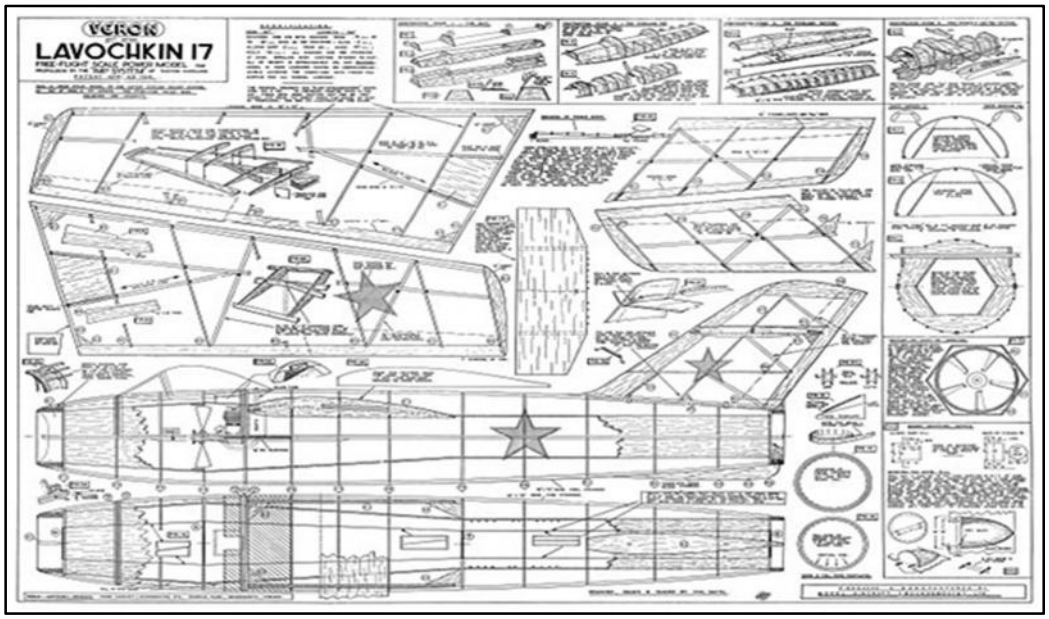
The model (airplane)

Lavochkin 17. Free flight scale Russian jet fighter. IMP System. Ducted impeller design - maybe the first ever free flight ducted fan kit - by Veron.

Quote: "Lavochkin 17. Free flight scale power model for propulsion by the 'IMP System' of ducted impeller - patent applied for. This is a near scale model of the latest Russian escort fighter of 40ft 3in span and 37ft length, the stabilizer having been enlarged for stability. Designed for use with engines from .5cc up to .87cc such as the following: Elfin .5cc; Allbon Dart .5cc; Frog 50; Amco .57cc; Mills .75cc: all engines use the standard 3in diameter impeller with varying pitches to suit. All up weight is approximately 11-1/2oz maximum. Model is hand launched having no undercarriage. Double covering the underside with tissue will still suffice for all normal landings."

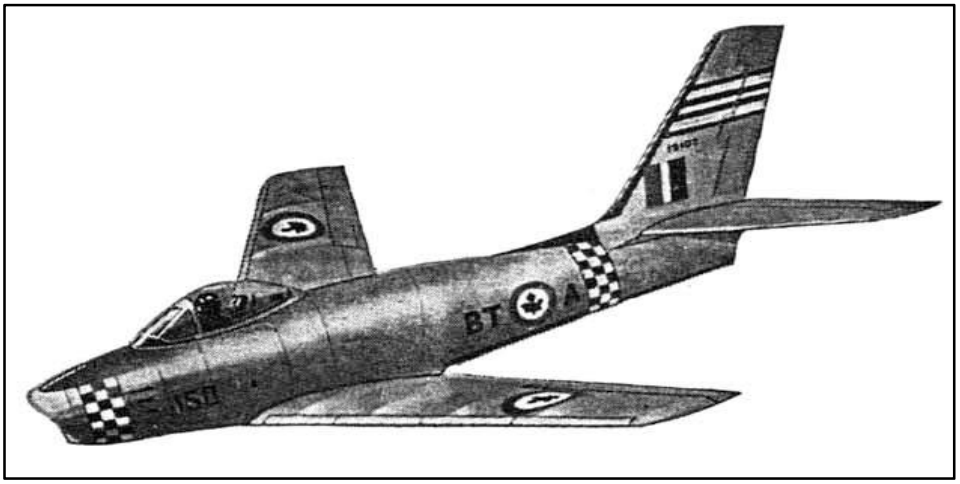
The boxed kit shown above sold for some £256 on Ebay very recently!





There were, I believe, at least two further Veron ducted fan models:
the North American F86 Sabre & later the Fairy Delta FD2.

Quote: "This flying scale model of the Sabre F.86E, now in service with the American, Canadian and British NATO forces, heralds the second design in a series introducing to modelling a new and intriguing method of propulsion, the 'IMP SYSTEM,' being a diesel or glow-plug powered ducted impeller. This brilliant innovation devised and developed by Veron designer Phil Smith, enables you to make a faithful replica of a modern jet fighter and power it with your small motor without the propeller being visible, so preserving the characteristics of pure jet flight. Designed for diesel and glow-plug motors from .5 cc up to .9 cc, the impeller included in the kit is made to suit all capacities of motor by variance of the blade pitch. Details are given on the plan for the installation of beam-mounted motors such as the ALLBON DART .5 cc, AMCO .87 cc and MILLS .75 cc. Details are also given for mounting an ELFIN .5 cc. The FROG 50 can also be adapted. Owing to the high running speeds required, a well run-in engine must be fitted or one which has had AT LEAST HALF AN HOUR TEST RUNNING on the bench."



Fairey Delta 2. Maybe the most interesting & possibly the most difficult & tricky of the trio?

In many ways, Phil Smith was way ahead of his time in trying an entirely new form of free flight, when ideally these models should have been RC based but RC technology was in it's infancy & far behind free flight knowledge so mission impossible. What he achieved was really very good, particularly when one looks at the "now" scene with jet models, turbines & ducted fan high power units coupled to ultra-modern radio gear flown by extremely competent fliers.

I believe Phil produced the ducted fan impeller units individually, hand-made. No idea what they cost. Truly a labour of love. It would be most interesting to know how many of these models were built & successfully flown - suspect not very many? Anyone have any clues?

I also vaguely remember the appearance of a Lavochkin at Middle Wallop one year, but not when & certainly can't recall any flights – maybe one of our readers has a better memory? Never saw either of the other two on the ground or in flight – has anyone else memories?

Knight & Pridham 32mm Ducted fan unit

How about a modern day update? Plans for the Lavochkin, Sabre & Fairey Delta 2 are available via Colin Smith or Outerzone but the ducted fan unit? Yet another web search revealed possibilities.
"This brushless unit can generate up to 130 grammes of thrust. We recommend powering this unit with a 3s 450 20C li-poly pack (not supplied by us) an ESC and our Time and Speed Controller. "

No doubt there are many more modern electric ducted fan units, but probably far too powerful – mind you, could be only for the brave & very exciting! The Albon Dart (guessing) delivered less than 0.05 bhp or about 37 watts, no idea what the Veron fan delivered by way of thrust but again guessing probably around 100 grams on a good day? The K & P fan looks a possible candidate but would need some sort of clever housing round the front end to map into a Lavochkin fuselage as Phil's standard impeller was about 3" diameter.

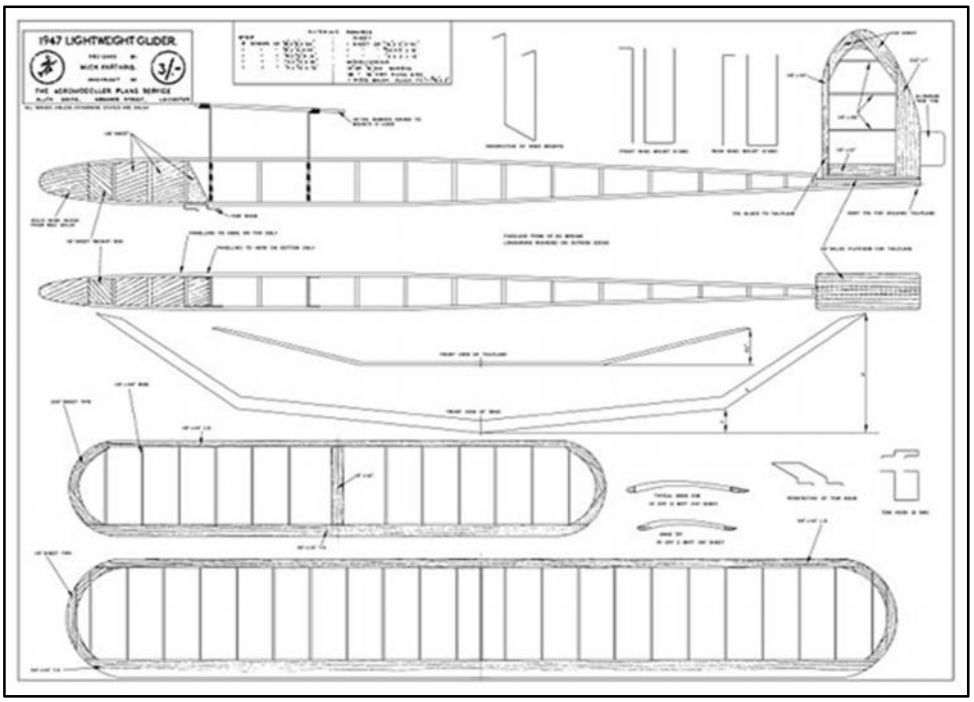
K & P also have a suitable ESC & timer/speed controller in their product range, matched to the 32mm unit. Could be fine for free flight?

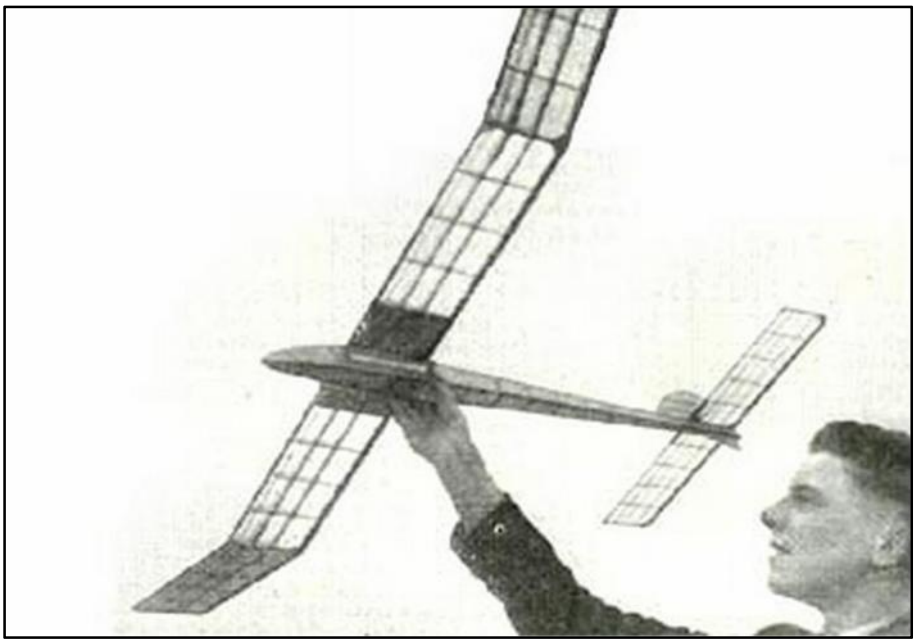
There's a winter project for a brave soul? Next problem – where to fly the finished product – as a proper free flight model of course, none of this modern technology other than an electric fan & a timer cut-out for the motor run, – unless of course there is a keenness to use a Dart & make your own fan!

For completeness, Phil's Queens Cup Winner is shown with him & the magnificent trophy in the introductory pics & the plan is the Rubber Model plan of the month.

In modern day parlance & targeted at the radio guys, there is a Gibbs Guide to Electric Ducted Fan Power Systems – available only as an e-Book. It focuses on fan units, motors, batteries & Electronic Speed Controllers. Quote *"Guidance is also given on how to choose a power system for <u>any</u> EDF model"*. My underlining – absolutely don't think it would cover free flight?
Footnote: Bournemouth Club Trophy table for 1948. Middle one is Queens Cup & those on left & right are for "Southern Counties Challenge Cup" & "Southern Counties Control Line Challenge Cup" presented by Mrs & Mr Guy Rickard respectively – who were the owners of Veron. What ever happened to all those trophies?

What else? I was thinking lightweight gliders after reading the January 1948 Aeromodeller. It had Mick Farthing's 1947 Lightweight Glider as one of the featured plans. The same Mick Farthing of lightweight rubber powered projectiles.
Original model had a parachute DT, build one now & fit a lightweight rdt module – very necessary as it would float away on a puff of a thermal! Definitely a case of not using full strength dope. A simple auto-rudder would be good for old legs to avoid too much quick movement when towing? No spars were, of course, de rigueur for lightweight models in the late '40s & early '50s!





By chance, I have kept my old Woodford Special – another slightly larger lightweight at 58" span (the Farthing model is 34" span) & it is still in decent condition, albeit it hasn't seen the air for a few years now. It was another good floater.

Quote: *This lightweight glider was designed specifically for the open glider event of the 1951 Woodford Rally, organised by the Daily Dispatch at Manchester. Designed for rapid building, easy trimming and to be big enough to be kept in sight for five minutes under average contest conditions, the original was built in 12 hours and performance was quite up to expectation. Average time from 100 metre line, and still air is three minutes plus, and its slaw glide makes it ideal for finding; thermals on contest day. The model can be made to turn in extremely small circles without any danger of a spiral dive - a useful trim for windy days. This is a model that can be flown safely in high winds providing the wings are braced with cotton as recommended on the plan. For normal flying, the wings are of ample strength and should have no folding tendencies!* Mine survived life at Beaulieu for several years with only the odd tissue tear, but the undergrowth was a great inhibitor to any attempt at speedy movement on tow & it was mostly flown in reasonable weather to avoid long retrieval treks having the traditional fuse dt of indeterminate time duration!

'That's funny ; the man in the shop just said they would make it go faster.''

Continuing the Jetex theme from the tail end of last month, the same January 1953 Model Aircraft mag had this review, I have to confess that I was completely unaware of Jetex kits. A websearch then found www.jetex.org which has a wealth of information, well worth reading. The review is of one of their kits – for twin Jetex 50 units! It must have been fun & games getting both fuses lit for the motors to fire reasonably together as noted within the review!

OVER THE COUNTER ——— KIT REVIEW

Jetex Saunders Roe A/1

Fourth in a series of scale models for Jetex motors, the Saunders Roe *A*/1 is a most interesting, and ambitious project. All credit to the designer of this model, A. A. Judge, for keeping the construction essentially practical and relatively straightforward.

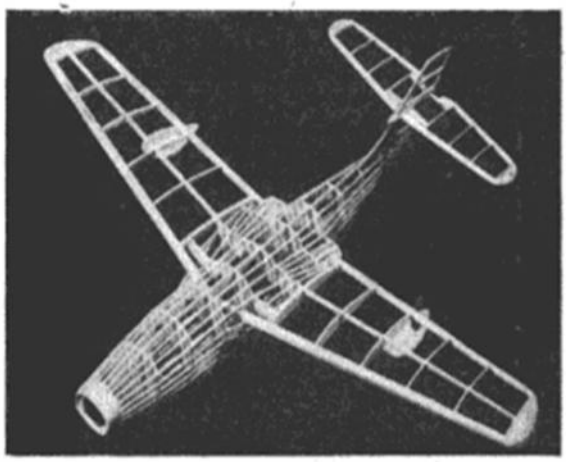
For the power unit, two Jetex 50 units are employed, tucked into jet tubes built into the trailing edge of the wing centre section assembly. Fuselage (or hull), wing centre section and the fin and rudder are assembled as an integral unit, with main wing panels and the tailplane added later and cemented in place. The model cannot be dismantled for transport, but since the span is only 20 in. this should not present an undue disadvantage. Construction is rugged enough to take normal landing shocks, etc., and the tailplane is well protected by its high mounting position.

An ingenious feature of the Saunders Roe model is a simple "automatic rudder," operating on a pendulum control principle. This rudder is to take care of possible variations between the thrusts of the two Jetex motors and thus trim the model directionally for stable flying. Normally power-on flight is straight with the model going into a gentle turn in one direction or another as the thrust from one motor dies slightly before the other. To get the two jet motors as near "synchronised" as possible it is necessary to ignite both simultaneously and a length of dethermaliser fuse with both ends burning is recommended for starting.

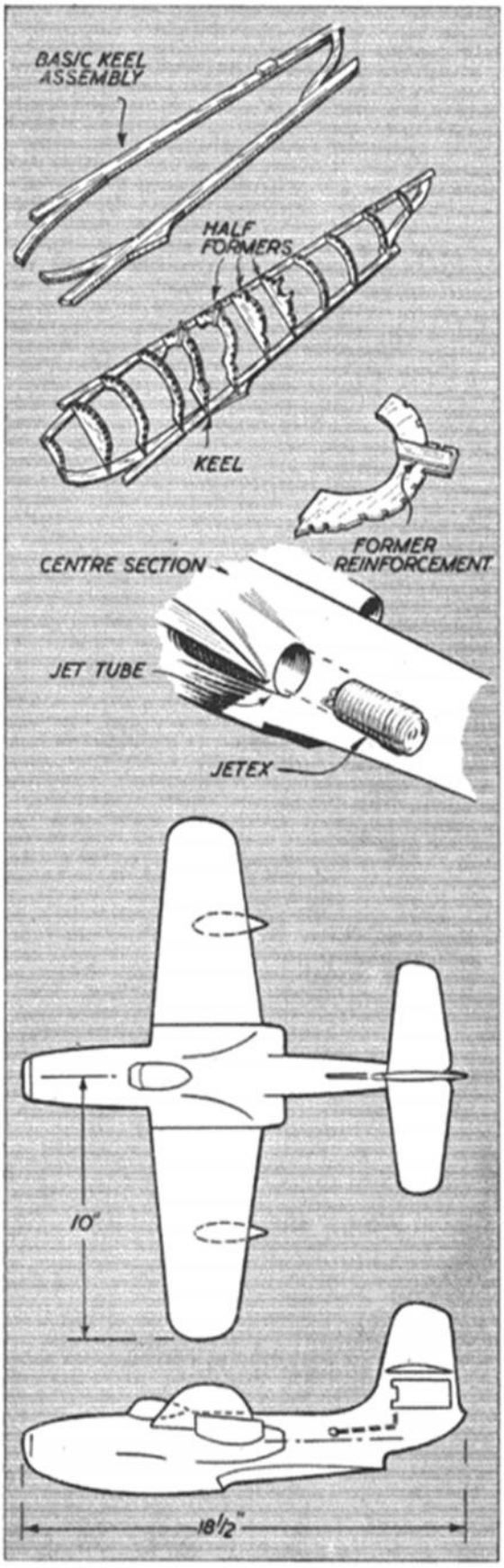
The kit received for review contained balsa of an excellent quality throughout. The $\frac{1}{16}$ in. square stringers were hard, springy stock, and the sheet soft for easy cutting, without being weak.

For finishing purposes, a large sheet of coloured transfers are included, covering roundels, fin flashes, numerals, etc. Moulded asbestos rings for forming the jet tubes are supplied and also a moulded cockpit cover.

This is certainly an out-of-the-rut flying scale model to appeal to the sports flier.



The review model under construction by M.A.



Has anyone ever seen one in flight? Or even ever seen one?

Have a good Christmas break.

Roger Newman

HERE AND THERE

The Editor Comments on Current Topics

1950 AMERICAN NATIONALS A perusal of the 1950 American National results throws an interesting light on the present speeds prevailing on the other side of the Atlantic and the motors used to attain them.

In their class "A" the McCoy 19 engine completely swept the board at speeds averaging around the 110 m.p.h. mark; the best being 116.84 m.p.h. by Warren Tomme—a junior entry.

Honours in the "B" class were shared out fairly equally between the McCoy 29 and the Dooling 29. Here the average speed was in the region of 120 m.p.h. with the best performers, Torry and Stanley Grish, working as a team, well ahead of all others with over 12 m.p.h. in hand at 137.88 m.p.h.

In class "C" the McCoy 49 established an undisputed superiority with speeds in the neighbourhood of 125 m.p.h. with the best performer, Lew Mahieu, of Long Beach, achieving 135.28 m.p.h.—not so fast as the smaller class.

In the larger "D" class the McCoy 60 and Dooling 61 share the honours at speeds of 140 m.p.h. with world record holder, Eugene Stiles, of Alameda, reaching 147.48 m.p.h. to achieve the highest speed of the meeting.

These speeds compare favourably with those achieved at Knokke by the chief European exponents and give an indication of the goal to be aimed at by our national speed exponents.

It is always difficult to make comparisons between flights made in different countries under different conditions in the case of free-flight models. This applies particularly to flights made in America where we have had frequent evidence that better than average conditions obtain than in this country. Nevertheless it is always useful to know what is happening elsewhere and a review of the free-flight results at the American Nationals, at which there was considerable rain this year, reveals that the standard of winning flights were of a definitely high order by comparison with those to which we are accustomed in this country.

No less than 54 entries with a aggregate of over 10 minutes appear in the results, which is impressive by whatever standards and it indicates no falling off in the quality of American aeromodelling.

The best total of 26 min. 11 sec. was reached by Joseph Foster Jnr., of San Jose, California, with a model powered by an Ohlsson 23, the next best being by Jack Emery, another Californian, with a total of 23 min. 20 sec.

Seventy-two different classes appear in the Nationals results and this must almost be a record in itself.

WAKEFIELD CONTEST 1951 As we go to press we learn that Finnish Aeronautical Association has applied for sanction to hold the 1951 Wakefield Contest in Finland and there seems little doubt that the event will be held once again in the land of the midnight sun. The S.M.A.E. Council have no objection nor it is almost certain will the F.A.I.

In view of the excellence of the arrangements and organisation of the contest held at Jämijärvi those who made the acquaintance of the Finns this year will look forward to another visit with undoubted pleasure.

The S.M.A.E. Council have also approved the modification of the Wakefield Rules on the lines recommended by the F.A.I. Stockholm conference which should give the 1951 contest an added interest.

For the benefit of those who are not yet aware of

these modifications we have given details of them together with a technical review of their implications and effects in this issue.

The main purpose of the modification is to bring the method of measuring the models into line with the international method established some three years ago by the F.A.I. in order to avoid confusion and eliminate certain weaknesses which have caused difficulties of interpretation in the past.

The method of measuring the total area and the fuselage cross section will be in accordance with the F.A.I. regulations, with the area of the surfaces including the projected area of the surfaces through the fuselage, and using the " inscribed circle " method of calculating the fuselage cross section in difficult cases of wing and fuselage junctions. The projected area of the surfaces on to the horizontal plane will also be employed in determining their area.

As the F.A.I. methods of measuring have been fully explained in the S.M.A.E. Handbook for the last two years we would refer our readers to this publication for full details.

THE 1951 WAKEFIELD TEAM

Now that it is known that the 1951 Wakefield Trophy Contest will again be flown in Finland under similar conditions to last year the question of the British team selection is one of paramount importance. There is a likelihood, as we see it, of a repetition of the 1950 results if a team is chosen on the performances in the Wakefield Trials held under typical *English daytime conditions*. We need models with maximum *still air performance* and such models may not necessarily be suited to normal British competition weather. Given a windy Trials day, for example, a model which may well be capable of winning the Wakefield in Finland might well do very badly in the Trials. Maximum still air duration calls for, basically, moderate power and a long power run and rather " open circle " flying. This type of trim seldom pays *in a wind*.

Nor would attempting to hold our Trials under similar conditions to those which might be expected in Finland be the answer—for we very much doubt if we could get similar conditions to order on the date required! We have given the matter very serious thought, and talked it over with a number of leading Wakefield fliers. One solution which, it has been suggested to us, would meet the case and give Great Britain the best possible chance of bringing back the Wakefield to this country is as follows.

The S.M.A.E. should select, now, half of the team members on the understanding that they got down to the job of producing Wakefields *for Finnish conditions*. They would be excused flying in the Trials and could concentrate entirely on still air models. The remaining three places would be filled by Trials competitions to preserve the present attractiveness of " giving everyone a chance of getting into the British Wakefield Team."

The three selected members? Those suggested by the chap who thought up the scheme would, he says, be Evans and Warring of the 1950 team, who would have the invaluable experiences of Jämijärvi contest behind them; and Copland, who is still undoubtedly in the world class of Wakefield fliers. All three, he points out, are experienced Wakefield men and all prefer " still air " conditions.

He adds that Ellilä will almost certainly be improving his model for the 1951 contest, under the conditions in which this contest will be held and suggests that his scheme is the only certain way of preventing a Finnish " hat-trick."

Whilst there is no doubt that this somewhat drastic method of team selection would provide us with a first-class Wakefield Team, we doubt whether it would be at all popular with the fliers who will be competing for a place in the British team which will make the journey to Finland. Nor are we satisfied that it *is* so all-important that Great Britain should win the Trophy in 1951—after all, the U.S.A. and ourselves have had our fair share of successes.

We should, of course, be delighted to see the British Team win in 1951, but we must keep in mind that the donor of the Trophy, the late Viscount Wakefield of Hythe, desired above all that it should promote international goodwill and sportsmanship. The fostering of this spirit seems to us to be far more important than which country actually wins the Trophy.

MODEL FLYING BANS

The newly elected P.R.O. of the S.M.A.E., K. J. A. Brookes, intends to endeavour to counter, as far as possible, the recent adverse publicity which our hobby has received as the result of reports in the daily press dealing with the banning of model flying in certain districts.

Despite the amount of space devoted to these reports, we are, of course, aware that the local councils who have taken this drastic action are a very small minority compared with those who have given model flying every support and encouragement.

Mr. Brookes feels, and we entirely agree with him, that more publicity should be given to this fact and asks that the secretaries of clubs who have been able to interest local authorities in their activities, thereby obtaining flying grounds and other facilities, should write to him c/o the S.M.A.E. Offices, Londonderry House, Park Lane, W.1. giving full details.

PURCHASE TAX

IMPORTANT NOTICE

As purchase tax is now chargeable on model aircraft products (see Editorial) the prices quoted by our advertisers in this issue may be subject to alteration without notice.

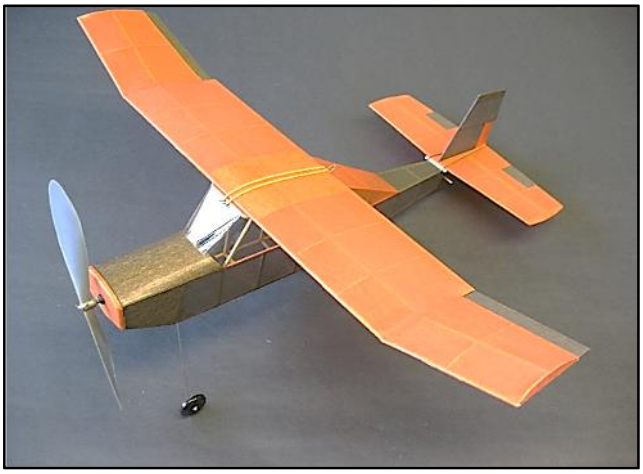
Indoor isn't for Everyone 93 - Nick Peppiatt

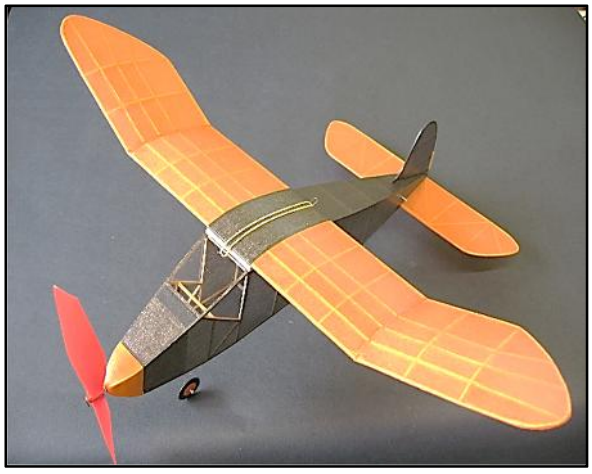
Bostonians and Trinity Indoor, 11th October 2025

Once again the weather got the better of us for a scheduled SAM1066 competition. This time it was in the form of Storm Amy over the weekend of 4th and 5th October, which caused the events planned for Salisbury Plain to be cancelled. So my column this month will be about Bostonians and the competition held at Trinity in Newbury on the 11th October.
The Bostonian class originated in the USA, and has not been adopted by the BMFA Free Flight Technical Committee. The rules used can vary a little at the Contest Director's whim, but as a reminder they are basically as follows: -

1) Maximum projected wingspan 16", maximum wing chord 3".
2) Maximum propeller diameter 6".
3) Power limited to rubber motors.
4) All surfaces to be double covered.
5) Maximum overall length 14", excluding propeller(s).
6) Minimum weight without rubber motor 14 g. (This can vary, but in the UK, all competitions have been held with a 14 g minimum weight, as is used in the West Coast of the USA. The AMA minimum weight is 7 g.)
7) The fuselage must contain or exceed a theoretical box measuring 1½" x 2½" x3".
8) There must be a forward windshield and a window on each side of at least 1 square inch area.
9) The landing gear must have at least two wheels of ¾" minimum diameter.
10) Rise off ground from at least two wheels is required in all take-offs.
11) An unlimited number of flights is allowed, the three best counting.

It can be seen that the main purpose of this event is to construct and fly a model that has some semblance to a full scale aircraft. As I have stated before, these models are well suited to a smaller indoor venue, such as the Trinity Hall, which is of four badminton court size; the 14 g minimum weight ensures that they are reasonably robust and can withstand the effects of wall or ceiling contact with the minimum of damage. They can also be flown outdoors in calm conditions. There is no shortage of published designs; in a search of Outerzone I found some three dozen. In my view one of the best to start with is Bob Peck's Bostonian Pup, which is sometimes still available, now as a laser cut kit, from Wind-it-up Enterprises (at the time of writing it is out-of-stock!)

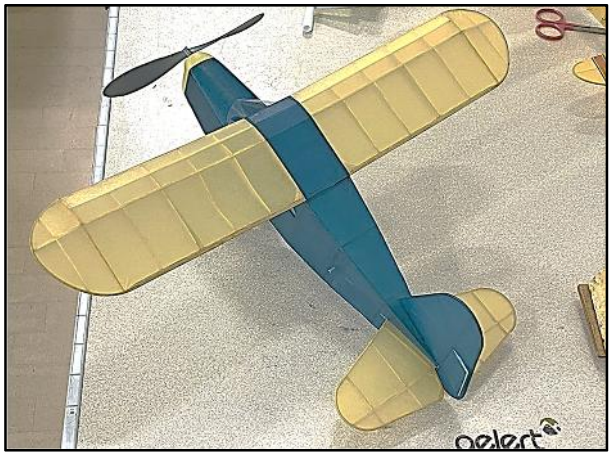

Peck Polymers Bostonian Pup.

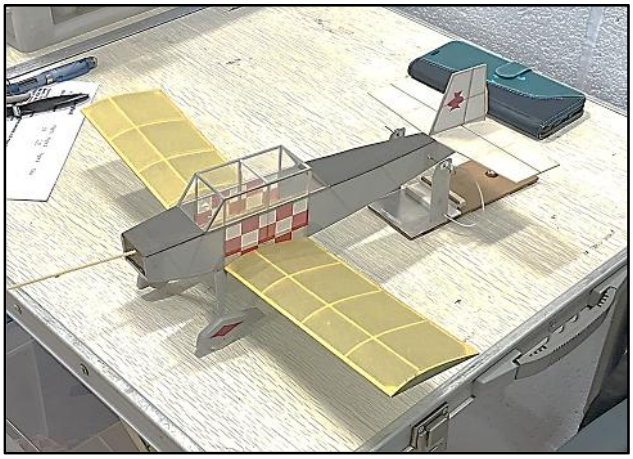

Sorta Senator Bostonian.

The Pup kit (now laser cut) is a very good starting point for a built up indoor flying model. Has adjustable surfaces to aid trimming. 15.4 g w/o rubber.
Sorta Senator is Based on Mike Stuart's plan (www.ffscale.co.uk), its origins are obvious.
A fine flier, weight 14.9 g w/o rubber.
The Bostonian Pup has adjustable rudder and elevator tabs, and ailerons to aid trimming and a neat single rubber band wing attachment, which I have used on my other Bostonians, including the Sorta Senator. In case you think that this model is evading the two wheel rule, there are, in fact, wheels fitted to the two sub-fins.


Steve Haines' Boston Bullet

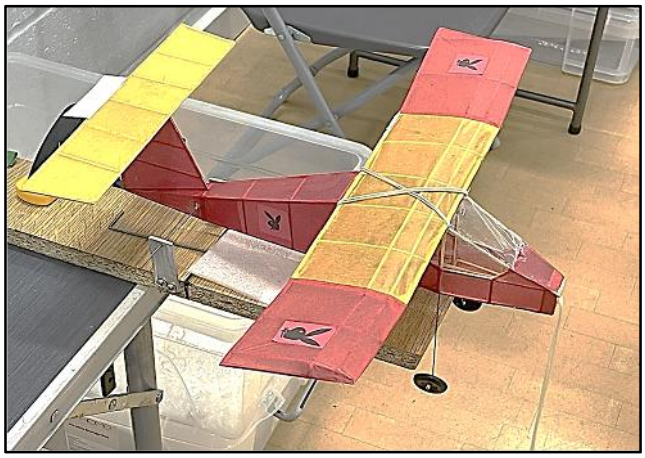

Peter Brown's Boston Found


John Whatmore's Rearwin Bostonian

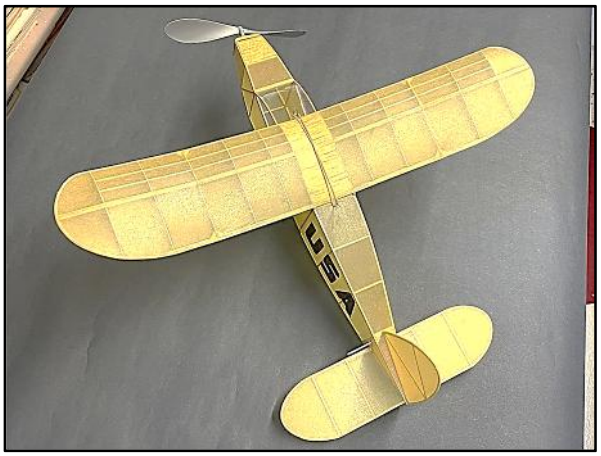

Mick Langford's Bostonian Knight

Now to the Trinity Indoor competition: flight times were to be terminated when the model first struck a hard object, e.g. wall or ceiling girder. As can be seen from the results sheet, there were eight entries. The Boston Bullet, built by Steve Haines, which placed second, is from a design by a twelve year old Frank Allen published in the November 1984 edition of Model Builder. Also from the same source is Peter Brown's Boston Found, a design by the 'Peanut Professor', Walt Mooney, based on the Found Centennial, published in May 1981. John Whatmore's own design based on the Rearwin Speedster placed third. Not surprisingly, perhaps, the low wing wing Bostonian Knights of Mick Langford and Richard Preston, built for the one model competition planned for March next year, struggled against the high wing opposition. The other entries were the Sorta Senator of its designer, ace scale model builder and flyer, Mike Stuart, and Tony Calvert's Boston Bunny, which was built from the plans of Carl Headley's Basic Bostonian published in Lew Gitlow's book 'Indoor Flying Models'.

Incidentally, I built my Sorta Senator after my Sorta Korda (Bill Baker, Model Builder, January 1986) had been beaten on several occasions by Gordon Hannah's SS at the Bostonian competitions that were held in the smaller hall at the Nottingham University sports centre in conjunction with the Indoor Scale Nationals, over ten years ago. Gordon built his with a conventional two wheeled undercarriage.



Tony Calvert's Basic Bostonian aka Boston Bunny



Sorta Korda Bostonian

Trinity Indoor Bostonian Competition 11th October 2025						
Name	Model	Flight 1 (s)	Flight 2 (s)	Flight 3 (s)	Flight Total (s)	Position
Nick Peppiatt	Sorta Senator	71	71	75	217	1
Steve Haines	Boston Bullet	55	63	68	186	2
John Whatmore	Rearwin	51	48	49	148	3
Peter Brown	Boston Found	42	40	42	124	4
Mike Stuart	Sorta Senator	40	40	29	109	5
Tony Calvert	Boston Bunny	40	25	39	104	6
Mick Langford	Bostonian Knight	31	28	25	84	7
Richard Preston	Bostonian Knight	27	28	27	82	8

Future Indoor Meetings

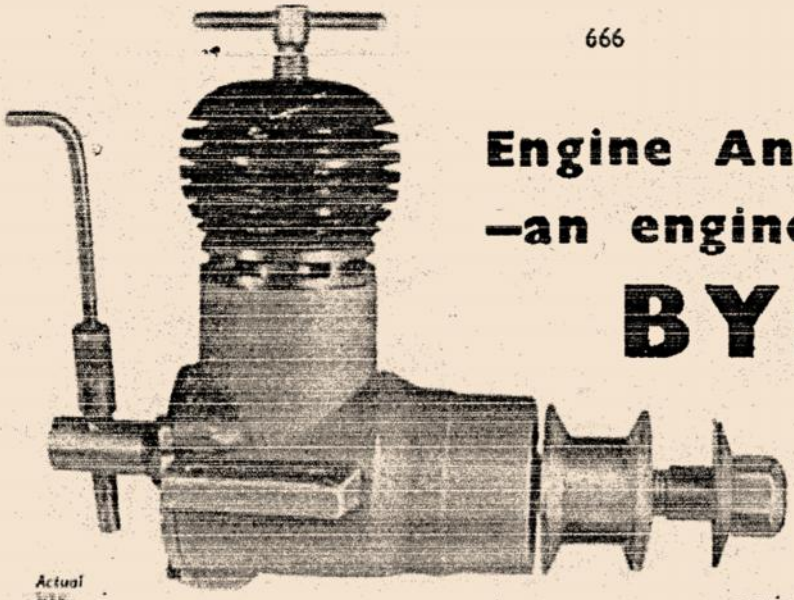
Future events at Trinity include; -

13th December '25 – Christmas KeilKraft Elf competition
10th January '26 – High wing scale competition
15th March '26 – Bostonian Knight competition

Also, on 22nd February '26 there will be the third South-East Area BMFA indoor free flight meeting at the Triangle Leisure Centre, Burgess Hill.

Nick Peppiatt

Engine Analysis: Byra 2.5 - Aeromodeller December 1955



Actual size

Engine Analysis No. 16 —an engine from Spain

BYRA 2·5

reviewed by **R. H. WARRING**

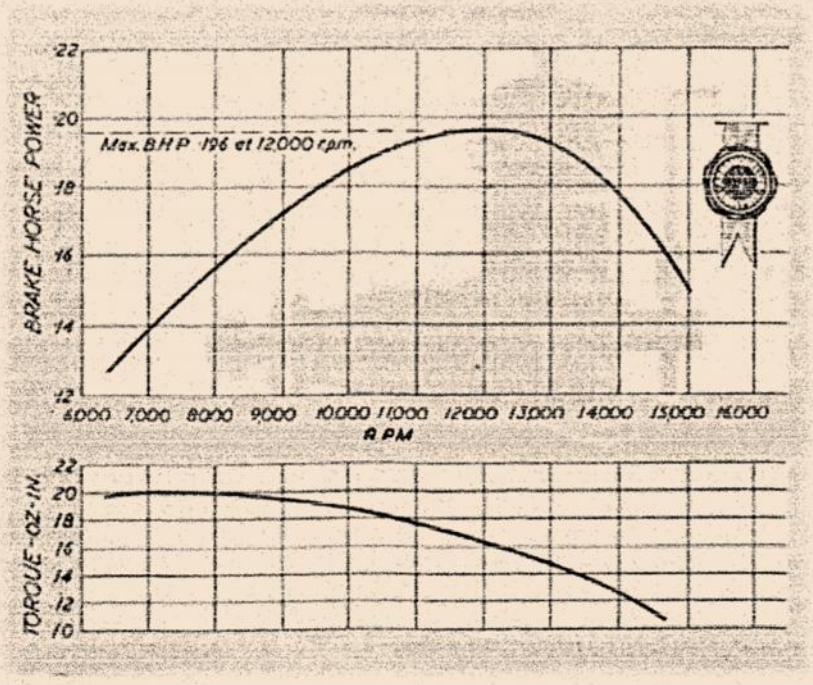
FIRST IMPRESSIONS of this new Spanish engine are that it is a magnificent job, particularly clean and pleasing in external appearance. It is nicely compact for a 2.5 c.c. motor fitted with ball races and weighs almost exactly 5 ounces. Initial test runs, too, confirmed that it was not just flattering to deceive, propeller-r.p.m. figures being up with the best. Also it started readily with all sizes of propellers simply by slackening off the compression slightly and finger choking.

At the higher speeds, however, there was a marked tendency for the contra piston to work up, thus reducing compression and causing missing. It was felt that this was probably due to the use of too shallow a contra piston, subsequently confirmed when the engine was finally taken apart for examination at the conclusion of the test runs. This, coupled with the fact that the cylinder jacket gets extremely hot, made it an awkward engine to handle on the high speed runs, continual re-adjustment of compression being necessary in this region to get steady readings.

Nor were the running characteristics themselves particularly good at these high speeds. With almost every propeller size tried there was a noticeable falling off in speed as the engine warmed up and, particularly with the smaller propellers, one had the impression that the engine needed just a little more compression, or a slightly different mixture, for best running settings. Adjustment of either control did not produce the anticipated smoothing out, however.

At speeds above 12,000 r.p.m. there was a persistent miss and it was presumed that the only solution would be to employ a fuel with a higher proportion of nitrate. Remarkably enough such a fuel made no apparent difference—the missing still persisted and torque fell off rapidly beyond 12,000 r.p.m. just the same. Hence it was finally decided to conduct all torque-r.p.m. tests on standard Mercury fuels, anticipating that the peak of the power curve would probably occur at this speed.

Maximum B.H.P. output was, in fact, subsequently found to be .196 at 12,000 r.p.m., the fall-off beyond



DATA

Byra 2.5 c.c.

Displacement: 2.564 c.c. (.1564 cu. in.)
Bore: .598 ins.
Stroke: .557 ins.
Bore/stroke ratio: 1.075
Plate weight: 5 oz.
Max. B.H.P.: .196 at 12,000 r.p.m.
Max. torque: 20 oz. ins. at 7,500 r.p.m.
Power rating: .0765 B.H.P. per c.c.
Power/weight ratio: .04 B.H.P. per oz.

Specification

Crankcase: light alloy
Cylinder: hardened steel (D-3
Piston Cast Iron
Contra-piston: mild steel
Crankshaft: hardened steel (A-4)
Con. rod: light alloy forging
Main bearings: two metric size ball races
Cylinder jacket: light alloy
Rotor disc: aluminium

Manufacturers

F. Battle, Barcelona Spain.

this being quite sharp. A maximum torque of 20 ounce-inches was obtained between 7 and 8,000 r.p.m. Thus the performance is really quite good for an engine of this size, particularly at moderate speeds. About the only unusual thing is to find a ball-race engine peaking at such a comparatively low and useful r.p.m. figure.

Test running was preceded by about forty-five minutes running-in period and test running time itself totalled in all something less than one hours running time. Towards the end of this period there was a quite noticeable leak of fuel at the crankcase backplate pin carrying the rotary disc valve and also a smaller leak through the front bearing. Neither should have any appreciable effect on performance but it did appear that the rotor disc was not standing up very well to its job. Removing the backplate, the cause was obvious.

The rotor disc is machined from soft aluminium, mounted on a steel pin. Wear in the running time given was such that the whole disc had a float of $\frac{1}{32}$ inch, the apparent reason for this being mal-alignment of the pick-up. The crankshaft pin is extended in the form of a rectangular tongue to engage with a radial slot machined in the rotor disc. Actually there are two such slots, one each side, in the form of a flattened "V" (*see* photo) with the idea of timing the engine for contra-direction rotation merely by engaging the opposite hand slot. The trouble was caused by the fact that these slots did not radiate exactly from the centre of the rotor disc, hence the hard tongue had a certain amount of oscillatory movement in the slot instead of mating smoothly. This resulted in high wear on the sides of the slots, chewing up the metal to an appreciable extent as the tongue tried to align itself. The resulting side loads means excessive loading on the centre bearing, producing rapid wear.

The only other signs of wear, incidently, were on the connecting rod. The little end bearing showed quite excessive wear for the total running time achieved and again this would appear to be a fault of initial assembly, the con. rod being just that little bit out of vertical to start with. We would hazard a guess, too, that the manufacturers "boobed" a little in their original specification for the connecting rod. This is a light alloy forging

PROPELLER-R.P.M. FIGURES

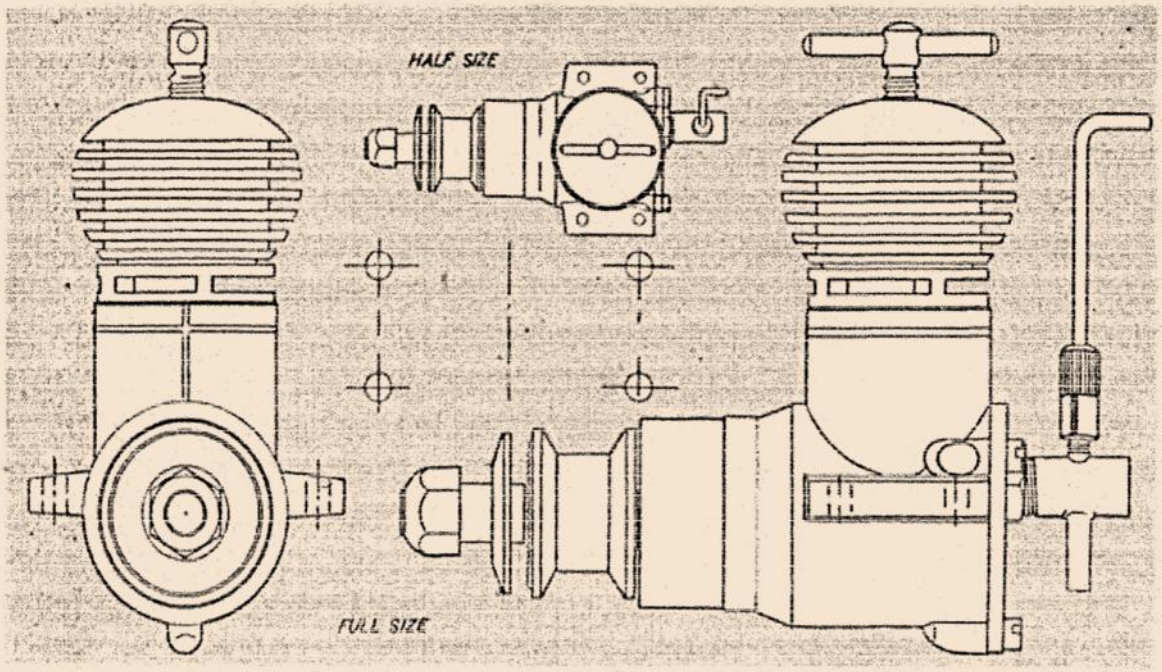
Propeller dia. x pitch	r.p.m. Mercury No.8	Mercury R.D.
10 x 6 Frog nylon	—	8,200
9 x 6 Frog nylon	—	9,800
9 x 4 Stunt	9,600	9,600
8 x 4 Stunt	11,800	—
8 x 5 Stunt	—	11,400
*7 x 4 Stunt	13,800	14,000
*7 x 3 Stunt	13,800	—

*These two propellers were checked as virtually identical in geometric pitch.

which has been milled over at each end in order to get the necessary clearance within the crankcase, resulting in relatively thin walls for the big end bearing. This bearing, incidentally, showed no appreciable signs of wear.

The crankcase casting is beautifully done and finished on the outer surface by a wet blasting operation to give a very pleasing, uniform matt grey surface. The twin ball races are either press fitted or shrunk in and are of conventional pattern. The crankshaft is of hardened steel, .275 inches in diameter and parallel along its bearing length. It is a fairly easy push fit into the ball races and runs exceptionally free with a matter of about 5 thou' end float in the races. The front portion of the shaft is turned down to .220 inches, the first $\frac{1}{4}$ inch length then knurled to take the drive collar and the end .4 inches threaded to take the propeller bush nut. The latter diameter is .271 ins., a $\frac{7}{32}$ in. drill through the propeller hub giving a satisfactory fit. The drive collar itself is turned from aluminium and driven onto the shaft to fit, not broached first.

The cylinder is of hardened steel, screwing into the crankcase casting and sealing with a thin copper gasket. This unit was assembled so tightly that a special C-spanner had to be used, engaging the exhaust ports, to remove. The inside of the cylinder is beautifully finished and whilst the threads turned on the outside are perhaps



Byra in pieces shows the alloy disc valve with its two slots for clockwise or anti-clockwise timing. Motor is a product of Senar Bottle, winner of the Criterium D'Europa speed contest.—see World News

a little rough they are quite adequate and certainly as good as average production standards.

The four exhaust ports are milled in a substantial ¼ in. wide flange with four crescent shaped by-pass ports machined on the inside of the cylinder positioned exactly under each exhaust port, which is a rather unusual arrangement. These ports have right-angled ends.

The piston is also of hardened steel, nicely made and fitted. The top is conical. A generous wall thickness is left to support the .157 in. diameter gudgeon pin which is an easy press fit in place. The contra-piston appears to be of mild steel, quite shallow in length, as previously mentioned, and a tight fit. The fit, in fact, is sufficiently tight to make adjustment a little stiff, but a somewhat greater depth would undoubtedly cure the "working off" trouble.

The cylinder jacket is turned from hard aluminium alloy and is quite substantial. It is anodised and dyed black and the depth and hardness of this coating appears better than normal practise in that it is more robust and less readily damaged. On most production jobs the new look of an anodised part is quickly lost, which is not the case with the Byra.

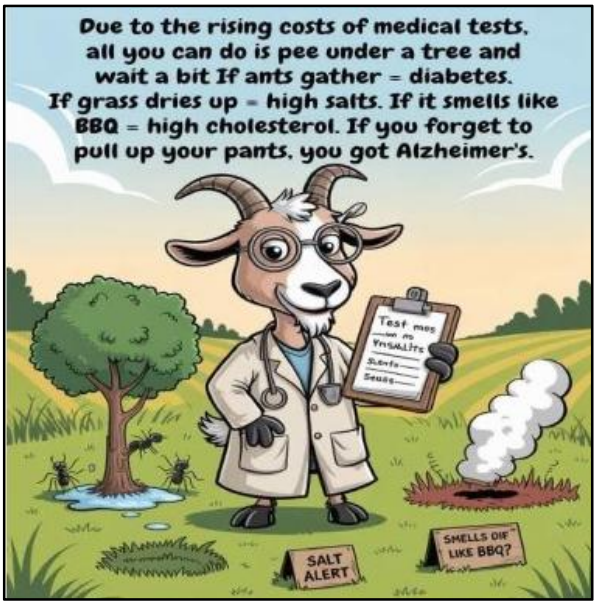
The choke tube is of brass, screwing into the crankcase backplate and locking with a nut. The spray bar is permanently assembled by soft soldering and the whole unit nickel plated, making a very neat job. The needle valve itself is of conventional pattern with the screw base slit for friction locking.

Being located behind the engine, this control is easy to reach and adjust. Starting characteristics are excellent, finger choking only being necessary to prime. Needle valve adjustment is far from critical, a slightly rich mixture making very little difference and there being ample warning to open up again if the needle is closed down too far when running.

The compression control is flexible enough in that the engine will keep running over a range of setting of a half a turn or so but finding the setting for best running at high speeds is rather critical. Turning back the compression one full turn will readily stop the engine whilst over-compression will quickly lead to rough running and a laboured stop. Response to cutting off the fuel supply is quick and positive, there being no tendency to over run.

Altogether, in fact, the Byra appears to be a fine job with just those one or two faults. The standard of production workmanship is, we would say, higher than that of the average British motor and the design layout appears basically sound. A revised method of driving the rotor disc (or more exact positioning of the pick-up slots) would appear to be a necessity, otherwise we would not give the disc a useful life of more than two or three hours. The contra piston could also be lengthened as a cure for its tendency to slaken off at high speeds (although this would also necessitate lengthening the cylinder and cylinder jacket) and perhaps some thought given to a revision of porting to cure that high speed "miss". In its present form it would not appear to be a racing engine with normal fuels, but if this particular characteristic can be overcome undoubtedly the B.H.P. curve could be extended along the speed range to a substantially higher peak. The thought occurs that for really high speed running the Byra might operate better with a glow plug head. And as a final point of criticism we would suggest machining the bottom of the mounting lugs so that they are truly flat across the engine. Some manufacturers do and some do not. We bless those that do.

Aeromodeller December 1955



Viking + a bit - Allen Teal (New Zealand)

Martin Pike rescued this email from his Junk folder:

From: Allen Teal - Tealcare <allen@tealcare.org>
Date: 29 October 2025 at 00:01:17 GMT
To: SAM 1066 Membership Secretary Martin Pike <members@sam1066.org>
Subject: Clarion

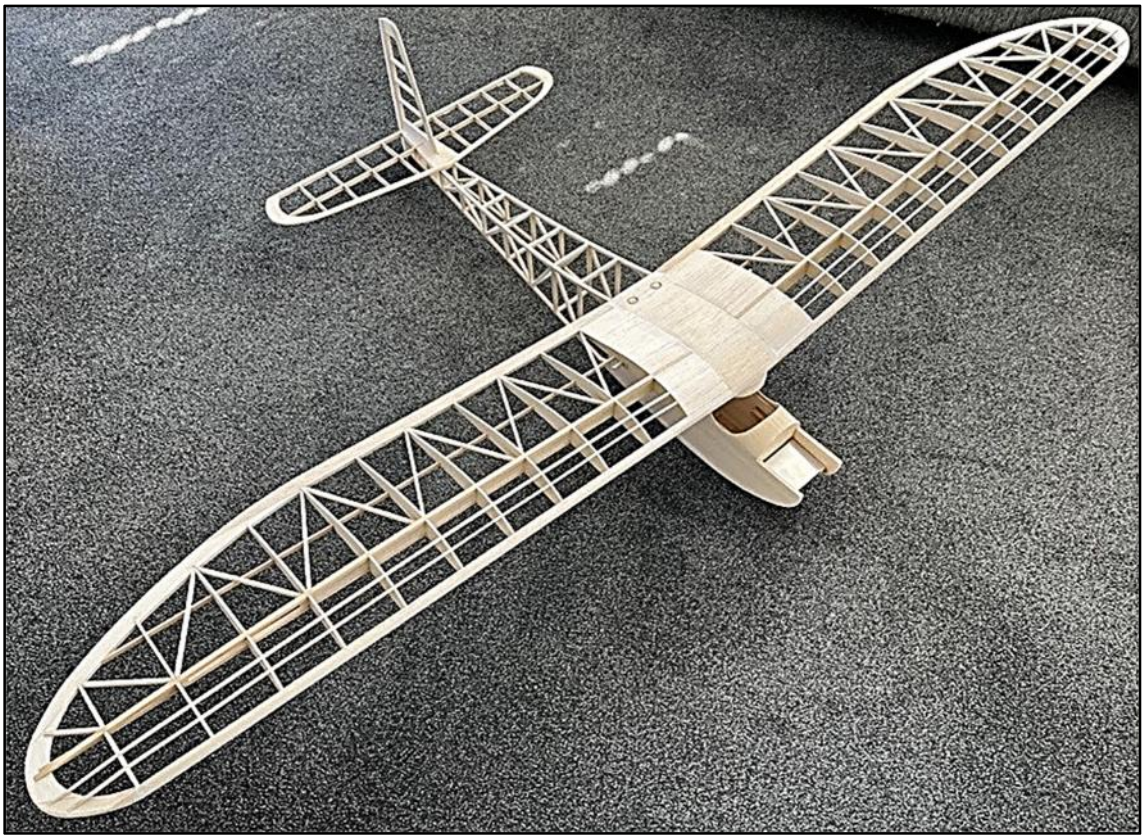
Hi Martin, from New Zealand,

Thanks for sending through the New Clarion once again, always a good read, and I appreciate the work John A does in assembling the contents.

Sometime ago, I saw a photo of the 'Viking' as built by Tony ? in the UK (now my desktop display) I have always admired the lines of this model and decided I would build one. However, I would make some 'adjustments'. I was able to download an electronic plan of the model (original was 63inches) from OuterZone (Thank you so much) and had this printed but enlarged to two metre/79inches wing span.

The afore mentioned adjustments I made were to make the centre section of the wing a flat fit on the fuselage (easier for bolting on) and this enlarged the span to 2.1 metres/ 83inches. The structure has also been beefed up somewhat to take the additional stress of the larger size, particularly in the one piece wing.

There is still a little work to do to complete the model such as glazing, painting out/fuel proofing the engine bay, and fitting fuel tank, etc, so it has not yet flown. My aim is to have it finished in time for the summer flying period which is a month or two away. Attached photos for your interest.
Anyway, thanks for sending the magazine which is always enjoyed.



Allen Teal (New Zealand)

A Bit of Nonsense - Model Aircraft December 1955

A Christmas Caper

by L. Ranson

I MIGHT agree with all those cosy Christmas sentiments about peace and goodwill and all that if it weren't for a chronic seasonal blight, known throughout the modelling hells of East London as Froggy Manners. Every year at the crack of bon-bon time this boisterous character comes barging in on the Yuletide scene with the sort of dim-witted scheme, which only a born idiot would listen to. Why he should single me out for persecution I don't know—probably I'm a sympathetic type.

So, there I was, snoozily digesting the turkey and pud, and dreaming of a quiet spot of radio flying on the morrow, when I was woken by the most unearthly din. Something like Stephenson's Rocket ploughing its way through a tin can factory. The old ticker sank faster than a brick in a downdraught. There was only one thing that could make a noise like that this side of the earth's crust, and that was the Froggy flivver. Quick as a flash I made a grab for a bunch of grapes and the thermometer and made a dive for the bedroom, but before I could reach the door I caught a glimpse of the Froggy phyzog leering at me through the window.

"Watcher, me old cock," he hailed, as I opened the door, "Long time no R/C, eh?"

"Hullo, Frog," I replied in lukewarm fashion, "You're looking a bit on the rakish side. Been slimming?"

"Don't talk wet. Reason the old torso's under the weather is all this radio revelling. Hectic, you know."

"Given up F/F?"

"You bet. Don't think I'm mug enough to go running meself to a shadow at that game, do you?"

I thought it was about time I knew the worst. "What's new, Froggy?"

"What's new? The boy says," chuckled Froggy knowingly, "Out there, that's what's new." He pointed in the direction of his ancient chariot.

"You don't mean that thing?" I gasped, "As Queen Victoria said when she first saw it, 'I am not amused'."

"Comedian, hey," countered Froggy, "Cut the cackle and cast a peeper at that gorgeous hunk of model in the back seat."

"Well, bring her in and introduce me," came my enthusiastic retort. Perhaps old Froggy wasn't such a blight after all.

"What you gabbling about?" said the Frog, looking at me queer-like, "I'm talking about my new radio job. What a record breaker! Have those little old Russkis begging for mercy."

This had me suspicious right away. "What's the catch, Froggy?"

"No catch at all, pal. Just that I betted old 'Polly' Perkins that my new job had the edge on that battered bit of uncontrolled balsa of yours."

Of all the nerve. You could have knocked me down with a two bladed featherer. A Froggy model would draw sighs of sympathy from onlookers even when it made a perfect landing. I reached for the nearest flower pot.

"Take it easy, chum," said Froggy, drawing away, "No harm meant. But with all this guff going on about long distance radio flying, I thought you and me might have a duffy on those lines. A bit of a race to Southend."

I sat down, feeling suddenly weak. "A race to Southend?"

"Yep," continued Froggy, coming in for the kill, "Old Polly 'll fix you up with the car, and act as co-pilot, and here's the scheme."

Whereupon he drew a grimy map out of his pocket and stubbed it with a grimier finger. "Here's the finishing post. Nice little field just off the main road."

"Any bull?"

"No. Just speak to the farmer nicely."

Boxing Day morning the neighbourhood awoke to the shattering roar of "Polly" Perkins' sports special charging up the road. The only reason I could see for calling it a sports car was that you needed to be an athlete to push it. As it shuddered to a halt by the door, the character called "Polly" jumped out. It wasn't that he was energetic, but it appeared to be the only means of exit.

"Just jettison the junk in the back seat," quoth he, breezily, "Hey! careful with the door, old bean. Expensive stuff, cellotape."

Progress to the airfield was by way of a series of violent leaps from bump to bump, which kept the model on the back seat in a semi-airborne state. If I'd had any breath left when we arrived I'd have breathed a sigh of relief.

Froggy was already on the scene, going through the tic-tac routine with some distant character.

"Something wrong?" I asked, more in hope than expectation.

"Nothing much," he replied airily, "Escapement's a bit on the stiff side. Must be the weather. Have it right in a jiff."

Chronologists, engaged in scientific research into the exact time lag of a jiff, might be interested to learn that before this time factor had elapsed we had managed to cram in lunch, plus a few warming up circuits round the airfield—Bannister style.

Eventually, when we were collapsed in a state of advanced refrigeration, the Froggy loud hailer beat upon our frozen eardrums.

"Well, what are we waiting for? Father Christmas?"

"Our first impulse was to send Froggy the same way as his last model—the pieces of which were widely scattered over the airfield. Anyway, we restrained our enthusiasm, and together managed to get his model—and his car—away to a perfect handlaunch.

After all the dust had settled, we

". . . I caught a glimpse of the Froggy phyzog leering at me . . ."

followed the same procedure and made off in hot pursuit. Exactly what manoeuvres the model executed during our leapfrog chase across the airfield I would be the last to know. A series of short stiff uppercuts from the sharp edge of a bleep box was all I remembered.

I awoke just in time to prevent the model from doing a spot of conker collecting, and soon we were happily chugging towards the coast, with the model doing a vulture act overhead.

About half way, I eased a crick or two out of my neck, which might have felt worse had I not spent a wasted youth in the front seats of the ninepennies. Then Polly turned to me and remarked, by way of a lengthy discourse of the relative merits of his junk heap special over that of Froggy's, that it was rather odd that we hadn't passed that gentleman's entourage.

Further speculation was rudely interrupted by a sort of strangled noise from inside the bonnet, and the game little sportster stuttered to a stop. Polly, veteran of a thousand breakdowns, joyfully reached for his outsize in toolkits.

"Carb," he said tersely, "Won't take a tick."

If those chronologists have sorted out Froggy's jiff, they might turn their attention to the problem of Polly's tick. It might be possible to measure it in light years or galactic time, but at least it outdistanced the largest tankful of fuel.

"All set for the take off," Polly called out, emerging from inside the bonnet. "Told you it wouldn't take a tick." He fastened down the bonnet with a professional looking granny knot, and then gaped blankly in my direction. "I say, where's the jolly old kite?"

"In the jolly old dickey," I replied sourly. "Too much tick—too little juice."

"Sorry, old thing," he said miserably, moustaches adroop. "Suppose we'd better flap along to the rendezvous."

We proceeded on our doleful way, consoling ourselves with the prospect of Froggy having been overtaken by a worse fate. We would have probably passed the field had it not been for the jubilant figure of Froggy waving us to a standstill.

Inside the field, he poked a bedraggled looking model under my protesting nose. "What price the Froggy technique, now?" he crowed.

"Why all the tears and broken undercart?" I asked suspiciously.

"Pranged a hedge as it came in," came the Froggy rejoinder, "Got a trifle short of fuel, you know. Talk about luck. There I was, just half a mile off."

"Hey, mister," interrupted a youthful voice from behind the gate. Froggy looked round, startled.

"Hey, mister," came the youthful voice again, its diminutive owner now hoving into view, "I found your wheel."

Froggy, a little white, but still game, said boldly, "Thanks, kid. Must have found it behind that hedge," he continued turning to me, studiously ignoring the youth, who now dismounted from his bicycle.

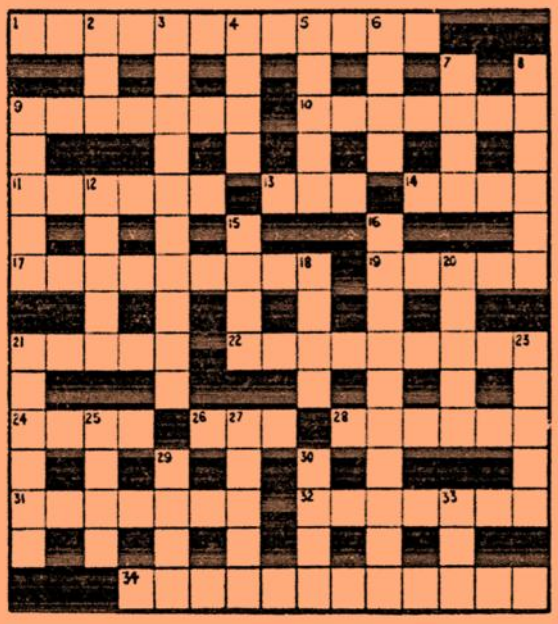
"Sorry I tore your tissue getting it down from that tree, though," persisted the youth, "Forgot I put the wheel in my pocket."

While I gave the youth the third degree on the exact location of the said tree, the inquisition was suddenly drowned by the tin can symphony of the Froggy flivver belting through the gate.

I haven't seen the menace since, but I'm preparing a special reception for him next Christmas.

CHRISTMAS CROSSWORD

Here is an answer to start the ball rolling—21 across, JODLE. We noticed, too late for alteration, that it was wrongly spelt, but our ill-fortune will give you a flying start. JODEL is the correct spelling.



ACROSS

1. This M.A. plan should score a bull with most modellers (12).
9. Windy American engine (7).
10. Popular power plants (7).
11. Degree and Highlander combine for luck (6).
13. Batteries and tanks can be (3).
14. Tick-over to start a New York airport (4).
17. Messy toil ensures a smooth-running engine (3, 6).
19. Act it for silent understanding (5).
21. Phonetically a Swiss pastime but in fact a French Bebe (6).
22. When you make one, inform the S.M.A.E. (3, 6).
24. Short for a long Whitsun meeting (4).
26. The type of jet for a flight to Mars (3).
28. Could be a plan (6).
31. See 29 down.
32. A bandit from Bristol (7).
34. You may miss this dish in the morning if you're selected to represent us on the Continent (4, 3, 5).

DOWN

2. Section of T/R circle (3).
3. They're reputed to be worth modelling (10).
4. Weak point for Achilles (4).
5. This should reign on the flying field (5).
6. The snow lay thus according to the carol (4).
7. There may be one in your engine and your radio receiver (4).
8. Model appearance depends on this ratio (6).
9. Cut in relief upon a shell often used as an adornment (5).
12. This type of model is not always this (5).
15. Knock senseless with a C/L manoeuvre before tea (4).
16. High engine power, correctly applied, will give your model this (5, 5).
18. Dunmow's the town that loses its colour and is cut-up about it (4).
20. Could describe a finish (5).
21. No scope for model flying in this dense vegetation (6).
23. Dared to fear (5).
25. Hardly a suitable modelling material (4).
27. She was a Fair child (5).
29 and 31 across—Your model's performance largely depends on it (4, 7).
30. Some councils have put it on model flying (1, 3).
33. The Air Officer Commanding gets his initial recognition (3).

Secretary's Notes for December 2025 - Ray Elliott

SAM1066 AGM 2025

AGM time is looming.
This will be a Zoom meeting and will be held in January.
The date will be announced in the January issue of the New Clarion.

Agenda

1. Present
2. Welcome
3. Apologies

4. Minutes of meeting held on 23rd January 2025 (New Clarion February 2025)
5. Chairman's report
6. Secretary's report
7. Membership secretary's report
8. Treasurer's report and accounts
9. Report on the transfer of the David Baker Heritage Library.

10. Election of Officers: Chairman, Secretary, Treasurer, Membership Secretary & Committee Members.

11. Annual subscriptions for 2026
12. Any other business
    - Possible collaboration between SAM35 and SAM1066
    - Suggestions for 2026 competition programme

Any nominations for Committee positions and details of any other business to be discussed should be received by the Chairman at least 14 days prior to the meeting. Current Committee members are prepared to continue in post.
Tony can be contacted at - tonyshepherd50@hotmail.com

The Free Flight Technical Committee has now published the Contest Calendar for 2026.
For those who may not have seen it, it is reproduced below.
The classes are those set out previously and discussed at the Free Flight Conference in October.

For further information see FFTC News issue 139.

SAM1066, together with the Croydon club, are proposing to run two events as usual.
Provisional dates are 6th April (Easter Monday) and the 10th or 11th October. Venue will be Salisbury Plain. More details to follow in the New Year,

Events Calendar for 2026

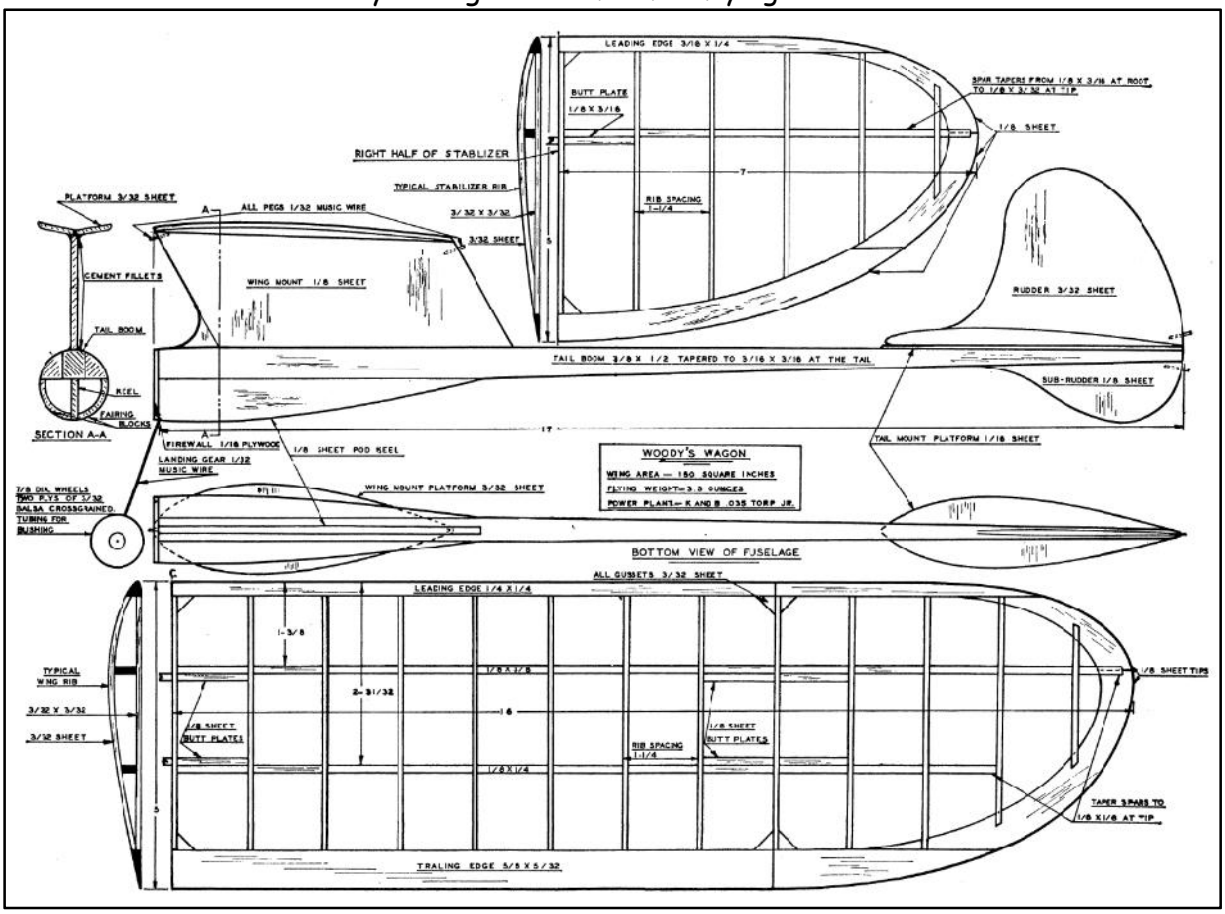
Date	Venue	Event	Classes	Contact
1 March	Area	1st Area	CR (Gamage), CG, CP, F1Q(Plugge), F1G/ F1H (Plugge F1H), CRP/VRP/SLOP (Plugge SLOP) CLG/HLG	Area
22 March	Area	2nd Area	CR, CG (Plugge, Team Model Engineer), CE, F1C (Halfax, Plugge), 1/2/A/F1J (Plugge F1J), Classic G/Vintage G, E36	Area
3 April (Good Friday)	North Luffenham	Northern Gala	CR (Caton), CG (CMA), CP (Hamley), CE, MV, E36, 1/2A/F1J, F1G/F1H, HLG/CLG Club Champs CR, CG, CP, CE	FFTC Lead Stephen Philpott
26 April	Area	3rd Area	CR, CE (Plugge), CP, F1A (SMAE), Co2/E30/P30 (Plugge E30), CRP/VRP/SLOP (Plugge VRP, Frog Senior SLOP), MV	Area
9-10 May	Salisbury Plain	Team Selection F1A/B/C/Q	F1A, F1B, F1C, F1Q	FFTC Lead Mark Benns
23-24 May	Salisbury Plain	London Gala	Saturday – CG (Pilcher), CR, CP, CE, MV, HLG/CLG Sunday – Classic G/Vintage G, CRP/VRP/SLOP (Falcons SLOP), 1/2A/F1J, F1G/F1H, Co2/E30/P30, E36	FFTC Lead Simon Dixon CD Chris Redrup chrisredrup@yahoo.com
7 June	Area	4th Area	CE, CG, CP (White), F1B (Gutteridge, Plugge), F1G/F1H, 1/2A/F1J (Plugge 1/2A), HLG/CLG (Plugge)	Area
28 June	Area	5th Area	CR, CG, CP (Plugge, Team Keil CP), F1Q, MV, Classic G/ Vintage G (Plugge Classic G), E36, Tailless (Plugge),	Area
26 July	Area	6th Area	CR (Team Farrow), CG, CE, F1C (Buskell), 1/2A/F1J, Co2/E30/P30 (Plugge co2), CRP/VRP/SLOP (Plugge CRP)	Area
16 August	Area	7th Area	CR, CE, CP, F1A (K&MAA), F1G/F1H (Plugge F1G), E36 (Plugge), HLG/CLG	Area
29/30/31 August	Sculthorpe	Nationals	All events – Details to follow	CD TBC
12 September	Sculthorpe	Stonehenge Cup	F1A, F1B, F1C, F1Q	FFTC Lead John Carter CD Peter Martin ffworldcupuk@gmail.com
13 September	Sculthorpe	Equinox Cup	F1A, F1B, F1C, F1Q	FFTC Lead John Carter CD Peter Martin ffworldcupuk@gmail.com
20 September	Sculthorpe	East Anglian Gala	CG, CR, CP, CE, Classic G/Vintage G, CRP/VRP/SLOP, Co2/E30/P30, MV, Tailless	FFTC Lead Ken Faux
19/20 September	Sculthorpe	Team Selection Reserve Date	F1A, F1B, F1C, F1Q	FFTC Lead Mark Benns
4 October	Area	8th Area	CE, CP, CG, F1B (Duce), MV (Plugge), Co2/E30/P30 (Plugge P30)/ Classic G/Vintage G (Plugge Classic G)	Area
24 Oct0ber*	North Luffenham	Midland Gala	Classic G/Vintage G, MV, 1/2A/F1J, Co2/E30/P30, F1G/F1H, E36, HLG/CLG	FFTC Lead Phil Ball
31 October-1 November Or 7-8 November	Buckminster	Buckminster Gala	TBC Note: Final date to be announced a few days in advance as site is weather critical.	FFTC LEAD Simon Dixon CD Stuart Darman

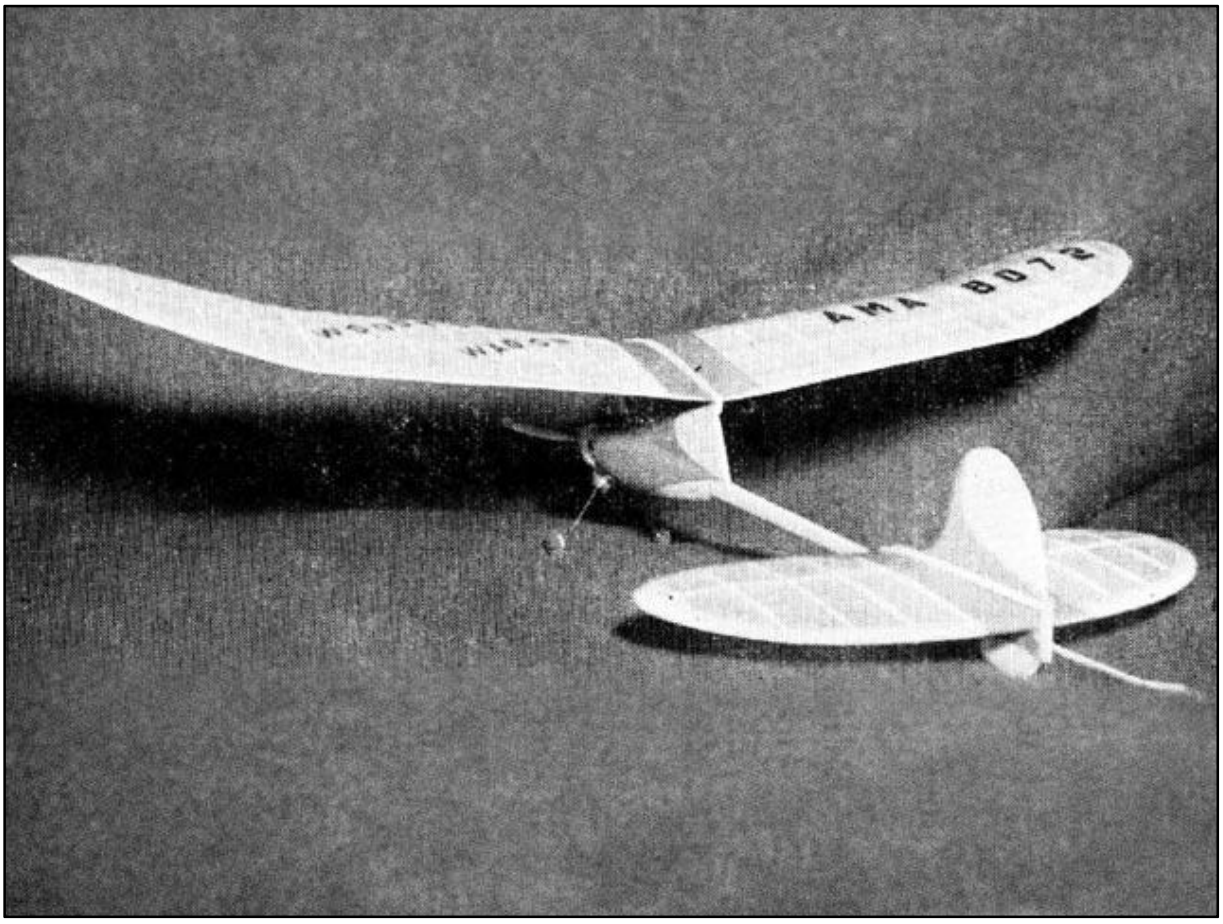
*Team Selection fall back date

Ray Elliott

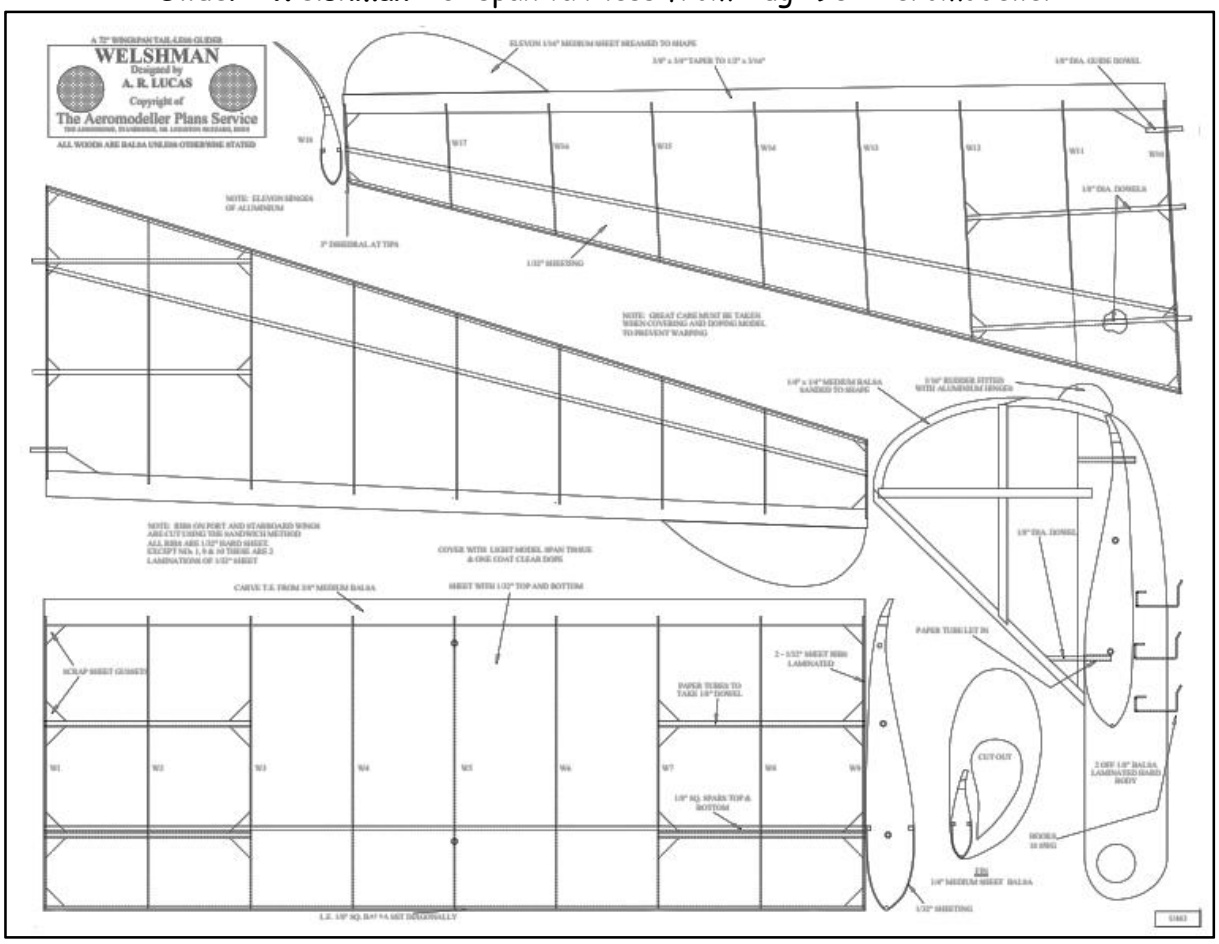
Plans for the Month - Roger Newman

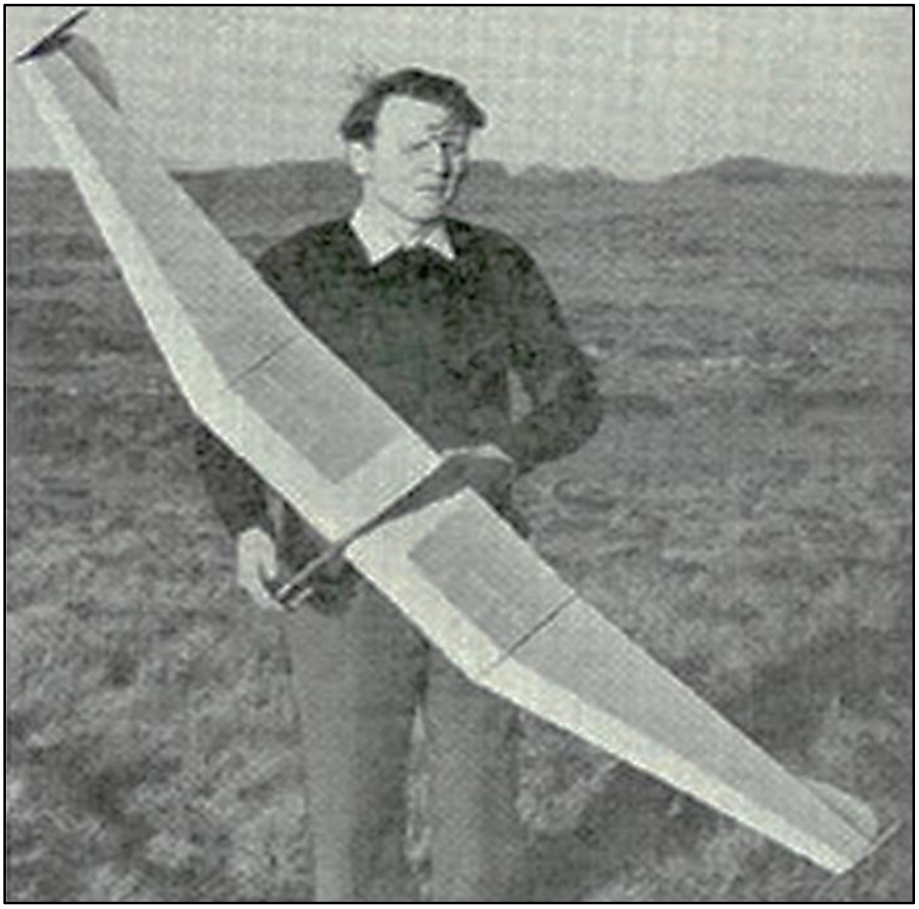
Power: Woody's Wagon. Fine for fun flying with Cox Pee Wee



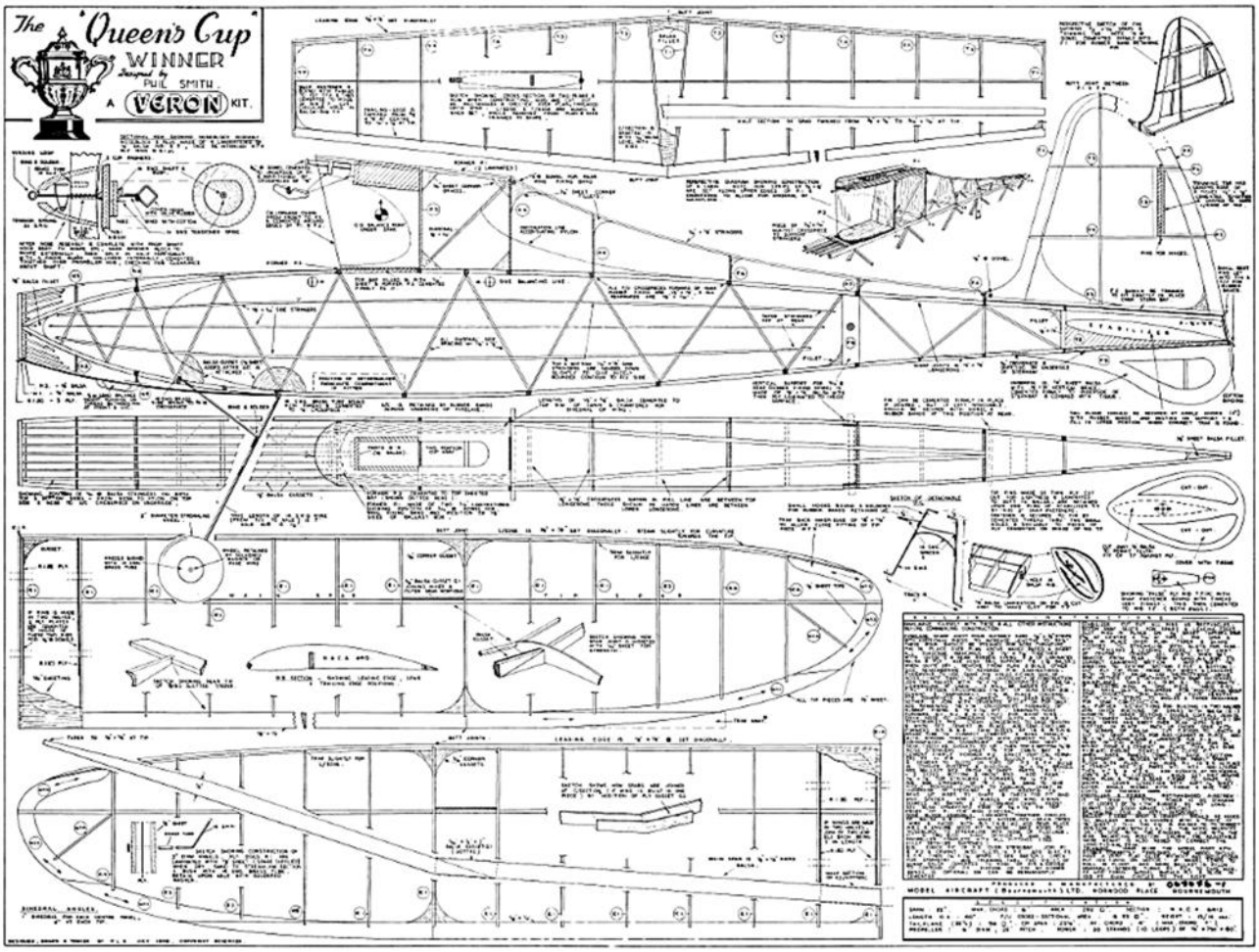


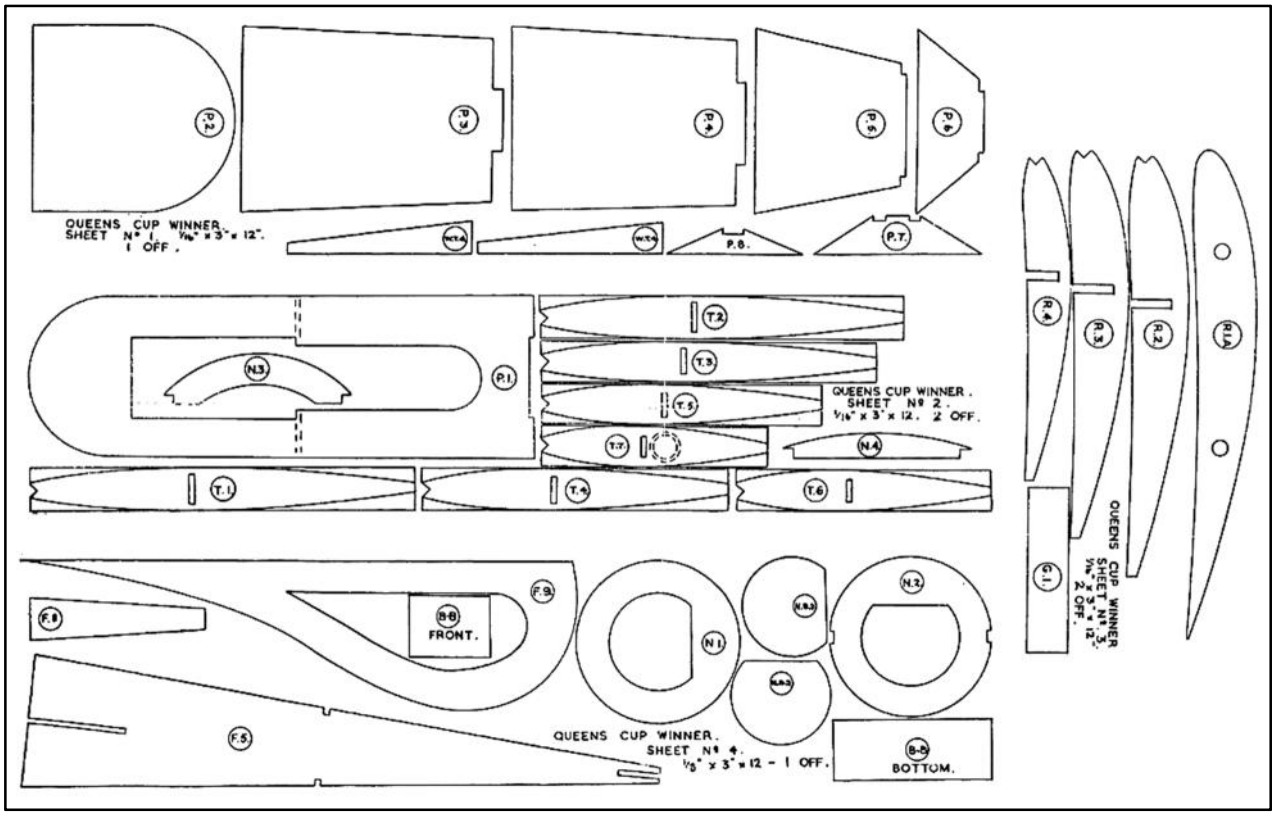
Glider: Welshman – 6' span tail-less from Aug 1951 Aeromodeller





Rubber: Queens Cup Winner from Phil Smith





Roger Newman

Events and Notices

La 10ème Grande Coupe de Birmingham

A qualifying event for the 2025 Southern Coupe League

Pending field availability this event will take place at MOD North Luffenham at 10.00 on Saturday 6th OR Sunday 7th December 2025

F1G for the Aeromodeller Trophy
2 flights between 10:00 & 12:00 then 3 rounds to published timetable.

Pre 1970 Coupe 3 flights (no rounds) start 10:00.
Within this event models which meet our pre 1958 cut-off date will fly as Vintage Coupes.

Pre 1970 Coupe may double up with F1G as at previous events.
Contacts below for details if unsure.

Both events finish at 14.45 followed by fly-offs as required (Not DT!)
Maxes will be determined by conditions on the day.

Prizes for 1,2 & 3 in F1G and Pre 1970 Coupe. The winner of F1G will be awarded the Aeromodeller Trophy and the top placed Vintage Coupe the Vintage Plate.

Entry Fee £10 covers both events (includes £5 FFTC field fee for ALL competitors).

The organisers will determine which of the two days of that weekend are likely to have best weather and will email potential attendees on the evening of Thursday 4th December to confirm the chosen day.
Will all potential fliers please email gavin.manion84@gmail.com ahead of time so that they are included in that confirmation email.
Single registrations on behalf of a group of fliers would be very welcome.

For further information contact: -
Gavin Manion at gavin.manion84@gmail.com tel 01543 422509
Or Stuart Darmon at stuartdarmonf1a@yahoo.com tel 01858 882057

MAY WELSH 2026

Sat.23rd.May – Mon.25th.May

May Welsh 2025 was a success, see Aeromodeller August 2025.
As the organiser, I am already thinking of next year's event.
See https://www.sam1066.org/ for photos of the area and updated details.

We have an excellent, extensive outdoor flying site and a good indoor hall.

The next May Welsh event will be, in Bangor, North Wales, UK. It will follow a similar format to 2025 with both indoor and outdoor flying sessions. As well as the sports flying and the flying-only scale competitions, 2026 will have Mini vintage and P30 competitions.

I think it is important to make events an opportunity to meet and talk.

There are plenty of places to stay locally, but they are spread out. If enough people are interested, we could rent an entire local house that sleeps up to 15 in seven rooms and a fold-down bed. There is enough space to host meals, socialise and effect repairs.
https://www.snowdoniamountainlodge.com/yr-ocar
With seven people staying in the house, it would come out as £84/person/night (Fri/Sat/Sun), which is less than most places. People might also wish to share rooms.
This is by no means the only accommodation in the area, and the event would still go ahead if there were no 'clubhouse' - I just think it would be a good idea.
In order to secure the house I would need a commitment from 7 people with a deposit of £75 each. This would have to be before 20.11.2025. Large bank holiday weekend accommodation is often booked up way in advance, another (ideal) local venue has already been booked.

Please contact me, Martin Pike, if you are interested in booking on :
Martin.pike.xray@gmail.com - or 07831 141418
If you know of others who might be interested in this event, do pass this message on.

Permits for Salisbury Plain & North Luffenham

There is a tab on the free Flight Technical Committee website
Where you can apply and buy the permit that you require on line

The costs are:
£30 for Salisbury Plain - £35 for North Luffenham

The details of the Conditions of Issue
And Code of Conduct are included with the application
And must be strictly followed

Options for Flying on Salisbury Plain, Area 8

The flying of competitive events on Salisbury Plain occasionally requires the launch site to be changed from the usual trimming field to the north east side of the airstrip. This is often problematic as in the past access has proved difficult but a new route has now been found which has proved to be much easier, even after wet weather. The image below shows the route.

It is hoped that on competition days organisers will place their entrance marker flags in whichever entry to Area 8 is appropriate to the location of the day's launch point.

Chasetown Indoors

I have secured an indoor flying venue at ;
Chase Terrace Academy,
Bridge Cross Road
BURNTWOOD,
WS72DB

Flying 10am till 3pm
Saturdays

18th.Oct - 29th. Nov
20th.Dec - 17th.Jan

Enter the school at Wych Elm end
for car park

Costs
£10 for flyers & £2 for spectators, children free.

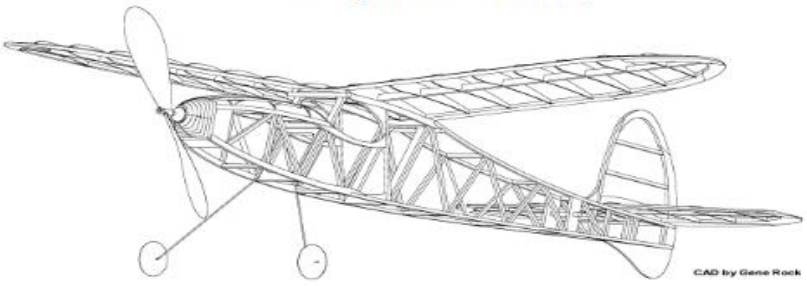
Can you bring your BMFA + contact details
& write them down in the supplied book please.

Contact: peter.thompson7406@gmail.com

INDOOR MODEL FLYING IN BANGOR

Brailsford Centre, Ffriddoedd Road,
Bangor LL57 2EH,
what3words : ///drizzly.chained.neck

Regular flying meetings in a 22x20x9m hall,
September-May



Dates
5.10.2025, Sunday, 1500-1700
2.11.2025, Sunday, 1500-1800
7.12.2025, Sunday, 1500-1800
4.1.2026, Sunday, 1500-1700

More dates pending, first Sunday of each month to May.
Fees £15/2hr £20/3hr session
Contact: members@sam1066.org

Beginners Welcome

TWIFF

(Totton West Indoor Free Flyers)

(Free flight only)

Electric and rubber all styles **Sundays**, from 12:00-15:00

Admission for flyers £15.00 Free for spectators and helpers

2025

21st September 19th October

16th November 28th December

The West Totton Centre is a good-sized hall, three badminton courts with no obstruction on the wall or ceiling. There is plenty of parking, although there are a lot of people coming and going at Vaccination times.

There is a Tesco Local nearby for coffee and snacks.

Location :- Hazel Farm Road, Totton, Hampshire, SO40 8WU

www.google.com/maps/place/West+Totton+Centre/@50.9103094,-1.5097122,15.5

Or, if you like, car park entrance at ///playroom.pump.dorm

Contact Ken Brown 02380578866 or 07913814492 brown53hh@gmail.com

Indoor etiquette.

Please keep the centre of the floor clear - for other fliers.

Launch from the outside of your expected flight pattern, and leave the centre open for other flights.

Walk round the hall rather than across.

Retrieve from the nearest edge - even if a long walk is involved. You get to see everyone's hanger that way.

Please walk slowly. Just the draft is enough to upset a flight. (This especially applies to children. Please try to calm their (understandable) excitement.) If anyone treads on a labour of love it is upsetting, and it can, and does, happen by accident, but should not happen through thoughtlessness.

Look out for other planes at all times and especially whilst launching - shooting down is not funny, and especially not when it is easily avoided.

Most important of all. - Have FUN, and help the others have FUN too.

SUPERLIGHT CARBON E-20 AND HLG BOOMS

New stock just in.

First come, first served.

Carbon rod blanks, ideal for E-20s and hand or catapult-launched gliders. Long enough for two booms.

97cms long, 4mm diameter tapering to 1.5mm. 3.4 grams, but some wet-and-dry action will lower this figure.

£8.00 each + postage from Martin Dilly on +44 (0)208 7775533 or martindilly20@gmail.com.

A CENTURY OF BRITISH FREE FLIGHT

A new book, A Century of British Free Flight, has just been published to mark the BMFA's centenary. 155 pages of text, plans and photographs in colour and black and white trace the development and history of free flight from before Bleriot crossed the Channel to the present day. Nine authors have pooled their talents to cover everything from the rise of the Vintage movement to electronic timers and GPS tracking.

The histories of gliders, scale, rubber, electrics, power models and indoor are all explored by people who've spent most of their lives flying their classes. Although there's no 2022 Free Flight Forum Report we think A Century of British Free Flight will more than fill the gap. All proceeds will go towards defraying the expenses of those representing the United Kingdom in teams competing at the World and European Free-Flight Championships.

The UK price is £20.00 on the flying field or £22.00 by mail; to Europe it's £25.00 and anywhere else it's £28.00. Cheques should be payable to 'BMFA F/F Team Support Fund' in pounds sterling, drawn on a bank with a UK branch; you may also order by credit card, which is a lot easier (and cheaper).

Copies are available from:
Martin Dilly, 20, Links Road, West Wickham, Kent BR4 OQW
or by phone: (44) + (0)20-8777-5533,
or by e-mail to martindilly20@gmail.com .

E30/RDT/BMK/E20 Batteries

The 75mAh lipo's which I sell for E30 now come with Micro JST plugs which make them suitable for BMK timers etc. Since they do not have the current limiter, they work well with the Band Burner and can also be used as lightweight E20 batteries. Just send me £10 and I will put 4 in a Jiffy bag

Ron Marking, Pros Kairon, Pennance Road, Lanner, Redruth TR16 5TF. Alternatively, use PayPal but e-mail me your address. ron.marking@btinternet.com

DILLY JAP IS BACK –AGAIN

Well, that seventh roll of tissue went pretty fast, 300 yards in a bit under three years. I've just received a new roll; almost inevitably there's a slight price rise but it's still only £15 for a five yard roll a yard wide, or £17 by mail to the UK, folded. I normally sell it in rolls at contests, but if you want yours mailed in a roll let me know and I'll sort out a length of plastic pipe and find a courier price. Doing the sums, there's now well over a mile of Dilly Jap covering models all over the world.

To re-cap on the details, it's 12 gm/M² and has a strong unidirectional grain. It's white and low absorbency, so remains very light when doped. For those of you old enough to remember, it's identical to the Harry York tissue sold at his South London model shop in the 1950s.

I'm on 0208-7775533 or e-mail: martindilly20@gmail.com

INDEPENDENT REVIEW OF DILLY JAPANESE TISSUE

The following appeared on the Hip Pocket Aeronautics Builders' Forum. Nine different tissues were tested, doped and un-doped.

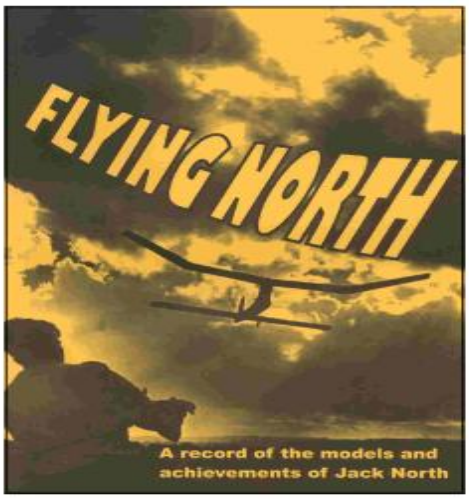
"I am really impressed with how well this tissue performed. Dilly Jap tissue with 2 coats of thinned nitrate dope is around 8% stronger than the old 00 Silkspan with 2 coats of dope, yet Dilly Jap is 0.09 grams per square foot lighter. Here are the test results:

Test#	Tissue Type	gm/sqft	Avg Ten Str lb	Spec Str lb/gm
9a	Dilly tissue (UD)	1.20	14.74	12.28
9b	Dilly Jap Tissue (D)	2.04	19.70	9.66

So far, the Dilly Jap tissue has the highest specific strength of all the tissues and Silk-spans tested. Doped Dilly Jap has nearly double the strength of doped Japanese Esaki tissue and yet doped Dilly Jap weighs 0.1 grams per square foot less than doped Esaki. Dilly Jap can't be beat for weight critical contest models requiring the torsional rigidity afforded by tissue papers!"

Crossword Solution

THIRD RE-PRINT JUST ARRIVED



FLYING NORTH

A goldmine for vintage and nostalgia model flyers -

FLYING NORTH traces the model flying career of Jack North, one of only three people to represent the UK on all three outdoor free flight teams, - Wakefield, Power and Glider. It covers his flying and models from 1938 onwards and includes no less than 24 of his previously-unpublished designs.

FLYING NORTH was compiled and edited by two of Jack's Croydon clubmates, David Beales and Martin Dilly, who had access to Jack's extensive notebooks, photographs, drawings and his original models.

FLYING NORTH is a fascinating 163 page book and includes 130 photographs, reminiscences by colleagues, re-prints of all Jack's published plans and articles, including his later extensive work on thermal detection, and an outline of the professional career that also made him such a respected name in high-speed aerodynamics.

FLYING NORTH proceeds go towards the costs of the national teams representing the UK at World and European Free-Flight Championships.

READERS' FEEDBACK

"... no other modeller's life and times can ever have been so comprehensively covered"

"I hope it becomes a classic."

"I am glad I bought Flying North. ..... such a huge chunk of nostalgia"

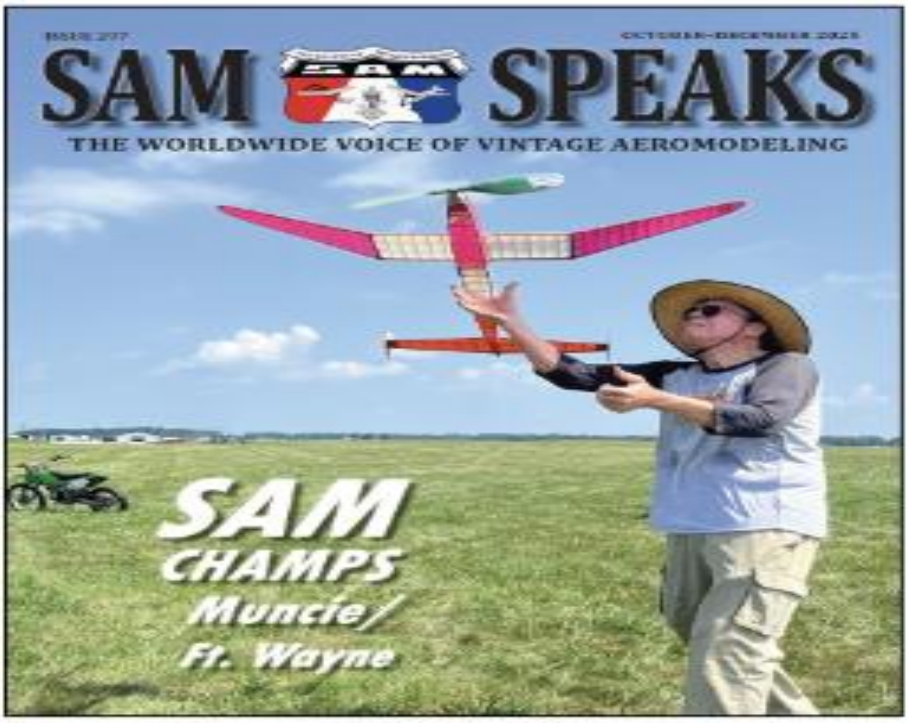
"... am immensely impressed. A splendid effort"

"A fitting memorial to an unforgettable personality. I am sure the book will become an instant classic, treasured by aeromodellers all over the world"

"A very balanced record of Jack's modelling and professional activities"

"The best aeromodelling book since the Zaic Yearbooks"

Price £22.00 in the UK, £26 airmail to Europe and £32 elsewhere.
Contact Martin Dilly on +44 (0)208-7775533 or e-mail martindilly20@gmail.com



This bi monthly emagazine can be obtained from the Society of Antique Modellers. Web site
http://www.antiquemodeler.org/
for the modest cost of $30 pa.
Quite a few UK people already belong,
but a few more might help our Parent Body!

Provisional Events Calendar 2025

With competitions for Vintage and/or Classic models
All competitions are provisional. **Check websites before attending**

February 22nd	Saturday	Coupe De Brum, Luffenham
or February 23rd	Sunday	
March 9th	Sunday	BMFA 1st Area
March 23rd	Sunday	BMFA 2nd Area
April 6th	Sunday	BMFA 3rd Area
April 18th	Friday	Northern Gala, Luffenham
or April 19th	Saturday	
May 4th	Sunday	BMFA 4th Area
May 24th	Saturday	London Gala, Salisbury Plain
or May 25th	Sunday	
June 1st	Sunday	BMFA 5th Area
June 14th	Saturday	Croydon, & 1066, Salisbury Plain
or June 15th	Sunday	
June 28th	Saturday	Crookham Gala, Salisbury Plain
or June 29th	Sunday	
July 6th	Sunday	BMFA 6th Area
July 26th	Saturday	Southern Gala, Salisbury Plain
or July 27th	Sunday	
August 9th	Saturday	East Anglian Gala,Sculthorpe
or August 10th	Sunday	
August 23rd	Saturday	**FF Nationals,**Sculthorpe
August 24th	Sunday	**FF Nationals,**Sculthorpe
August 25th	Monday	**FF Nationals,**Sculthorpe
September 7th	Sunday	BMFA 7th Area
September 13th	Saturday	Stonehenge
& September 14th	Sunday	& Equinox cups, Sculthorpe
September 14th	Sunday	Southern Area BMFA Gala, Odiham
September 20th	Saturday	Birmingham Classic, Luffenham
or September 21st	Sunday	
October 4th	Saturday	Croydon & 1066, Salisbury Plain
or October 5th	Sunday	
October 12th	Sunday	BMFA 8th Area
October 25th	Saturday	Midland Gala, Luffenham
or October 26th	Sunday	
November 15th/16th	Sat or Sun	BMFA Mini Gala, Buckminster
or November 22nd/23rd	Sat or Sun	
December 6th	Saturday	Coupe de Brum, Luffenham
or December 7th	Sunday	

Please check before travelling to any of these events.
Access to MOD property can be withdrawn at very short notice!
For up-to-date details of SAM 1066 events at Salisbury Plain check the Website
www.SAM1066.org
For up-to-date details of all BMFA Free Flight events check the websites
www.freeflightuk.org or www.BMFA.org
For up-to-date details of SAM 35 events refer to SAM SPEAKS or check website
www.SAM35.org

Useful Websites

SAM 1066	-	www.sam1066.org
Mike Woodhouse	-	www.freeflightsupplies.co.uk
BMFA	-	www.bmfa.org
SAM 35	-	www.sam35.org
National Free Flight society (USA)	-	www.freeflight.org
Ray Alban	-	www.vintagemodelairplane.com
Belair Kit's	-	www.belairkit's.com
Wessex Aeromodellers	-	www.wessexaml.co.uk
US SAM website	-	www.antiquemodeler.org
Peterborough MFC	-	www.peterboroughmfc.org
Outerzone -free plans	-	www.outerzone.co.uk
Model Flying New Zealand	-	www.modelflyingnz.org
Raynes Park MAC	-	www.raynesparkmac.c1.biz
Sweden, PatrikGertsson	-	www.modellvänner.se
Magazine downloads	-	www.rclibrary.co.uk
South Bristol MAC	-	www.southbristolmac.co.uk
Vintage Model Co.	-	www.vintagemodelcompany.com
Norcim	-	http://norcimradiocontrol.scienceontheweb.net/
David Caudrey	-	https://davidcaudrey.me.uk/
John Andrews		www.johnandrewsaeromodeller.webs.com

control/left click to go to sites

Are You Getting Yours? - Membership secretary

As most of you know, we send out an email each month letting you know about the posting of the latest edition of the New Clarion on the website. Invariably, a few emails get bounced back, so if you're suddenly not hearing from us, could it be you've changed your email address and not told us?
To get back on track, email membership@sam1066.org to let us know your new cyber address (snailmail address too, if that's changed as well).

P.S.
I always need articles/letters/anecdotes to keep the New Clarion going, please pen at least one piece. I can handle any media down to hand written if that's where you're at. Pictures can be jpeg or photo's or scans of photos. I just want your input. Members really are interested in your experiences even though you may think them insignificant.

If I fail to use any of your submissions it will be due to an oversight, please feel free to advise and/or chastise

Your editor

John Andrews