



NEW Clarion

SAM 1066 Newsletter

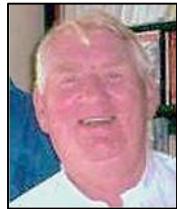
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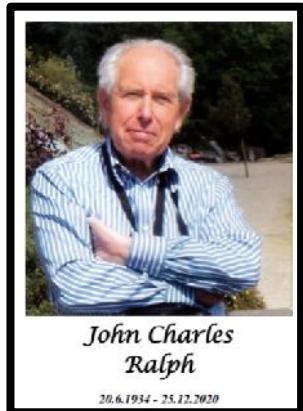
Editorial

Here we are again, things are not getting any better and it looks like it will be quite some time before any form model flying or contest calendar can get underway. The Covid vaccine jabs are progressing but there is a long way to go. Mind you, I've had both of mine so I've pulled up the ladder, Jacks alright. Rachel has had her first, awaiting the second.

Managed to get a reasonable content for this month's magazine thanks to a response to my call to arms. I will still need input for March issue so do not rest on your laurels, keep writing, you may find you enjoy it and it helps fill the day.

Sad to report another aeromodeller has passed away, **John Ralph**, aged 86, died on Christmas day.

This issue kicks off with a Jim Paton update on his current activities, including a close call with a lipo battery fire. Jim, who is certainly one of our most active members, has Oxford's 'Port Meadow' close at hand and is fond of early morning trimming. My old power model flying companion John Bickerstaffe always said mornings were the calmest and would often visit local Lawford airfield early in the morning before going to work. Me, I do not get out of bed too readily I'm afraid.



In ploughing through Model Aircraft magazines I picked up a Pylonius piece on radio control aeromodelling spectatorship, he seems to have felt it was quite an art. I also found his views on the different approach to aeromodelling bans by UK as opposed to USA.

My head scratching has given me a few bits and bobs from the old memory bank to write about, no special order just as the thoughts occur.

David Lovegrove, answering my plea for input, has put a piece together on his selection for the probable 'One Design' contest for his Oxford clubmates. He's picked out a reduced scale version of the chubby American design 'Clodhopper II'. He's built one for trials.

I inadvertently missed the final paragraphs of the article on cranks last month. I include it this issue and it makes my comments on the arrangements nul and void as he states he has built them all.

Another article on lost models, this time by Geoff Smith, is one more answer to my plea for articles. I'm pretty sure there are more of you out there with tales to tell.

Nick Robinson's book on paper airplanes continues to provide me with filler articles. This time the model is said to be somewhat akin to an Elephant.

I have unearthed another of my old paperback Clarion articles. It refers to an old time companion of mine, Ray Archer, now living in Wales. If you google 'EFlightray youtube' there are quite a few videos of his projects. Well worth a look.

Peter Hall has been busy with rubber testing and, although I think he's stretching a point or two, I'm sure some of you will take note. Me, I just weigh out 10gms of whatever rubber I've got, tie a big knot, trim and lubricate. Make up into 12 strands and straight into the model, 350 turns and if it don't break I'm away.

Roy Tiller & Roger Newman wrap up the issue with their regular contributions and a final letter from a Colin Franklin seeking the whereabouts of some Oliver Tiger news sheets once in possession of the late Mike Beach.

Editor

Personal Update

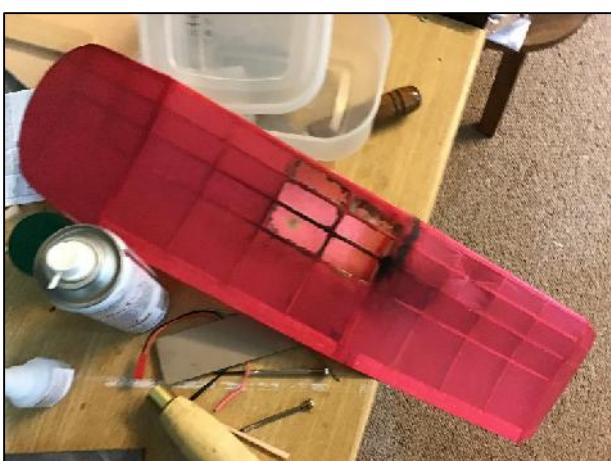
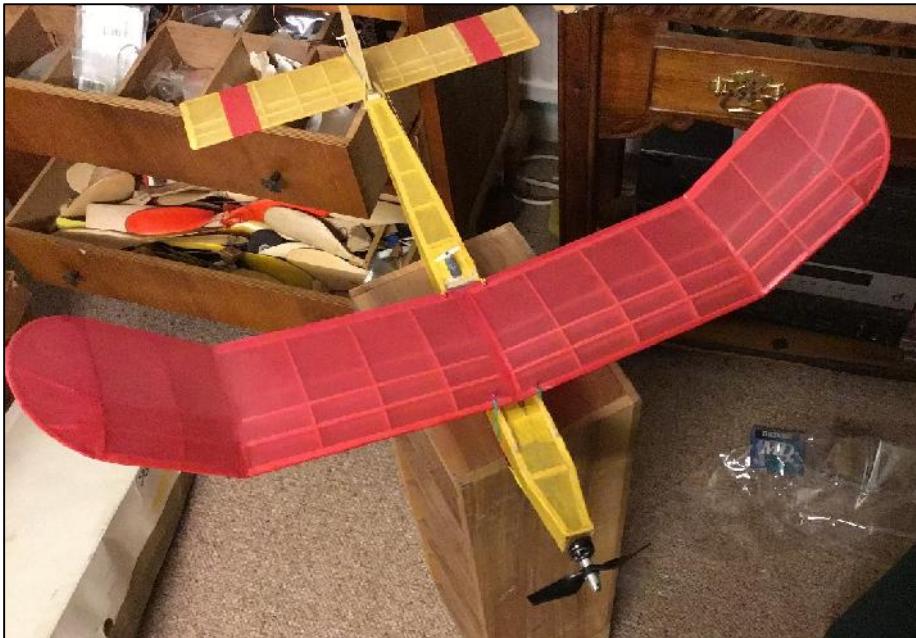
Jim Paton

What a year, or for me six months. The first six months of Covid I was gloating from wonderful New Zealand where they had almost no cases and deaths. I don't do much flying while I'm there. I arrived back in England on June 3rd totally jet lagged. Normally I find it a drawback, but instead this time I used it to get loads of trimming in at dawn at port meadow nearby. Andrew Longhurst and I had our weekly session there and also I met up with David Bull. So, for me I have had a good season. What was missing was the competitions which give the trimming purpose. With Covid restrictions Andrew and David were forced to abstain. I have continued, but with the low temperatures and the lack of company my flying has become less frequent. Last Monday the road from Wytham to port Meadow was flooded. Yesterday I drove a different way to find the meadow completely flooded.

With Andrew and David I fly rubber. During their absence I have drifted into electric. My E36s used to be competitive when the motor run was 15 seconds. I have two E36s both reduced size power models. Eureka and Pearl. They are Don De Loach kits. I got myself the latest motor called a Cobra. I had many trimming sessions gradually increasing motor time and power. Needless to say there were many potential disasters, but most were averted with radio dt. I had nearly got there when it climbed well for 5 seconds followed by a power dive. I repaired the damage but rebuilt a whole new pylon. Amazingly the changes that inevitably resulted from the repair improved the trim for the better.

I inherited a beautiful 27" wing from Ted Tyson. I recently combined this with a tailplane that was lying around and built a fuselage. I played with a brushless motor, but because the battery was too small, the motor would cut out leading to a nose dive.

I persisted till a few days ago when the lipo caught fire while charging. A new battery 2s 320 mah.



I rescued the wings and tail and motor in time. That was enough electric for me.

So I built a new fuselage and put a rubber motor and radio dt in it. I dug out a Japanese Paulownia prop and three loops of 1/8th rubber.

It now flies a treat. I'm not sure I can compete with it unless there is a Sam 35 class at Buckminster for it.

The propeller is an object of beauty and highly efficient.



The rebuilt model now in rubber mode complete with radio D/T

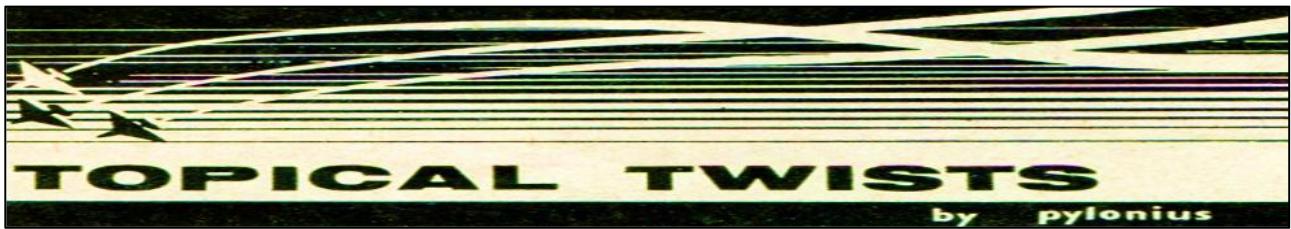
I have an old Lanzo Cabin and I electrified this model because, as a rubber powered model, it was a dud. However, it still wouldn't fly well, being terribly sensitive to rudder.

Following discussion with Andrew Longhurst I increased the dihedral. Magic, the over sensitivity disappeared and it now flies a treat. I ought to re-rubberise it!



I had the same problem years ago with a KK Piper Super Cruiser. I gave up on it. Cabin models look a bit odd with adequate dihedral, but they don't half fly better.

Jim Paton



Extract from Model Aircraft April 1952

How to Watch:—Radio Control

All previous "How to" articles have given, far too much consideration to that very small section of aero-modellers who build and fly model aircraft. Little or no attention has been paid to the "Stand and stare" adherents to this hobby. I can only hope that this series serves to remind them that they are not altogether forgotten—as they richly deserve to be.)

Go to any model event or rally, and what do you find to be the star attraction, apart from the tea van, I mean? Why the R/C event of course. Long before this popular event is due to start vast hordes of clamouring spectators can be seen thronging the flying area, there to await with an expectant thrill the Incomparable spectacle of a radio model weaving its graceful and precise patterns in the sky above. Which just goes to show what colossal optimists most people are. But is the experienced radio watcher so easily fooled? Not likely. He knows just what to expect, I don't mean that he is in any way cynical. He, too, finds the swooping motion of the radio model strangely moving—particularly when out of control. What I mean is that he is aware that most of the elaborate equipment strewn over the comp. area is there solely for exhibition purposes. Any sort of gadget that resembles the control panel of the Brabazon is to him immediately suspect of being a pretentious fraud, while the bloke with a few bits of wire dangling from a cocoa tin may well prove to be the eventual winner.

He knows, too, that of the competing models at least 50 per cent, have never flown and never will; and of the remaining 50 per cent., the majority are either of the "No-Joy" press button variety or are fitted with the special o.o.s. equipment (a bumper booklet, on cross "country" running issued free with each unit).

Having thus narrowed down the field to the effective flying margin, that is, the bloke with the cocoa tin, he will proceed to take critical stock of the aerial manoeuvres. This involves a beautifully executed spiral dive, during which time the bloke with the cocoa tin frantically manoeuvres his aerial this way and that way in a desperate endeavour to regain control, which to everyone's delight, he never successfully does.

One last word on R/C. The rapid progress that has been made in this new field within the last few years is nothing short of astonishing. To think that only so recently in 1948 the accepted flight pattern, was a few simple turns to the left, a few simple turns to the right, and a sudden downward spiral ending in an attempted loop. But what do we find today, after four years of rapid development? A few simple turns, to the left, a few simple turns to the right, and a sudden downward spiral ending in an attempted loop. Such is the nature of progress in this atomic age. After giving a particularly nerve shattering display of homicidal flying the owner of a large and formidable power job was heard to remark, with some considerable pride, that the engine wasn't flat out.

Hardly the same could have been said for the luckless spectators.

Announcing the Bans

By way of throwing a revealing sidelight on the great differences in national behaviour that exist even between the English speaking peoples, came news of the nationwide reaction of the American people to a ban placed on model flying in some obscure little American backwater. All sorts of distinguished Johnnies took their all-American stand to denounce, in the strongest terms, this flagrant violation of democratic principles; Mayors, Generals and even Statesmen, falling over each other in their anxiety to say their piece in the name of American liberty.

Many were the brilliant and inspiring speeches that ranged the length and breadth of the land, but of them all, none was more penetrating, nor more appealing to the inflamed public imagination, than that of a certain police chief, who pointedly referred to the low incidence of juvenile delinquency among model builders and to the absence of sinister bar crawling types in their virtuous ranks.

Now what would be the reaction, to a similar ban in the old country? Well, the publicity side of the question could easily be accounted for; a short but exultant notice in the daily press. Speeches on the subject would undoubtedly be of the pithy breakfast table variety. Mayors, Generals and Statesmen joining with the public at large to retort as one man the inevitable: "Jolly good thing, too. Lot of noisy, overgrown kids playing with toys". But what of the police chief? What would be the comment of his counterpart in a country where model flying is regarded, not as an antidote to juvenile delinquency, but as a very serious form of that particular social menace, and where the twin delights of modelling and pub crawling are commonly enjoyed by the majority of indigenous balsa bashers?

Your guess is as good as mine, but I'm of the strong opinion that, even with such a special viewpoint, he couldn't resist saying: "Jolly good thing, too. Lot of noisy, overgrown kids playing with toys".

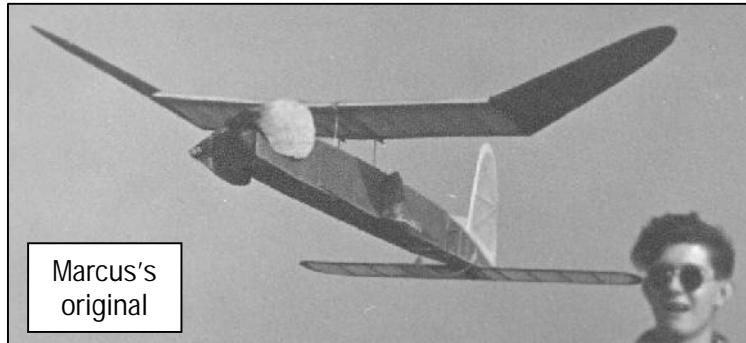
Pylonius

Random Memories continued:

- John Andrews

Following from last month's epistle I've been thinking back to my early days and a few things have come to mind.

My first foray into serious competition must have been about 1951, the 'Bazooka' had been published in a 1950 Aeromodeller and I had made a crude copy based on it. The noseblock I used was just a piece of 1/8th ply and a single bladed prop on a wire hub with a long cigarette lighter tension spring.



The 'Gamage Cup' back then was the first competition of the year and it was decentralised, ie. You flew on your own patch which in the case of The Rugby Model Engineering Society, Aeronautical Section (I love that name) was RAF Lawford Heath about 5 miles outside Rugby. My model was trimmed and I was ready to give it a go. I'm not sure whether the max was still 5 min but my model was not that good anyway. The competition required an ROG (rise off ground) but did not require the model to stand unaided so all I did was dab the tail plane on the deck with model at about 45deg. and let go. I've no idea what times I achieved but I did manage one max, whatever it was, on the last flight. My first flight passed without incident. The second was looking good but when the prop folded the glide circle flattened and the model slowly increased speed until it dived vertically into the runway. To my amazement there was no structural damage with the exception of the wire prop shaft which was folded flat back against the ply noseblock. The shaft must have acted as a shock absorber. Much fettling with pliers got the shaft usable again, not easy with 16swg wire in a tight brass bush.

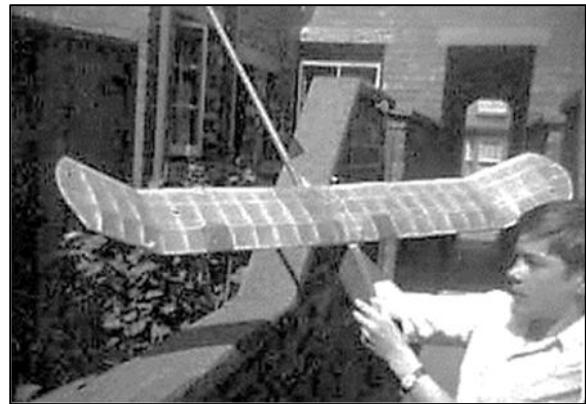
General repairs to tissue saw the model ready for its final flight. The club experts had decided that the terminal velocity dive had been the result of a too rearward CG coupled with the flat plate stabiliser giving insufficient decalage. A bit of weight on the front and less tail incidence and the third flight hooked lift and was up and away. D/T failed and model disappeared. This flight was the one I mentioned in the last issue, found by farmer a few days later and scrapped due to warping.

My first foray into area competition flying was in a Wakefield elimination trial of some sort flown at, if memory serves, RAF Wellsbourne Mountford. Back then you had to qualify in a couple of area events to win a place in the last 100 final, the winners of which made the national team, actual details escape me.

I had built a Wakefield, it started life with plug in shoulder wings as fuzzy picture shows but they must have been duff because I do remember clearly that when I flew in the comp the wing was mounted on a moveable wire cabane on top of the fuselage. My one and only flight was quite spectacular, the motor was bunching on the front hook when I finished winding but I ignored it and carried on. The model ROG'd OK and got to about 50 feet or so then stopped climbing, the prop started to freewheel then bang, the model disintegrated. A shower of tissue, balsa bits and a writhing rubber motor fell to the ground. The bunched rubber had jammed in the nose, the prop freewheel disengaged, then the motor bunch released and boof, a pile of bits. I must have recorded a time tho'.



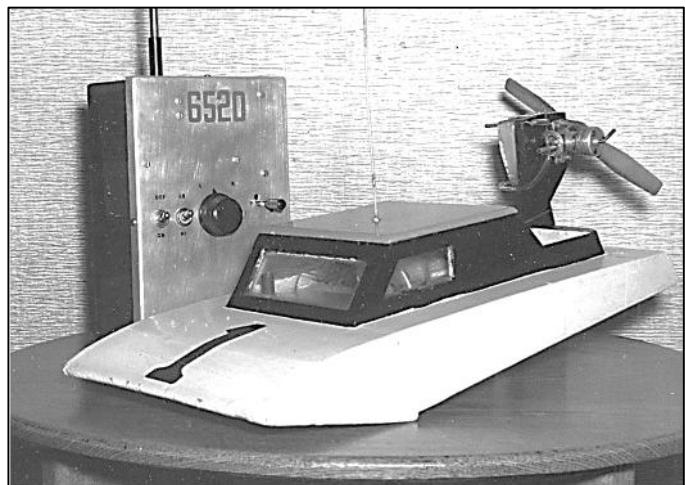
My best thermal flight was quite early in my model flying career, during a Rugby M.E.S.A.S. club championship on RAF Lawford Heath in the early 1950's. The club had 'The Redding Trophy' which was for the best combined flight time from the three events, Glider, Rubber & Power. I did not have a glider so I threw a few bits together to compete with. See right, posed by my next door flying buddy Ian Lomas at the top of our terraced houses entry.



A point of interest, I later had a long cricket career as a medium fast swing bowler and was known for being straight due, I believe, to playing cricket up and down that entry with Ian for hours on end.

Back to the glider, a fuselage of 1/2 in square balsa with sheet front end, an old power model wing and for the stabiliser a piece of and old wakefield wing. No time for fancy bits ie. No D/T nor auto rudder. I launched the model OK and it circled slowly across the airfield and not being too windy Ian and I followed it on our bikes. We sat on the fence at the end of the runway as the model drifted towards us only about 30ft up. The model did not land but got sucked up in monster lift and was up and away back towards Rugby. We followed for a short while but when the model was just a dot in the sky I left Ian to it and returned to the airfield to make flights with other models. Ian followed the model fairly easily as the road was roughly on the same path. It was about 5 miles back to Rugby and when on the town's outskirts Ian noticed that the model was descending, Thermal broken up by the buildings I assume. The model flew right over the town centre about 150ft above the town clock tower then on as the ground went downhill. How Ian managed to keep track of it was something of a miracle but road directions were in his favour. At the death when the model was landing Ian estimated where it might have come down amongst terraced housing and after much searching up and down entries finally found the model. It was only about two streets from where we lived so he dropped it in home and cycled back to the drome in time to pack up and cycle home again. Ian had had a good cycle ride that day, on the recovery ride he was looking skyward of course and finished up in the ditch at the side of the road twice. If you are going to have a mate get a good'un.

In the early days of radio I had a dabble with model boating. The radio was still single channel carrier but I had improved relay operation by a transistor switch on the Rx output which gave a much greater current change to the relay making it more reliable and less susceptible to vibration.

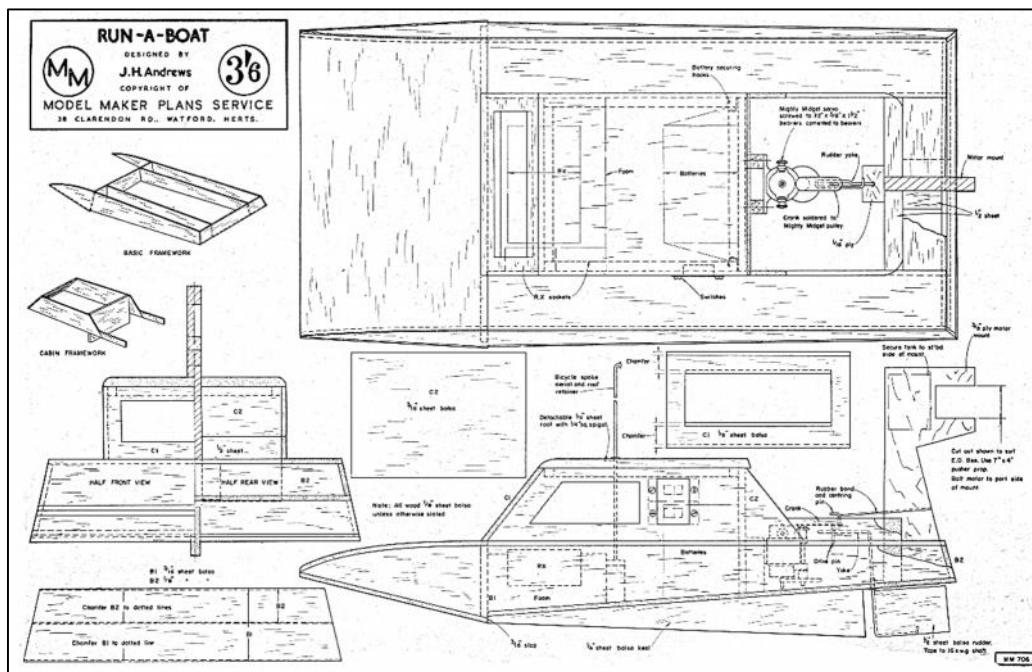
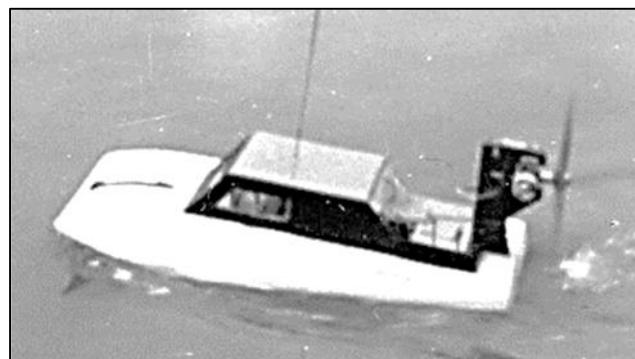


I used a mark space radio system and the rudder on the boat, driven by a mighty midget motor, was pulsing from side to side for straight running. A lever switch was used for steering, the switch giving full radio signal one side and no radio signal the other. The straight running of the boat was achieved by varying the mark space signal with a knob on the Tx. This knob could be used for steering but I only used it to set straight running. The limited power from the mighty midget motor meant that at full speed the boat's turning circle was just too large for the local canal so reduced power had to be used.

Problem with full engine power was that the front step would come out of the water and speed would double, so Ian & I took the boat to an old water filled disused quarry for space to run.

At that time the engine was mounted vertically on a folded aluminium bracket and at the quarry after a while we noticed the engine was loose and just before we got the boat back to shore the engine jumped off the back and into the water. It was only about 10ft short of the ledge we were operating from but being a quarry the fall off was quite sharp so wading was not an option. We manage to acquire a long branch from a tree with foliage at the end and we started dragging. After a while we saw a flash of silver about 6ft away but we had to wait quite a while for the muddied waters to clear. It was the Bee and we dragged it ashore.

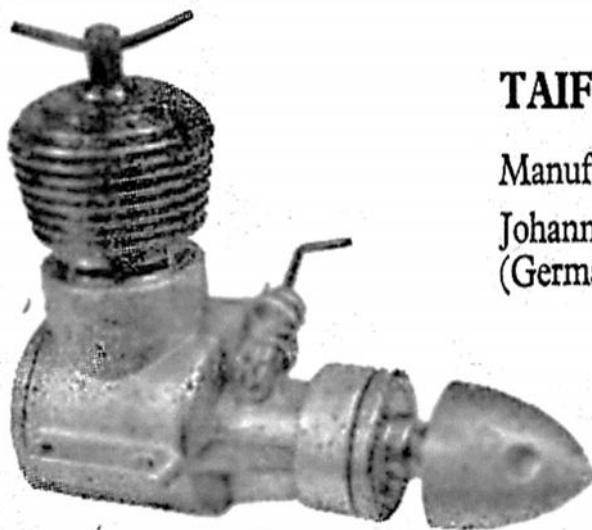




The engine mount was redesigned as the pictures show and in this form I drew up a plan and wrote a few words, then submitted the article to the R.C.M.&E. mag. My article & plan were published in the July 1962 issue of the magazine. Famous at last.

John Andrews

Engine Analysis: Taifun Tornado 2.5cc - Aeromodeller Annual 1955-56



TAIFUN TORNADO 2.5 c.c.

Manufacturers:

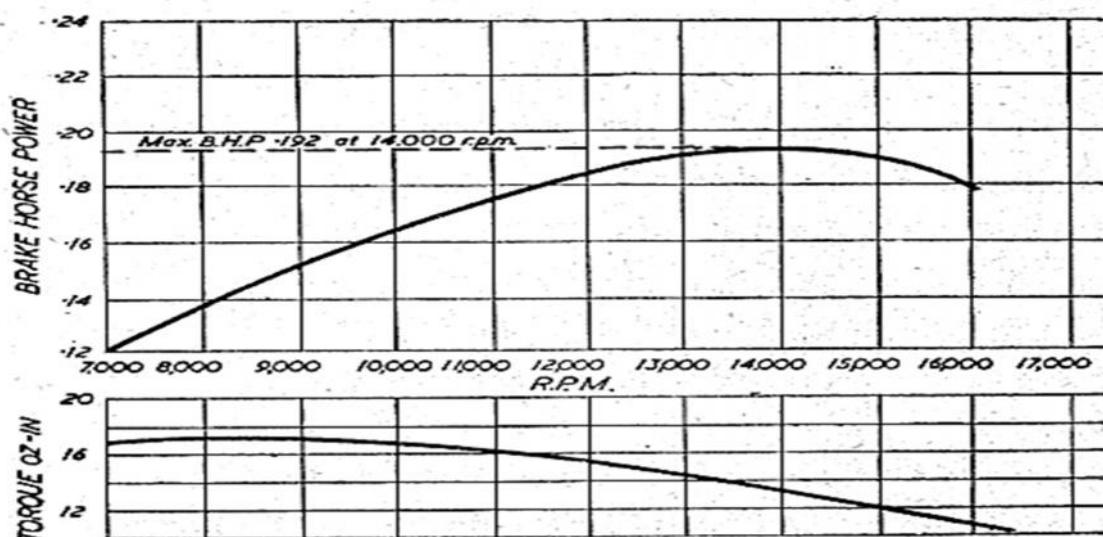
Johannes Graupner, Kircheim-Teck
(Germany).

Displacement: 2.47 c.c. (0.15 cu. in.)
Bore: 0.59 in. Stroke: 0.59 in.
Bore/stroke ratio: 1.07
Bare weight: 5 oz.
Max. B.H.P.: .192 at 14,000 r.p.m.
Power rating: .078 B.H.P. per c.c.
Power/weight ratio: .038 B.H.P.
per oz.

Material
Specification:
Crankcase: Die-cast
light alloy
Cylinder: Nickel-
chrome steel
Piston: Cast iron
Contra-piston:
Nickel-chrome steel
Crankshaft: Alloy
steel
Con. rod.: Dural
Bearings: Two
ball races

PROPELLER	R.P.M.
dia. pitch	
11 x 5 (Stant)	6,000
9 x 4 (Stant)	10,000
21 x 15 cm.	11,500
9 x 6 (Trucut)	8,200
7 x 6 (Stant)	12,000

Fuel: Equal parts ether,
paraffin and castor oil



Oxford Club "Group Build"

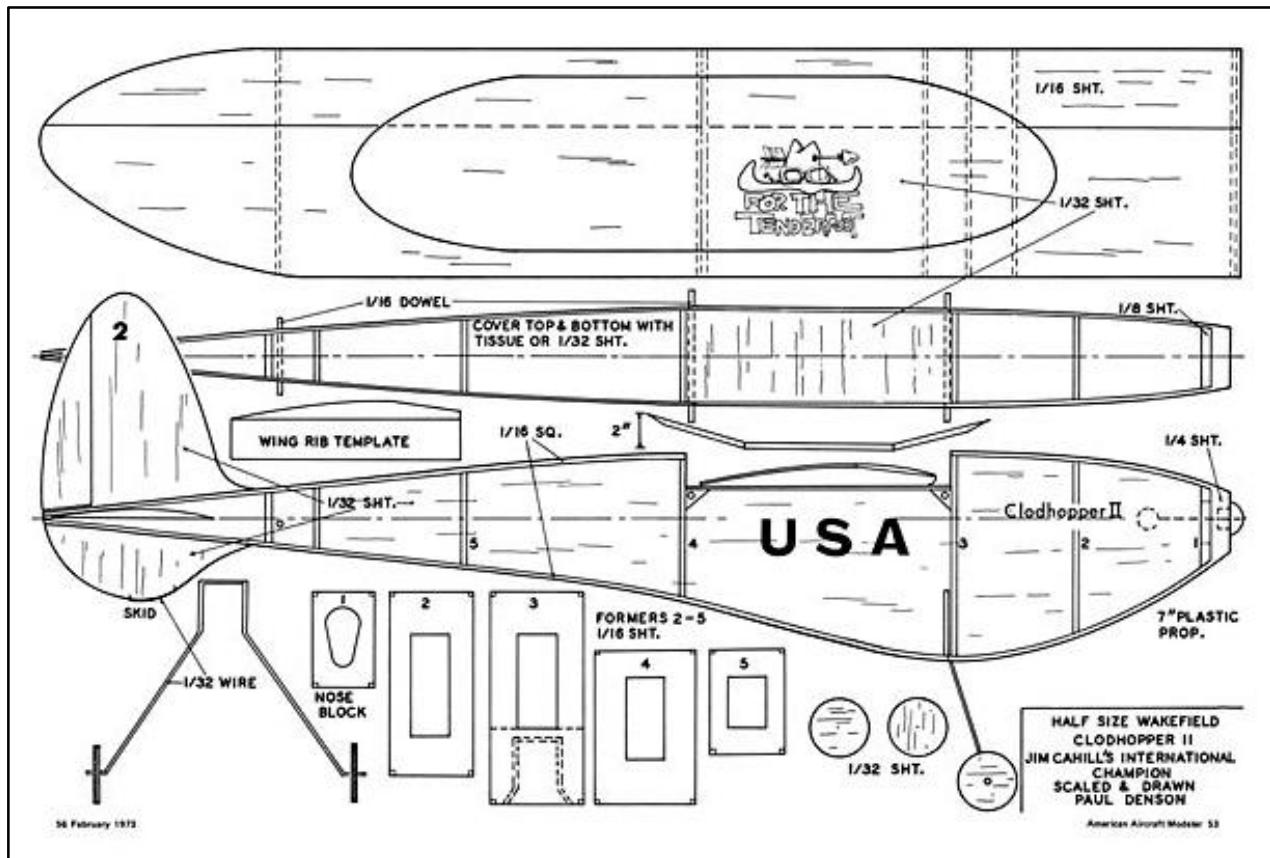
David Lovegrove

I was recently tasked to come up with a suitable model to replace the venerable *Cloud Tramp* as a club "Group Build" for the warmer weather ahead. Back in 2018 (which seems like a lifetime ago now after the travails of the past year), we had great fun with the *Cloud Tramp*, but it was felt that we should move on a bit.

The design spec had to include features such as -

- _) retaining fairly easy construction, to make it accessible for our younger or less experienced members
- _) all-sheet if possible
- _) A full fuselage rather than a "stick"
- _) Similar size to the *Cloud Tramp*

Trawling through the thousands of plans on Outerzone, I quite quickly identified the *Cloudhopper 11*. This is Paul Denson's all-wood, 24" wingspan version of Jim Cahill's Wakefield entry that was first published in Air Trails in 1937.



Now then, I concede that this is a bit of a "Marmite" model, with somewhat "aesthetically challenging proportions". It's typical of its time, when all kinds of theories about the most efficient shape and planform were rife. In this case, I think the deep-bellied fuselage was probably thought to reduce drag from the usual long, gangly undercarriage struts, whilst the slim head-on view also offered low air resistance. Leon Shulman's "Wedgy", coming just a few years later, mirrored this thinking. In that case, very successfully.

Likewise, the full-size Clodhopper reportedly had exceptional performance.

Having said all that, the big question was, would this "Ugly Duckling" fit the bill in other respects?

Time would tell, but first I had to build one, to ascertain whether or not it fitted the brief.

Construction was straightforward. Mercifully there was none of that awkward business with the wing roots that can be a pain with the Cloud Tramp.

The only slight niggle resulted from my having chosen some 1/32" for the wing that was a tad too light. Something a bit firmer would have been better, and indeed, light 1/20" would have been better overall.

Likewise, the horizontal stab (help! - I've suddenly turned American) made from that same sheet of 1/32" caused a few headaches at first but seems to have settled down now.



No chance to fly the model yet, what with everything else going on at present, plus indifferent weather. When the time comes I'll bung in some 1/8" Supersport rubber and sashay along to Port Meadow to see what this baby can do!

Word has reached me from rubber guru Andrew Longhurst, that it won't be much cop: tail too small, probably tricky to trim, etc., etc..

Fair enough, Andrew would know, but the point is that this is just for fun. No-one, least of all me, expects top-notch mini-vintage performance. It's just a quickly-built, cheap and cheerful vehicle for my clubmates' enjoyment. If it flies at all well, or even at all, that will be a bonus.

Whether we get as far as actually promoting it for the Group Build remains to be seen. Like much else in these "interesting" times, there's much uncertainty surrounding our hobby at present.

David Lovegrove

Crank Instead of Gears, PS

- Aeromodeller December 1938

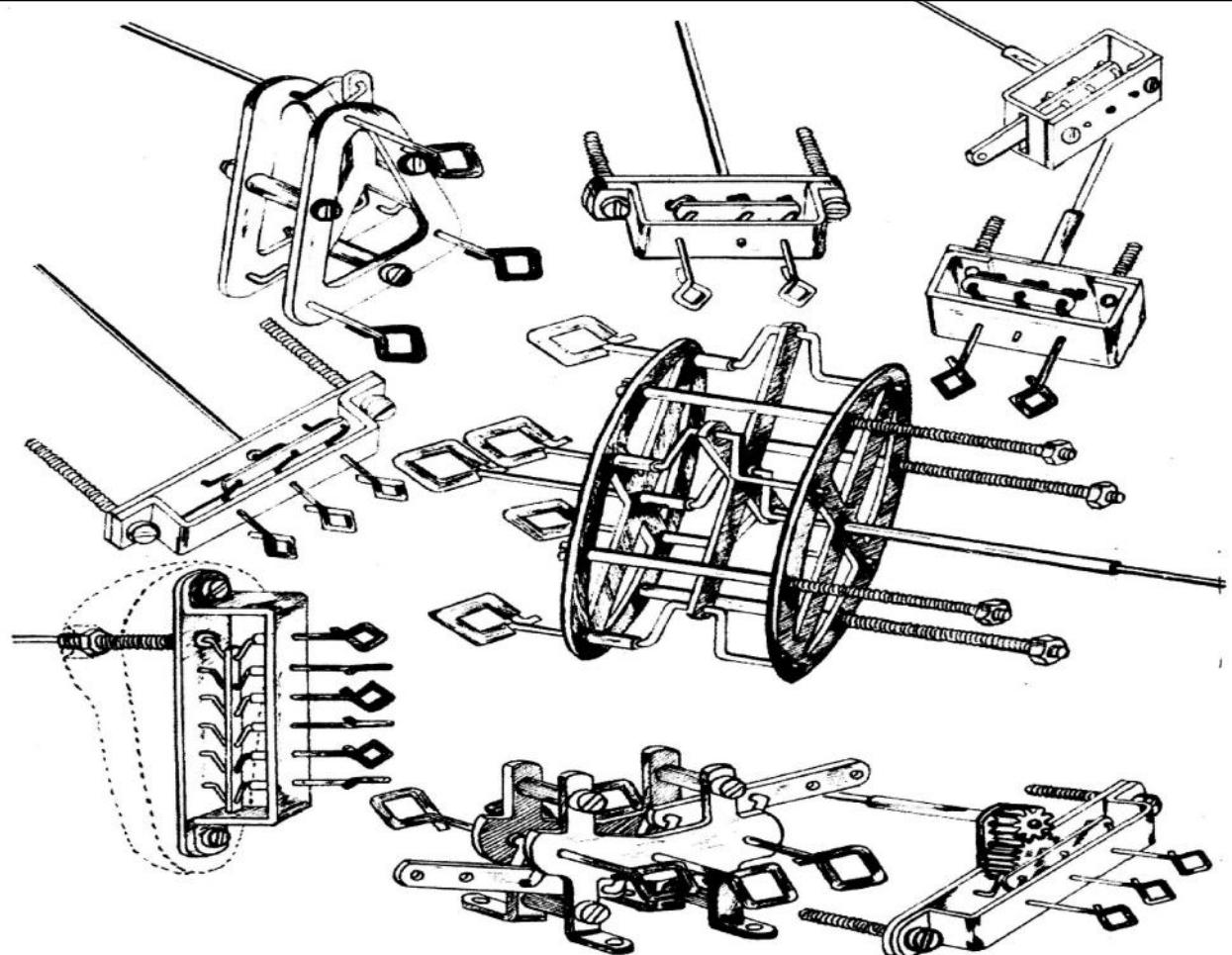
Editor: Below is the final part of last month's article 'Crank Instead of Gears', which I confess to overlooking. The author says he built all of them and this fact negates all my comments made in the last issue.

the wing rib shape, and at the same time being strong enough to withstand any load required to drive the airscrews. Size for size as compared with the geared unit for the same purpose, the crank unit is about half the weight and much stronger. A complete unit arrangement such as has just been described can be seen in the sketches. The six-hook double link double throw unit in the centre at the bottom was used in conjunction with the small hookless type in the top right corner. These were connected together with light duraluminium arms, and this arrangement worked very well in practice, being silent in action and vibrationless. It will be seen that as the parts of the unit, such as the links and the throws of the crankshafts revolve, they could, not being balanced, set up vibration, but owing to the extreme lightness and the comparatively low speed of rotation this does not happen.

All the crank units in the sketches were built by the writer, some of which are still in his possession, among them being the large circular unit in the centre and the geared-up unit at the bottom right corner. These all look considerably larger and much heavier than these words would imply, but that is not so, as they have been drawn large to show the various parts.

The five-hook centre unit will probably be more interesting than any other, as this can be accommodated in almost any round fuselage model, and as a unit which will fit inside the modern machines fitted with cowls.

This type is slightly more difficult to construct, owing to the extra work involved in cutting the side-plates and the corresponding distance pieces. The outside size of the one illustrated is 1½ in. diameter, weighs complete half an ounce, and will take four loops of $\frac{1}{8}$ x 20 hard rubber on each hook, and under the strain of $\frac{1}{2}$ lb. of this rubber wound to breaking point revolves at a high speed in absolute silence. This type of unit should appeal in many ways to builders of "Wakefield" models, as a large power output can be imparted to the airscrew shaft devoid of excessive friction. The six-hook shown at the bottom left corner was designed for incorporation in a scale model, and, as will be seen, is particularly suitable for scale models of machines with inverted engines. The fixing of this is very simple. The airscrew spindle bush is screwed, and the side-screws securing unit, to the nose block. The remaining units are straightforward types usable on almost any shape of machine. That in the top left was used on a model with a triangular fuselage, for which it is most suitable. That in the bottom right is interesting, and, as mentioned earlier, includes a step-up ratio to the airscrew shaft. This is the last unit constructed to date. May it be pointed out in conclusion that the advantages of these units over the geared types are almost frictionless power delivered to the airscrew spindle, the total absence of noise under working conditions, their light weight, and lastly the ease of construction.



The ones that got away, but some of them returned

A response to your appeal to put pen to paper and an addition to the piece on lost models by my Crookham club mate Nick Peppiatt.

In case you wonder how can a modeller 81 years young have such a detailed memory, it is not the case at all, just that I kept records during my early modelling years.

The story begins in 1950, yes 70 years ago ! My first power model was given to me by Sid Hall- a regular Chobham Common sports flyer who designed all his own pylon models, loosely based on the Banshee but always under powered. I was his fetchermite, so this was my reward- Baby Banshee powered by a second-hand ED Bee- metal tank and all.

According to Chobham Common legend you were not a "real modeller" until you had lost one. So, in June 1950 I became a "real modeller" at the tender age of 10. The flight, 15 minutes oos landed about 10 miles away at Winkfield in Berkshire. A postcard during the week (no phones in those days !) indicated its whereabouts, so all was well.

The first glider loss was also in 1950 (July). A mercury Gnome wing and tail with an O D fuselage disappeared after 8.45 from Chobham into Wentworth, never to be seen again.

Next up was another Sid Hall gifted power model - also ED Bee powered oos in July 1952 for 5.30 (very strong wind) but was found near Guildford.

July 1950 saw my first Dream Bogey making 7.45 and coming down at West End Chobham. The most spectacular flyaway occurred in 1955. Flying my second Dream Bogey at Chobham, it hooked a boomer at 12 o'clock and disappeared as a tiny dot, over flown by a lumbering Boeing Strato Cruiser out of Heathrow (Chobham Common was on a flight path in those days). The Dream Bogey came down in Epsom high street at 2.30 and was taken round to Epsom police station - the only time I have ever collected a model from the police. Of course in those far off days nobody bothered with d/t's they were alien.

During the late 50's, a Stomper, powered by the trusty Bee (couldn't afford an Elfin 1.49) disappeared from Chobham, never to be seen again.

An own designed glider based on a Lulu was next to go AWOL.

Fast forward now to my first spell with Crookham Contest Modellers and the scene changes to Beaulieu (around 1970). Beaulieu is renowned for waiting to launch under a circling buzzard. I did this with an 80 gram od Wakefield, using a KSB timer in the pylon. Unfortunately 4 other flyers also took advantage of the buzzard and all of us maxed easily. Unfortunately it was the first of 2 occasions when I chased the **WRONG MODEL** never to be found.

Around the same time I lost an Elton Drew designed A/2 from RAF Odiham (timer failure). I was flying with my young son, but we should not have been allowed in (permission for Crookham members had been given for free flight every Sunday) but it was Farnborough Airshow and Odiham was on standby for emergencies !.

Next up were a series of flyaways in the 1990's.

A coup at Port Meadow d/t'd over the railway and canal onto that canopy of wood land where nothing ever penetrates.

Also from Port Meadow a d/t failure on a Satu resulted in 5 weeks spent in blazing sun in a corn field - returned but never to fly again - you should have seen the warps !

1992 saw me win HLG at the Southern Gala at Little Rissington. It cost me 2 Mike Page Butterflies. (no D/T's of course)

A Yellow Bird was lost from Odiham- came down at Hook, about a 5 mile flight.

Into this century I lost a 36'' Corsair off a bungee at Middle Wallop , no D/T never seen again.

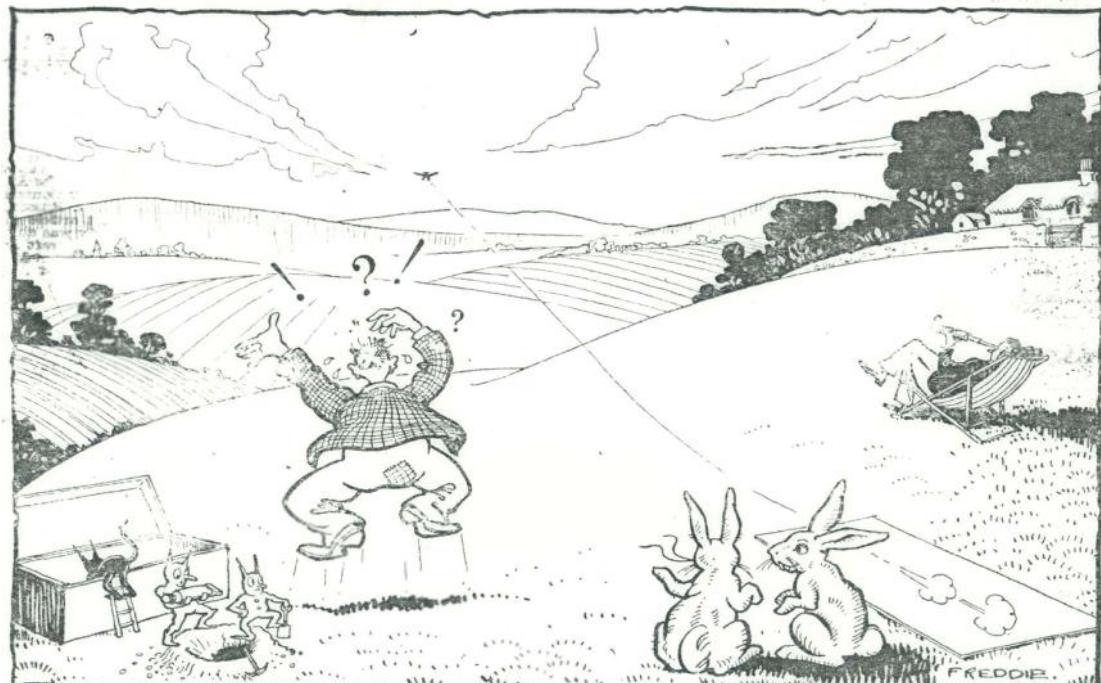
The second 'chasing the wrong model' episode involved my black and yellow Lulu. I saw it d/t down from a boomer, or did I? 2 fields out I found it, but it was not mine, although an identical colour scheme. My Lulu was found on the Leckford Estate, d/t popped, but due to the strength of the lift went much further than the one I tracked.

2005 and I had an 8 1/2 minute third flight with my 9ft Mantis at Middle Wallop. It came down behind the copse at the back of where the radio flyers gather. Open fields there, but no model. Never been seen since. What use would a 9ft glider in the D/T'd position be to anyone?

Lastly I must just relate a remarkable flyaway from Chobham Common in 1971 or 1972. Onetime Crookham member - Jim Mcneil, lost an A/2 (d/t failure) in the January! It disappeared over Chobham village and was picked up in Lewes in Sussex - a flight of probably 40 miles or more.

Enough of my ramblings, I hope they have been of some interest.

Geoff Smith.



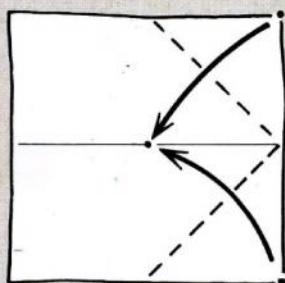
Somebody ought to tell him about Radio D/T's

WHEN I SEE AN ELEPHANT FLY

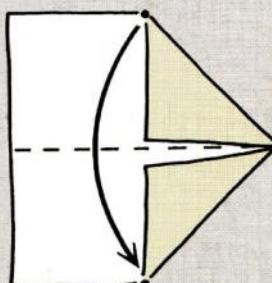
NICK ROBINSON

Inspired by the famous cartoon, this Elephant has particularly large ears, otherwise it wouldn't fly at all! The basis for the design is to fold half a "bird base" in origami terms and it was adapted from work by Frenchman Alain Georgeot.

Start with a square (grey or pink!), coloured side down and add the centre horizontal crease.



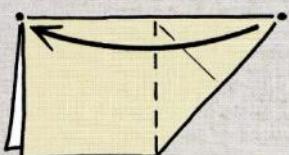
1 Fold both right-hand corners to the centre crease.



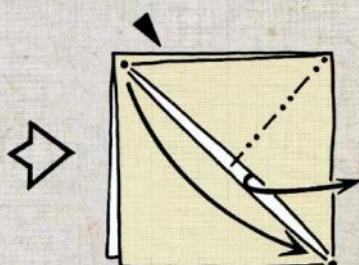
2 Fold the top edge in half downward.



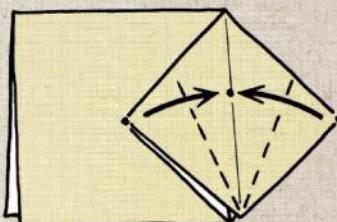
3 Crease the upper right corner to the lower right corner and return.



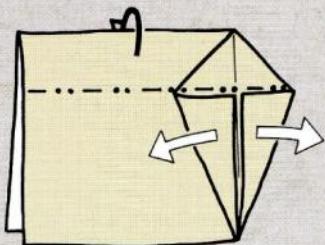
4 Fold the top right corner to the top left.



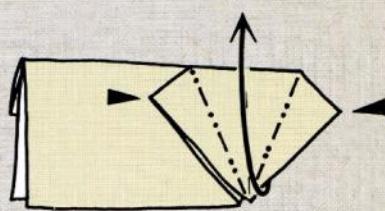
5 Using established creases, carefully squash the loose corner flat ...



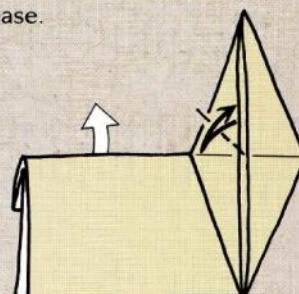
6 ... to this position. Fold both lower sides of the squashed section to the vertical centre crease.



7 Mountain fold the top edge behind along the line formed by the horizontal inside edges of the kite shape. Open the flaps back out.

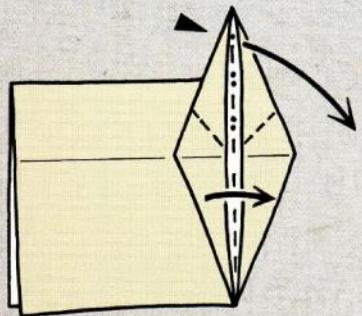


8 Fold the loose corner upwards, gently pressing the sides in ...

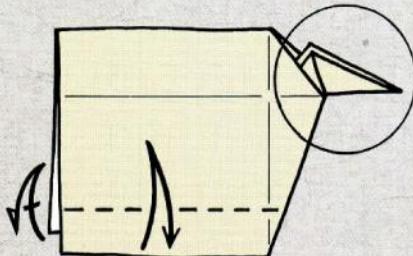


9 ... to this position (as in the "Flapping Bird" steps 8 to 10). Pre-crease a small 45-degree fold on the diamond shape, then raise the hidden flap from behind.

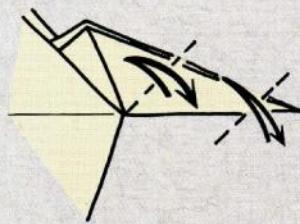
WHEN I SEE AN ELEPHANT FLY



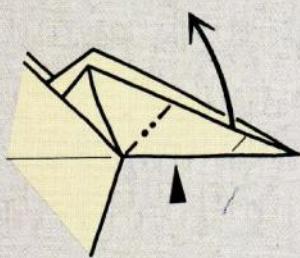
10 Add another 45-degree crease to match the last one, then use the creases shown to swing the paper across ...



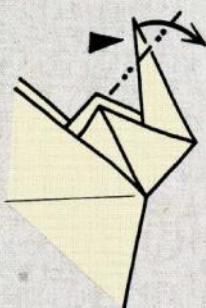
11 ... into this position. Precrease two shaping folds on the raw edges. The circled area is enlarged in the next three diagrams.



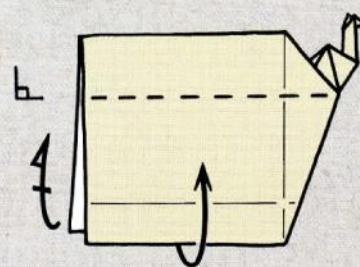
12 Make two pre-creases at about 45 degrees.



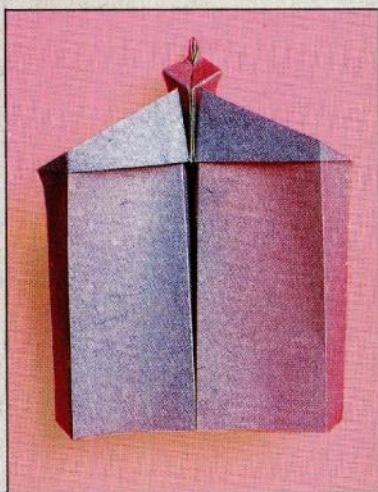
13 Use the larger to make an inside reverse fold.



14 Then repeat with the smaller crease to shape the end of the elephant's trunk.



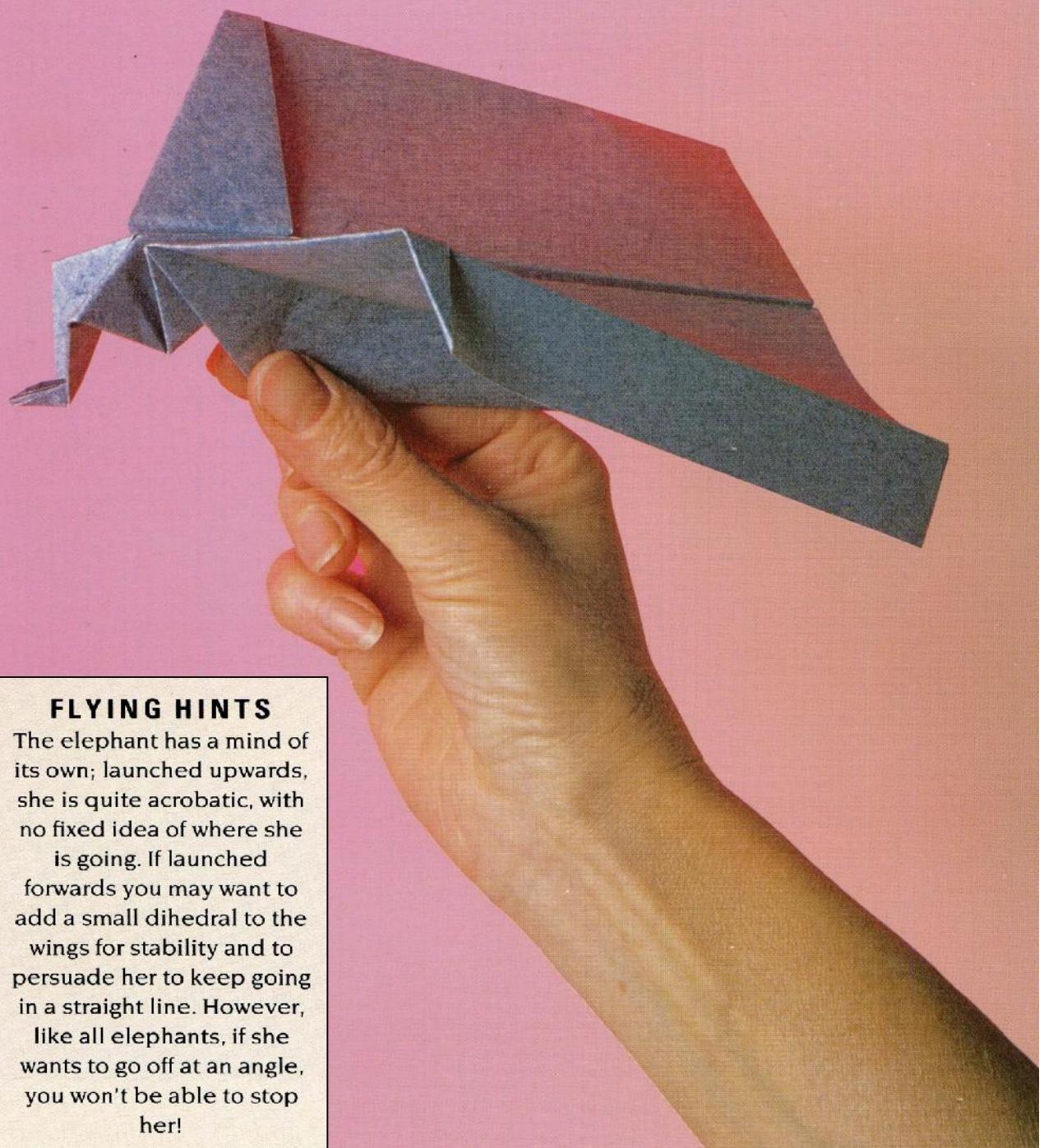
15 Fold the wings to right angles and adjust the wingtips to match the profile shown below.



16 You can now see an elephant fly!



WHEN I SEE AN ELEPHANT FLY

**FLYING HINTS**

The elephant has a mind of its own; launched upwards, she is quite acrobatic, with no fixed idea of where she is going. If launched forwards you may want to add a small dihedral to the wings for stability and to persuade her to keep going in a straight line. However, like all elephants, if she wants to go off at an angle, you won't be able to stop her!

From the book 'Paper Airplanes' by Nick Robinson

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Indoor Isn't for Everyone 46

Nick Peppiatt

Bill Hannan (1931-2020) - an appreciation

I was very much saddened to learn of the passing of Bill Hannan in December. He was a major inspiration to many builders of small flying models. He contributed to the 'Model Builder' magazine for nearly twenty five years, with his 'Hannan's Hangar' column ...Being a column devoted to miscellaneous ramblings of an aeronautical nature...' according to the very early ones. The later columns began with an apposite aphorism. The following came from the first three issues of the small hard copy pile of 'Model Builder' issues that I have: -

'Scale model accuracy is in the eye of the beholder.' (October 1977)

'To invent a flying machine is nothing; to build it is little;

to make it fly is everything.' (October 1978)

'Cups and medals tarnish. Knowledge and skill last a lifetime.' (July 1979)

If you want to find further examples of Bill's pearls of wisdom, digital copies of many issues of 'Model Builder' can be found on the following websites: -

www.rclibrary.co.uk

www.rcbookcase.com

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CONTRIBUTORS

Russ Barrers, of Russ-Craft Model Museum, San Marcos, California, provides much of our design research material. If in the Southern California area, be certain to visit his facility!

John Karstrom, a helicopter rotor systems specialist and model helicopter authority, who writes for Model Helicopter News and American Aircraft Modeler magazine.

Ray Caswell, senior citizen of Autogiro City, is an aerospace engineer, and resides in Tujunga, California.

Mel Duke is a steam plant engineer in beautiful downtown Burbank, California (Really!) Mel specializes in hand-launched gliders.

Bill Hannan, in real life, is a graphic designer and proprietor of "Hannan's Hangar" in The Model Builder magazine. Bill dwells in Escondido, California.

Fred R. Hamlen, of Boston, Mass., is an architect, and unusually dedicated scale drawing delineator.

Fulton Hungerford, of Timuvala, Florida, has long specialized in unusual models, such as his famed indoor Ford Trimotor. He is the manufacturer of FH wheels.

David W. Jones is an industrial designer, and has studied with Frank Lloyd Wright. In addition, Dave has strong interests in music and photography.

Björn Karlstrom, of Sweden, who is internationally known for his scale drawings and paintings, is also a model builder and speedboat designer.

Kingsley Kay is a former president of the North American Can Pilgrimage scale model club, and a dental technician, who lives in Los Angeles, California.

Otto Kuhn is a highly accomplished commercial artist who resides in Sherman Oaks, California.

Jed Kusik is an industrial art teacher, and well-known control-line test racer from Huntington Beach, Calif.

Trudee Kusik is Jed's wife, and an aircraft draftsman, formerly with Douglas Aircraft Company.

Laure S. McCready, formerly Professor of Marine Engineering and Department Head, U. S. Merchant Marine Academy, and later Director of the National Maritime Research Center, is listed in Who's Who, and began aero-modelling in 1926.

Walt Mooney, of San Diego, California, is a full-size aircraft designer, author, sailplane pilot, and TV "Thrillseeker" in addition to his modelling activities.

Bob Peck, of Peck-Polymers, La Mesa, California, is a model designer well-known for his Peanut Scale kits.

R. G. Schmidt is an avionics system designer with General Dynamics, Fort Worth, Texas. He was a member of the 1950 Wakefield team.

Frank Scott, of Dayton, Ohio, is a GM technician, private pilot, glider pilot, and skydiver. Frank is also the inventor of the "Scott Sled" kite, and frequent contributor to Junior American Modeler.

David Stott, co-originator of the Peanut Scale concept, is a model builder for Sikorsky Aircraft, in Connecticut.

Roald Tweet is Chairman of the Augustana College English Department, in Rock Island, Illinois, and has been a modeler for more than 32 years.

Harold (Bill) Warner is a history teacher in Sepulveda, California, author, and past president of the North American Pilgrimage flying scale model club.

Bill Watson, from Van Nuys, California, builds and flies all manner of model Zeps, 'quos, 'copters and weirdies. Fred Weitzel, of Yonkers, New York, is a music teacher. Fred has held national records for both ornithopter and autogiro models.

FUN!



FUN!

PECK-FORM 148

PEANUT SCALE!

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Plans & Things advertisement from January 1974 Model Builder

Operating as Plans & Things, which started around 1964, Bill also compiled and published a series of inspirational plans from a number of wide range of modellers, mainly based on the West Coast of the USA. The accompanying flyer shows an agreement for Peck Polymers to take over this operation from W.C.Hannan, Graphics and a list of the contributors and, also, the Paper Glider, powered by the Brown CO₂ Micro-Jet, which I featured in IIFE26 (NC December 2018). This transfer took place in the mid-1970s. The complete plans listing was spread over several other pages, under the headings Peanut Scale, Flying Scale, Obscure Aircraft, Sports Models, Ornithopter, Rotorcraft and Scale Drawings. More details of this operation can be found in Bill's article 'Mail Order Isn't Easy' originally published in Model Retailer, Feb 1977, and reprinted in 'Scapbook of Scale, 3-Views & Nostalgia'. Apparently, the bestselling plan was Walt Mooney's Demoiselle.

PEANUT POWER!
BY BILL HANNAN

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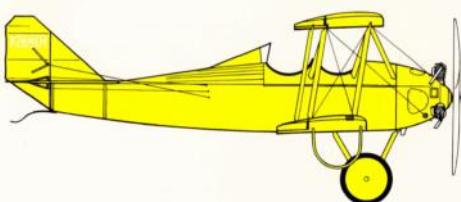
Front cover of 'Peanut Power!' with a remarkable photograph of a Fokker FII parked on an elephant's trunk!

INTERNATIONAL
Peanuts & Pistachios

VOLUME NUMBER FOUR
COMPILED BY BILL HANNAN



AMELIA EARHART AND HER KINNER CANARY



INSPIRATION FOR BUILDERS OF SMALL SCALE FLYING MODELS

Front cover of 'Peanuts and Pistachios' Volume 4 - typical of the ampersand series of publications.

Bill was a qualified technical illustrator and it showed in the quality of his publications. A major work 'Peanut Power!' first came out in 1980, which includes the plans for his Bede BD-4 Peanut. Bill then went on to set up Hannan's Runway with his wife, Joan, and publish a series of compilations, most with an ampersand in the title over the next twenty years

These included: -

Scrapbook of Scale (2 volumes) - Models and Musings

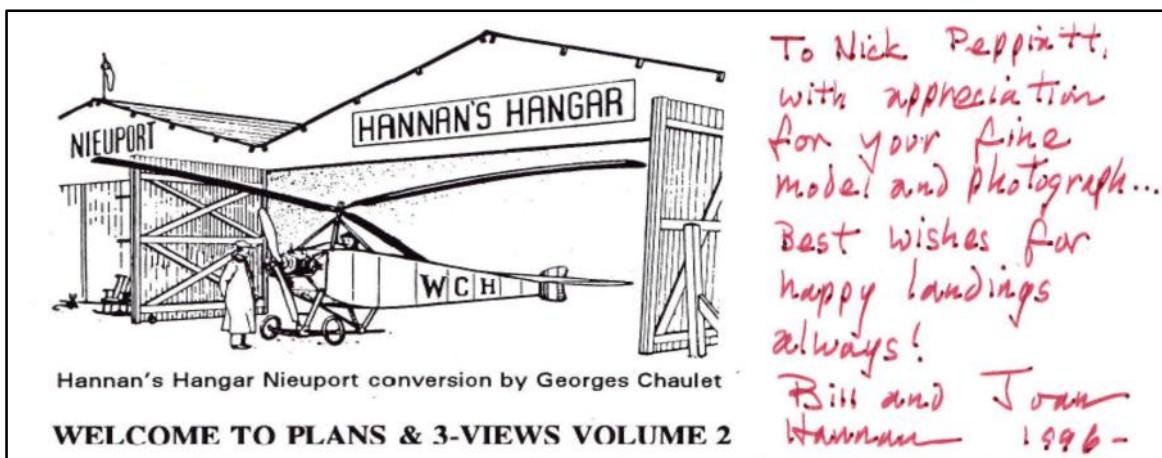
Peanuts & Pistachios International (6 volumes) - Stick & Tissue International (3 volumes)

Plans & 3-views International (2 volumes) - GBs & Gee Bees International

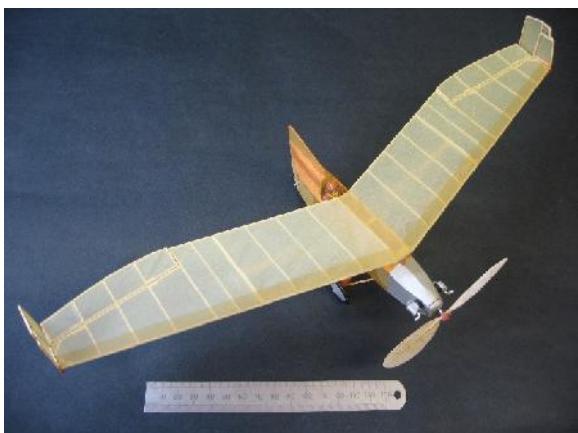
Models & Modelers International (2 volumes) - Models & Methods International

Model Builders & their Models International

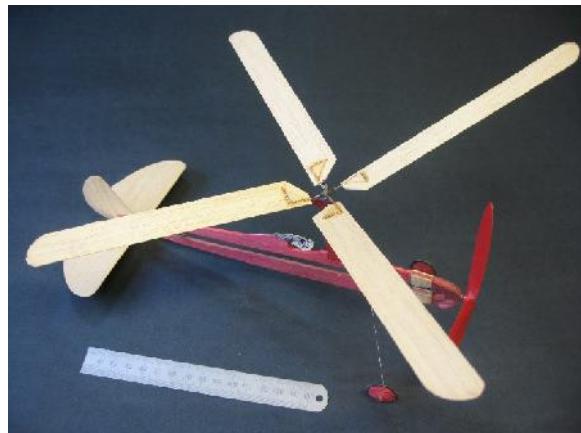
I am the proud possessor of most of these publications and obtained many directly from Hannan's Runway. These were individually signed by the author himself. In Peanuts & Pistachios volume 5, Bill published his drawing of the Lippisch Storch IXb. Siegfried Glöckner used this drawing to produce plans for a Pistachio sized model, which were published in Stick & Tissue volume 3. My Storch was built using these plans and I duly sent photos of the completed model to Bill, one of which he published in Plans & 3-Views volume 2. I was very pleased to receive a copy of this issue inscribed as follows:



Bill was keen to promote unorthodox designs and this edition of Plans & 3-views also contained an autogiro section with two of his designs. The earlier Tyro-Gyro, shown below was one of his Plans & Things offerings.



Pistachio scale Lippisch Storch,
from Siegfried Glöckner plan,
published in Stick & Tissue volume 3.



Tyro-Gyro all sheet autogiro
13" rotor diameter, from Bill Hannan's plan

Bill's autobiography can be found in the AMA History Project: -

www.modelaircraft.org/sites/default/files/files/HannanWilliamCBill.pdf

Many of the Hannan's Runway and Plans & Things publications are still available: -

Although I only knew Bill through limited correspondence, he appeared a charming man and his modelling skill, expertise and promotion of the hobby will be much missed.

Nick Peppiatt

A PARACHUTIST FOR YOUR CONTROL LINE OR FREE FLIGHT MODEL

SOME READERS may remember Clem Sohn, the Birdman of the 'thirties, who was sponsored in this country by the *Daily Express*. His speciality was to dive from an aircraft and perform impressive birdlike evolutions by means of wings attached to arms and legs. He finally pulled the ripcord of his 'chute and landed safely. One day his parachute did not open . . . A modern successor is Sergeant Valentin, of the French Air Force, who provides similar entertainment and has, indeed, been billed to appear in this country. However, he wisely carries a lap pack in addition to a shoulder pack.

The model Birdman offered to our readers is based on Sergeant Valentin, and colour scheme given is his standard dress for these displays. It can be released from a control line model by means of a third line; even more satisfactory is its release from a free flight model by means of a timer. It can even be arranged for departure when dethermaliser lifts tail, giving all the appearance of baling out.

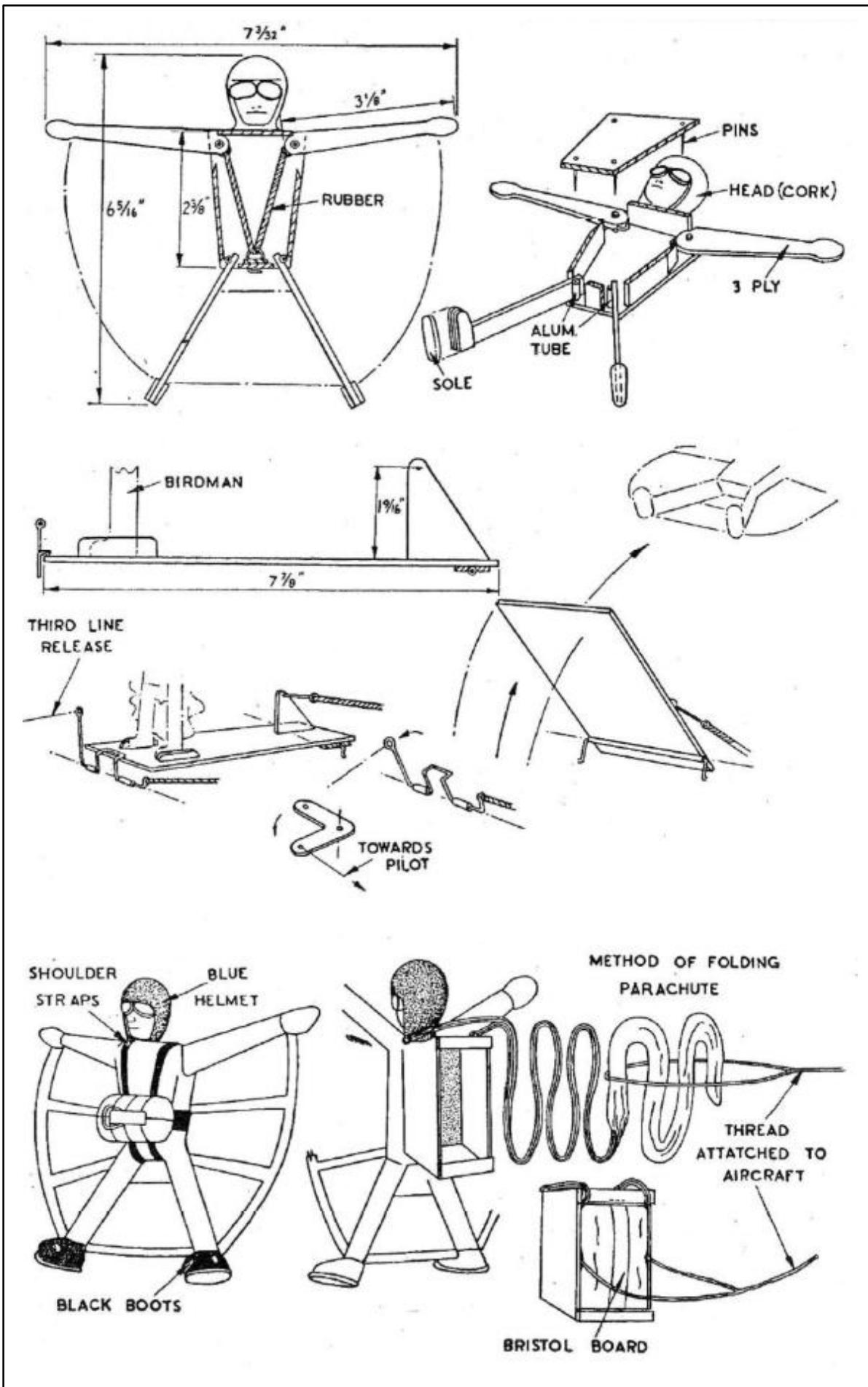
French modeller Moreau provided the model which has been thoroughly tested and proved a great success on club rallies, galas, and other occasions where a little extra spectacle goes down well. Sketches are dimensioned, and while smaller Valentins can be made, they are not recommended as they are too small to be readily visible in the air—particularly if free flight releases are to be made away from the main spectators.

Alternative release systems for third time or timer are illustrated. Basically they are the same, only difference being point of attachment of the pull cord. The basic platform is arranged inside the fuselage, so that Birdman can be slipped in place with his feet wedged between the two retaining pieces. By lowering the arms the wings are folded and retained in place by the elastic bands with just enough force to make a snug fit without jamming on release.

When the platform is released Birdman is thrust upwards and ejected. His arms swing up and he is away. Note the provision of an additional fine thread line from the aircraft attached to the parachute. This acts as a ripcord and by varying its length, duration of the Birdman antics can be adjusted.

Parachute should be of silk or stout tissue, and for size illustrated should be about 25 ins. in diameter, with sixteen lines evenly spaced round the circumference of about 30 ins. long. Note the strip of Bristol board which holds the parachute in place until jerked out by the pull of the release thread.

Valentin is an amusing figure that can be produced in less than an evening's work. Those unskilled in modelling a suitable head may find a small celluloid doll—usually acquired nude with a little bath—can be decapitated to substitute for the cork carved head.



Extract from old paperback Clarion circa 2004

Random Ramblings

I'm sitting here looking at a blank computer screen wondering what pearls of wisdom may flow, hence the title. I have done absolutely nothing aeromodelling wise since Peterborough Flying Aces, apart from my last article, so random ramblings it will have to be, rather than my usual unstructured drivel.

One thing comes to mind, I recently made contact with another of my 50's - 80's aeromodelling mates Ray Archer. Ray was with us in our control line heydays and early radio, single channel through to multi. He got waylaid along the way and had a foray into the early days of drag racing. He built a couple of dragsters using an old straight six 3.5 Jaguar engine. I was peripheral to his activities but we had some fun, until the big boys and big money moved in. We went from straight petrol power through methanol and eventually finished up with three 2-inch SU carburettors on a Wade blower, swallowing methanol like it was going out of fashion. The dragster didn't do any better times but the terminal velocity improved and with the six open pipes facing skyward emitting white exhaust vapour it was spectacular for its day. The expression 'Going like a train' was most apt, as the exhaust shot up to about 10ft and hovered there, in a long line, as the car went down the strip. I remember one practice day at Santa Pod, I shot off down the drag strip in the straight six Ford push-car behind Ray and overtook the Street Car racing in the other lane. What made it worse for the driver of the other car was my two kids waving at him out of the Fords window, not good for the guys ego to be beaten by a push car that gave him 20 yards start to boot. Happy days.

It didn't take long to get a good digression going did it? I never really got started on any vintage aeromodelling subject did I?

Hey! Ho!, back to the digression, contact between Ray and myself had degenerated to Christmas Card between wives level for a number of years, then, out of the blue, earlier this year we get a card from Ray. He announced that he had finally achieved escape velocity at work and that the Archers were emigrating to Wales, Neath to be precise. Fortunately this card came a few weeks before the wife and I were off to Tenby for a few days to revisit the two golf courses there, so we arranged a visit to the Archers on our return journey from Tenby.

Last I'd heard Ray was into electric radio control, when he took me into his new workshop, Oh-boy! was he into electric? He had some enormous models, semi scale jobs 10 or 12 foot wingspan, a B25 and a Spitfire. He also had a huge flying wing, if you are on the web then look at web.ukonline.co.uk/ray.archer/, he has a web site with pictures.

Since our reunion we have exchanged a few e-mails, more on his part than mine I must confess, the results however may prove of some interest to a few of you Sam1066ers and certainly a diversion from my usual rubbish.

Ray Archer and the B25



I sent Ray a few pictures of my own models and as he always had a bent for whimsical cartoons, he soon replied with the following amendments.



Right is Ray's version of my best open rubber job 0-3

I think Ray felt a little more wing area was required, hence the proposed conversion.

Spelling does not appear to be his strong point though, unless I'm missing something.



Ex Ian McDonald Float Plane (Its my tail plane)

A little while before Wallop I was at one of the hanger meetings at Davids and the conversation must have got round to float planes, next thing I know I'm going home with a vintage float plane ex Ian McDonald minus a tail plane. After a fruitless search for the name of the model in order to make some tail feathers, I decided to build a tail plane in the manner of the wing and to hell with authenticity. I was not sure whether I could claim to be the builder of the model, after all I had constructed a flying surface and just fitted a rather large prop assembly, with fuselage and wing attached, on the front. Whither the B.O.M. rule.

I made up a short motor from 14 strands of $\frac{1}{4}$, it seemed a bit powerful for the single bladed prop but I figured R.O.W. would need it, having witnessed a few attempts by others. I had made a set of blue foam floats for my old Senator a couple of years back and tried it off water at Peterborough but no joy. I was using 12 strands of $\frac{1}{4}$ in that, but it was old and heavy. It flew OK but not off water.

I took the Float Plane down to my local trimming site and, with a few hand turns and a small piece of packing, the model did a couple of turns up to 20 ft. and glided down a treat. I was ready for Wallop and Peterborough but sadly no pond at either venue. I've just got it down off the workshop wall to take the photo.

I seem to be collecting other peoples models at the moment, I have a Gipsy, a Jaguar and am expecting a Korda shortly. I will use these models for pleasure flying with an 80 gm motor from 16 strands of $\frac{1}{4}$ Tan Sport. The idea is that I will get a nice short burst of power on half turns and not have to run too far. I will have to be careful not to wind them up too much or I'll be into the aerobatic looping like I got with the same sort of set up in my own Gipsy at the Nationals a couple of years back.

Note: videos of Rays models flying can be found on youtube, google Eflightray

John Andrews

A Nightmare And The Last Squeak

I'm not eating pork pie again; not before bed-time. I had a nightmare so vivid that it took a pint of tea and three slices of toast and marmite to get over it. I dreamed that all of us had been locked up since last Spring in a vast prison. There had been no charges, no trials and no release dates. Outside on what would have been competition days the weather was fine and calm, Inside, all day, every day, a loudspeaker announced new restrictions, punishments and the number of prisoners who had died. Can you imagine that!? But you don't want to listen to my nightmares, you have your own.

In fact, the lock down reality hasn't been quite so bad for retired, adequately funded, reasonably fit, hobby - rich O.A.P.'s like many of us. We've all filled the time building new models, conducting research, writing articles and papers and studying quantum physics. Haven't we? No doubt our editor will be deluged with the fruits of it all. In preparation for next season I have revised my No Mistakes Policy after it failed me at the last Area Meeting, browsed my rubber test records and re-read Paul Rossiter's comprehensive survey 'Rubber Testing' published in Free Flight News April and July 2011 and dug out my own article on testing in order to update it. This is a complex and fascinating business and you can do a lot of useful work without special equipment. What we want to know is how to identify good rubber and how to make the best of it using the simplest 'day before' and 'on-the-field' procedures. In short how to get the last squeak out of your ten grams. I'm sure you're familiar with most of the following but this is lockdown and we are used to repeats.

The quality of a rubber is its capacity to store energy. The proper way to test this is to weigh the sample and stretch it to just before breaking point, then relax the rubber measuring the pull at points back to zero. The pull represents the torque and the stretch the turns the rubber might take. This information is graphed and the area under the curve represents the available energy storage capacity of the rubber. The bigger the better. (see fig.1 below and Rossiter for essential detail and calculations) Some years ago Peter Brown computerised his testing rig and was able to read out the energy storage in foot lbs./lb. immediately. Below, I'll describe Rossiter's quick method of assessing rubber quality and some simple ways of predicting the number of turns a motor should take. The length and weight of rubber samples are not easy to measure with enough accuracy so averaging multiple tests is good practice but extremely tedious. But first a few considerations.

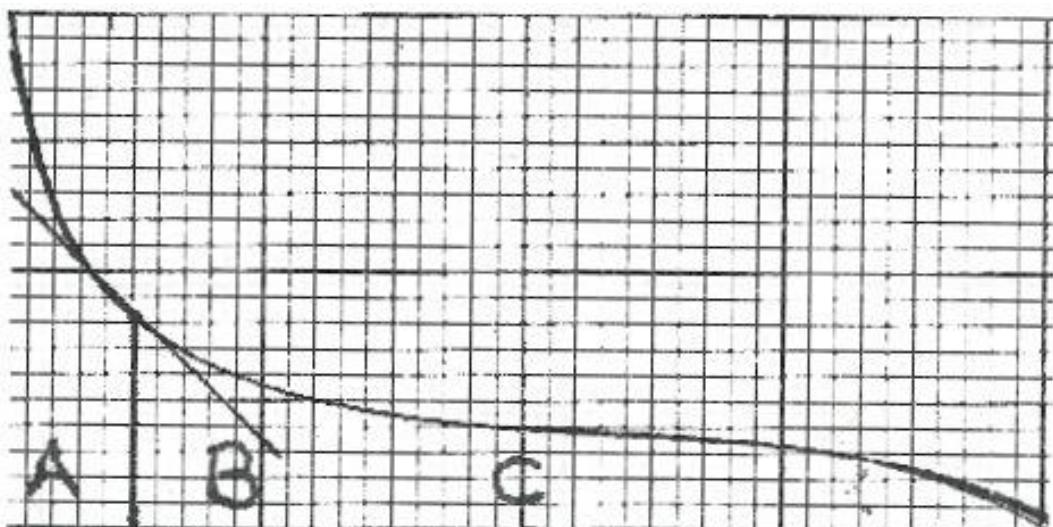


Fig 1 _Characteristic rubber relax curve

The 'y' axis is the pull or torque, the 'x' axis the stretch distance or number of turns. Area 'A' represents the burst energy, 'B' and 'C' the climb and cruise.

This is the relax curve, the stretch curve echoes this at a higher energy level. I find that the unwind cruise torque is 9 - 12% less than that measured during the wind. You never get out what you put in.

1. 'Set' and 'breaking in': If you measure a strip of rubber and stretch it to near its break point then hold it for about 4 minutes then relax it and measure the length again, this will be found to have increased by about 5 or 6 %. After 24 hours this increase will have reduced to about 2.5% and it will remain permanent a little bit below this. This is the 'set'. The operation is often called 'breaking in' when applied to motors. The new length means you can get a few more turns on a motor by breaking in. If you hold fully stretched for four minutes before winding this should mean about an extra 24 turns. If it's a cold day you could then lose all this!

2. Temperature: We all know that our motors give fewer turns and less torque on a cold day. Fred Pearce found the loss to be around 0.67% per degree C, Rossiter finds as much as 1.2%. Assuming .7% this means a motor giving 400 turns at 20 C would give 428 at 30 and only 344 at freezing !

3. Winding technique: The aim is to get to the last turn before the motor explodes, while avoiding bunching which can move the c.g. or jam in a tube fuselage. After a lot of experience you can sense the breakpoint approaching.

There are three winding methods.

- (a) pull the motor out to just before break point, (Super Sport rubber will break at about 9.5 times its length at approx. 20 degrees C) so it's a game of chicken.
- (b) Some hold there for 30 seconds or more.. Then allow the motor to pull you in as you wind, arriving at the model's nose just before the motor breaks.
- (c) pull out to a more comfortable stretch and wind on half the turns then walk in so that you reach the nose at full turns.

All your favourite methods.

4. Holding while waiting: While waiting for lift or for the wind to drop holding a fully-wound motor, 5% of the torque is lost in the first 30 seconds, and after 2 minutes you've lost 13%. Thereafter the losses are negligible. You can compensate by adding two or three hand turns until just before your motor explodes in the fuselage.

As you see, if you've got some dodgy rubber, a poor winding technique, it's a freezing cold day and you've been holding for 2 or 3 minutes and you've not added hand turns you may find the climb less than spectacular and blame it on the air.

Quality testing: Super Sport rubber strip now seems pretty consistent in quality but it varies very slightly in thickness and width so 9.7 gram, (10 grams minus 0.3 lubricant) x 12 strand coupe motors from different batches and even from different parts of the same batch may vary in length and so in the number of turns they will take and the torque they produce. For this reason it is important to think of motors in terms of length rather than number of strands as Dave Hipperson pointed out in an article some years ago. Rossiter describes a quick way to test rubber quality. A coupe motor is extended with a load of 20 kg. held for 20 seconds then relaxed. This is repeated, then it is repeated for a third time and the extension is measured. The motor is then relaxed to 50% of this extension and the load is measured. Multiply the extension by the load at 50% and you have a 'figure of merit' - a proxy for the results of a full

energy storage test. (Note: 'Extension' = stretch length minus the motor's original length. Rossiter doesn't record the temperature at his tests but my tests are at 19 degrees, probably lower than his. I can get a 19 Kg pull but strands begin to break so I test with a 17 kg. pull until Summer. I used to use 15 kg. until I got a new spring balance, more determination and improved the rig)

Test method: This is a variant of Rossiter's above. My test rig for coupe motors consists of a 50mm x 25mm x 3.5 M. batten marked off in centimetres and secured to the floor at the zero end. The motor is anchored at the zero end and pulled out along the batten using the device shown below which allows you to pull and hold at any point to read off the stretch length and the pull in kilograms via the spring balance. (Larger motors would probably need an R.S.J. and a boat winch.)



Ignore the little holes - they were part of an earlier system

Weigh out 9.7 grams of strip (plus the lube = 10 grams) and measure the length being careful not to stretch the rubber. Make up the motor to the desired length/number of strands. Find the motor length by dividing the strip length (minus 3 cms. for the knot) by the number of strands.

Pull out the motor to 17 kg. on the spring balance and maintain this pull for 4 minutes or until the length stops increasing. Relax the motor and allow it to recover temperature. Pull out again to 17 kg. and record the stretch length at its maximum (after 30 seconds or so). Relax the motor to 55% of this length and record the pull. The stretch length represents the number of turns the motor will take and the pull at 55% the torque expected at this point in the cruise/climb. (Rossiter uses 50% but this refers to the extension not the stretch). The product of pull and stretch equals the figure of merit.

Predicting performance: see Fig. 2. It is useful to know, even approximately, the maximum number of turns a motor should take. John Barker published a very useful article - 'Prop Picker' - some years ago in which he offers a formula for calculating turns. The motor length in inches is cubed and then divided by the weight of the motor in grams. The square root of this is then multiplied by a factor which reflects the quality of the rubber. At the time of the article and using Tan 2 rubber this was 44. This method can be applied to any weight and length of motor.

I noticed that for coupe motors within the normal length range, at 19 C, the max. turns figure was close to 2 x the stretch length in centimeters. Since the stretch length is on average just below 9 x motor length at this temperature and if by now you are too exhausted to bother, you can simply multiply the motor length by 18 and write this on its little plastic bag.

To test a prediction put on a hat, gloves and goggles, pull out the motor x 9 and wind allowing the motor to pull you in, reaching its original length as it explodes. Note the number of turns.

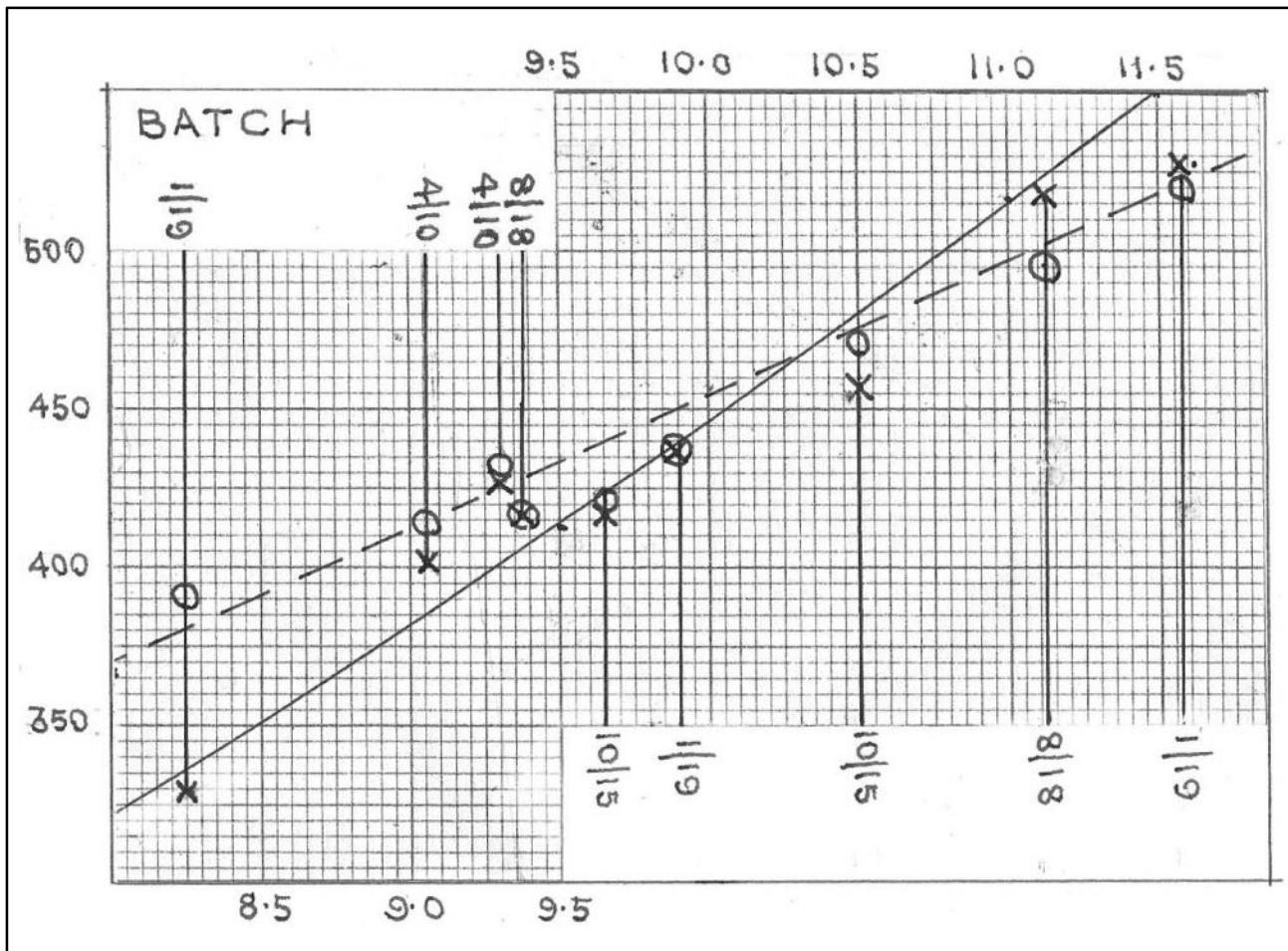


Fig.2 Summary of turns prediction tests

'Y' axis = turns

'X' axis = motor length

John Barker _____

motor length x 18 - - -

break = x

stretch x 2 = o

Conclusions:

All three prediction formulae seem useable in the normal coupe motor length range, 9-10.5" inches. The poor performance of the shortest motor - well short of my predictions - is possibly due to the chaotic knotting you get with a short fat motor near break point and the stresses created. Except that Barker gets it nearly right! His magic number 44 applied to Tan 2 rubber, these tests don't suggest any change for Super Sport. Within the normal motor range and with this small sample, Stretch x 2 looks most promising. Motor length x 18 might be trimmed down a bit to 17.5.

Given the effect of temperature, inconsistencies in winding, inaccuracies in measuring, the small sample, and calculating and recording errors, you might object that the whole enterprise is a waste of time, or possibly a hoax to get you to underwind or break all your motors at the comps. this year. The first objection is uncharitable, the second paranoid.

And what have you been doing in Lockdown?

Peter Hall

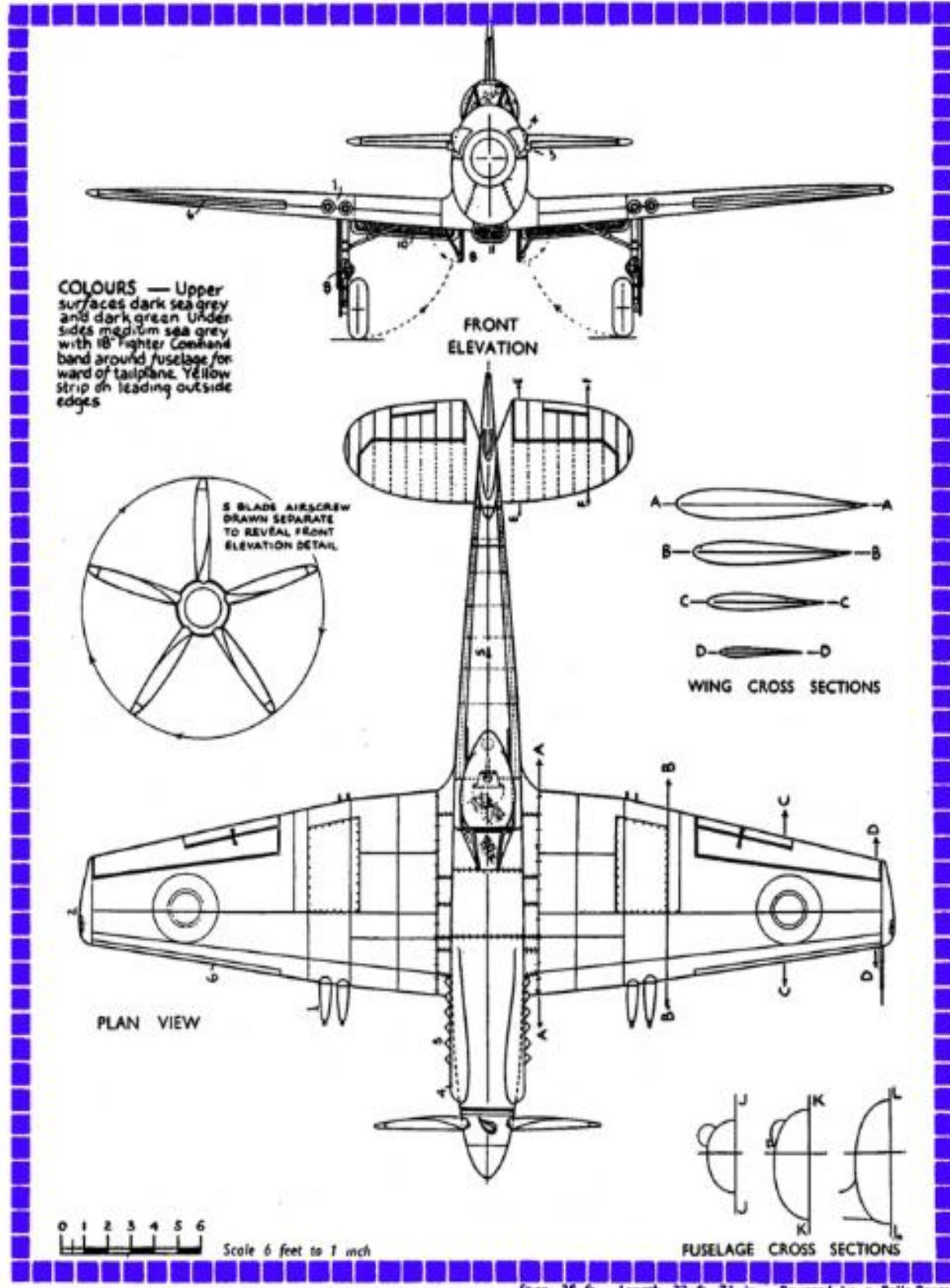
VICKERS SUPERMARINE

"Spiteful"

The long line of "Spitfire" aircraft, which has extended to over twenty models, has now come to an end with the introduction of the supermarine "Spiteful." Although this new Vickers design bears a distinct family resemblance to the "Spitfire," an examination reveals many changes of design and construction, chief among which is the inwardly retracting undercarriage and redesigned wing. The new wing not only employs a new section developed by the designers for operation at speeds in the neighbourhood of that of sound but a new constructional technique which enables an accuracy of construction within the limit of five thousandths of an inch to be maintained. This high accuracy, coupled with a superfine finish on all external surfaces and the elimination of external excrescences, has been largely responsible for the high performance. A Rolls Royce "Griffon" engine with two stage two speed supercharger, coupled to a five-bladed Rotol propeller, supplies the motive power, and in spite of its increased speed and wing loading this new design possesses all the manoeuvrability and "niceness" of control which has been an outstanding feature of supermarine production.

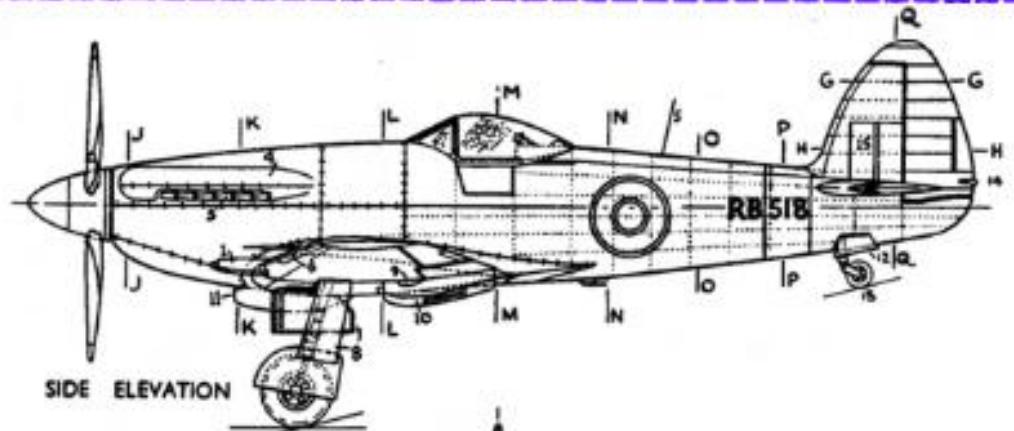
Courtesy of
ARMSTRONGS LTD. (Aircraft Section)

THE VICKERS-ARMSTRONGS SUPERMARINE

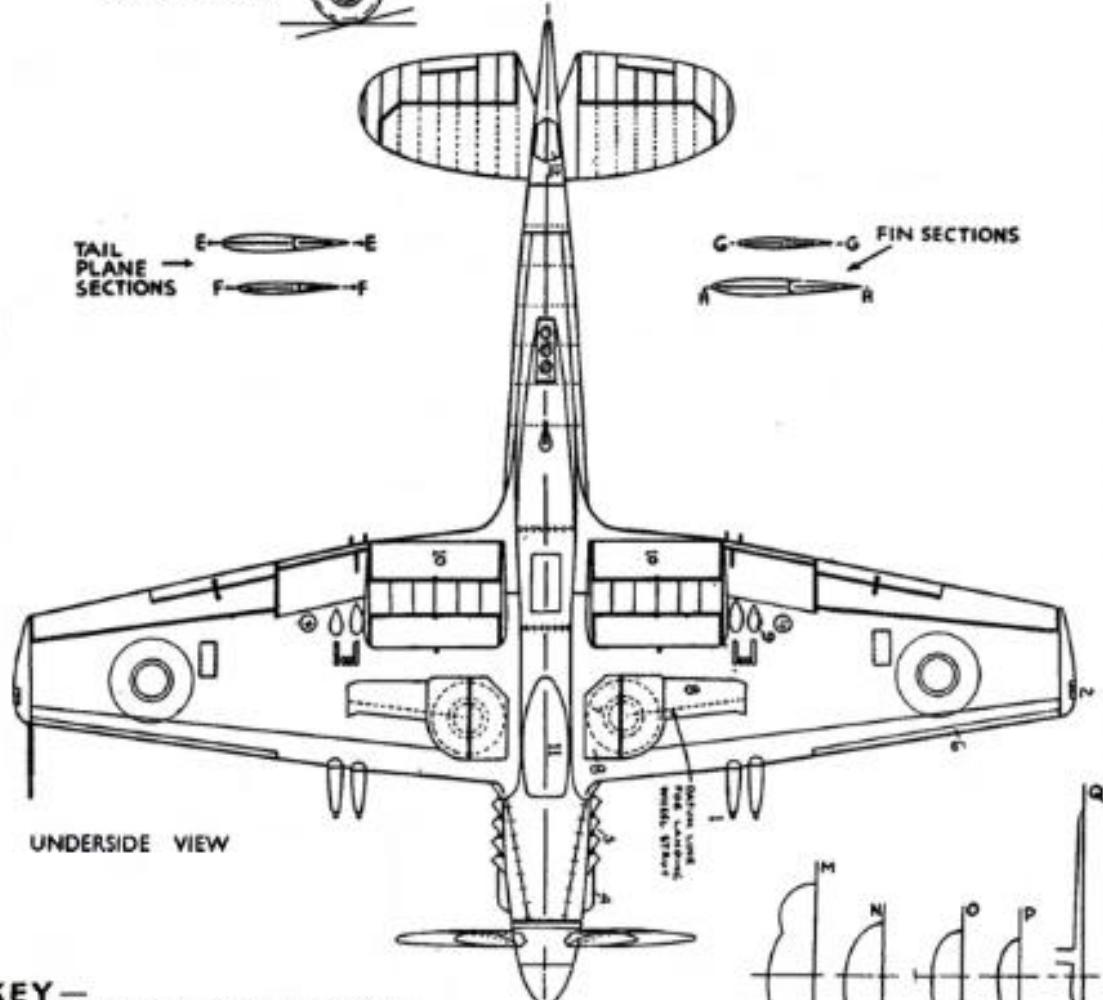


Span, 35 ft. Length, 32 ft. 7½ in. Powered by a Rolls-Royce
The wing section is laminar-flow and made to very fine limits
a "Veri-Tru" drawing compiled from

“SPITEFUL” MARK XIV SINGLE SEAT FIGHTER



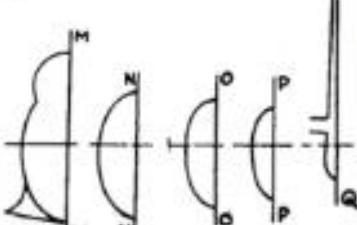
SIDE ELEVATION



UNDERSIDE VIEW

KEY—

1 4-20M.CANNONS	6 YELLOW STRIP	11 AIR. INTAKE
2 NAVIGATION LIGHT	7 RETRACTED/WHEEL	12 TAIL WHEEL COVERS
3 EXHAUST MANIFOLDS	8 L/WHEEL COVERS	15 RETRACT TAILWHEEL
4 CRUMPER BLOCK FAIR.	9 DRUMPFED FAIR.	14 TAIL LIGHT
5 WHIP AERIAL	10 RADIATORS	15 R/WB FLASH



FUSELAGE CROSS SECTIONS

BRANDY BY
M. T. BAKER & CO.

"Griffon" 61 motor of 2,050 h.p. Armament, four 20 mm. cannon, hitherto unobtainable in manufacture. This plan is reproduced from material supplied by Messrs. Vickers-Armstrongs.

Report No. 120

New arrivals throughout 2020.

I am sure we can all agree that there were some unwelcome and rather nasty new arrivals in our life during 2020, primarily Covid 19 and its variants with the resultant impact on health, wellbeing, social life, the economy and our model flying meetings.

New arrivals at the Library by contrast were very welcome and uplifting.

Regularly, every month, through the front door letter box came the Aeromodeller and SAM 35 Speaks whilst bi-monthly arrived the BMFA News, all of course reliant on the subscription being up to date.

Equally regularly via the email Inbox every month came the New Clarion and every three months the Free Flight Quarterly from Australia. You will all be familiar with the first four mentioned above but here is a little about FFQ which has articles on modern and vintage models and techniques, also some articles on full-size aviation "believing that we are heavily indebted to the designers and builders of our bigger brothers for their developments in aerodynamics, materials and structures".

The editorial team comprises:-

Andrew Longhurst (UK), David Mills (USA), Sergio Montes (Australia), Paul Rossiter (Australia), Chris Stoddart (USA), and Allard van Wallene (Netherlands).

Subscriptions are US \$20 p.a. digital edition, US \$60 p.a. printed edition.

The next group are all club newsletters, some are true "New arrivals" by email (all free subscription) and some are "Go and get them". To find this latter group go to the SAM 1066 website, in the left hand column select "SAM International" and in their website left hand column select "Newsletters" which will display a page of about 20 newsletter titles, some with dated newsletters available to download at a click and some which give the newsletter's website address where you will find the newsletters free to download. From these websites we download, from the list below, only those newsletters which include plans or G/A drawings.

Free Flight Down Under. (Australia)

Association of Vintage Aeromodellers of New Zealand Newsletter.

Association des Amateurs d'Aeromodels Ancien. (France)

Notiziario SAM 62. (Italy)

L'Aquilone. (Italy)

Indoor News and Views. (USA)

Gas Lines. (USA)

Free Flight Quarterly

Issue No. 77 October 2020



Gerhard Woetzelberg with his large "Decarbonizer" F1E model with Jodelay-type wing construction, in front of the slopes of Traunstein near Rhoden Hatz in Saxony, Germany. Gerhard continues in this issue with the 8th part of his series on F1E construction and development and has added two new articles on the construction of F1E models, the Klassik and the Decarbonizer shown above. See page 7.

In this issue		
Editorial: Paul King 1943-2020	Sergio Montes	2
Wings according to the Viennese school	Gerhard Woetzelberg	3
Jodelay wing construction examples	Gerhard Woetzelberg	7
Power Duration models, Part 1	Jim Eagley	8
The F1E Story, part 3b	Adrian Duncan	11
Lifting Line, Elliptic Wing and F1A performance	Sergio Montes	15
Alan King's 1954 Wakefield Winner	Alan King and	19
	Bill Dean	22
Phaggio-Pegna PC 7 Schneider Cup Racer	William Pearce	26
		the 1930's

Subscription rate (4 issues). Printed edition: Australia and New Zealand AU \$45; elsewhere US \$60
Digital Edition: Australia and New Zealand AU \$20; elsewhere US \$20

The image is the cover of the AVANZ NEWS newsletter. At the top, the word "AVANZ" is written in large, bold, white letters on a blue background. To the right of "AVANZ" is a white oval containing the "Vintage SIC" logo, which includes the text "Vintage" and "SIC" with a stylized biplane icon. To the right of the oval, the word "NEWS" is written in large, bold, white letters. Below the main title, a subtitle reads "Newsletter of the Vintage Special Interest Group of Model Flying New Zealand #180". The central image is a vibrant yellow and blue vintage-style model airplane, possibly a Cessna 172, flying through a cloudy blue sky. The airplane is shown from a three-quarter perspective, angled upwards and to the left.

FREE FLIGHT
DOWN UNDER

NEWSLETTER OF THE AUSTRALIAN FREE FLIGHT SOCIETY INC

VOLUME 52 NUMBER 4

SUMMER 2020

**THE AFFS
NEEDS YOU**

**SOME FLYING
TAKES PLACE IN
AUSTRALIA!**

CAT 4 FLYING SITES

WATT'S HOT IN E-36

STAY AHEAD OF THE PACK

**COVID CONSTRUCTION
CONTINUES**

Australian Free Flight Society Inc.

ASSOCIAZIONE ITALIANA
AEROMODELLISMO STORICO
**NOTIZIARIO
SAM - 62**
Periodico riservato ai soci
www.samitalia62.it

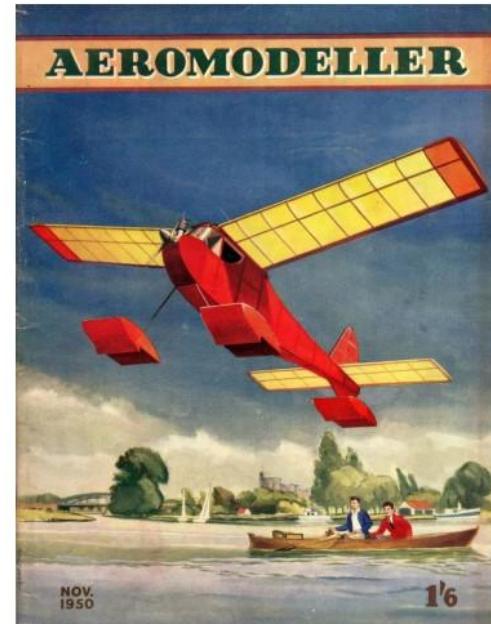


*Streamline "Cyclon"
modello di Ridenti restaurato da
Montesi e rifinito da Imoletti*

N° 187 Agosto 2020

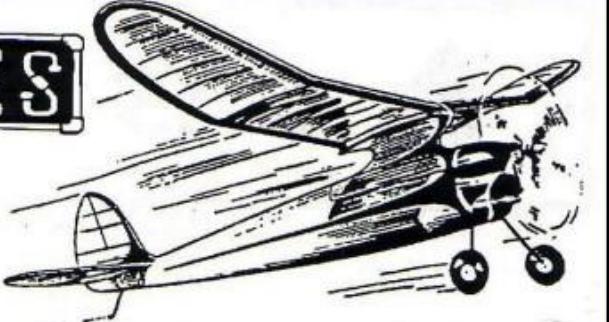
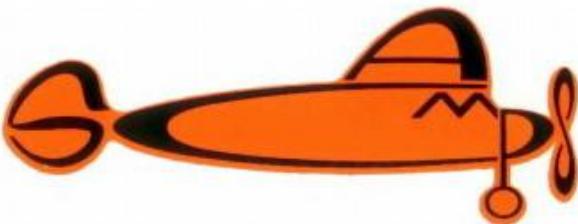
Association des Amateurs d'Aéromodèles Anciens

Bulletin 4A n° 116 bis spécial Claude Lacombe



GAS LINES

June 2020

S.A.M. Chapter 13
AMA Charter #158

Official Newsletter of the Southern California Antique Model Plane Society

All plans and G/A drawings found in these new 2020 publications are included in the updated "Plans in Magazines" file now on the SAM 1066 website, thank you to webmaster Mike Parker. Next month will concentrate on vintage items added to the library by trawling through websites and by donations.

Roy Tiller, tel 01202 511309, email roy.tiller@ntlworld.com

Roy Tiller

Editor:

This is a letter from Colin Franklin looking to trace the whereabouts of a set of Oliver Tiger news sheets that were in the possession of the late Mike Beach.

Mike Beach:

It is with a sad heart, that I found out that Mike had passed away some while ago,

I don't get out very much and with covid it's even worse, it was only due to going through the SAM1066 MAG on line that I found out Mike had gone.

I met Mike on the flying field at Middle Wallop and he gave me some advice on buying spark engines, he also provided me with a list.

We found we also had the same interest in flying fleas.

Anyway, while I was reading my back issues of SAM 35, (of which I am no longer a member due to the new editor changing the front cover and name trying to drum up member ship.) Don't try and mend it, if it's not broke.

I found a note from Mike talking about Oliver Tigers and it was mentioned that he had the full set of Oliver Newsheets. These sheets were titled "**Tiger Tattles**" and included tuning tips.

I wondered if any of the members know what happened to them when he passed away, and if they were saved.

I'm asking this as my friend Tony Higgins passed away and all of his notes and info was chucked away, not knowing their value to the model builders of yesteryear.

If you know anyone who may have acquired Mike's vast collection of info, please ask them to look to see if they have the Olly Tiger news-sheets.

I would like to acquire copies. Naturally all expenses would be paid.

regards. *Colin Franklin*,
 "Colin's Canopies"

Thank you. Tel: 01271-830865 or email: cfranklin@sky.com

Secretary's Notes for February 2021

- Roger Newman

Regrettably my mild flush of optimism last month has been somewhat dashed by the continued restrictions imposed throughout the country. Considering this background, it is highly unlikely that any Area events will be held as scheduled in the early part of the year or indeed that any form of flying will be permitted. I guess even the Nats at the end of May must be in some doubt.

A prospect that imparts a rather gloomy future for free flight, particularly in our part of the world is that the attitude by the Authorities towards model flying at Beaulieu is becoming ever more dismal.

Our late Chairman used to joke that we were the last of a generation & it would be down to the toss of a coin as to whether flying sites would disappear before flyers or vice versa. His words sadly ring very true - it could be a tie!

Added to this rather dismal view of the world, the CAA have seen fit to issue their latest edict entitled:

CAP 722 Edition 8 - Unmanned Aircraft System Operations in UK Airspace Guidance

This of course encompasses model flying. This document brings the UK in line with the latest EU regulations. It comprises 238 pages, most of which have very little relevance to our hobby & is truly a turgid read, but fortunately the BMFA have synopsised those bits that are relevant to model flying in a brief(ish) document that may be downloaded via:

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

(CAA Article 16 Authorisation)

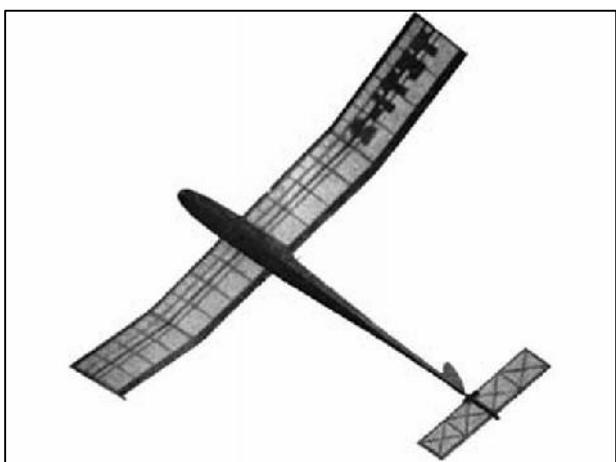
**(A guide to model aircraft & drone flying after December 31st, 2020)
(for BMFA members).**

Even this note is 12 pages in length & is a "tick the box" mandatory action when renewing membership on line. However, do read it if you have both the capability & willingness to do so. There is even a short section concerning free flight - most of the information has been previous known, but be aware of a new requirement that (to quote) - "Within the terms of our Authorisation, the Operator/Remote Pilot of any free flight aircraft with a maximum take-off mass of less than 250 grams which is likely to operate at a height above 400ft, must be registered as an Operator & have evidence of Competency (such as passing the BMFA online test)." Also that it is now mandatory to report to the CAA "any instances where aircraft have flown beyond visual line of sight". This latter point entails the submission of a 5 page on-line form to the EU! So if you lose your 15"span CLG in a thermal, do be aware!

It was interesting to read Nick's comment on the drone happening at Gatwick in last month's NC. I must confess to holding a view that it never happened as reported, it is impossible to believe that Sussex Police are so incompetent that they could not track down the offender. More like an institutional cover-up - we shall never know the full truth?

On a less topical subject - Classic A1 gliders.

I had a quick search for other possible candidates. The Asteroid was published in the early '60s so it's out of contention. There is of course the Aiglet, which was another fine flyer & really easy to build - even I made one. Pluto is yet another Cizek design from the Aeromodeller of March 1959, just a bit earlier than his La Mouette & Yeti, published in Model Aircraft of Oct 1957 of straightforward construction. There are many others listed but mostly as GA or outline drawings. Plenty of scope - provided we can fly before 1st July!



Yeti

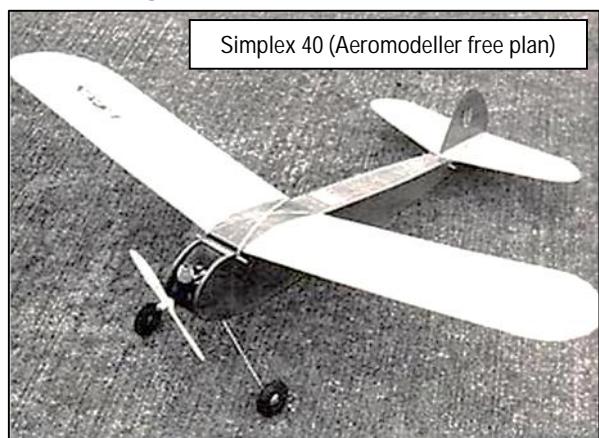
Other than that, I have to admit enthusiasm has rather diminished with all the news on Covid & flying restrictions. However, the Ballerina fuselage is now complete apart from fitting the front two ply formers, so I'll have to get round to doing a bit more. That just leaves the fin, then sanding & covering etc.

Very sad to read the passing of Raymon Albon & Robin Kimber, both of whom were excellent fliers, nice people & good competitors in the heyday of Middle Wallop & other venues. It brings home that we are indeed mortal!

On a happier note, I enjoyed Nick's tales of lost models - I did make a short list of some of mine that have escaped over the years but I've lost it! Probably the most notable were both Simplex models of different sizes & both at Middle Wallop.

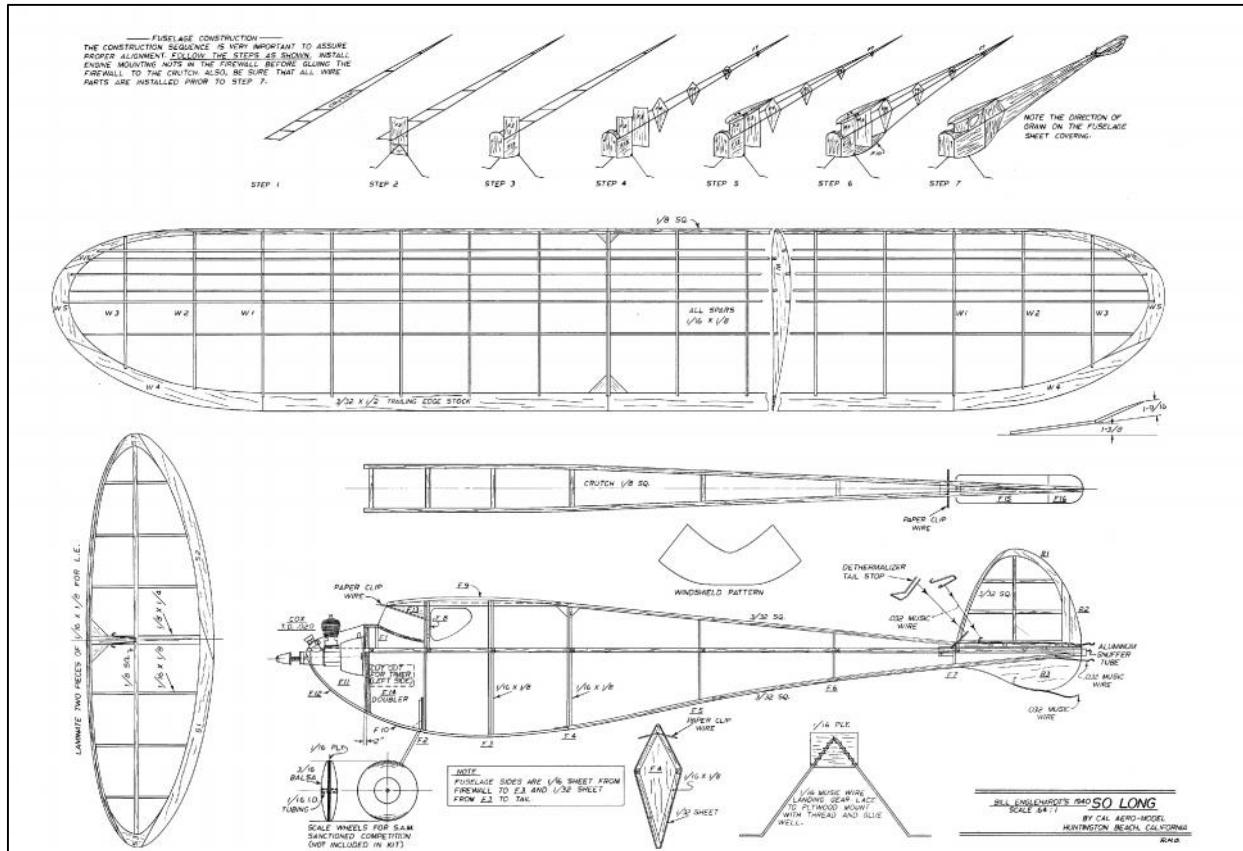
The 60 with a lovely AM25 caught a boomer & sailed off in the blue but about 30 minutes later, I had a phone call to say "found your model, I can bring back if you wish" - so yes please & a meeting at the main gate within a quarter of an hour resulted in me being reunited with an errant model - no DT! The kind person who returned it happened to be in his farm field & watched it come down. Knowing that model flying was taking place on the airfield, he immediately called & came down in his pick-up truck - wouldn't take anything at all, just happy to be there.

The other was a Simplex 40 that likewise caught a boomer at one of the Champs weekend. About a couple of months or so later, I happened to read a short note in SAM Speaks from Peter Michel, who stayed at a local hostelry over that Champs weekend. His note said (if I recall correctly) - he was in the bar when a local came in & after some chat, this person said "I found this when I was combining today, but there's only this bit left as it all went through the combine before I could stop" - what was left was the front end of the Simplex, comprising the engine (a PAW100) on bearers & the rather bent undercarriage still fixed to its former, also attached to the bearers. From Peter's description of the remains, I concluded it sounded like mine, so rang him & described the construction etc - Peter agreed & I got it back! I still have the PAW, which remarkably was undamaged & I am now on Simplex 40 No 4. No 2 flew away at Beaulieu on its second trimming flight with a brand new PAW55, never to be seen again - no DT, "it's only a trimming flight!". No 3 life expired after many flights, so No 4 came into existence with the original Paw back in it - nylon covered for a long life!

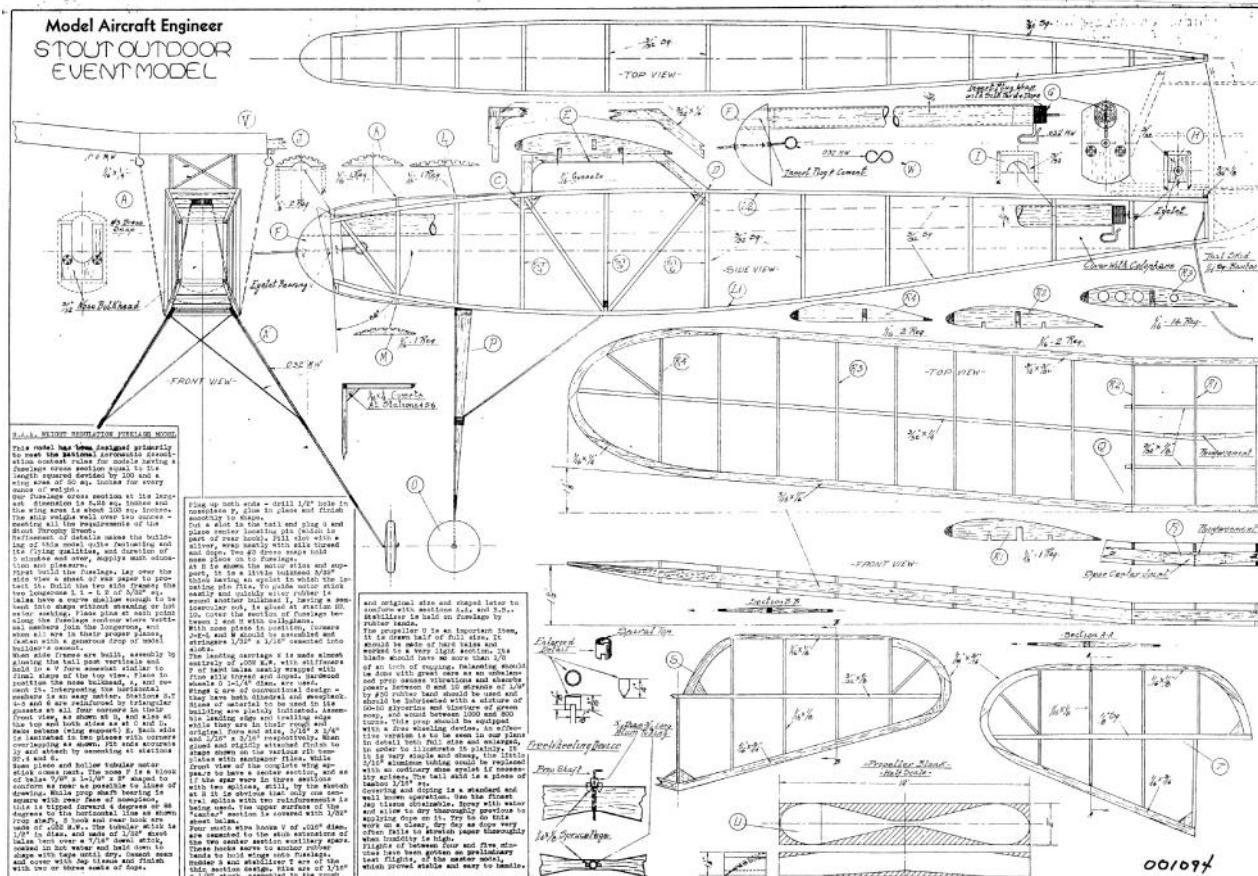


Plans for the month

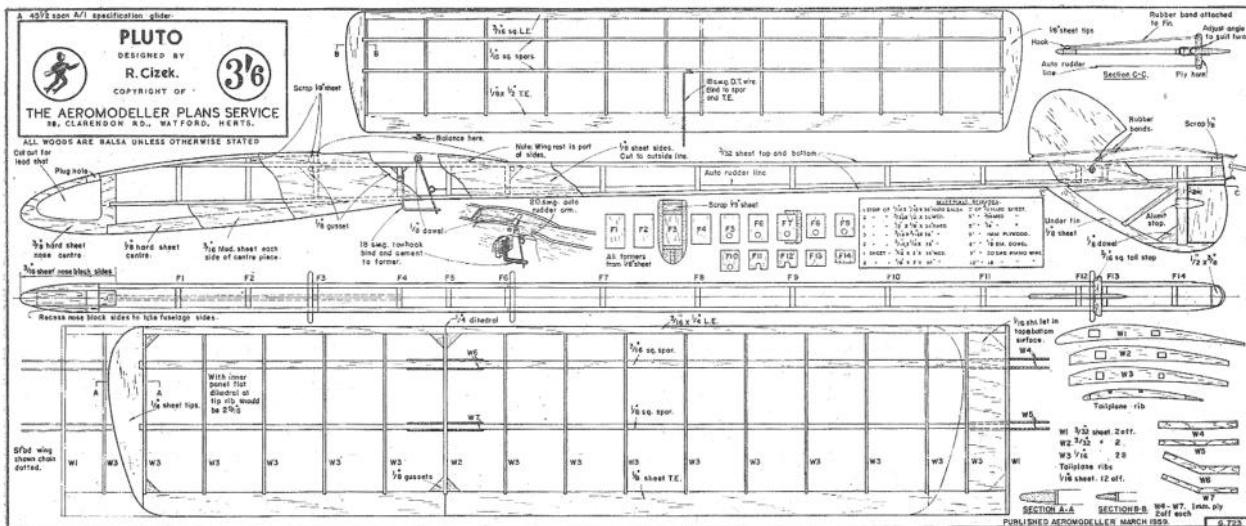
Power: So Long - scaled down version of old American classic



Rubber: Stout Outdoor Event Model - old timer from USA



Glider: Pluto - as mentioned above.



Roger Newman

Classic A1 Glider Email International 2021

Eligible Models

A Classic A1 glider is any Free Flight towline glider of total projected surface area not exceeding 18 square decimetres, built in accordance with a design published or kitted between January 1951 and January 1961, as per BMFA Classic Glider rules ([https://britishmfa.sharepoint.com/sites/public/Rule Books](https://britishmfa.sharepoint.com/sites/public/Rule%20Books))

Maximum length of towline 50 metres under 2Kg. tensile load

The Contest

All flights for each entry must be made on the same day between 01 January 2021 and 01 July 2021 inclusive. All flights must comply with local regulations governing model flying and with the guidelines of the national aeromodelling governing body (BMFA, AMA, etc.)

All flights for each entry must be made with the same model. An individual may make up to three separate entries provided that each is made with an entirely different eligible model.

A model may not be used by more than one individual over the age of 16 years. Juniors below this age may fly a model borrowed from another entrant.

The maximum for the first flight of each entry is 30 seconds. If this is achieved, the entrant is permitted a second flight of maximum 60 seconds, and so on, the maximum increasing in increments of 30 seconds until either a max is not achieved, or flying cannot continue (e.g. because the model is lost or damaged). The score for that entry is the total flight time including the sub- max final flight.

All flights must be timed by a person other than the entrant. Procedure for starts, timing, attempts etc. is per F1H except that a flight aborted by RDT does not qualify for a second attempt, even if less than 20 seconds (in line with BMFA classic rules)

Entry

Entry is free of charge. Once the flights are completed, entry is submitted no later than 07 July 2021 by email to classical1postal@gmail.com by sending the following information;

The name & contact email* of the entrant

The name(s) of the timekeeper(s)

The score, in seconds, in the form of an addition, e.g.

$$30+60+90+120+124=424$$

The name of the model and where it was published

The country and location where the flights were made

If entrants aged 16 or under wish to be eligible for the junior prize they must include their age in years (D.O.B. not required). Juniors are also included in the overall results and are eligible for the other prizes.

In order to qualify for the team prize the entries of all three team members must be submitted in the same email, also stating the name of the team. Entries received in this way will also be included in the individual results.

Information about the flying, the site, etc. plus photographs will be very welcome and will help in reporting the contest in the modelling press.

Southern Coupe League 2021

Date	Competition	Location
21 March	Second Area	Area venues
9 May	London Gala	Salisbury Plain
T.B.A.	Oxford gala	Port Meadow
11 July	Fifth Area	Area Venues
15 August	Southern Gala	Salisbury Plain
18 or 19 September* (tbc)	Crookham Gala	Salisbury Plain
9 October	Coupe Europa	Salisbury Plain

AREA 8. SALISBURY PLAIN. 2021.

Area 8 has been booked for free flight use, every Saturday/Sunday, plus 3 Bank Holiday Mondays in 2021, subject to final approval on the Friday morning preceding each weekend.

Those wishing to sport fly/trim must hold an annual season ticket. 2020 season tickets remain valid for 2021, with no new tickets being issued, or payment requested in this case. Those not having a 2020 season ticket may obtain one for 2021 via donna@bmfa.org for £20. The terms and conditions remain the same as in previous years, although users are also reminded that when driving they should stick to established tracks and avoid creating new ones.

On contest days only, non-permit holders can sport fly/trim on payment of a site access fee of £5.

All flyers entering a contest must also pay the site access fee. This applies to Club Galas, Centralised and Decentralised BMFA events. The exception to this is for BMFA Contest Season Ticket holders, who will not be required to pay the site access fee for BMFA Centralised events, and the World Cup events.

You are reminded that the BMFA pay for an annual licence to use the site via the FFTC.

Driving on Salisbury Plain.

We have frequently been reminded by the authorities that allow our access to Area 8 of,

The need to drive and behave safely, as it is a potentially dangerous place. Respect the environment, as it is a conservation area with numerous vulnerable species.

More recently all users of the Plain have been asked to avoid creating any new vehicle tracks.

The Salisbury Plain Military Lands Byelaws 1983, state that a driver may only leave the road (Public Right of Way), by 15 yards, and then only to park. For practical reasons, the interpretation of this can be somewhat liberal for our purposes.

Three farmers have grazing licences for Area 8, and an annual hay crop is taken from the plateau. Their rights and livelihoods must be respected.

This leads to the conclusion that vehicle movements should be kept to a minimum on grassy areas, and any motorised retrieval should be confined to the well-established tracks.

We never know who is watching our behaviour on any of our few remaining flying sites.

Peter Watson. FFTC Area 8 liaison.

Free Flight Supplies

Michael Woodhouse

mike@freeflightsupplies.co.uk & <http://www.freeflightsupplies.co.uk>

Free Flight Supplies is still operating. I have made arrangements to both receive and despatch materials. If you need stuff I can supply, it just might take a bit longer to get things to you. Carry on building!

Stay safe and look after yourselves.

We are only posting on an occasional basis. Any calls or e-mails asking "where's my order" will receive a curt load of invective from me or June.

If you get June the reply will leave you stunned!

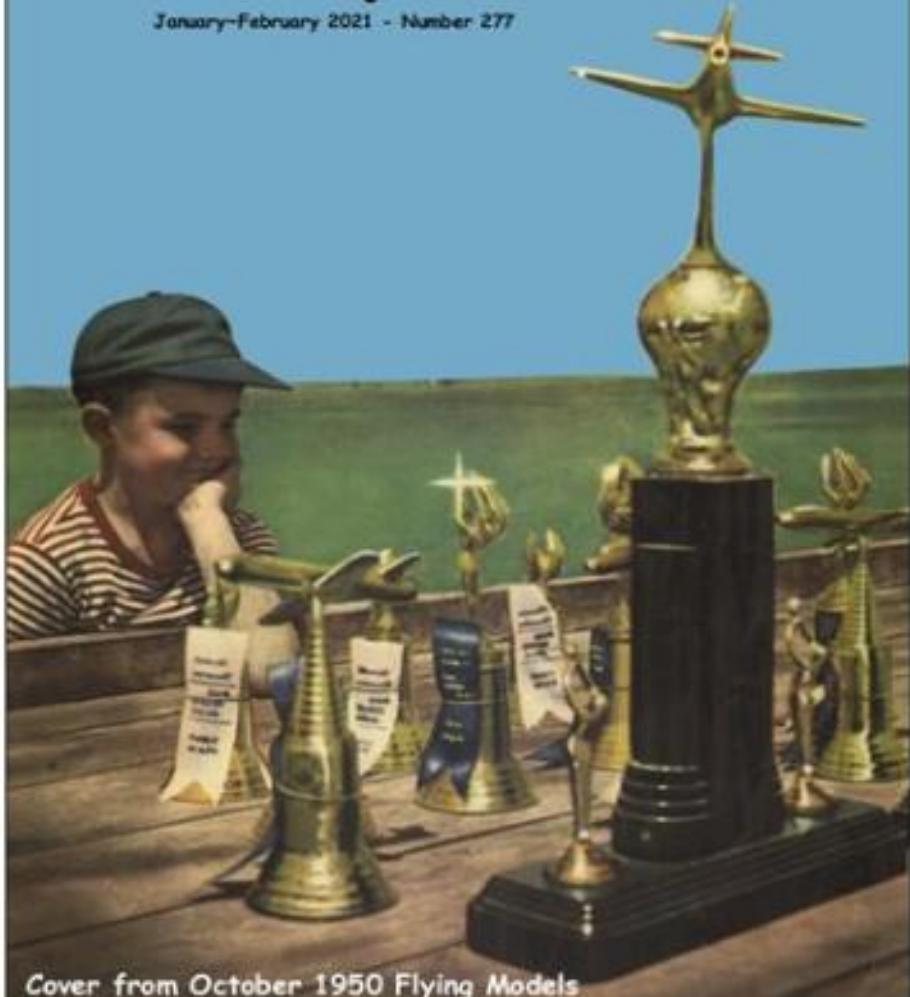
SAM Speaks USA.

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!

SAM Speaks

January-February 2021 - Number 277



Cover from October 1950 Flying Models

E30 Batteries

I have bought some batteries direct from China which are suitable for E30. They are labelled 75mAh. I have so far only had time to test three and I can report that they are all good and in fact give a better performance than any I have previously tried. If you send me £10 I will put four in a Jiffy bag and send them to you.

Ron Marking, Pros Kairon, Pennance Road, Lanner,
Redruth TR16 5TF

CARBON BOOMS For Hand Launched Gliders

If you need tapered carbon tubes for HLG booms I may have what you want. As supplied they are 99cm long, taper from 5.2mm to 2mm and weigh 6.4gm. As a rough test a 58cm length, suitable for a Yashinskiy type of model, weighs 3gm after a little application of wet-and-dry paper (used wet, of course) and it looks as if there's quite a bit more that can come off. The thin end that's left is good for a catapult glider.

Price is £7.00. In normal times I'd sell direct at contests, but postage and packing would be extra, depending on how many you need.

Contact Martin Dilly to order
Tel: 0208 7775533 or e-mail martindilly20@gmail.com.

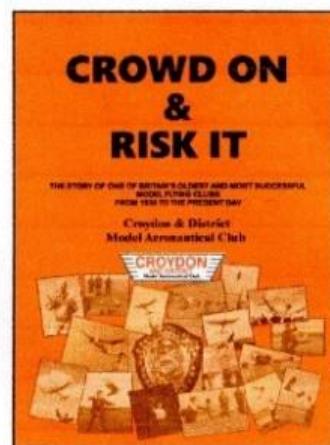
CROWD ON & RISK IT

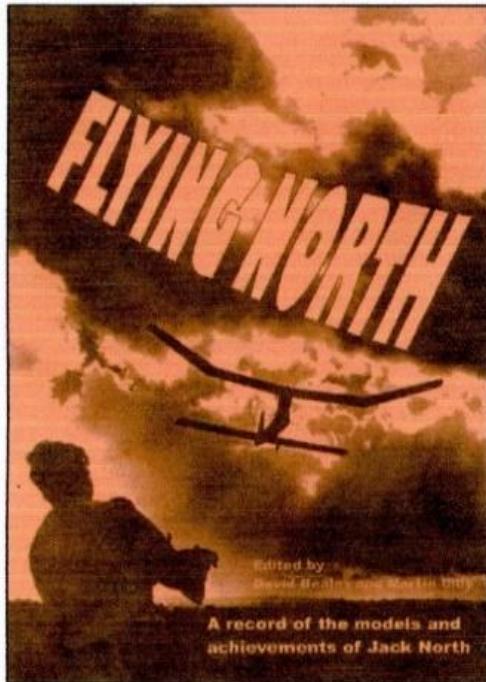
This is the story of one of Britain's oldest and most successful model flying clubs, Croydon & District MAC, from 1936 onwards. The club contributed much to aviation, both model and full-size, and the late Keith Miller compiled its history till around 1960. Now, this up-dated 73 page version of the club's history, copiously illustrated with many previously unpublished photos, takes the Croydon saga up to the present. Contributions by past and present members vividly capture the atmosphere of the heyday of free-flight, with almost weekly contests at Chobham or Bassingbourn.

53 designs by Croydon members have been published in the model press and 24 of its members have represented Great Britain in World and European Championship teams. Several have gone on to notable careers in aerospace. Crowd On & Risk It covers all this and more.

Just £8 by PayPal or cheque.

Contact Martin Dilly (martindilly20@gmail.com), phone/fax 020 8777 5533 or write to 20, Links Road, West Wickham, Kent BR4 0QW for your copy.





Flying North is a 163 page book covering the model flying career of Jack North, and including 23 previously un-published plans of his aircraft. Access to Jack's drawings and notes dating back to 1938 means that there are a number of designs in the book likely to be tempting to the nostalgia-minded.

Contact: Martin Dilly on
020 8777 5533 or write to:
20, Links road,
West Wickham.
Kent BR4 0QW or e-mail:
martindilly20@gmail.com

The price in the UK is £18; airmail to Europe £20 or to anywhere else £22. Cheques should be payable to BMFA F/F

Team Support Fund, in pounds sterling only, and drawn off a bank with a branch in the UK, you may also order by credit card, all proceeds help to fund the expenses of those representing Great Britain at World and European FF Championships

DILLY JAP IS BACK

After a bit of a gap since the final 5 yards came off my last bulk roll of Japanese tissue several people have asked if it will be available again, so I've just received my seventh roll. Doing the sums, that means that there's now just 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.

Anyhow, since the last roll came in 2015, the price is slightly higher (maybe as a result of you-know-what ...xit and its effect on sterling), but it's still only £13 for a five yard roll a yard wide, or £15 by mail to the UK. I normally sell it in rolls at contests, but lately many people have had it sent lightly folded, so I can do that if you prefer.

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 Silkspans 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!"

FREE FLIGHT FORUM REPORT 2020

Warps - Right way? Wrong way? What way? -
 Mike Woodhouse;
 Moment Arm - A Novel Stability and Control Arrangement -
 George Seyfang;
 How Big Should I Build My Next Coupe? - Alan Brocklehurst;
 Scale Matters - Ivan Taylor;
 Evgeny Verbitski - An Appreciation - by Mike Fanham, Ken
 Faux and Peter Watson;
 Do Freewheelers Drag? - Spencer Willis;
 The Hammer and the Feather - Aram Schlosberg;
 The Performance of Rubber Motors - John Gibbons;
 Gurney Flaps - George Seyfang;
 Gyros in Free Flight Scale - Ivan Taylor;
 A Glass Act - Russell Peers;
 A Glider for Every Occasion - Stuart Darmon;
 A Love Letter to the Free Flight Community - Bernard Guest.



The UK price is £12.00 including postage; to Europe it's £15 and everywhere else £17. Sales of the Forum Reports help to defray the heavy expenses of those representing Great Britain at World and European Free-Flight Championships. 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).

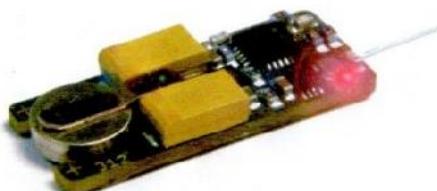
Copies are available from :

Martin Dilly
 20, Links Road,
 West Wickham,
 Kent,
 BR4 0QW

or by phone to: (44) + (0)20-8777-5533, or by e-mail to martindilly20@gmail.com.

BUGS

Free Flight Model Tracker



£50.00 - each including 6 batteries

Ready to use radio tracker

Suitable for most handheld receivers

Powered by one 312 ZincAir hearing aid battery

27mm long, 11mm wide, 5mm thick 3 grams
 including battery

Run time around 10 days

Red LED flashes when transmitting

Available in any frequency from 140MHz to 980MHz

Supplied in protective heatshrink

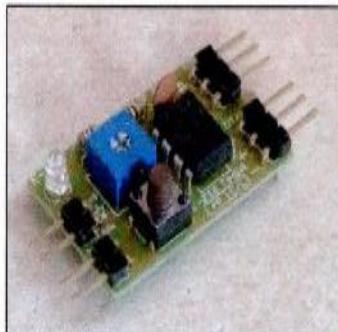
Very quick delivery, often next day

On sale at

http://www.leobodnar.com/shop/index.php?products_id=217

or contact Peter Brown 07871 459291 for options

E-Zee Timers



E-ZEE FF Combined Electric Motor Power and Servo Operated DT Timer Type EFF 1
Cost £15.00 + p & p

This timer controls electric motor power and run-time (via an ESC) and after a further delay drives a D/T servo to terminate the flight. The motor power is set by a single turn potentiometer and the motor run and D/T periods are set by a simple push button / LED interface

- motor run duration:-adjustable 1 to 30 seconds, set in 1 second increments
- d/t duration:-adjustable 10 seconds to 5 minutes, set in 10 second increments
- motor power:-adjustable at all times from zero to full throttle (by potentiometer)
- push button immediately stops the motor at any point during the flight profile
- duration settings are saved in memory a single button push serves to repeat a flight.

Length 30mm Width 20mm Height 11mm Weight 5gm

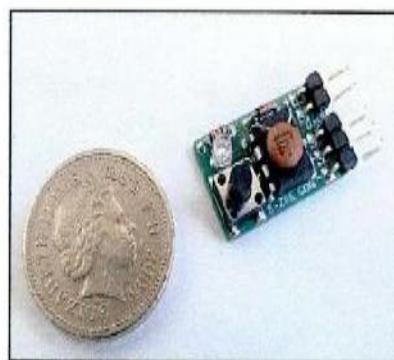
For installations where the timer is inaccessible remote pushbuttons and LED's are available

Servo operated DT Timer only Type SDG 1 Cost £12 + p & p

This timer was originally developed for use with 36 inch hi start classic gliders, but will be of interest to all sports free flight flyers not requiring electric motor control. The timer drives a D/T servo to terminate the flight, the D/T periods being set by a simple push button / LED interface. Driven by a small 30mAH battery and using a 2 gram servo the avionics can be used as nose ballast so there is no overall weight gain

- d/t duration:-adjustable 10 seconds to 5 minutes, set in 10 second increments
- push button immediately cancels the flight at any time
- duration settings are saved in memory a single button push serves to repeat a flight.

Length 22mm Width 13mm Height 11mm Weight 2gm



Timers are supplied with a comprehensive instruction manual and users guide

E-Zee Timers have been designed and are manufactured in the UK
Exclusively available from

Dens Model Supplies

On Line shop at www.densmodelsupplies.co.uk
Or phone Den on 01983 294182 for traditional service

Provisional Events Calendar 2021

With competitions for Vintage and/or Classic models

All competitions are provisional and Covid restrictions may apply, **Check websites before attending**

February 28 th	Sunday	BMFA 1 st Area Competitions
March 21 st	Sunday	BMFA 2 nd Area Competitions
April 2 nd	Friday	Northern Gala, Barkston
April 3 rd	Saturday	Croydon Wake Day & SAM1066 , Salisbury Plain
April 25 th	Sunday	BMFA 3 rd Area Competitions
May 8 th / 9 th	Sat/Sunday	London Gala, Salisbury Plain
May 29 th	Saturday	BMFA Free-flight Nats, Barkston
May 30 th	Sunday	BMFA Free-flight Nats, Barkston
May 31 st	Monday	BMFA Free-flight Nats, Barkston
June 20 th	Sunday	BMFA 4 th Area Competitions
July 11 th	Sunday	BMFA 5 th Area Competitions
July 25 th	Sunday	SAM1066 Cagnarata +, RAF Colerne
July 31 st	Saturday	East Anglian Gala, Sculthorpe
August 1 st	Sunday	East Anglian Gala, Sculthorpe
August 15 th	Sunday	Southern Gala, Salisbury Plain
September 4 th	Saturday	Stonehenge Cup, Salisbury Plain
September 5 th	Sunday	Equinox Cup, Salisbury Plain
September 12 th	Sunday	BMFA 6 th Area Competitions
October 3 rd	Sunday	BMFA 7 th Area Competitions
October 9 th	Saturday	Croydon Coupe Day & SAM1066 , Salisbury Plain
October 17 th	Sunday	BMFA 8 th Area Competitions
October 30 th	Saturday	Midland Gala, North Luffenham

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 the website

www.SAM35.org

Useful Websites

SAM 1066	-	www.sam1066.org
Flitehook, John Hook	-	www.flitehook.net
Mike Woodhouse	-	www.freeflightsupplies.co.uk
BMFA	-	www.bmfa.org
BMFA Southern Area	-	www.southern.bmfa.uk
SAM 35	-	www.sam35.org
National Free Flight Society (USA)	-	www.freeflight.org
Ray Alban	-	www.vintagemodelairplane.com
Belair Kits	-	www.belairkits.com
Wessex Aeromodellers	-	www.wessexam1.co.uk
US SAM website	-	www.antiquemodeler.org
Peterborough MFC	-	www.peterboroughmfc.org
Outerzone -free plans	-	www.outerzone.co.uk
Vintage Radio Control	-	www.norcim-rc.club
Model Flying New Zealand	-	www.modelflyingnz.org
Raynes Park MAC	-	www.raynesparkmac.c1.biz
Sweden, Patrik Gertsson	-	www.modellvanner.se
Magazine downloads	-	www.rclibrary.co.uk
Aerofred Plans	-	www.aerofred.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