


	<h1 style="color: red; text-align: center;">NEW Clarion</h1> <h2 style="color: red; text-align: center;">SAM 1066 Newsletter</h2>	Issue 052019
		May 2019

Affiliated to
SAM 1066 Website:



Club No. 2548
www.sam1066.org

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

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Editorial

Did not quite make the target 50 pages this issue, you guys had better start writing something about your own efforts or we will have a magazine written by about four regulars.

I'm off to Sneyd Indoors at Walsall on 27th now that Wallop has become a victim of an evil weather forecast. The demise of our first Wallop meeting will also allow me to visit the Scale Indoor Nationals at Wolverhampton where I will hope to shout encouragement (abuse) from the balcony at each of my acquaintances, look out Ken & Nick. Reports next issue.

I kick off this issue with my foray to Thorns indoor where I gave my new flying jacket an airing. The jacket was an xmas present from our daughter whom, I assume, thought that as I always write my name in large print on the wings of my aircraft I might as well have it on a jacket as well. I was watching an old episode of 'Cheers' on tele in the early hours one morning and lo and behold Woody behind the bar was wearing an identical garment.

I seemed to have about exhausted my stock of Topical Twists by Pylonius but a quick Email to our archivist Roy Tiller got Barbara on the hunt and now I have the first 12 months of Pylonius's articles, so next issue we will be starting from scratch. His first epistle appears to have been in the January edition of Model Aircraft in 1951.

I've served up my second piece from articles I wrote for the old Clarion. I find it interesting to read my own record of the happenings of the period. A bit self-centred I suppose.

The engine analysis of the two Webra engines may interest motor power output devotees. The difference in output between the two engines, one silenced & one not, is startling as the unsilenced 2.5 out performs the silenced 3.5 significantly.

Nick Peppiatt has penned a piece on heat moulded scale cockpit covers, it never ceases to amaze me the lengths scale modellers will go to to make their creations.

There is another of Ray Malmstrom's masterpieces, the 'Martian' a diminutive power model. The point of interest is how he almost invariably gets all the details on one A4 size piece of paper.

An Email from one Lars Karlsson in Sweden, who I met at Wallop a few years back, gave me a link to a website chock-a-block with Swedish modelling pics and data. I've picked out a few pictures from the piece on their aeromodelling museum, something we desperately need in the UK I feel.

I report on our (Rachel & I) trip down to Beaulieu old airfield for the Croydon Wakefield Day. It's a difficult place to fly unless you are familiar with the terrain and to my way of thinking trackers are a must have accessory. I, luckily, had our Sec. Roger on recovery duty which was not too onerous for him as my flights were quite short. Point of note, I've never seen so many loose horses roaming about and at our first location there was a huge puddle of water which they made use of.

A very old box of exquisite Wakefield model frameworks was on hand from Alan Brocklehurst, he tells the story of their source and is asking for anyone who may be interested in completing the models to get in touch.

Roy Tiller weighs in with another piece on 'Meccano Magazine' and our Secretary Roger winds up as usual with his monthly report.

Editor.

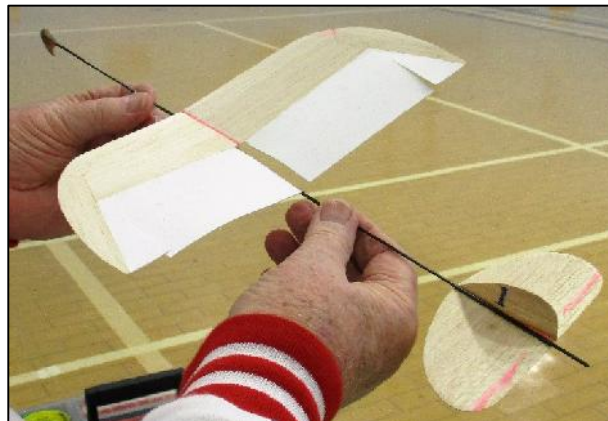
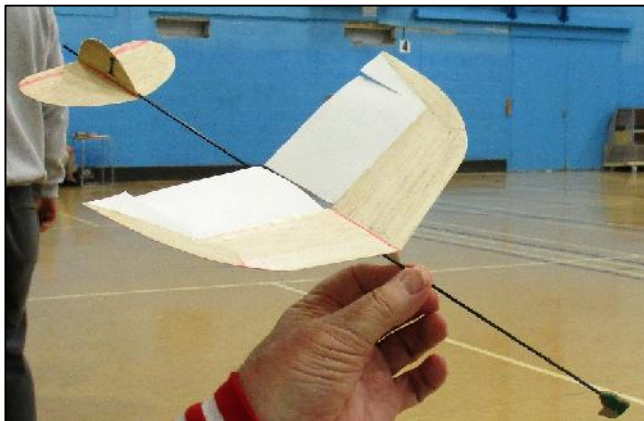
Saturday 6th April, Rachel and I ventured via A45, A46, M41, M42 and M5 to Stourbridge and the South Birmingham Club's indoor meeting at Thorns Leisure Centre sports hall. Having been somewhat under the weather health wise since Christmas we were in need of a trip out to blow away the cobwebs. We had a good afternoon out and felt all the better for it.

I did not do much, just had a few flights with one of my Gyminnie Crickets. Had a 3-55 flight banging about on the lights so decided to see how small a motor I could use for respectable flights. Turned out to be about a 7" loop of .080 with 1,000 turns. The model I was using was my heavier one from last year's Nationals, with the emergency stiffening bar that was added to the motor stick due to the stick bending like a bow on full turns, hence the motor thickness required.



I was sporting my new flying jacket which was a Christmas present from our daughter Rebecca who seemingly thought that, as I put my name in large print on all my models, I might as well have it on a jacket as well. Nobody is going to miss me now.

Eric Hawthorn was in attendance with a couple of catapult launched gliders built to the latest design thoughts using long carbon tube fuselages and thin special plastic of some sort for the curved rear area of the wing. He had one with the flying surfaces set at zero zero and one with slight incidence on the wing, and I do mean slight. The wings were split at the root & tip to enable flexing on launch, at least that's what I believe is the idea.



It took Eric a while to get the models trimmed properly, as they need to be very close to the stall for best performance. There were quite a few high speed arrivals at the deck during the process but the carbon tube seemed to shrug them off without complaint. When Eric had got the hang of it all, the flights were quite spectacular with the model climbing after launch in a slight curve then flattening into a floating slow glide down. Flights became more and more repeatable as the afternoon progressed and Eric got the angles weighed up.

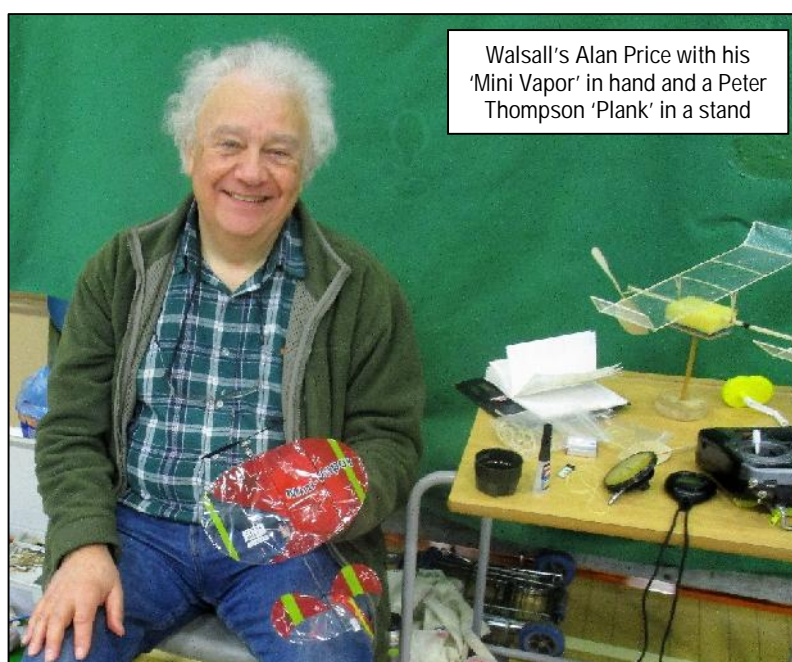
Eric was not alone with Catty flying as Mick Chilton was also performing with an all balsa version.



Eric demonstrates his launch to Colin Shepherd & Derek Richards



Mick Chilton



Walsall's Alan Price with his 'Mini Vapor' in hand and a Peter Thompson 'Plank' in a stand

A pleasant afternoon out with a bit of flying, a bit of chit chat and an easy drive home in daylight.

John Andrews



Extract from Aeromodeller December 1976

Micro-dotty

Some of the most brilliant ideas seem, at their origin, to be completely whacky, like Edison talking through a piece of wire - though we often wish it had been when we get the whacking, if not whacky, telephone bill. But I am thinking mainly about the chap who, thinking of ways of taking the maxim of simplicate and add lightness to the nth degree, hit upon the brilliant lotion notion of dope covering a very minimal airframe, but without the tissue. Just what he was after was not all that transparently obvious at first, but when his rather naked craft was still floating around the hangar catwalks long after its tissue covered rivals had feebly expired, his idea was quickly taken up, and now when we think of indoor flying, we think of microfilm.

Odd as it may seem, the microfilm model is not some new wonder of the age, like radio control or rice crispies, but was a fully developed sport way back in the early thirties. Indeed if you were to turn up at the old airship hangar with a 1935 design no one would believe you were there to hold a one man vintage comp. Anyway, all these years the micro thing has been ticking away like a gentle time bomb, unchanging as the homely hobby resolved into a rabid sport and the poor man's artefact became the rich man's toy. When at last the gaga public was treated to a show of the faltering flimsies on television it was all agog to come to eyeball grips with this 'see through' form of flight. Fashion all too often goes from one extreme to another, and the public is gasping for a change. It is many years since it underwent its baptism of fire on the radio ballistic ranges and it is now doubtful if the sight of twenty helicopters inverted would raise the pulse rate one blase beat.

But where to view these insect-like contraptions in full, action replay flight? Model flying, generally, has become somewhat elusive - going to ground in more ways than one - and nowhere are the preserves more sanctified than where their microfilmies are flown. They are even reluctant to let the flyers in, let alone the stampeding public. The mere thought of the thermic devastation that could be caused by John Citizen in holiday mood is enough to precipitate a mass leap from the catwalks. Think of the conflicting currents set up by a battery of hot dogs on one side and a concentration of ice lollies on the other, let alone the random radiations from all those perspiring bodies. And what would the model flyer say if his record attempt were to be disallowed because of a following updraught from the bodies below? Far from encouraging people into the area, there are already purists who are thinking in terms of putting the modellers themselves behind a perspex screen, working through mechanical arms, as in a radio active laboratory.

Glue-it-Yourself

Back in the old days when the modeller was first and foremost a fabricator of flying machines, it was taken for granted, in an honourable hobby, that his contraption, be it modest or earth shaking (?), was, in the pavement artist's vernacular, All me own work. Since that time much of the workbench onus has been taken on by commercial interests to the point where the model flyer is just a consumer factor in the Toy Trade. How the old purist sneered at the racks of shaped and graded balsa wood. That's not model building, he would snort, That's jigsaw. But what would he make of today's helpful goodies: the glass fibre fuselages, plastic wing ribs and Action Man pilots? Like any real mechanic, he would do his nut.

Still, the old religions die hard, and somewhere in the rule book there is some vague wording about those parts which must be built by the flyer; though just what goes on under the plastic film, false or fabricated, is anyone's guess.

What I think we are likely to get in the future, as a follow up to vintage, is a 'Build it Yourself' movement, in which the enthusiasts parade and fly fully built up, non commercial models, whilst all about the models are being built and flown by computers, probably on some hourly-hire basis.

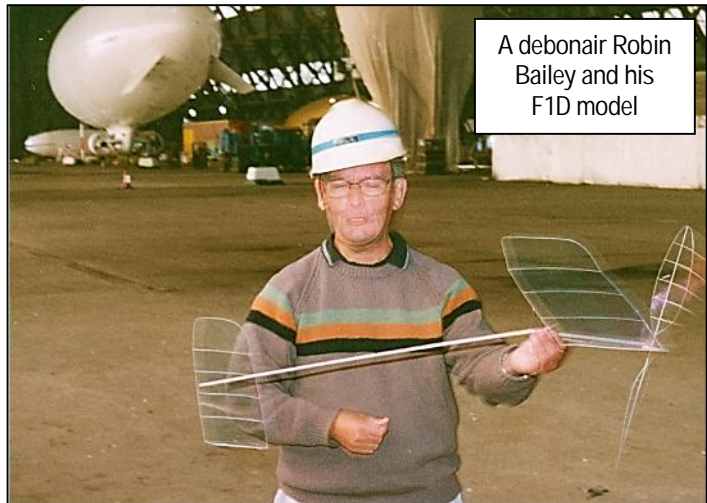
Pylonius

More old paperback Clarion from 2003

John Andrews - Goes Indoors - Part 2

Pressing on from last month's epistle to the afflicted it was in 1997 that I summoned up the nerve to contact indoor maestro Laurie Barr and arranged to pay my first visit to the Mecca of UK indoor flying, the old airship hangers at Cardington near Bedford. Sunday April 13th saw yours truly travelling down the M1 motorway and I must admit that I was a little apprehensive at the thought of mixing with the big guns of the UK indoor scene when I'd only been at it for a few months.

I turned off the motorway at junction 13 and at the top of the first rise; looking to the right I could clearly see the two sheds breaking the skyline some eight miles distant. I still feel the same buzz when I crest the rise even these days. I eventually arrived and turned in through the gates, and then following Laurie's instructions drove between the two sheds round to the rear entrance of Shed No.1. I drove inside and Oh Boy! Was it big? I don't think any first time visitor could fail to be completely in awe of the sheer size of the place. The photo below gives a flavour of the shed; Robin Bailey poses with one of his latest international F1D models and in the far distance a James Bond 007 type airship.



A debonair Robin Bailey and his F1D model



Robin's model cruises by

There was a light aircraft parked over one side of the shed, now I was in that place from 10-30am until 6-30pm and the first time I noticed that aircraft was when I was showing the wife the camcorder video later that evening at home. I had not seen that aircraft at all during the day even though I had videoed it when I had panned around at the start of my video record, which should give you some idea how big the place is (or perhaps how unobservant your scribe is).

Performances on that first visit were not record breaking. The record book shows flights of 4 minutes or so with my tissue covered models whereas the two guys I had set up next to were doing 9 minutes with the Mylar covered Penny Planes they had, but I was hooked on indoor.

(These models are not difficult to photograph, at the speed they fly you could change the film in the camera and still get a second shot)

There's not been much vintage content as yet so a little Airship history should fill the bill.

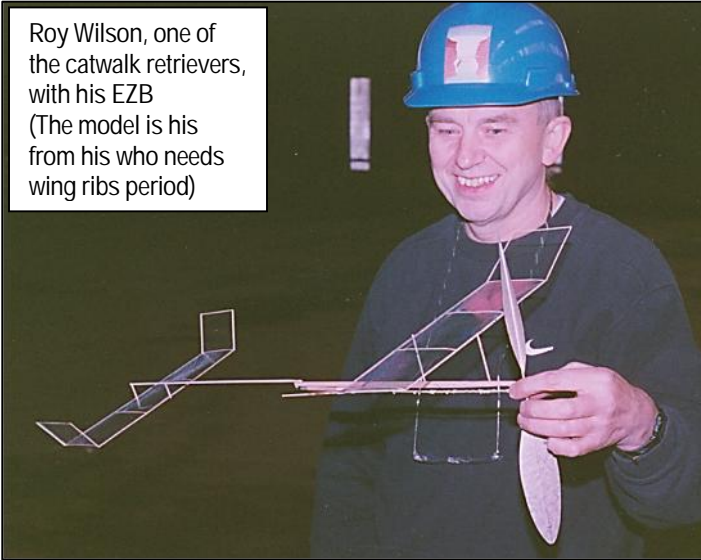
Shorts Brothers Engineering Company won a contract for the construction of an Airship in 1916 and one of their young engineers, 29 year old Claude Lipscomb was given the project. The design team moved from London to Cardington for several reasons: the gentle prevailing winds: the site was near to Bedford where several precision light engineering companies were based and nearby at Putnoe was an airfield used by the Royal Flying Corps.

The internal dimensions of the sheds are stated as:

Length 812 ft, Width 180 ft, Height 157 ft and containing 4000 tons of steel.

The construction looks more akin to shipbuilding than the aircraft industry, huge girders and braces held together by monster rivets, but they are for building Airships after all. There are internal catwalks at the top of the shed sidewalls and one in the peak of the roof. For safety reasons individual modellers are not allowed to do retrieval work from these catwalks, normally John Tipper or Roy Wilson do the work at the end of the day.

Roy Wilson, one of the catwalk retrievers, with his EZB (The model is his from his who needs wing ribs period)



To complete the potted history, the first Airship to come out of the Cardington facility was the R31. The ship was commissioned in November 1918 exactly two years and two months from the date that Lipscomb set up at Cardington. Remember this impressive project was achieved without computers and modern methods of communication; it was designed by hand and built by hand, not a calculator in sight.

Vintage digression over, back to the flying. My first ambition was to get a model up near the roof; I never got more than half way up there on my initial trip. My third visit saw me with a condenser tissue covered o/d Penny Plane with which I had managed to raise my flight times towards 6 minutes on my second

visit, but not towards the roof. This third visit was roof time, I put 1200 turns on a 1/8" x 18" motor which I knew was far too much for a good flight time but should get the model high.

The model shot away more akin to an F1C power model than an indoor job but the desired high climb was definitely on. Problem, Shed No.1 is a little worse for wear these days with many holes in the roof and broken windows. It is the condition of the roof that has required the suspension of green mesh curtaining below the roof to prevent falling debris. This curtain hangs in folds, some lower than others that leaves gaps into which high flyers can pass above the curtain into the roof space. It is said that models have flown above the curtain and been sucked outside through the holes in the roof. I cannot vouch for the truth of these rumours. My Penny Plane reached the roof in quite spectacular fashion and for a moment I was mentally patting myself on the back for a job well done when it suddenly occurred to me that perhaps it was not such a good idea. The model flew through a gap in the curtain and I could see it circulating above the mesh for a little while then it landed on top of the netting. Model gone I thought.

At that time I did not know about the recovery possibility and it was at the next meeting two weeks later that I heard a voice up in the roof. It was John Tipper up there with a pole doing a recovery exercise at the end of the day and low and behold down floats my model; tissue shrunk and wing like a propeller but back in hand. I had bought a roll of Mylar covering material so the Penny Plane was recovered and lasted well until I gave it away at a Coventry meeting.

With my new found covering material I set about trying to build models for the 10-minute milestone. I built several EZB's and Penny Planes but could not get the weight down below 4 gms and keep the models strong enough to fly. My log book is full of 8 & 9 minutes flights but it was July 26th. 1998 before I managed to get EZB No.6 below 3 gms and with 1800 turns on a .110" x 17" motor I finally beat the ten minute barrier and 11-00 minutes dead is on record. The 15-minute barrier still seems a mile away. I will need to get good wood and work on my propellers as that is where significant weight can be saved.

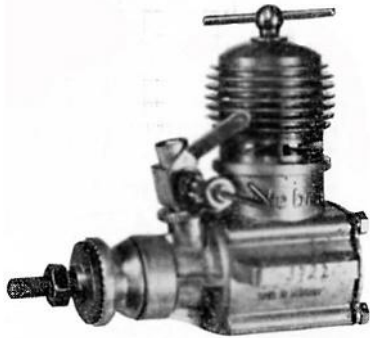
Losing models indoors does not seem an option at first thought but I have lost four. My Penny Plane No.2 was an eight-minute model and very reliable until it slid down the side netting, through a gap and down to the bottom of the sidewall slope. Too high for pole retrieval and too low for side catwalk. Number 2 loss was a very flimsy EZB No.5, one of my attempts at low weight, which resulted in a very flexible model. The shed was being used as a storage depot for water barrels and they were piled up about 30ft. high and in one area they were loosely stacked on top of the majority, which were encapsulated in blocks of nine on pallets. No.5 was trimming OK until I wound her up when distortion removed the turn and off down the shed she goes straight as a die until she was down the barrel end where a graceful turn set in and she flew over the top of the loose barrel pile. I climbed all over those barrels but the model eluded me. EZB No.7 was lost high up in the side girders out of reach again.

We moved into shed No. 2 and the air was much less stable in there mainly due to the big doors not being shut properly. To emphasise the size of the sheds once again, there is a six-story block of flats with a pitched roof in No.2 and they do not reach the roof by any means. About now I invested in the gas filled steering balloon as the drift made steering a regular necessity and I managed to lose just one model in No.2.

We are back in Shed No.1 again now and this year I hope to make a serious attempt at improvement.

Next issue polystyrene surfaces and vintage if we can dig some up.

John Andrews

**WEBRA KOMET 2.5 2.454 c.c.****Specification**

Bully 3.5 c.c.	Komet 2.5 c.c.
Displacement: 3.416 c.c. (.208 cu. in.)	2.454 c.c. (.175 cu. in.)
Bore: .6505 in.	.551 in.
Stroke: .627 in.	.627 in.
Bore/stroke ratio: 1.04	.88
Weight: standard engine: 5½ ounces with exhaust throttle and pump: 6½ ounces	5½ ounces
Max. B.H.P.: (2.5) .235 B.H.P. at 13,000 r.p.m. (3.5) .20 B.H.P. at 9,500 r.p.m.	

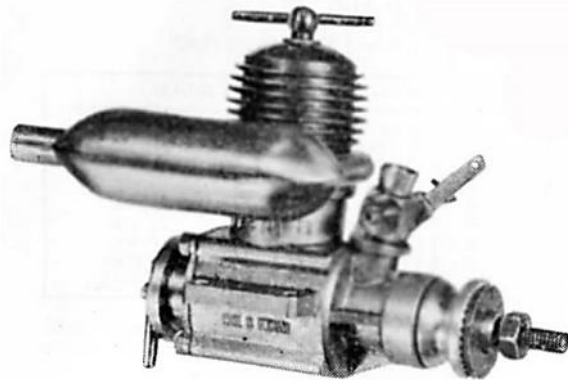
Material Specification

Crankcase: Pressure die cast light alloy
Cylinder: hardened steel
Cylinder jacket: light alloy anodised, red "Komet"
or blue "Bully"
Piston: cast Perlite iron
Contra piston: hardened steel
Crankshaft: hardened steel with extension screw
Connecting rod: forged dural
Main bearing: plain
Spraybar assembly (and barrel throttle): brass
Exhaust unit: pressure die-cast light alloy

Propeller—r.p.m. and Power Curves

(A represents 3.5 c.c. Bully with throttle, silencer and pump.
B represents 2.5 c.c. Komet.)

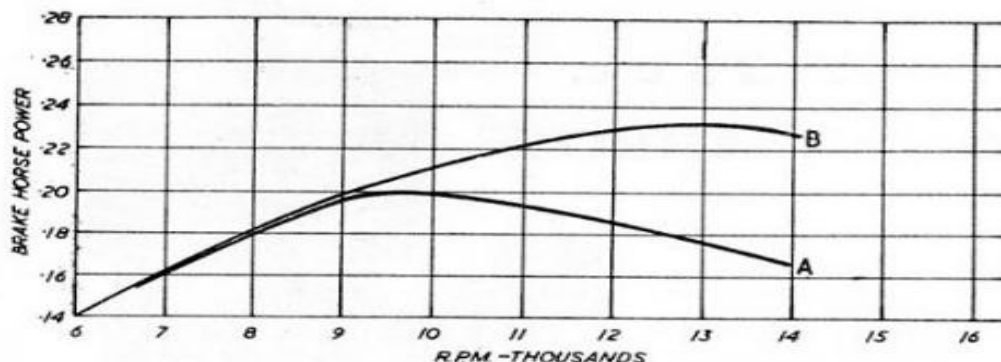
Fuel used: 2 per cent nitrated, standard diesel mix.
Throttle control: fully effective in reducing speed to 2,500-2,700 r.p.m. on engine fitted with exhaust unit. Partially effective only on engine without exhaust unit, reducing idling r.p.m. to approx. 3,000 r.p.m. but fluctuating.

**WEBRA BULLY 3.5 3.416 c.c.**

Max torque:
(2.5) .23 ounce-inches at 6,500 r.p.m.
(3.5) .23 ounce-inches at 6,500 r.p.m.
Power rating:
(2.5) .069 B.H.P. per c.c.
(3.5) .059 B.H.P. per c.c.
Power/weight ratio:
(2.5) .043 B.H.P. per ounce
(3.5) .03 B.H.P. per ounce
Manufacturers:
FEM & MODELLTECHNIK,
5 Genestrass, Berlin-Schonberg

PROPELLER—R.P.M. FIGURES

<i>Propeller</i>	<i>Bully with silencer and fuel pump r.p.m.</i>	<i>Komet r.p.m.</i>
12 × 4 (Trucut)	6,500	
11 × 4 (Trucut)	7,700	
10 × 4 (Trucut)	8,700	8,800
9 × 6 (Trucut)	8,500	
9 × 5 (Trucut)	9,200	
9 × 4 (Trucut)	10,400	10,400
8 × 5 (Trucut)	10,500	
8 × 4 (Trucut)	12,000	13,300
8 × 3 (Trucut)	12,500	
10 × 6 (Frog nylon)	8,200	8,500
9 × 6 (Frog nylon)	9,600	10,000
8 × 8 (Frog nylon)	7,600	
8 × 5 (Frog nylon)	—	11,400



Plunge Moulding of Canopies

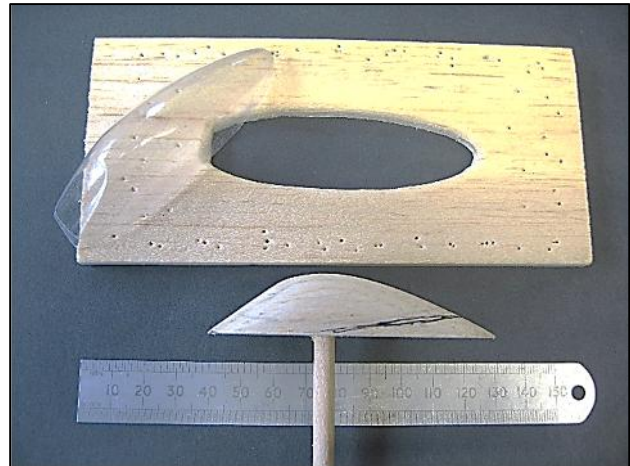
This month's epistle can have both indoor and outdoor connections. Crookham clubmate Tony Hansell has been building some rubber -powered scale models at 1/16 full-size.

These are an FW 190 from a Guillows kit, a Thunderbolt and a Zero scaled up 1.5 times from that fine Model Builder publication 'Flying Scale Models of WWII'.

Chatting at one of our monthly club meetings in the pub, it turned out that Tony was unable to finish these models because of a lack of suitable cockpit canopies. As in the past I have made such canopies, e.g. for the MIG 15 shown, I offered to have a go and at a subsequent meeting Tony brought along the forms he had produced.



Bill Dean's Keil Kraft MIG 15 with plunge moulded canopy



Male form, female mould and formed canopy for MIG 15



Tony's male forms for, from left to right, Thunderbolt, FW 190 and Zero



The book from where Tony constructed the Thunderbolt, FW 190 and Zero.

An excellent guide to forming canopies can be found on Mike Stuart's flying scale website at <http://www.ffscale.co.uk/page4f.htm> and this is basically what I have followed. The challenge for me was that the canopies were somewhat bigger than those I've made before.

Materials

As Mike points out, transparent material that can be used is readily available in the form of vacuum formed blister packaging. These can be formed of two base materials, PET (polyethylene terephthalate) and PVC (polyvinyl chloride).

If the chasing arrow recycling symbol is present on the plastic product, either moulded or printed, PET is signified by the number 1 and PVC by the number 3. If the chasing arrow symbol is not present there are several non-laboratory (shedly) tests that can be carried out to help identify the material. If creased sharply, PVC will show a white mark at the crease. If a small piece of the material is burnt with a cigarette lighter, PVC burns with difficulty and the burnt residue is black. PET burns more readily and has a lighter colour of burnt residue.

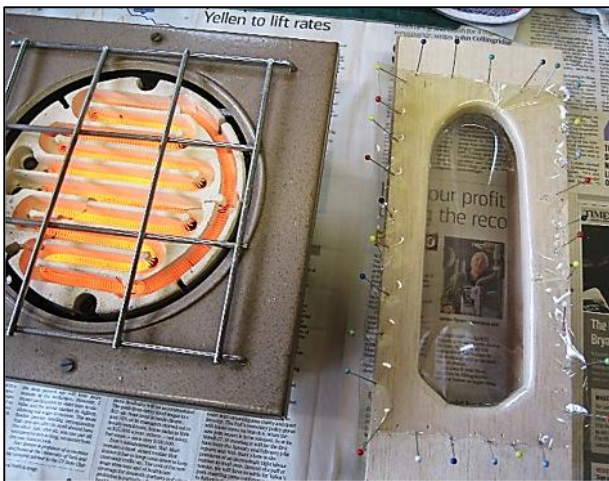
Being something of a hoarder, I have a collection of transparent packaging material, which was raided for this project. Material with a thickness of around 0.3mm is the most useful. Being thermoplastic it can be heated to flatten it somewhat before attaching to the female mould plate.



Printed chasing arrow symbol for PVC
from transparent box lid.
This material was used for the Zero canopy



Hot plate and mould forms for the Zero



Hot plate & formed canopy pinned to female mould plate



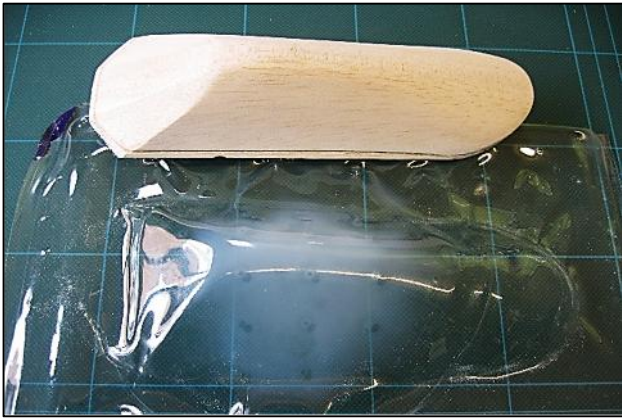
Moulded Zero cockpit canopy

Equipment

This is quite simple. All that is required is a male plug of the canopy's shape, a matching female form on which to attach the plastic sheet and a means of heating. I have an old hot plate, as shown in the photos. It has no identifying markings, and I do not recall quite how or why I acquired it, many years ago. Obviously an electric grill could be used as a heat source, but as we have a gas oven, I find the stand alone hotplate is more convenient.

Process

Tony had made his forms in hard balsa and, apart from fine sanding, no further finishing was required. To ensure an adequate depth to the finished moulding, I added some 1/8" sheet balsa to the base of the forms and drilled a hole for the dowel stick to aid handling.



Zero canopy form with some material that did not work!



Forming the Thunderbolt canopy.
The plastic is simply held in place by pins.



Two untrimmed Thunderbolt canopies and the male form



FW190 mould forms and canopy

The female forms were cut from material made from two laminations of 3/16" sheet balsa. I found it necessary to add some cross-grain reinforcement to the lower surface at the ends of the plates. This plate also needs to be supported to give enough clearance for the canopy to be pushed through. I used two pieces of 2" by 1" timber. The hole in the plate needs to be slightly larger than the male form, say 1mm all round, to give clearance for the canopy material and the edges of the hole on the top surface should be rounded.

The transparent material was pinned to the female mould plate and, turned upside down and heated up by holding it in a gloved hand and waving it over the heat source. When the plastic appeared soggy, the plate was placed on the timber spacers and the canopy form pushed in. If the plastic was not hot enough and the canopy not fully formed, it is a simple matter to re-heat it and try again. Remember, the material is thermoplastic, so, by definition, it can be re-heated and re-formed.

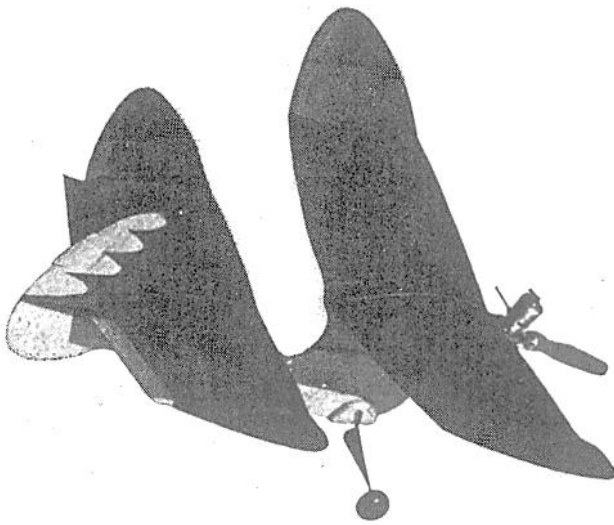
I had much more success with PVC material than PET, which tended to go milky, no doubt because of the relatively crude and uncontrolled nature of the heating process I used. The PVC seemed very tolerant of this abuse.

The Thunderbolt and FW190 canopies were made from the vac-formed trays for Cadbury's square Christmas chocolates, which can be hung on a tree. This material is 0.3mm thick. I also made a Thunderbolt canopy from some blister packaging for a grandchild's toy, which was a bit thinner. I initially tried the Zero canopy with some material from a Cadbury's round Christmas tree product, which appeared similar to that used for the chocolate squares, but turned milky on heating, so I think this was PET rather than PVC. The Zero canopy was successfully made from some flat PVC material from a square transparent box lid.

So Tony now has some canopies and no excuse for not completing his models! I look forward to having some photos of these in due course.

Nick Peppiatt

From the book - Ray Malmstrom 60 years of IVCMA - supplied by Chris Strachan



**Strange but true,
this little tandem
wing job really flies. Any $\frac{1}{2}$ c.c.
motor will supply ample power.**

I CAN almost hear the aeromodeling wits murmuring, on seeing the *Martian*, "evidently a case of what you lose on the tailplane (non-existent!) you make up for on the wings" Well, frankly, that's about it, and when it comes to real flying, this tiny tandem-wing certainly has no need of a tailplane. Simple to build, easily trimmed, it has proved to be a very stable little job in the air. The following notes are for the less experienced. To the old hand, resting for a while from the nerve racking business of building contest jobs, the *Martian* should present no problems, and provide just about a couple of evenings' light entertainment, before this diminutive little job is ready for the wide open spaces.

Fuselage

Trace the shape on $\frac{1}{4}$ sheet. The lucky ones with some 6-in. wide stock tucked away can do it in one go. Others with only 3-in. wide sheet handy must make the fuselage in two parts and dowel and cement them firmly together. Add the engine mount, drilled for the engine of your choice, noting here the right thrust (viewing model from the rear). Add blocks A, wing platforms, fin, and the four dowels firmly cemented in, for the rubber bands. Add to this the undercart blocks and $\frac{1}{16}$ ply inserts, if you are going to use an undercart. The undercart legs are simply bent from 16 s.w.g. wire with bushed balsa or celluloid wheels retained by small washers soldered on. Round off all edges. Give two coats of clear dope and lay aside.

Wings

Front and rear wings are built in exactly the same way. Leading and trailing edges are cut from sheet. Pin these over plan and add ribs. Set root ribs by means of the template X, provided. A V-cut is made on the leading and trailing edges

MARTIAN

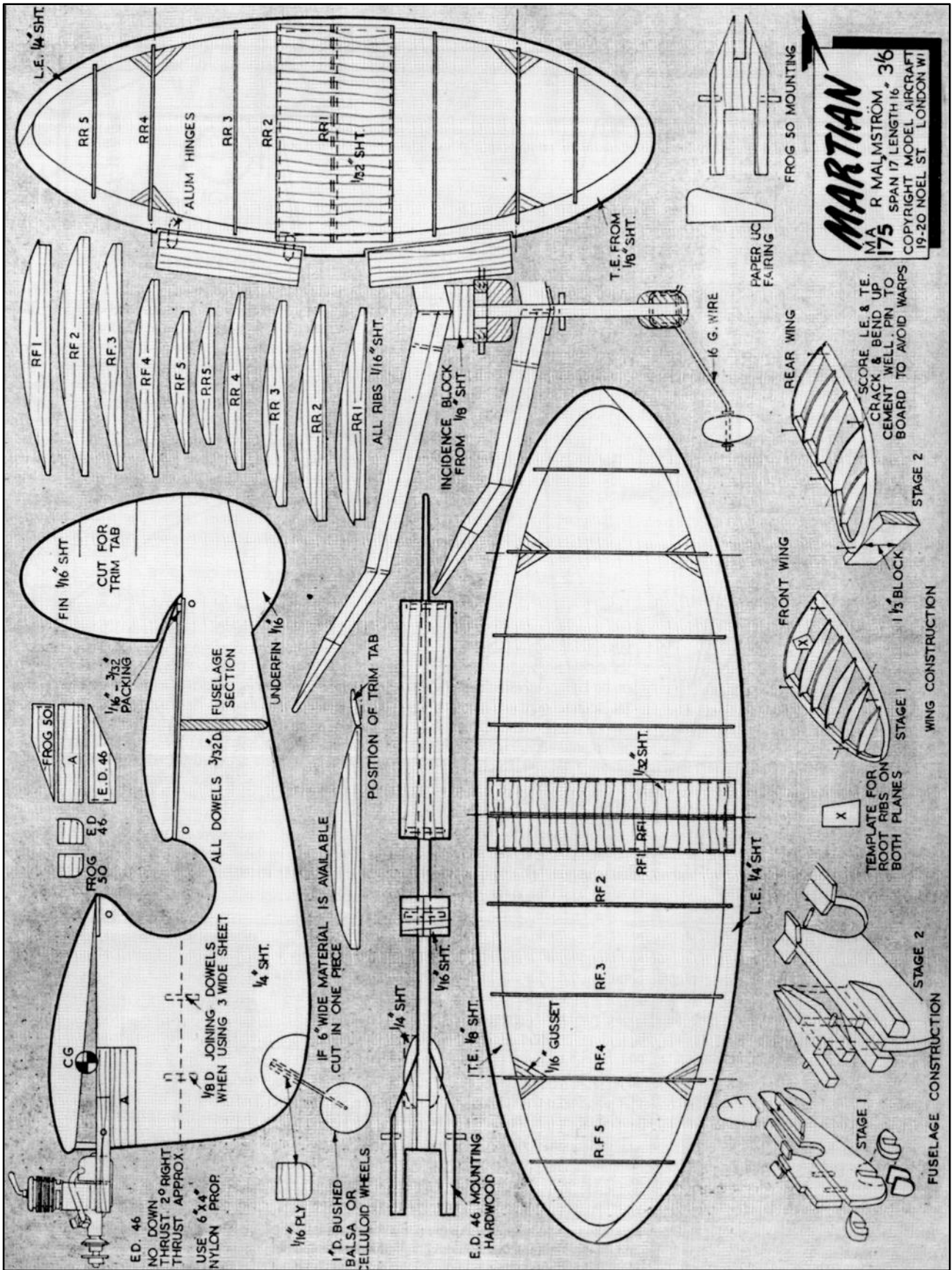
by Ray Malmström

at the points shown, and the outer panels raised by $1\frac{1}{4}$ -in. Cement generously at crack, and add gussets. Join right and left wing panels together, supporting at correct angles until dry. Sheet with $\frac{1}{2}$ the two centre sections. Cover, water shrink, and give one coat of clear dope. Please see that your wings are absolutely true, and free from warps. This is important. Add the trimming elevator tabs to trailing edges of the rear wing, with aluminium hinges. Cement incidence block (from $\frac{1}{8}$ sheet) to L.E. of front wing. Decorate model with either coloured tissue or trimstrip, and give one coat of fuel proofer. Bolt engine complete with 6 x 4 propeller in place, assemble wings and balance model at point indicated.

Flying

Choose a calm day and a field of long grass for your test flying. The model is usually flown without the u/c, and the settings that produced a very satisfactory flight performance with the original *Martian*, are detailed on the plan. Slight engine right thrust, with the trim tab on the fin offset to the right (model viewed from the rear) about $\frac{1}{4}$ in. The elevator tabs on the rear wing are bent up to the angle shown. The model is very sensitive to these elevator tabs, and they should be adjusted a little at a time. When the correct setting has been found, they should be locked by cementing. A $\frac{1}{16}$ - $\frac{3}{32}$ packing under the trailing edge of the rear wing was found to be necessary. Naturally the settings will alter from model to model but these from the original model can serve as a starting point. Get the glide as shallow and as straight as possible, avoiding any tendency to stall. Violent turning on the glide can be cured by raising the wing tip on the inside of the turn by packing at the centre section. Throttle the engine down, or fit the prop. on the wrong way round for your first power flight. The engine torque should give a wide climbing turn to the left. With this first flight successfully logged you can begin to open up. One other thing, avoid power turns to the right. With this type of model they usually build up into a spiral dive.

With a $\frac{1}{2}$ full tank (FD46 engine) the *Martian* climbs to a dot in the sky. So either limit your power run, or start chasing. You have been warned!



Scale to 17 inches wingspan x 16 inches long

Ray Malmstrom

Editor:

Some eight years ago I met Lars at Wallop when he paid the UK a visit. It was a windy day but he flew, which was more than I did as I recall. He wrote a bit for the Clarion at the time. I've just had an Email from him with a link to an ace website with magazines and pictures galore, all in Swedish I'm afraid.

<http://www.modellvänner.se>



Lars & Myself at the Middle Wallop Easter meeting in 2010

I've picked out a few pictures from the website on the museum, shows what can be done.















Editor again:

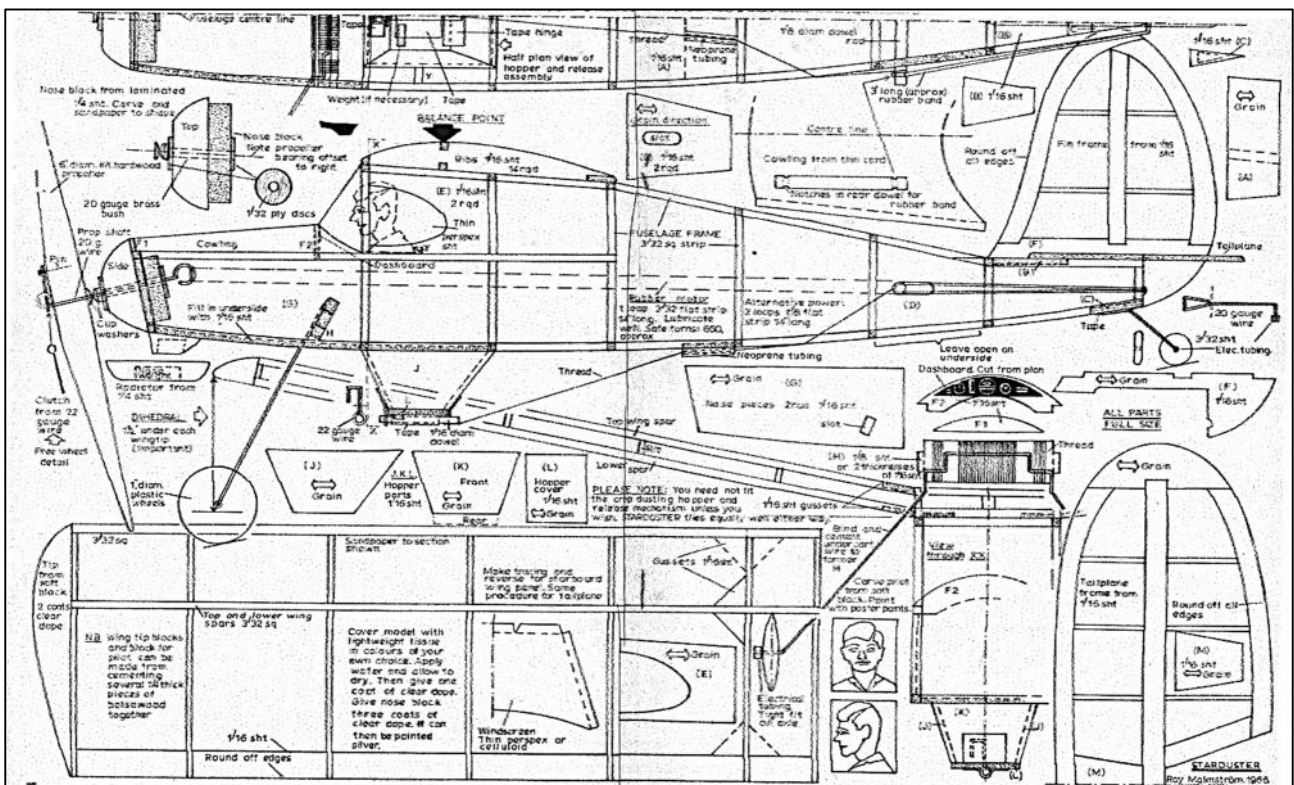
A museum full of excellent aeromodelling advertising, the UK really needs one soon, before it's too late for Free Flight.

Lars Karlsson

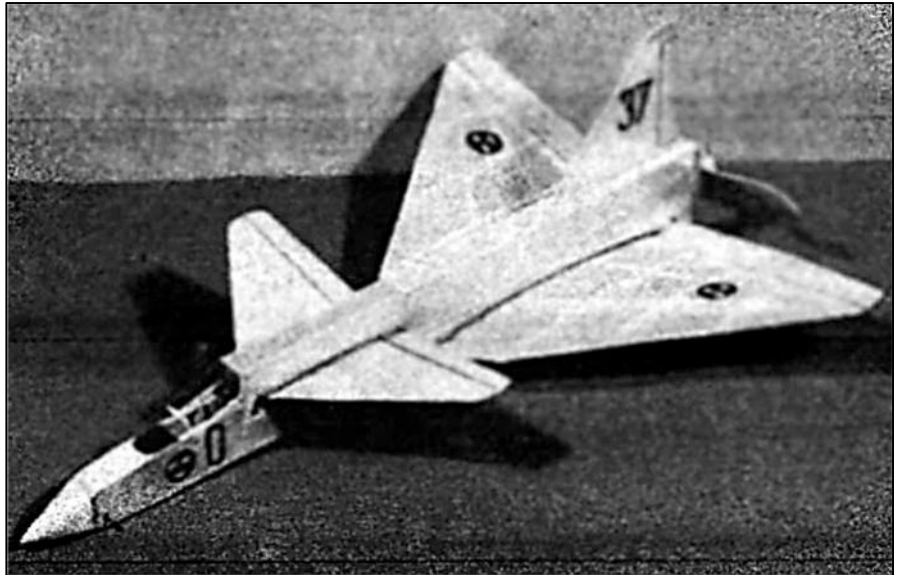
Report No. 99. Aeromodelling in Meccano Magazine, continued.

We ended last month's look at Meccano Magazine with Ray Malmstrom's Jetrida, a Jetex powered model, from the September 1966 issue. The October, November and December issues were bereft of model aeroplane plans although aeromodelling was not forgotten as these issues covered propeller carving, Cox engines and Cox RTF planes reviews.

The January 1967 issue included Malmstrom's Starduster a 29" wingspan rubber powered semi scale crop-duster or leaflet dropper. The crop dust or leaflets were to be placed in a box mounted on the lower fuselage. The rubber motor rear peg was fitted in a slot and pulled to the rear of that slot by a rubber band running around the stern post and pulled forward by the wound up rubber motor. Ray explains that as the rubber motor runs down the peg will, at a point dependent on the strength of the rubber band, move from its front position to its rear position and thus pull a cord connecting the motor peg to the trap door catch, opening the door and releasing the contents. To quote "This little model is a lot of fun" but maybe not to M. W. rules.



Then came another three months issues with no model aeroplane plans, so it is forward to the May issue for Malmstrom's rubber powered Saab A37 Viggen of 13" wingspan. Also in this issue is a plan by Ron Warring, it is rubber powered, has a four bladed propeller and, wait for it, four wheels! Plan for the Balsa Dragster on the next page.

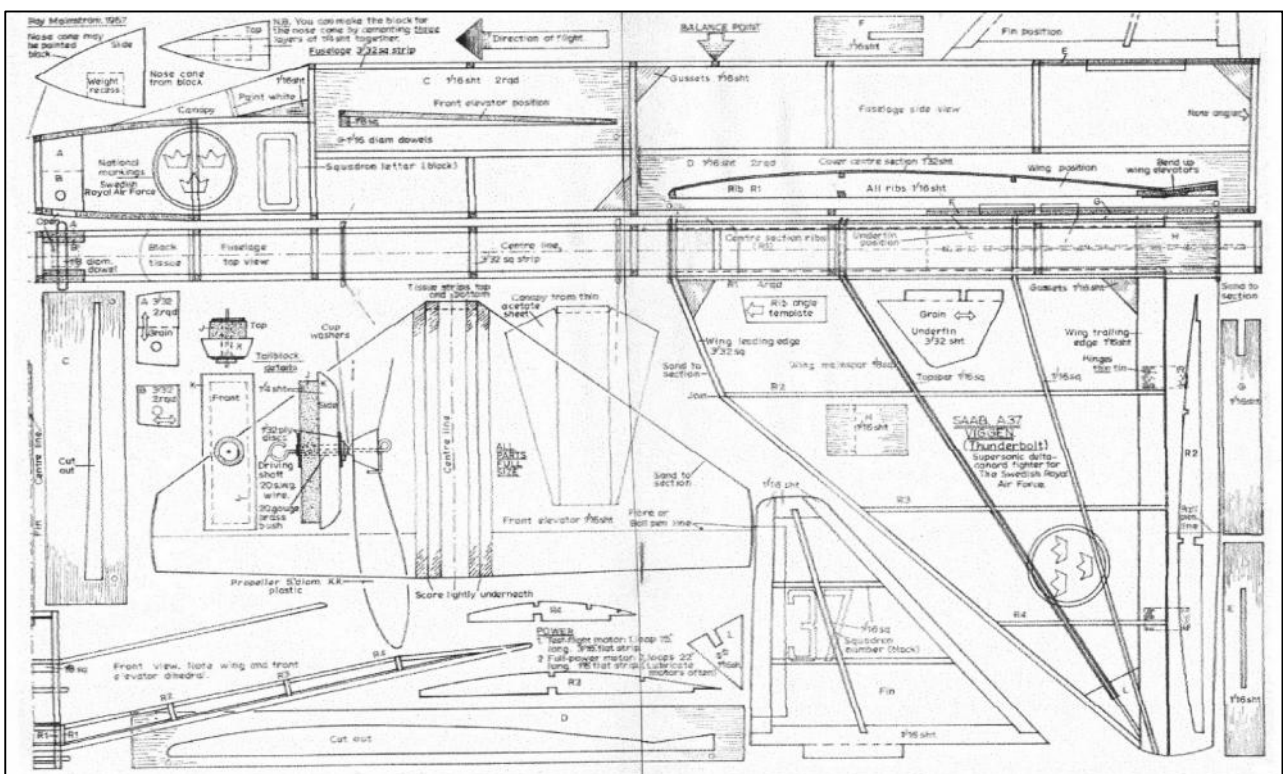


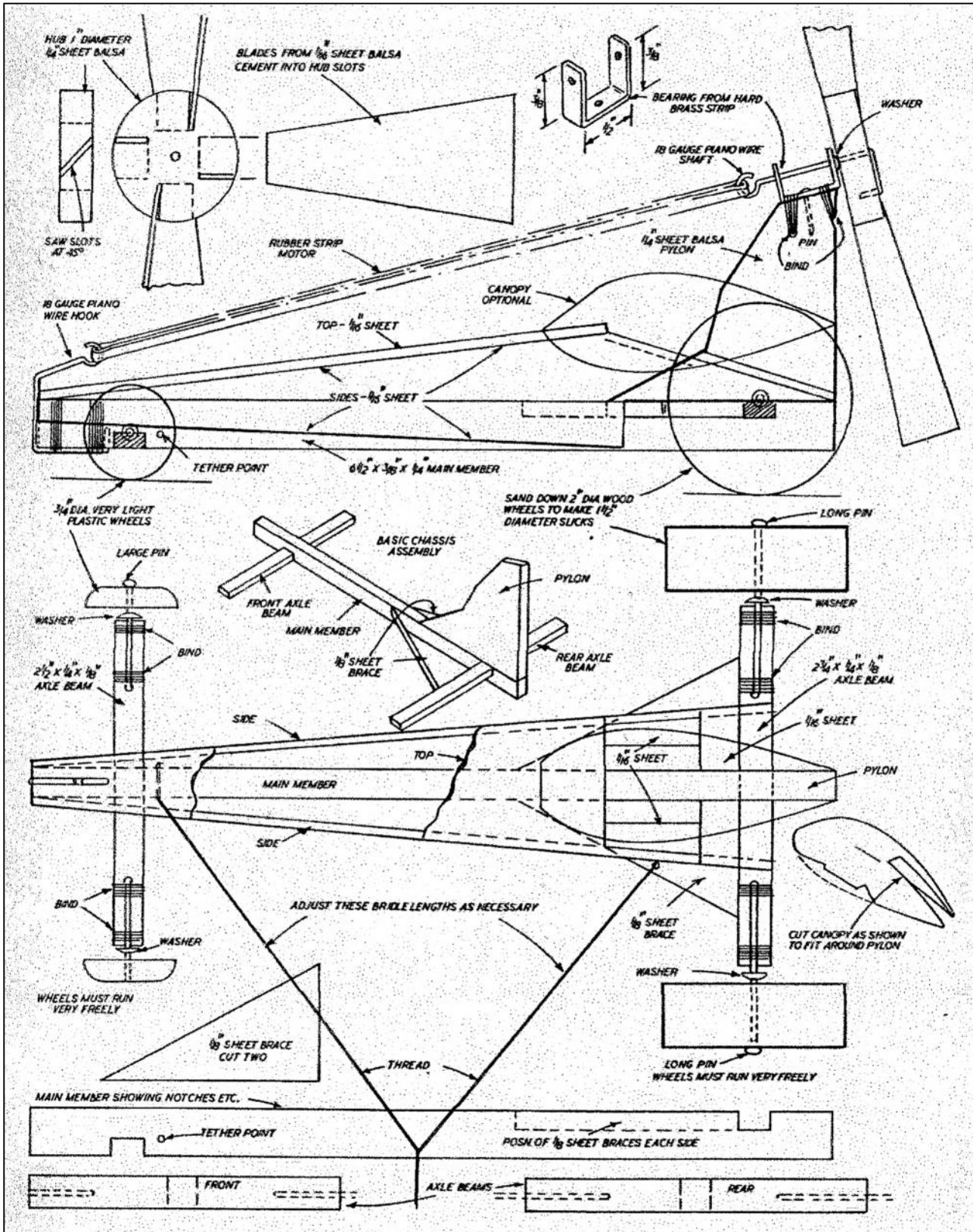
The June issue had another plan by Ron Warring, this time for a Balsa Ruler, actually a vernier calliper, but of course now one could buy a precision vernier calliper for just a few pounds.

The July 1967 issue again had no model aeroplane plan but carried a notice part quoted below. "Dear Reader, when it was first announced that the July Meccano Magazine would be the last, many readers wrote expressing their regret that action of this kind had been necessary. Although this is indeed the last Meccano Magazine to be published by the present publishers, we feel sure that existing readers will be pleased to hear that investigations are being made into the possibility of continuing the Meccano Magazine. It is hoped to recommence publication of the Meccano Magazine later this year, possibly in a different form."

If you would like to build any of these models, plans and articles, as they appeared in Meccano magazine, they are available by email.

Meccano Magazine readers had to wait from the July 1967 "last" issue until January of the following year for the relaunch. We will have a break from Meccano for a while so next month it will be something new or something old.





For detailed plans contact:

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

Roy Tiller



Croydon Wakefield Day was held at Beaulieu this year and, as I had the 8oz trophy from last year and needed to return it, Rachel and I decided to attend the meeting. A hotel stay was booked and an £11 licence to fly on the site was acquired. Roger Newman filled us in with a detailed route from hotel to airfield and he told us to wait at the locked entrance gate and phone him to gain entry. All went well until we arrived at the gate. We just missed someone entering so we phoned Roger, no answer. We waited but no one else turned up so Rachel was forced to walk to the flight area, which luckily was just visible through the gorse three or four hundred yards distant. I understand from John Hook, who came back to let me in, that Rachel, being somewhat an unhappy bunny at the time, gave poor Roger the rough edge of her tongue until it was realised that the area was a phone dead spot.

I parked alongside the peri-track and surveyed the scene. The grass covered old runway had obstacles in the shape of grazing horses but the downwind area looked reasonably free from any large gorse outcrops. There was no activity and being a very hot day I sat in the car awaiting to see when the local flyers would commence.

Roy Tiller was the first to set up shop and soon had made three flights with his 'Fledgling' under 24" model, which got him into the prize list but as Flight Control had moved by prize presentation time and Roy had not, I believe he missed out on a bottle of wine under the old John Thompson rule: 'no show no prize'.

The glider boys, David Cox, Dave Etherton and John Hook appeared next and with models in hand marched off through the gorse until they vanished from view. A while later gliders seemed to spring up from the gorse and flyers emerged and came galloping across the open ground to release their models before coming to a standstill gasping for breath from the effort.

I decided that, having travelled down, I'd better make some sort of effort myself so I set up my winding jig and assembled my old 39 Korda. I had had to rebuild the noseblock after a vertical arrival last year on Salisbury Plain so a test flight was in order to check the thrustline. I wound on a couple of hundred turns or so and selecting a patch of the grass runway reasonably clear of horses I cast the



Korda aloft. The model flew away with a modicum of right turn and when the prop folded the glide looked as though it might be OK but having little height I was not too sure.

I went to control and entered, and Roger informed me that it was a combined wakefield contest so I reasoned I would be up against some high performance 4oz jobs. Roger had offered to recover for me, knowing the area, but the weather forecast suggested that the wind direction would swing right round later in the day and Roger said control would soon relocate. So I suspended my flying until such time as control moved.

Later, after a long dusty bumpy drive around the remnants of the peri-track, we were relocated on the opposite side of the field. There was a fairly large clearer area downwind but slightly off line so once again I decided to wait for the windsock to move round a little further.

Sitting comfortably in the chairs we watched Peter Hall perform with his Wake.



I think the sequence above is self-explanatory: assisted by Roy Vaughn;

Peter winds; Peter prepares; Peter waits; Peter chucks.

(thanks to Alan Brocklehurst for the pictures)

Eventually the windsock swung into line with the open area and I wound a tentative 500 turns on the Korda for a first comp flight as Roger set off for recovery. I let the Korda go, it was a trimming flight in effect and trim was quite reasonable. The 1 min flight time was something to record and made Rogers recovery job simple. With the end of the competition approaching I wound for a second flight and two broken strands appeared but were stuffed in the tube anyway. I stopped at 500 turns again in case it broke but a better flight of ensued, 1-30 or so.

My trip out was not a complete disaster after all, I now know the Korda is trimmed and I featured in the prize list. A really nice day out but a difficult venue, needs trackers.



Organisers Ray And Roger prepare for presentation of prizes



Prize winners: Peter Hall (Wakefield Winner) John Andrews (3rd Wake) David Cox, John Hook, Dave Etherton (1,2 & 3, Glider)

John Andrews

C.G. POSITION

THE TERMS balance (point) and centre of gravity (position) are used synonymously whereas strictly speaking only the centre of gravity is an exact point and the balance point is the position of the centre of gravity relative to the overall length of the model, i.e. the balance point established when rigging the model for flight. This horizontal position of the centre of gravity (i.e. the balance point) is by far the most critical as regards trim. The vertical position of the centre of gravity is normally ignored entirely, although it can in actual fact play a considerable part in trim.

It is perfectly possible to fix the balance point over a very wide range and still trim the model out to fly successfully. It is also possible to ignore the question of where the model balances and adjust the trim entirely on the reactions produced by test gliding. This latter method, however, can fall down if the original balance point was not in a reasonable position; can lead to a lot of time arriving at a final trim without any guarantee that it is the *best* trim which can be achieved; and may also be extremely hard on the model during the "proving" trials.

The first point to be considered is that the angle at which the wing is mounted on the model is purely an arbitrary setting. Trimmed for an "optimum" glide, the wing will be operating at an angle of attack quite near its stalling point—say 6 to 7 degrees. The main significance of the wing rigging angle is that it affects the *attitude* which the rest of the model will assume relative to its flight path.

With most orthodox wings, the point of application of lift at such a flight attitude will be between 25-30% of the chord—the root chord in the case of rectangular wings*, or the mean chord in the case of tapered or swept wings—Fig 1. The other force to be considered from the point of view of establishing balance is the total drag force—the resultant of wing drag, fuselage drag, etc.—Fig. 2. If this has a moment about the ultimate centre of gravity position it will have to be corrected when establishing trim by means of the two variables—the balance point and the tailplane setting.

Take first the case where the drag force comes in line with the centre of gravity and thus produces no pitching effect. The balance point can then be located in any of three typical positions—forward of the centre of lift (1),

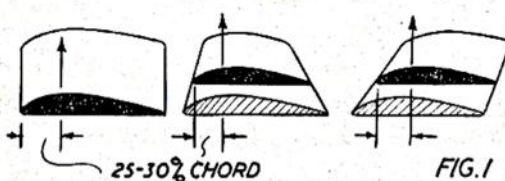


FIG. 1

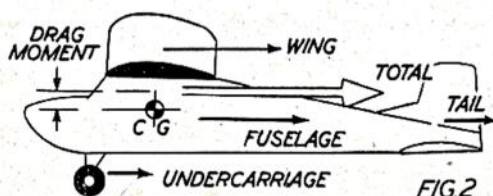


FIG. 2

immediately under the centre of lift (2), and aft of it (3). Only position 2 is an exact setting. Either of the other two can be varied over a wide range.

To balance out in case (1) the tailplane must be rigged to develop a downward force, which is obviously an inefficient arrangement and never used on free flight models. In position (2) the tailplane is used purely as a stabiliser, rigged to give no lift when flying in trim and only effective as a working aerofoil

* Strictly speaking, CG. position should be related to mean chord on all wing layouts. Adding incidence to a rectangular wing, for instance, imparts sweepback. The difference is small enough to be ignored and centre of pressure position in any case only an affirmation.

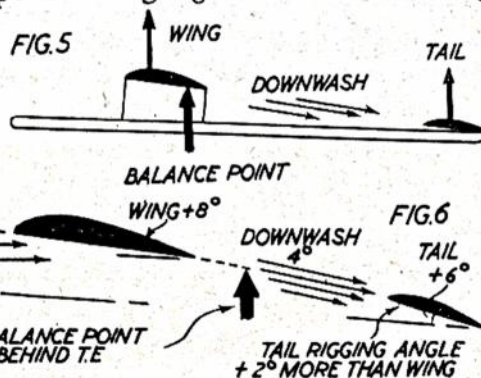
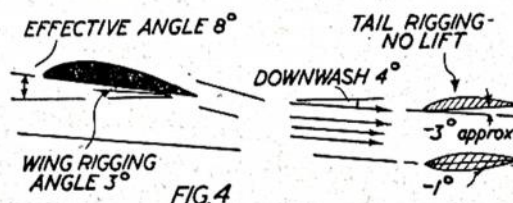
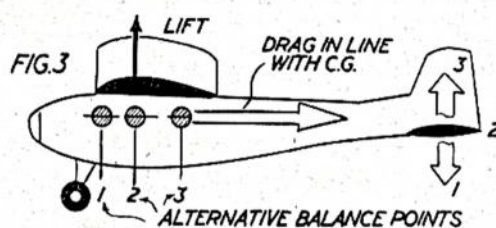
when the model is displaced from its normal flight path. Correctly speaking, this is the only definition of a "non-lifting" tailplane and has no reference to the tailplane *section*. The section can be symmetrical or cambered, in both cases rigged to generate no lift in normal flight.

Such a balance point is an extremely stable one for it enables the tailplane to be used with maximum efficiency as a stabiliser with a generous effective longitudinal dihedral angle or difference in angle of attack between wing and tail. The *effective* longitudinal dihedral is not merely the *geometric* difference between the two rigging angles, which is apt to cause some confusion. Suppose, for example, the wing is rigged at 3 degrees incidence and its actual operating angle of attack is 8 degrees. Downwash from the wings will modify the airflow over the tail, equivalent with a conventional moment arm length to an effective displacement of the airflow through roughly half the angle of attack of the wings, i.e. 4 degrees. The tailplane must be lined up with this deflected airflow, giving an apparent angle of attack of 4 degrees with a symmetrical section and in the region of 2 degrees with a cambered section—Fig. 4. Translating this back in terms of actual *rigging* angles, with the wing at plus 3 degrees this corresponds to a tailplane rigged at -1 degree (symmetrical section) or -3 degrees (cambered section). It is instructive then to work out the effective angle of attack of the tailplane and thus its corresponding corrective power, when the model is displaced nose-up or nose-down, following the same principle.

Adopting the third balance position (3) means that equilibrium can only be produced by rigging the tailplane to develop a continuous upward force. In other words, a lifting tailplane is utilised, contributing towards the total lift and thus serving a dual purpose—Fig. 5. Almost all duration models are rigged in this way, the actual balance point adopted ranging from just behind the centre of lift back to beyond the trailing edge. But the more one tries to utilise the tailplane as a source of lift (i.e. the farther aft the corresponding balance point), the less the efficiency of the tailplane as a *stabiliser*, simply because of the reduction in effective longitudinal dihedral.

To take an extreme case, with the same wing operating angle of attack as before and an *effective* angle of attack for the tailplane of 6 degrees, the tailplane would have to be rigged at a 2 degree positive angle *greater* than the wing rigging angle—Fig. 6. With a moment arm of about 4 times the wing chord and a 40% tailplane, this would correspond to a balance point about half a chord length *behind* the wing trailing edge.

Although a perfectly feasible arrangement, the stability margin of such a layout is low and, in fact, non-existent in a nose-down displacement. This is because any lowering of the effective angle of attack of the wings



(such as dipping the nose after a stall) immediately reduces the downwash and *increases* the effective angle of attack of the tailplane. Such a model would then have no recovery from a dive.

The practical limit with aft balance trim is generally realised with long moment arm models (which has the effect of lessing the downwash effect because of the greater distance of the tailplane from the wing) with a 1 to 2 degree *rigging* angle difference between wing and tailplane and the balance point on the trailing edge or up to one third of the wing chord behind. Even so, dive recovery is usually very poor and a high drag centre essential to help in recovery, i.e. the centre of drag is above the centre of gravity of the model and normally exerts a nose-up couple which increases with increasing speed.

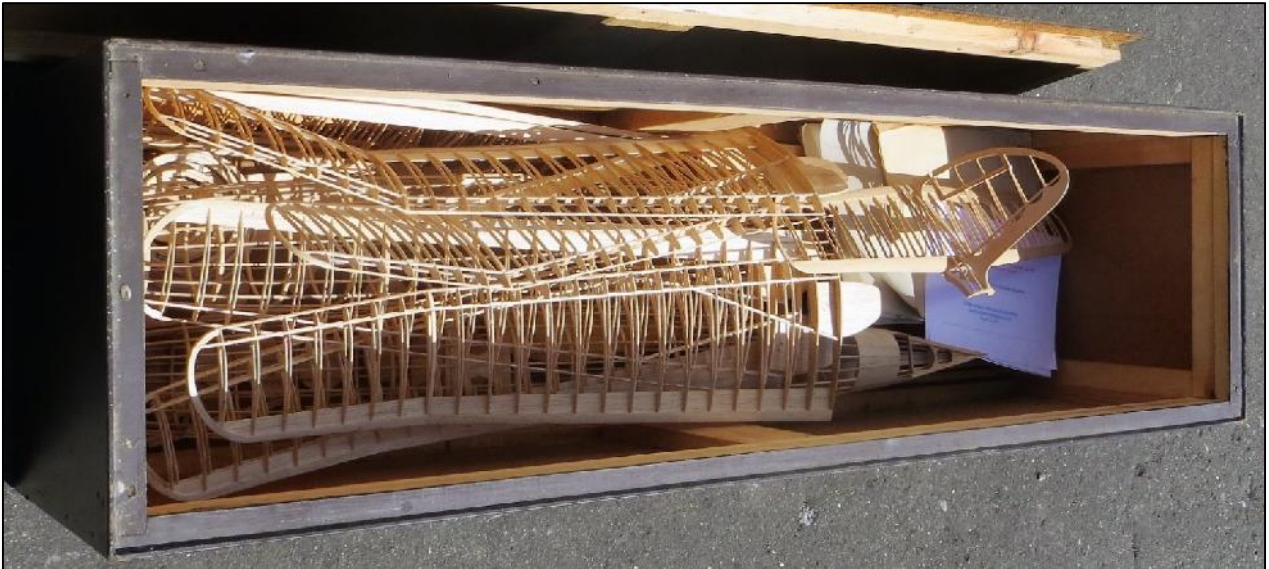
As a general rule, the trailing edge should be considered an aft limit for balance on any duration model and adopting a minimum *rigging* angle of difference between wing and tailplane of 1 to $1\frac{1}{2}$ degrees is a safeguard against a reversal of stabiliser action should the model adopt a nose-down attitude. The lower the wing position the smaller the safety margin and a 75% chord limit is recommended for the balance point on shoulder wing designs. Shoulder wing power models are very prone to fly "over the hump" with an extreme aft balance trim and dive in under power.

An important point to bear in mind with all power models is that the flying speed is higher under power, meaning that the angle of attack of the wing is lower and with it the wing downwash, increasing the effective angle of attack of the tailplane. The pylon layout largely offsets this by the increased drag couple at higher speeds, which is one of the main reasons why a pylon layout is so much favoured for high-power duration designs. On the other hand, to increase the stability of any model the balance point should be moved forwards (retrimming the tailplane setting to leave the *wing* operating angle of attack unchanged). But the pylon model tailplane is now less effective in combating the looping tendency of the drag force and so seldom is a very forward balance point employed on such layouts. A figure of between 60 and 75% of the chord is about average for contest standard designs.

Moving the balance point forward on a high-powered shoulder wing design usually demands a very large downthrust angle to prevent it from looping. It has been recommended, and it seems to work out in practice, that with the balance point around 40% of the chord the thrust line should pass above the centre of gravity and it is possible to produce a very effective, fast-climbign trim by this technique.

With rubber models, power-on trim is not so critical but the same general technique applies—balance point fairly well forward (40 to 50%) for shoulder wing or high wing designs; and 60-75% on pylon layouts or up to 100% on pylon designs with long moment arms. Gliders do not represent the same problem as regards "power-on" trim although it is generally found that approaching a "critical" trim by working to an aft balance point position may lead to towline instability. A far better solution here is to utilise as much of the total area as possible for lifting by transferring area from the tailplane to the wing, rather than employing large lifting tailplanes. Large tailplane areas (30 to 50%) are normally a characteristic of powered models and necessary for "power-on" stability. Glider tailplane areas can be reduced to as low as 15-20% without resorting to excessive moment arm lengths, when a balance point of 40 to 50% of the chord is generally a satisfactory solution.

I took a box of 3 vintage Wakefield model airframes to Beaulieu to see if anyone would be interested in finishing them and flying them. As everyone remarked, they are all built to an exceptionally high standard and I think the background story behind them will be of interest.



The story is as follows: I joined Westland Helicopters Ltd in 1973, and sometime after that (I am not sure if it was just before, or just after I got married in '75), I recall being asked to go around to Mr. Robert's house to see some of his models. Presumably word had got around that I flew F/F models (Tailless rubber and A/1 and A/2 gliders at that time) and besides having just joined Bristol and West after my move south, I was also a member of the Westland Yeovil and District Model Aero Club. At the time Mr. Roberts wasn't well and he kindly passed the models on to me in the hope that I could finish them off and enjoy flying them. Sadly he passed away shortly afterwards.



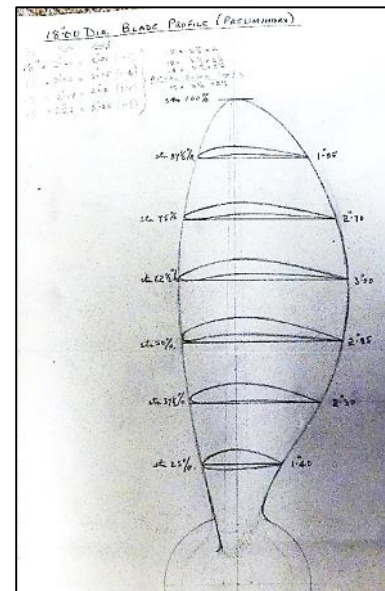
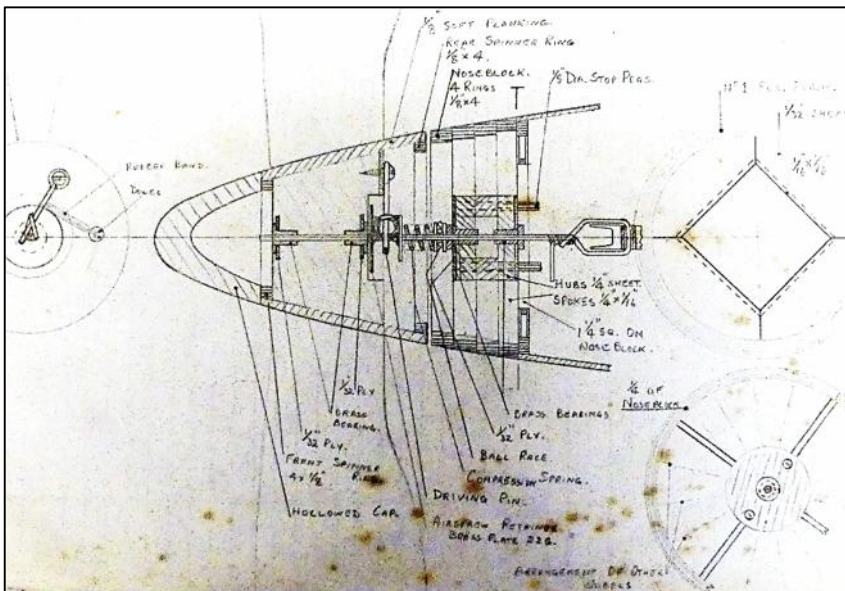
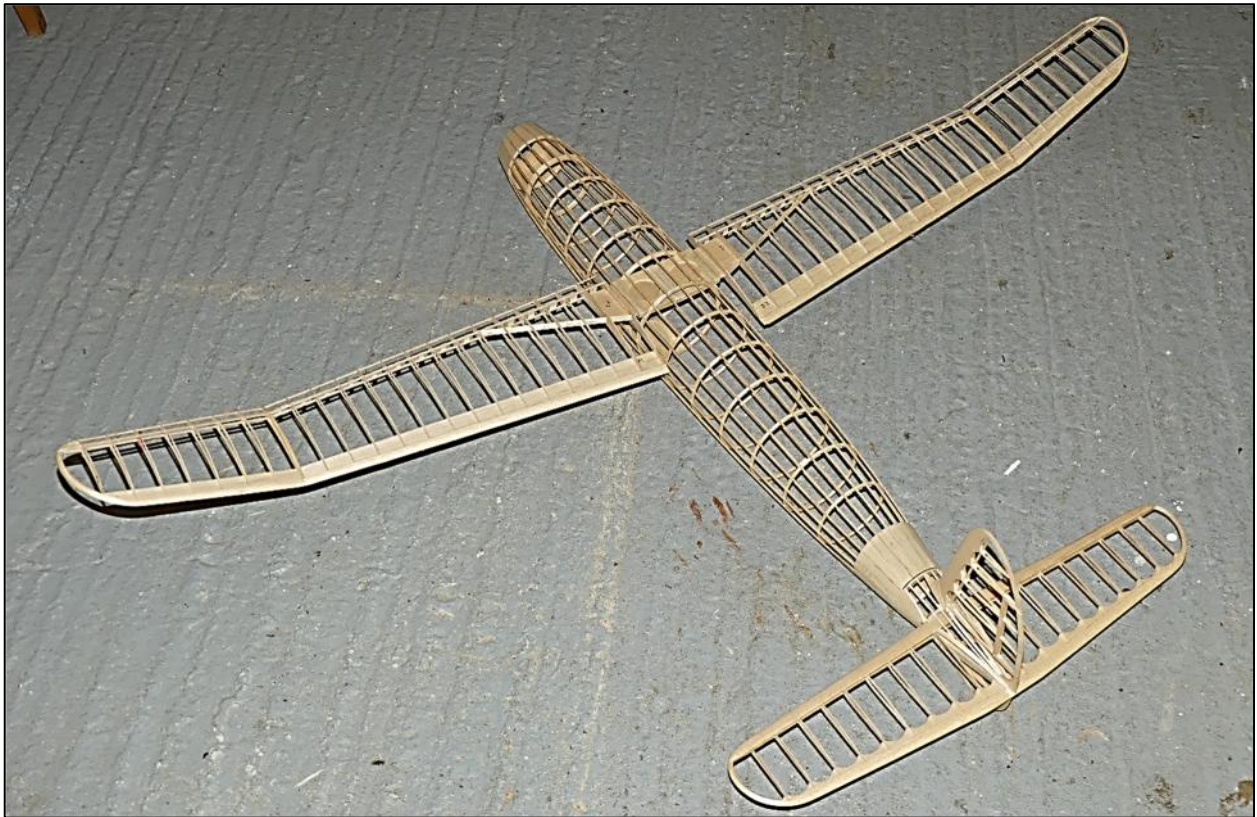
His paperwork dates the models at 1950, so they are now nearing 70 years old. They have been carefully stored over the last (approx) 43 years in the original model box that he also gave me. But I'm afraid that I haven't found the time to finish them.

After I retired, I decided to focus on flying Coupe which is still my main interest. Last year, I distracted myself with building a mini-Vintage Dinah-Mite that isn't quite finished yet, and of course my next Coupe hasn't even been started. Hence I thought it was time to rationalise and offer these models to anyone who would like to complete them (perhaps in exchange for a charitable donation) or possibly donate them to a Museum.

(I am currently waiting to hear from Jim Wright, re the BMFA Museum).

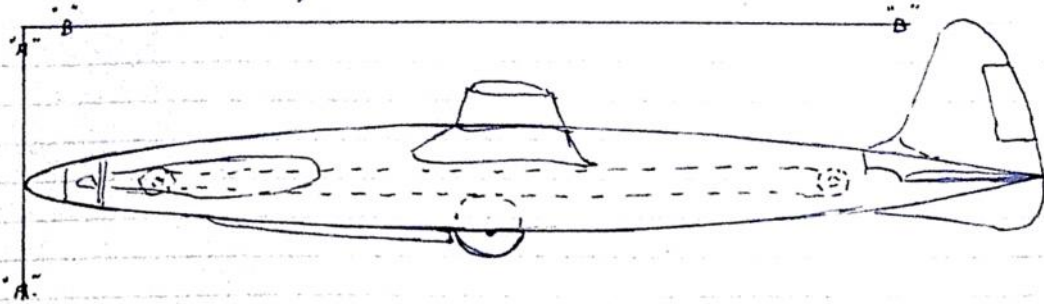
I recall either being shown, or maybe given, copies of Aeromodeller magazines from the late 40's which I can't currently locate. However, Roger Newman has rapidly done a little detective work and sent me plan of the 'winged serpent' by a Mr. J.L. Roberts published in the late 40's which shows some similarity with the models in my possession. We wonder if this was a fore-runner of the Defender-III.

I will carry on searching and hope to be able to confirm that he is the same model builder. I'll try and do a bit more searching for the old mags and make some other enquiries.



1950 Wakefield Defender III. (C.G. Position).

Note. A/c considered with prop. folded & % retracted.



A/c Unit.	Component Weight	Component C.G. from "A"	Moment "A"	Component C.G. from "B"	Moment "B"
Propeller Assembly	1.25 oz.	4" 0	5 oz/in	6" 8	8.5 oz/in
Fuselage.	1.25 oz.	18" 5	23 " "	6" 8	8.5 " "
Undercarriage.	.25 oz.	12" 0	3 " "	9" 0	2.25 " "
Tail cone & fin.	.16 oz.	35" 0	5.6 " "	5" 5	.88 " "
Tailplane.	.24 oz.	35" 5	8.5 " "	6" 7	1.68 " "
Wings.	1.20 oz.	16" 0	19.2 " "	4" 8	5.80 " "
Rubber motor.	3.75 oz.	18" "	67.5 " "	6" 8	25.50 " "
Total A/c.	8.10 oz.	x "	131.8 oz/in	y "	53.11 g/in

Horizontal base. $x = 131.8 \text{ oz/in.} \div 8.10 \text{ oz} = 16.25 \text{ (from tip of nose.)}$

Vertical base. $y = 53.11 \text{ oz/in.} \div 8.10 \text{ oz} = 6.56 \text{ (from edge of drawing.)}$

1950 Wakefield Defender III. (Reading Slim-A-Sheet)

Root chord.	6" 00
Theoretical Tip chord.	3" 20
Mean chord.	4" 60
Length of wing panel.	23" 00
Area of wings with square tips.	$46" 00 \times 4" 60 = 211" 60 \square$
Area of portion cut off by tip radii.	$2" 12 \square$
Actual wing area.	$211" 60 \square - 2" 12 \square = 209" 48 \square$
Angle of Incidence.	4°
Min. Possible Tail Plane Area.	* $69" 82 \square$
Tailplane Span.	20" 40
Chord on 2 %.	4" 10
Theoretical Tip chord.	2" 75
Mean chord.	3" 425
Total area of tailplane with square tips.	$69" 87 \square$
Area under tail fining.	$3" 69 \square$
Area of portion cut off by tip radii.	$1" 54 \square$
Actual Effective Tailplane Area.	* $64" 64 \square$
Total Fin Area.	$26" 00 \square$
Length.	38" 00
Req. fuselage area under 1/100.	+ $14" 40 \square$
Fuselage maximum diameter.	4" 30
Actual fuselage cross-sectional area.	+ $14" 43 \square$
C.G. Position from nose.	15" 60 16" 25
Airframe.	18" 00 dia. x 25" - 27" - 29" fitted. (Calculated fitted 26")
Rubber.	58 1/2 ft. x 1/4" x 1/4" DUNLOP 6000.
Motor.	50" x 14 STRANDE 1/4" x 1/4"
Rubber weight.	(Assuming 15 1/2 ft. weigh 1 oz.) 3.75 oz.
Total 1st ingepen	58"

ESTIMATED WEIGHTS:

Propeller Assembly	1.25 oz.
Fuselage.	1.25 oz.
Undercarriage.	.25 oz.
Tail cone & fin assembly.	.16 oz.
Tailplane	.24 oz.
Wings.	1.20 oz.
Rubber motor.	3.75 oz.
Total Weight of %.	8.10 oz.
Power / weight ratio	4.64 %

Depicted here are detailed tabulations of weights, materials, prop sections, CG calculations and folding prop constructional details.

Mr Roberts, it would seem, was just as meticulous with his detailed records as he was with his actual model building.

The condition of the wood is still as perfect as the day the models were made. If any modeller would like to complete these models be it for flying or exhibition please contact me.

Alan Brocklehurst: Email:
alan.brocklehurst1@btinternet.com

Alan Brocklehurst

Not what was planned or anticipated! A late bit of editing of my notes to comment on cancellation of our planned meeting at Middle Wallop on 27th April. Having watched the weather forecast together with the rest of the Committee over the past few days, we very reluctantly decided that cancellation was the wisest course of action as the forecast increasingly became grimmer. The prospect of wind speeds averaging 20mph & gusting beyond 40mph, coupled with a high probability of rain does not appeal at all.

So we will carry forward the event schedule from April over to the June meeting & hopefully look forward to some blissful weather! As a footnote, the licence came through without any problems thanks to some sterling work by our lovely contact at DIO.

Southern Area Gala at RAF Odiham

The licence has come through for this event on 5th May. Adverts for this have been in recent editions of the NC, so for those who have prepaid & booked, turn up & enjoy the day.

Croydon Wakefield Day

This year held at Beaulieu as when the calendar was worked out it looked as if there would be no access to Area 8 of Salisbury Plain. As things turned out, we could have been there & maybe attracted a few more entries. However, the faithful few turned up at Beaulieu plus our esteemed Editor & Rachel. For once, the weather was kind & we enjoyed a very sunny day with little more than a gentle breeze. The only downside was having to swap locations as the wind swung from NE to SW at lunchtime - a normal Beaulieu happening.



Ray Elliott winding keenly assisted & observed by Pete Jellis



Roy Tiller & Fledgling



Peter Hall prepares for winning flight in Wakefield.

Ray Elliott will provide a short report in next month's NC.

Results

Combined 4oz 8oz Wakefield:

1st - Peter Hall (Lanzo Duplex) 6.51; 2nd - Ray Elliott (Lanzo Classic) 6.42; 3rd - John Andrews (Korda) 2.26.

F1B:

1st - Roy Vaughn (O/D) 1.00

(Roy was not happy but brightened up later when he was ground testing his Norvel in a Creep fuselage – clocked at 25000+rpm!)

Marcus Lightweights

1st - Peter Jellis (Raff V) 1.28

(Peter took the pragmatic view of being the only entry so he didn't need to fly more than once!)

SAM1066 Mini-Vintage:

1st - Dave Etherton (Nord) 6.00 (lost model on 3rd flight); 2nd - Roy Tiller (Fledgling) 4.28
(Roy was keen to try his rdt system – worked a treat on his final flight which maxed)

SAM1066 Over 50" Combined Vintage/Classic Glider:

1st - David Cox (KK Chief) 7.24; 2nd - John Hook (Windjammer) 7.13; 3rd - Dave Etherton (Inch Worm) 6.25.
(Some excellent flying by all three entries.)

Alan Brocklehurst & a mystery modeller

(my follow on from Alan's previous report)

Alan came to the Croydon Day at Beaulieu & combined the day with a visit to his son in Gosport. He brought an old model box containing the frames & structures of what looked to be some quite exquisite models. He is trying to identify both the models & modeller. Thus far he thinks that they were constructed by a Mr J L Roberts, possibly in the late '40s or early '50s. This Mr Roberts had several models published in the *Aeromodeller* starting in March 1943 with a BAM Swallow, followed by a Bristol F2B Fighter in October of the same year. Then came a gap until March 1948, when the Winged Serpent was published, shortly after this in January 1949 with a Featherweight. Another long gap until April 1960 & Pandora & finally Miss Flighty in June 1967.

A little more info was found in a past SAM Speaks - as below, which ties in with the information known by Alan.

At the age of 14 I went to work with Neatland Aircraft in Yeovil, as a probationer apprentice in the Drawing Office. I was in a kind of heaven, real aeroplanes - Spitfires, Seafires and Welkins. And I had a pass to the experimental shop where they were working on the mock-up of the W.34 (later the Wyvern) and where they kept a Widgeon IIA. The Widgeon was flown while I was there, usually by Harold Penrose, but was destroyed in a hangar fire a few years later. Of course, I joined their model aircraft club and got to know Jack Roberts, who had several scale models published in the "*Aeromodeller*". I saw him flying the first version of the "Flying Serpent", later a plan in the "*Aeromodeller*". This was semi-scale, with twin fins, inverted gull wings and four blade prop. Although not a duration job it was most impressive in flight. I also met Ken Gyford whose "Gull" flying boat had appeared in the *Aeromodeller* Plans Service. A large rubber motor in the hull drove twin airscrews via mechanical linkages. A beautifully made model with a fair performance.

Sorry about the quality. This was extracted from an article by Geoff Keeble in 1993, who obviously knew the gentleman in question. Maybe Geoff is still around to tell us more?

The models are very worthy of preservation & would make an excellent exhibit for the BMFA Museum if such a thing came to pass, so contact has been made with Jim Wright to see if there is any interest. In the meantime, letters to the Editor if anyone can throw light on either the models or Mr J L Roberts. I know Alan would much appreciate the input.

Performance Kits Kingfisher plan

A request has been received for a copy of the above plan. We do not hold a copy in our plan library; neither does my reliable backup in Derick Scott. Roy Tiller tells me that this was one of nine plans that are missing from the portfolio of 41 Performance Kit plans that he has identified through adverts. So once again, an appeal to our membership - has anyone out there got a copy of this elusive plan that we can borrow, scan & return to the owner?

Revolutionary Phoenix Aircraft

Tail end note on more British Innovation - not strictly modelling but an interesting article that recently appeared in Sky News.

Phoenix, an unmanned aerial vehicle (UAV), has been designed to repeatedly transition from being lighter than air to heavier than air.

This generates thrust to propel the craft forward.

The development of the aircraft was led by the University of the Highlands and Islands, with the team made up of representatives from academia and industry.

Phoenix, which is 49ft (15m) long and has a 34ft (10.5m) wingspan, was flown successfully and repeatedly over a distance of 120m (394ft) during indoor trials at the Drystack facility in Portsmouth in March.

The test flight was the culmination of a three-year project to prove the viability of a variable-buoyancy powered aircraft.



Phoenix ready for test

Vehicles based on its technology could be used as pseudo-satellites which would "provide a much cheaper option for telecommunication activities".

Pseudo-satellites are high-altitude aircraft that operate in the stratosphere and can be used for various different purposes such as communications, monitoring, surveillance, and environmental observation.

The Phoenix spends half its time as a heavier-than-air aeroplane, the other as a lighter-than-air balloon. The repeated transition between these states provides the sole source of propulsion. The vehicle's fuselage contains helium to allow it to ascend and also contains an air bag which inhales and compresses air to enable the craft to descend. This motion propels the aeroplane forwards and is assisted by the release of the compressed air through a rear vent. The design of the Phoenix allows it to be completely self-sufficient.

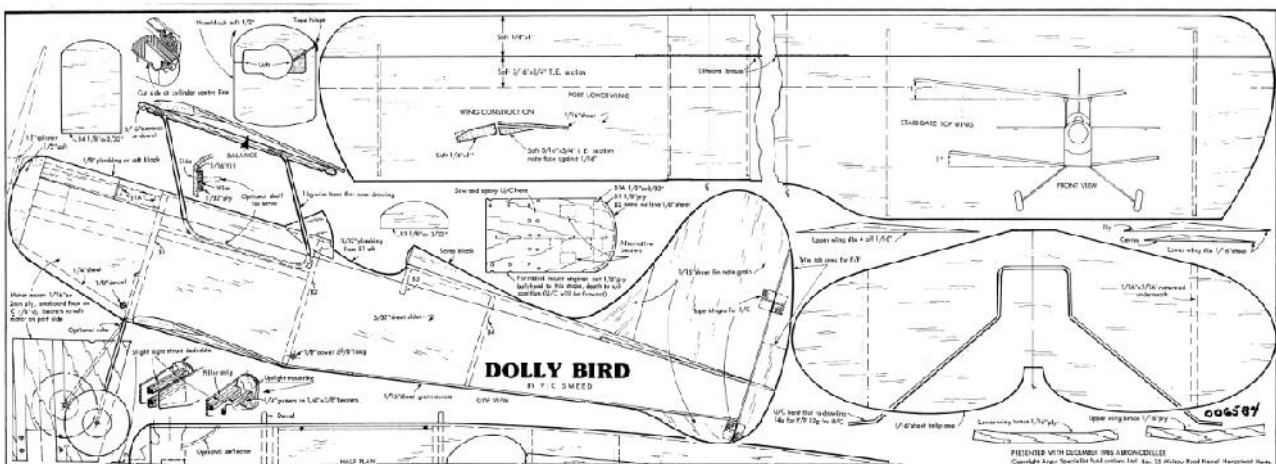
Energy needed to power its pumps and valves is provided by a battery which is charged by lightweight flexible solar cells on its wings and tail.



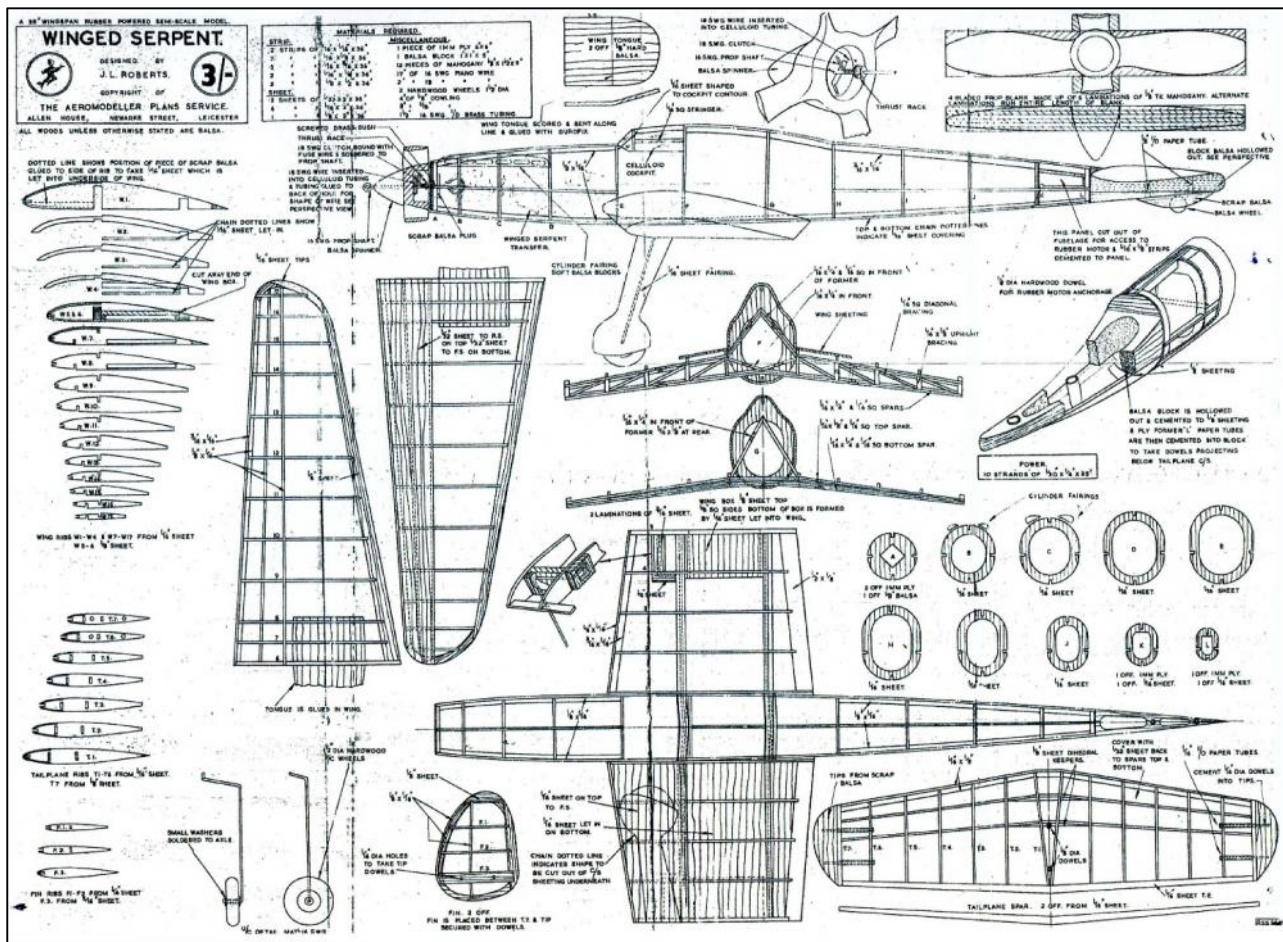
Phoenix on test
A lot more work to make it commercially viable?

Plans for month

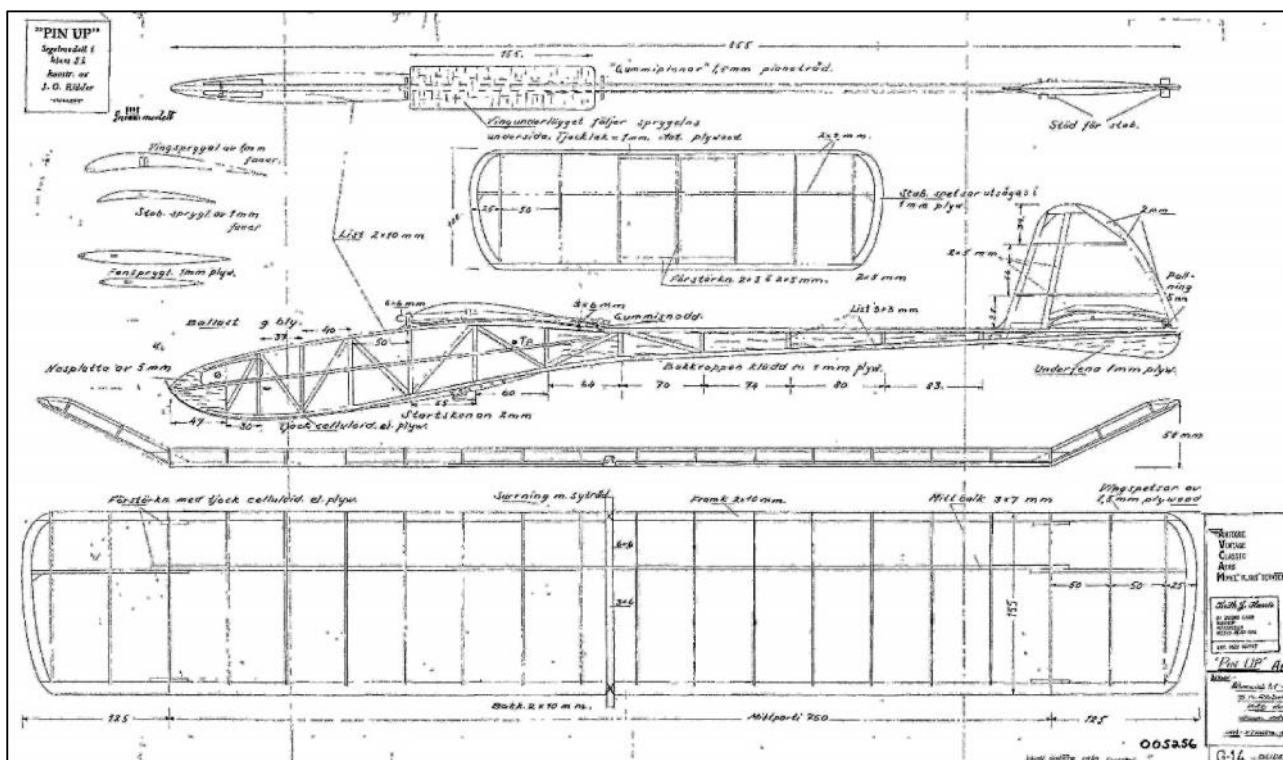
Power: Dolly Bird - yet another Vic Smeed sports design



Rubber: Winged Serpent by Mr J L Roberts as above. An exercise in design elegance.



Glider: Pin Up - attractive small glider from one of the Nordic countries?



Southern Area Gala Odiham

Sunday 5th May 2019 *(Note the change of date)*

As most of you are probably aware, our late Chairman was instrumental in setting up & organising the Southern Area Gala at Odiham for many years. Notwithstanding the abandonment of last years event due to bad weather, it is our intention that we continue with the event. It is organised under the umbrella of the Southern Area BMFA (not SAM1066) with the traditional mix of low key competitions & sports flying, subject to the MoD licence for last years event being carried forward & issued as always.

Licence

The licence application for last years event is being carried forward, having being given an OK on the date by the RAF for the event to be held. So subject to the licence being re-issued & received, the date is set for Sunday 5th May, as we advised that there is much less likelihood of disruption on a Sunday – we just have to hope that bad weather does not appear at the last minute.

Comps

Tailless; E36; Vintage/Classic CLG/HLG; A1; Vintage/Classic Combined glider; Vintage Wakefield combined 4oz/8oz; Coupe d'Hiver combined; Vintage Lightweight Rubber.

These are the same as previous years.

Attendance/Attendees

This event requires attendees are pre-registered for security reasons. There is a limit of 65 attendees, so do make an early application to avoid disappointment. Those who have already paid for the cancelled September event of last year can carry forward their entry – just turn up on the day.

Anyone who has not already paid for entry & wishing to attend must send following details to Peter Carter by post, enclosing the entry fee made payable to "Southern Area BMFA" & an SAE. Last date for receiving requests to attend is Saturday 27th April 2019.

- name
- address
- contact details (phone, mobile & email)
- BMFA membership number
- vehicle details (make & model, licence plate info, colour)
- entry fee payment of £13 per flyer

Peter's address is 74 Buckland Avenue, Basingstoke, Hampshire, RG22 6JA. He will send a written confirmation to those who apply to attend.

Note: there will be absolutely no entry on the day. If you haven't pre-registered, you won't be allowed entry.

Constraints

As always we will be subject to RAF Security measures, hence the need for pre-registration. Cars will be escorted on & off the flying area from the entrance gate as previous years. It is anticipated that we hold an "on-field" briefing prior to the commencement of flying, but this has not yet been sorted out.

It is expected that all competition fliers will use DTs (all forms are acceptable), the use of trackers is encouraged but is not mandatory. Competitions will use a DT fly-off as necessary. Sports fliers of power models are encouraged to use DT's wherever practical & common sense in limiting engine runs.

Any queries, contact me on rogerknewman@yahoo.com

Drone Zone Flying Restrictions

For those of you who wish to operate within the law as from 13th March, according to the latest Air Navigation Order amendment, there is a very good interactive map that can be accessed via [Airfield restrictions - Dronesafe](#). You can zoom in anywhere in the UK and the restricted zones are clearly marked.

Accompanying text from this website is as follows:

UK FRZ Map

This map enables UA operators to **remain clear** of the new UA FRZs that are created as part of the latest amendment to the ANO.

It is illegal to fly any drone at any time within these restricted zones unless you have permission from air traffic control at the airport or, if air traffic control is not operational, from the airport itself.

Do have a look – if only to re-assure yourself before breaking the law!

Rules for operation at Middle Wallop in 2019:

SAM1066 has been granted three separate days at Middle Wallop,

Sat.Apr.21st, - Sat.Jun.29th, - Sat.Aug.10th.

The first meeting will be for competitions flying only. If no problems arise from the first meeting, then sports flyers can be included in subsequent meetings subject to their agreement to conditions set out below.

For all models, SAM1066 will apply the 250 gram rule which exempts model aircraft from any proposed drone regulations that encompass aeromodelling. Simply put – this means that all models flown on the field must weigh less than 250 grams.

For ALL models, the fitting & use of an operable DETHERMALISER (DT) is mandatory for all flights – clockwork or (preferably) RDT. The use of a fuse DT is not permitted.

For models entered in competitions.

1. For all comps, the max is limited to 2 minutes or less dependent on conditions prevailing on the day.
2. All competition fly-offs will be subject to the timing procedure known as "DT Flyoff"
3. ie: the flight will be timed to the ground and a deduction made of two times any overrun of the DT time set by the CD.

For models not entered in competitions.

- a. For all flights the DT must be set to operate at, or earlier than the max time set on the day.
- b. All models must carry name & address label with full contact details (Name, address, mobile and/or landline number) in a visible position.
- c. All models must carry BMFA membership number in a visible position.
- d. BMFA membership cards must be shown on entry to the field.
- e. Random checks will be carried out during the day. Anyone found to be infringing any of the above rules will be asked to leave the field.
- f. Checks will be made throughout the day on wind speed & direction.

Should the wind speed and / or direction change such as to cause potential problems of keeping models on the field, the organisers reserve the right to take appropriate action which may result in a change of location or worst case, in the cessation of flying for the remainder of the day.

Salisbury Plain: - Area 8 - 2019.

The booking of Area 8 for FF use in 2019 has been a bit more protracted, and tenuous than in previous years, but has now been completed.

Every Saturday/Sunday, plus the 3 Bank Holiday Mondays have been allocated for our use, conditional on BMFA representation at the monthly Training Area Allocation Conferences, and final approval on the Friday morning preceding each weekend.

Most of you will be aware that the Area is to be used as a film set at some point and would be out of bounds to us for some time. The latest information received is that 22nd April to 17th May dates would be removed due to filming, but that the dates may change slightly. I guess that nobody really knows what will happen, and that details will be released at the monthly conferences.

For those wishing to sport fly/trim an annual season ticket can be obtained through donna@bmfa.org for £18. The terms and conditions remain the same as in previous years.

You are reminded that the annual licence is paid by the BMFA, and that anyone entering a contest, must pay a site access fee of £6. 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 this for BMFA Centralised events, and the World Cup events.

F1G & Vintage Coupe Events 2019

Date	Venue	F1G	Vint	Organiser	Comments
2 nd Dec 2018	North Luffenham	✓**	✓	gavin.manion84@gmail.com	Grande Coupe de Birmingham. F1G for A/M Trophy, Vintage for Vintage Plate
10 th Feb 2019	Area Venues	✓*		BMFA areas	1st Area. F1G (Plugge)
27 th April	M Wallop		✓	SAM 1066	Vintage Coupe
5 th May	RAF Odiham	✓*	✓		Southern Area Gala Combined Vintage and F1G
27 th May	Barkston Heath	✓		BMFA	FF Nationals. F1G Mon 27th for 308 trophy
2 nd June	Oxford Portmeadow	✓*		laurencemarks64@googlemail.com Andy Crisp 01865 553800	F1G
29 th June	M Wallop		✓	SAM 1066	Vintage Coupe
25 th July	Area Venues	✓*		BMFA areas	5th Area
10 th Aug	M Wallop		✓	Croydon / SAM1066	Cagnarata Day - Vintage Coupe (H'cap)
18 th Aug NB Saturday	Salisbury Plain	✓*		BMFA	Southern Gala
1 st Sept	Salisbury Plain	✓*	✓	Crookham	Crookham Gala , Combined Vintage and F1G
28/29 th Sept	Salisbury Plain	✓*		BMFA	London Gala, Coupe on 29th
6 th Oct NB Saturday	TBC	✓		BMFA	Midland Area Gala
12/13/14 th Oct Note Flexi Date	BMFA Buckminster		✓?	FF Gala, John Ashmole 01406 370188	Probable Vintage Coupe
19 th Oct	Salisbury Plain	✓**	✓	Croydon Coupe Day /SAM1066	Coupe Europa. Vintage for the AAA trophy, Team F1G for the FliteHook Trophy
1 st Dec	TBC	✓	✓	gavin.manion84@gmail.com	6 th Coupe De Birmingham

(*) Qualifying event Southern Coupe League. (+) Qualifying event Eurochallenge F1G 2018/19
All Vintage Coupe events for SAM1066 Trophy, 1st – 3points, 2nd – 2pts, 3rd – 1pt; no points for last place!

Croydon&DMAC 2019 Competitions

CROYDON WAKEFIELD DAY Sunday 21st April, Beaulieu Old Airfield

4oz and 8oz Wakefield, - F1B (in rounds),
Marcus Lightweights (RAFF V, Bazooka, Dinahmite, Supa Dupa).

Start 10am. NB all flyers must have a Beaulieu permit which can be obtained at;
<http://www.beaulieumodelflying.org.uk/permits.html>. cost is £10 seniors, £5 juniors.
Entrance to airfield is 2.5 miles west of Beaulieu village on B3055 to Brockenhurst,
opposite a small public carpark.

CROYDON COUPE EUROPA Saturday 19th October, Salisbury Plain Area 8.

F1G (in rounds), - Vintage Coupe.
Flitehook trophy for F1G teams.

Start 10am. Entrance to Area 8 is 2 miles west of Shrewton on B390 to Chittern.

For further information on events please contact:

Ray Elliott; tel 020 8997 7745, email ray.elliott8@btinternet.com.

Cocklebarrow Farm Vintage R/C Meetings 2019

7 July - 18 August - 29 September

Signposted from Aldsworth Glos.

on the B4425 between Cirencester/Burford
and off the A40 between Northleach and Burford
[follow SAM 35 signs].

All types of R/C up to 1969, sport flying no competitions.
BMFA insurance essential [A certs. not required]

Contact Tony Tomlin

Tel: 02086413505 email: pjt2.alt2@btinternet.com

DREAMING SPIRES FREE-FLIGHT RALLY-2019

DATE:-2nd JUNE 2019 STARTING AT 10 a.m.

VENUE:- PORT MEADOW, WOLVERCOTE, OXFORD

CLASSES:-

FIG(COUPÉ d'HIVER)	} 5 FLIGHTS
FIH (A/I GLIDER)	
MINI VINTAGE RUBBER (Max span 34")	} 3 FLIGHTS
VINTAGE/CLASSIC GLIDER (Comb)	
HI-START GLIDER	
E30/P30/CO ₂ (Combined)	} 7 FLIGHTS
HLG/CATAPULT GLIDER (Comb)	
ALL TOWLINES 50 metres	

FREE-FLIGHT SCALE TO 'DREAMING SPIRES'

RULES. NO DOCUMENTATION. STATIC JUDGING
QUALITY OF FLIGHT etc. 1/6 motors up to 1.5 c.c. allowed.

ALL FLIERS MUST BE INSURED

NO STREAMERS ON POLES, NO THERMISTORS, NO BUBBLES
NO 1/6 POWERED MODELS TO BE FLOWN OUTSIDE OF
THE SCALE COMPETITION.

CONTACTS:-

ANDREW CRISP
4 GROVE ST.
OXFORD OX2 7JT
Tel: 01865 553800

LAURENCE MARKS

laurencemarks64@gmail.com

Peterborough Flying Aces Nationals SATURDAY 31st August 2019

at Ferry Meadows, Nene Park, Peterborough PE2 5UU.

Competitions 10.00 to 16.15

3 NEW EVENTS FOR 2019!

Vintage Model Company "PILOT" Rubber Duration. Senior and Junior Classes Plus Fly Off - Best Senior versus Best Junior. **Note!** Intending competitors may purchase the kit from V.M.C. for only £20 by quoting the code "acesfly". Model must use kit prop. **Note!** We would like to see that any junior has had a hand somewhere in the building of the model.

Open E20 Electric Duration Max length and span, 20 inches. Any motor, battery and timer. Max motor run 8 secs. DT and RDT permitted. Certificate for best "Ferry 500" Restricted Class model. (for rules see www.peterboroughmfc.org).

Open Rubber Scale. At last! a flight profile judged class for scale rubber models that are not necessarily "Kit" models.

SCALE MODELS - NOTE! ALL scale classes, except MASEFIELD Rubber Scale are judged for flight profile and realism by the Flight Judges. They may ask for some verification, so please have the plan or, if scratch built, the 3 view available on the field.

Masefield Rubber Scale. Any scale rubber model, to which Masefield type bonuses will be applied. **No flight judging**, just duration plus bonuses. Present model to control for processing.

Open CO₂/ Electric/ Rubber Scale Judged for flight profile and realism. Any CO₂ motor/tank permitted. See note re verification

Kit Scale ANY rubber powered kit model up to 36"span. **Judged** for flight profile and realism. See note re verification

Jetex/Rapier Authentic Scale Judged for flight profile and realism. See note re verification

EDF Authentic Scale Judged for flight profile and realism. See note re verification

Jetex/ Rapier Profile Scale Judged for flight profile and realism. See note re verification

P-20. 20" span and length. Max 8" plastic prop, 6 gram motors (may be external).

Cloud Tramp 5 flights NO MAX. (best and worst times discarded, and the remaining 3 times totalled. **Note!** If fewer than 5 flights logged the best and worst are still discarded.

Tailless Rubber Duration: Max span 30" (tip to tip). Max rubber 10gm, Prop 9.5" max dia. commercial plastic. (may be modified.) No in flight movable surfaces, except DT)

Frog "Senior" Rubber Duration (for plan see <http://www.houseoffrog.co.uk>)

Rubber Ratio: NO MAX. Any rubber powered model with wing span 15" - 25" (tip to tip).

(KK" Elf "is eligible). Flight score is total time in secs (for 3 flights) divided by span inches.

Catapult Glider: Catapult, max 2 grams rubber on a 6" max handle. This equates to a 280mm length of 3/16" rubber tied into a single (140mm) loop. Any model permitted.

TableTop Precision Precision flight time Rubber event - models must Rise off Table.

36 inch Hi-Start Glider: Any glider up to 36"span launched by the supplied "Hi start" bungee. Includes a prize for best performance of a **SCALE** glider (proof of scale reqd.)

Best Unorthodox: Must be seen to fly by nominated Scale Flight judge)

Rubber Scramble: 20 minutes, use any rubber powered model that qualifies for one of the above events. Competitor must both wind and launch, from box, but may use a retriever.

Flying Swarm Mass launch for any non electric model that is eligible for one of the day's competitions. Last model down is the winner.

Young Flying Aces: Prize for Best Junior: Scrolls for top 3 (Jun. 17yrs or under on 31/08/19)

Prizes for 1st place: Scrolls for 1st, 2nd and 3rd:

Bumper Raffle: **Note: this is a Free Flight event: No Radio Control: Proof of Insurance required for all flyers.**

Revel in the special atmosphere created at this unique event: Discounted parking. Toilets, Café, and Park Visitors Centre.

Contact Brian Waterland on 01778 343722 (07717461000 on the day).

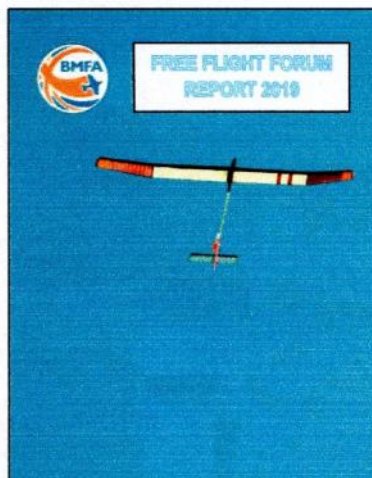
See also Peterborough MFC Website at www.peterboroughmfc.org

THE 2019 FREE FLIGHT FORUM REPORT

It's a Bumper Issue

The Free Flight Forum Report is now in its thirty-fourth year and it's the biggest yet, with no less than 17 papers, covering a vast range of the topics that make free-flight so fascinating.

Only Joules and Forces - Peter Watson;
 Classic 1/2A Models - Simon Dixon;
 Trimming the Sopwith Snipe - Mike Smith;
 Russell Strips - Russell Peers;
 Testing June 2016 Tan Super Sport in April 2017 - Tim Chant;
 Developments in Carbon Wing Construction - Stuart Darmon;
 Buckminster - We've Got It; How Can We Use It?
 - Gavin Manion/Stuart Darmon;
 The Management of Models - Mike Woodhouse;
 Combined BMFA Rubber and CdH (F1G) - Phil Ball;
 Drone Legislation and Free Flight - Dave Phipps;
 The Rate of Climb of Model Aircraft - Dr. John Gibbings;
 A Review of Contemporary FAI Space Modelling - Stuart Lodge;
 GPS versus Radio Trackers - Mike Woodhouse;
 About Time - Chris Edge;
 "W" Style Geodetic Ribbing for Model Aircraft and Microlights
 - Denis Oglesby;
 Flat Plates, Cambered Plates and Coupe Aerofoils
 - Alan Brocklehurst;
 FAI Free Flight Since the BoM - Stuart Darmon.



The UK price is £13.00 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: (44) + (0)20-8777-5533, or
 by e-mail to martindilly20@gmail.com.

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

March~April 2019 - Number 266



Cover From November 1929 Model Airplane News

L'AQUILONE SAM 2001

TOMBOY RALLY INTERNATIONAL POSTAL CONTEST 01/06/2018 - 31/05/2019

We wish to present this competition to all the lovers of this nice model with the only aim of having fun in a postal contest which is organized to provide some fun flying together or at the same time as are all postal contests. The Tomboy Rally wants to prove the performance of this model along with the ability of the builder and pilot, without reaching the peak agonism of usual contests and only wishing to fly the model having fun in a relaxed manner. After having carried out some tests we have decided to admit the use of i.c. engines and electric motors trying to reduce the gap between them.

Model

- The 36" or 44" wing span (as per plan Aeromodeller) and 48" (as per Boddington plan or 36" scaled up) models are admitted;
- Models may be fitted with floats as per plan (scaled-up for 48" version);
- no minimum weight;
- reinforcement or lightening of the structure with respect of the basic outline of the original model are admitted;
- materials to be used are those found on the plan;
- plastic covering in place of tissue, silk or other is admitted.
- More than one person can use same model;
- Same model can flight in L.&. or float version;
- Lone fliers can self launch and time

Engine/motors

I.C. engines are admitted within the following limits: **36"-44" wingspan:** Any engine 1 cc. max, Fuel tank : 3 cc. R/C carburettor is admitted.

Electric Motors:

Any electric motor is admitted with direct drive

The engine cannot be stopped and started again: the motor must run continually without interruptions till the end of the battery charge or competitor's decision. No folding prop is admitted; if a folding prop is used the blades must be held open with a rubber band; freely assembled admitted batteries:

-450 Man 2 cell LiPo; separated batteries pack for Rx alimentation is allowed.

48" Wingspan;

I.C. Engines: Any engine with 2. 5 cc. maximum displacement; Fuel tank : 6 cc. R/C carburettor is admitted.

Electric Motors: Any electric motor is admitted with direct drive freely assembled admitted batteries: -500 Mah 3 cell LiPo separated batteries pack for Rx alimentation is allowed

The engine cannot be stopped and started again: the motor must run continually without interruptions till the end of the battery charge or competitor's decision. No folding prop is admitted; if a folding prop is used the blades must be held open with a rubber band;

Flights and results

Each competitor may fly as many flights as wished during the admitted period but only the best flight will be considered for the final result. Hand launches are admitted. The flight time start when the model is released or takes off. The flight time ends when the model lands or hits a fixed obstacle. In case the model flies out of sight the timekeeper will time for 10 seconds after losing sight of the model. Timing will continue if model is seen again or stopped after 10" deducting this time from the total time of the flight.

Awards :

A diploma for all competitors and prizes for the first three in each version rank. Special prize for best flight in float version.

Results

Results, address, photos and technical specification about model must be forwarded to the Organization within the 15th June 2018 to Curzio Santoni (cusanton@tin.it) or to Sianfranco Lusso (gfi@orange.fr). Many pleasant flights and happy landings to ALL!!!!

Special Prize Vic Smeed

SAM 2001 have scheduled an extra Diploma that will be awarded to the best flight in Tomboy floatplane version (36" 44" or 48") taking off from water. The Editor will send to the winner a Diploma signed By SAM 2001 President and a bottle of special Italian Wine to drink to Vic Smeed!

Good ROW and flight

Special Prize David Baker

The 2012 was the 5th edition of SAM 2001 Tomboy Rally and we have scheduled a special prize for the three best flights obtained with 36" Tomboy F/F. Only engines diesel max 0.75 c.c. shall be used. The other rules are the same for 36" or 44" wingspan type. It is possible to use an R/C Tomboy, however, being this a free-flight contest, the time must be stopped when transmitter is used, since the aircraft model should fly freely from any control from the ground. Good thermals

Indoor Flying with the South Birmingham MAC**Mainly Free Flight****Thorns Leisure Centre.**

Stockwell Ave.

Off Thorns Road - Quarry Bank - West Midlands - DY5 2NU

Saturdays 1pm until 4pm

2019

Jan 12th – Feb 9th – Mar 9th – Apl 6th – May 4th

Sep 14th – Oct 19th – Nov 16th – Dec 14th

Admission - Flyers £8.00 - Spectators £2.00

Ultra-light R/C models may be flown for the first 15mins of each hour (quad copters or heavy fast flying models not accepted)

For further information phone Colin Shepherd 0121 5506132

or e-mail cosh43@hotmail.com

Waltham Chase Aeromodellers

INDOOR F/F MEETINGS

Waltham Chase Aeromodellers, in association with South Hants Indoor Flyers, are pleased to announce the continuation of the Indoor F/F Meetings held at the Main Hall at:

Wickham Community Centre, Mill Lane, Wickham, Hants PO17 5AL

These meetings will be held on the following dates:

Meetings will run from 7.00 p.m. to 10.00 p.m. on Tuesdays in the Main Hall

2018

2nd Oct - 6th Nov - 4th Dec

2019

8th Jan - 5th Feb - 5th Mar - 2nd Apl

7th May - 4th Jun - 2nd Jul

The hall is particularly suitable for indoor free flight models of all types, with a ceiling free of obstructions.

Tables and chairs will be available in the hall, the organisers are always grateful for assistance with moving furniture. A hot drinks machine is available on site.

Admission to the meetings will be **£5** for Senior fliers, **£1** for Junior fliers and **£1** for spectators, whilst accompanied children will be admitted free.

Fliers will be required to show proof of insurance.

No R/C models may be flown at these events.

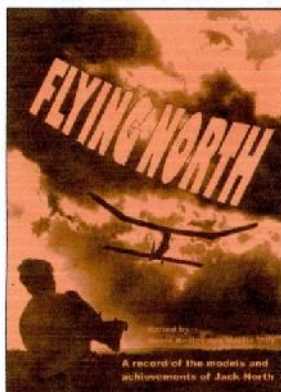
Flitehook, who carry a large stock of indoor models and accessories, will attend many of the meetings.

Waltham Chase Aeromodellers welcome all indoor F/F fliers to these events.

For further details please contact:

Alan Wallington, "Wrenbeck", Bull Lane, Waltham Chase, Southampton, Hants.
(Tel. 01489 895157) (e-mail: alan@wcaero.co.uk)

or see our web site: www.wcaero.co.uk



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

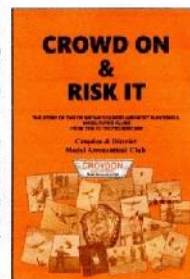
CROWD ON & RISK IT

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.



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 sixth roll. Doing the sums, that means that there's now just under a mile of Dilly Jap covering models all over the world.

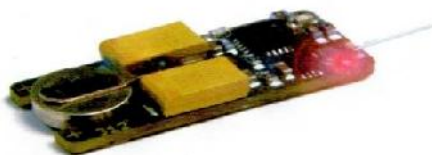
Anyhow, since the last roll came in 2015, the price is slightly higher (maybe as a result of you-know-what ...xit and its effect on sterling), but it's still only £13 for a five yard roll a yard wide.

To re-cap on the details, it's 12 gm/M² and has a strong unidirectional grain. It's white and low absorbency, so remains very light when doped. For those of you old enough to remember, it's identical to the Harry York tissue sold at his South London model shop in the 1950s. I normally sell it in rolls at contests, as it's a shame to fold it for mailing, but I can do that if you prefer.

I'm on 0208-7775533 or e-mail: 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

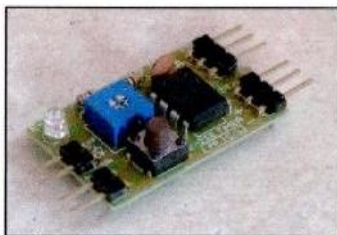
Very quick delivery, often next day

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

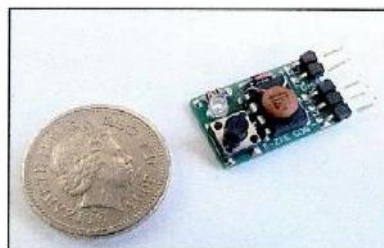
a simple push button / LED interface

- 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 2019

With competitions for Vintage and/or Classic models

February 10 th	Sunday	BMFA 1 st Area Competitions
March 3 rd	Sunday	BMFA 2 nd Area Competitions
March 24 th	Sunday	BMFA 3 rd Area Competitions
April 19 th	Friday	Northern Gala, Barkston Heath
April 21 st	Sunday	Croydon Wake. Day & SAM1066 , Beaulieu
April 27 th	Saturday	SAM1066 , Middle Wallop
May 5 th	Sunday	Southern Area Gala 2018/9 Odiham
May 25 th	Saturday	BMFA Free-flight Nats, Barkston Heath
May 26 th	Sunday	BMFA Free-flight Nats, Barkston Heath
May 27 th	Monday	BMFA Free-flight Nats, Barkston Heath
June 9 th	Sunday	BMFA 4 th Area Competitions
June 29 th	Saturday	SAM1066 , Middle Wallop
July 21 st	Sunday	BMFA 5 th Area Competitions
July 27 th /28 th	Saturday/Sunday	East Anglian Gala, Sculthorpe
August 10 th	Saturday	Cagnarata day, Croydon/ 1066 Mid. Wallop
August 17 th	Saturday	Southern Gala, Salisbury Plain
September 1 st	Sunday	Crookham Gala, Salisbury Plain
September 15 th	Sunday	BMFA 6 th Area Competitions
September 22 nd	Sunday	BMFA 7 th Area Competitions
September 28 th /29 th	Sat/Sunday	London Gala, Salisbury Plain
October 6 th	Sunday	BMFA 8th Area Competitions
October 12 th	Saturday	Buckminster Free-Flight Gala
October 13 th	Sunday	Buckminster Free-Flight Gala
October 14 th	Monday	Buckminster Free-Flight Gala
October 19 th	Saturday	Croydon Coupe Day/ 1066 , Salisbury Plain
October 26 th	Saturday	Midland Gala, Barkston Heath

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 & Pauline	-	www.flitehook.net
Mike Woodhouse	-	www.freeflightsupplies.co.uk
BMFA Free Flight Committee	-	www.freeflight.bmfa.org/
BMFA	-	www.bmfa.org
BMFA Southern Area	-	www.sabmfa.org.uk
SAM 35	-	www.sam35.org
National Free Flight Society (USA)	-	www.freeflight.org
Ray Alban	-	www.vintagemodelairplane.com
David Lloyd-Jones	-	www.magazinesandbooks.co.uk
Belair Kits	-	www.belairkits.com
Wessex Aeromodellers	-	www.wessexaml.co.uk
US SAM website	-	www.antiquemodeler.org
Peterborough MFC	-	www.peterboroughmfc.org
Outerzone -free plans	-	www.outerzone.co.uk
Vintage Radio Control	-	www.norcim-rc.club
Model Flying New Zealand	-	www.modelflyingnz.org
Raynes Park MAC	-	www.raynesparkmac.co.nf
Sweden, Patrik Gertsson	-	www.modellvänner.se

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