

Sticks and Tissue No 112 – March 2016

If you can contribute any articles, wish to make your point of view known etc please send to or phone 01202 625825 JamesIParry@talktalk.net The content does not follow any logical order or set out, it's "as I put it in and receive".

Thanks to Mark Venter back issues are available for download from <http://sticksandtissue.yolasite.com/>

Writings and opinions expressed are the opinion of the writer but not necessarily the compiler/publisher of Sticks and Tissue.



Dave Platt launching his Judy

From Dave Platt

This year's Top Gun event will feature the return of the rubber-powered freeflight shindig of Polo Ground days. Inspired, I designed a Yokosuka D4Y Judy, seen here undergoing its trimming trials. By the way it was nice to see the smiling face of my pal Neil Tidey in your last S&T.





Sad News

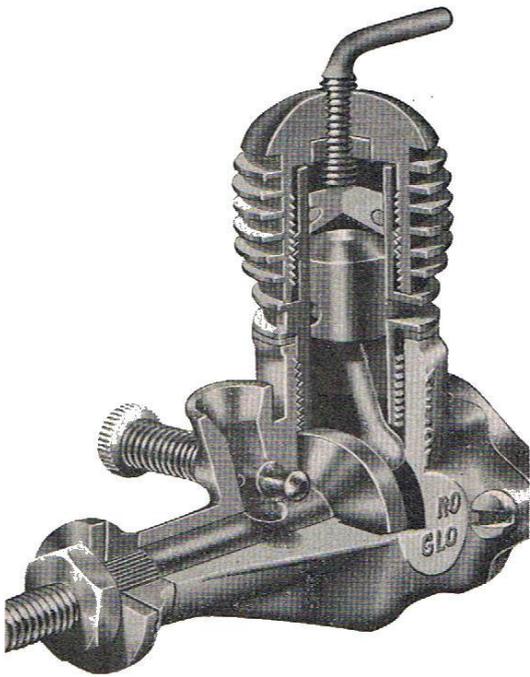
I heard that John Bezing passed away recently. Whilst he had a long aeromodelling career as far as I know control line was his main activity he being a control line aerobatic competitor and organiser in CLAPA.

His interest were not just aeromodelling I recall discussing theatres and cinema architecture another passion of his.

The start of 2016 has been sad as regards friends who are no more one of the DMFG passed away David Ward which was extremely upsetting may they both R.I.P.

James Parry

McCoy .049 Model Aircraft January 1954



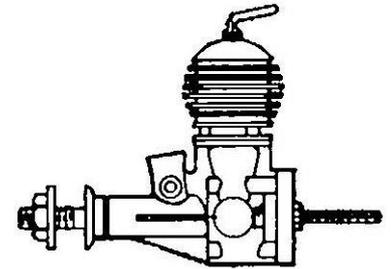
The McCoy .049 diesel is the first new American compression ignition engine to appear for more than five years. During 1946/48, several U.S.- built diesels appeared on the market, in response to the interest which this then new type had aroused, resulting from its wide acceptance in Europe, but, in general, were unable to compete with the highly developed spark ignition engines available in the U.S. Then, with the advent of glowplug ignition in mid-1947 and its rapidly gained popularity during the following twelve months, the American diesel faded further into the background and its production virtually ceased.

In Europe, however, the superiority of the new glowplug motors served to encourage many c.i. engine manufacturers to modernise the design of their diesels and much development work has since taken place. Thus, combined with the world wide tendency toward smaller cylinder sizes (which favour the model c.i. engine combustion process) the diesel has re-emerged as a worthy contender in the competition field with particular advantages in regard to specific power output in the under 1 c.c. sizes.

The .049 cu. in. (0.8 c.c.) "half-A" class having become the most popular capacity category in the U.S.A., it has been frequently prophesied in MODEL AIRCRAFT during the past two years or so that the Americans would eventually re-admit the compression-ignition motor and bring out a .049 Cu. in. diesel and the McCoy is the first confirmation of this.

The unit now featured in this month's test has been in our possession for the past six months, during which time it has been used in a team-racer and a PAA-load model and entered in competition; which activities have aided us in our overall assessment of its qualities.

This particular engine was first described in "Accent on Power" in the August 1953 issue, and we will not, therefore, repeat earlier comments on its design except to remind readers of two unusual construction features—the use of a plastic compression-ring instead of a close fitting lapped surface, on the contra piston and the useful fibre insert in which the compression screw is fitted.



Specification

Type: Single-cylinder, air-cooled, two-stroke cycle, compression ignition. Crankshaft type rotary valve induction. Circumferential exhaust and transfer porting with sub-piston supplementary air induction.

Domed piston crown.

Swept Volume: 0.0497 cu. in. (0.814 c.c.).

Bore. 0.405 in. Stroke: 0.386 in.

Stroke/Bore Ratio: (0.953 : 1.

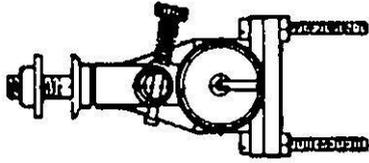
Compression Ratio: Variable.

Weight: 1.5 oz.

General Structural Data: Pressure diecast aluminium alloy crankcase with integral main bearing and detachable rear cover. Heat treated steel cylinder screwed into crankcase and seating on Vellumoid gasket. Two transfer passages formed in crankcase sides and opening into annular chamber feeding three cylinder ports. Hardened steel piston with bronze gudgeon pin and duralumin connecting-rod. One piece counterbalanced crankshaft. Steel contra-piston with heat-resistant plastic compression-ring. Red anodised duralumin finned cylinder barrel with fibre friction insert on compression screw threads. Spray-bar type needle-valve. Two point bulk head type mounting.

Test Engine Data

Total running time prior to test: 1.5 hours.



Fuel used: 40 per cent. ether, 30 per cent. Shell "Royal Standard" kerosene, 30 per cent. Castrol "R" plus 2 per cent. iso-amyl-nitrite.

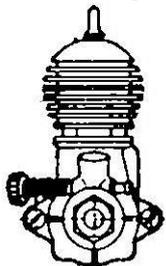
Performance

We have heard very conflicting reports of the "startability" of the McCoy diesel. When we first reported on this engine, we compared its starting qualities with those of existing British 1c.c. diesels— neither foolproof nor instantaneous but not difficult. In three published reports from other sources, however, the McCoy was considered very easy to start, whereas, from two others (unpublished) it was thought to be "tricky," in one case, and "an absolute XYZ!" in the other.

Testing our own example again after a period of some weeks, we came to the conclusion that our original assessment was still right and this was confirmed by a well-known team-racing enthusiast to whom we had loaned the motor during this period and who had entered it in the Cambridge Team Race Rally. In this event, the McCoy powered racer had lapped at 50-51 m.p.h. on 30-ft. lines using a 6 x 6 Stant propeller. This was the highest speed of any "half-A" class model present and the McCoy was overhauling its slower competitors every fourth lap, but more frequent refuelling stops and slightly reluctant starting robbed it of a place.

The McCoy seems to like to be fairly wet for starting and we found that, even when hot, priming through the ports was the best method of obtaining a sure start. Actually, the engine is not critical to the actual starting drill adopted and does not flood easily, but the "suck in and one flick" type of start is not one of its attributes.

Modern American "half-A" class engines are noted for their ability to rev at really high speeds and to deliver useful power at such r.p.m. This means that these engines are designed to maintain an even torque at the expense of low speed pulling power and the result is that the .049 engine is in variably operated at five figure r.p.m. and as high as 15,000 for competition purposes. The McCoy, although a diesel, maintains these traditions and is, quite definitely, a lot happier above 10,000 r.p.m. than below it. In fact, our own test engine fluctuated a good deal at lower r.p.m., making accurate test readings difficult and necessitating some "smoothing" of the performance curves.



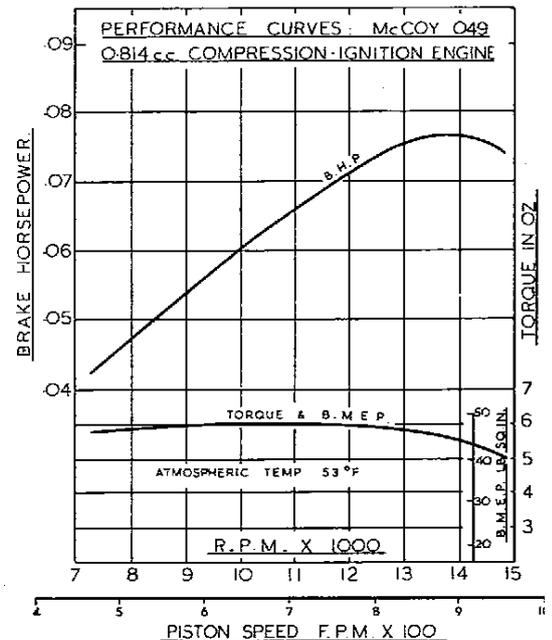
Thus, the McCoy's maximum b.h.p. was realised at close to 14,000 r.p.m. The makers have claimed that the engine's output is 50 per Cent. up on an equivalent glowplug engine and this is borne out by our test. The average conventional "half-A" glowplug model gives around 0.050 b.h.p., and the McCoy recorded just over 0.076 b.h.p. This is, of course, entirely due to the higher b.m.e.p. realised with the c.i. motor. Incidentally, with this engine there is not a great deal of difference in starting qualities with light or heavy loads, whereas most diesels' starting qualities deteriorate badly when fitted with light, high-speed props.

The general running qualities of the McCoy diesel are good. At low speeds, after some 1 hours running time, there was still an appreciable power loss between initial cold starting and reaching normal running temperature but this was not applicable at peak speed. The engine remained remarkably free from vibration except when 15,000 r.p.m. were exceeded on one occasion and some difficulty was then experienced in holding compression settings despite the fibre compression screw thread insert fitted.

On our particular McCoy, there was a good deal of liberty in the main bearing and this resulted in considerable quantities of oil being sprayed Out behind the prop. This would, of course, partly account for a seemingly high fuel consumption.

In conclusion, it should be mentioned that, although the makers strongly recommend the sole use of the McCoy fuel especially blended for this engine (and not available for our test) no deterioration of the plastic contra-piston ring sufficient to affect its excellent compression sealing properties, occurred during our tests using standard British fuels.

Power/Weight Ratio: (as tested): 0.081 b.h.p./lb. Specific Output: (as tested) 93.8 b.h.p. / litre.



From Adam Chambers

Here's one to tease the old folks, but what is it?





Answer is : its an entirely homespun creation. Wings off a record breaker with reduced dihedral, fuselage is a Jasco Flamingo with added lightness . Rest is my ideas, inc removable u/c.
Power is 3 cell lipos, a 3548 900kv motor on 14/7 prop.
AUW 4.4.1lbs giving 8 oz/sqft.
I've yet to name it .

Dual Function E-Zee Timer for i/c Powered Free Flight by Mike Edwards (mike.edwards@adville.ltd.uk)

Back in October 2015 I was considering building a free flight Junior 60, to home my newly acquired ED Comp Special. I wanted to incorporate a timer to reliably cut the engine, so that I could avoid my normal method of guessing the amount of fuel in the tank at the time of release (I have been known to be a poor judge at times!). I wanted to utilise the original tank and cut off mechanism on the Comp Special.

I was looking into using a mechanical timer to release a sprung line to pull the cut off, when my father showed me an E-Zee DT Timer he had bought from Den's Models (www.densmodelsupplies.co.uk). The electronic timer unit was an appealing solution for the fuel cut off timer, as it provided a simple mechanical element using a servo to pull the fuel cut out. I was planning to use two separate timers one for the engine cut off and one for the DT.

I contacted Den Saxcoburg via email to ask if it is possible to get units with extended LED's and push buttons, so that I could place both timer boards inside the fuselage. Having explained to Den why I wanted the two units he advised me that although at present he did not have a dual function timer suitable for i/c power he thought he could modify one of the dual function electric free flight units he currently sells, by replacing the ESC function with an i/c throttle control function instead.

Den kindly went away and with the designer Alan Bond produced a modified unit. He promptly sent me the modified unit which fitted my requirement perfectly.

The modified unit was also supplied with the extended LED and push switches. The timer unit is designed to operate on a supply voltage up to a maximum of 5.5V and so lends itself to operation on a single Lipo cell. I initially trialled the system on the bench using two standard servos purchased from the local model shop. These operated ok, but I was concerned that their recommended operating voltage window of 4.8-6.0V may cause a problem. I looked around for a servo designed to operate off a single cell. After some hunting I found a servo sold by Hobby King, deigned to operate at 3.7V but for simplicity were also supplied with standard JR connectors. When tested on a crude work bench rig up these servos seemed to pull the fuel cut off piston with ease (Once they had arrived on a rather slow boat from somewhere). They also have the added advantage of being slightly lighter than the original ones selected at 5.6g each (servo type: Turnigy™ TGY-D56LV Coreless Low Voltage DS/MG Servo - part number 9399000024-0).

Following an extended build period, (mostly due to my novice status) I have now built the Junior 60 with the Comp Special and prototype two function timer installed. Ground testing was carried out in January 2016 whilst waiting for suitable trimming weather. During the ground testing, the system operated repeatedly without fail. I incorporated the LED, push switch and main on/off switch with a 300mAh Lipo into a compartment at the front of the fuselage, allowing the board to be installed into the cabin area safe from diesel contamination.

The final installed weight of the timer, battery switch and servos was just under 45g. The system is easy to use and quick to reset. It can be adjusted via the single push button for engine runs up to 30 seconds (at 1 second intervals settings) and a maximum DT time of 300 seconds (at 10 second intervals settings). The board also contains a potentiometer which allows the travel on the engine cut servo to be adjusted between 0 to 90 degrees. This feature is especially useful as it allows the system to be setup, such that the servo does not stall by trying to pull beyond the cut out stop point.



Simple pull rod connects to the original Comp Special Cut off – Note Lego men not necessary for correct operation



Timer board mounted inside the fuselage with LED and push switch extended to a plywood panel

Finally, in mid-March a day of suitable weather allowed me to test the system for real. During an outing at Salisbury plain which was blessed, with almost perfect flying conditions. I managed to complete around a dozen short trimming flights. On all occasions the engine cut off and DT system operated correctly.

From Keith

Hello Peter. It's been a hard decision but I have finally decided to reduce as much of my model aircraft stuff as possible. So here goes with my list of IC engines that I am prepared to sell.

SC25 – New in box un-run

SC40 – In good condition

Irvine 40 Sport – With new Piston and liner, un-run since fitted.

OS Max 40 SF – With new Piston and liner, un-run since fitted.

OS Max LA40 – New in box un-run.

Irvine 61 Sport – Has had little use.

These are all in good or new condition and have not been abused.

I also have a very old Enya 29 racing engine that is a bit battered, it goes like stink but it is a bit noisy. Only just made the limit on the meter when I flew at Reading. Then there is an Old "Vintage" ED Mk 11 unfortunately before it came into my possession it had the exhaust stacks removed but would be great in a vintage model.

Kits- Un-Made

Flair SE5a complete with wheels and machine gun extras.

Precedent Fun Fly.

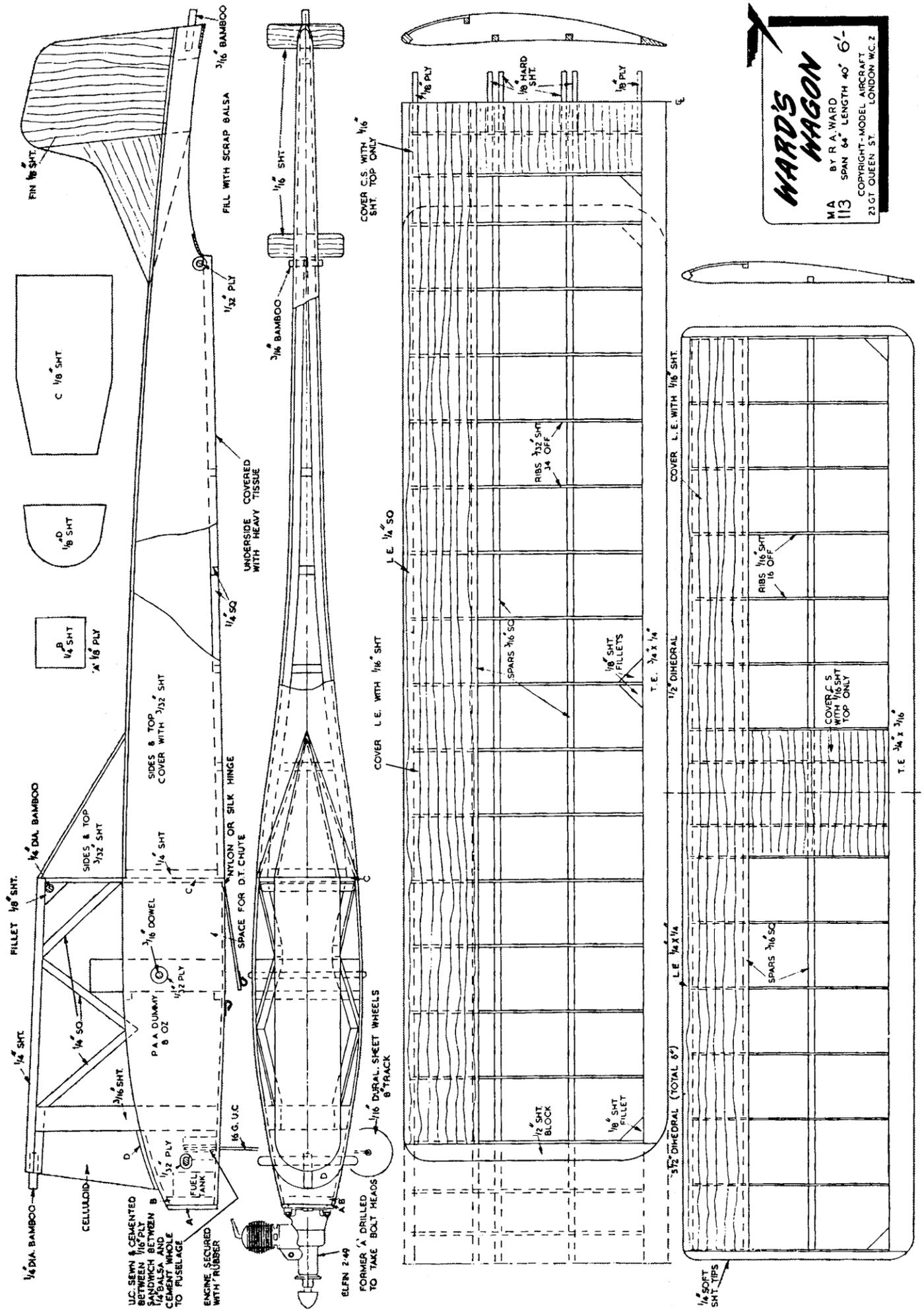
An FVK Mini Spitfire – An early moulded model originally meant for a speed 400 electric motor.

There is also a sport model for a 40 engine similar to a "Space Walker" in design.

Then there is my collection of RCME's and Radio Modellers going back nearly 40 years which I would be happy to give away to a good home.

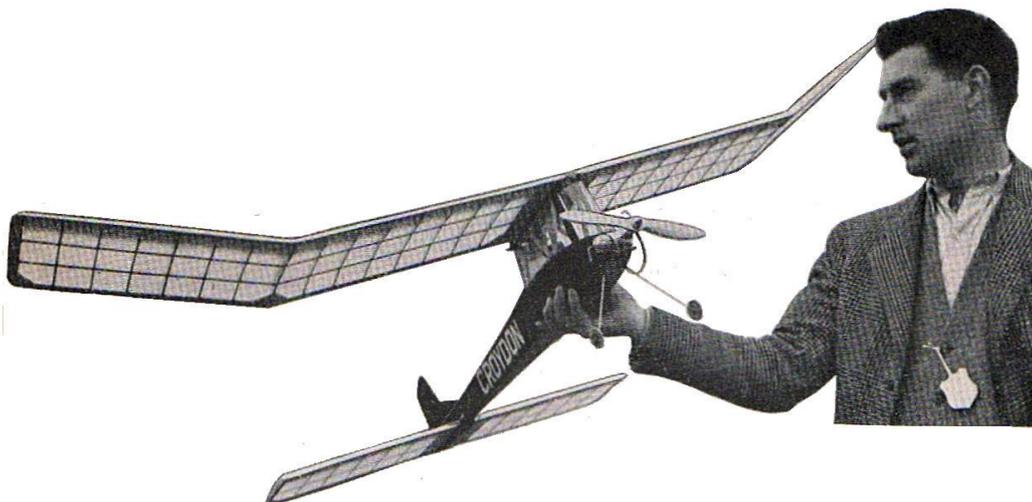
Well you did ask! If you know anybody that might be interested in purchasing any of the above let me know.

Peter Wallis phwallis@btinternet.com



HARD'S WAGON
 BY R. A. WARD
 SPAN 64" LENGTH 40" 6'-11 1/2"
 COPYRIGHT-MODEL AIRCRAFT
 23, G.T. QUEEN, ST. LONDON W.C. 2

Ward's Wagon by Ron Ward Bowden Trophy P.A.A. – Load winner from Model Aircraft September 1951



When the rules for the Bowden Trophy P.A.A.-load contest were announced the writer decided to design a model to conform to the specification. As this seemed hardly worth while for one contest, it was decided to make the model suitable for (a) P.A.A.-load, (b) duration contests, and (c) radio control.

That the Wagon fulfils (a) has proved by its success in winning the Bowden Trophy. Flown without the dummy pilot it has a good contest performance, but so far it has not been fitted with R/C.

Fuselage

Cut sides from medium-hard sheet. Cement formers A, B and C into position and join sides at the rear, inserting piece of scrap in between. Insert 3/16in. x 3/4in. pillars and wing platform. Sheet the top of fuselage and cabin fairing. Cement in 1/4in. sq. bottom spacers.

The undercarriage is sewn and cemented between pieces of 1/16in. ply, backed by 1/4 in. sheet balsa. Now cement undercarriage and fuel tank into fuselage.

Sheet cover bottom up to door, which is attached to fuselage with a nylon or linen hinge.

Cement diagonal cabin struts, Former D, and celluloid windshield in place. Glue nylon round nose for added strength. Cover with heavyweight "Modelspan" and give two coats of dope.

Wing and Tailplane

No dihedral bracing is incorporated in the wing—the writer having found from contest experience that in the event of a crash it is better for the outer wing panel to be knocked off as a whole, than to be broken into pieces—making quick repair difficult. Cover with Jap tissue, or lightweight "Modelspan." Give one coat of dope and one coat of a mixture of 2 parts dope, 1 part banana oil, adding 6 drops of castor oil to 4 oz. of this mixture.

Engine Mounting

An Elfin 2.49 engine was fitted to the original. Four 6 BA cheese-headed bolts are inserted in the lug holes and the heads of these locate into recesses in the front former. The engine is held in place with elastic bands. The nose can be easily modified to suit other engines.

The timer and cut-off valve have been omitted from the plan for clarity.

The d/t parachute is 12 in. diameter, with a 1 1/2 in. hole in the centre and is attached by 3 ft. of line.

Flying

If flying th Wagon as a P.A.A.-load model, make all test flights with the load in position. Use 5 secs. engine run at low revs, for first tests under power. The climb should be to the right. If the model turns left on the glide, power may be increased, but stick to 5 sec. run. Should the model climb and glide to the right be careful about increasing the power. Use side-thrust if turn under power is too tight. Adjust turn on glide by means of trim tab.



Photos from Peter Renggli, Urs Brand and Urs Rindisbacher



Markus Thalmann



Paul Salvisberg



Peter Däppen



Peter Fässler







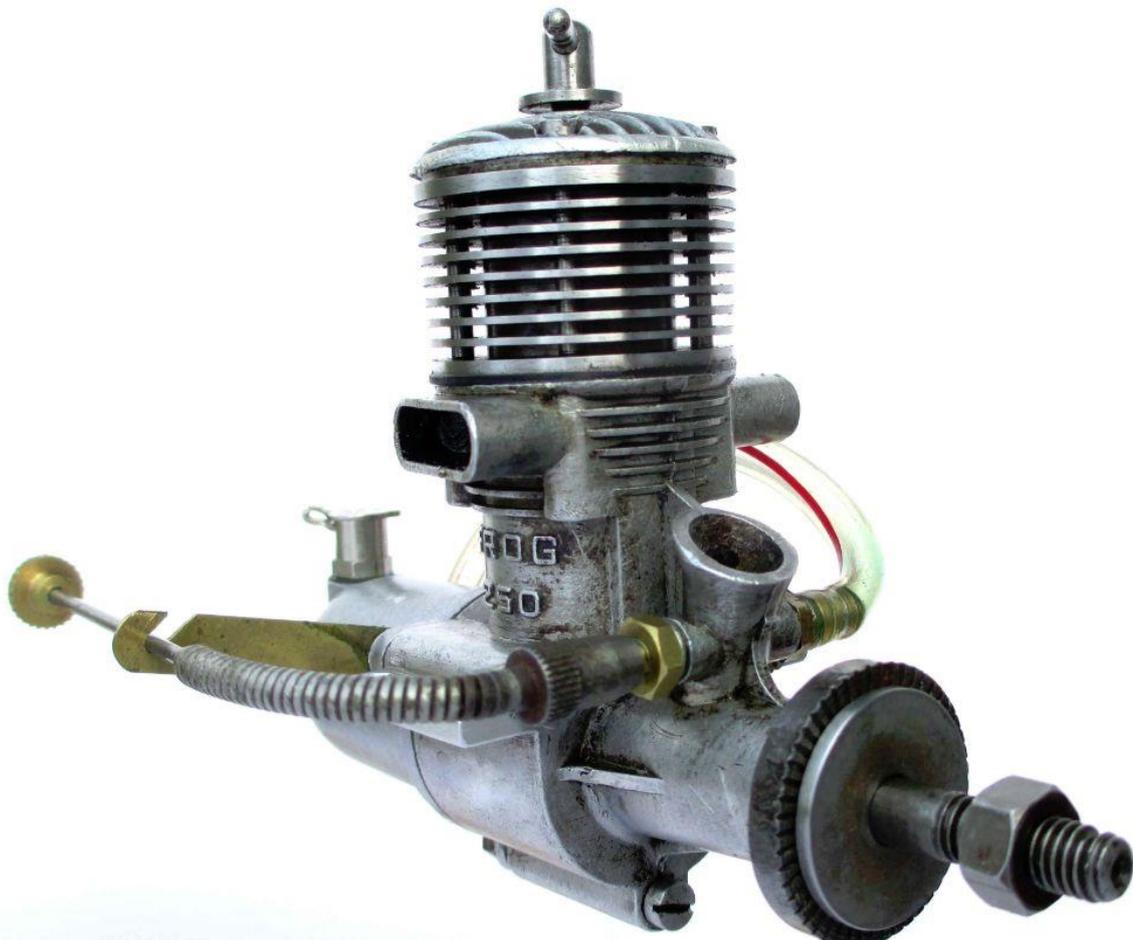
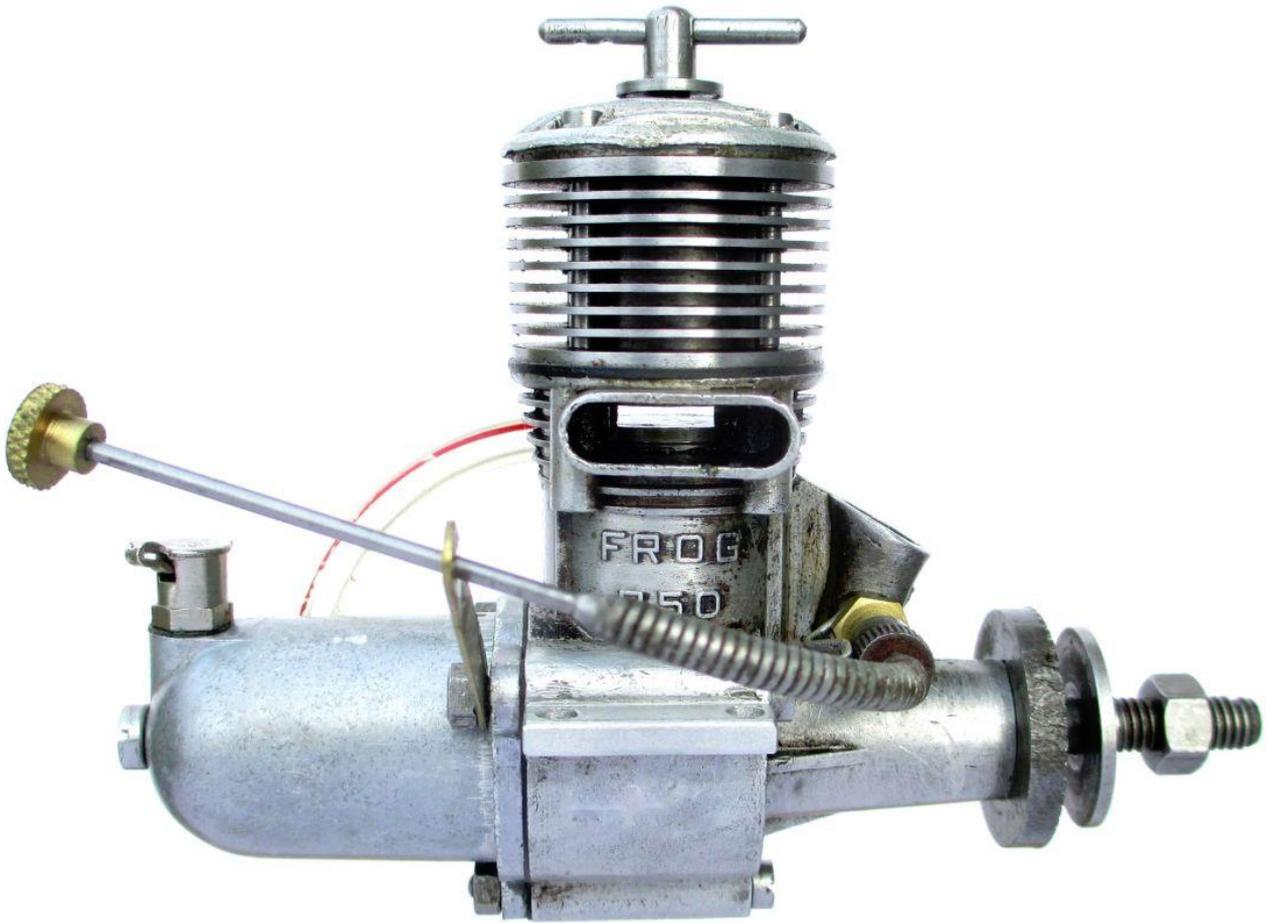








Engine photos from Bill Wells

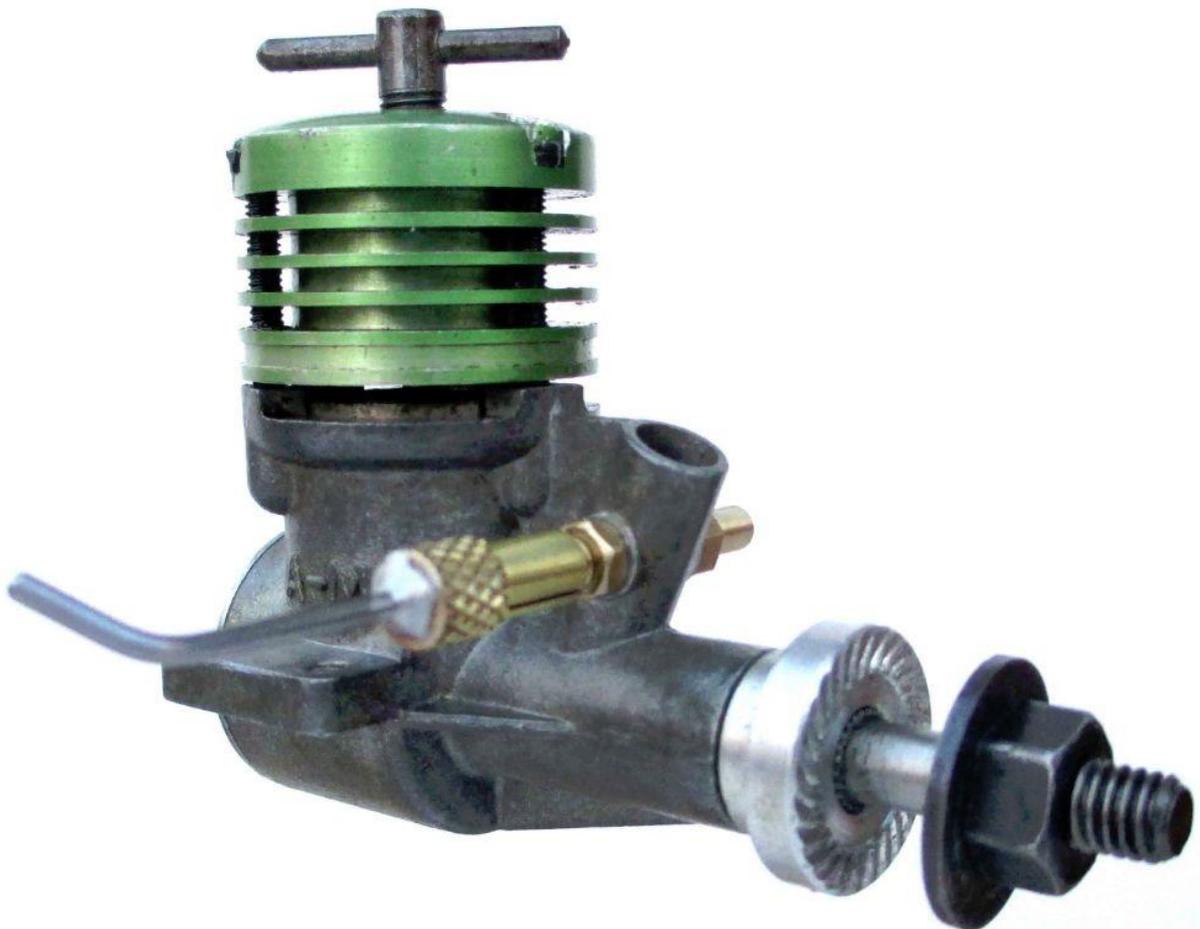




*Millich .030 ci FI TBR 0.49cc Bore 7.7mm
Stroke 11.3mm RPM 8000-12000 Wt 1.7 oz*



*Millich .020 ci SP TBR 0.375cc Bore 7.5mm Stroke
8.5mm RPM 5000-18000 Wt 1.6 oz The crankcase
is marked on the left side as 030 for economical
reasons the 020 uses the same crankcase as the 030*



AM 10 Wt. 3.25 ozs ,bought at the Gildings Auction last November for less than £13

From John Mellor

Hi James I enjoyed this month's Sticks and Tissues as usual and you implied that you are a little short of content at present so I thought a couple of pics and details of my two little winter build projects might be of interest. The first is of my Buttercup which I scaled up from the 27" span Fred Reese plan on Outerzone. I had seen one to the original size flying very prettily at Cocklebarrow last summer and decided I would give it a go as I needed an "easy fly" hack that would go in the car in one piece – for cold weather use. Accordingly I had the plans scaled to 52" span by my friendly printer and I got balsa bashing. With a parallel chord wing and flat sheet tail surfaces it went together pretty quickly and was complete in around a month. To be honest I nearly abandoned it half way through the build as it looked so ugly with that huge deep fuselage. However I persevered and when I got the fablon window stickers on it entirely changed the looks and I got a second wind. From memory (I'm writing this in my warm office and it's out in my freezing model room) it has a 170 watt motor running via a 40 amp speed controller and total weight is a little under 2 lbs with 1600 2S cell pack. It is rudder and elevator controlled and originally David Lovegrove and I were going to install a galloping ghost system in it but we could not get it to work as a push pull system so I abandoned that and used 9gm servos.

I took it up to my local Cricket Ground to test fly it expecting a real pussycat but I got anything but!! As no c.g. was shown on the plan I balanced it on the mainspar which is where I start off with most models – wrong! It staggered off the deck and lurched all over the sky nearly wiping itself out on a post protecting the wicket. Not promising. It appeared underpowered and the c.g. was obviously too rearward. The answer was obvious – stick one of my favourite 2200 3S batteries in for both more power and further forward c.g.. This time it flew beautifully and it looks cute in the air. I have now had some 15 flights and I'm amazed how well it copes with wind. I could have done with the U/C a little further forward as it will ROG but usually tips over on landing – may be better when the grass is shorter in summer. It certainly looks a bit different and gets admiring comments from friends at Maidenhead R.M. club.

By the way I have built some spats which make it look even better – should have fitted them for the picture – but they are not a particularly good fit on the U/C and I am waiting for shorter grass to try them.



Me again James. This is my second winter build project undertaken mostly while my wife was having a month "down under". It is a modified Wagtail which is a pretty little model designed back in about 1963 by John Ralph for Galloping Ghost controlling rudder and elevator. I well remember seeing John fly the original at Grove aerodrome and a very reliable and smooth performer it was on an O.S. Max 15. I built

my first one in 2005 for aileron, elevator and rudder as usual using brushless electric and it was a great little flyer until the speed controller gave out after about 100 flights. The fuselage was a bag of bits but the wing was unmarked so that went into the loft.

I had kept looking at the wing when I was up there checking my fleet and eventually got it down in January. I still had the plans I built the model off so I spent 3 weeks of odd moments knocking up a new fuselage and I am very pleased with the result. I will be testing it within the next few days but hopefully it will fly as well as my original one. The main differences between John's original and mine is that I added a panel either side on the wing to make it 45" span (to help carry the extra servos etc.) and lowered the dihedral and installed strip ailerons but other than that it is essentially similar to the original. I am using a motor of around 300 w (I've used it in a control line machine some years ago) with 40 amp speed controller and 2200 3S Lipo and the total weight is 34 ounces. I will probably wait to test fly it before adding final trim.



From John Ralph

Hi James's !! . thanks for your interest in the " Build and Show " Guillows Catalina . I plan to write an article for Tony Dowdeswell to appear in his magazine " Flying Scale Models " and have already started to sort out photos which I took when I was doing the conversion. I have already indicated the main parameters in the recent " STICK AND TISSUE " (NO 110) but more details will be given in my article for Tony. Meanwhile I have attached a few photos(print copies) showing the model frame etc . The kit ribs were used as were the fuselage formers . However the fuselage was fully sheeted and the wing LE also. Ailerons were fitted so the structure had to be moded to take them. I spent a long time perfecting the wing tip float retraction and although it works well it is debatable if anyone would make the sort of mini winch I did to wind it up.!! The ailerons are operated by a single servo in the centre of the wing but I will suggest that a better modern solution is to put a mini (4gm) servo in front of each aileron.

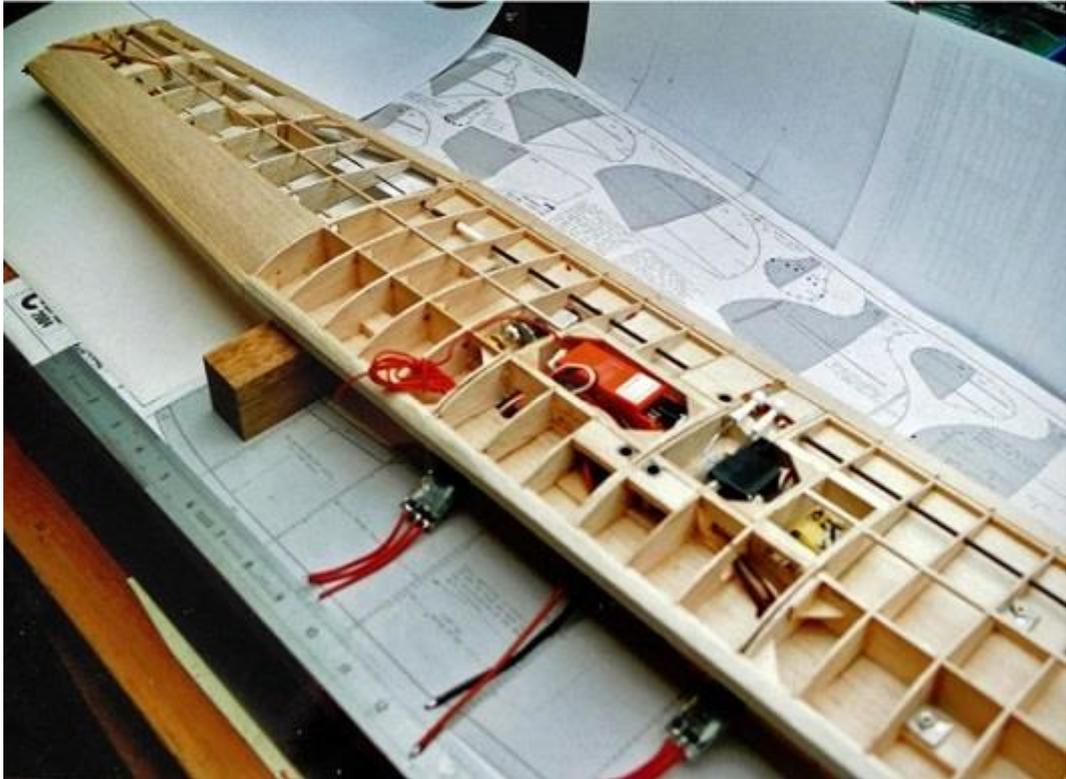
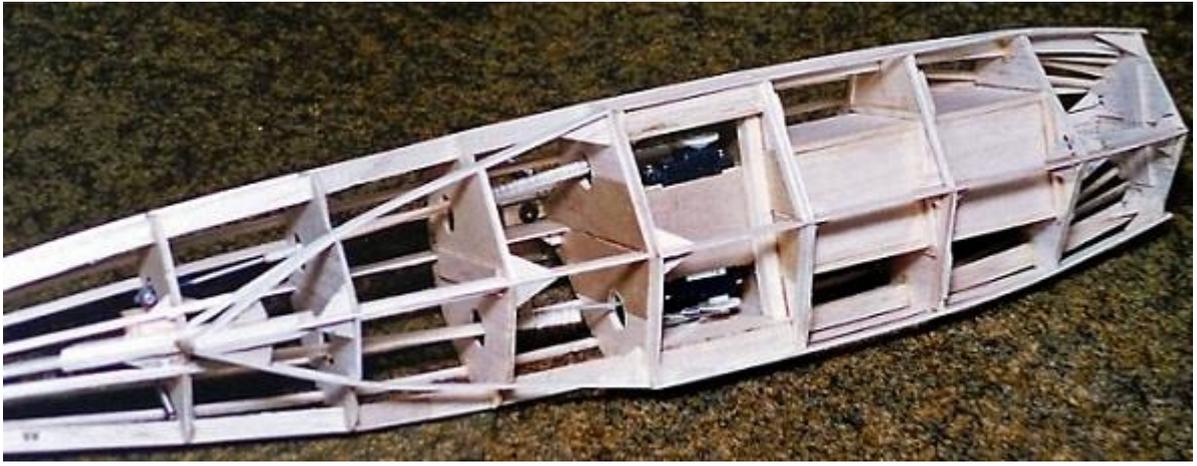
I last flew the model on 8 -850 Ma hr- Nimh 's mounted well up in the nose under the cockpit . I planned to upgrade to a 3S Li Po of similar weight (probably a 1500 Ma hr.) but house moves etc. in the last few years have slowed me down a bit!!

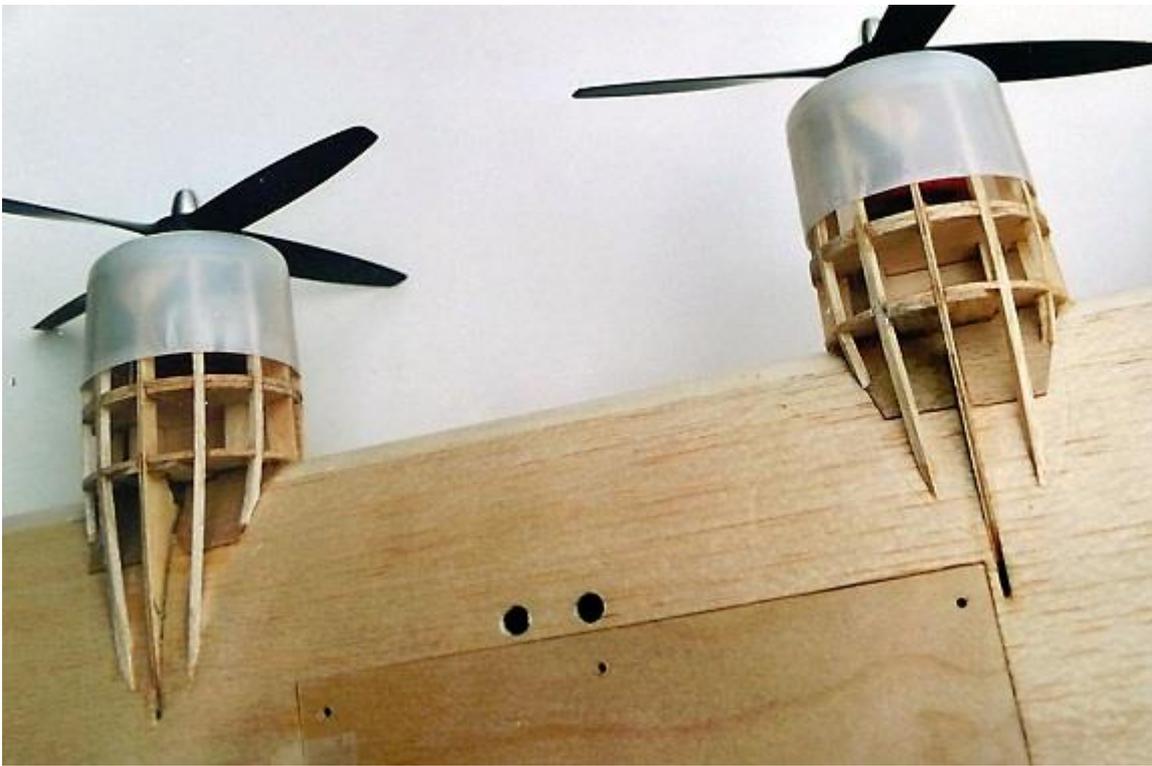
I am becoming what I used to sarcastically call a " Cheque Book Modeller " !! . I was ,I believe , the first down here to fly a scale sea plane when I electrified a " CANADAIR CL215 " (SEE RADIO MODELLER AUGUST 1995) to take advantage of a small lake near our home a couple of miles from Lands End . That was seen by my close friend , Geoff Andriesson who soon followed suit and has subsequently designed and built several innovative scale sea planes and flying boats . The latter includes a 6FT SR. PRINCESS and very recently a SUNDERLAND of similar size.

My " Decent " !! into " Cheque Book Modelling " was partly triggered by the death of my wife in 2011 and my move from our idyllic location at Porthgwarra where I could develop and fly my own creations , plus building a trimming vintage free flight models to fly " Up Country " at THE SAM 1066 " events at Middle Wallop . Sadly the latter seem to be winding down and I rarely fly a FF model except indoors . Outdoors I still fly my old Canadair but ,and here is The "Cheque Book " connection , I have a DYNAM CATALINA " which needed very little to do before I was able to fly it off and on the water . It is made from MPO but is well thought out and is very nice to fly . The tip floats are fixed on this one though! I also have a similar E-FLITE Mosquito and several mini RC scale models.

As usual I have " Gone on " a bit but that's what comes of spending over seventy years as an aeromodeller . I have a lot to remember !!







From Mike Spencer - Blue Pants

Decent windy weather today for outside sanding of leading edge and other blockwork. Latest creation is a new build CL Blue Pants for Alan Bond, now nearly finished as you see, attached. As well as Alan's commission in exchange for some electronics wizardry he is doing for me, I undertook this build as a test piece for a potential RC conversion that now looks quite feasible at the original CL size for about 180W and a 3S 1300 LiPo. Havingndertook this build as a test piece for a potential RC conversion that now looks quite feasible at the original CL size for about 180W and a 3S 1300 LiPo. Having now flown my own Vintage IC to ECL conversion using about 200W (very lively with that and up to 250W available) I am satisfied that the power is suitable. The CL Elevator is huge so it would be sensible to reduce that a bit for RC !

Loads of space inside and the removable top hatch will go all the way back to middle of wing. I have made fuz slightly wider than the plan and with (removable) torque-tube undercarriage to maximise the inside storage space. I could easily get a LiPo larger than the 1300 in there.

All parts except rectangular formers (adjust to taste according to fuz width required) are CAD drawn, cut and validated so, if anyone else wants a set of ribs/fin/stab/fuz sides/fuz doublers, you know where to come.







This Sunday, 10 April, Control Line meeting at Wimborne MAC site at Cashmoor on A354 between Blandford Forum and Salisbury. 6 grass circles, BBQ, portaloos. Contact Chris Hague

christopher.hague@ntlworld.com

Or myself James Parry jamesiparry@talktalk.net 01202625825

Middle Wallop

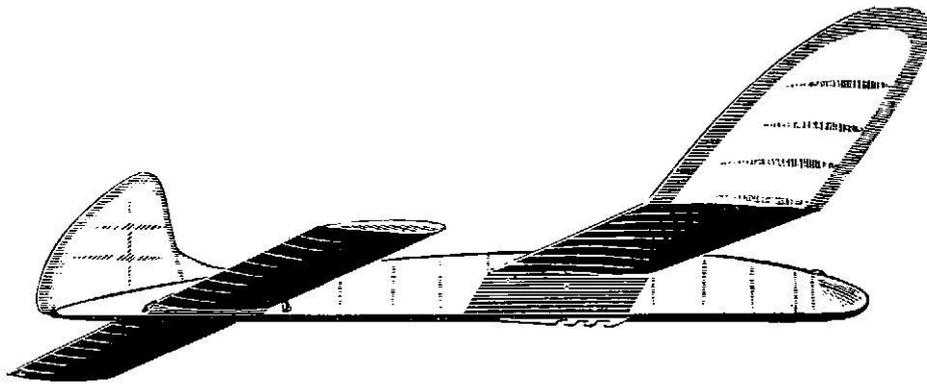
April 23 / 24 FF with RC and CL on 24th

June 4 / 5 FF with RC and CL on 5th

BEWARE THIS IS STILL IN THE BALANCE AND IS NOT 100% CERTAIN SO CHECK BEFORE YOU ATTEND. SHOULD BE MENTION ON 1066 WEBSITE AND IN NEXT CLARION.

ALSO WITH REGARD TO R/C THERE WILL NOT BE A TOMBOY COMPETITION AT EITHER

Pipi by P C Koorn a tandem wing glider from Model Aircraft January 1952



Early in 1948, just three days before the first national meeting in Holland for unorthodox gliders, I decided to build a tandem wing glider. I already had a pair of suitable wings and designed Pipi round them, the model being completed within two days.

The purpose of the meeting was to select the Dutch team to compete in the tailless contest

at Lyons in France, and I had a busy day flying my two tailless models into 1st and 3rd places, while in the tandem event my brand new model was placed second. A few weeks later Pipi established a Dutch hand-launch record, with a flight of 1 min. 30 sec.

The model performed very well during 1949, eventually setting up a new Dutch tandem-wing record with a distance of 15 km. (6 min. o.o.s.), and nearly beating the tandem towlaunch record which was 8 min.

Pipi disappeared this year, and I have had no time to build another as I am in the Royal Dutch Navy and there is plenty of work to do.

Building

Building is very easy and even a beginner will be able to make a good simple tandem, capable of flights of 1 1/2 min. or more from a 150 ft. towline, without thermals.

Begin by making the wing and tailplane ribs and the fuselage formers. As the fuselage sides are parallel for their whole length, all formers will be 1 9/16 in. wide. Place the bottom longerons on the building board and cement the formers in place. When they are dry install the wing tongue and noseblock. Steam the top longerons to shape and cement to the formers. Be very careful with the construction of the tailplane rests (R), and do not forget the anchoring dowels. The towhooks are cut out and cemented to the 1/16in. ply which forms the bottom of the fuselage. To complete the fuselage construction, build up the fin and fit it into the 1/8 in. sheet rear fuselage decking.

Wing

Build up the tips from three layers of 1/8 in. balsa, cutting the sections as on the plan, so that the layers overlap at the joints. Take care when cementing the wing boxes in position for, like the tailplane rests, the incidence depends on their accurate placing. Reinforce the wing roots and boxes, and sheet in the wing between ribs 1 and 2 with the thinnest ply obtainable. When the structure is complete and dry, sand the leading edge and tips to a smooth contour.

Tailplane

Build the tailplane in one unit for strength, taking care with the reinforcing of the centre section. The fixing dowels of the underfins must be a tight fit in the paper tubes. Form the tips from soft balsa blocks, sanded to shape.

Covering

Cover the whole model with Modelspan and give it three coats of dope. The colour scheme of the prototype was bright red with black trimmings.

Flying

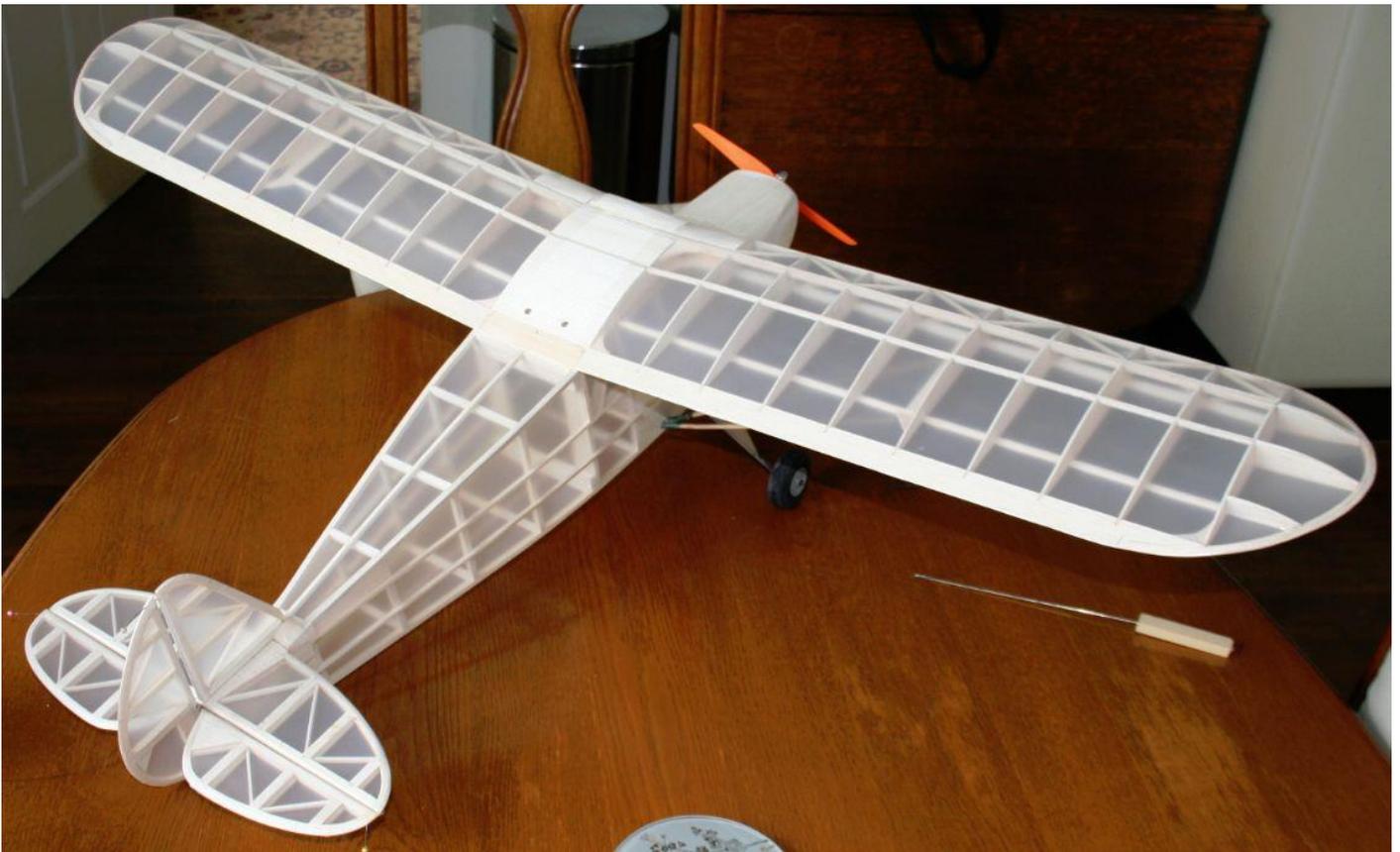
Choose a calm day for test flights. Add lead shot to the ballast box until the e.g. is in the right place. The model flies fairly fast, and, if on launching it dives, launch again with a faster throw. If it still dives, pack up the tailplane T.E. until correct trim is obtained. Should the model stall, add more ballast in the nose. For circling install a small trim-tab on the upper surface of the wing, 1/3 in. from the T.E. and 3 in. from the tip. Swinging on the line can be cured by moving the towhook rearwards.

From George Stringwell

Herewith some photos of the latest build , this really IS "sticks and tissue" being a one and a half times scale up of the Earl Stahl rubber scale Interstate Cadet, which makes it 42 inches span and a surprisingly hefty model. Power is a 60 watt out runner on a 2S 850 watt lipo, radio is rudder and elevator plus throttle of course. It weighs in at just under 16 ounces and is covered in tissue (Esaki Liteflite green on the fuselage and (hoarded) heavyweight Modelspan white on the wing and tail) over 38 micron document laminating film. In one of the photos you can see it covered in the doculam before applying the tissue. The combination of the doculam and heavyweight tissue, plus three coats of nitrate dope, produces a finish which could truly be described as "bullet proof"!

My aim was to produce a model which retained the "ethos" of a rubber scale model but would be a practical park flyer. I reduced the tail surfaces to the alternative scale outlines shown on the original Earl Stahl plan and then spent a lot of time looking at them and worrying that they might be too small! However, the CG has come out well forward (27%) and looking at it on the graph it would seem to have an acceptable static margin, so hopefully it won't turn out to be too much of a handful when the weather decides to play ball and produce a calm evening for test flying.



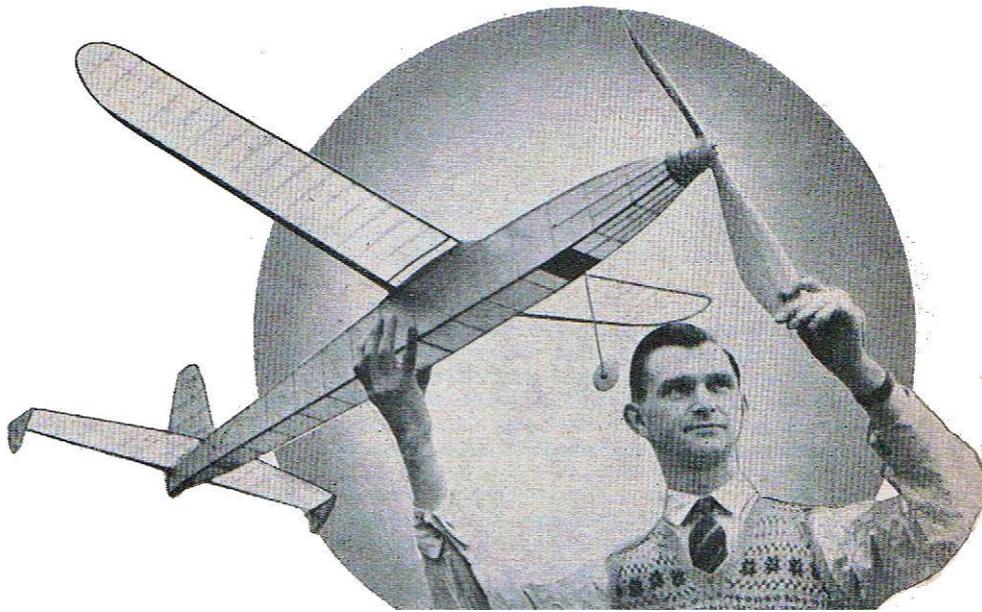


From Dan Mellor

Hello! Someone asked about the Bonnacon plan on S&T a while ago. I did reply, or at least meant to, saying I had the plan. I've since seen it's still available from the current owners of the APS plans archive. This is my recently completed example. It's a design I've wanted to build since it was published 20-odd years ago, but only just got round to. Irvine Mills powered and I'm not looking forward to starting. I think the port fin may be an early casualty...



Red Swan by Henry Tubbs from Model Aircraft January 1952



The most important factor in the design and construction of a successful Wakefield model is the obtaining of a very favourable weight-ratio of airframe to motor. In the prototype of Red Swan the all-up weight came to no more than 8 ½ oz., of which 4¾ oz. was rubber (16 strands of 1/4 X 1/24 in. Pirelli). This 3 3/4oz. airframe was only achieved by very careful selection of materials, and attention to small points, such as lightly sanding all wood before use.

The fuselage is conventional in construction, but take care to select four matched longerons. Small 1/16 sq. braces are cemented across the angles between the spacers to increase rigidity. Cotton bracing is also used, but care should be taken that this does not twist the fuselage out of alignment. Start at the rear end with one thread at each corner, and work towards the nose. It is important to note that the Cotton should be just taut so that it will tighten slightly when doped.

The wing ribs are made in the usual way for a straight-tapered wing. Cut root and tip templates from ply, sandwich the appropriate number of rib blanks between them and sand the bundle down to shape. Care should be taken in tapering the L. and T.E. and spars in order that pairs are identical.

The wings were made in halves for ease of transport. but there would be a small saving in weight if a one-piece wing was used.

Fin and tailplane ribs are made as the wing ribs. The spars are fitted after the ribs have been assembled with the leading and trailing edges. Cut the tailplane tip fins from 1/16in. sheet and when cemented in place, sand them until they line up with the fuselage underfin, thus relieving the tailplane of any weight carrying. The fin is located in position by a hole in the centre of the tailplane and a guide at the rear. The hole is slightly off-centre to give some turn, a trim tab being fitted for fine adjustment. A normal tip-tail D/T is used.

If two-piece wings are used, strips of Sellotape over the join will keep them together and take some strain off the dowels.

A rubber retainer is fitted over the protruding end of the fin dowel, to prevent it coming out in flight.

The monowheel undercart should be such that there is 1¾ in clearance between the prop. tip and ground, in the R.O.G. position.

Red Swan should be trimmed to fly in fairly tight R H circles under power. the circles opening out slightly on the glide Side-thrust will have to be adjusted to suit different power. Down-thrust is built in.



By Dave Bishop of DB Sound.

The first show for this 2016 year was held at the historic Battle of Britain RAF Kenley airfield in Surrey on Saturday March 19. The event was organised by the Kenley Friends Association with help given by some exact scale radio controlled model aeroplanes being demonstrated by the Caterham, Croydon and Sevenoaks clubs from 12midday until 4pm. The Portcullis club was open for hospitality and from there conducted tours were available all day long at that place for visitors to be shown what happened some 75 years ago before, during and after the war.

We, model flyers, all arrived there and set up what was to be needed for the 12midday start to the accompaniment of a bitter cold overcast day with a strongish wind blowing in the "right" direction as far as crowd safety was concerned. One good thing was that some excellent toilets had been supplied and despite the (not at all) good flying conditions, there was a goodly crowd that came to see what was going on. Another thing that was good for me as the presenter, was that the chaps had brought along a nice lot of aeroplanes for the static and flying displays throughout the afternoon. The standard of radio controlled piloting nowadays is so good that any crowd can see a model in the sky, no matter what the weather seems to throw at us. National and European star Mike Williams opened the show with his Extra 300 and amazed the watchers with his "normal" gifted set of aerobatics and he was followed by the main host James Gordon flying the DH60 Gypsy Moth scratch built by the well known Brian Rice. The Moth was powered by a Laser 150. Don Coe flew his Old Warden winner DH Moth as only maestro Don Coe does, which is so scale in every detail that all judges have a hard time judging this beauty. There was some cracking flying done by an Acro Wot with 4 cells doing the pulling work by Neil Wallis. There is a new young gifted designer and kit manufacturer, Gavin Barden, who flew his doubled up Junior 60 with a 103" wingspan that just poodles it's way around the skies for seemingly endless hours of relaxed flying on rudder/elevator controls and a Saito 65 popping away up front. A superb massive Super Cub was also beautifully flown by Neil Wallis powered by a big ASP twin cylinder motor which both looked and sounded, just perfect. There was a very nice Thunder Tiger powered Ripmax Jive flown by a Caterham club member Shaun Dale in his first public show after gaining his B certificate. That was followed by a Outlaw delta powered by a Irvine 36 that went flew like a rocket by Mike Williams. It belonged to Rod Hunt the treasurer of the Croydon club. Other aeroplanes were a Bowers Fly-Baby that has been flown publically at Old Warden many times by James Gordon, a vampire foamy by Gavin Barden another O.W. performer and a Wot4 flown by Gavin's son Mathew aged 8. One of the cheapest kitted aeroplanes by Mr Barden is named the Equaliser and this latest design of his is priced at just £45 did a flying display. Presently it is a "special" as a fun flyer and your scribe was given the job of judging the best built one out of a whole number of these models in various stages of undress at a Caterham Club night. These will be on sale at Old Warden and other shows and I am sure that there isn't a cheaper R/C model to beat it for value for money. The Croydon club's chairman Peter Royalle, flew both a Spitfire and a Hurricane in a good display which was just right for that event. There was a number of static models on display including a very nice B17g Fortress, a BE2 by James Gordon, a Texan and a Flair Magnatilla in German markings which is the "norm" with this particular aeroplane. Another high speed flying job was flown by Mike Williams named Super Zoom. The 4 hours simply flew by (if you can excuse the pun) and considering the conditions, the team did a great job in a very nice atmosphere and well done James Gordon and those who helped him make it all run so smoothly. Most of the attached pictures were taken by the very nice son of the famous air show arranger Rod Dene, named Ben, and many of his pictures were put onto the Internet for all to see.

Coming up Shows that are a "must go to" are

The first 2016 Modelair event at Old Warden is on May 14-15 which is the annual Mayfly and it features the Ron Moulton memorial trophy along with a SAM35 and Ebenezer events being held there over that weekend. The three annual Modelair Old Warden events are run by the hard working team of Ken and Sheila Sheppard. Mike and Joan Reynolds both ran the trade line for years which started when they ran the original largest (reputed) model display show in Europe for many years at RAF Halton, which made an awful lot of money for the RAFA funds. Nowadays Old Warden modelling events are not "shows" but it is the place to meet and catch-up chat with everyone that you might have known in past aeromodelling years. The main thing is to bring along a model of basically any sort to fly where there are areas arranged for free flight, control line, carrier deck landing, vintage, speed, aerobatics and scale. There is a lot more of radio

assist being done around that "free flight" area as well and its quite amazing how many Keil Kraft rubber powered designs have been modernised with small electric motors controlled by and micro radio receivers servos. Another "different" thing there is the tethered car racing pits area with IC motors sounding great as they whiz around a mini Brooklands. And there is the radio controlled area which has nonstop flying under the auspices of the nicest line up of flight line helpers (with no more embarrassing shouting at pilots) you could ever wish to meet. There is still a Tx Control tent (again manned with the friendliest helpers) because Old Warden encourages the use of 35 MHz and pegboard and you'd be surprised just how many of them there are who are perfectly satisfied and happy with clipping on a peg to their transmitter aerials. There is a special fun time at Old Warden which is an annual aim to get another record total of modellers with their Ebenezer models, which is a hoot. The youngsters also have a building and flying a model competition, which is great for encouraging newcomers into our sport. To top it all there is the line-up of traders and its worth putting a few quid away (if you can afford it), because not only are there some super bargains to buy but a lot of boot sellers who I promise you will have just that particular scoop you might have been looking after for years going at "silly money". In particular I enjoy seeing most of the attending traders taking time out from their stalls, to fly their different sorts of modellers there and just a look at their faces proves to everyone just how much they enjoy and love their hobby. (I am sure that is exactly what Ken Sheppard has in mind when staging Old Warden's model flying nowadays.) Electric flying is permitted for campers at the end of the normal days flying at 5pm after the full size aeroplanes have come back home to their hangers. If you do happen to arrive early in the morning before 10am you will see (and possibly photograph) some of the most beautiful full size aeroplanes taking off to appear elsewhere at different shows in the country. There are some 40 plus full size aeroplanes hangered and stored there of which some are the only ones in the whole world. Also there are some very old and interesting vehicles as well, so take along your cameras to record them for your own album. The best full English breakfast is there in the restaurant as well as one of the best bookshops on aeroplanes I have ever seen. There are some very nice walks as well as a good children's play area. As I have said, Old Warden gives me special "vibes" and has done for over 70 years, that I just cannot explain. But one thing is for sure, and that is, it's a "must go to" place, with full camping available for the whole weekend.

More events for you diaries.

June 4 - 5 at Long Marsdon a Traplet Publications sponsored event with some of the best show pilots from around the world demonstrating the latest and greatest aeroplanes ever. Bring a fisherman's folding chair with you, sit back along the long flight line with your sandwiches and drink and be thoroughly entertained each day. There are plenty of excellent toilets and stacks of friendly traders and I will do my best to keep everyone informed through my microphone as to what is going each day.

June 17 - 18 -19. Weston Park annual show at Telford where everyone meets everyone. Bring along a model as there is flying in the evening.

June 25 - 26 Wings & Wheels at North Weald aerodrome and I'll be there with my microphone to say goodbye to Jane Stephenson after so many years of her organising excellence but we have been assured that the show will go on which is very good news. Sadly there is no flying after the day show at this event but there is very good entertainment laid on for everyone during the evenings. There is the biggest market to see on the Saturday which sells almost everything you could wish to buy.

July 23-24 Old Warden Scale weekend.

September 24-25 and the last Old Warden's Modelair event with the Festival of Flight and the special "Vic Smeed" memorial day plus anything and everything Vintage. Belair will be at Old Warden and he will have all of the Vic Smeed models that will fit the bill for you to build before the third and final for 2016, Modelair event.

October 1-2 Ragley Hall this event replaces "Weston Park in the Dark" show and will be run by Steve Bishop and his team.



Tiger Moth that was flown at RAF Kenley on March 19 -2016 by Roger Godley



Don Coe's, "Tiger Moth" with unbelievable scale details.



Mike William's, "Extra" show stopping performance always.



Kit designer newcomer young Gavin Barden with his kitted "Fusion" at £80 balloon bursting.



Neil Wallis's "Acro Wot" powered by 4 electric cells.



Gordon Faithfull's "Edge" gave a knockout performance.



The doubled up "Junior 60" of Gavin Barden's is kitted at 103" wingspan Saito 65.



This "Super Cub" of Neil Wallis sounded great and flew beautifully with its ASP 160 twin.



This very old "Bower's Fly-Baby" belongs to James Gordon and is powered by an OS91



Another shot of Gavin Barden's Doubled up "Junior 60".



This "Lancaster" is a massive electric powered job and did static engine runs that sounded great.



One of the prettiest "Jason's" "Gypsy Moth" ever, by genius designer Brian Rice and flown by Jams Gordon. A Laser150 supplies the power.



This very quick "Outlaw" delta powered by an Irvine 36 belongs to the Croydon club's treasurer Rod Hunt and demonstrated by Mike Williams.



This "Vampire" is an electric fan powered foamy by Gavin Barden. Very quick in the air.



A new "club build" model is be designer Gavin Barden called the "Equaliser" and possibly one of the cheapest aeroplane kits to buy, ever.



James Gordon and his "BE2" at 75" wingspan and powered by an RCV 91 pictured at Old Warden.



All of the team of flyers who "made the day" at RAF Kenley on Saturday March 13.

I nearly forgot again!

25 February I had a chance to have a fly at Epsom Downs so here are the photos, the weather was grey and bloomin cold so the three of us that is me, Tony Tomlin and Derek Foxwell only spent an hour and half up there. No one else truned up. I meant to include last month but me brain did not respond at the right time.



Derek's Coquette



The glider is Tony's Libelle the foam Fun Cub in the foreground was flown really well by



That was close, very very close, Derek's Chatterbox



Derek's Chatterbox contact him if you want a kit at derekfoxwell@btinternet.com



Tony's Chatterbox with a trusty no compression ancient PAW 80. He has to start it electronically!



Micro Aces

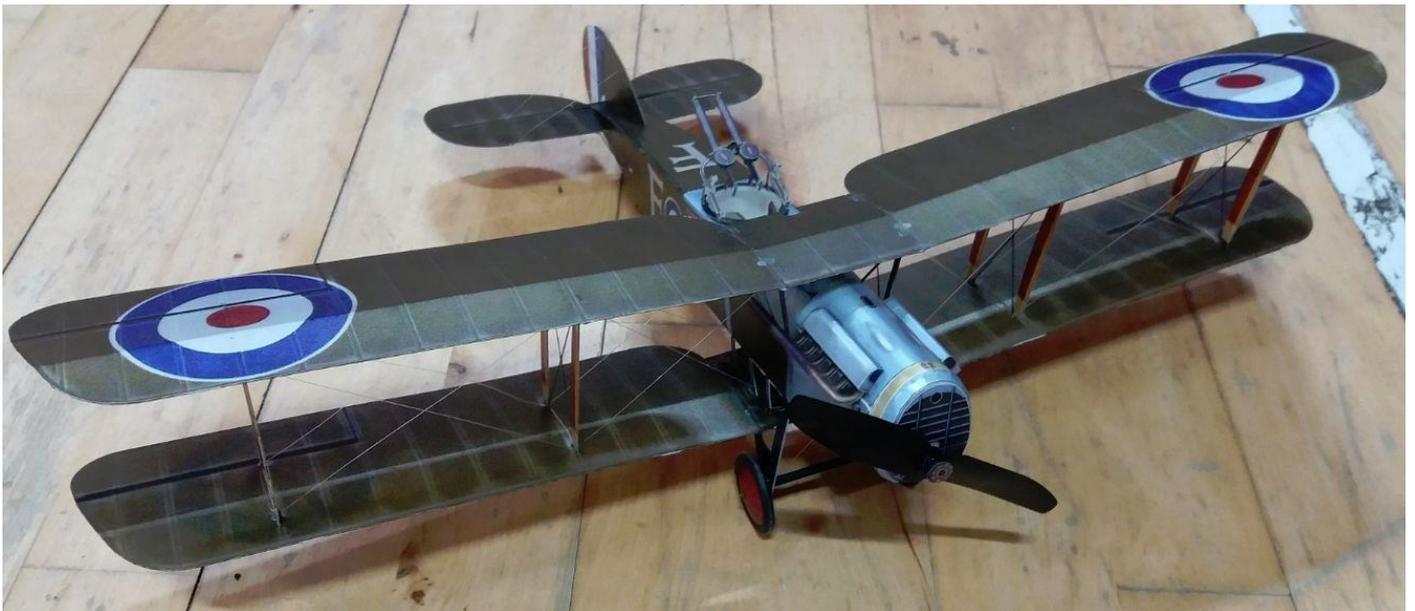
Jon Porter came along to the Broadstone indoor meeting on 24 March and flew his new kit of a Brisfit. Here are a few photos.





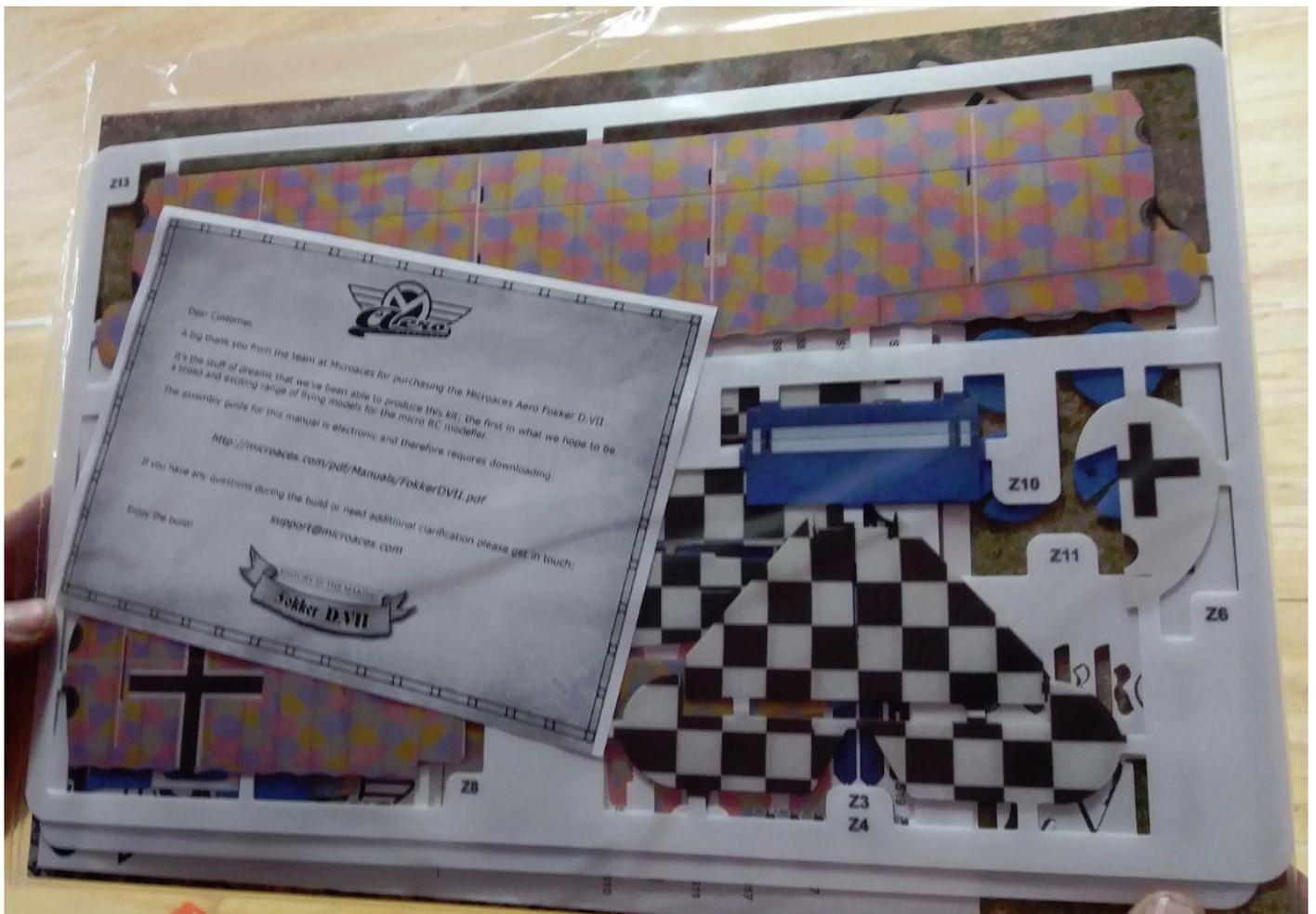
Jon Porter displaying his model. The kit should be available soon.

<http://microaces.com/>





This is a Fokker kit that someone bought on the night other side next photo



Control line at Wimborne MAC

10 April Sunday

9 October Sunday

Eastbourne vintage RC

Sunday 18th September

Cocklebarrow

The dates for Cocklebarrow have been confirmed as 10th July; 21st August and 2nd October.

**SHILTON
VINTAGE (FLY IN)**

BLACKWELL FARM

Saturday 28th and Sunday 29th May 2016

Details and directions for the Shilton Vintage meet on 28th and 29th May 2016.

Flying all day Saturday and Sunday.

Caravans and camping available, water on site and port-a-loo.

BMFA members only. Proof of Insurance required.

The Bar-be-cue will be running on Saturday evening from 7 p.m. Bring your sausages and burgers and enjoy an evening with like-minded people.

ARRIVALS FOR CARAVAN AND CAMPING AFTER 2 P.M. FRIDAY.

You will need to pre-book your pitch as we are limited to 10 caravans only. The site will be well sign posted with **SAM35**. Post code **OX18 4AP**

Caravans/Camping £10.00 for weekend

Flying £5 per pilot.

Local facilities are available in Carterton 3 miles away.

CONTACT: Nick Blackwell Tel: 01285 657610 (evening only)
Email: nick@nickblackwell.co.uk

OR Derek Foxwell Tel: 0208 647 1033
Email: derekfoxwell@btinternet.com

OR Boycote Beale Tel 01993 846690
Email: bealekraft@outlook.com

Directions:

By road from the north:

Follow the A40 to Burford, at roundabout take the A361 toward Swindon, at junction for Cotswold Wildlife Park turn left onto Hen and Chick Lane. Follow lane until it bears left, here turn hard right and take the track until it ends, this is the airfield.

By road from the south

From Swindon take the A361 to Lechlade and Burford. 3 miles before reaching Burford at junction for Cotswold Wildlife Park turn right onto Hen and Chick Lane, then as above.

(When you visit Blackwell Farm – you must try their honey – it's bloody marvellous)

DMFG near Blandford Forum RC vintage

1 May Sunday Vintage RC

Contact James Parry jamesiparry@talktalk.net 01202625825

Peter Wallis

Hi James – if you need a ‘filler’ I have written 3 articles on the build on this 1945 Adamcraft – will send you the first missive plus photos .

The Adamcraft

For as long as I can remember I’ve always wanted to build an Adamcraft 18” dinghy .

Dare I say I was first given an Adamcraft kit in 1948 but that fell by the wayside as it really was beyond my capabilities at the time and building one now I can easily see why – cutting 24 planks out from printed 1mm ply was beyond me however things have changed .

I am a member of the ‘Vintage Model Yacht Group’ and happened to read in the club magazine ‘Turning Pole’ that a certain Graham Potts had a kit that was available so a deal was struck and the kit in its original spiral wound tube dated 1945 found its way to my workshop .

Once again I was confronted with those 1mm printed ply sheets but a certain Peter Mitchell another builder within the Frensham Model Yacht Group has a band saw and he was able to help me out with those planks thankfully .

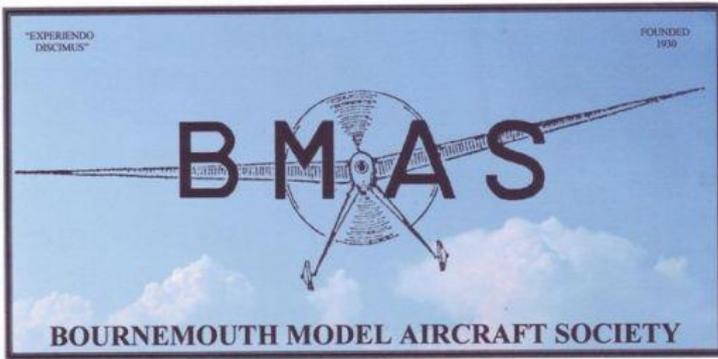
The other big change that has effected all hobbies is the availability of really advanced adhesives which I have been using in my other hobby building vintage model aircraft so a quick look at www.deluxematerials.com website gave me just what I wanted with a curing time of under 10sec’ . This would make positioning those planks so much easier although I have to say each plank was a fight and I could only manage three at a time and had to be in the right frame of mind.....

The build of the Adamcraft is identical to building a clinker dinghy starting with a jig which once all the planks are in position can be discarded .

I would be delighted to hear from other owners of these little craft and perhaps we could exchange our experience and possibly meet my email is phwallis@btinternet.com .

The Adamcraft will have r/c and I will keep you updated as the build continues..... .





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CONTACTS: JOHN TAYLOR 01202 232206

All dates are Tuesdays

26 April 2016

24 May

28 June

26 July

23 August

27 September

25 October

22 November



The Committee wish to acknowledge the support of the following sponsors without whom putting on this event and maintaining the field for the rest of the season may well have proved impossible :-

R & D Walker Ltd Butchers

The Moreton Charity

The Edith Mann Charitable Trust

This years event will be held on the weekend of 13th and 14th August. Format for the event will be very similar to previous years with :

- Off the peg flying both days
- Camping facilities (please contact us to book in advance)
- Saturday night BBQ
- Onsite toilets and drinking water facilities
- 200 ft grass strip for R/C flight
- Control Line Circle (depending on availability of land as we are on a working farm)
- Small field Free flight
- Bring and Buy Sale - bring along your bits that are "Surplus to Requirement" and turn them into cash

This year, as last, we will be holding TWO mass build events :-

On the Saturday we welcome pilots along to celebrate the "Cotswold Novice", the iconic Sid King Design

On Sunday it is going to be a mass collective of Vic Smeed designs.

In both events, models of any size (scaled up or down); in any version and with any power source, IC or electric, will be eligible.

For further information or to register your interest please email:-

gray@ncmac.co.uk

It goes without saying but please :-

**WILL ALL PILOTS PLEASE ENSURE THAT THEY
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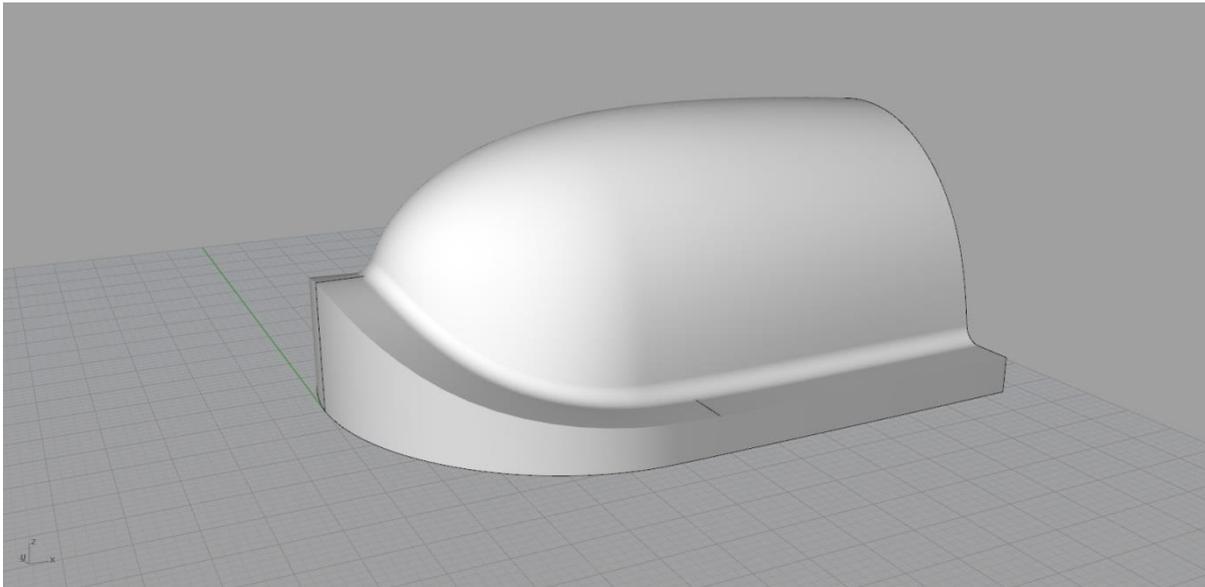
To complement the canopies, we are also producing original style bellcranks for many vintage Control line models.

Our latest list of Vintage designs has also grown and now includes -

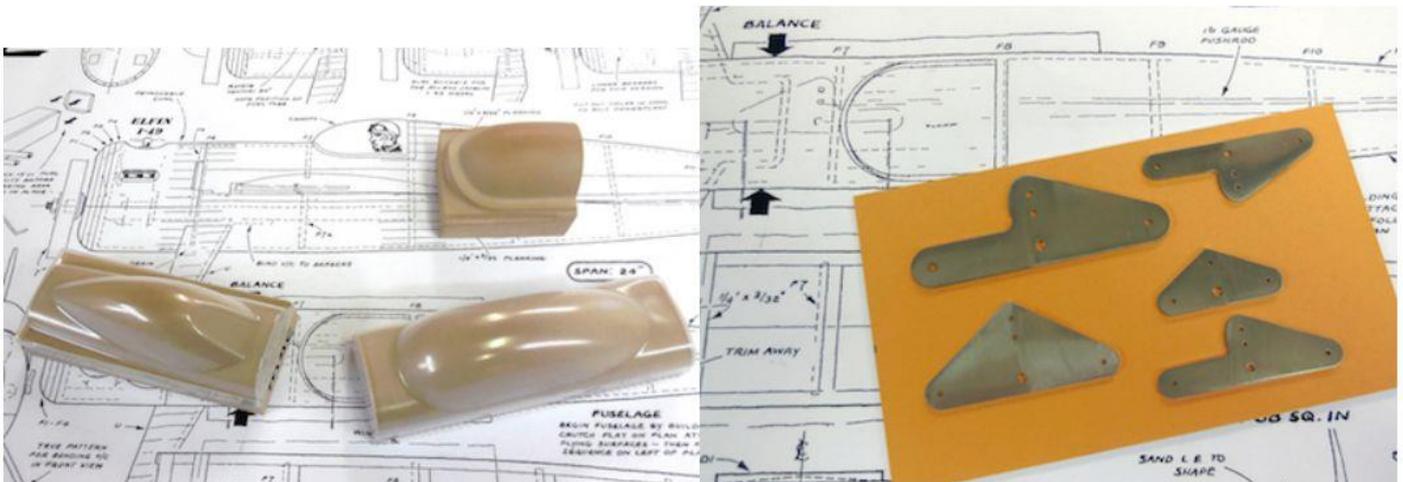
- All American Stunter - De Bolt inc plan
- KK Phantom - later version
- KK Phantom - early version
- KK Phantom Mite - 16"
- Princess
- Blue Pants
- FW-190 Focke Wulf CL 33" span Veron
- Veron Panther 41" span
- Veron CL Stunter MkII 30" span
- Mercury Team Racer MK1
- Philbuster 28" span
- Boogie Woogie AM
- Icarus - Coasby AM
- Peacemaker 46" inc plan
- Ringmaster Profile 42" inc plan
- Rascal
- Senior Monitor
- Supermarine Spitfire Mk XII Parts Set for AM1688
- Taurus - Coasby
- Thunderbolt - Morley
- Veron Nipper
- Vickers Viscount scale model
- Voetsak 1946 - Ron Moulton
- Weatherman - Cyril Shaw Speed CL original
- Weatherman - Clubman profile inc hardwood
- Skiffler - D Platt with canopy
- MiniBuster
- Philbuster
- Veron Combateer
- Peacemaker - Profile and built up with canopy
- Spectre KK
- Chizler
- Time Traveller
- KK Ranger Mk1 & 2 with canopy
- KK Pacer with canopy
- Spitfire 45" Pentland design CL776
- Humongous
- Mercury Mac with canopy

- Ringmaster
- Mercury Midget
- Tucker Special
- Feno
- Chizler Classic Stunter with canopy
- Sukhoi SU-26 profile stunter
- Trojan SAM35 Jasco
- Mercury Combateer with canopy
- KK Bantam
- KK Scorpion
- KK Super Scorpion

Call Belair Vintage on 01362 668658 for your free Vintage Catalogue.



Computer image shows the 3D development of the Keil Kraft Ranger Mk1 canopy.



Regards,

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Dens Model Supplies

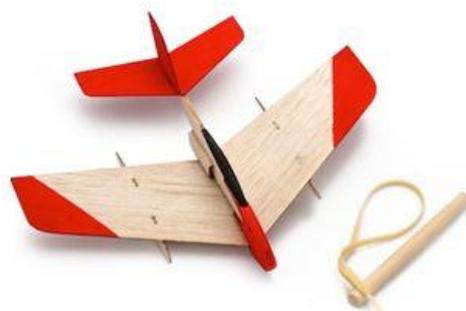
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From Martin Dilly

Crowd On & Risk It is the story of one of Britain's oldest and most successful model flying clubs, Croydon & District Model Aeronautical Club, founded in 1936 and not to be confused with Croydon Airport MFC, established some forty years later in the mid-1970s. Different club, different name.

Some years ago the late Keith Miller compiled a history of the club from 1936-1960, and now Martin Dilly has produced an extended 73 page edition, covering the Chobham Common and Bassingbourn years and bringing the story more up-to-date. As well as Keith's photographs there are many additional ones that convey the atmosphere of free-flight when entries of well over a hundred were common in club-run contests, along with the memories of many of Croydon's past and present members.

24 Croydon members have represented Britain in all the free-flight classes plus a few CL and RC ones, a unique record, and they have had no less than 52 plans published in the magazines over the years. The club has also launched a number of people into some pretty serious aerospace careers, ranging from movie stunt flying and commanding the Battle of Britain Memorial Flight to pioneering supersonic wind tunnel techniques that led to Concorde and the Tornado.

Crowd On & Risk It is available from Martin Dilly (martindilly20@gmail.com) or phone/fax at +44 (0)208 777 5533 or 20, Links Road, West Wickham, Kent BR4 0QW at just £8.00, UK cheques or PayPal

