

Sticks and Tissue No 128 – July 2017

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.



Bill Wells. This is a cartoon picture of an early Peffer. Slightly distorted views are not to everyone's taste but I think they are fun.

DMFG Meetings

What a time a few meetings have gone ahead but others cancelled cos of the weather, still a few photos below taken over last couple of months



Spike and his Swanee



John Bainbridge and Mercury Mentor. The model was built by Malcolm Jagger who passed away last year. It is now electric powered a 35 watt motor 7 x4 prop and 240 mah battery via one of Dens Models timers. Flies very well.





Mass launch for 600 RES thermal glider comp practice round run by Chris Hague



Three John Liard's models and Lancer which is John Taylor's

Tony Tomlin's latest project an enlarged Skycar

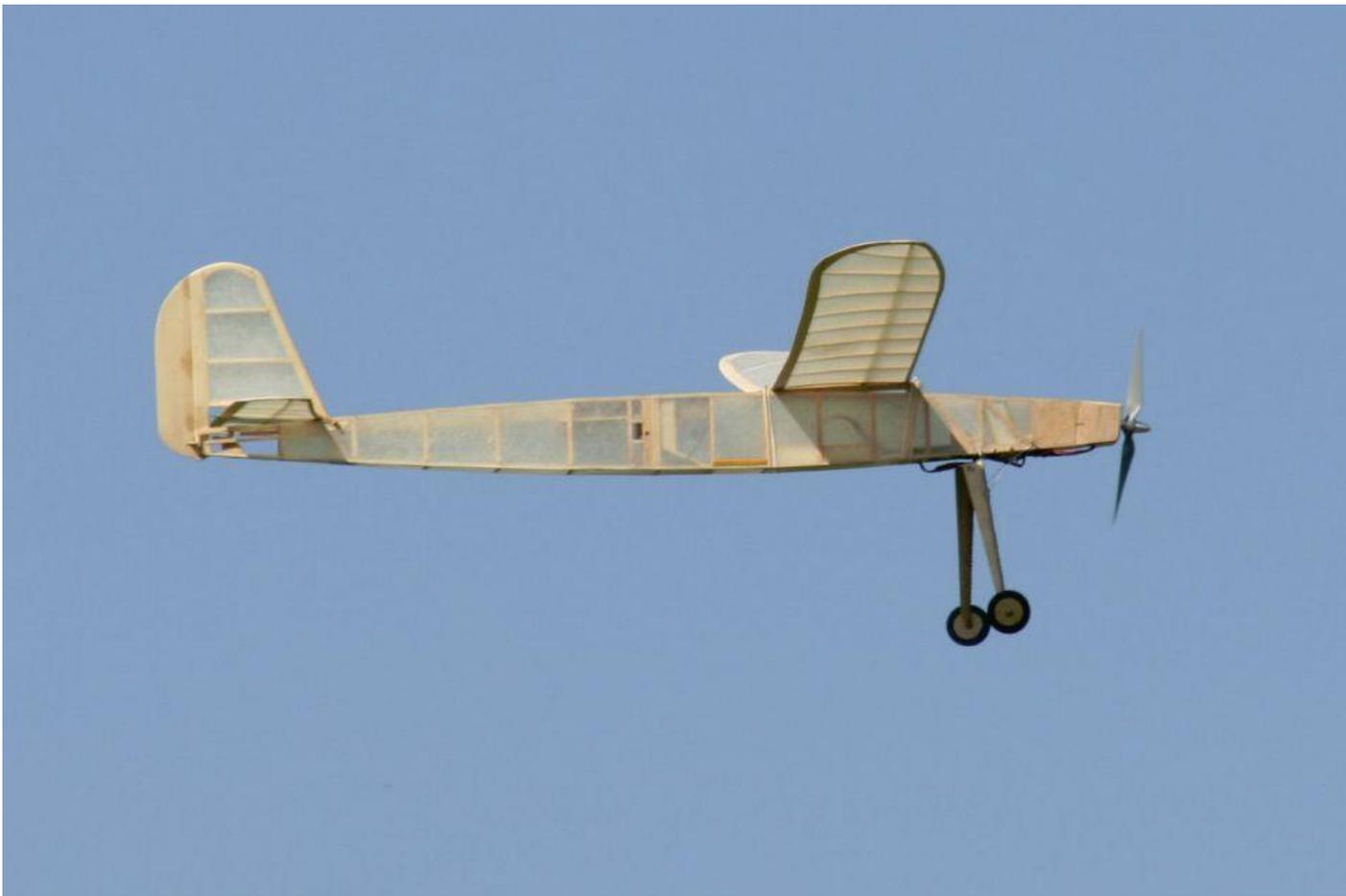


Photo sent by Peter Renggli taken by Urs Brand and Urs Rindisbacher of the MG-Bern









Valerie II by J A Galyer a slick new stunter for .29 - .35 engines from Model Aircraft April 1965



Because of its function, a stunt model has to conform with a certain code of proportions to be successful, which leaves restricted scope for the actual shape of the finished aeroplane. Keeping to this code, however, we can, for instance, change the wing planform from straight taper to elliptical or have wing mounted undercarriage instead of fuselage mounted, wire spreader type. Even a different colour scheme can change the appearance of a model to a certain extent and parts which are not quite so aerodynamically important can be made decorative as well as functional.

Valerie II was designed with these limitations in mind, and confidence in the design was justified, as she has been found to be extremely stable, yet completely acrobatic.

Construction

Commence by cutting out and numbering all parts. Bend main undercarriage and tailwheel wires and bind firmly to F3 and the ply facing to F12 respectively. Make all pivots, bearings and horns as shown. Make fuel tank from tinplate to dimensions given.

Cement bearers to fuselage sides, D1 and add doublers D2 and D3. When dry, cement formers F1, F3, F13 and fuel tank between fuselage sides and hold with rubber bands, check for alignment and leave to dry thoroughly. The wing is built upside down to keep the top surface flat. Place spars S1 over position on plan, and with suitable packing under the trailing edge, cement in all the ribs, checking that they are all at right angles to the trailing edge and the building board. Add the 1/4 x 1/4 in. leading edge, centre section and leading edge sheeting and leave to dry.

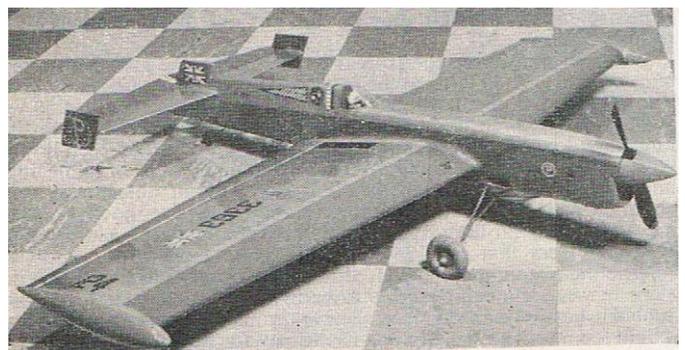
Sand down the flaps and tailplane parts, join the elevators and hinge to the tailplane as shown, using small dowels to strengthen the tailplane fin joints. Join flaps and hinge to the wing. Turn over the wing and cement in the pieces WA and WB and the bellcrank platform, drilled as indicated. Solder leadouts to the bellcrank, but leave the other ends for the moment. Now install in the wing and connect to the flaps: also connect the elevator pushrod to the bellcrank. The leading edge and centre section sheeting may now be completed. Shape the tip blocks, part and hollow out, adding weight to one and drilling the other to take the leadouts, cement to the wing, using the parting line to check alignment. Add the tip sheeting and sand the completed wing to shape. Fix the brass guides and bend the leadouts to form loops. Bind with copper wire and solder.

The completed wing may now be cemented firmly to the fuselage, checking alignment carefully. Replace the small pieces removed from the fuselage and add braces D4 and D5. Thread formers F10, F11 and F12 on to the elevator pushrod and cement in place, now add formers F2 and F4 to F9, checking for any bowing tendency in the fuselage.

Cut out appropriate slot and fix the tailplane assembly, align carefully and connect to the elevator pushrod. Check for free movement. The rear fuselage decking pieces, D6 and D7, centre fin and rudder may now be cemented in place. Bolt in the motor and solder wire across the bolt heads; add the 3/4in. thick nose filler piece, top block and spinner former. Build-in the air duct as shown and cement the bottom sheeting firmly in place. Roughly carve the cowl to shape and cement lightly in place, sand the fuselage to shape, add the cockpit, flap and U/C fairings and then blow off all balsa dust (preferably outdoors!).

Finishing

Give the entire model two coats of sanding sealer and lightly sand with fine garnet paper: then cover with whatever material you prefer, dope and colour to personal choice. Add wheels, prop and spinner (a 2 in. spinner may be used instead of 1 3/4 in. if desired). The model should be flown on 55 ft. to 65 ft. lines.



Gerry Parker Deceased

From Mike Cummins of Raynes Park MAC

We had some sad news today that Gerry Parker long time member and past secretary of the Raynes Park club passed away at 6am this morning after a short illness (Hodgkins Disease) this has shocked many of us here who new him well as an active and energetic modeller and who flew regularly at Chobham Common up to the last.If you could add this information to the latest Sticks & Tissue if possible it would be greatly appreciated as there are a number of modellers that would have known him from Chobham that have moved away from the area.



Cocklebarrow Rallies *Important news*

In 1988 we answered the call for volunteers to run Cocklebarrow and we have been running this event ever since. However, we now feel the time is right for us to bow out and hopefully someone else will come forward to continue this great tradition. The August and October meetings will be our last ones.

Pam and Tony Tomlin have offered to run the Control Tent but are unable to transport and store the extras needed for the Rallies.

If you are interested in helping to run this event in the future please contact Paul and Val either by email howkins776@bt.internet.com or by phone 02476405126. We look forward to hearing from you.

Paul and Val Howkins

A tale of lost and found (Schlosser involved!!!) From Warren brown

On a perfect Sunday afternoon - disaster struck.

My favourite little biplane flew away, carrying with it an irreplaceable 1 cc Schlosser diesel.

Not sure exactly what happened, but the control froze at full throttle with looping gradually becoming a spiral climb drifting slowly downwind.

I watched until it became a tiny dot with occasional sun flashes off the wings, with a sinking feeling that I had seen the last of my Schlosser.

Heard the, motor cut at last but could not see it.

Thankfully I took a compass bearing with my phone.

Plotted the bearing on Google maps, seemed to follow the meandering Yarra River.

The following Tuesday I decided I couldn't say goodbye to my Schlosser without at least giving it a chance, so I arranged a flight from the local full size airfield in a plane not much larger than a model.

First two circuits at the minimum allowed 500 feet (the circuit does pass over our model club) and things looked hopeless.

Then I asked to take it a bit further out, and finally saw a little flash of yellow sitting in grassy bend of the river - lucky or what!

It was lying exactly on my plotted line, at 2 km from the model club.

I took a visual bearing from a distinctive vineyard.

I would have taken a picture, but the little Jabiru plane was so "chummy" there was no way I could get my phone out of my pocket.

(For those interested, the little Jabiru is made in Toowoomba (correction Bundaberg), Queensland and powered by a 2.2L flat four of 80 hp.

With two not so light blokes on board we were very close to maximum take off weight.)

After landing I drove to the intersection of the highway and river to walk down the river.

Phoned the farmer (hay advertised for sale on a fence sign) who warned me about his electric fences (would lay me flat on my back he said) and also that his bulls would likely chase me (they chase him!) so I had better be ready to climb a tree or jump in the river.

After climbing 4 electric fences and staying in the tree line along the river to avoid annoying the bulls, I used my phone to track my progress until I was level with the vineyard, a few steps more and there it was!

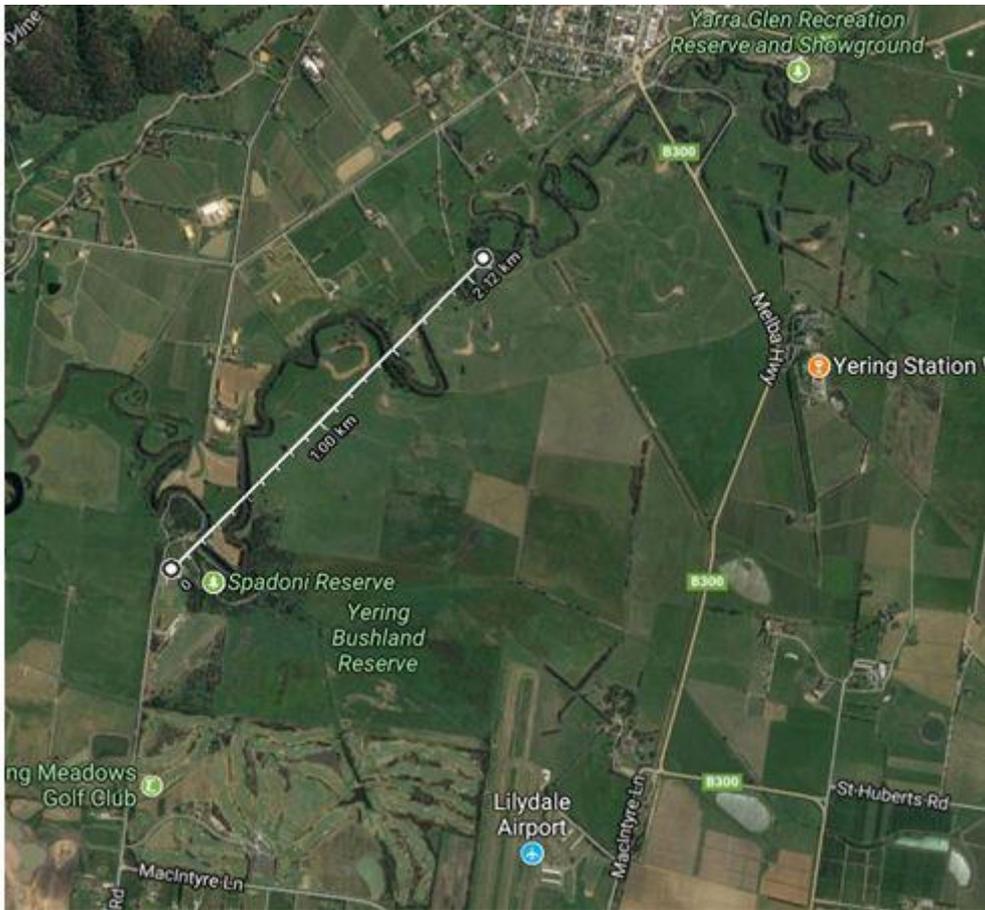
Sitting nicely in the grass without so much as a hole in the tissue.

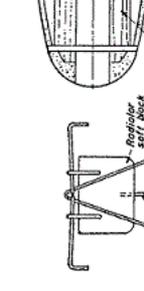
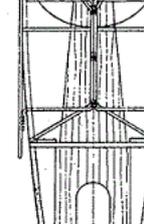
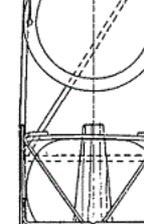
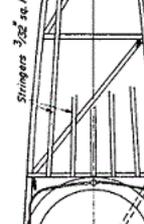
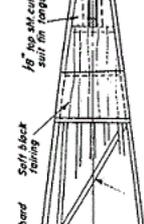
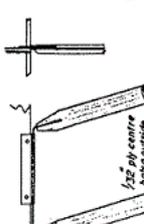
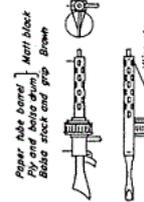
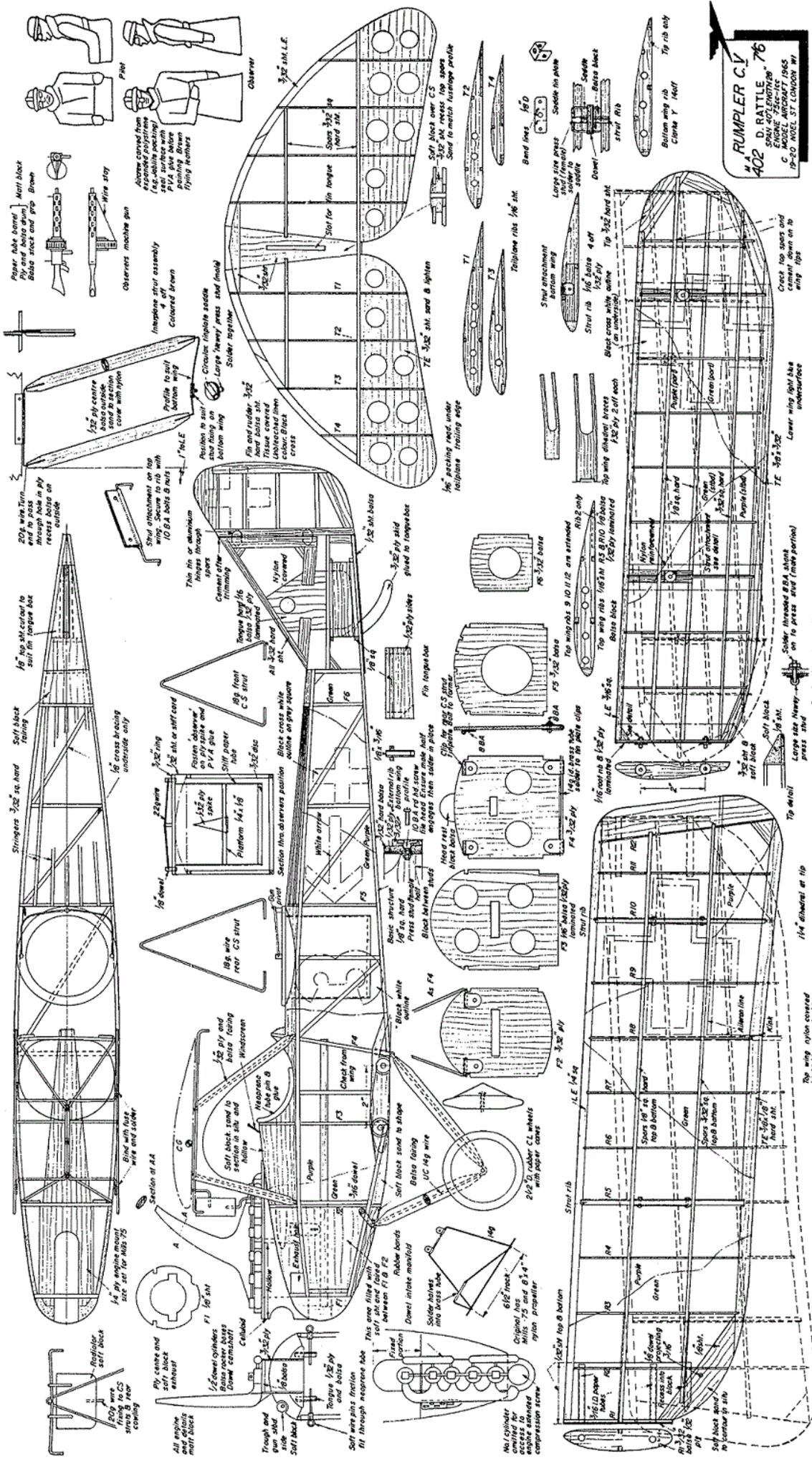
Even from 50 m away the model was hard to see, it would have been hopeless with a ground based search from both sides of the river.

The most hazardous part for the model was climbing back over the electric fences.

To the airfield for a victory photo!

Back home for a post-mortem, battery (main suspect) was flat of course (will be thrown out after testing), receiver worked perfectly but I will throw it out just in case, not worth risking the Schlosser again.





A.A. RUMPLER C.V.
402 D. RATTLE
 SPAN 40 INCHES
 C. MODEL AIRCRAFT 1963
 19-ED. NOEL ST. LONDON W1

Blades spaced from
 expensive polystyrene
 1/8" double packing
 and a surface with
 sand paper
 painting Brown
 flying leathers

Imagined strut assembly
 Coloured brown

Thin tin or aluminum
 shims through
 spars

1/8" wire turn
 end to pass
 through hole in ply
 recess bolts on
 outside

1/8" top sk. cut out to
 suit fin tongue box

1/8" cross bracing
 underside only

1/8" ply
 1/8" wire
 1/8" wire

1/8" wire
 1/8" wire
 1/8" wire

1/32 ply centre
 sand to action
 cover with nylon

Profile to suit
 bottom wing

1/8" N.E.
 1/8" N.E.

1/8" front
 C.S. strut

1/32 ply
 sand to action
 cover with nylon

Profile to suit
 bottom wing

1/8" N.E.
 1/8" N.E.

1/8" front
 C.S. strut

1/32 ply
 sand to action
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 sand to action
 cover with nylon

Profile to suit
 bottom wing

1/8" N.E.
 1/8" N.E.

1/8" front
 C.S. strut

1/32 ply
 sand to action
 cover with nylon

Profile to suit
 bottom wing

1/8" N.E.
 1/8" N.E.

1/8" front
 C.S. strut

Rumpler C. V. An enterprising and attractive free flight scale model for engines up to 1 cc. 40" span by Dennis Rattle from Model Aircraft June 2965



The Rumpler C V was one of the later types of reconnaissance aircraft to come into service on the Western front and was very successful in this role, having an extremely high ceiling which made it very difficult to intercept. Dennis Rattle's very practical F/F model, presented here, bears markings revealed by Imperial War Museum photographs—the white arrow was a unit marking, whilst the figure 3 indicated attachment to the Third Army of 1917/18.

Construction

Fuselage: Start with the sides and build one on top of the other, to ensure accuracy. Drill the "Pop" stud fixing holes at this stage.

Make a sub-assembly of bulkheads 1 to 4 with engine bearer. The latter is shown spaced and drilled for a Mills .75. Some 2-3 deg. left side-thrust can be incorporated when drilling bearers. In making this sub-assembly, use a hardwood glue and bolt the strut and undercarriage fittings to bulkheads 2 and 4 prior to assembly.

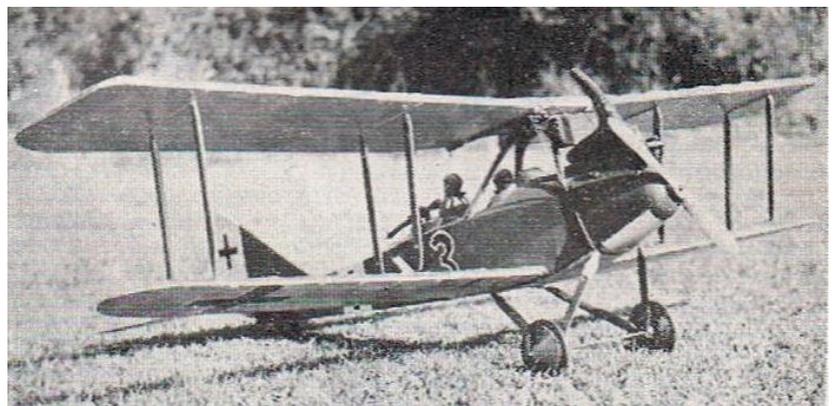
Assemble the sides to the bearer sub-assembly, join sides at rear, adding bulkheads 5, 6. Now add cross bracing on underside and the decking stringers. Complete the rear end of fuselage by adding box for fin tongue; ensure that this box is correctly aligned before fixing and then sheet in the tailplane platform and sides. Locate the tailskid into the bottom of the box.

Some care is necessary when bending the sides to former 1. It is advisable at this stage to assemble the centre section struts into their fittings (bulkheads 2 and 4) and fold them back whilst the soft balsa block is shaped between nose and bulkhead 3. The cockpit coaming is made from thin card. Continuing aft, soft block is again shaped in situ to rear gunner's position. The rear cockpit is a sub-assembly and is offered complete into position in the space between the top ring and fuselage. The side is faired in, using stiff paper. The underside shape between bulkheads 1 and 3 is completed with soft block, shaped in situ. The centre section struts may now be completed, binding and soldering all joints well, after which the fairings are added.

The cowling portion between 1 and 2 must be removed for hollowing and completing to drawing. Part of the dummy engine is fixed aft of bulkhead 2. Note that two Jugs extend below the removable cowling. Two wire pins pass through neoprene bushes (friction fit) in fuselage side and locate in these lugs.

Care taken over the cowling with its large exhaust, the aircrew members, armament and radiator, are well rewarded as the aircraft derives much of its character from these. The undercarriage is straightforward, being hinged on rear legs and secured by rubber bands at front legs.

Wing and tail: The wing and tail assembly are fairly straightforward, and are built over plan in the usual manner. Check "pop" stud positions on lower wing root rib in conjunction with fuselage and ensure firm anchorage of studs at strut positions. Likewise on the upper wing, dowel tubes can be aligned better if fitted in one piece when both wing halves have been completed. When the cement is dry they can be cut between root ribs. Accuracy is important with wing struts and a trial assembly of the model should be made in order to locate pop studs in relation to lower wing.



Fuselage and upper wing covering is in nylon although tissue could be used for the latter. Do not dope or paint excessively, keeping the weight to about 14 oz.

Trim for a flat glide with the C.G. as indicated on the plan. Test flights should be made under low power about 1/16 in. of packing under the tailplane T.E. was required on the original. A turn with the torque (i.e., to the left) is more desirable: otherwise the model is docile.

From Dion Home - USA

Here is a 120" version of Winnie Davis' 1938 design The Big Gull. I maiden it today.

https://youtu.be/0twj_0ekUuQ



From Jud Bock

Thought you guys might like to see a video of a first flight made by a flying pal of mine. Very nice job. He is a good builder.

Subject: Maiden my Sopwith Pup Today - The Video - Nelson

Finally put the 1/4 scale BUSA Sopwith Pup in the air. Today was hot and humid, but winds were down and ideal for getting that first flight on the Pup.

<https://www.youtube.com/watch?v=niWmai0N6n4>

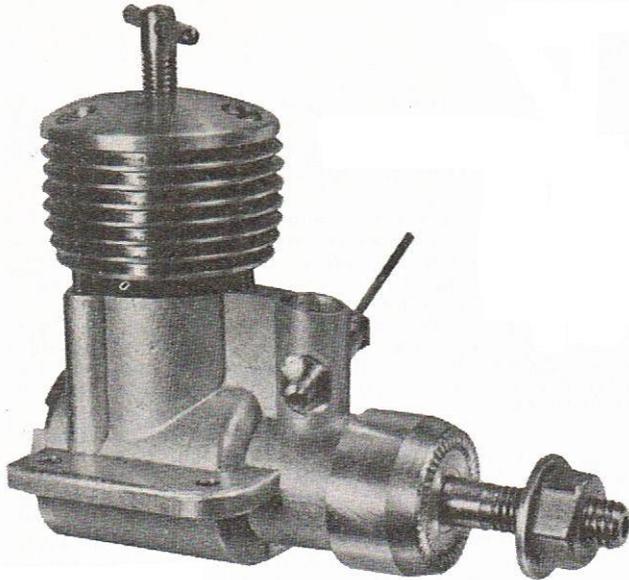
The flight went off without a hitch. The Zenoah G-26 hadn't been run in at least 15 years. With its electronic ignition, fired right up. The Pup was an easy flyer, and the G-26 very responsive. I flew around at 1/3 to 1/2 throttle.

Second flight, Larry Inness launched his Pup and he flew formation until I got tired of that and shot him down. Evident by the smoke trailing from his Pup towards end of the 8 minute video.

Thanks Larry Inness, Larry Woscyna, Rene Mayo, and Loren Blinde for being there and lending assistance. Especially with the great video and photography work!

P.A.W. Special.

Renowned Macclesfield engine repair works produce a high-performance 2.5 cc Diesel – the Eifflaender. From Aero Modeller December 1957

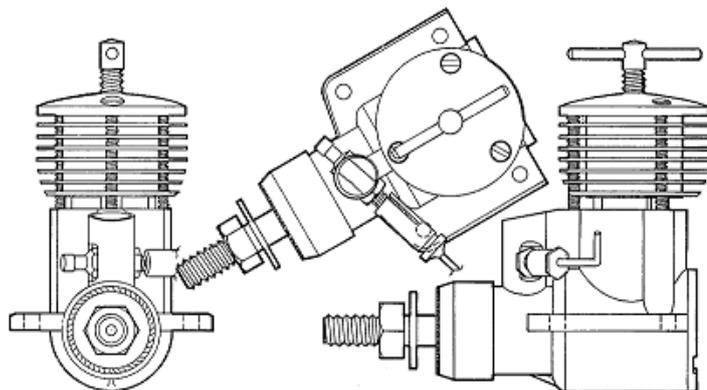


When a man who has dealt with engine repairs, re-boring and servicing for a decade—and remained a power enthusiast all through—turns to the production of an engine, you can expect to find a lot of “know how” built into it. This, in fact, characterised the PAW “Special” which is, in effect, a custom built unit receiving rather more man-hours and individual attention than a normal production engine produced in greater numbers. For this, naturally enough, you have to pay, the PAW “Special” selling at some £2 more than its mass production contemporary. In return we can confidently say you get a very good engine right in

the top class for 2.5 c.c. diesels and one which, because of its rugged construction, should outlast many a model.

About the only unusual feature of the design is the employment of a single ball race for the rear main bearing, coupled with a cast iron bush in the crankcase for the front bearing. This is a very logical arrangement, using a reasonable length of shaft (which the PAW Special has), but needs careful attention to accuracy of fit if trouble at the front end is to be avoided. There is often a tendency, for example, for the shaft to “rock” if the main ball race is a little free and consequently the front end to bind. Such a possible failing appears quite absent on the “Special” and, in fact, Eifflaender goes to considerable pains to ream and lap the cast iron bush and lap the face for the ball bearing to achieve optimum running fits.

The crankcase unit is a substantial gravity die casting made from a typical simplified pattern (i.e., none of the undercuts and embellishments commonly employed on pressure die-cast shapes). The cylinder (liner) is of steel with 1/16 in. walls fitting snugly into the crankcase to locate against a narrow flange, this lower section of the crankcase being turned out to fit. It is encased by the turned dural jacket and the complete cylinder unit held down by three 6 B.A. screws engaging in drilled and tapped holes in the crankcase unit.



Since the porting is symmetrical, the cylinder can be assembled in any position although the logical (and obvious design) position is with the pillars between the exhaust ports opposite the screws. This gives three alternative positions for re-assembly, should the engine be dismantled. On the basis that once an engine is run-in the cylinder position should not be disturbed (circumferentially) it is a wise precaution to mark the cylinder before taking it out, so that it can be put back the same way round as before.

Whilst the exhaust porting of the “Special” is quite conventional—three milled slots in the cylinder wall, giving some 200 degrees effective opening—the three transfer passages are unusual in that they are wide and almost circular in form, but of relatively shallow depth. These are located staggered to the exhaust slots with their peaks (opening points) extending just above the bottom level of the exhaust. In effective width they are appreciably wider than the solid area between the exhaust ports (circumferentially). Presumably cut by a form of end mill, forming the transfer passages would appear quite a tricky operation.

Both the piston and contra piston are of Brico cast iron lapped to fit the silver steel cylinder (liner). Fit of the contra-piston was just right on the test engine—easy to move and “come back” for adjustment, yet positively locking at all speeds with the engine hot or cold. Piston fit in the cylinder was siso excellent. The piston is relatively shallow in depth, quite light and has a conical top. The silver steel gudgeon pin is

press fitted, the turned Hiduminium RR.56 connecting rod having a ball shaped upper end and generous bearing area. The big end bearing is fed with oil through a hole drilled in the con. rod, both big and little end fits being excellent and retaining this fit after several hours running time. Gudgeon pin diameter is 5/32 in. and crank pin diameter 13/64 in.

The crankshaft is of high tensile steel, 3/8 in. diameter stepped down to a B.S.F. threaded length for the propeller nut. The web is 5/32 in. thick, angled towards the top to give a counter balance effect, and the web diameter relatively small (13/16 in.). The crankpin is turned integral and partially drilled through. The crankshaft has a 7/64 in. hole drilled down its length slightly past the intake port, which is elongated in form 7/16 in. long and 3/16 in. wide. The corresponding hole in the bearing sleeve is appreciably wider and slightly offset against the direction of rotation to provide longer and better induction timing, taking full advantage of the thick bearing and long shaft port. The cast iron bearing sleeve itself is of substantial thickness (1/16 in.) as is the surrounding wall of the casting (3/32 in.). The intake is a simple "straight up" tube, narrowing slightly internally to a throat. The top of the intake is barely angled off, the whole backed up by a really solid section which takes one of the cylinder hold-down screws. The spraybar unit is of brass, angled back to the left (which is a preferred position for side-mounted motors on control-liners).

The propeller driver is turned from dural, bushed with a split collet to grip on the plain part of the 1/4 in. diameter shaft length. Unlike the usual washer form for the driver, it is cup shaped so that it extends over, and covers, the front of the crankcase bearing—looking rather like a ball race housing but, of course, rotating with the shaft. The threaded length of shaft protruding is of sensible length to take a wide range of propeller pitches and the nut of substantial proportions.

Starting characteristics are truly excellent for a high performance engine, finger choking being adequate to prime. There is no vicious bite even on six and seven inch diameter propellers, provided the compression is backed off and a generous prime is given. Adjustment, we found, tended to become slightly critical with increasing speed. That is, above about 12,000 r.p.m., spot-on running needed fairly careful adjustment of the needle valve and compression to achieve. The "Special" ran strongly even if off the best setting, but not perfectly smoothly and giving its best performance. For example, it was readily possible to achieve around 14,700 r.p.m. with a 7 x 4 Stant propeller with the "Special" running strongly, but roughly.

Very fine adjustment of the needle valve then brought this up to a steady 15,400 r.p.m. and a healthy note. This characteristic is a little peculiar. It gives the effect of slight lack of compression, but advancing the compression adjustment does not cure, and indeed usually slows the motor. A slight addition of nitrate to the fuel effects an improvement. The makers, incidentally, do not appear to place great importance on fuels used, but do specify the following for their standard test mixture—

Castrol R. 15 per cent.

• Castrol XXL 15 per cent.

Esso Blue (paraffin) ... 30 per cent.

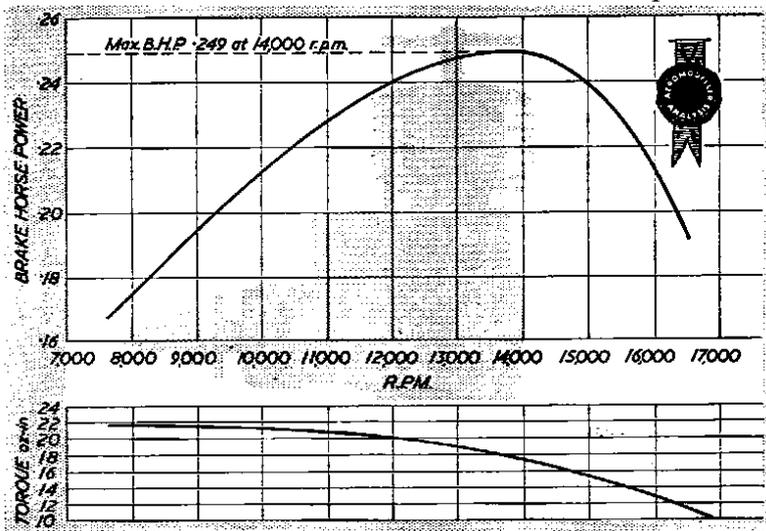
Anaesthetic ether .. 38 per cent.

Aniyl nitrite 2 per cent.

Mercury No. 8, as a comparable fuel, contains the same percentage of amyl nitrite, fractionally less ether and more paraffin.

Peak B.H.P. with the test engine was achieved at just on 14,000 r.p.m., the actual power output figure of .1 B.H.P. per c.c. being very good indeed and certainly well into the top performance class for engines of this size. Smooth running and high torque output are re-tamed well down the scale, so that the "Special" can equally well drive a large diameter propeller at moderate speeds, if desired. It is also capable of handling high pitch propellers for control line work, although in this field its fuel consumption is somewhat on the high side.

For free flight, we would favour an 8 x 4, 9 x 3, or 8 x 3; and a 7x9 or 8 x 6 for control line.



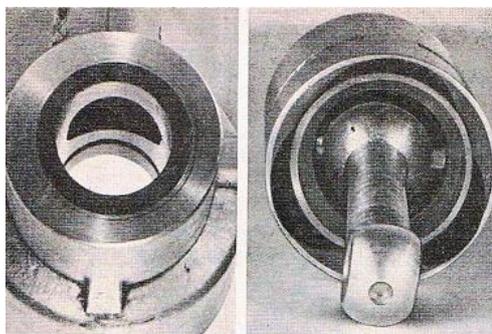
One overall feature we can commend for control line work—a real ruggedness about this engine, with the widest and longest mounting lugs we can remember for its size. Also, we imagine, it will not be particularly critical about tank position for tight manoeuvres.

PROPELLER—R.P.M. FIGURES

Prop dia x pitch	RPM		Prop dia x pitch	RPM
9x3 Tiger	11,500		7x9 Trucut	10,400
8x4 Tiger	14,200		8x4 Trucut	13,500
8 x 3.5 Tiger	15,000		8x6 Trucut	10,200
6x9 Tiger	14,500		8x8 Trucut	8,200
9x4 Stant	10,300		8x10 Trucut	7,700
8x6 Stant	10,900		9x4 Trucut	10,900
7x6 Stant	13,600		10x4 Trucut	7,900
7x4 Stant	15,000			
7x3 Trucut	16,400			
7x4 Trucut	15,400		Fuel used	Mercury No 8

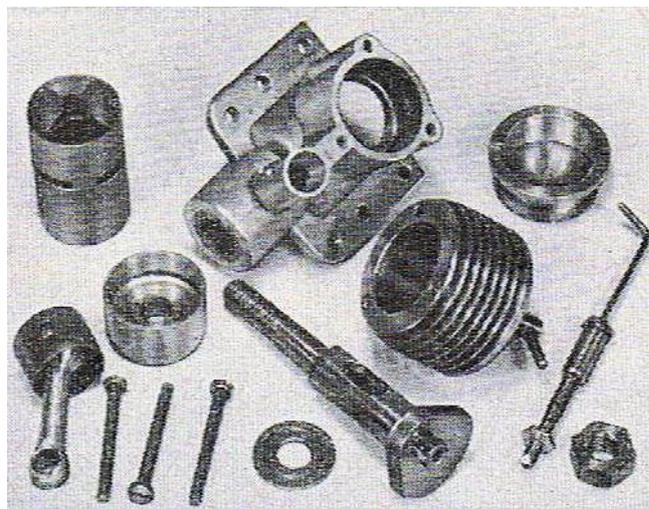
SPECIFICATION

Displacement: 24S6 c.c. (.1498 cu. in.)
 Bore .597 in
 Stroke: .335 in.
 Bore / stroke ratio: 1: 109
 Bare weight: 4 7/8 ounces
 Max. B.H.P.: .249 at 14,000 r.p.m.
 Max. torque: .22 oz-in, at 7,000 r.p.m.
 Power output: .101 B.H.P. per c.c.
 Power rating: .051 B.H.P. per ounce



Material Specification: .

Crankcase: gravity die-casting in light alloy. Cylinder (liner): Silver steel, ground and lapped
 Piston: Brico cast iron, ground and lapped
 Contra piston: Brico cast iron, ground and lapped
 Crankshaft: high tensile steel
 Connecting rod: Hiduminium RR.56
 Bearings: rear, Ransom and Maries 3/8 in. ball race front, press-fitted
 Brim cast iron sleeve
 Cylinder jacket: turned dural
 Back cover: turned dural
 Propeller driver: turned dural
Manufactures:
 Progress Aero Works,
 Chester Road, Macclesfield
 Retail price £6 10s. (including p/t.)



From Maris Dislers in Oz

Here's my latest model. A mini Veron Cardinal at 24 inch wing span. Built to Boddo's Model Flyer plan. Didn't want to paint those lovely hollow aluminium wheels, as they're rarely seen anymore. I've fitted 2 channel wireless, rescued from a R/C helicopter toy, just to keep it from flying away and up close where I can admire it. Weighs 108g. Would not like to lose this particular Clan .24cc diesel, as it's an excellent runner unlike some others. You can read my test report of the engine on Adrian Duncan's Model Engines website.



From Gary Hinze

Hello Aeromodellers,

I have posted the results of the 25th Worldwide Postal Contest here:

<http://www.endlesslift.com/contest-report-25th-worldwide-postal-competition-2016-2017/>

I have posted the announcement for the 26th Worldwide Postal Contest here:

<http://www.endlesslift.com/26th-annual-world-wide-postal-competition-2017-2018-including-sky-bunny/>

I have incorporated the Second Foam Plate Rubber Band Powered Airplane Contest into the 26th Worldwide Postal Contest with suitable rule modifications here:

<http://www.endlesslift.com/the-second-foam-plate-rubber-band-powered-airplane-contest-2017-2018/>

Radar - A safe, steady single channel flier — 53" span for, 09 to 15 size engines, this well tried model really comes in on the beam! by Derrick Courtney from Radio Modeller July 1971



Way back in 1965 I had a single channel kit model—the H-Ray - powered by a 2.5c.c. diesel. This was quite a hot model and, after a tremendous amount of exciting flying, we tried towing streamers, for amusement of ourselves and our spectators. With a little peaking up of the engine, and a few trim adjustments, we had great success—finishing up with 250ft. streamers - and put on several shows at local rallies. However, it was this streamer towing that eventually put an end to the H-Ray. After a rather ropey launch (no names—no recriminations!) the prop somehow or other managed to cut the thread tow-

line attached to the streamer and, without the load for which it had been re-trimmed, the model went zooming up into the great blue yonder—and no amount of frantic button pushing would keep it down. So it was a case of “back to the drawing board,” and that’s how Radar was born. John Fenner, clubmate and local model shop proprietor, had a good deal of influence on the design, inasmuch as he has lots of experience and is a great believer in the sort of negative motto that “lots of weight does not necessarily make for bags of strength,” so it was planned to keep Radar pretty light. In fact, the prototype only goes to 32 oz. all-up—including radio gear and Deacs. (I always feel upper class when I say “Deacs” and not just “batteries.”) I think you’ll agree that this isn’t bad for a model of 53in. span, though you might feel that, despite the light loading, it might be asking a bit too much of the little O.S. 10 we decided to use. Not a bit of it! She performs like a dream. You’ll have read before how good this motor is for throttling, and it’s been proved yet again with Radar, coming in very handy in time-and-spot landing competitions—and, of course, ordinary spot landing, too. The glide is a very floaty one, of course, so you can get plenty of practice in with that quick-blip or whichever method you use to actuate the throttle. It gives you plenty of time to think, and to plan your approach pattern.

And so the plan was eventually drawn up (on our hall wallpaper) and is passed on now for those single channelers (most of them?) who want a good, steady-flying, reliable model, without gadgets or gimmicks, and one which does not just fall Out of the air when the motor cuts. Building it is all dead simple, and goes something like this . . .

CONSTRUCTION

Fuselage

Build the radio compartment first. This is a” box “ comprising formers F3, F4 and the 3/16 -in, doublers. Now glue the engine bearers to the 3/16 in. sheet nose doublers and put both assemblies aside to set, while you cut out the fuselage sides from tin. sheet. The nose-assembly and the radio compartment are next glued together, as shown in the perspective sketches on the plan and, once again, left to dry out thoroughly. Now lightly score the fuselage sides at the positions of formers F3 and F5 (see plan view) and gently crack-bend them to the required angles, before gluing the sides to the completed assembly. Fit formers F6 and F7, making sure that the fuselage sides are not curved, but remain flat as per plan view drawing.

When all is dry, cover the top and bottom with 3/32in. sheet—cross-grain—not forgetting the 1/4in. ply under carriage support and dowel gussets.

Add the fin, dowels, etc., after covering with coloured tissue, doped on with clear dope.

Flying surfaces

The wings are very simple, and there is nothing out of the ordinary at all about their construction, except perhaps the lack of gimmicks. You may find it a bind cutting out all those riblets, but do not omit them—they help preserve the proper leading-edge section. Build one panel at a time (the right-hand one is shown; for the left-hand one you can either put carbon paper under neath and go over it with a pencil, or else use a” transparentiser “—oil, paraffin or similar—so that you can build on the back of the plan.)



Pin down the lower main spar, trailing edge, and rear spar. Now glue the ribs and riblets in place, after which the leading edge and the tip parts are added. Finally add the top spars but not the centre-section sheeting. Repeat all this for the second wing panel, then join the two together with the three 1/16in. ply dihedral braces. You can leave the second panel still pinned onto the board for this if you like—it's easier to fit the dihedral braces to the free "panel first, and let them set, before offering up the braces to the fixed-down panel. Put the odd box or dope can underneath the wing panel, so as to give 6 in. between tip and building board. This will give the required 3in. under each tip when removed from the board. Now you can sheet the top and bottom of the centre section, as shown on the plans, and finally add the 1/16in. ply trailing edge strengthener at the centre section. This is very important, to prevent the wing-



retaining bands from cutting into the trailing edge. (You'd be surprised how easily rubber bands can chop a wing in half, once they get started!)

The tailplane is a simple structure, from 3/16in. sq. balsa—doubled up at the trailing edge for strength. Just round off the corners—don't bother to try and get a streamline section or you will weaken it too much, and it's a "flat plate" section anyway.

You may feel you would prefer to make the tailplane completely from 3/16in. sheet, but, if you do, make sure that you use the softest, lightest sheet possible, or you will find that you have to add some ballast under the engine. In any case, you may find that sheet will warp more readily than the built-up structure!

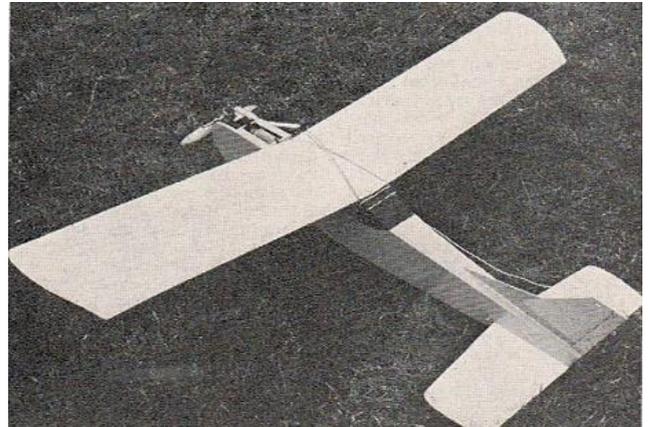
Mind you, don't go slapping on coats and coats of shrinking dope, or you will be in trouble. Two coats of medium (50/50) dope thinners mixture should be sufficient, whether tissue or nylon covered, and leave the tail pinned or weighted down to the board for a day or two afterwards.

The fin is from 3/32 in. sheet, with the grain as indicated, well cemented to the fuselage. You can add some triangular fillet at the join, if you are anxious about this, or have the sort of flying field that tips your model over on its back every time it lands ! (If you do, then you've probably long since taken the line of least resistance and adopted the habit of flying without an undercarriage).

Give the entire model a coat of clear polyurethane, or other fuel-proofer of your choice, and you are ready to install the engine, radio etc. I will not detail any of this, because it will depend upon what you are going to use. Just one word—don't forget the little bit of plastic sleeving over your 18swg. torque rod, where it sits inside the rudder yoke. This will eliminate what can otherwise be a very nasty source of electrical "noise."

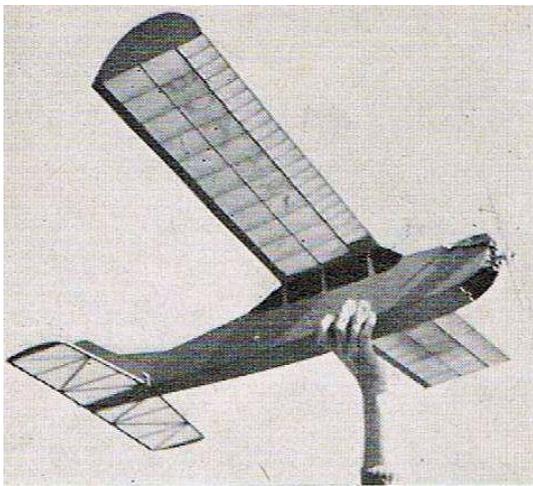
Trimming and flying

You have been told many times before in Radio Modeller to check everything out, but just for those of you who are new readers this month, I will give a quick run-down. First, centre of gravity; this is shown as the balance point (a little arrow under the wing) on the plan. If the model balances at a point further back than this, then you will have to add some weight under the engine. Like lumps of lead, pieces of old cement tube, etc. Next check the wing alignment; make sure that the incidence matches the plan, and that the distance to each tip from the tip of the fin is equal, and that there are no warps. Do the same with the tailplane. If you detect any warps, hold the offending surface a foot or so in front of a radiator (having switched same on, of course !) for a few seconds, twisting in the opposite direction. Then walk away, holding the twist until the structure has cooled off. (You can do it to music if you like). Don't hold too near, however, or it may burst into flames!



You will have been checking all your radio gear like mad, so now make sure that there are plenty of turns on the escapement rubber (if you are using a rubber-driven escapement, that is, and not a motorised actuator) and that it all works properly with the motor going, and the transmitter a respectable distance away. Good. Now stop the engine, fill up the fuel tank and fire up again. One final check—to make sure you switched on the receiver— and then you can launch the model, or have a stooge launch it for you.

I always trim for a very gradual left turn, both on power and on the glide, which, if uninterrupted (by my thumb on the button) would give a circle of about 1/4—mile diameter. You can then easily fly a straight path by pulsing “rights” every so often. A lot of fun can be had in flying straight up wind until you can hardly see the model, and either the radio range gives out (not nearly so likely these days as it was a few years ago !) or your nerve does, In any case, Radar will come back as though on a beam—and now you can see where the name comes from. (I hope my wallpaper does the same thing, as I want to finish the hall !). Radar is an ideal model for spot-landing, or touch-and-go, but keep her well up wind while the power is on. Mind you, winds present no problems as Radar really thrives on conditions of either calm or gale force (well, almost)—and my prototype is still flying, to prove it. With practice, you’ll be able to perform rolls, reversals, Immelmanses! And very pretty stall-turns and loops if you are persistent, and lucky. Radar is a real floater, so if you run short of fuel, or cash, you could even try a bit of slope soaring (I did, honest !) —oh! the tightness of us Tom Thumbleians!



Prototype was originally tissue covered, and this shot shows the construction of the flying surfaces to good effect. (Also, that the designer, like many others, sometimes dispenses with the u/c for rough-field flying !) The model got a bit tatty over the years, so has now been re-covered in Solarfilm, as seen in other pictures.

From Stephen Winkworth (Follow on from last month)

I think solar power will eventually come to the model aircraft world in a more usable form than at present. Anyone interested should try looking at the Bloomberg YouTube on the Airbus solar-powered aerial platform, designed as a cheaper alternative to satellites. You can see them building the model (pretty big by S&T standards) and covering it with a solar film that looks not much heavier than the stuff we know as Solarfilm! Whereas here am I struggling with tinfoil backed panels that weigh 100gm of my model's 330gm overall weight! Anyway, some good news at last: the beast can be made to fly on solar power. Modellers reading between the lines will notice that I don't say anything about the landing. The truth is that I am not used to flying at midday with the sun in my eyes and I lost it for a while, only to see it nose dive into the ground. It is currently being repaired. Here is my letter to the supplier of the cells, David Garlovsky:

The task of developing a small flying model based on your SHEEP cells continues to fascinate and aggravate in turn!

The aerodynamics of my design are not user friendly. The problem lies in the centre of gravity, which is higher than ideal, leading to a loss of pendulum stability; Moreover, owing to the combination of the weight of the motor at the trailing edge of the wing and the hundred gram weight of the cells themselves - all of this behind the centre line of the wing - the CG is not only higher than ideal but much further aft. To bring the centre of gravity to the normally stable position of roughly one third of the chord from the leading edge would involve adding a weight in the aircraft's nose almost as much as the weight of the cells themselves.

These facts led to the choice of a balance point behind the centre of pressure, with the tailplane contributing lift to counteract the nose-up rotational moment of the wing. A side benefit is that the overall loading per unit area is reduced. But the model's ability to self recover from extreme positions and turbulence is reduced, as there is none of the automatic increase in pitching moment which occurs when a non-lifting tailplane suddenly acquires a positive angle of attack in a near stall, for instance. In our model there is a real risk of the tailplane itself stalling in such a situation. In a dive the tailplane of our model will continue to lift, like any lifting section, until its angle goes several degrees negative, so any corrective effect will be weak and non-linear. The tailplane will then, as the dive steepens, soon reach negative stall and cease to have any stabilizing effect. Having said that, our model is still controllable provided it is not allowed to reach extreme positions. And in calm air it is stable.

All this sounds like bad news, but adds to the interest of the challenge. Now for the good news. On July 18th, a day with an unusual light south wind and only slightly veiled sun, the model flew for several minutes under solar power, the cells being backed up with a small lipo battery in parallel to enable the radio to continue operating during intervals of lower solar flux (e.g. while turning away from the sun). The ancillary battery is of small capacity (250 mAh) and is further hampered by a 1.5ohm resistor in series, so that it is not able on its own to provide enough power to fly the model, but is still able to operate the servos.

The flight consisted of three or four wide circuits of the field, slowly gaining height to a maximum of around 60ft. This success must be set against the failure to perform during the previous Test of June 20, when the model tried to fly nose high and merely mashed into the ground. The difference is easily explained. The June 20 test followed some trials during which the thrust line had been progressively modified.

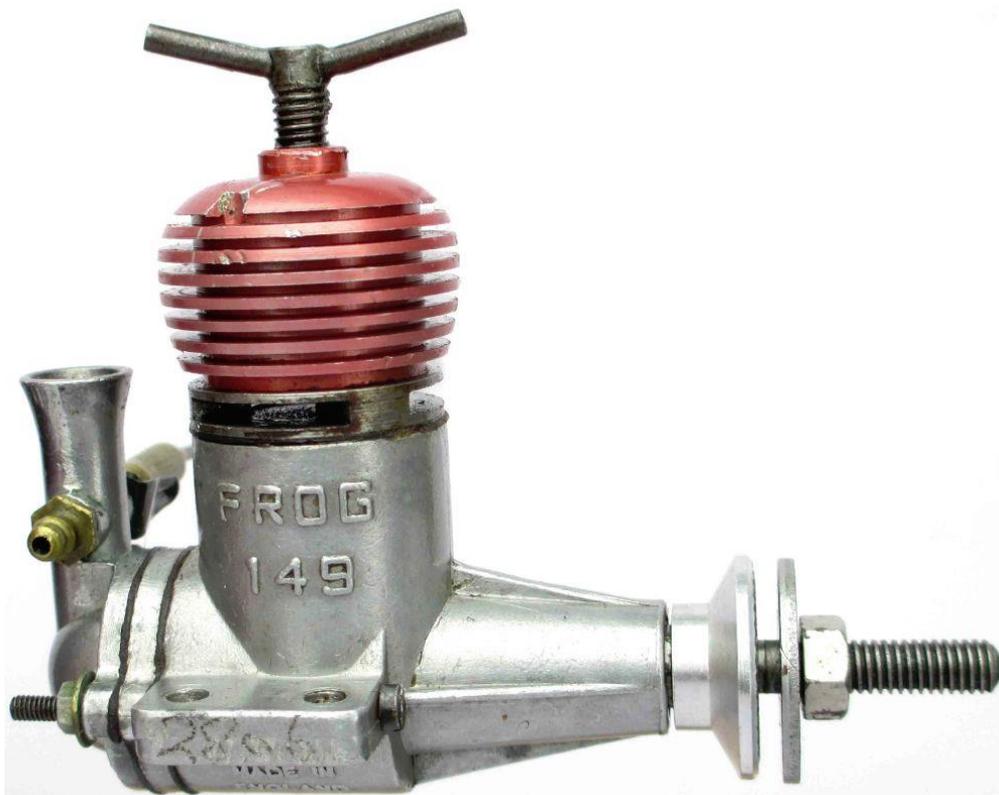
Just as the lifting tail setup is only marginally stable, so any pitching moment introduced by the thrust line will easily overcome the delicate balance. When first tested there was an appreciable nose-down moment as power was increased, so I had added a few degrees of down thrust to bring the thrust nearer to the centre of pressure. But I had overdone it. There was now an upward pitching moment, far in excess of what the tailplane could control, and the model tried to fly grossly nose-up, with greatly increased drag, consequently mashing into the ground. Further lipo powered tests in calm evening air with reduced down thrust enabled me to optimise the angle so the model was able to fly on its designed power allocation.

Some celebration is now in order: the objective has been achieved. An even more convincing achievement would be to eliminate the ancillary lipo altogether, substituting a 4.8v rechargeable of say 150 mAh capacity. I am not sure how that would interact with the electronic controller for the solar cells. Would they 'fight'? If the controller lost power from the sun, would it try to milk the 4.8v rechargeable, or conversely in full sun would it try to charge it?



From Bill Wells

I searched around to see what pictures I had that would bring back memories of the past. Perhaps it was that engine a reader always wanted but like me couldn't afford. Perhaps it was that engine that was used in a particular model. No doubt readers will soon tell us or send in pictures. So this month the Frog Vibramatic.

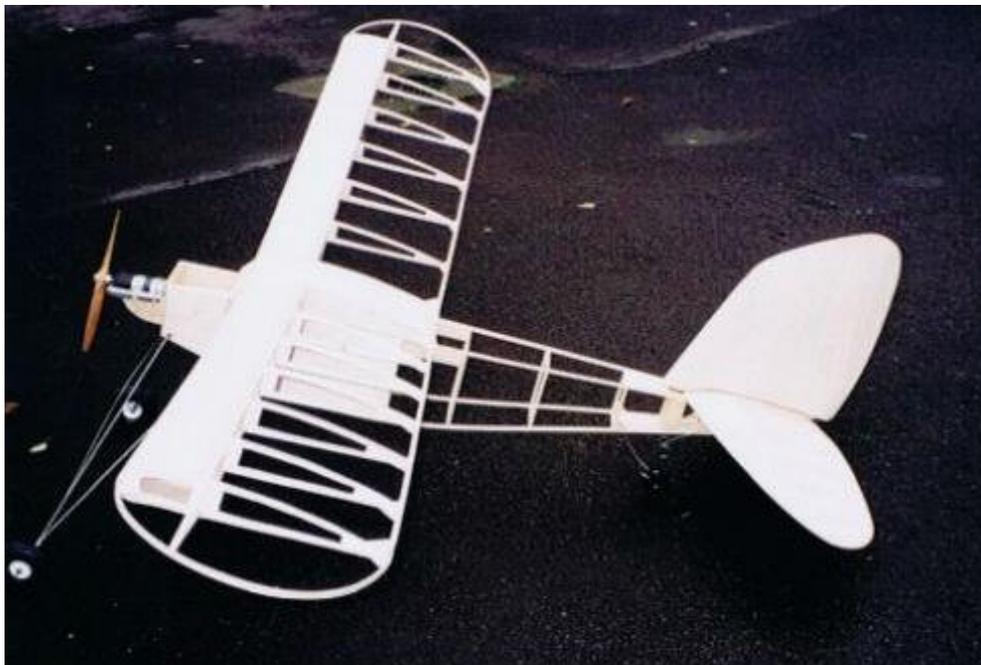


Nostalgic photos kindly sent by Tony Penhall

(Wording is as on photographs written at the time. These photos have appeared in SAM35 speaks etc)



Here's Noel Barker 1988, with his 'Vulcan' prior to its demise due to a little pilot error, Noel says he may yet build another of this fine D A Russell design.



"Skyrocket" Built and flown by, Henry Grocock a New Zealand Modeller from my plans.



Noel Barker with his Denny plane Junior at Weybridge nr Guiddford



Noel's Dennyplane again



*"Porlock Puffin" C E B design 1936 by Charlie Bruee USA. Atom engine
Plans for model are available from Tony*



Charlie Harris at Old Warden with Bowden design "Swallow"



Promethius. By Gil Harris. An original model restored by Mike Beach previously in the hands of Harris's friend John Frost. Comet 18 engine now in my Skyrocket.



Promethius picture shows Harris petrol engine. The original set up.



Beautiful Premier Lion seen at Midlands meeting Higham Ferrers





Forster's Neptune taking off in Canada (Built form Tony's plan)



Biggleswade Common before we were prohibited from use of the place for modelling!



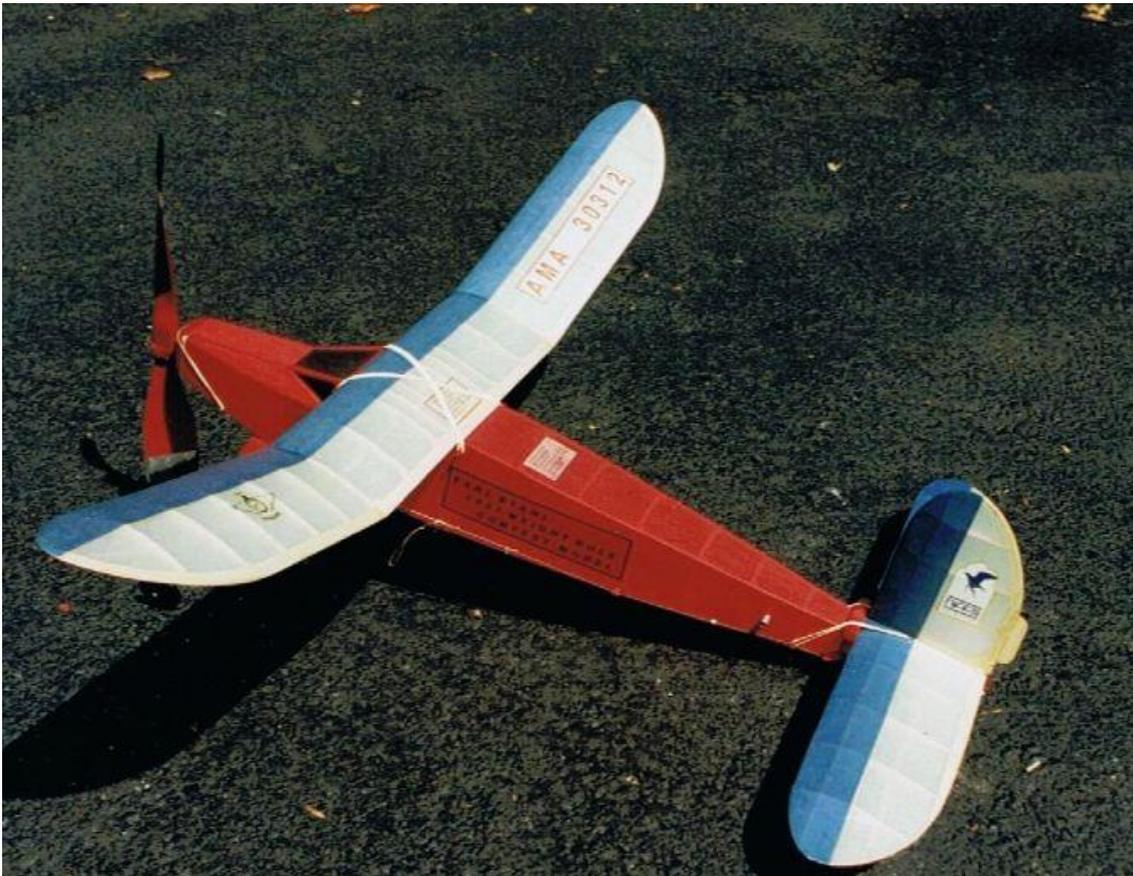
Buccaneer. John Howse built this example with a Brow Junior I found for him. Bless him. He was a very good pal.



Richard Bevin's model



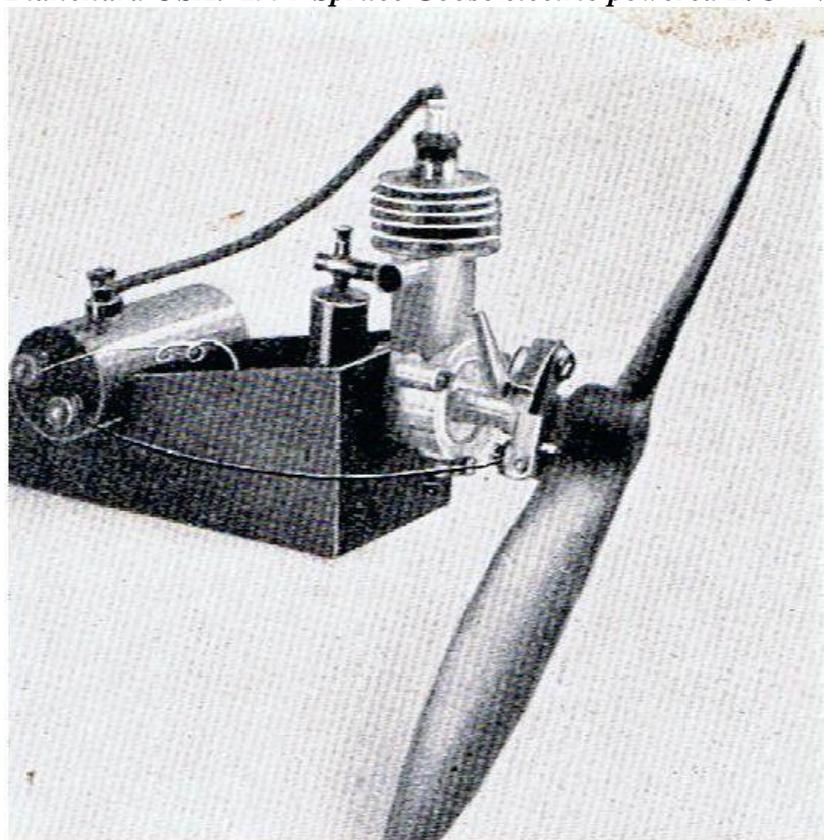
Michael Barton. Builds the Trevithick Monoplane from my research and plan. Lovely flyer!



From America, looks like a Korda to me. Possibly Seattle C1996?



Woody Blanchard USA. 1997 Spruce Goose electric powered R/C – WOW!!!



The Grayson "Gnome"



Skyrocket. Designed by A E Brooks for the Leicester MAC 1935.

This is the replica of my late father's (E G Penhall) who won the Southern Counties Challenge Cup for petrol models at Gosport Hampshire on June 5th 1938 with his 18cc Comet engine Skyrocket. I would have loved to have witnessed the competition, pity I was only 3 months old then – My brother 8 years my senior saw it all! Lucky devil.

Showscene Dave Bishop.

My favourite place to visit for a wholesome weekend is Old Warden where three individual flying events take place each year under the name of Modelair. The latest (middle) one was on over the weekend of July 22-23 and it had a mixture of weather including some strong rainy spells that soaked the passageways in one of the hangers. That necessitated a team of Shuttleworth people with mops and buckets working flat out to clear gallons of rainwater from the walkways. When the rain ceased, flying recommenced and the restaurant was packed throughout the weekend with more customers than I have ever seen at that place. The strong wind direction was straight along the radio control section and it played merry heck with my digital microphone when I was recording interviews and photographing some of the pilots and organisers. Consequently (and please excuse me if there are please) a few possible errors in my report of a cracking weekend of continuing friendship amongst so many wonderful visiting acquaintances from all over this and other countries.

Let me set the Old Warden scene because it is not a show weekend at all but hundreds of modellers gather there each time not only to fly their latest creations but also for a catch-up chat with friends made over many years. They seem to vary in age from the very young, to people as old as your scribe. If you are looking for a modelling trade bargain, Old Warden is the place to go. It caters for every discipline from free flight to control line, to radio assist and radio control. This last weekend was especially programed for Scale models. There were multitudes of cracking aeroplanes there that were spread all over the whole airfield. Starting at the beginning I walked to the control tower to take a look at a scale silver and blue coloured autogyro, built by Trevor Taber who came from Herts. His other interests were in way back free flight rubber duration models such as the Keil Kraft Ajax, Contester, Competitor and also the SAMS organisation. He pointed out to me three other beautifully built scale control line models namely an Antonov AN2/3 Colt, an all-black Westland Lysander and a camouflaged Westland Whirlwind. The latter was powered by two cracking Oliver Tigre motors. Another free flight couple of chaps enjoying themselves were John Foster from Enfield with his electric 30" wingspan Poppet being helped by his modelling pal from Mauritius, Mevin Daoappadu.

Another popular "regular" at Old Warden was the well-known and pleasant Rick Morris, who is an ex senior airline captain with over 21,000 hours in his logbook. Rick had a blue and yellow modified Tomboy

that he named “Tomby” because he had tried flying it with an added extra top wing making it a bi-plane. “It never flew properly” said Rick, so he removed the top wing and it “flew like a dream”. The power up front was a PAW diesel and one could see by the twinkle in Rick’s eyes, that he was more than pleased with the result. Another modeller was Glen Tennant who came from Henfield in Sussex, the home of Alan and Freda Head of Soar Ahead Sailplanes. Glen had an all yellow Mills diesel powered model Simplex built from way back from an Aeromodeller free plan. He reckoned that a 20 second engine run was about right for this doped nylon model. He had been in aviation all of his life and flew his own full sized Piper Tri-Pacer aeroplane from Shoreham airport. He said he knew Chris Foss of Wot 4 and other designs fame. (Which reminds me that there were many enquiries to me as to how the AM editor Andrew Boddington was? My reply was that Ken Sheppard had completed his “fill in” August edition and he (Ken) didn’t know how many more times that he would be continuing the job.) All the best Andrew and we are all thinking of you.

It was nice to see a father/daughter duo there in the Free Flight area with a whole box of very nicely built models. They were Michael and Caroline Carpenter (who has a ten month old son) who had been coming to Old Warden for many years and despite the strong wind they were having a good time with the many models they had brought along with them. Michael, a retired member of the House of Commons, had a model V1 Doodlebug and Caroline a 1930’s model racer named Chambers Maid, complete with 4 strands of rubber for power. Your scribe was shown a very nicely built model Saab J29 designed by Ray Malmstrom and Jetex powered, that Michael had in his collection. Another friendly chap was Steven Harvey from Towcester who had a Tomboy with a DC Dart diesel up front and also a Tri-Ebenezer that had a similar motor.

A trio of flyers were Steve Card with his “father” and his grandson Leo. (A windy and hard to decipher recording, - sorry). They came from Wickford where Keil Kraft existed way back. Steve had been a policeman for 30 years and he was holding a beautifully built Keil Kraft free flight Competitor. His grandson had a Falcon chunky designed by Bill Dean. The other member of the trio held a 30” wingspan Bugaboo with a DC Merlin up front that he had found in his lift and brought to Old Warden for the weekend.

On the radio side (or the far right hand end of the flight-line) there was a very generous line up of Scale models with the same group of Modelair team of helpful and very friendly chaps. The Croydon and Caterham modellers had come up from the south to do the usual yellow jacketed marshalling of the generous flying slots. And there was a “secret” piece of judging going on as well that determined the eventual winners of various annual Scale trophies including Roger Godley who was the winner of the huge Shuttleworth Selection Trophy with his fully detailed De Havilland Hermes Moth. All entrants to this particular event had to have a scale model of any of the full size aeroplanes stationed at Old Warden and Roger’s model was a copy of the actual aeroplane that was the first DH aeroplane that the Richard Shuttleworth had owned. It holds the world record for the longest one to be “hangered” there. The model was built from a quarter scale, very much modified, DB Sport and Scale kit after Roger had taken many pictures of the full size aeroplane hangered there. It had that wonderful distinctive Neil Tidy, 4 stroke “put, put”, of a Laser 120 when flying in the hands of the super ex-chairman of the Croydon club. James Gordon won “best model in show” with his (now) beautifully detailed Bleriot X1. It was originally built by the Old Warden champion Don Coe, from a one third scale Mick Reeves plan, with a Laser 360V up front, also modelled on the collections aircraft. It was good to see the ever smiling scale champion Richard Crapp there with a Precedent Stampe that he had bought purely to learn how to fly that particular aeroplane, as he intends to model it on a much larger built model later on. We can look forward to seeing that beauty when it takes off for the first time at Old Warden for he is a regular visitor there. A huge vote of thanks must go to the chief organiser Ken Sheppard who was working everywhere solo that weekend and his lady Sheila, was much missed.

I was going to include some more pictures taken at the last Tom Stephenson’s Wings & Wheels show on June 24 – 25 at North Weald but I will keep those for a future Sticks & Tissue. To sum up, despite the sometimes awfully wet weather, the Scale weekend at Old Warden was great and it was good to have a “one to one” chat with some many friends once again especially to people like Rob and Pat Rich and of course the ever friendly and popular Al’i and Jane Machinsky of Al’s Hobbies, the BMFA team plus Belair and the rest of the traders who frequent this warm and welcoming place.

Now if any of you Sticks & Tissuer’s out there happen to have a free half day to spare and would like to bring a model along to Kenley airfield on Sunday September 10, to a 4 hour show presented by yours truly

and a team of nice friendly people, then please be welcome. It is a super place to fly from with a hard runway and lots of people seeing what we modellers are all about. All you need is a BMFA “B” certificate and both you and your model (static or flying) will be made welcome. It usually starts at about 12 o’clock midday and goes on till 4pm and the man in charge is the ever helpful Mike Williams. There are other things going on there as well including a live band. If you can come along, can you email me on davedbsound@gmail.com or give us a landline call on 01959 577550 please?

Finally a “must go to” diary date is September 23 – 24 for the last of this year’s Modelair Old Warden Autumn event, where there’s acres of camping, super toilets, a great restaurant and the very friendliest of people. Do come and say hullo please? All the best.

Dave Bishop of DB Sound. Email davedbsound@gmail.com



This autogiro at July’s Old Warden was a control line model from Trevor Taber.



A control line model at July’s Old Warden was this magnificent Scale Antonov Colt.



A second Scale C/L model was this excellent Westland Lysander the same as the one inside the hanger.



The Westland Whirlwind control line model powered by two Oliver Tigre motors.



A super free flight Poppet electric model by John Foster.



Rick Morris shows off his Tombi.



The very nice regular visitors to Old Warden were free flighter's Father/Daughter couple Michael and Caroline Carpenter.



This Tri-Ebenzer was by Steven Harvey at Old Warden.



Another Old Warden, Tomboy modelled by Steven Harvey.



Grandmother said OK to picture this youngest flyer at Old Warden.



Three generations of free flight flyers with Steve Card complete with a Bugaloo, a Bill Dean's Falcon and Keil Kraft Competitor.



The great ever helpful Modelair team at Old Warden.



Scale genius Richard Crapp was there at Old Warden with his “trainer” Stampe. See text.



The Shuttleworth Selection Trophy winner at Old Warden was Roger Godley with his DH Hermes Moth.



Seen receiving a congratulatory handshake from the “Boss” Ken Sheppard for his “best in show” Bleriot X1 at Old Warden, was flight-line marshal, James Gordon.



The two winners at Old Warden complete with their DH Hermes Moth and Bleriot X1 are (left) Roger Godley and James Gordon.

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2017

10th September 2017
8th October 2017
12th November 2017
10th December 2017

Friday 29th December 2017
10.00a.m. to 4.00p.m

2018

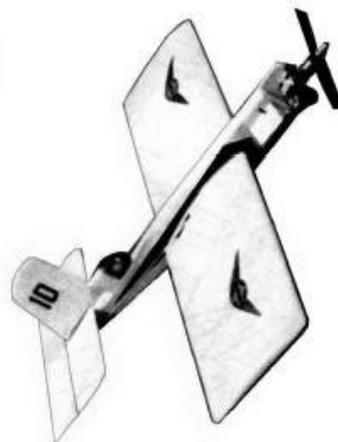
Sundays 10.00a.m. to 4.00p.m.
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11th February 2018
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8th April 2018

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WOT4

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Towline Catapult advice and Glidair model by Ray Malmstrom from Model Aircraft December 2964

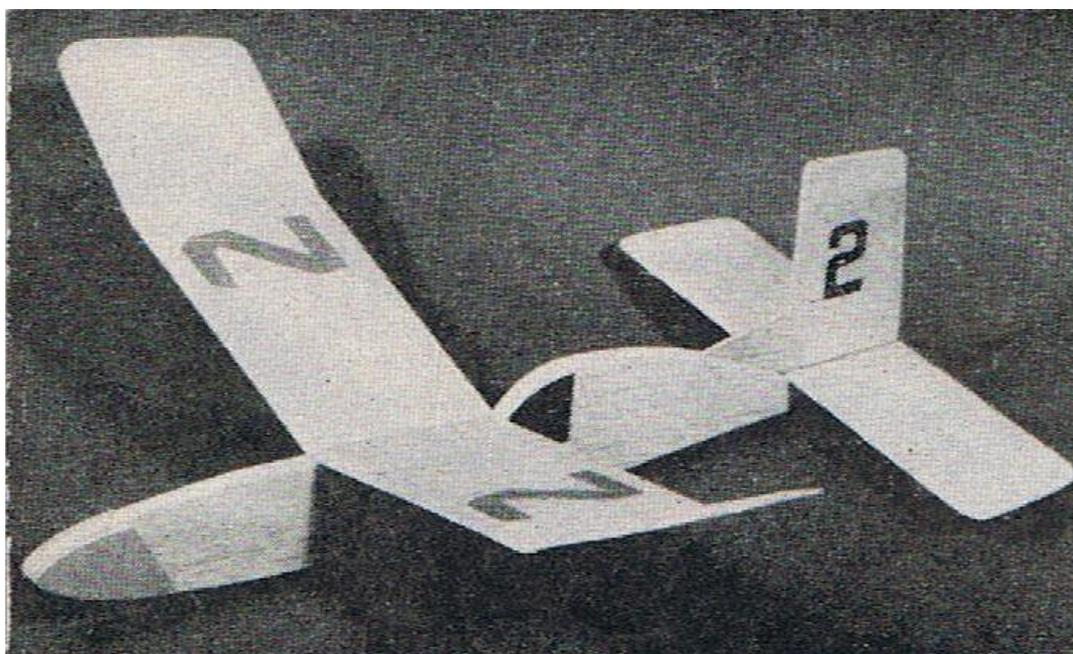
Towline catapult gliders (near relatives of the 'chuck' variety) can produce quite long flights, and are simple and inexpensive models to produce. One or two tips you may find useful.

Always get a dead straight glide by hand launching, before putting your model on the towline-catapult.

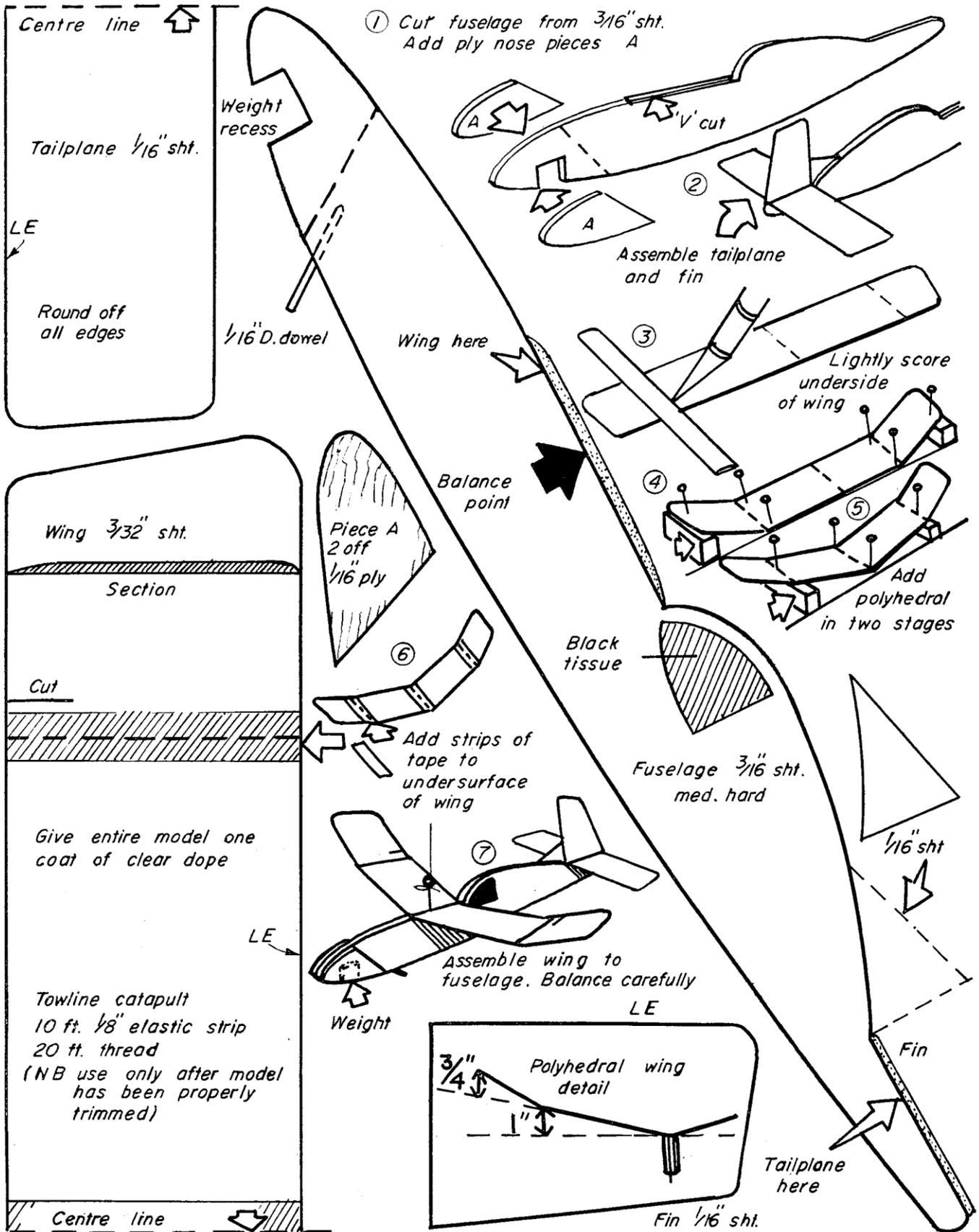
Turns can be cured by warping up the leading edge of the wing tip on the side of the turn. Check for warps, the added speed of launch on a catapult finds out any inaccuracies - with dire results! Loops can be avoided by tilting the wings very slightly on launching. You will find that your longest flights are not always achieved by putting the line back to its maximum. Finally leave the fin alone for trimming - slight adjustments can have violent results. Towline catapulting is quite an art, needs practice, but is great fun.

Glidair, the 11 in. span model featured this month, is simple to build and exciting to fly. All details and full-size parts are en the plan.

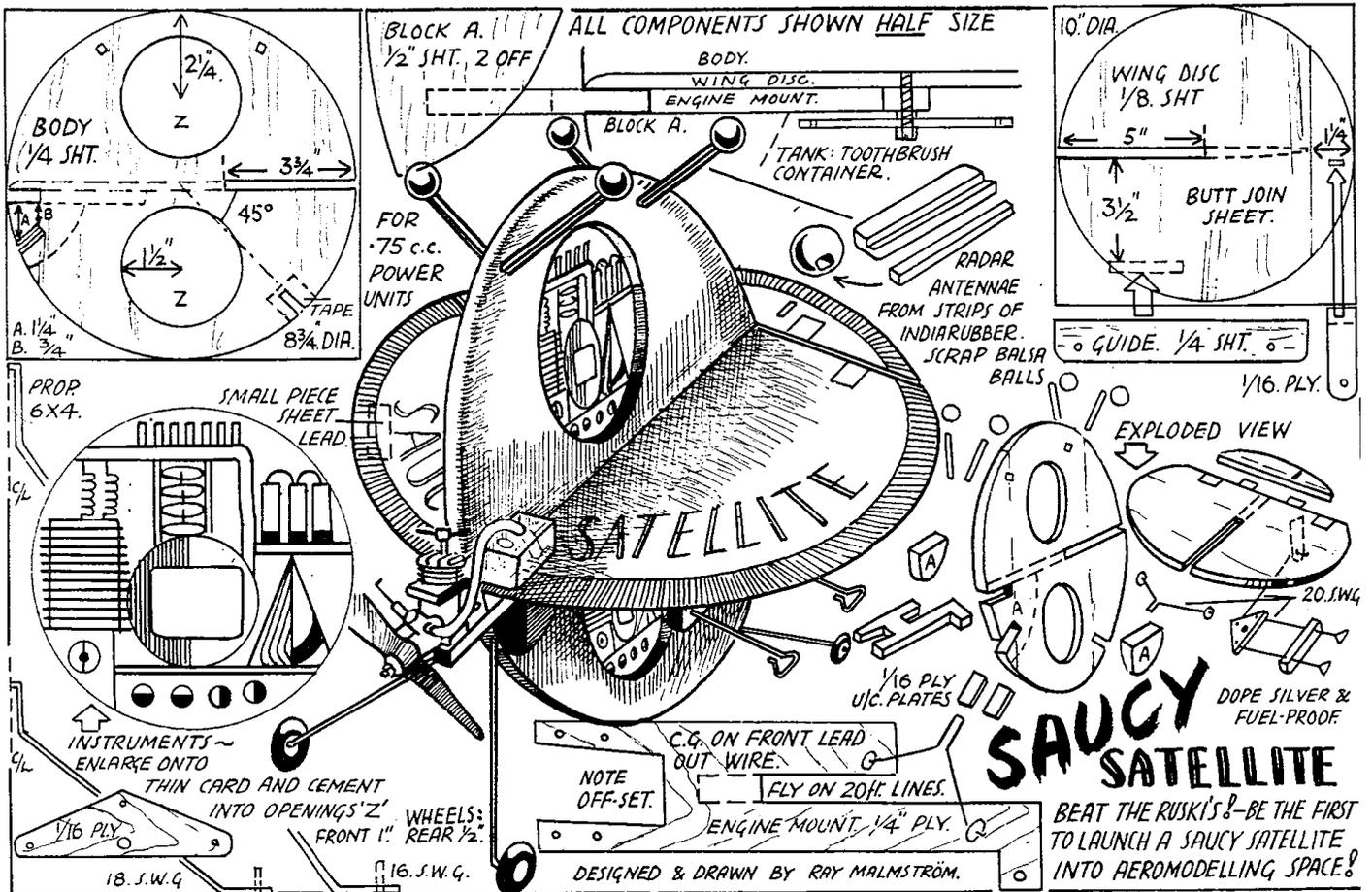
Please remember, balance your model carefully before attempting any flying. Quite long flights have been obtained by hand launching. STOP-PRESS INSPIRATION! Why not carry Glidair aloft under that sports-type power job ? Arrange for release by either a timer or fuse. Released from a good height Glidair may make the next county! Good launching!



Plans next two pages



Fly your own Sputnik!





Small Electric Scale

Belair Kits are very pleased to have commissioned renowned scale designer, Peter Rake to produce a range of small electric scale models.

Wingspans are typically around 36 inch (1m) and all suit the economical 400 brushless motors and

mini servos. All airframes are of traditional all wood construction and no mouldings are required. Each aircraft has been thoroughly flight tested and are all proven fliers.

Call Belair on 01362 668658 or visit their online shop at www.belairkits.com

[Here are just three of the growing collection see all the others on our website](#)

Martinsyde Elephant - electric scale 50 inch

Ref: res-martele

The latest design in the Belair range of small electric scale models. Parts Set for the Peter Rake Martinsyde Elephant.

The Martinsyde "Elephant" G100, a single-seat fighting scout, was large and unwieldy - hence one explanation for the nickname "elephant". Originally introduced as a long range fighting scout it proved unsuitable in this role and from 1 July 1916 it was used predominantly for bombing duties.

Our Parts Set includes full size 3 sheet detailed construction plans, plus laser cut parts, including fuselage sides, bulkheads, formers, wing ribs, tip shapes, scale control horns, wing tip scale outlines, fin/rudder and tailplane parts, wheel cores, plus many smaller items. Buidler to add their own stripwood and covering.

Specifications

Scale 1:1.325, wingspan 50.35 inches. All wood construction, for 400 size brushless motor setups and 3 cell lipoly. 4 channel - ESC, Rudder, Elevator and Ailerons





Price: £60.00 Inc VAT
66.00 USD | 71.03 EUR

Fokker DVII Parts set and plans

Ref: res-fokkd7

The Fokker D.VII was a German World War I fighter aircraft designed by Reinhold Platz of the Fokker-Flugzeugwerke. Germany produced around 3,300 D.VII aircraft in the second half of 1918.

The D.VII quickly proved itself to be a formidable aircraft.

Our Fokker DVII is modelled at Wingspan 38" span and a scale of 1.3"=1ft. It is suitable for 400 size brushless motors and the kit includes laser cut parts in balsa and plywood plus a multi sheet plan. Builder to supply their own stripwood and wire.

Price: £60.00 Inc VAT
66.00 USD | 71.03 EUR





Price: £60.00 Inc VAT
66.00 USD | 71.03 EUR

Bellanca Skyrocket - 42 inch Electric Parts Set and Plan

Ref: res-bellsky

From the Golden Era of flight, comes the elegant Bellanca Skyrocket. With a wingspan of 42 inches, the design is traditional all wood construction and modern CAD design features.

A full size multi-sheet plan is included and the laser cut parts set includes all the balsa and plywood parts required to build the basic airframe, such as fuselage sides with spar slots and wing position holes laser cut for accuracy, formers, bulkheads, cowl components, wing ribs, shaped spars, tip shapes, trailing edges, struts plus many smaller items.

Specifications

Scale 0.9" to 1ft, 42 inch wingspan for 400 size electric brushless motors and 2 cell lipoly batteries. Rudder, elevator and motor function.

Image of laser cut parts is not for the Skyrocket, but is typical of kit contents. Builder to supply stripwood and covering to complete basic airframe.





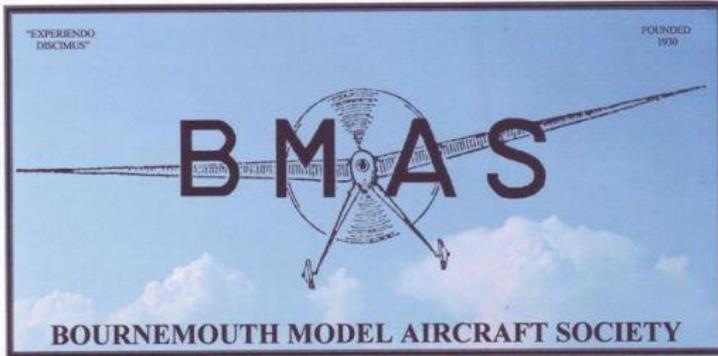
Price: £60.00 Inc VAT
66.00 USD | 71.03 EUR

Regards,
Leon Cole
Belair Kits

Tel: +44 (0)1362 668658

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All dates are Tuesdays

25th July

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19 September

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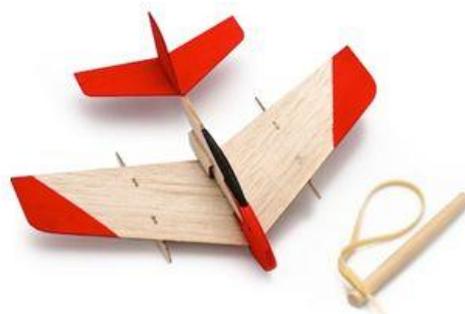
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