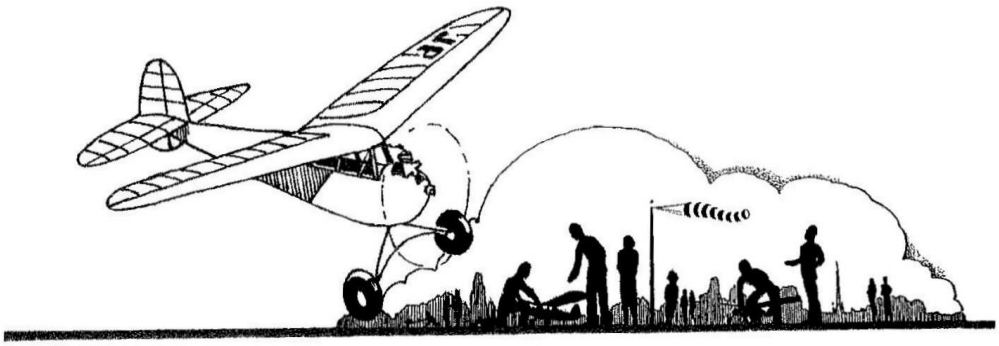


Sticks and Tissue No 125 – April 2017

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.

Photo sent by Peter Ziegler Bellanca Model K

From David Lovegrove

Herewith a few pics of my new "Tadpole" tail-less model, another Eric Clutton design (hi Eric!) that appeared in RCM&E in 1965, at around the same time as his iconic Sharkface. Apparently, the Tadpole was developed from Eric's shrunken version of the ME163 rocket-powered intercepter. I'm sure it will be instantly familiar to that generation of modellers whose first self-inflicted, snapped-off-half-razor-blade-finger-cuts were suffered in that era.

Disappointingly, I somehow missed all that single-channel malarkey and dived straight into Galloping Ghost in company with the local luminaries of that time, namely John Ralph (hi John!), Bill Grundy and my big brother, Peter. After that, of course, we all charged headlong into "Digital Proportional", so there's always been this Single Channel-shaped gap in my life.

One of the reasons for this regression is that I recently "modernised" an old Horizon "Model D" four-channel transmitter (photo below) using one of Phil Green's excellent 7-Ch. + SC encoding modules alongside an Orange DIY 2.4 GHz transmitter module. This excellent combination confers modern, foolproof proportional control, along with the option to add a single-channel "Bang-Bang" button. Ergo, I now have two ways to crash my toys, all wrapped up in one convenient package!

Seriously though, this is a brilliant wheeze. Lately, I've been practicing s/c with my newly built DB "Tinker" bipe and the ability to switch seamlessly between propo and button-pushing is absolutely priceless. The two modes operate simultaneously, plus you can choose either sequential or compound s/c emulation*, with kick-up elevator available as well if you want it. When things get a bit hairy on the button-pushing front, the fingers can instantly shift over to the adjacent propo stick, whereby normal service is instantly resumed. Fantastic!

Emboldened by this invaluable electronic safety net, I thought hard for all of two seconds before choosing to build the 31" wingspan Tadpole as a first go at a pure rudder-only model. Maybe not the best choice? But hey, it should be fun! If it turns out well, and even if it doesn't, I'll nail together a Sharkface to keep it company in the shed. The Sharky should be a doddle. Shouldn't it?.

Incidentally, Eric's build notes for the Tadpole include a few classic lines. Rhapsodising over the joys of the compound escapement, he describes how, when trimmed for a slight left turn, a quick blip would kick the Tadpole back on to the straight and narrow. "This made life blissful . . . The model could be headed into wind by an occasional blip and these were sometimes continued until Tadpole disappeared from sight (!). After a slight interval it would reappear from upwind in a descending spiral, and this could be allowed to continue until the model was only inches from the ground - a quick blip of right rudder at the last moment and Tadpole climbed away again. Great fun!" I believe he's calmed down a bit these days . . .

A few years ago, realising that the limits of my always-modest aerobatics abilities had been reached, the search for something more satisfying led me to investigate www.singlechannelersreunited.co.uk. I know you've seen this site mentioned before but it really is an Ancient Modeller's dream come true. Here are nostalgistas galore, all passionately sharing their enthusiasm for the modelling paraphernalia of fifty or sixty years ago. Speaking for myself, it's no exaggeration to say that the experience has been the proverbial kick up the backside. It's given me a huge amount of fun.

Incidentally, with our first SAM 35 vintage RC and Control-Line bash coming up on the 11th of June at Middle Wallop, it would be really great to see a rash of Sharkfaces, Tadpoles, and whatever other primitive models the guys out there have in their sheds, turning up for a day of fun!

Anyway, less chat, more photos.

Sent by Peter Ziegler, Murri Ziegler

There was in this spring again a spring meeting of the friends of rubber powered model aircrafts thanks to a new flight area.

Because I text and pictures (these come from Peter Ziegler, Peter Hunn, Peter Widmer, Roman Gröner and Klaus Bucher) because of the big data amount in a mail cannot send, receive several mails.

Rubberpower spring meeting in Jona (Switzerland), 25th of March, 2017, Peter Ziegler

A marvellous spring day with warm temperatures and, unfortunately, not expected quite windless the friends of rubber powered model airplane in Jona. Roman Gröner has invited to this meeting and eleven pilots followed the invitation. Two companions arrived even from abroad. One from Germany and one from Italy. And the both enjoyed the day and the ruling atmosphere in full trains. All persons present, in spite of the seclusion of some participants for meteorological reasons (wind direction) did this. Nevertheless, while fetching back the models one met over and over again and talked shop at the land places. There was a lot to fetch back. Besides, each of the participants had at least four different models. This proved an interesting cross section by the variety of the models powered by rubber. Talking shop was continued with the common

lunch of the "east group" in the comfortable restaurant, while the "west group" enjoyed a picnic on her start place.

After the catering break wide model was sent around model in the blue sky and her flights with shining eyes were pursued. This went on in such a way, until the first companions and also visitors on the way home came along. At approx. 17:00 o'clock there ended the air traffic and one met again in the restaurant "Sageli" to a final drink.

In the name of all thanks I Roman for the organisation of the successful occasion and also the family Murer from Jona which made available the great flight area.

Group picture with models:

Standing from the left Than Pham, Peter Keller, Peter Hunn, Fredi Genther, Hansruedi Zeller, Peter Ziegler, Klaus Bucher, Hanno Pfeiffer, Urs Schaller, George Gandylakis and seated Roman Gröner

Albatros D III (G.Gandylakis)

Albatros D III (R. Gröner)

Beechcraft D17 Staggerwing

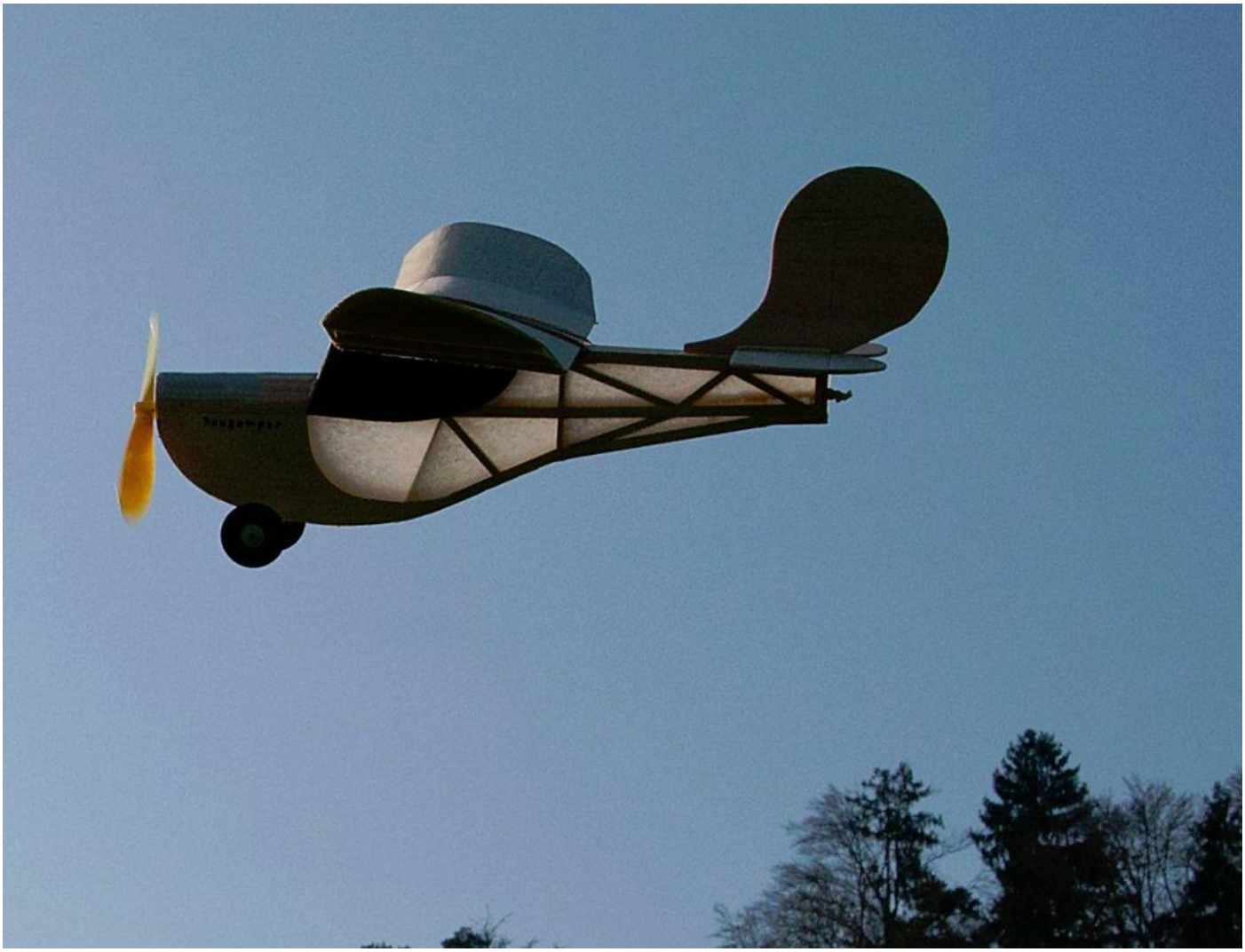
First flight Lisa

Flight area

FROG Raven

FROG Redwing

Häfeli DH-3



Heugömper

Interstate Cadet

Javelin

Lacey M10

MiG-17 of T. Pham with elastic-done Impeller

Models of HR. Zeller

Models of P. Ziegler

Models of K. Buche

Models of P. Hunn

Models of R. Gröner

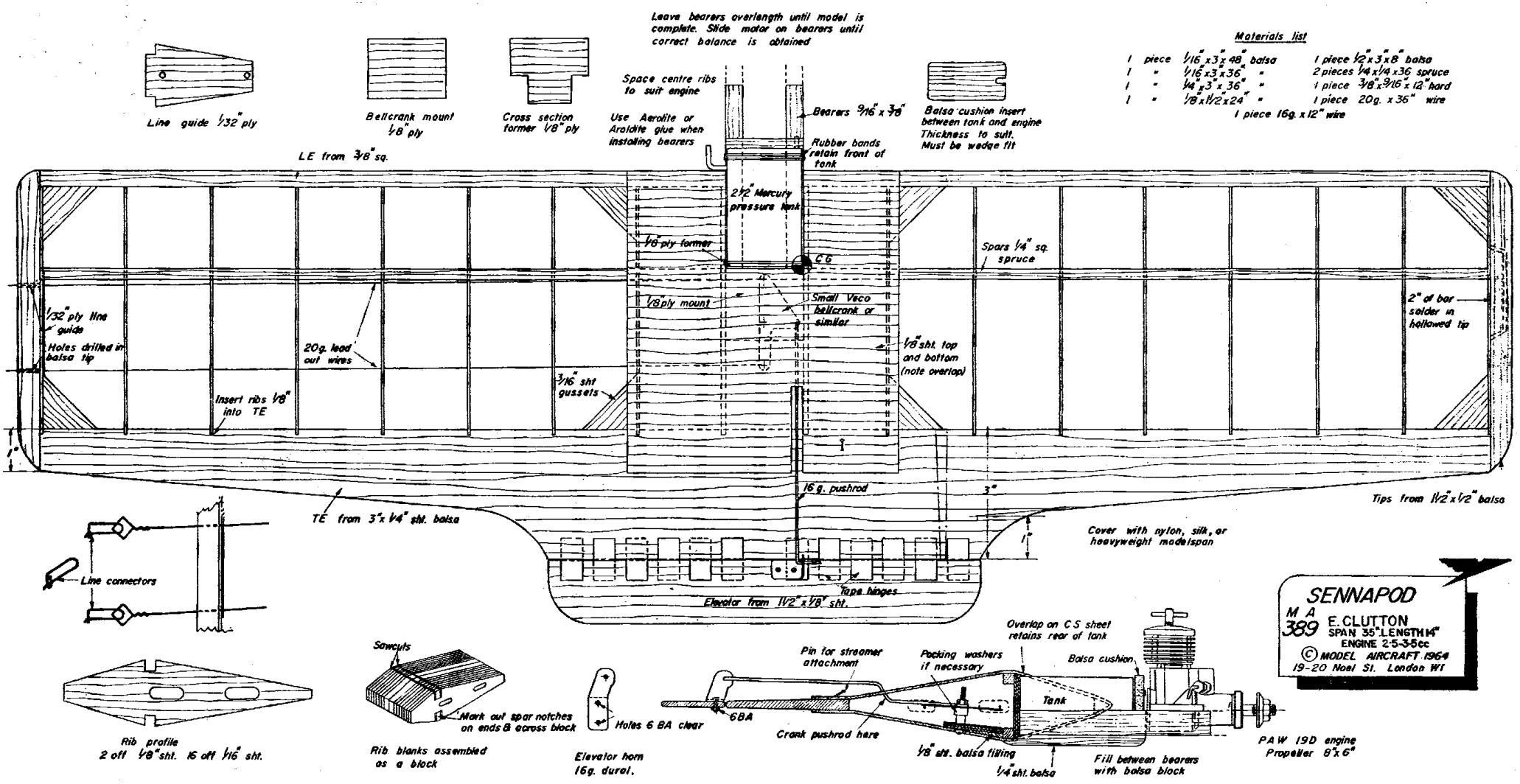
Pilatus Porter built from paper from P. Keller

Veron Goblin from original kit of 1950 built by P. Ziegler

VFM Mothe

Wanderer

Rivets F-1


Leave bearers overlength until model is complete. Slide motor on bearers until correct balance is obtained
Materials list
1 piece 1/16" x 3" x 48" balsa
1 " 1/16" x 3" x 36" "
1 " 1/4" x 3" x 36" "
1 " 1/8" x 1 1/2" x 24" "
1 piece 1/2" x 3" x 8" balsa
2 pieces 1/4" x 1/4" x 36" spruce
1 piece 3/8" x 9/16" x 12" hard
1 piece 20g. x 36" wire
1 piece 16g. x 12" wire
Line guide 1/32" ply
Bellcrank mount 1/8" ply
Cross section former 1/8" ply
Space centre ribs to suit engine
Use Aerolite or Araldite glue when installing bearers
Bearers 9/16" x 3/8"
Balsa cushion insert between tank and engine Thickness to suit. Must be wedge fit
Rubber bands retain front of tank
LE from 3/8" sq.
2 1/2" Mercury pressure tank
1/8" ply former
CG
Spars 1/4" sq. spruce
1/8" ply mount
Small Veco bellcrank or similar
1/32" ply line guide
Holes drilled in balsa tip
20g. lead out wires
1/8" sht. top and bottom (note overlap)
2" of bar solder in hollowed tip
3/16" sht gussets
Insert ribs 1/8" into TE
16 g. pushrod
3"
1"
TE from 3" x 1/4" sht. balsa
Tips from 1 1/2" x 1/2" balsa
Cover with nylon, silk, or heavyweight modelspan
Line connectors
Tape hinges
Elevator from 1 1/2" x 1/8" sht.
SENNAPOD
M A 389
E. CLUTTON
SPAN 35" LENGTH 14"
ENGINE 2·5-3·5cc
© MODEL AIRCRAFT 1964
19-20 Noel St. London W1
Overlap on CS sheet retains rear of tank
Pin for streamer attachment
Packing washers if necessary
Balsa cushion
Tank
Sawcuts
Mark out spar notches on ends & across block
6BA
Holes 6 BA clear
Crank pushrod here
1/8" sht. balsa filling
1/4" sht. balsa
Fill between bearers with balsa block
PAW 19D engine
Propeller 8" x 6"
Rib profile
2 off 1/8" sht. 16 off 1/16" sht.
Rib blanks assembled as a block
Elevator horn 16g. dural.

SENNAPOD A winning combat model designed by Eric Clutton from Model Aircraft March 1964

Having made a number of combat jobs, all of which proved lacking in some way or other, I wrote down the following list of desirable "combat" features and designed a model around them.

1. tough; 2. simple; 3. quickly built; 4. easily repaired; 5. fairly fast; 6. extremely manoeuvrable; 7. must hold lines really tight at all times. The model which was built to meet these specifications is presented here. For instance, besides being very quickly built the model has several other useful features, If the tank should spring a leak it is replaceable in a few seconds, there are no tubes in the wings tips to jam the lines, and my elevators never come adrift!

With my favourite P.AW. 19D up front, the model fairly zips round all the usual aerobatics and some not so usual. Owing to the rearward bellcrank pivot, the lines are so tight that it is possible to tell where the model is even when it is behind you—a highly desirable feature during a line tangle!

Construction

Mainspars are cut to length from 1/4 in. square spruce and rib stations marked off. The leading edge is left square and overlength and the trailing edge is cut from 1/4 in. sheet balsa and the notches cut for the ribs before it is planed down to 1/8 in. thick at the rear.

A master rib is cut (without spar notches) from hard 1/16 in. balsa or ply and used as a template to cut all the ribs, which are then lined up in the form of a solid block and held together with a few pins from each side, with the two 1/8 in. ribs in the centre. The spar notches are now marked and cut with a junior hacksaw or similar, and finished off with a small file. The ¼ in. sq. spar should fit snugly and flush in each recess in the "block." Smooth off all faces of this block of ribs, with particular attention to the ends, which must be square with the ribs. Before removing the pins and dismantling the completed ribs, make two guide lines on the block as shown on the plan. These make it easy to keep the ribs in their correct relative positions—a good way to avoid warps!

Place bottom spar on building board and glue ribs in position making sure they are upright. Add top spar and trailing edge. When dry, add L.E. and gussets. Reinforce all joints with a fillet of cement.

Carve L.E. to section and add ½ in. tips (after embedding weight in outboard tip) sand these to shape after fitting. The bellcrank mount can now be glued in position and bellcrank and leadouts fitted. The elevator pushrod is cranked to clear the T.E.

The 1/32 in. ply line guide is glued to the inside of the inboard end rib. The 1/16 in. sheet centre section planking is now added, being simply glued over the top of the ribs and LE. & TE—note overlap on ribs.

Fit elevator and cut pushrod to correct length to fit. The centre section former and bearers can now be fitted, using an epoxy glue such as Araldite. Fill in between bearers with balsa block and complete details.

Cover and dope complete model, place tank in position, and slide motor with prop back and forth on bearers until correct balance is achieved—this is inportant! Now drill bearers and bolt engine in position —note sidethrust. Fit balsa cushion between tank and motor. This is partly to hold tank in position and partly to preserve the tank in the (unlikely!) event of a crash.

The diamond section wing on this model has amply proved itself in local competitions—to such good effect that it has been adopted as our club (Five Towns M.A.C.) model.

From George Stringwell

I've had a quiet six months the building front, probably a good thing given the large number of completed models in the workshop, I struggle to keep up with giving them all regular outings. However, I have just

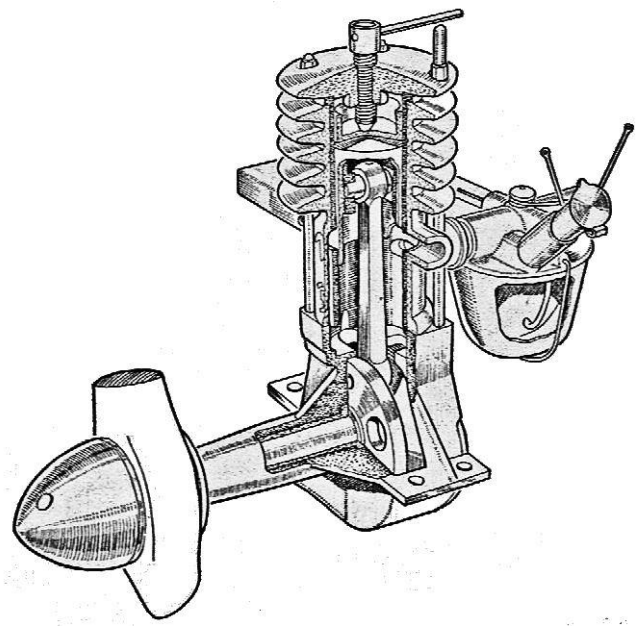
finished and flown a Ken Willard "Scorcher" which you see in the attached pictures. This has come out at just 1 pound AUW and with a motor producing 120 watts from a 3S battery lives u to it's name and scorches around te sky n fine style. Finish is my usual 38 micron document laminating film under heavyweight Modelspan tissue from my hoarded stock on the wings (a very tough finish) with lihgtweight tissue only on the fuselage and sheet tail surfaces. Producing the tissue leading edge "flame" effects taxed my scalpal skills, but I am pleased with the finished look!
Spring has arrived here in France, we have had a sunny dry April, albeit plagued by some quite strong winds which have noy encouraged flying activity already somewhat curtailed by neck problems due to osteo arthritis which makes prolonged gazing at the sky a painful occupation. I think longer thermal flights will need the services of a sun lounger, but that is not an option for faster fling models like the Scorcher and Sharkface.

From Graham Bryant

Seeing the photos of the Chatterbox models in S&T took me way back to my youth and the time when the plan for that model was featured as a full-size pull-out in 'Aeromodeller'. That would be, guessing, 1960 or 1961? Anyway, it appealed to me, and I started to build one. When I was part-way through the construction my mate called - he had just bought a McGregor single-channel RC kit and I can remember us setting it up on my mom's dining-table, winding up the rubber for the escapement, and listening to it rattle when the transmitter-button was pressed. Wow - impressive.

Cut a long story short, I agreed that my mate could install his fancy RC outfit into my Chatterbox, which I duly finished and powered it with an Allbon Dart (the only engine I actually owned at the time....). My mate said that it would be best if we trimmed out my Chatterbox FF before installing the RC; he also suggested that I replaced the teeny little plastic Dart fuel-tank with something a bit larger, so he soldered up a bigger tank. The Chatterbox as I recall flew more or less straight off the board, no trimming necessary, so the RC stuff was duly installed and "ground checked" along the road outside my house. Came the great day, off to Sutton Park. RC checked again, (large) tank filled, Dart started, Chatterbox launched.....flew in lovely circles...got good and high....never to be seen again. Don't know what happened, but the McGregor stuff didn't do what it should have, and that long-ago episode put me off RC for life! I've still got a soft spot for the Chatterbox design, though - dead easy to build, and tough as old boots. Shame about the junk RC.....would love to build another some time for but this time strictly for FF only.

The ETA “5” from Aeromodeller September 1948



We must preface our report this mouth with a short note of apology. Readers will notice the absence of the Aero-Modeller airscrew especially designed for each engine by P. R. Payne who is unfortunately in hospital at the time of writing, and consequently unable to oblige. We shall therefore publish the drawings for this airscrew at a later date and would also mention that in the very near future equipment will be ready that will enable us to give dynamic thrust figures in place of the static thrust given at the moment, which will of course be of far more practical value to aeromodellers.

TEST

Engine: “ETA”5c.c

Fuel: Maker’s recommended.

Starting: Hand starting was used throughout, and no difficulty was experienced with the engine either hot or cold. The special air control device on the intake pipe helped starting considerably. The cut-out is efficient, at all reasonable speeds, but is inclined to be unreliable at the very high speed ranges.

Running: The speed range is somewhat limited for even running, but this seems to be a characteristic of the larger sizes of diesel engines. Flexibility is not, in any event, of great importance for model aircaft work. In one respect the ETA would seem to be well designed, in so far as the engine seemed most happy when running at speeds around that at which the maximum B.H.P. was delivered.

B.H.P.:

Readers will by now be familiar with the characteristic graph curves of model diesel engines; that is, the steep rise to maximum output, followed by an equally steep drop. Tests seem to show that the curves of the larger sizes of engines are steeper than those obtained from the small engines of 1 or 2 c.c. capacity. Another marked point of difference is that the maximum B.H.P. usually lies at a lower

R.P.M. reading with the larger engines.

In the case of the ETA, maximum B.H.P. was discovered at 6,250 R.P.M. when a reading of .1805 B.HP. was taken. This output may be considered good, and compares favourably with the published BHP. figures for other makes of engines of this capacity. Makers figures are, usually, unreliable, and tend to err on the generous side. The ETA does, however, deliver the power claimed for it.

It will be seen that the limits of test extended over a range of only 4,000 RP.M., as the engine would not perform consistently enough outside this range for reliable test results. At 4,050 R.P.M. the output was .1428 B.H.P., while at 8,000 R.P.M. the output was .1505 B.H.P. The difference between the highest and lowest reading is, there fore, approximately.0400 B.H.P.

Power Weight Ratio:

.304 B.H.P./lb. Static Thrust: For reasons previously explained tests were conducted only with an airscrew conforming to the recommendations of the engine makers, and an orthodox, symmetrical airscrew of 14 ins. diameter and 8 in. pitch was used.

The considerable figure of 35 ozs. Was recorded at 4,100 R.P.M. and the engine ran steadily under this load. A reduction in engine speed to 3,000 R.P.M. resulted in a static thrust of only 20 ozs., but un even running at this low speed made tests difficult.

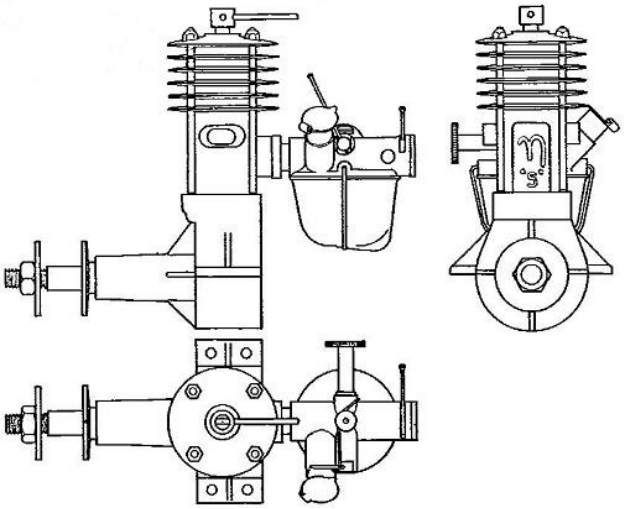
General Observations: The ETA engine seems to be particularly well made; and capable of standing up to hard conditions of usage. Control is good both for carburettor and compression settings.

Name: ETA “5” C.I. Engine. Silver series. Reference 5.CI. Two-stroke compression ignition pattern. Full written guarantee. .

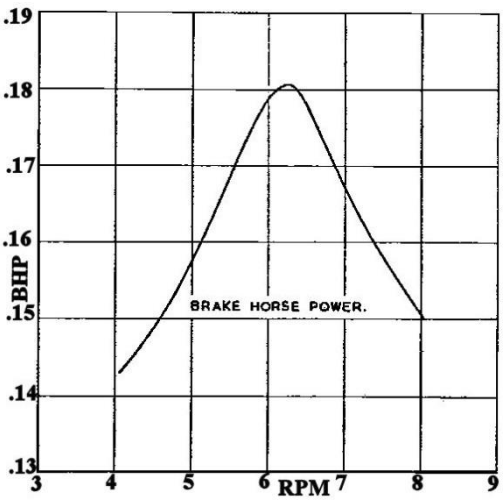
Manufacturers: Eta instruments Ltd., Otterspool Way. Watford By-Pass, Watford, Herts. Tel.: Watford 3440/2725.

Price: 19s. 6d.

Delivery: Ex works—obtained from retail traders only—no direct sales of units.
Spares. ll spares available ex works—special repair and overhaul schemes are also offered. (See spares leaflets for full details.) General Specification: Bore .6718 ins./17.07 mm. Capacity .305 cu. in./4.99 c.c. Stroke .8593 ins./21 83mm. Weight 9 ½ ozs./295 grs. Overall Height 4 ½ ins./l08 mm. Overall Length 6.6ins./152.4 mm. Height above C/L 3 ½ ins./ 88.7 mmm. Max. recommended speed 12,000 r.p.m. Nominal out put .2 H.P. Compression ratio 12/1 to infinity. Rotation either clockwise or anti-clockwise.

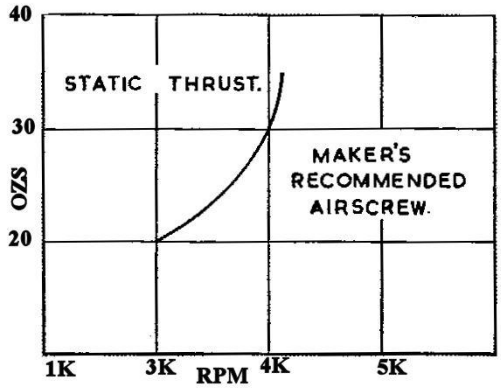


Airscrews
Free flight 14x7 ins.—l3 X 8 ins. Airscrews—Control line 12x10 ins.— l1 x 10 ins.—10x12 ins.
Flywheel—2 ins, dia. 5/8 ins. (9/16 min.). Available from manufacturer.
Fuel: Recommended—3 parts Ether, 2 parts Gas Oil, 1 part Castrol XL. (2 ½ % Amyl nitrate may be added if available.)
Mounting: Reinforced beam lugs, faces machined. For upright or inverted installations. Hole centree ½ in. by l-27/32 ins, for No. 6 woodscrews or 4 BA machine screws.
Material Specification: Crankcase, cylinder casing, and rear cover—precision die-cast hiduniinium alloy. Cylinder head, rear cover, spinner—high grade duralumin alloy: Con-rod and piston insert—special high duty alloy. Piston, contra-piston, and main bearing sleeve—heat treated meehanite. Cylinder liner, crankshaft, and gudgeon pin— heat treated nickel chrome molybdenum steel. Pressure screw, clamping washers—heat treated nickel alloy steel. All other parts of first grade high tensile steel, light alloy, or brass.
CONSTRUCTIONAL DATA
Crankcase: Fully machined for maximum crankcase compression, assisting both starting and performance. Thread in crankcase and rear cover thread milled to ensure accuracy of fitting. Main bearing sleeve, ground externally, oil shrunk into housing, bore honed. All joints faces metal-to-metal, no gaskets.
Cylinder: Machined on all location faces: all portways machined. Fins tapered for maximum heat dissipation. Liner, ground externally, oil shrunk into casing,-bore ground, honed and polished. Cylinder spigotted to crankcase to ensure correct alignment, and retained by four high tensile steel tension rods between head and crankcases. . Crankshaft: Machined from solid bar. Fully counter balanced. Ground and lapped on main bearing and crankpin. Extension ground for concentric location of airscrews, fly wheels, etc. Selectively fitted to main bearing. Bearing section 1 ½ ins, long by 5/8 in. dia. Drive to airscrew through friction connection, allowing slippage in cases of emergency.
Piston and Con-rod: Special design ensures maximum compression seal, as no gudgeon pin holes pass through piston. Gudgeon pin scoring and trapping are also eliminated. Finishing operations on the piston are performed after sub assembly, obviating risk of subsequent distortion. Pistons are ground, lapped and individually polished to their cylinder sizes.- Tubular gudgeon pin is ground Con-rod machined from solid. Eyes burnished to size. Eyes are furnished with lubrication ducts.



Contra-piston: Ground and lapped. Adjusted by fine pitch hardened screw, with setting stop.
Induction: A machined alloy die casting forms the basis of the induction head, with a special form “last drop” drawn container. Fuel capacity from 2—4 mins, according to load. Being retained on taper anti-leak seating by a spring clip, the, container is immediately removable for cleaning. Extended angular filler is closed by a snap top. Air intake has an integral spring loaded, self locking, sleeve choke. This may also be used to achieve a measure of speed control. The cut-out operates on the fuel cut-off system, not air bleed:

the valve rotates in an anti-wear sleeve, and is lightly spring biased to the “ON” position. Both the choke and cut-out are fitted with extended levers for remote control fittings. A finely tapered needle, friction locked, is fitted to a special type of overfeed diffuser. The needle is so arranged that neither the taper section nor the jet aperture foul one another. The induction assembly is screwed into a boss on the cylinder, and locked by a milled-edge ring. Inversion may be performed in 15 seconds, no tools being required.
Finish: Crankcase, cylinder, head and induction assembly— special matt surface, corrosion resisting, easily cleaned to “ as new” condition. Other components bright machined or polished.



General: Every unit is independently tested by two inspectors, the compression and jet settings being recorded. Twelve pages of literature are enclosed with each boxed unit, giving all necessary information on construction, installation, operation, performance, etc, A range of alternative fuels is quoted, with a comprehensive list of possible faults and cures which may occur through incorrect operation or use.
Accessories: Alternative 2 ½ in. Exhaust Extension Tubes, 4/6 per pair. 1 in. Filler Extension Tubes, 2/-each. Fully machined Flywheels, 12/6 each.. Short venturi intakes- for control line or special applications, 14/8 complete.

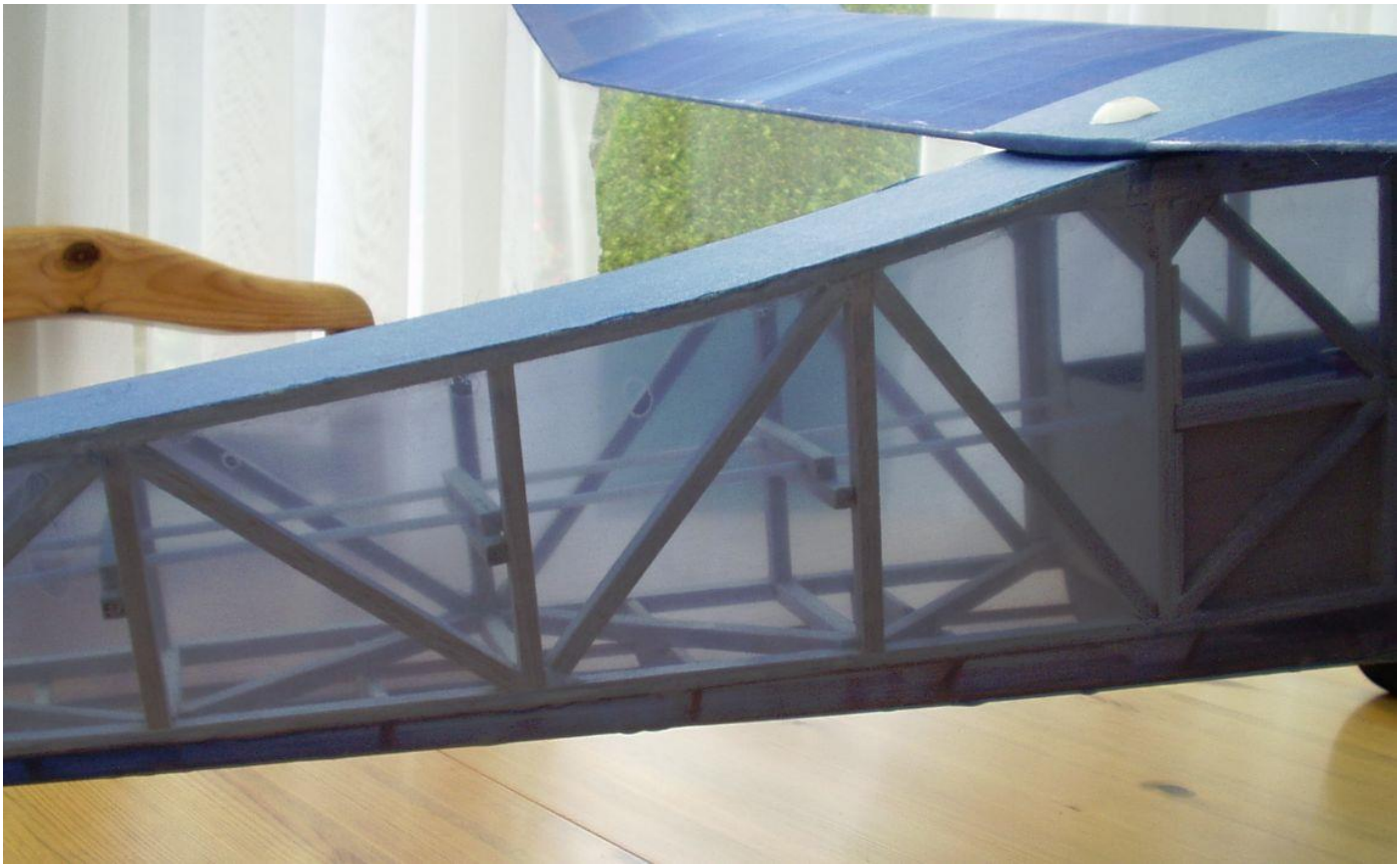
From John Laird

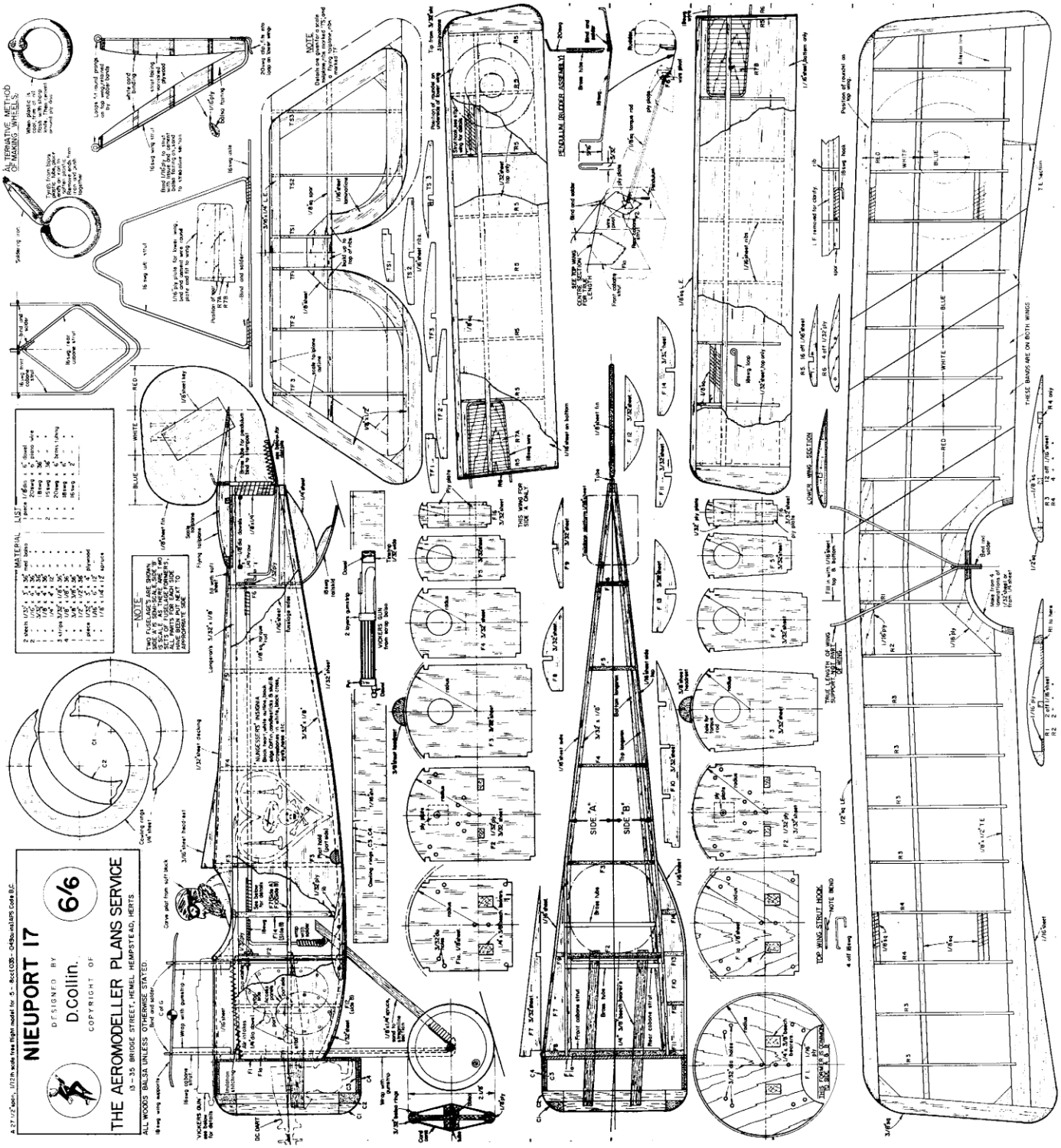
I have just built a Bill Winter 1949 design, the Vagabond. He also redesigned it in 1981 for RC. I referred to both plans in my build.
The Vagabond is 75" span and is powered by a 400 Watt brushless motor with a 60 W ESC and 3000 3 cell lipo. Power is way over the top, but it helped with CG which came out at 45% compared to RC version's 35%. No noticible efeect on flying as you can see from the video.
The weight came in at 3 lbs giving a wing loading of 11 ozs/sqft. Covering is Mylar with doped light blue chiffon on top. The almost transparent blue colour was inspired by AllenK's Cumulus finish.
I had trouble with the chiffon (1st effort at fabric over mylar), which being very light in weight really needed 3 pairs of hands to keep it straight and stretched while being doped on - maybe I should have applied it wet? Ragged edges masked by heavyweight blue tissue giving a two tone blue colour which I am quite pleased with. Photos attached show the finished model. I built the wing with detachable tips for ease of transport/replacement should it be necessary. Undercarriage is detachable - again for ease of building, covering and striaghtening in event of too many hard landings on our concrete strip. Photo shows the components ready for assemble.
For those who want more detail, there is a brief build log on RCGroups here

https://www.rcgroups.com/forums/showthread.php?2770756-TBD-The-Vagabond-a-Bill-Winter-s-design

Maiden flight shot by Mick Butler here on youtube

https://www.youtube.com/watch?v=957ylA8daZU

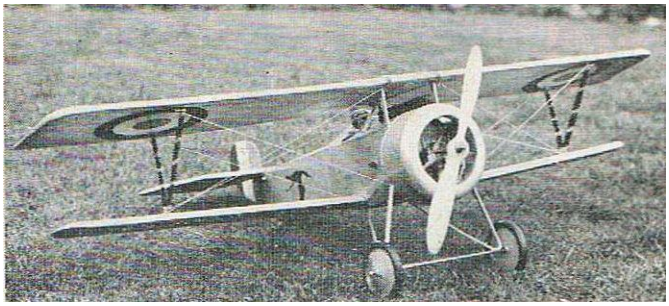




Nieuport 17 by D M Collin from Aero Modeller December 1967 a free flight 1/12 scale for small engines up to .8 cc

A two way plan for the famous French World War 1 fighter for free-flight with true scale or simplified fuselage and pendulum control

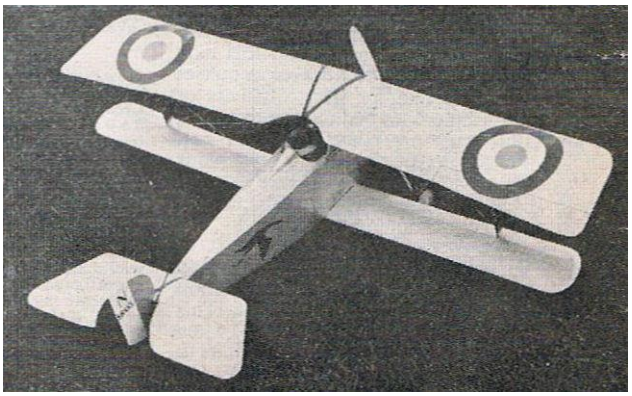
Designed to be as tough and robust as the usual sports model. D. M. Collin's Nieuport 17 offers the choice of a simplified "square" fuselage or the true scale tapered section. (See formers on plan for side "A" or "B'). The original has the vertical fuselage sides, but application of the French insignia conveys a most realistic appearance.



When first built, the prototype weighed 9 oz.— this has crept up to 10 1/4 oz. after respraying etc. Actual weight is not critical. It is unlikely that the balance point will be far enough forward when first built, the original needed about 2 in. of 1/8 in. dia. solder glued into the cowling to bring the centre of gravity position onto the sop wing mainspar.

The original used an 8 in. x 4 in. propeller cut down to 7 in. x 4 in. (as the correct 6 in. X 4 in. looked a bit too blanked off by the cowling). The hole in the cowling is used for filling the tank—the compression screw extends backwards through the lower air vent in the cowling and as it is not considered necessary to fiddle with the needle valve between flights it is shortened and does not reach outside the cowling.

When starting, invert the model and put some fuel in the intake tube, this is enough to warm up, ready for turning the model right way up, filling the tank and starting in the normal way (without any risk of a hydraulic lock).



When first built and after any heavy landings check the following before flying:

1) Wings and tail are fully “home” in their seatings (the wing can half come off its mounting struts after a crash).

2) Make sure the rudder has the correct amount of movement each way and also moves freely. Make sure the rudder is in a neutral position with the wings horizontal.

3) See that there is some downthrust (2-3 deg.) on the engine and also some right sidethrust 2-3 deg.). Neither angles appear to be critical but there should be sufficient sidethrust to prevent an excessively sharp turn under power.

4) With the C of G in the correct location the glide should be adjusted by packing under the tailplane, at the same time the glide can be checked to remove any turn—the rudder setting can be adjusted by gripping the pendulum through the cockpit opening with long nosed pliers and bending the linkage by moving the rudder (holding it close to the hinge). The model should glide straight over the distance of a normal hand launch.

5) With power, the model should climb quite easily and any tendency to turn excessively sharply can be eliminated by side-thrust adjustment. The original flies to the left under power and on the glide but it has been trimmed to turn to the right with power on or off. It is the designer’s policy to trim to give a steeper glide than occurs just below the stalling point as he finds his models do more damage to themselves with their horizontal component of velocity than with their vertical component? It is also safer from the stability point of view of course. With full power any tendency to stall can be eliminated by increasing the downthrust.

Lightweight radio control can of course be fitted for rudder-operation. It will mean a higher wing loading, and a need for a more powerful engine, perhaps a 1 c.c. diesel would be best in such a case.

From Jörgen.

Hi James sending you some Pictures of this Winters effort the Frog 45 with the Red Fin Twin in the nose and next is the Martinet with an MP Jett 0,40 Classic both from Belair kits and last is the Vic Smeed Moppet with an CS Navo 0,5 short kit from Douglas Wass . Now have been flown I hate the cool whetter we still have here in Stockholm.

Photos sent by Peter Renggli taken by Urs Brand and Urs Rindisbacher of the MG-Bern, September 2016 Antik-fliegen.


6


HB-DAX


7

Keil Kraft Mini Super

Taurus

From Ted Horne

Attached is a list of plans that have been given to the Raynes park club. They were originally in about 20 rolls, each roll containing a complete mixture. I have folded them all to A4 size and sorted them into alphabetical order. The publishers of these plans UK., American, Original by the builder, Kit Manufacturers, and others. In most cases there is only one copy of each plan.

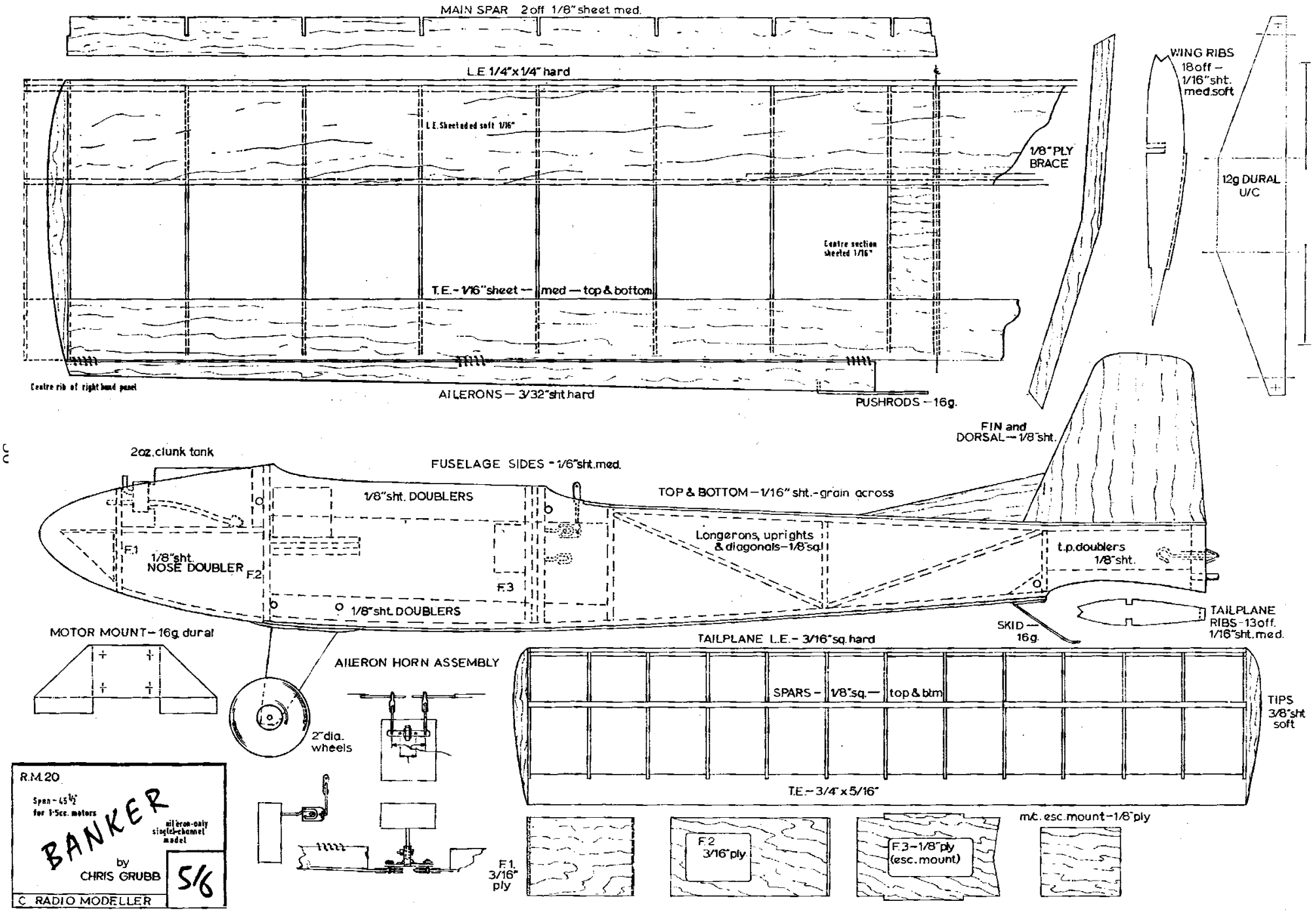
I have been given the task of storing all these plans, But the Club Is happy to give them to anyone who would make use of 1 or more of them .

If the list were to be included in Sticks and Tissue, and someone would like a particular plan,I would be prepared to post the said request to that person. We cannot charge for these plans, as we would probably be infringing copyright. What we can do is to say that the plan requested would be sent out upon receipt of a money order to the value of £2.50 for UK. addresses, and £5.00 for overseas addresses, made payable to the Raynes Park MAC. (We need to check the correct address). The quoted cost, being merely to cover Post and Packing.

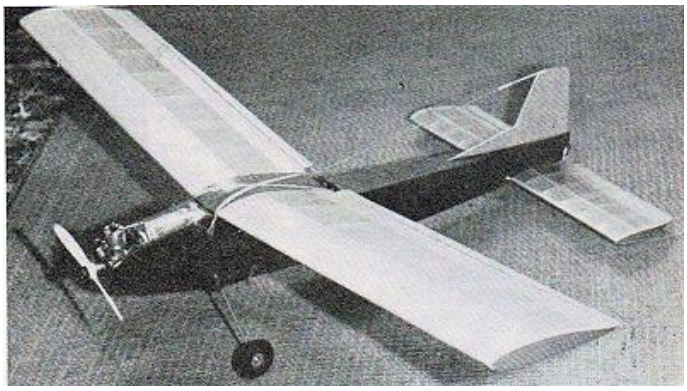
The last bit of information, is the address to which the request is made. At present I suggest that it is my e:mail, address that is used, when I can say whether or not the plan is still available.

TedHorne3K@aol.com

Title	Span	Type	Year		Title	Span	Type	Year
1/2 A Train	45"	Power .8cc			Nova	78"	Glider A2	
Accipiter		Glider A2	60		NRG NRS	44.25"	Wakefield	49
Ajax	52"	Glider			Ottair	48	Glider 50 Gram	
Altair	80"	Glider A2	72		Pelican	73"	Glider Open	56
Aquarius	72"	Glider A2			Performer	36"	Rubber	
Avenger	65"	Glider A2			Pink Elephant	90"	Glider A2	79
Banshee	50"	Power 2.5 cc			Predator	50"	Open Rubber	
Bilgri	47.5"	Wakefield	55		Raff 1V	32"	Rubber	
Blomgren 52	42.5"	Wakefield	52		Ramrod 250		Power	
Blomgren 52	42.5"	Wakefield	50		Ramrod 600		Power	
Blue Note	90"	Glider A2	97		Reds Swan	46.5"	Wakefield	
Borderline	42"	Wakefield	53		Rolling Stone	76"	Glider A2	
Boxall's	42"	Rubber	55		Rookie	49"	Wakefield	82
Brigand	32"	Glider			Ruskie	43	Wakefield	
Clipper	44"	Wakefield	48		Satu	60"	Glider A2	
Copland 1936	40"	Wakefield	53		Satu		Glider A2	
Cordser 1939	44"	Wakefield	£39		Seraph	64"	Glider A2	53
Corsair	48"	Glider A2	57		Sija	82"	Glider A2	
Cumulus	54"	Power	65		Simon	41	Wakefield	49
Delinquent	36	Open Rubber	53		Sky Walker	40"	Open Rubber	
DG 150		Coupe			Skyrider	36"	Glider	75
Dowsett's	44.5"	Wakefield	51		Slow 400	53"	Power 3 cc	
Dream Weaver	56"	Power 2.5cc	58		Stomper	48"	Power 1.5cc	53
Elila 49	46.5	Wakefield	49		Strato Streak U.K.	45"	Power .8cc	
Eliminator	45"	Power 1.5cc	53		Strato Streak USA	40.25	Power .099 in	4
Evans 52	40"	Wakefield	52		Sune Stark	43"	Wakefield	52
Faracce	32/70"	Glider			Super Scout	76"	Twin Boom	
Fevair	41"	Wakefield	64		Swan 1953	60"	Glider A2	
Flashback	66"	Glider A2	0		Swift Half	48"	Power .8cc	
Flip-Flop	36"	Rubber	52		Swiss Miss	56"	Power 2.5 cc	54
Garter Knight	39"	Coupe	61		Tail Firster	30"	p 30 Cannard	99
Ghost	42"	Wakefield	51		Terrible Coupe	36"	Coupe	
Greengage	43"	Wakefield	54		The Clipper	41	Wakefield	
Hell's Angel	40"	Power 1.5 cc	46		The Tyke	44"	Wakefield	
Hepcat	36"	Rubber	46		Thermaleer	36"	Rubber	
High Climber	38"	Wakehield			Thin Man	51"	Wakefield	45
Hyperion	71"	Glider A2			Tilka	51"	Wakefield	
Inch Worm	64"	Glider A2	54		Top Score	73"	Glider A2	40
Jaguar	44'	Wakefield	48		Torontonian	46.6"	Open Rubber	
Junior	76	Glider A2			Trip Stick	39"	Open Rubber	36
King's 54	48.4"	Wakefield	54		Upstart	36"	Rubber	54
Kiwi	64"	Power 2.5 cc	54		Urchin	40"	Open Rubber	60
Knights 1952/3	46"	Wakefield	53		Vansteed 1950	42"	Wakefield	
La Mouette	48"	Glider A1	74		Vansteed 1951	42"	Wakefield	
La Moette	48"	Glider A1			Vapour Trails		Power	
Lamb's Climber	44"	Rubber Open	98		Vinnare	43"	Wakefield	52
Lanzo Stick	56"	Wakefield	62		Voodoo	47.5"	Wakefield	
Lanzo Stick	55	Wakefield	80		Walthew	29.5"	Rubber	
Licorice Stick	54"	Open Rubber			Waring	43"	Wakefield	52
Lil Aud	40"	Power 1.5cc	51		Warring	43"	Wakefield	54
Linesman	76"	Glider A2	52		Watthew	29.5"	Rubber	
Linesman Mk 2	76"	Glider A2	52		Whiffler	82"	Glider A2	
Lively Lady	80"	Glider A2	69		Whiffler 2	82"	Glider A2	
Lively Lady		GliderA 2			Wichita	80"	Glider A2	50
Lucifier	72 "	Glider A2			Wichita 72	80"	Glider A2	94
Lulu	50"	Glider			Wild Goose	44"	Rubber	
Luton Minor		Power .8 cc	53		Wishbone	78"	Glider A2	64
Maxie	42	Open Rubber			Wiskas	58"	Wakefield	
Meanderer	96"	Glider Open	58		Zeek 1/2 A	33"	Power .8cc	99
Mini weaver	45"	Power .8cc			Zeek American	50	Power 2.5 cc	
Missius 2	50"	Wakefield			Zoot Suit	57.5"	Power 2.5cc	92
Nord 2	50"	Glider						
Nord 2		Glider A 2						


MAIN SPAR 2off 1/8" sheet med.
L.E 1/4"x1/4" hard
L.E. Sheeted soft 1/16"
1/8" PLY BRACE
Centre section sheeted 1/16"
T.E. - 1/16" sheet — med — top & bottom
Centre rib of right hand panel
AILERONS — 3/32" sht hard
PUSHRODS — 16g.
WING RIBS 18off — 1/16" sht. med.soft
12g DURAL U/C
FIN and DORSAL — 1/8" sht.
2oz. clunk tank
FUSELAGE SIDES - 1/6" sht.med.
1/8" sht. DOUBLERS
TOP & BOTTOM — 1/16" sht. - grain across
Longerons, uprights & diagonals - 1/8" sq.
t.p.doublers 1/8" sht.
F.1
1/8" sht. NOSE DOUBLER
F.2
F.3
1/8" sht. DOUBLERS
SKID — 16g.
TAILPLANE RIBS - 13off. 1/16" sht. med.
MOTOR MOUNT — 16g. dural
AILERON HORN ASSEMBLY
TAILPLANE L.E. - 3/16" sq. hard
SPARS - 1/8" sq. — top & btm
TIPS 3/8" sht soft
2" dia. wheels
T.E. - 3/4" x 5/16"
m/c. esc. mount - 1/8" ply
F.1. 3/16" ply
F.2 3/16" ply
F.3 - 1/8" ply (esc. mount)
R.M.20
Span - 45½"
for 1·5cc. motors
aileron-only single-channel model
BANKER
by
CHRIS GRUBB
5/6
C RADIO MODELLER

Banker by Chris Grubb Single Channel RC model for 1.5 cc 45 /12” span from Radio Modeller September 1967



The urge to progress to improve on ones flying ability and to try out new developments, led to the building of this model, as a determined effort to get out of the rut. Aileron-only control seems to be used a great deal in Japan, so I thought there must be something in it. Now I would not revert to rudder—unless it was to try kick-up elevator again.

You see, the Banker was originally fitted with kick-up elevator and this proved only partially successful in that, although it would loop and half-roll off the top it had a nasty habit of pointing its nose up at about 60 degrees every right-hand signal. The Elmic Compact escapement rotates through the “up-elevator” position after each “left” signal and the elevator, therefore, kicks-up just before right-aileron, causing this to happen. I have since removed the elevator function and Banker flies very smoothly indeed. Spiral dives are fairly wide, and the model will loop and roll. etc., using normal “rudder’ flying techniques.

A low-wing configuration was considered to be a little dodgy for a first try at aileron-only, hence the somewhat stereotyped general layout. Construction was kept simple and the fuselage is wide enough to take most receivers. The wing features a full-depth sheet spar. and wide leading-edge sheeting. The engine used on the original is the O.S. Max 10. which gives ample power. Radio gear is a MacGregor Minimac receiver, Elmic Compact escapement. coupled with Fred Rising clockwork actuator for motor-speed control.

If the model is to be used without the motor- control or the 225 DEACS shown, it would be advisable to lengthen the nose by about3/4tin. To keep the centre of gravity in the correct place without ballast ing.

Construction

When choosing your balsa, select the correct grade of wood for each part—e.g. medium-hard for spars, soft, straight-grained for LE. sheet, and so forth.

Wing. This is quite straightforward. Try and make a neat job of cutting the rib slots to ensure a true wing. Slots which are too wide tend to “bow” the spar as the cement dries. Join the spars with the dihedral brace before fitting the ribs, then pin one panel on to the plan, together with the trailing edge. Cement ribs, top T.E.. and L.E. Repeat for the other half. When fitting the leading-edge sheet, pin the wing panel to the building board with about 2in, of the L.E. protruding over the edge. Use a P.V.A. adhesive to attach the sheet, as its relatively slow-drying properties will allow time for adjustment. The ailerons must be made from very hard stock, ta minimise twisting, and are best covered and stiched to the wing after final finishing and fuel proofing.

Fuselage

This needs no special instructions other than a reminder to keep the tail;-end light. Box in the right hand side of the tank bay and slot it for the motor-control push-rod. The bolts for the dural motor mounts must be fixed with tinplate straps on the inside of the formers.

Tailplane

This symmetrical and of quite a thick section. One way of making the ¾ x 5/16in T.E. called for is to cement two strips of 1 x ¼ T.E. section stock together, then trimming off the fore-edge to give 3/4in.—but be careful not to produce a heavy t.e. in doing this, as the tail must be kept light.

Installation and linkages

First make the aileron yoke and fit it to the escapement. It is made as a removable unit, being retained by means of an 8BA bolt and spring washer. The Deac battery must be in its correct position before spot-cementing the motor control escapement (if used) to the slides. Both motor and aileron linkages must be absolutely free, with no chance of binding. To obtain motor change on full rubber turns (I prefer 1/4in. strip rubber for driving the Compact), requires a really fast tap on the button (unless you’re using the R.M. Combo-Coder, with its electronic quick-blipper!—Eds.), but, as the turns are unwound, motor change becomes progressively easier to attain. When signalling “right-aileron” there must be a sufficiently long pause between blips” to avoid the throttle changing inadvertantly, so if you are a fast button-pusher——slow

down! This, of course, does not apply if a simple sequential actuator such as the Elmic Conquest, is used instead of the Compact.

Trimming

Before venturing out-doors, check all flying surfaces for warps, and correct, if necessary, either by heat from a radiator or steam from a kettle. Test-glide Banker over long grass. The glide should be fairly fast, flat and, of course, straight. Try first power flights on a -full tank and half to three-quarters full power. Allow the model to climb to a fair height before trying your first aileron-turns. Aileron takes slightly longer to become effective than rudder (with this model, at any rate), and signal length must therefore be adjusted accordingly. which may take a little trial. and-error practice. Banker responds with smooth, banking turns which can be held on for longer than is possible with rudder, enabling one to empty a full 2 oz. tank with plenty of escapement-turns left for safety.

A little practice will see you able to give cormmands immediately after hand-launching—and I guarantee that, once you have flown aileron-control, you will not want to use rudder-only again!

Wimborne MAC Control Line meeting 23 April 2017

Wimborne club arranged for reasonable weather and it lasted all day. Turn out was reasonable about 15 flyers and in the end only three circles were required and were all in use much of the time.

There were two new fliers to the event, Phil Mitchel “Mitch” and Paul Seeley. Both were flying combat models Mitch had a minor problem with C of G but that was soon resolved and he had some really good flights. Paul’s models as you’d expect, anyone who has seen his FF models and indoor FF will know how well he builds, had a couple of superb models Piranha and Squish (May have got that a bit werong?).

Den was trying out a few models successfully. Spike Spnecer and Aland Bond both flew electrified Blue Pants. Stewart Hindle had his useful runway and flew many of his selection of small electric models.

On to the photos.

Some of Chris Hague’s range of models for the day

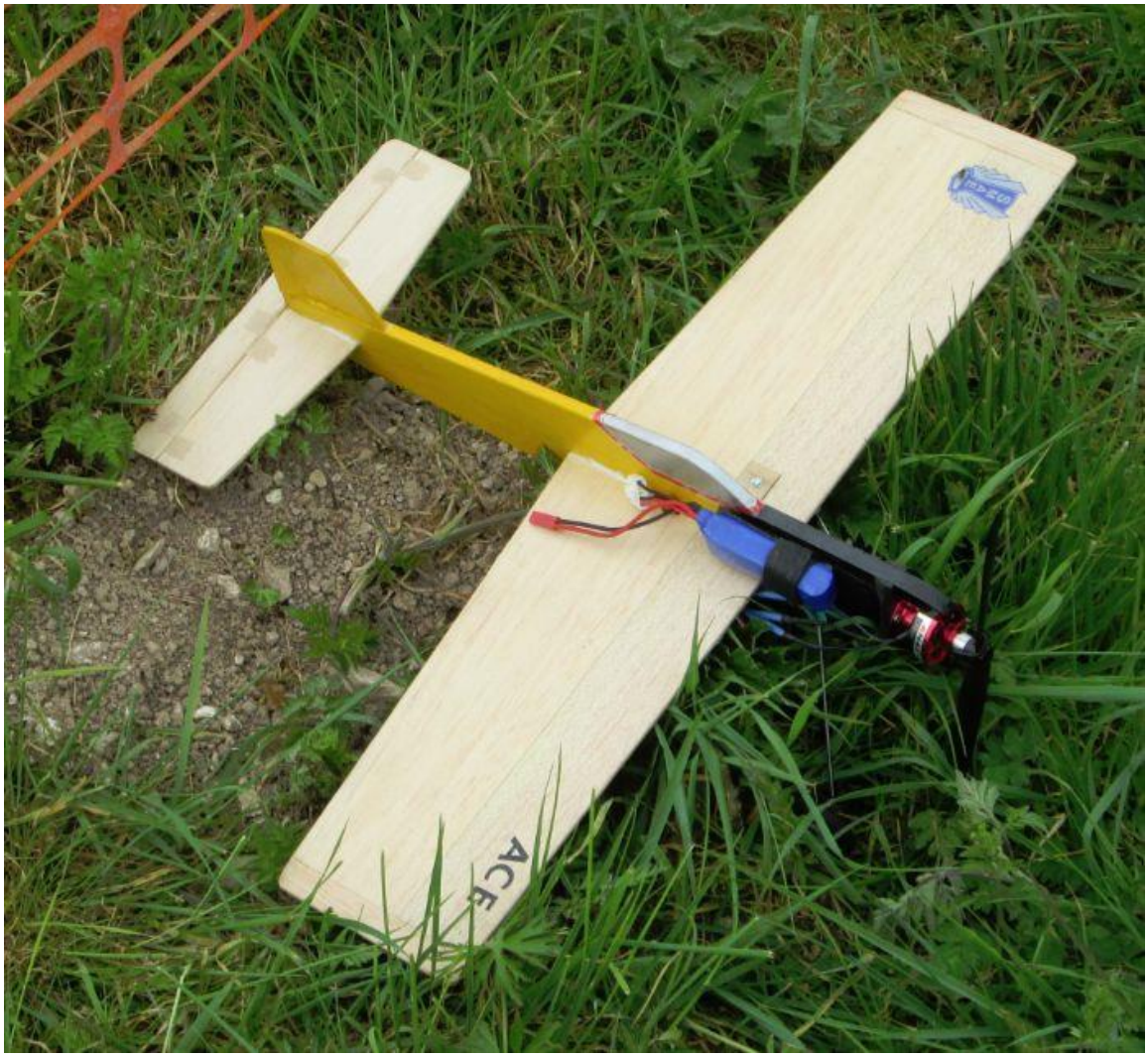
Paul Seeley's model

Mitch's model ready to go

Den testing a new model

Terry Paget launching hisreduced sizel Peacemaker electric power, flown by Paul Seeley on 50' lines

Our elegant poser, trying for the Putin look



Ken Wisker's electric Rascal surprised us all and himself on first flight, very very fast

Alan Bond's Blue Pants

Alan and Tony as it were looking under the bonnet

Den testing out his autogyro

The model was moving forward slowly

You may recall Caulkhead Gil was experimenting with mind over matter control line. Having increased the headgear performance he stood around awaiting use of the circle and whilst wearing the equipment made the basic mistake of thinking, the result was he corkscrewed himself into the ground with only the headgear on show and marking his location. We awaited many hours to see if he had opposite thoughts and would emerge from the ground but he didn't.

SHOWSCENE by Dave Bishop of DB Sound.

Many years ago when I was in my teens I bought a Frog 100 diesel one cc engine along with some fuel and an engine bearer. The whole lot was "joined up" and the fuel tank was filled up. The Frog engine had a red hard and razor sharp plastic propeller and I was told that a "chicken stick" was an advisable thing to buy for finger protection, but wasn't I the toughest guy in the world. Surely who needed such a thing as a thick rubber finger stall, only poofters would need that sort of wimpy item and certainly not me! So here I am working for Mr Billy Butlin's Fun Fair and in one of the speedway workshops and I wind this lot up in a big metal vice and do what I was told to do when starting this engine for the first time. Priming "they" apparently called it, and ones thumb was pushed down onto the carburettor air intake hole and the propeller wound over until the fuel tube was showing some of the fuel was where it should be. My thumb was removed and I got my Saturday night finger and gave a quick flick onto the propeller. Now what actually happened in a tenth of a thou, as us engineers say, (and remember at that time I was a virgin at starting diesel engines) this tiny red prop thingy in front of my new toy, gave a fantastic bang and I was struck by a very nasty pain. In those days I didn't swear as I was a leading choir boy for goodness sake and yet oddly enough, I shouted out an oath. So where did that come from? Nobody could hear me because of the speedway cars were doing what they were designed to do, which was very noisy. Despite my agonising finger pain I continued with the starting procedure. I slowly wound my propeller so as to feel the compression, as I had been told to do by the experts. Suddenly, and for no good reason, this thing goes bang again, and I am hit in exactly the same place as before, only this time there is some bloody gore was added, as well as the twice size pain. By this time I really screwed up eyes hurt, and I proceed to hold my waggling hand tightly between my thighs for some pain relief. It was at that moment my boss walked into the workshops demanding to know what I was doing holding onto my parts, instead of working. I ashamedly told him about starting my first model aero engine and he said that "such toys were simple and anyone but a dickhead could handle such a tiny thing". Still cradling my sliced opened finger I pointed to him with my nose to see what he could do about starting it. "Easy sonny boy" he said and gave the frantic Frog a flipping flick and I'm delighted to say that it bit him back, only much harder than it did to me. There the two of us stood bent backs with our hands clutched tightly between our thighs in excruciating agony. It was later that I bought a chicken stick and soon learnt that diesel engines need a special "I'm in charge" approach to get them started and running properly. I don't know if anyone has witnessed Neil Tidy of Laser engines but he is the world's best diesel engine starter without a doubt and never is bitten on his pinkies by any old engine. So it's on to Showscene dates.

I will be seeing Neil Tidy at the Old Warden Modelair weekends of May 13 – 14, July 22 – 23 and September 23 – 24. Full camping is available with some R/C electric flying in the evenings if the full size aeroplane activity allows. These three superb weekends are run by that wonderful pair of grafters, Ken and Sheila Sheppard, and everything is laid on at that wonderful place for all aeromodellers and friends to have a great weekend. The Long Marston International is on June 3 – 4 with loads of flying allowed in the evenings. In almost 30 years of helping me with DB Sound shows all over the UK, Rob Shipton will be working on the Flight Line there, along with my super step son, Stuart. You couldn't have a more experienced pair of helpful chaps such as those two, to run a show with both models and full size aeroplanes. Show organiser John Holiday will welcome them both. Now to the Weston Park show on June 16 – 17 – 18 run by Steve Bishop and Peter Whitehead. It's simply the biggest show in the UK and I loved presenting it for over 20 years for the super pair of entrepreneurs .

And finally The Wings & Wheels show is at North Weald aerodrome on June 24 – 25 although I haven't heard anything from any of the Traplet publications after I announced that I was retiring from commentating last year. The MD, Tony Stephenson, kindly rang me on my birthday for a chat but sadly Tony is all I have heard from that company so I do hope that all is well with them.

Due to this blooming continuous agonising back ache that I have been left with after falling off a ladder last year, sadly I won't be able to attend any major shows again to commentate at this year. I have plenty of pictures and memories still that I can relate to Sticks & tissue readers if the editor James Parry allows. Meanwhile here's a dig into my memory box for some more pictures taken at a few of the hundreds of aeroplane shows that I have presented from all over the world.

See you next month and all the best from Dave Bishop of DB Sound.

Superbly built Supermarine Spitfire built by Dave Barker who was the chairman of the Sevenoaks club.

I love visiting Epsom Racecourse and here is an "All American" free flight model taken in May of 2010.

Another K2 model at Crawley taken of "Neptune" some while ago.

This K2 duration model was taken some years ago along with its owner Tom Thompson from the Raynes Park flying club.

A very nice scale Sopwith Camel taken at the K2 in Crawley.

This is a half scale model Bleriot on its way to England from France flown by Henk van Hoorn of the Netherlands in April 2011.

Here is Henk van Hoorns half scale Bleriot taking off from France to land in England on April 2011

Another show I presented was at the 50th anniversary of the Schneider Trophy held at Spithead, Calshot, in 1981 and this super Robin DR400 picture was given to me some time later.

This is show stopper Dudley Pattison of Flair products and his van along with Peter Nicolson. They featured three magnificent Shorts Crusaders for the 50th anniversary of the Schneider Trophy where at the end of his slot Dud's flew some amazing show stopping aerobatics, much to the huge crowds delight.

A group of modellers at a show for the Caterham Team's 100th anniversary public demonstration held on April 2 - 2015.

A wonderful team of Dave and Marion Watts of Southern Model Fuels and his full size home built Europa in 2013.

The front cover of RCM&E taken many years ago with Jim Davies and his wife Margaret, along with one of the best show pilots ever, David Wright.

A picture of yours truly who is showing off at a Biggin Hill airshow when working with the great John Blake.

Ron Moulton was always an innovative show person especially at Old Warden events and this one is your scribe wearing a Tin Hat from a Battle of Britain slot.

(One of the very best Flight Line Directors ever and LMA member is Rob Shipton seen here with son Rufus and his 105" wingspan Sopwith Camel powered by a geared Zenoah 32.

From Jon Porter of MicroacesFokker Dr.1 Triplane available for pre-order

99 years ago today....

...on the 21st of April 1918, Manfred von Richthofen was shot down and killed near Vaux-sur-Somme.

In Microaces pursuit of creating realistic, flying micro replica kits of famous aircraft and pilots, we don't think the combination of the instantly recognizable Fokker Dr.1 Triplane and the most famous ace of all time, the 'Red Baron', can be beaten.

On this significant anniversary we are truly proud to present the **Microaces Aero Fokker Dr.1** kit for Pre-Order.

Two kits are available: The personalized red livery of Manfred's final mount and the more 'factory' livery of a most infamous character from history, Hermann Goering!

Both kits come with a replica spinning rotary Uberursal II kit, a vac formed plastic cowl and a very unique method of battery placement.

If you decide to pre-order your kit, or kits, you can get 10% off the RRP. Use the code 'DR1PLEDGE' when ordering to apply!

By pre-ordering, you help us continue our development program and keep Microaces moving forward which is very much appreciated.

We plan to have the kit ready for dispatch in the second week of June so there isn't too long to wait either!

Kind regards
Jon & Simon

*P.S. Click on the images below or **HERE** for more information on each kit!*

(Note from editor please check that offer is still valid as I received this a few weeks ago)

HOT NEWS! SAM 35 DATES FOR YOUR DIARY

We're delighted to announce that SAM 35 has been granted permission to hold two Vintage Model flying events this Summer and Autumn at Middle Wallop - Europe's biggest grass airfield!

The dates are June 11 and October 8, both Sundays, and everyone - SAM 35 members and non-members alike - is welcome, subject to the conditions set out below.

The emphasis will be on fly-for-fun and, in addition to RC ,we plan to have control-line flying - full details will follow in SAM Speaks. Brian Lever intends to CD a BeeBug Bash (details and rules on the Home page at sam35.org). More classes may be added.

Entry to the airfield* is from 9.30 am and there will be a Pilots' Briefing at 10 am.

Throughout the discussions, it has been clear that the MOD's H&S regime is now far tighter than ever before, hence we need to take particular care to ensure safe flying. Please therefore take note of the following conditions:

- **NO BMFA "A" OR "B" CERTIFICATES ARE NEEDED. HOWEVER, ALL FLYERS WILL BE REQUIRED TO REGISTER THEIR TRANSMITTERS AND MODELS AND SHOW A CURRENT BMFA MEMBERSHIP CARD - NO CARD, NO FLY!**
- **2.4GHZ RADIO EQUIPMENT IS TO BE USED EXCLUSIVELY**
- **THERE WILL BE RANDOM SPOT-CHECKS TO VERIFY CORRECT FAILSAFE OPERATION. PLEASE ENSURE THAT YOU AND YOUR MODELS ARE READY FOR THIS!**

- **THE MAXIMUM NUMBER OF MODELS AIRBORNE AT ANY ONE TIME WILL BE RESTRICTED TO FIVE**

The Museum of Army Flying will levy their usual charge at the gate* (probably £5 PER PERSON - TBC) for entrance to the airfield. ***Note also that when you reach our site on the airfield, there will be a further charge of £5 per person. This is to help defray the cost of our Licence. The only exceptions will be wives and partners.***

*** DIRECTIONS TO THE ENTRANCE GATE:**

We should now enter the airfield from the usual place, i.e., the Museum Car Park.

That's all. If you have any questions, please ring David Lovegrove on 01491 200558 or email dflovegrove@hotmail.com"

"Under the terms of our Licence, freeflight is not permitted and please also note that the airfield authorities do not allow dogs on the site". Pop it in under the section starting "The emphasis will be on Fly-for-fun . . ."

Peterborough Flying Aces Nationals, Sunday 3rd September 2017 at Ferry Meadows, Nene Park, Peterborough PE2 5UU .

NEW EVENT ! BIG CASH PRIZES ! KK Elf Precision.
Precision flight time contest for the"Elf"model (Super complete kit available from The Vintage Model Company (VMC) or Brian Lever (blever@btinternet.com). Target times posted on the day at control.) Model must use a 6 inch Dia Plastic prop (spares available from VMC)
Note! The Elf is also eligible for the Rubber Ratio Contest (see below).Prizes, kindly donated by The VMC, will be determined by "Elf "Placings in **both** "Rubber Ratio"**and** "Elf Precision"(1st £50,2nd £30, 3rd £20)**. Photo by Aeromodeller of "World Record for Most Elfs"-**12.45pm at Scramble location.
Rubber Ratio: NO MAX. Any rubber powered model with wing span 16"-25" (tip to tip).Flight score is total time in secs (from 3 flights) divided by span in inches. **Cash Prizes** for "Elf" models! See above.

SCALE MODELS - NOTE! All scale models, except Masefield entries, are judged for accuracy, workmanship and flight profile. Please bring the plan or, if scratch built, the 3 view.

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

Open CO2/Electric Scale "Stand off" scale judged against plan/ three view plus judged flight profile of launch/flight/landing. Any C02 motor/tank permitted.
Kit Scale ANY rubber powered kit model up to 36"span. Model judged against kit plan plus judged flight profile.Cash Prizes,donated by The Vintage Model Company, for highest placed VMC models
Jetex/Rapier Authentic Scale Judged against model plan/three view and judged flight profile.
Jetex/Rapier Profile Scale Judged against model plan/three view and judged flight.

P-20. 20"span and length. Max 8" plastic prop, 6 gram motors (may be external)
Cloud Tramp 5 flights NO MAX. (best and worst times discarded, and the remaining 3 times totalled. Note! If fewer than 5 flights logged the best and worst are still discarded.
Tailless Rubber Duration: Max span 30" (tip to tip). Max rubber 10gm, Prop 9.5" max dia. commercial plastic. (may be modified.) No inflight movable surfaces except DT)
Frog"Senior"Rubber Duration (for plan http://www.houseoffrog.co.uk or PMFC see below
Catapult Glider: Catapult, max 2 grams rubber on a 6" max handle. This equates to a 280mm length of 3/16" rubber tied into a single (140mm) loop. Any model permitted.
TableTop Precision Precision flight time event for Rubber models which must Rise off Table.
36 inch Hi-Start Glider; Any glider up to 36"span launched by the supplied "Hi start" bungee. Also includes a prize for best performance of a **SCALE** glider (proof of scale reqd.)
Best Unorthodox: Must be seen to fly (by either Scale Flight judge)
Rubber Scramble: 20 minutes, use any rubber powered model that qualifies for one of the above events. Competitor must both wind and launch but may use a retriever.
Flying Swarm Mass launch for any non electric model that is eligible for one of the day's competitions. Last model down is the winner.
Young Flying Aces; Prizes for 3 best Juniors (Junior **-** 17 years or under on 31/08/17)
World War One Tribute event: Until 2018 we will award a prize for the best scoring model of a **WW1 combat aircraft** flown in any of the scale competitions.

Prizes for 1st place: **Scrolls** for 1st, 2nd and 3rd.:: **Raffle** Including Kits donated by The Vintage Model Company.
Note: this is a Free Flight event: strictly no Radio Control: Proof of Insurance required for all flyers.
Revel in the special atmosphere created at this unique event.: Discounted parking. Toilets, café, and Park Visitors Centre. For more details of events visit the Peterborough MFC Website at www.peterboroughmfc.org **OR** contact Brian Waterland on 01778 343722 (07717 461000 on the day)

Cockelbarrow dates

The dates for Cocklebarrow are 9th July; 20th August and 1st October.

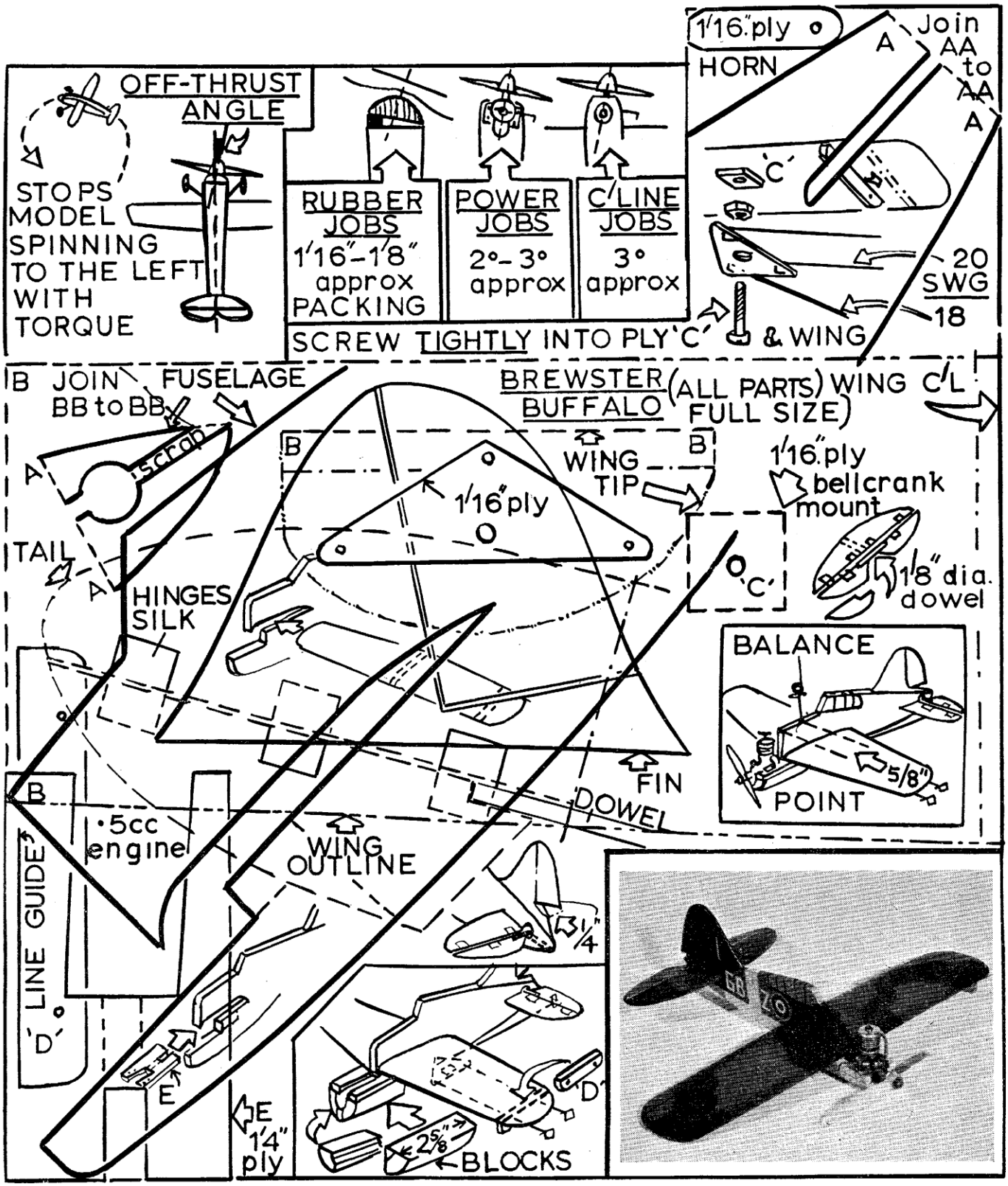
North Cotswold MAC – August event from Gray

The North Cotswold MAC have set the dates for our 2017 Fly For Fun show for August the 12th and 13th. We'd like to extend an invitation to all our regular guests and new visitors to join us at our site at Far Heath Farm near Moreton-in-Marsh, Glos.
We will be running all our regular attractions, including off-the-peg sport R/C flying, control line and small field freeflight.
Our Designers' Events this time are going to be:
On the Saturday, any model designed by the great Ray Malmström, in any form and any size + R/C conversion. Then on the Sunday, Chris Foss's legendary Wot4 design in any version and any form including ARTF's and foamies. Informal judging and prizes in both events.

Ray Malmstrom's Model'n Tip— MODELLING PINS

Aeromodellers (like dress designers) would be lost without supplies of the humble pin. For holding sheet coverings, frame works, etc., in position while the cement sets they are invaluable. On the subject of pins, herewith two tips. Firstly always use the glass- headed modelling variety, they are easier to position accurately, and to push in. Secondly, when removing pins, rotate the pin several times before pulling it out. The pin will withdraw easier and you will avoid damage to the parts being held together, Heaving a pin straight out often causes trouble with a delicate structure. You will only need a handful of modelling pins, some medium grade balsawood, and a few odds and ends to get right in building the rubber-powered model featured here, It is a simple-to-build, sure-fire performer, of the famous Good year Trophy racing aeroplane, Cosmic Wind, designed by Lockheed's test pilot Tony LeVier in 1947. It's a good looker and flies as well as it looks. The plan furnishes all details. Spend a moment on balancing this little racer correctly. Test glide over long grass and obtain a straight glide. Then wind on the turns and get flying. Fly to the left and avoid right hand turns. Rudder adjustment is sensitive. See you on the starting line!

Plan on next page



A special instructional feature for wingmen on the off-thrust angle, with FULL-SIZE plans to build a flying model BREWSTER BUFFALO FOR 05 C.C. ENGINES. by Ray Malmstrom

Once the propeller is revolving under power, any model aircraft becomes subject to the demon of the piece—torque. This is a twisting action that often causes the model to bank so steeply to the left, that it ends up with its nose buried lovingly us Mother Earth The cure is simple—point the propeller driving shaft to the right. The angle the prop shaft now makes with the centre or datum line of the model is called the off-thrust angle. The amount the shaft must be pointed to the right must be found by test, and depends on the power being used, but below will he found useful amounts and degrees of off-thrust for rubber driven and power

models. One important reminder: the more power you use, the more off thrust will be required.
Below are full-size parts for building, here and now a snappy C/L model of that tubby World War II fighter—the Brewster Buffalo. The entire model is made from j in. sheet, except where noted. Tailplane and elevator of 1/4 in. sheet and the lower blocks are from laminated 1/8 in. sheet.
You will notice the off-thrust angle has already been incorporated in the engine mount. Build it accurately, finish in colour dopes, adding transfers and a coat of fuel-proofer. Balance as on the plan and fly on 18-22 ft. lines. Use any 0.5 c.c. motor (E.D. .46, D.C. Dart, Frog 50).
This little Buffalo (15 in. span) has "pep and performance plus," and really can be flown in the back garden ! A larger tank can be fitted if desired. Happy landings.

Belair Kits are very pleased to have been appointed BRODAK dealers for the UK and Europe. Modellers can now purchase all their control accessories, including flying lines, handles, bell cranks, metal fuel tanks and many other items required to finish off their models. The Brodak range will also complement the ever increasing range of Vintage/Classic CL models Belair Kits produce as parts sets, such as the Humongous, Peacemaker and Rascal shown.
Call Belair on 01362 668658 or visit their online shop at www.belairkits.com Our free Vintage catalogue is available, just call for your copy.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Regards,
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CONTACTS: JOHN TAYLOR 01202 232206

All dates are Tuesdays

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