

## Sticks and Tissue No 130 – September 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](mailto: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.



*The Old Warden "Lizzie" landing photo from Ronald many more photos in this issue*

## Derek “Tom” Thompson deceased

Very sad news that Tom passed away three weeks ago. To me he will be remembered as an active free flight member of Raynes Park MAC flying mainly at Epsom Downs and until it ceased free flight at Middle Wallop. Always with a cheerful disposition he will be missed.

I have found 3 photos of Tom that were taken up on the Downs The one where he is holding the Cloud Tramp is when he won it in 2010. You might like to include them in the next issue of Sticks and Tissue.



*Tom at Epsom Downs in 2010 and below Middle Wallop in August 2015 with Ted Horne*



## Cocklebarrow Farm Vintage R/C Meeting Sunday August the 20th Tony Tomlin

The second vintage event of the three planned for 2017 at this always popular site. The last event in July had what can only be described as nearly perfect conditions and we were hoping for at least something similar. Sadly this was not to be as in fact the two days before the meeting we had rain and a strong wind. This made the setting up of the site by Paul Howkins and a few dedicated helpers, to put it mildly, difficult and we were all fearing for Sunday to be the same.

Luckily the weather gods smiled on us and Sunday dawned cloudy with some warm sun and most importantly, only a light breeze. Due to the weather pattern of the previous few days, numbers were sadly down with 31 fliers signed on, which considering the amount of work in organising these meetings was disappointing. However the fliers between them brought along around 60 models so the flightline was never quiet. Junior 60s again were the most numerous with 8 counted, followed by the Super Scorpion (4) a model that seems to handle the elements well. A couple of Harry Hundelby designed Sparky's were seen flying, the AM15 powered version of Phil Williams, flew steadily whilst the writers version, powered with a Derek Collin designed and built, 3.2cc twin diesel, flew well with the twin making a sound which could be described as strident!

It was good to see Dick Blenkinsop with his own design model from 1947 now in MK II version, 66" span and electric. Models included the smallest, the Eric Clutton Sharkface to the largest probably the 3x Vic Smeed Mamselle of John Laird that flies in a slow stately manner. There were also two nicely built Mercury Aeronca Sedans seen flying. Of the more aerobatic models the Astro Hog of Derek Parker looked smart and performed well. The award for the prettiest model must go to the 6 foot Mercury Mallard built and flown by Paul [Mr Cocklebarrow] Howkins, this was covered with a ladies silk scarf with a complex pattern by Pablo Picasso and looked fantastic. There were three Chatterboxes, Bob Young's model flew well but unfortunately [and very unusual for Cocklebarrow ] the two other Chatterboxes flown by the writer and his twin brother Ted [up from Devon] had the misfortune to have a mid-air shortly after the flying started. Those watching heard a loud bang and the models fell to earth with the writers Chatterbox missing its right hand wing. Brother Ted's model descended slowly with the wing jammed in its undercarriage slowing its decent [my wing]! The very lightly damaged Chatterbox was only on its 3<sup>rd</sup> flight unlike the other that had flown for years [and looked it]. It was suggested if twins were meant to have telepathy in this case it wasn't working!

The day continued at the normal relaxed Cocklebarrow pace with lots of chat and a few fliers selling off models and a number of engines now surplus to their requirements, due in the main to the huge upsurge in electric flight. Incidentally only 2 people were using 35MHz the rest being on 2.4GHz.

Luckily the promised rain held off until the site was cleared late in the afternoon, bringing to an end a good days flying with everyone looking forward to the next meeting in October.

When signing on fliers were aware of a notice from Paul and Val Howkins that after the October meeting they have decided to take a back seat from organising the event [after 29 years]. It is hoped to continue the event with myself and my wife Pam taking the reins. However there is a major problem in that the hardware [signs, stakes, safety tapes, toilet tent etc] need storage fairly close to the site. We live 100 miles away from the site and are unable to store the equipment, so a small cupboard would fit the bill. Please contact Val and Paul if you can help : [howkins776@btinternet.com](mailto:howkins776@btinternet.com) tel 02476405126 or Tony Tomlin [pjt2.alt2@btinternet.com](mailto:pjt2.alt2@btinternet.com) Tel 02086413505



*The terrible twins after meeting in the air*



*Natter time*



*Tony and Ted's Buzzard Bombshells*



*Mervyn Tilbury*



*Paul Howkins with Picasso covered model*

**John Ralph sent this photo of his Guillows Catalina conversion**





## Patron 1/2 power by Francis Ballardie from Model Aircraft August 1965

Patron is a model that flies well in very strong winds (Scottish type!) even with the c.g. at a hundred per cent., which is unusual for a 1/2A model. The original model turns in a regular four minutes in dead air, but with the weight kept down and a good TD 049 installed, this sparkling 1/2A design should be capable of 4 to 5 min. with a 10 sec. engine run.

Even with a second-hand 049 which was not quite up to par, the model clocked up an impressive number of contest successes, as can be seen.

### 1963

2nd—S.O.S. Gala.

2nd—Scottish Gala (in fly-off)

2nd due to 5 sec. engine run.

2nd—Overall Scottish Power Championship.

Highest score in team which helped win Kiel Trophy.

### 1964

2nd—Winter Rally, Abbotsinch.

1st—GMAC-Hornets Rally.

3rd—Barnstormers Rally.

2nd—Scottish Festival.

1st—Scottish Nats.

1st—Overall Scottish Power Champs.

### Construction

Fuselage—First cut out the sides and, taking the left-hand side, add top and bottom and then the corners.

Next add the pylon and the diagonals: these really do prevent the fuselage from breaking.

The side sheet should be sanded to 1/32 in. thickness near the tail end. Now add the right-hand side, the ply timer mount and finally the fin. Sand the fuselage smooth, give a coat of clear dope and sand it smooth again with the finest grade paper.

Wing—Cut all the ribs from quarter-grain medium 1/32 in. sheet balsa, making sure they are accurate as it is essential to have a true wing. Build the port inner panel first incorporating the 1/8 in. wash-in.

Do not add the spars yet. Make the other panel and join them, suitably jugged. Now add the spars and, when dry, add the diagonal ribs, one panel at a time, making sure the correct “warps” are built in and leave to set thoroughly. Complete the other panel in a similar fashion and leave overnight pinned or weighted down, to set. Complete construction by carving and sanding the leading edge to shape, sanding the whole structure before giving a coat of dope and sand once again.

Tailplane—This is built in a similar fashion to the wing, except for the geodetics. An easy method for this is to crack a diagonal rib in the centre and insert from the leading edge to the centre spar and then to the trailing edge.

Covering—Cover the wing with medium Jap tissue, grain chordwise and give two thin coats of clear dope after water-shrinking. Now rub the wing down lightly with worn garnet paper or grade 6 rubbing paper. Give the centre panels a coat of fuel-proofer and a second coat to the starboard under surface. When this is dry to the touch, pin the wing down and leave for two weeks to ensure it is remaining absolutely true throughout the season.

The tailplane should be covered with super fine Jap sparingly doped. The leading edge should be fuel proofed in a strip about 1 in. wide. Pin this item down also for two weeks.

The fuselage should be covered with medium Jap or model span doping (and sanding between coats) until all the pores are filled. Fuel-proof the whole fuselage and give an extra coat of proofer around the engine mounts. Leave it to dry for a week before installing the timer, tank and engine.

Trimming and Flying—Assemble the model, check for alignment and key the surfaces. I believe that pressure feed, the keying of surfaces and prevention of warps, are the only way to achieve any sort of



consistency so, before attempting to fly, test the engine to check that it is cutting out correctly on feed. Use a 51/4 x 3 in. Top Flite nylon prop and a fuel containing 50 per cent to 60 per cent. Nitromethane for competition work.

Tilt the tailplane for a right turn and test glide the model, adjusting for a fairly flat glide. When satisfied, set the timer for a 2 to 3 sec. engine run. Lean the motor out to full bore and release the model at about 70 deg. Patron should climb almost straight, leaning slightly to the right. Don't worry if she has a poor stall recovery at this stage: on a full run she will roll off the top into the glide. Increase the engine run to 4 sec. and try again. If a looping tendency develops— though this is unlikely with this set-up—increase both wing and tail incidences by the same amount, say half a degree. If on the other hand she has a nose down tendency move the c.g. forward 1/8 in. and pack up the tailplane T.E. Work up to a full engine run, adjusting the glide as necessary. The model should make 1 1/2 turns in the 10 sec. and have a fairly open glide circle. The original Patron weighed in at 61/2 oz. but careful attention to wood selection can knock an ounce off this.

## From Mick Butler

Pleased with my first version of Eric Fearnley's scale design of a Luton minor I decided to build another for my SC30 4 stroke engine. Scaled up from 43" to 60" covered in Solartex and added ailerons.

Link to a short video. [https://youtu.be/-eRiYa\\_UXG4](https://youtu.be/-eRiYa_UXG4)





## WARRING'S LIGHTWEIGHT DESCRIBED BY BILL DEAN From July 1948 Aeromodeller

This lightweight is the latest of a long line of models which started with Ron Warring's British H.L. record holder of 1 940 ( 26: 45,6 hand launch). The model featured here is the 1946 winner of the much coveted Gamage Cup—one of the most important annual contests held in the country. With the dethermalizer set for 15 minutes, its top flight was 22:48 and the aggregate sets a new record as the highest ever obtained in an S.M.A.E. contest.

On 80% turns, the still air duration is 3 1/4 minutes—amazing yet true. On good pre-war rubber it should do at least 4 minutes. A dethermalizer is a must, as the model recently turned in 10: 8 at 8 p.m. in the evening, when all thermals were practically non-existent.

Brief history of this outstanding lightweight follows. First of the series had an orthodox square nose and a high wing. After several months flying, a shoulder wing fixing was incorporated. The performance improvement was tremendous—as it was soon lost o.o.s. after 6: 30. Next model was fitted with a dethermalizer unit, but on its first test flight was also lost on only 200 turns, as it hardly seemed worth while setting the unit for such a small amount.

It became apparent from this point, that the many hours of work put in on design and experiments were really beginning to pay off in a big way—so model number three was built almost overnight. A slight tendency to spin was experienced. so small tip fins under the tailplane were incorporated with good results. In a few days this model had gone the way of all the others, disappearing into the clouds after 17: 30.

The fourth model was definitely a hot contest design, but although it turned in two minutes every time on less than half turns, it spun in on any more power. It was finally decided that the C.L.A. (centre of lateral area) was to blame, as the C.G. is basically too low on most shoulder wing jobs.

The centre fin was also partially useless at certain flight attitudes due to the airflow breaking away from the fuselage. Increased area anti-spin fins again proved to be the solution and this model won 2nd place at the Chingford 1946 Gala with 5: 30. Yes, this model was also lost and by this time the plan was getting just a little tattered, what with the modifications, razor cuts and cement.

Which brings us up to the present model, of which many have been built by the designer and others.

Incidentally, it was decided to build one to Wakefield size and although it flew just as well as the others (it was this model that won the Gamage Cup) it didn't seem worth it, as the smaller size was so much quicker and cheaper to produce. That is why the small version has been detailed here—although you can tackle the Wakefield size with confidence if you like a bigger model.

Fuselage. Begin in the usual manner by first laying out the side frame directly on the plan. Make the second side directly on the first to ensure that the two are identical. When quite dry, remove from the plan. slice apart, and join together by the upper and lower spacers situated on either side of the wingbox. Pull in at the nose and tail and add all the remaining- spacers. Next fit the detail parts, such as the rear peg anchor, dethermalizer box (if desired), wing box and undercart tube. Silk-cover the nose up to the second spacer, before adding the ply nose former and the super stringers. Small pieces of 1/16 in. reinforcement are fitted in the fuselage sides where indicated, to avoid tearing the covering when the wings knock off in a bad landing or crash.

Make a paper tube by wrapping round a piece of 1/10 in. dia. dowel and cement it in place in the tail. Then shape the underfin over a lighted candle and attach to the fuselage. Undercarriage and wheel details are shown on the plan.

Wings. Wing construction is normal except for the fact that two panels are featured instead of the usual one-piece wing. This plug-in method absolutely avoids breakages through crack-ups and makes a cleaner, more efficient fixing than the old type in which rubber bands are used. Auxiliary spars transmit the tongue loads out along the wings. Tips are laminated for strength and also to ensure that identical tips result (both tips being cut from one piece of lamination).

Start the wings by making the two wing ribs W1 and W2. Sandwich ten pieces of 1/32 in. oblongs, of the approximate size, between them—using about a dozen pins to keep the whole thing rigid. Then cut and sand away the surplus to make ten perfectly accurate ribs. Repeat for the other panel.

Cut out W3 and W4, using the rib patterns provided and attach to the lower 1/8 in. x 1/16 in. spar, which should be pinned down on the plan. Add the upper spar followed by the two wing tongues. Next comes the

leading and trailing edges —the latter being slotted to receive the ribs. Shape these components after assembly. Add the laminated tips and the 1/4 in. strengtheners at the root ribs.

Remove from the plan and cut slots 3/8in. x 1/16 in. to take the spar reinforcements for the tongues. A 1mm. ply fairing underneath and a 1/32 in. balsa one on top, complete the wing panels.

**Tail Unit.** Make the ribs by the same method as that just described for the wings. Pin down the 1/16 in. square lower spar on the plan and cement the ribs to it. Add the upper spars, leading edge, trailing edge and tips in the usual manner. Pin the tailplane to the fuselage and build up a 1/32 in. sheet fairing to continue the fuselage curves. The 1/16 in. sheet anti-spin fins are cemented in place after the covering has been applied. Make the fin outline, then thread the two ribs on to the central dowel spar and cement the ribs in place. A movable rudder can be cut out of the 1/16 in. sheet trailing edge if desired. Use several pieces of copper wire for hinges. The fin spar should be a snug fit in the paper tube in the underfin. A press stud in the LE. completes a firm fixture. No tailplane bands are needed, provided that a really tight fit is achieved in the fin tube.

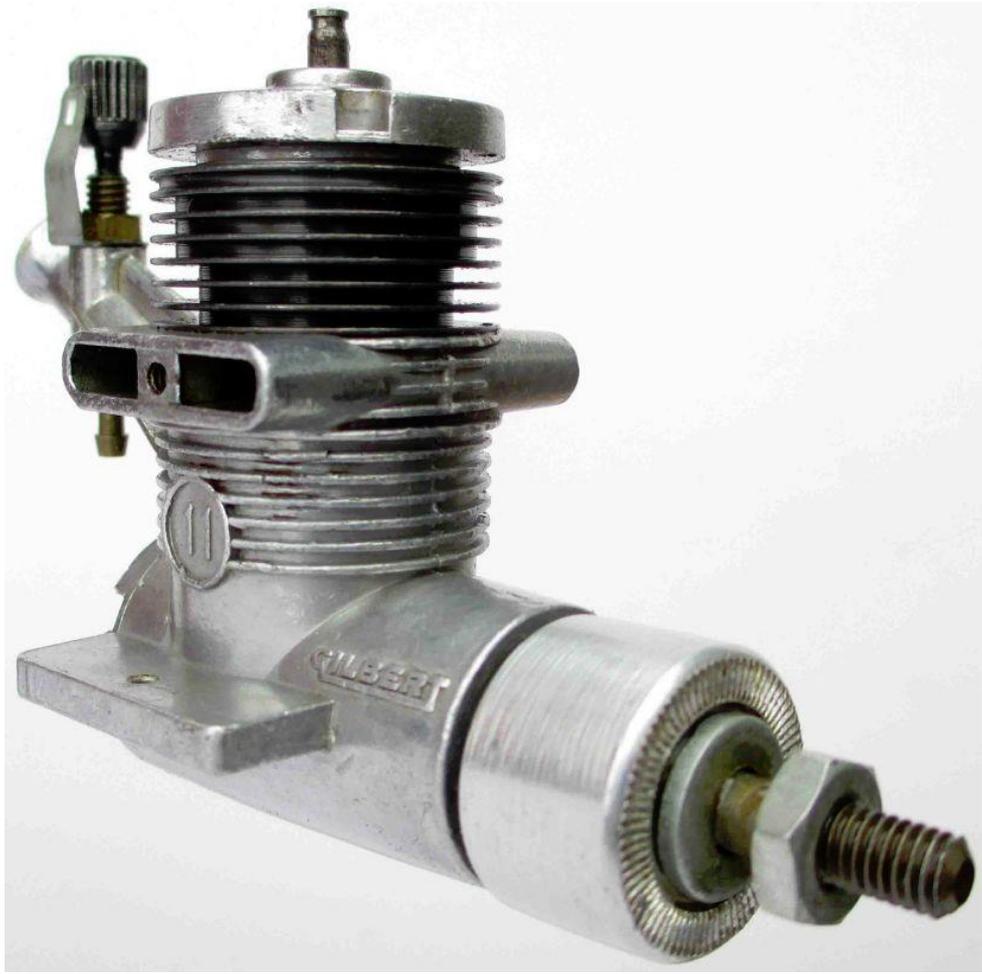
**Covering.** The original model is covered with black tissue for the fuselage and white for the flying surface. This combination sounds drab, but stands out well against most cloud and sky backgrounds. Give four coats of dope to the fuselage, three to the wings and two to the tail unit.

**Prop Details.** Cut out the blank as detailed on the plan and start by carving the back of the blades first. Completely finish the back before starting on the front, These should be undercambered 1/8 in. at the widest part of the blade. : Build up the spinner from scrap and cut out the nose block (A and B) from 1/16 in. sheet Insert a piece of brass tube in the nose block as a bearing for 'the shaft, soldering a cup washer on both ends to ensure a sturdy fixture. Bend the rubber hook in the 16 gauge shaft, push it through the nose block, then solder on the freewheel loop. Bend the freewheel clutch so that a circle is provided for a pin to be pushed through into the spinner. A ring of 3/16 in. sheet is cemented to the back of the spinner to enclose the freewheel parts. Attach the prop and bend a winding loop in the front of the shaft, ,  
**Power** consists of, eight strands of 1/4 in. by 1/24 in. strip, prewound to tension. We won't give any advice on the number of turns as we found that the quality of rubber varies considerably. In any case work up to the maximum number of turns gradually if only to avoid losing the model.

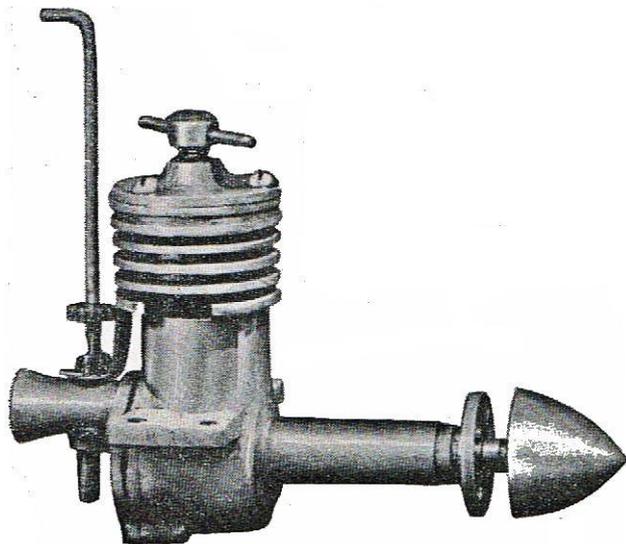
## **From Bill Wells**

I hope readers memories will be jogged by my engine pictures. A highly underrated engine is the Gilbert 7 (.07 cu in) and it's bigger brother the 11 (.11 cu in). For a side port engine they are quite powerful. Somebody forgot to tell the engines that side port engines just don't run that fast!! I used both in a KK Champ and got speeds of 37.5 mph and 45.45 mph respectively. The engines are reasonably light weight at 2.65 and 3.5 ozs. They do have some disadvantages. I would imagine getting a replacement glow head would be a nightmare so the heads would have to be drilled out and threaded for a conventional glow plug. Unlike a lot of side port engines you do not have the choice to angle the needle valve. However should the ground come up and smite the engine the cylinder protects the NVA which is just as well as the long intake is part of the crankcase casting!! The prop drive can suffer from its very loose fit on the crankshaft drive pegs, you can hardly call them a splines!!! A lathe, some patience and a small file are needed to make a replacement. For quick easy fitting the engine lugs have one threaded hole each side. Originally the engines came with exhaust collectors, one each side held on by a single central screw.





## Reeves H.18 from Aeromodeller March 1951



This month we again feature an engine of under 2 c.c. capacity—proving once more the popularity of engines within this category. Almost every new addition to the British range has, in recent months, been of small capacity, so that a very wide choice now exists. A likely reason for this concentration on units of small size is the general improvement which has taken place in design and power output, enabling models of fair span to be flown without the necessity for larger engines.

The engines tested in the past few months certainly show that British manufacturers, once they have got under way, are capable of bringing their products to a high state of perfection, so that the British-made diesel engine is now

undoubtedly the finest in the world. It is particularly noticeable that the small breakdowns and petty troubles which beset some of the earlier engines have quite vanished away, and the miniature British engine is now as reliable and “wear-worthy” as its full-sized counterpart.

Generally speaking, I should say that these improvements are mainly due to the use of correct materials in the right places, the increased employment of hardened and ground parts, and a better appreciation of the precision necessary to an efficient engine. On the design side, engines of higher efficient speed have been evolved by short-stroke lay-outs, improved porting arrangements, and more careful timing.

Fuel developments have also kept time with mechanical advance.

In the Reeves H. 18 many of these points will be evident, and on test an extremely good performance was obtained. Probably the most marked feature of this engine was the very excellent output at the lower revolutions, for, as the curve shows, .067 b.h.p. was obtained as low as 5,000 r.p.m., although the maximum power was developed at a considerably higher speed. This characteristic is unusual in “hot-stuff” engines, because high-efficiency porting usually behaves well only at around the high speeds for which it is designed. We thus usually find a very marked drop in power around the 4 to 5,000 r.p.m. mark. It is probable that the good over-all efficiency of the Reeves is due to the use of a rotary disc inlet valve in the crankcase—an arrangement which allows of great flexibility of timing. Another marked feature was the really superb fit of the piston within the cylinder, which showed no deterioration after many hours of hard running. This also doubtless contributed to the good low-speed performance, as, strangely enough, any piston leakage effects are more noticeable at low speeds than at high.

### Test

Engine: Reeves H.18 Diesel.

Fuel: Mercury No. 3 plus Ether.

Starting: Very good under all conditions.

Running: Smooth and consistent at all speeds, with good flexibility of needle control. The extended needle is a great convenience, and the situation of the carburettor at the rear of the engine makes for safety for the fingers. -

B.H.P.: As mentioned, a rather unusual performance was evident at the lower speed range. At 4,000 r.p.m. the output was as high as .060 b.h.p, which rose steadily to a maximum of .1034 b.h.p. at 11,700 r.p.m. Although dropping rapidly, a power of .087 b.h.p. was obtained at about 13,000 r.p.m.

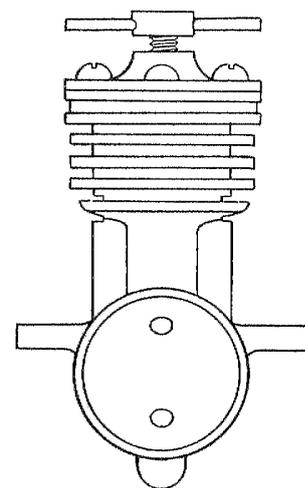
The engine may be considered to be performing excellently at any speeds between about 9 to 12,000 r.p.m.—a wide range of variation.

Checked Weight: 3.25 ozs. (without fuel tank).

Power/Weight Ratio: .510 bh.p./lb.

Remarks : This engine seems satisfactory from all points of view. The hardened cylinder and liner, the hardened and ground crankshaft, and the long main bearing, should make for long wear. Engine controls are particularly well placed for convenient handling.

General Continuetional Data



Name: Reeves H.18.

Manufacturers: Reeves Model Power Units, Victoria Road, Shifnal, Shropshire.

Retail Price: 62s. 6d, including purchase tax.

Delivery: Immediate.

Spares : Full spares and repair service by return of post.

Type: Compression ignition.

Specified Fuel: Equal parts paraffin, oil and ether, or Mercury No. 3.

Capacity: 1.77 c.c., .102 Cu. ins.

Weight: 3 ozs. bare.

Compression Ratio: Adjustable.

Mounting: Beam, upright or inverted

Recommended Airscrew: 8 X- 6 in. or 8x8 in. for control line. . 9 x 4in.for freeflight.

Bore: .510 ins.

Stroke: .500 ins.

Cylinder Liner: Case-hardened steel, ground honed and lapped.

Cylinder: Aluminium alloy casting, one piece with crankcase and integral fins, two exhaust ports and one transfer duct.

Cylinder Head: Plain aluminium alloy with three retaining screws.

Crankcase : Aluminium alloy casting.

Piston: Flat topped. case-hardened steel, ground and lapped. no rings.

Silver steel gudgeon pin.

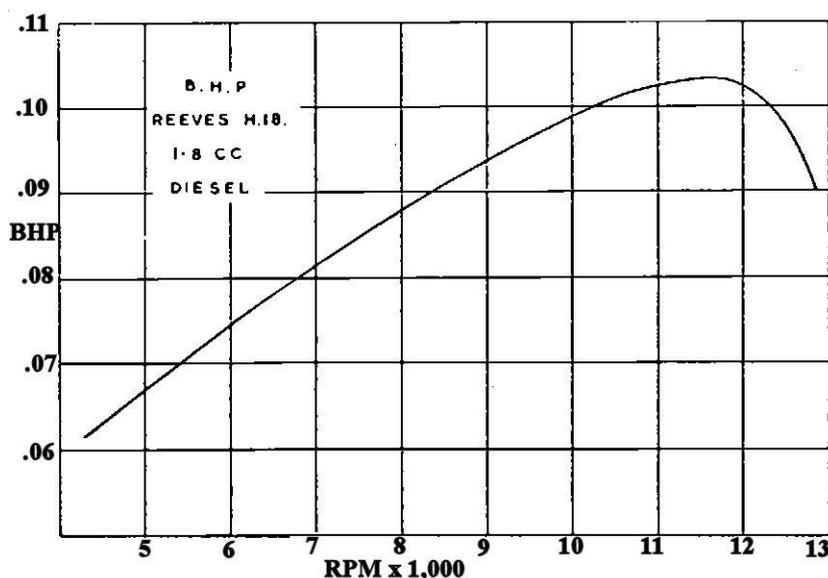
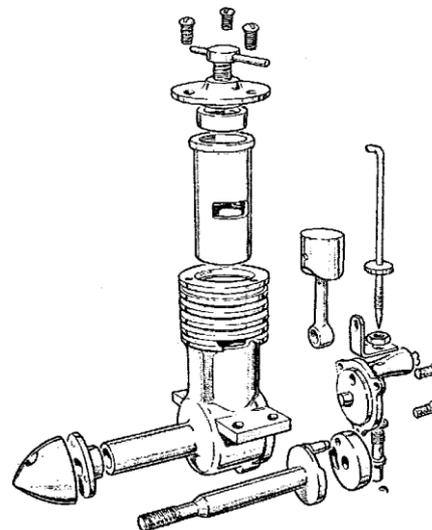
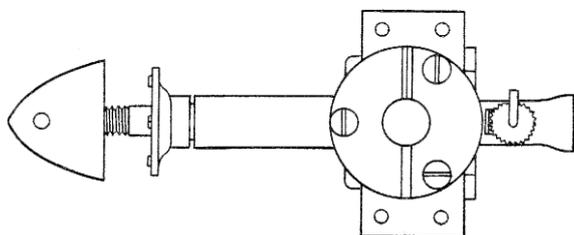
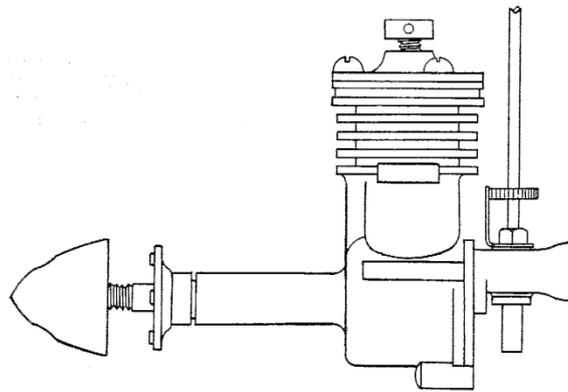
Connecting Rod: Case-hardened steel, ground and lapped.

Crankshaft: Case-hardened steel, ground and lapped.

Main Bearing: Plain. , induction: Rotary disc valve.

Contra Piston: Case-hardened steel, ground and lapped.

Special Features: Extra long crankshaft bearing giving engine longer life. Anti-vibration carburettor needle. Will run in any position without any alteration to engine.



## Cloud Tramp 2017 Tony Tomlin

The first Saturday in August is the traditional date for the mass launch worldwide of the Cloud Tramp model aircraft. This simple 20" wing span, rubber powered model was designed by the American aeromodeller Charles Grant in 1954, in an effort to attract both young and old to this very worthwhile hobby. Over the years interest has grown and now models are launched all over the world at exactly 17.00 hrs GMT meaning that, for example in Australia and many other distant countries the models are launched in the dark or in sport centres.

The largest group in the UK for a number of years has been the mass launch on Epsom Downs Racecourse which is organised by the Epsom Downs Model Aircraft Club [EDMAC]. This year, after a day which started wet and windy it was thought that pilot numbers would be down, but as the launch time grew near the weather brightened and flyers started to arrive.

Robin Willes, the EDMAC organiser, directed the flyers, many with their families, to the upwind side of the Downs for the mass launch. Roger Marples Vice Chair of EDMAC, was pleased to welcome Liz Frost, Chairman of the Epsom and Walton Downs Conservators Committee who took an active part in the flying, as well as all the flyers, their families and spectators. The objective of the meeting is fun, fun and more fun. It is not a competition which was amply demonstrated by its friendly atmosphere, and as always this light hearted event caused lots of good natured banter between the flyers with suggestions of how far or for how long their models would fly. As the seconds ticked away to the mass launch time, flyers were winding the last few turns on their model's rubber motor, [sometimes too many which led to a quick change of motor as the elastic cried enough and snapped]!!.

Robin lined up all pilots, he gave a sharp blast on his whistle and spot on time the air was full of models all climbing away. With 29 Cloud Tramps launched we had an improvement on last years 26. Some Cloud Tramps spiralled to the ground, some mid-aired, some flew 2-300 yards but some travelled considerably further accompanied by cheers and exhortations to keep flying, with the fliers, their children and grandchildren "fetchermite" chasing after them. After the event we were treated to some excellent flying by modellers who had also brought with them beautifully crafted rubber powered models. This brought to an end a really pleasant afternoon enjoyed by all.





*Mike Holloway*

From John Mellor

You may be interested in this picture from a great flying session at Ewe Farm ( nr. Wallingford ) this morning followed by good lunch at the local. For a change recently the sun shone all morning and the wind was light. Most users should be able to name the 10 models shown which are owned by Geoff Bremner, David Lovegrove and John Mellor. The pictures were taken at the end of the session during which they all flew and returned to base in one piece. Highlight of the morning ( other than lunch ) was the maiden flight of David's Quickie Biplane from an Outerzone plan. As expected David flew the Q.B. very smoothly once a couple of trimming details were sorted. More information will be coming your way once Geoff and John have progressed further with their versions.



*Quickie Biplane*



## From Ronald in Belgium

After an absence of about 16 years I went to OW again. Delightful ! The weekend weather was good, particularly so on Sunday. There were several control line disciplines to be admired. The carrier event was a first for me to enjoy live. Free flight was as interesting to see as usual and the r/c line had a number of beautiful scale models and some very competent pilots. Anyway, I include a number of photo's which may be of interest for S&T. *(more photos next monthJP)*



*Dick Stepney and control line models*







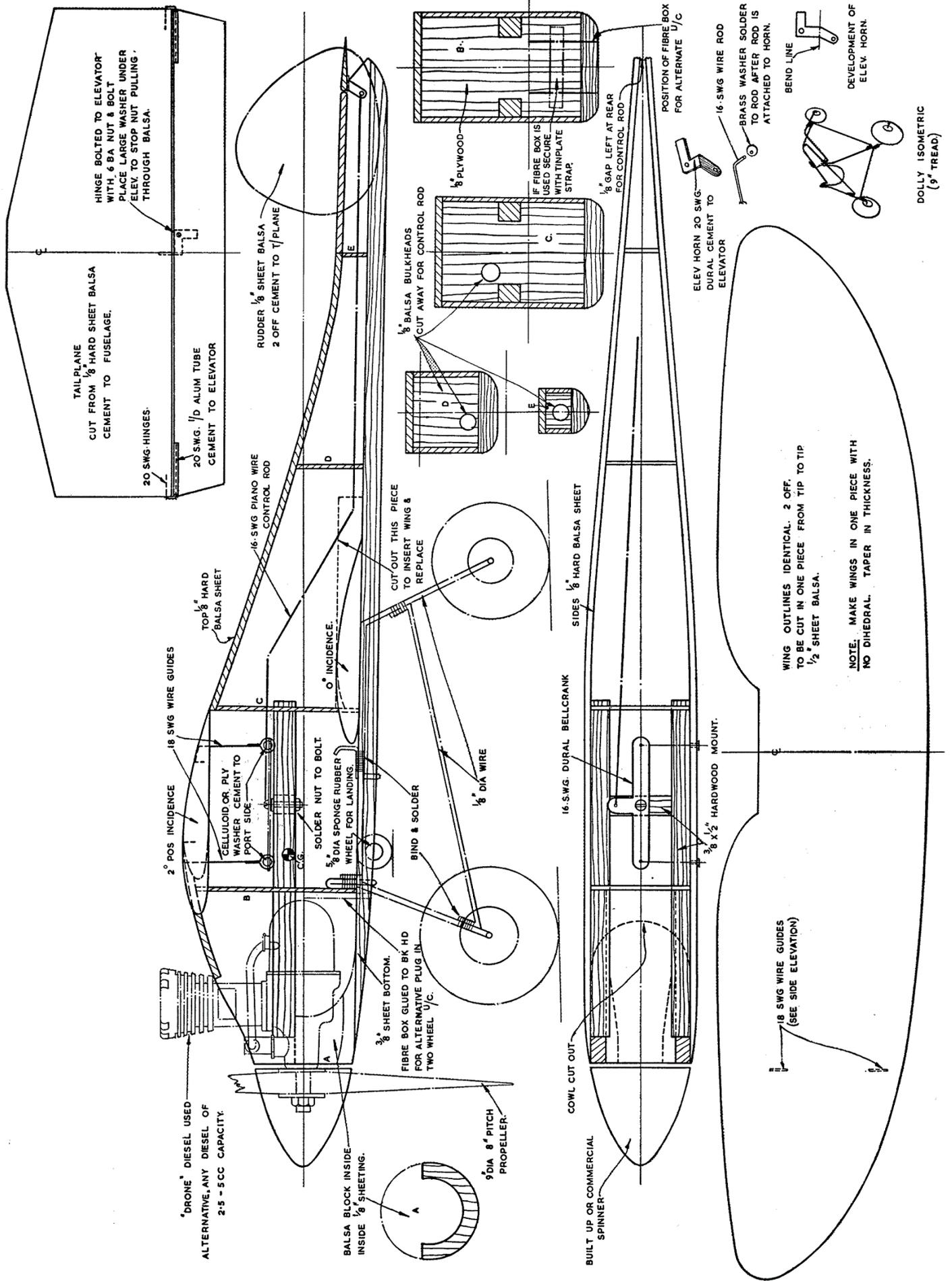




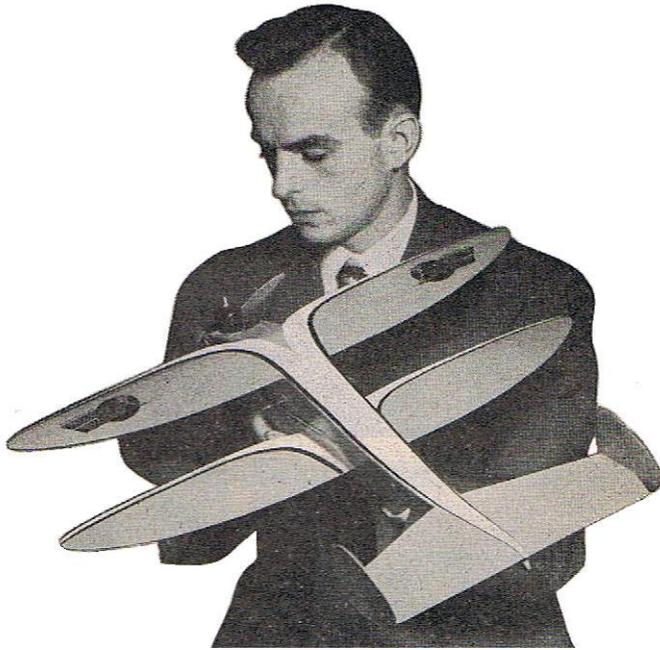








## Tyro Trainer by Walt Musciano from Aeromodeller July 1948



Control line speed flying has attracted many new enthusiasts since its conception. Unfortunately, many modellers become discouraged because their attempt proves unsuccessful.

This failure can be attributed to the fact that they have had no training in handling fast ships. Naturally one cannot expect to fly a De Havilland 108 before having flown at least a Miles Master. It was because the author observed numerous incidences where inadequate training was at fault that the "Tyro Trainer" was designed for his younger cousin and, when the easy handling and fine speed were apparent, the author proceeded to build one for himself !

Primary consideration was given to simplified construction. Anyone familiar with solid models can carve the wings and empennage and no special experience is required for the fuselage. A take-off

dolly was used in order to increase the speed and give the modeller experience in flying from these carriages which are used for all speed models. Many speed designs have a low stalling angle but the "Tyro Trainer has been power

stalled on many occasions and incidentally the flyer derives much satisfaction when performing this manoeuvre. The speed is moderately high. approx. 72 m.p.h. to make it an excellent transition trainer.

Cut the sides from 1/8 in. hard sheet balsa and cement the engine mounts in their proper location. (This will depend on the type of engine used) while this is drying, cut the fuselage bottom of 3/8 in. stock and the bulkheads of 1/8 in. Cement the bulkheads to the bottom and attach the sides in place. The bellcrank can be assembled on the foundation and this assembly cemented well between the mounts. The nose is carved from a block of balsa in order to form the transition from the rectangular fuselage section to the circular spinner section. This also provides additional strength. The fuselage top is not attached until later but the sponge rubber belly wheel can be attached at this time.

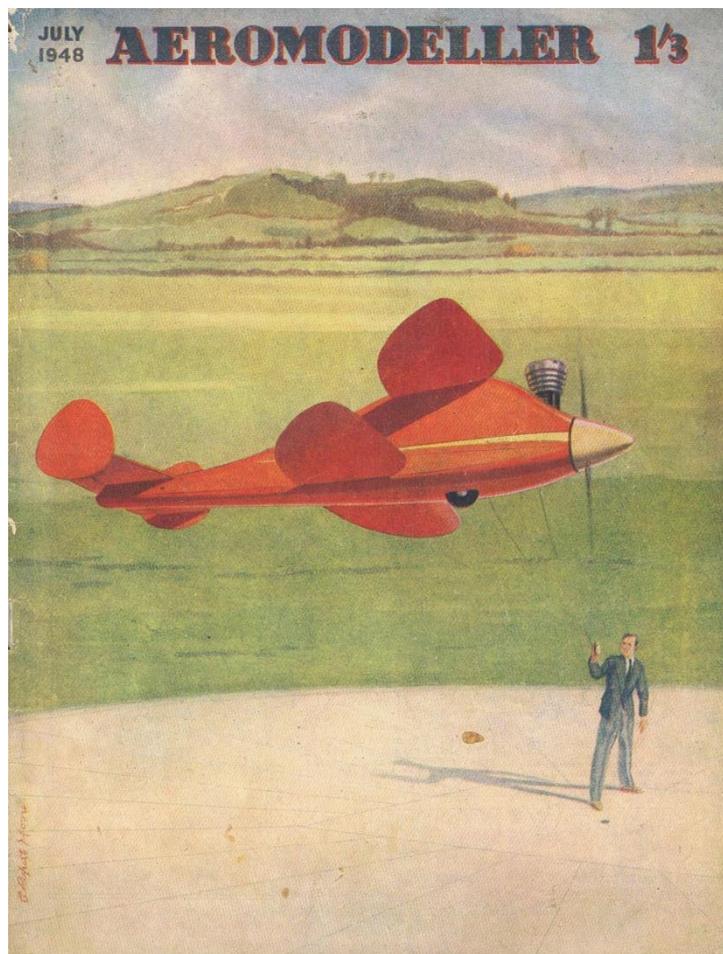
The tail surfaces are cut from 1/8 in. hard sheet balsa. Aluminium or other tubing is used as a hinge. This must be well cemented to the elevator. Attach the rudders to the stabiliser before assembling the elevator. Cut the control horn from aluminium or brass sheet and bend as shown. Connect the 1/16 in. wire control rod to the bellcrank and horn, cutting away the bulkheads where necessary, and then cement the empennage to the fuselage.

Select a straight grained 3/8 in. thick piece of medium soft balsa for the wings. Balsa planks the entire chord of the wing will be difficult and expensive to obtain, therefore, two narrow pieces cemented together span wise under pressure will prove satisfactory. Both wings are identical. The platform is cut first with a coping saw and then carved to the correct airfoil section. When sanded complete, a coat of clear dope and a light sanding will prepare it for assembly. Because of the fact that the root chord is less than the maximum chord, a rectangle must be cut out of the fuselage side to install the lower wing.

This need not be larger than the maximum chord and thickness of the wing. The lower wing is inserted and cemented well to the bulkhead, fuselage side, and bottom through the open fuselage top. When dry, the rectangles may be replaced with space removed to accommodate the wing root. Cement the upper wing in place and cover the fuselage top with 1/8 in. sheet balsa.

For the beginner who is fearful of wrecking his creation, two coats of clear dope and three of coloured will present an attractive appearance. The experienced flyer should endeavour to polish the model using wood filler before and rubbing compound after the application of the colour.

The take-off dolly is conventional in design and simple to construct. Bend the 1/8 in. wire to shape and wrap all joints with soft fine wire and solder well. The wheels can be solid rubber at least 3 ins, in diameter. Large wheels perform better than smaller ones. Portions of the dolly that come in contact with the model can be wrapped with tape to prevent scratching. The original model was powered with a "Drone Bee" diesel engine developed by Mr. Leon Shulman. Other models have used powerplants from a "(Bantam)" 19 in. to a "Mighty Midget" .45 in. the former operating without electric ignition using a "glow plug" add special fuel. Regardless of the power plant, the model should balance 3/8 in. behind the front control wire. The author disapproves the use of "shot lockers" or other methods of adding useless ballast unless it is unavoidable. Instead, the modeller should decide on the power plant he will use and construct the model accordingly. Considerable power should be used on the test flights in order to avoid "mushing." flight lines about 45 feet long of .014 in. stranded stainless steel wire have been used successfully. The model should be lifted gently from the dolly in about one lap. Do not try to climb into the wind and be sure to maintain tension in the lines. Loss of tension means loss of control. If this does occur a step or two to the rear should prove a remedy.



# VIXEN

by PAT THODY

a 63"span V-tail slope soarer  
for two function proportional

© RAOB MOELLER 6, Wellington Road, Hamilton Hill, Middlesex

**INSTALLATION OF PROTOTYPE**  
Battery and Rx. as far forward as possible in nose section so hard 1/8" sheet mounted flat. Always screw clip mounted flat on 1/8" ply.

Wing fillets from 1/4" x 1/4" of 1/8" quadrant cross section, creased and bent to curve

Wing end bit of zero incidence

1/2" sq across fuselage

1/8" sheet top grain lengthwise

3/16" dia. back down

Hard 1/8" sheet sides

1/8" X 1/2" across fuselage

Bottom: 1/16" sheet grain across fuselage

1/8" sheet bottom forward of this point grain across fuselage

1/8" sheet bottom double grain lengthwise

1/8" sheet doublers, 90° vertical

Hard balsa nose block

1/4" glass fibre cloth in resin inside nose section on sides, front and bottom

1/8" sheet top between sides, fit while resin is wet

1/8" sheet doublers, grain vertical



Frame from 1/8" sheet and two laminations of 1/32" ply

1/8" sheet top grain lengthwise

3/16" dia. back down

Hard 1/8" sheet sides

1/8" X 1/2" across fuselage

Bottom: 1/16" sheet grain across fuselage

1/8" sheet bottom forward of this point grain across fuselage

1/8" sheet bottom double grain lengthwise

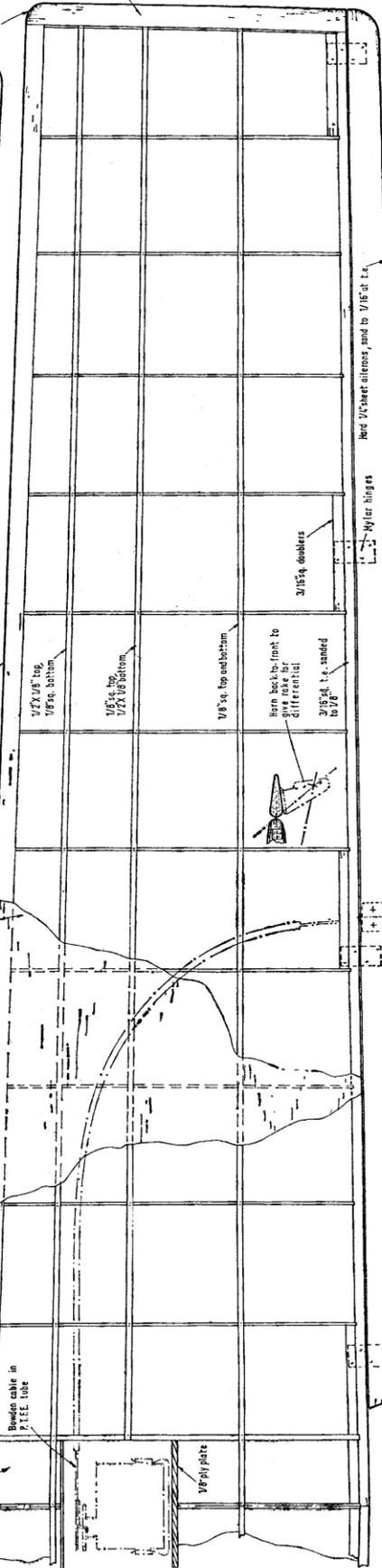
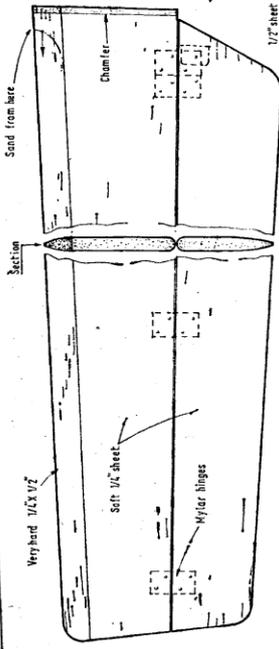
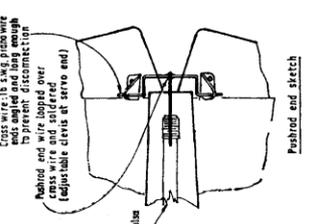
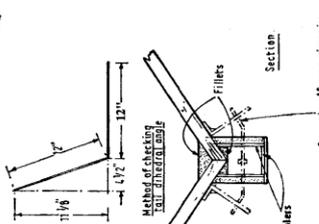
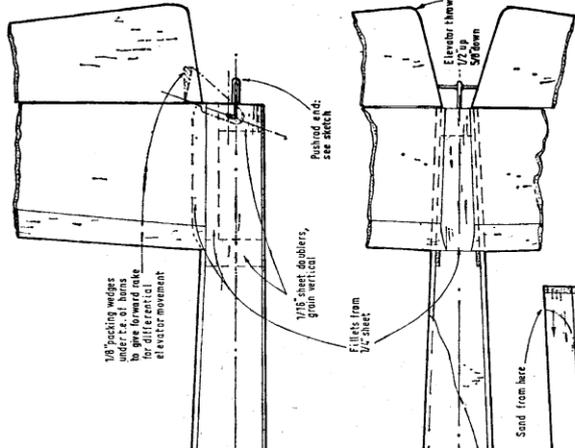
1/8" sheet doublers, 90° vertical

Hard balsa nose block

1/4" glass fibre cloth in resin inside nose section on sides, front and bottom

1/8" sheet top between sides, fit while resin is wet

1/8" sheet doublers, grain vertical



Ribs prepared by sandwich method, before unspinning, 24 of 1/16" sheet and soft 1/8" sheet; trim centre (temporarily) to fit.

Whole wing covered with 1/16" sheet

Cover centre 2" with glass fibre after inserting

Bowden cable in P.I.E.E. tube

1/8" ply plate

Hard 1/8" sheet alternates, sand to 1/16" at t.e.

Mylar hinges

3/16" doublers

Here back-to-front to give rise for differential

2/16" t.e. sanded to 1/16"

1/8" top and bottom

Drawn 1/2" up, 3/8" down

## Vixen a 63" span "V" tail slope soarer by Pat Thody for aerobatic or pylon racing from Radio Modeller September 1971

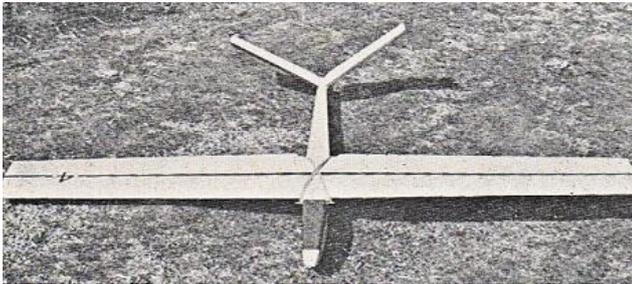


This model was conceived while surveying the wreckage of my 74in, span T-tail model. The following thoughts went through my mind—(well—apart from the usual unprintable ones, that is). I wanted a lighter, smaller and therefore cheaper model, but it had to be fully acrobatic—and easy to build—with a rear-end not prone to damage.

Drag is always the big enemy for lighter models, and two methods of keeping drag to a minimum were decided upon. One was to use a slimmer fuselage and the other was do away with the fin—which, on my T-tail models had been rather thick in order adequately to support the tailplane—and substitute a V-tail.

This latter ideal also helped in three other ways. First, no fin means less weight at the rear which, in turn, means less lead needed in the nose. Thirdly, the tail unit is kept well clear of the ground on landing. As an added bonus, the V-tail looks very pretty (to my eyes, anyway).

I therefore sat down and drew up the Vixen. The fuselage came out something like full-size types, for the same reasons—to cut down drag and concentrate the weight in the nose. Because of the slimness of the fuselage, fibreglass was used to strengthen the nose section, as this allows more room inside than would have been the case had fuselage doublers been used. The wing was the same 14 to 16 per cent progressive section that was successful on my previous model, but the span was reduced to 63in.



I used a foam-core wing on the prototype, but mine are relatively heavy, and replicas with the built-up wings shown on the plan have come out appreciably lighter. (As a matter of interest, my original fuselage, complete with R/C equipment etc., weighs 21 1/2oz. and the wing, with aileron servo, weighs 19oz.)

Cutting down the drag has really paid off on this model as it is very fast, for a comparatively light machine, and

may be flown in a very wide range of wind speeds without resorting to ballasting.

### CONSTRUCTION

#### Fuselage

The construction here is a little unusual as there are no doublers, and only one former is used. The sides are cut out from 1/8in, hard balsa sheet and the dowel holes drilled accurately in place. The nose block, 1/2in, square spacer, 1/8 X 1 1/2in. spacers, and the former are cut out first, then the spacers and formers are glued and pinned in place, together with the two dowels for the wing bands. The nose block may now be glued in, using epoxy, and the whole lot bound together with rubber bands and allowed to dry—checking, of course, for alignment. The fuselage bottom is now planked using hard 1/8in, balsa at the front, and medium 1/16in. sheet at the rear—both cross-grain. At this stage the 1/16in. stiffeners may be added at the rear of the fuselage. Before sheeting the top of the rear fuselage with 1/8in. balsa, a piece of 1/4in, square is glued across at the rear of the former. When the glue has dried at the front of the fuselage, the whole area inside the nose in front of the wing should be covered with fibreglass matting and resin. While this is still wet, the 1/2in, sheet top may be added, using fibreglass resin or epoxy to secure it in place. A sanding disc on an electric drill is very handy to smooth the front end to shape. I use Remcon servos, so a 1/4in, mounting block was glued in, as shown, for the special Remcon spring clip mounting—the servo being mounted horizontally. (You should give some thought to the mounting of your own particular servos, and linkage before commencing.)

#### Wing



As there is no dihedral the two halves can be joined together laid flat on a table. I do not use a dihedral brace as the 3in, glass cloth tape and epoxy resin have sufficient strength when bonded to the balsa. Butt join the halves, then do the sheet covering, finally fitting the fibreglas tape, with epoxy resin.

One tip here, if the wings are to be covered in Solarfilm, the centre section can be covered before the epoxy has set and the heat of the iron smooths out the epoxy resin under the Solarfilm. (This will not work with polyester resin, however, as the solvent will remove the Solarfilm adhesive.)

When the wing join is set, cut out the servo box and line the sides with 1/16in, balsa and the 1/4in. ply servo mount. The ailerons are made from 1/4in, hard sheet and fastened in place with mylar hinges, pinned with

toothpicks or -,1/16in. dowel.

#### Tails

These are made from soft 1/4in. sheet with a 1/2 x 1/4in, very hard leading edge, for stiffness. They should be joined at the angle shown on the plan, and the top fillet may be added at this stage. The rear fuselage sides have to be chamfered to allow the tails to seat, and fillets are added inside the fuselage for extra strength.

#### Covering

I have used Solarfilm to cover the whole model because it is easy, and I am sure its smoothness helps to reduce drag. However, as the model has no open structure, any covering method preferred may be used.

#### Installation

No problems here. I put the gear roughly in position at first to determine the centre of gravity; then packed the Deac right into the nose with some foam, followed by the receiver, and filled the rest of the nose with foam. My model needs about 1 oz. of lead in front of the Deac.

The total up-and-down movement on the elevators is 1 in, and on the ailerons is 7/8in. Note that there is differential movement on the ailerons; this helps to make the rolls more axial. This is achieved by having the aileron horns fixed the “wrong way round,” as shown in the detail sketch on the wing drawing.

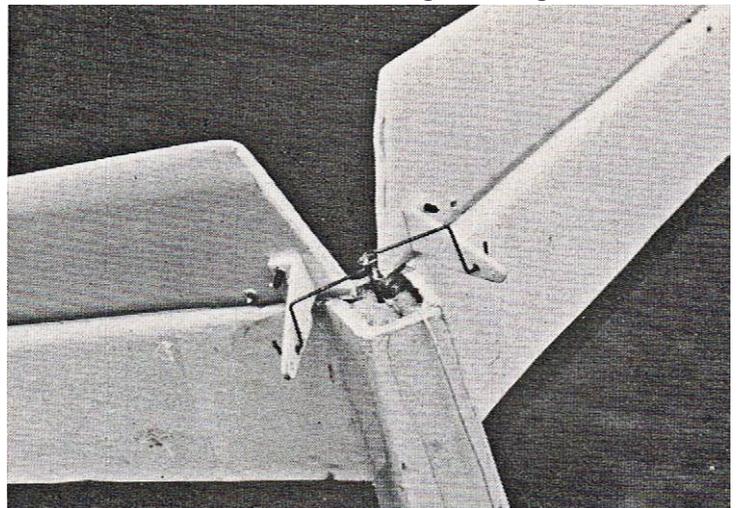
#### Flying

There are no particular vices with this model, for anybody who has flown elevator/aileron before. The V-tail makes no difference in normal flight, but it does seem to aid stability inverted (which is logical when you think about it). Vixen is fast—particularly for a light model, but ease back on the stick and it will soar well. Because of its lightness it needs plenty of steam before it is put into a manoeuvre but, for instance, three consecutive rolls may be obtained without too much sweat.

The only manoeuvre it does not do well is a spin. This is presumably because there is no rudder action!

(If anybody manages to fit differential rudder action I would be pleased to hear how they get on.)

One point about the V-tail is that, whatever the position of the model, the elevator will not be completely blanketed by the wash from the wings. This is noticeable in practice, as loops and inverted loops (no, not bunts,” please !) are very similar in size.



**DMFG Sunday 24 September 2017**

We had another get together for the sake of it and trial our now usable 5 km of runways facing N-S, E-W and in between, it worked out well especially for the David Ralph small wheeled ducted fan F115. He chose the 600m road just in case he ran out of room!



*David's F115 on runway prior to being swept*



*Just lifting off*



*Tony Tomlin's Skycar overshooting cut area of grass*



*Skycar close up taken in Tony's garden just prior to the meeting*



*Geoff and Chris Williams brought along several of their gliders unfortunately I only got the one photo*



*Paul Seely's combat models*



*Alan Coppen's models*



*Bottoms up*



*John Bainbridge's Dallaire Laser powered*

## Showscene Dave Bishop.

The Final Modelair weekend at Old Warden for 2017.

Due to circumstances, I was only able to get to the third and final Modelair event on the Sunday at Old Warden that was held over the weekend of September 23 – 24. To my surprise the place was missing the two main organisers namely Ken and Sheila Sheppard. The reason given was that Ken has been in hospital and Sheila had to drive many miles as a consequence. The result of their absence was that the “regular helping Modelair weekend team” got together and ran the whole event and a good job they all did too. The weather was the usual very kind with the unfortunate blustery wind across the runway. There was a special treat for everyone when a number of the full size aeroplanes flew away to another airfield for the weekend and reappeared back home just after 5pm on the Sunday after the model flying ceased. The Hurricane, Gladiator and others were a delight to see as they each came back “home” much to the delight of many camera enthusiasts. The weekend was filled with the many different types of disciplines of our sport with a lot of Free flight and radio assist modellers strutting their stuff on the left hand end of the airfield. The R/C flying chaps were on the right. The control line combat flyers were over the far left hand end of Old Warden and the control line speedsters near to the control tower. This Modelair had the excellent chap Bill Langley with his diesel powered racing cars running in the three lanes on a special slot car track that he had built. It is close to the main track on the grass verge with orange flexible safety fencing surrounding it all. Bill had even constructed a main control tower based on the famous German Nurburgring and good it looked as well. My Jan had packed me up a lunch box which I ate on the 90 minute drive to Old Warden and later on I imbibed in a bun filled with many slices of well cooked bacon and HP sauce all bought from the new chuck waggon handily situated by the control tower. I added a top class large cup of tea and enjoyed sitting down watching the free flight people have a whale of a time. It was good to see so many kind friends and acquaintances that came and said hullo including the Aeromodeller editor Andrew Boddington who is back in his chair after our Ken had done a term of filling in for him. There were a large number of traders along both angled lines with everyone telling me that they had “done well”. And of course there were also a number of regular friends from over the water all enjoying themselves and snapping many photographs to take back home afterwards. Thank you to everyone who worked so hard to make it go without a hitch as usual and we will have to wait until next year for more Modelair events but if you happen to have a diary for next year 2018 then here we go. May 12 -13 - May fly. July 21 – 22 –Scale and September 22 – 23 is the Festival of Flight.

See you next month. All the best from Dave Bishop of DB Sound. Email [davedbsound@gmail.com](mailto:davedbsound@gmail.com)



**A nice pair of Keil Kraft free flight models.**



*Andrew Boddington paid a welcome visit with a French visitor and also one of the regular Old warden friendly helpers.*



*The children at Modelair have their own build and fly competition all under the auspices of the Belair family. Great fun enjoyed by all and accompanied by lots of clapping.*



*This superbly built Vic Smeed Tomboy enlarged to 48" wingspan that was a joy to watch and yet another excellent kit from Leon Cole of Belair.*



*An old Madcap model at the Free flight area that was "something else".*



*This little Bi-plane was scratch built by this very friendly modeller who had completed it with 4 channel radio for full control.*



*A nice couple posed with two popular models for a while ago namely a Bill Dean Pirate and pusher Belair Pushy Cat.*



*A nice free flight 40 years old Keil Kraft Scorpion model with lovely lines by Derek Thornburn.*



*This rubber powered Air King model was built by Dave Collins with built up wing ribs. Nicely detailed.*



*This Spirit of St Louise free flight model was built by Dave Clark and is a R/C electric Gillows kit.*



*This was the show stopping scale model Nurburgring control tower built by Bill Langley that had three lots of one sixteenth scale diesel powered slot cars racing at the same time and looking great.*



*This walking encyclopaedia of helicopters is the famous Geoff Barringer seen here on the R/C line complete with his modelled pilot of President Donald Trump.*



*The two Red Arrows Hawks seen here in August 2013 flying at Dunsfold airfield with the pilots of the full Size Red Arrows standing alongside on the flightline. Sadly these two delightful jets are no more having collided in mid-air at an airshow in Spain last week.*



*This is a “secret” engine that is a “yes” a sparky ignition designed and being tested by the Laser engine wizard Neil Tidy. It is amazingly quiet and very powerful with terrific pick – up and that’s all I can tell you at the moment.*



*Neil Tidy smiles as always after yet another super flight with his Tiger Moth and Laser powered engine of course.*



# Waltham Chase Aeromodellers

## INDOOR F/F MEETING

Waltham Chase Aeromodellers, in association with South Hants Indoor Flyers, are pleased to announce the continuation of the Indoor F/F Meetings held at the Main Hall at **Wickham Community Centre, Mill Lane, Wickham, Hants PO17 5AL**. These meetings will be held on the following dates:

Tuesday, 3rd. October 2017  
Tuesday, 7th. November 2017  
Tuesday, 5th. December 2017  
Tuesday, 2nd. January 2018  
Tuesday, 6th. February 2018  
Tuesday, 6th. March 2018  
Tuesday, 3rd. April 2018  
Tuesday, 1st. May 2018  
Tuesday, 5th. June 2018  
Tuesday, 3rd. July 2018

All meetings will run from 7.00 p.m. to 10.00 p.m. The Main Hall at Wickham Community Centre is particularly suitable for indoor free flight models of all types, with a ceiling free of obstructions. Tables and chairs will be available in the hall, the organisers are always grateful for assistance with moving furniture. A hot drinks machine is available on site.

Admission to the meetings will be £5 for fliers and £1 for spectators, whilst accompanied children will be admitted free. Junior fliers will be charged as adult spectators. Fliers will be required to show proof of insurance.

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

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

Waltham Chase Aeromodellers look forward to welcoming all indoor F/F fliers to these events.

For further details please contact:

Alan Wallington, "Wrenbeck", Bull Lane, Waltham Chase, Southampton, Hants.  
(Tel. 01489 895157)

or see our web site: [www.wcaero.co.uk](http://www.wcaero.co.uk)

# FLITEHOOK

Indoor Free Flight Meeting  
West Totton Centre,  
Hazel Farm Road,  
Totton, Southampton.  
SO40 8WU

Café on Site

Contact [Flitehook](http://Flitehook)  
E-mail [flitehook@talktalk.net](mailto:flitehook@talktalk.net)  
Tel. No. 02380 861541

**Flyers £8**  
**Juniors & Spectators Free**  
**Sundays 10.00a.m. to 4.00p.m.**

**2017**

10<sup>th</sup> September 2017  
8<sup>th</sup> October 2017  
12<sup>th</sup> November 2017  
10<sup>th</sup> December 2017

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

**2018**

**Sundays 10.00a.m. to 4.00p.m.**  
14<sup>th</sup> January 2018  
11<sup>th</sup> February 2018  
11<sup>th</sup> March 2018  
8<sup>th</sup> April 2018

## Tony Penhall Vintage & Antique model Aircraft plans

<b>Prices of plans and postage do fluctuate, upwards, so check with Tony, details below</b>		Plan	P&P
		£	£
1935	KING BURD Cabin high wing American Gas model 60" span	8.95	1.50
1934	WAKEFIELD by R.T. Howse Bristol club member 48" span	8.95	1.50
1937	WAKEFIELD as above but 31" span	8.95	1.50
1936	SKYROCKET by AK Brooks (BMAS) 90" span petrol model	11.95	3.00
1933	BLUE DRAGON 1934 Sir John Shelley Cup winner designed by Captain CE. Bowden a pioneer petrol engined models	11.95	3.00
1938	EAGLET by Ben Shereshaw a pretty American Gas model 44" span nice performance with the Brat .16 petrol motor	8.95	1.50
1939	Cloud Models Dorking ELF petrol model span 52" by R.J. O'Neil	8.95	1.50
1946	SWALLOW or MONOCOQUE MIDGET a very pretty elliptical wing petrol model for the Elf or Ohlsson .23 engines	8.95	1.50
1936	A little known 72" petrol model, named PETIT DRAGON ROUGE by Captain. CE Bowden	11.95	3.00
1946	KANGETTE SENIOR a monocoque fuselage biplane span 44" by Captain CE. Bowden	9.95	3.00
1946	MIDGET At 23" span this tiny cabin design by Bowden gives stable sparkling performance with .5cc diesel .	6.95	1.50
1936	PORLOCK PUFFIN designed and built in a single night by Bowden and his lifelong friend JFP Forster for the Elf or 2.5cc Spitfire 60" wing span with fine performance	8.95	1.50

1936	PLW 5 Captaln Bowdens fifth low wing petrol model for the Elf petrol engine, span 54"	8.95	1.50
1938	CLUB CONQUEST a fine flying cabin model at 68" span for the 6cc Drome Demon petrol engine	9.95	3.00
1946	NEPTUNE FLYING BOAT by J. F. P. Forster his favourite bus! This classic design from a Master spans 62" for Brown Junior or Ohlsson .60 petrol engine with Radio Control	17.00	3.00
1936	CL OUD, CRUISER by American Harry Moyer with strut braced wings stringered fuselage and open cockpit this design commands skilful exacting building. A fine semi scale light plane type	11.95	3.00
1935	MISS AMERICA Frank Zaic design in conjunction with his friend Carl Schmidig superb performance from this cabin high wing classic	11.95	3.00
1936	TREVETHICK MONOPLANE by Richard Trevethick at 58" wing span this model placed second in the Sir John Shelley Cup Competition that year fitted with the Brown Junior engine and rudder bias gear	11.95	3.00
1935	MILTON SPECIAL Wakefield entry from Australia 42" span	6.95	1.50
1946	BLACK MAGIC Fred Hemsalls classic cabin model for Ohisson 23	8.95	1.50
1940	J.L. Sadlers PACEMAKER Ultra stable low wing model at 78" with very fine performance .	11.95	3.00
1935	HONEY The Little 36" span high wing prototype for the ELF engine as designed by American pioneer Dan Calkin in the USA	7.95	1.50
1938	ALPHA CORSAIR a reduced scale model of Joe Beshars design with wonderful performance for the Junior Brown Junior engine	8.95	1.50
1940	SKYLARK An interesting out of the rut Gull Wing model by American Louis Garami for Ohlsson 23 or Bantam .16 engne 51" span	8.95	1.50
1938	PRIVATEER by Charles Lutman cabin high wing for 2.5cc petrol	8.95	1.50
1938	M.S. BEE 47" cabin high wing model by Lutman	8.95	1.50
1938	M.S. WASP 39" span open cockpit biplane again from Charles Lutman	8.95	1.00
1938	DALLAIR SPORTSTER. This American beauty has superb performance at 108" span and is suited to free flight or RC conversion	14.00	3.00
1946	KEIL KRAFT SOUTHERNER MITE Pretty Bill Dean job for the Amco .87 diesel	7.95	1.50
1939	NEW RULER: A 72" span polyhedral wing, open cockpit semi scale design by Henry Struck USA Two piece plan requires joining. Brown Junior power or similar 8cc or 10cc engine	10.95	3.00
1938	AIR TRIALS SPORTSTER A stable high wing cabin model, another great little 46" span design from the hand of Ben Shereshaw	8.95	1.50
1938	PRIVATEER SENIOR 72" span cabin petrol model sister to the 54" span junior model by Charles Lutman of The Model Shop, Newcastle	11.95	2.50
1938	COMODORE by Ben Shereshaw USA 72" monocoque a very fine cabin job for brown Junior engine	11.95	2.50
1938	SCIENTIFIC MERCURY Ben Shereshaw again 72" cabin	11.95	2.50
1946	WORLD RECORD flying wing by Josh Marshall for 1 cc diesel	8.45	1.50
1940	THUNDERBIRD 45" span from the USA	8.95	1.50
1972	Post vintage Asymmetric flying wing by P Fisher X-AC-5	8.95	1.50
1947	SCARAB by Albert hatfull for Amco .87 diesel	8.95	1.50
1938	BERRILOID trophy winner by D Coover USA 72" span	11.95	2.50

**All plans are posted by return where possible**

**You are strongly advised to contact Tony to confirm prices of plans and cost of post and packaging**

T Penhall  
62 Gordon Road  
Little Paxton  
Cambs  
PE19 6NB

Phone 01480 472658



## 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](http://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. Builder 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.





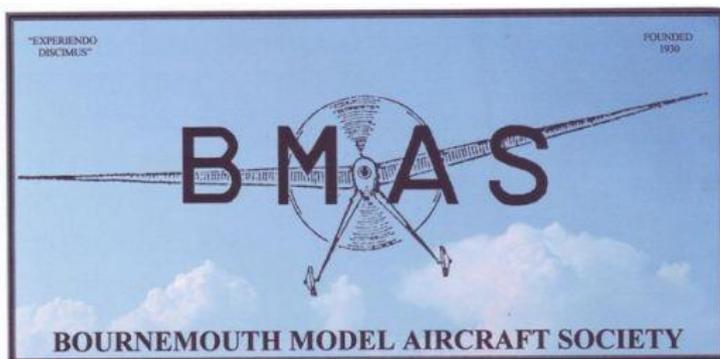
Price: £60.00 Inc VAT  
66.00 USD | 71.03 EUR

Regards,  
Leon Cole  
Belair Kits

Tel: +44 (0)1362 668658

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ALL FLYERS MUST HAVE BMFA INSURANCE FLITEHOOK NORMALLY IN ATTENDANCE

Adult Flyers £5 Spectators £1.50

CONTACTS: JOHN TAYLOR 01202 232206

All dates are Tuesdays

19 September

24 October

28 November

# Dens Model Supplies

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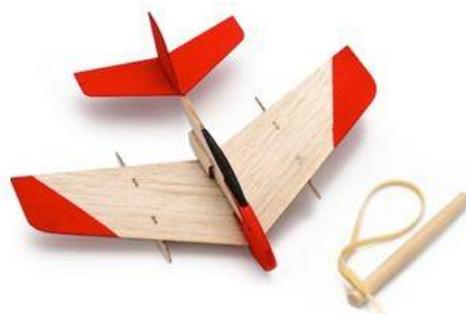
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## E-Zee Timers



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