

## Sticks and Tissue No 131 – October 2017

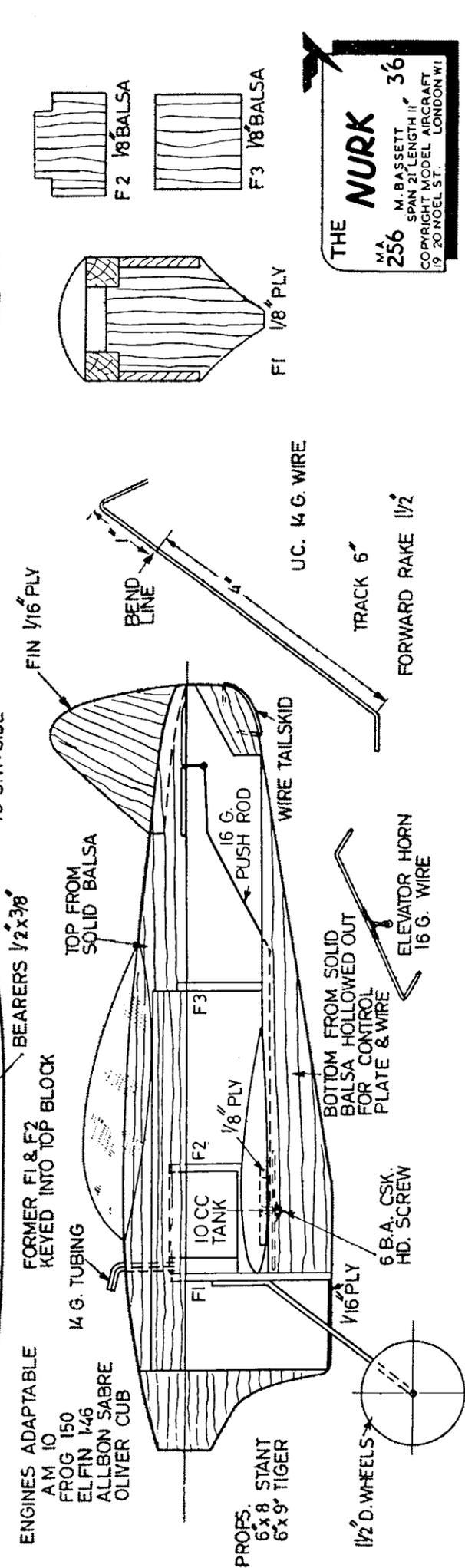
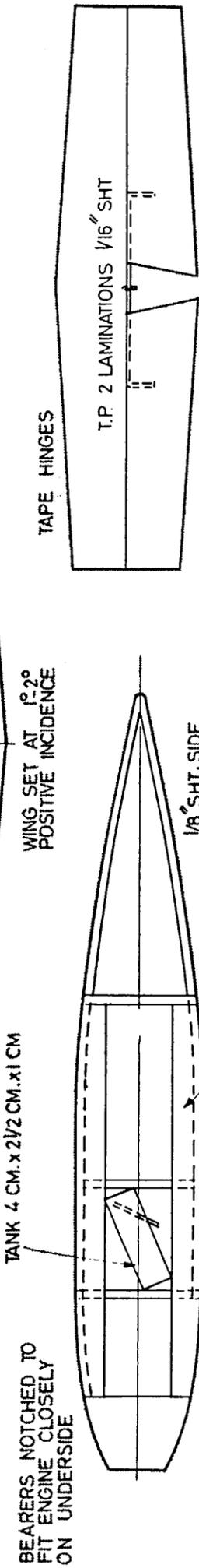
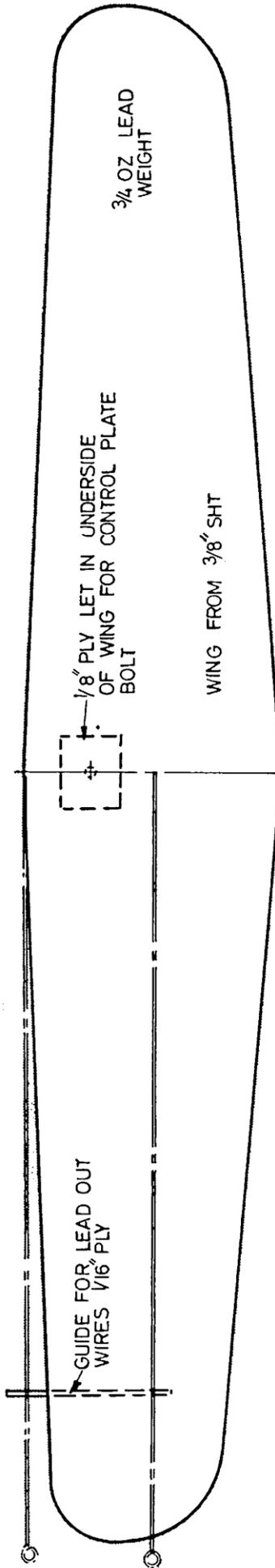
If you can contribute any articles, wish to make your point of view known etc please send to or phone 01202 625825 [JamesIParry@talktalk.net](mailto:JamesIParry@talktalk.net) The content does not follow any logical order or set out, it's "as I put it in and receive".

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

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**Peter Michel's Bordon Light Wakefield at Middle Wallop 8 October 2017**



**THE NURK**  
 M.A. 256  
 M. BASSETT  
 SPAN 21" LENGTH 11"  
 COPYRIGHT MODEL AIRCRAFT  
 19 20 NOEL ST. LONDON W1

## **The Nurk an attractive team racer for 1/2 A class by Mike Bassett from Model Aircraft April 1957**

We in the Sidcup Club have been interested in 1/2-A team racing since the idea was born, and The Nurk is the development of several models. The model is capable of speeds of over 75 m.p.h., and it once held the club 1.5 C.C. speed record at 76.8 m.p.h. It has won the Sidcup 1/2-A Team Race Trophy in the record time of 4 min. 45 sec. for five miles, successes include firsts at Wanstead and London Area rallies.

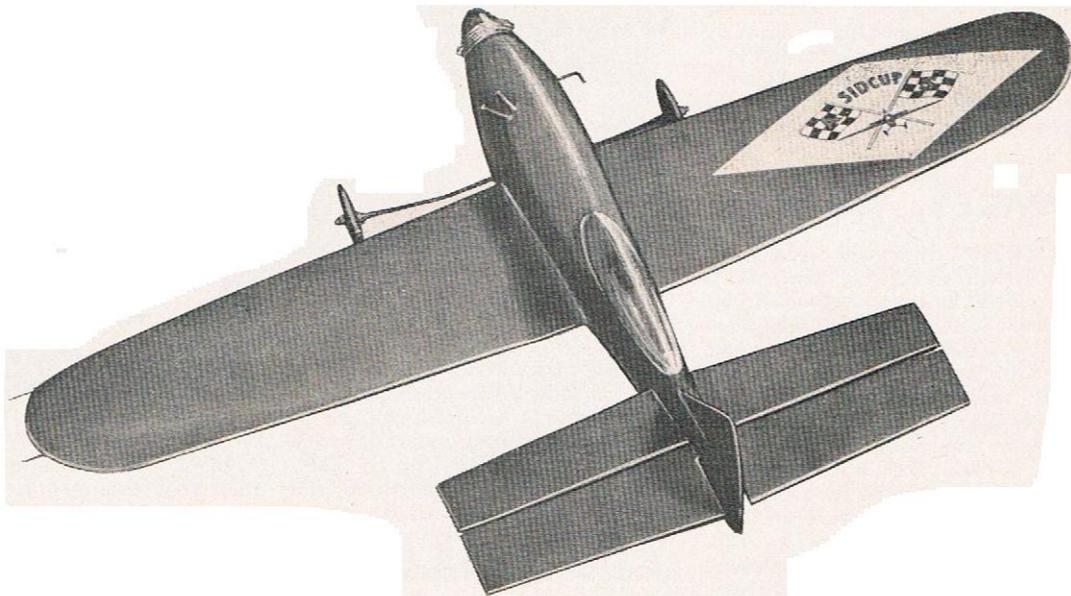
The motor used is the Oliver 1.5 c.c., which I find is the best 1/2-A motor currently available, and although the original model is very heavy, it will do over sixty laps with the recommended prop. The model should be built to weigh under 10 oz.

Commence building by letting the bearers into the 1 3/4 x 11 in. block, making sure that the width between the bearers is less than is needed to clear the motor. These are later notched to make a snug fit round the motor—a method that gives greater than average strength. Before finally gluing the bearers, drill out and fix the engine mounting bolts. Drill the bearers so that the 6 B.A. bolts are a screw fit into them.

While this is drying, cut out the wings from medium 3/8 in. sheet and sand to the section shown; it is most important that this section is accurate. Install line guide and ply pivot plate.

Cut out the tailplane, fin and elevators. Make up the tail as shown and let into the top of the fuselage, after carving latter to shape.

Cut out all the formers, bend undercarriage to shape, and bind and cement to F.1. Cement the fuselage sides to the top and carve so that the wings fit snugly. Finally, cement wings, tail and fin in place and fix control system. Add bottom and cowling blocks and carve to shape. Give two coats of sanding sealer and finish in required colour scheme.



Please note that Ian Russell of Rustler engines has a new email address [rustler@controlline.org.uk](mailto:rustler@controlline.org.uk)

## Photos from Ronald his visit to Old Warden from Belgium Part 2



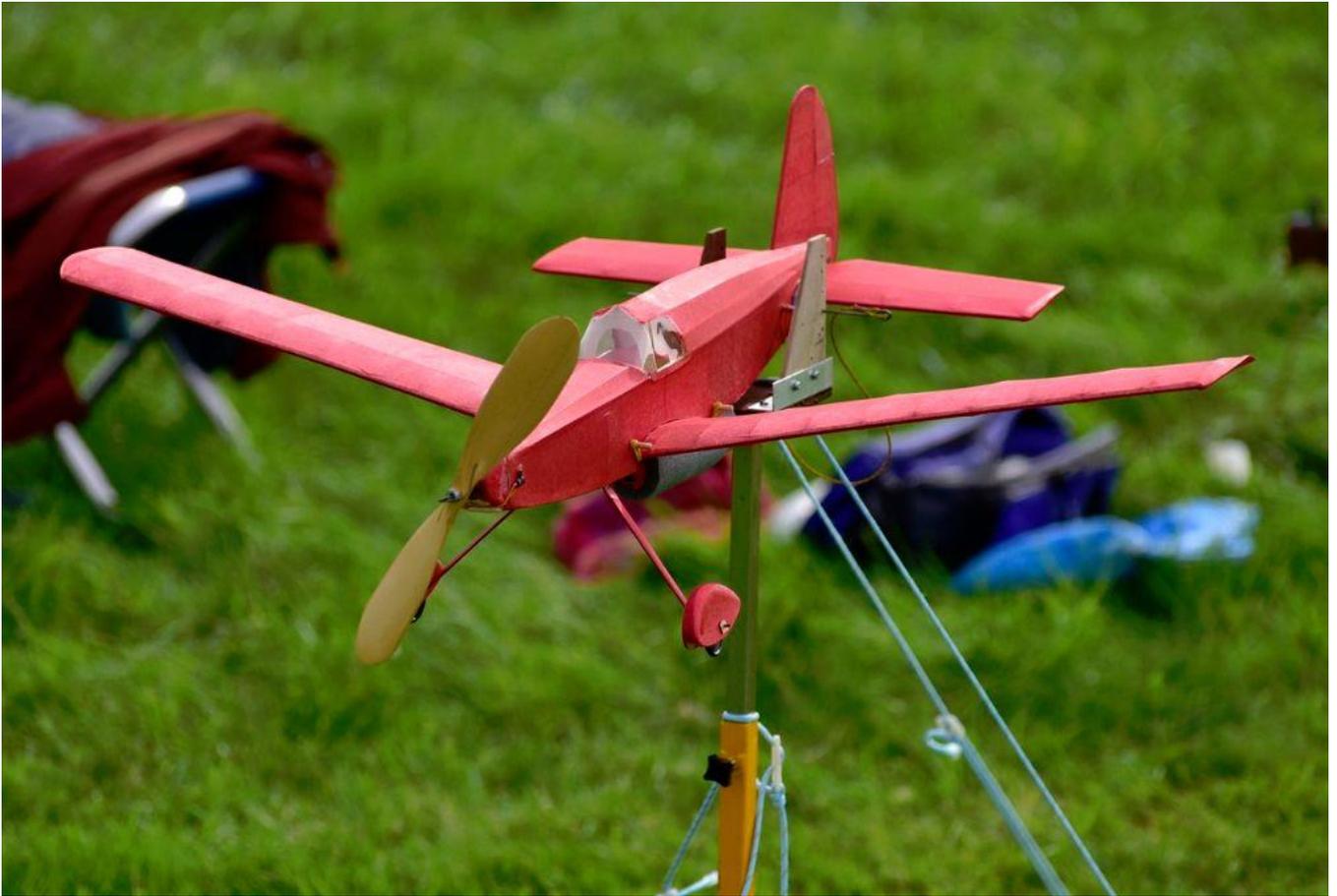
















*Bill Longley's 1/2 A Warlock by Harry Ryks, Muncie IND. From Frank Zaic 1959 - 1961 yearbook High thrust line, Low aspect ratio, 100 watt electric, 3 cell lipo R/C rudder , elevator and motor control For SAM 35 VPD , ( Vintage Power Duration ) Specially built for Old Warden events, ( only 1/2 A allowed )*





*Full size Chipmunk*



*Full size Gladiator*

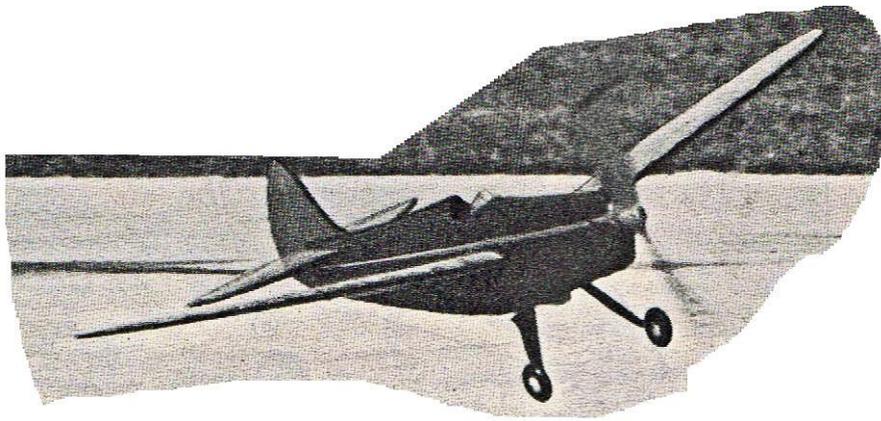




*Full size Hurricane*







The Ariel was one of two rather similar mid-wing monoplanes built during 1935 and early 1936 as a freelance design for a fast single-seater light plane of that period. Ariel was the second of these two models and after more than twelve years of active flying is still going strong. The model was completely stripped and re-covered for the first time last year after a collision with a car, but apart from new tissue and a section of the

mainplane the model is flying with all the original components intact including the airscrew.

#### Fuselage Construction.

First cut out the fuselage sides from medium weight 1/16 in. sheet balsa, sandpaper smooth and mark the position of all cross struts and the holes for the front and rear wire wing fittings, mark the hole positions very carefully so that they are exactly the same on both fuselage sides, otherwise there will be a difference of incidence of the left and right wing when the model is assembled.

In order to have a rigid framework when building the fuselage, cut temporary bulkheads from 1/8 in. sheet balsa. One the exact depth of the fuselage sides at the third cross strut from the nose and the exact width between the fuselage sides at this point and a similar bulkhead for the sixth cross strut position. Pin these bulkheads in position between the fuselage sides. Next fit the tail block and No. 1 bulkhead at the nose.

When these four pieces are fitted in position the fuselage sides will take a natural curve from nose to tail and the remaining cross struts and formers can be cemented in place. Note that 1/8 by 1/16 cross struts are fitted at all the former positions and the formers cemented on top of them, finally these cross struts are partly cut away to give clearance for the rubber motor.

The engine cowling and fuselage deck fairing from the nose to the rear of the cockpit is cut from one piece of stiff cartridge paper and the undercarriage leg fairings are made from the same material.

The undercarriage is shaped from one piece of 18 gauge steel wire and is held in position by two pieces of celluloid tubing cemented between two fuselage cross struts, the rubber band shock absorbers are hooked in place with a piece of wire through the open cockpit. Before covering the fuselage sides cement celluloid washers at the points where the wire wing fittings pass through the fuselage.

The nose block is shaped from 1 in. block balsa and is located by two pieces of celluloid tube reinforced with wire cemented into the rear of the block. These projecting tubes fit tightly into corresponding holes in the ply and balsa front bulkhead of the fuselage.

#### The Mainplane.

The whole of the framework of the left and right sections of the mainplane is cut from 1/16 in. sheet balsa. hard balsa being used for spars and trailing edges. Pin the leading and trailing edges on a fiat board and complete the framework before removing from the board. Celluloid tubes to take the 20 gauge steel wire wing fittings are cemented and bound with tissue to cut away portions of the main spars and trailing edges. The 20 gauge wire fitting for the wing struts are cemented and bound to the front face of the spars.

Shape the wing struts from hard balsa with a reinforcing strip of half-round celluloid cemented to the leading edge. If half-round celluloid is not available use 22 gauge steel wire cemented and lapped with tissue to the struts. The struts are anchored to the mainplane by lengths of celluloid tubing cemented to the projected ends of the wire fittings.

#### Tailplane, Fin and Rudder.

The tailplane, fin and rudder are simple to construct and should be built up on the plan. The fin and rudder are joined by hinges of thin sheet aluminium pushed through the trailing edge of the fin and leading edge of the rudder and cemented in place. The rudder post is of 1/16 in.



celluloid tube reinforced with 20 gauge steel wire lightly cemented into the tube, the tube itself being cemented and bound with tissue to the front face of the fin trailing edge. The rudder post fits into 3/32 in. celluloid cemented and bound to the tail block.

The Airscrew.

The airscrew is carved from 1 in. hard block balsa and requires downthrust and off setting. In order to keep the undercarriage legs short and still have a large diameter airscrew, the airscrew touches the ground when the model is in flying position: this does not affect R.O.G. flights with the model as it has a rapid take-off with the tail down.



## From Bill Wells

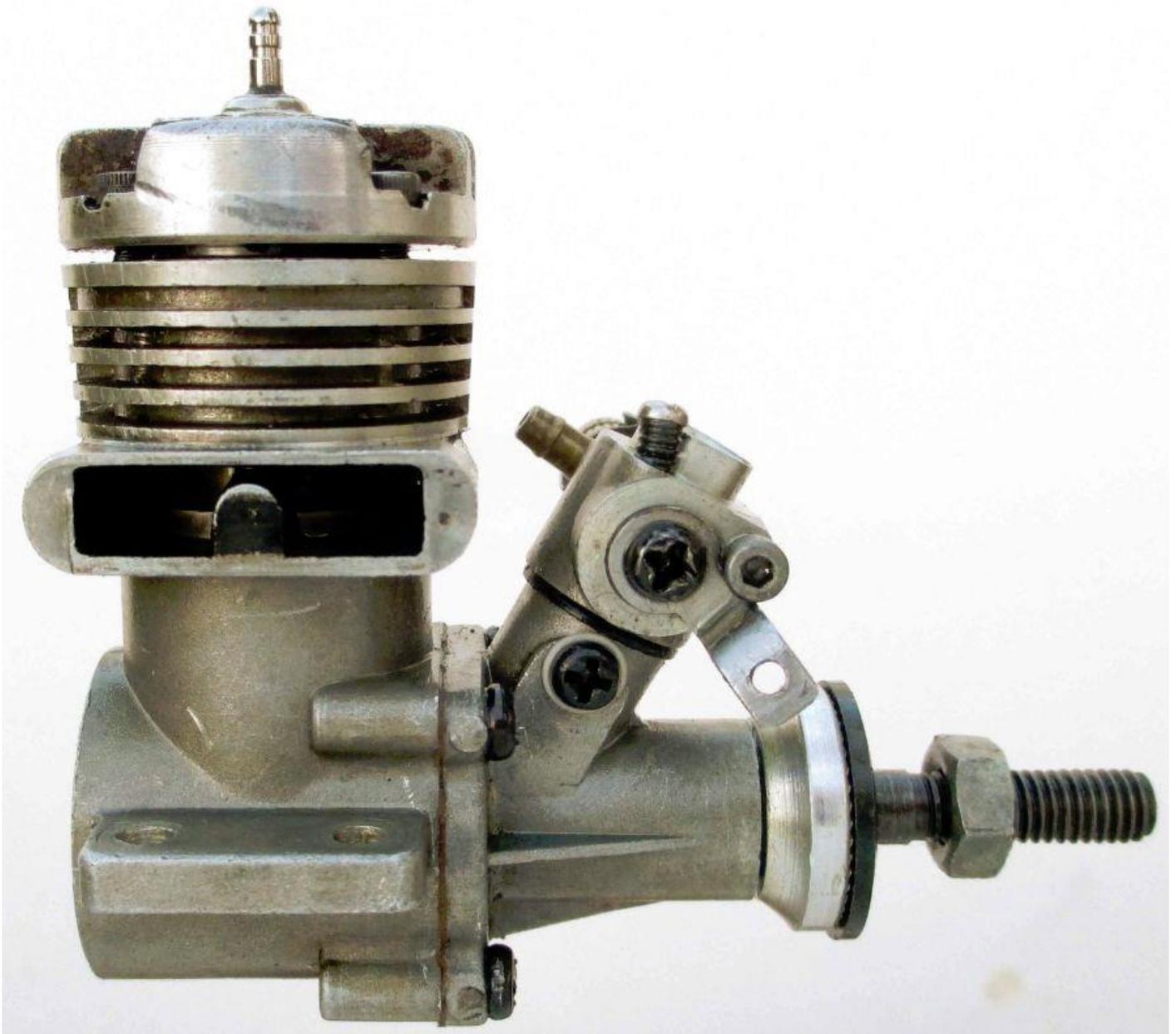
Recently I went to a swapmeet and found a gentleman selling engineering bit and pieces. I just couldn't help noticing a S.L.H 15A R/C engine amidst the spanners and picked it up. It was complete, with silencer absolutely filthy and locked solid. 'How much Gov?', I enquired. 'How about a fiver', he says. Underneath the SLH was a Flash 35 R/C so I picked that up looking at it with my sad dog expression. 'Have em both for a fiver mate, one don't work anyhah', he says. Later he threw in a small packet of Irvine bits so the deal was a goodun.

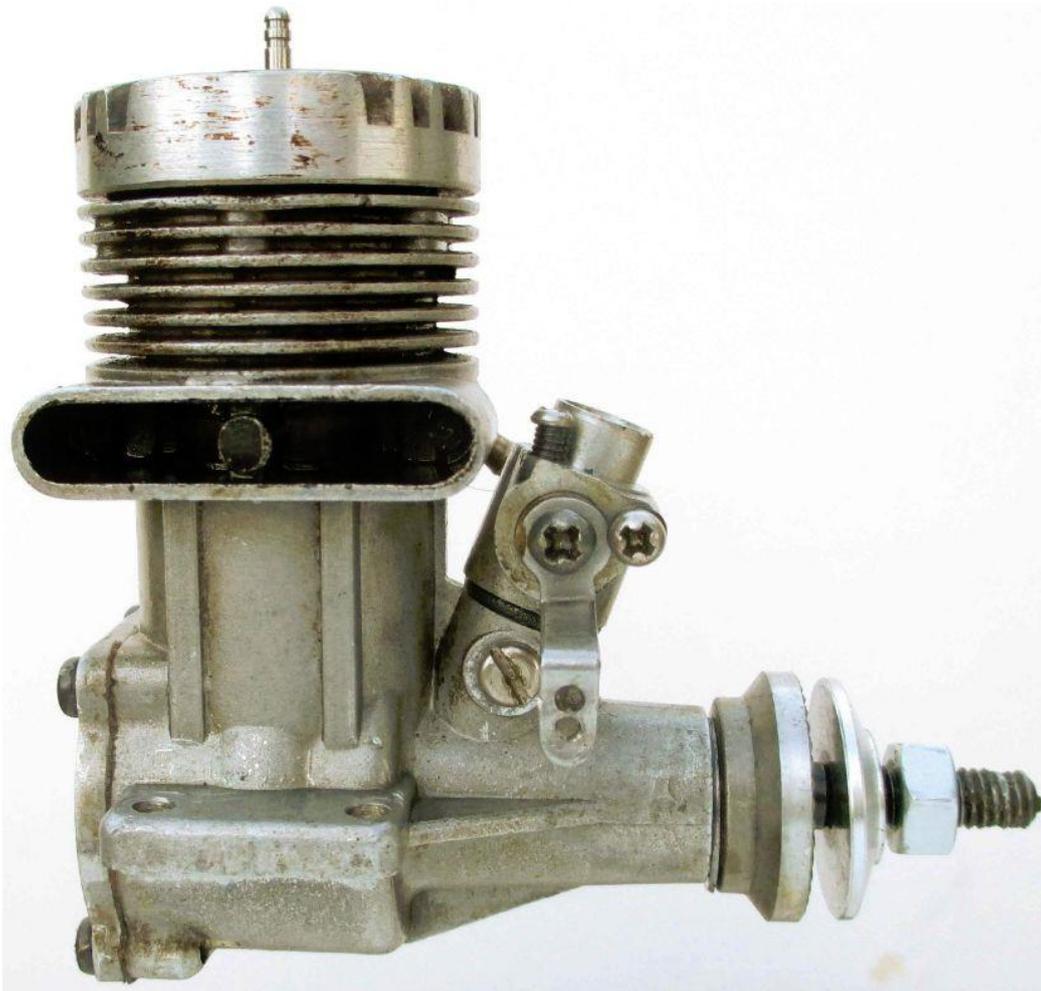
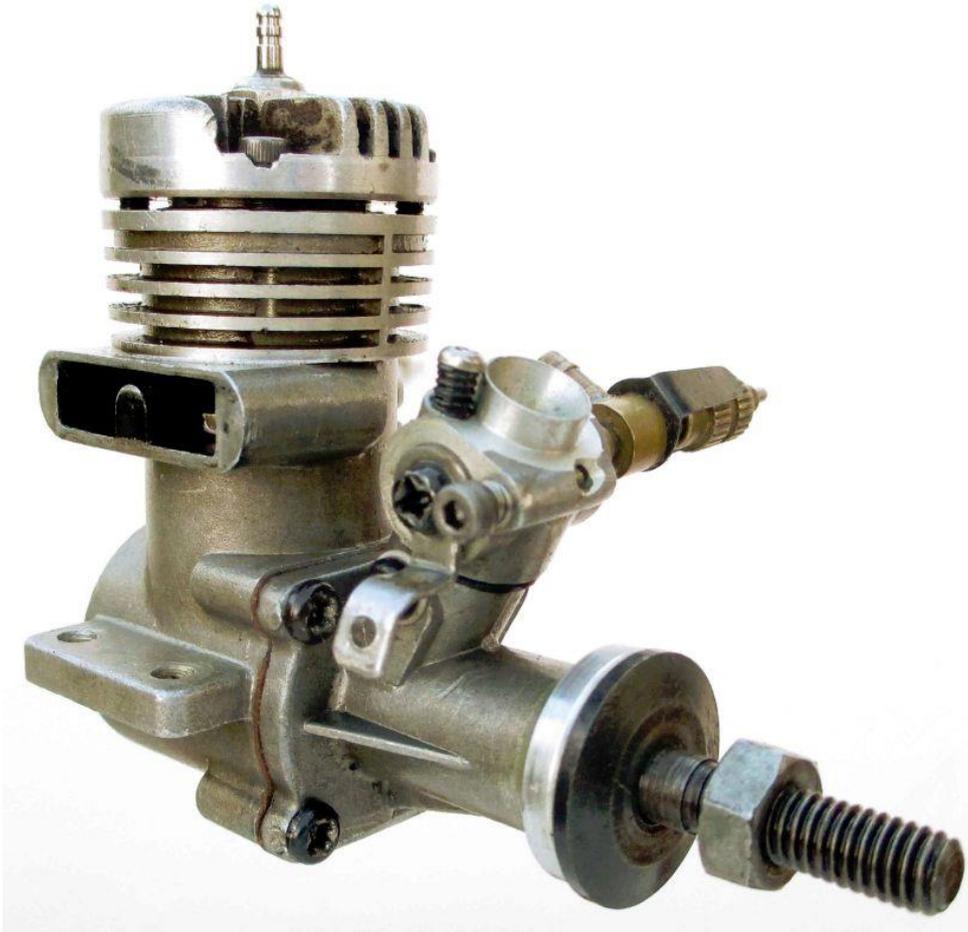
For those readers who are now saying what on earth is a SLH. Well there was a firm called Star Light Hou (sometimes spelt How) in Taiwan that made copies of Enya and OS engines, marketing them as SLH, Flash or Tai Jet. Interestingly where the originals had 'Made in Japan' in raised letters on the back plate or on back recess on the Enya, the copies had 'Made in Taiwan' in raised letters. SLH is on the side of the engine but some engines have instead the alternative names Flash or Tai Jet in raised letters. The engines were not the same quality as the originals and reportedly not so powerful but their advantage was they were cheaper than the real thing!!

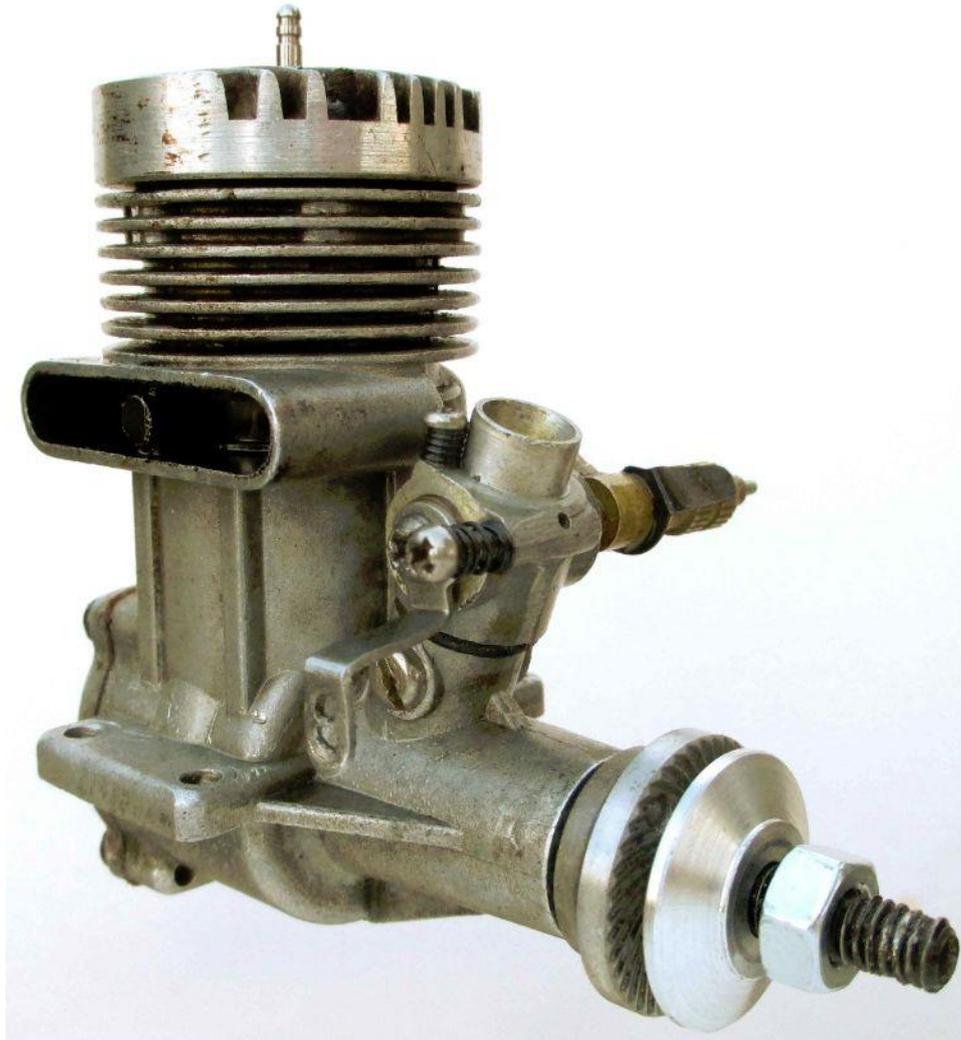
The 15A (an Enya 15 copy) was a bit of a struggle to dismantle. I used cellulose thinners to clean the engine followed by drying and then heating at reglo 6 to get the liner out, then more cleaning with cellulose thinners. Reassembled with a new front housing gasket and glow plug it runs well.

The Flash 35 (OS 35 copy) has badly pitted fins but it wasn't locked up and was clean inside so no need to dismantle. The prop drive, thrust washer and prop washer were missing so I used an LA 40 prop drive, made a thin thrust washer, a prop washer, a new 6mm prop nut, a new back plate gasket and a new glow plug. It runs and throttles extremely well. Note the prop nut is 6mm unlike the OS 35 which has ¼ inch 28 TPI thread.

Providing you are prepared to do the cleaning and make up spares collecting engines isn't always expensive!! These two engines are not for 'It's got to be in mint condition, for display in a glass cabinet don't you know old fruit', merchants. To me the 'used' condition doesn't matter they are examples of engines from the past and for the time being they are saved from the skip!!!







## **Middle Wallop Sunday 8 October 2017**

What a fantastic day this was, the weather for once was excellent and number flying were high I believe 56 signed on at the R/C gazebo, skilfully manned or should that be womanned by Pam Tomlin, including a few control line flyers. For me the absolute fantastic part was so may C/L flyers coming along at one point there were 25 but a few more turned up later. One comment was there are more C/L ers than at Old Warden.

A couple of the C/L ers were a big surprise firstly a couple I haven't seen for 30 years and that was at Three Kings meeting were the Leddy brothers Dave and Jim. They have been doing other things for a couple of decades, Dave flying full size and Jim concentrating on water things boats and of late his passion of Submarines. They had a few models though a seaplane with wheels in the floats, flying saucer and others see the photos. It was great to see Roy Vaughn and Steve Crawford especially as Steve flew his Chihuahua powered by a .8 PAW. He built is for a competition that was run at Three kings many years ago and performed very well indeed. It was a design by Stan Quek a former Three Kings member who went on to pylon racing and latterly, when I last saw him about 17/18 years ago flying helicopters. I'm now keen to build another Chihuahua, can't remember what happened to my first one, crashed I suppose.

Bee Bugs were much in evidence along with combat models courtesy of Paul Seely and John Stemp mainly. The Caulkheads were in attendance and so many others. There were 5 circles to begin with using part the Perry track and rest long grass however two more had to be formed and quite often 5 models were in the air at the same time which for 2017 was outstanding.

Radio Control was very well attended probably best yet and that's going back to the days of Michael Barton. Of interest was Peter Michel who flew a rubber powered with R/C guidance so at least he could fly at MW once more after free flight was banned a year or so ago. There were a couple of modellers who I've seen

flying only FF at MW but were flying R/C and a common theme was places to fly FF, Salisbury Plain being used by Peter Carter, and retrieving long flight models being more difficult than when we were all younger. Great thanks go to David Lovegrove for all the work he's put in organising the events. Here's the photos.



*John Bashford (Worthing) and his PAW 1 cc powered Veron Bee Bug*



*Two of Dave and Jim Leddy's models*



*The Leddy's seaplane(Wheels in floats)*



*Andrew Squires and acquired unknown model*



*Mike Gilham's Fokker D VIII and Electron*



*Peter Carter's Veron Concord*



*Barry Hood's? Scorpion*



*Steve Crawford's .8cc PAW powered Chihuahua, built for a comp held at 3 Kings, designed by Stan Quek former Three Kings member who went on to fly RC pylon and last time I saw him at Croydon flying Helicopters. Dave Day had one and he flew it like an F2B model absolutely fantastic.*



*Crowd scene*



*Another crowd scene*



*Ken Baker about to launch Bob Baker's Veron Spitfire, in flight below*

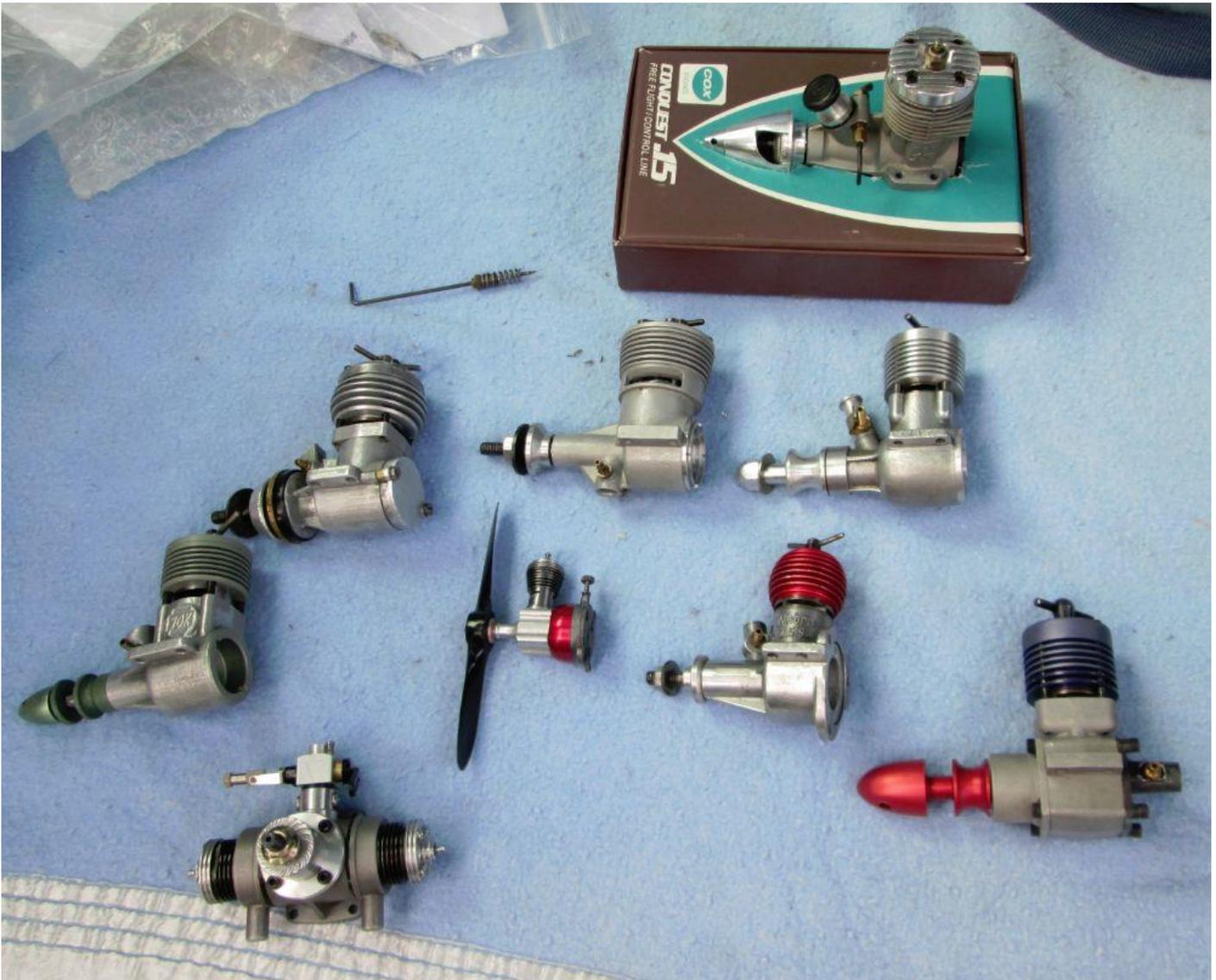




*Bob Davis's Corwen Kite*



*Peter Michel putting on turns*



*"Caulkhead" Mick recently purchased this superb collection of engines*







*Dens MVVS powered Rascal*



*Alan Holmes's Sparky*



*Coquette from Old School Model Aeroplane Factory kit*





*Bob Baker with his CL FW190*



*Bill Longley's Leprechaun and Ramrod 1000*



*Colin Hutchinsons model*



*The Tucano was from the Noel Stephenson plan*



*Dave Chinnery's Hepcat*



*I think this is Angelo Piacentini's Tomboy. Angelo won the Gold Cup back in late 40's early 50's.*



*Ron Moulton's design, the model so named I guess when he was having a joke. I'm too embarrassed to type the models name.*



*Spike Spencer's Quickie Bipe*



Having recently completed a miniature proportional outfit, which tips the scales at 13 1/2ozs., I wanted a model that was a bit different to put it in. Mike Birch's Moon glow had always appealed to me as a nicely proportioned model, so out with the slide-rule and the appropriate issue of "RM", and it was soon evident that something about 2/3 size would be about right for a .19 or .23 motor. Thus Moon probe was born.



It is not an exact scale Moonglow. but embodies many of the features and, consequently, has very similar characteristics to Mike's model.

The dorsal fin and the long moment of the fin/rudder, make the model fly as if on rails and this, together with the forward shift of the wing section's maximum-depth point at the tips, gives the model excellent low-speed characteristics. The wing section is quite thick so the model is not unduly fast; but because it can, and indeed should, be built to less than 31b. all up, it still has a good rate of climb.

Ideally, first time out we should have chosen a calm day for test flying but, due to various circumstances, we missed

several weeks and ended up at the flying field with a rather strong (and cold!) northerly wind blowing. The Super Tigre G.23 was fired up and the throttling checked. No excuses now, taxi out and open up. A bit of a wobble on the take off run due to the wind, pull back on the stick and Moonprobe is off.

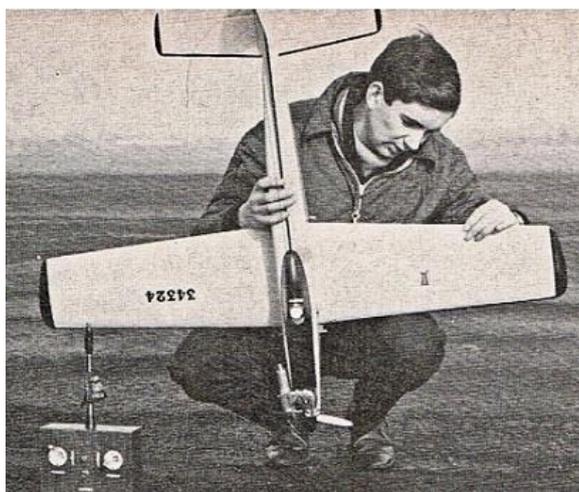
Once airborne, the wind did not seem to affect the model as much as it does some larger ones, but manoeuvres did have to be lined up carefully otherwise, with the light loading, it would be blown off heading. Landings were pleasantly easy in spite of the wind, approached being made on about half throttle, throttling right back when just off the ground to allow Moon probe to settle.

#### Construction

The construction of the model follows much the same lines as a normal "full size" multi model and, by the time you have built enough models to learn to fly, Moonprobe will present no problems. Care must be taken to build everything perfectly true, otherwise the pleasant flying characteristics will probably disappear and the model will become rather a handful.

#### The Wing

Wing ribs are made by the sandwich method, using the templates shown on the plan. Cut the two templates from aluminium and sandwich ten pieces of 1/16 in. sheet between them, and bolt together with two 6BA bolts. Using a razor plane and sandpaper block, the sandwich is shaped. On dismantling the sandwich, the edges of the ribs will have a rather sharp chamfer. This should be carefully sanded away, taking care not to destroy the correct rib profile. Leave the rib ends tapering to a point and chop them to exact length over the plan when assembling.



Working over the wing plan the notches for the leading edge, and bottom mainspar should be cut but none of the others. This much of the wing should now be built over the plan, building as if no ailerons were present. When set pin a length of 1/4in. x 1/8in. across the top of the ribs at each of the top spar positions, and nick the ribs with a modelling knife to give the exact position of the spar notches. Cut the notches and then fit the spars. By the time this much is set, the structure will be sufficiently rigid to be removed from the plan.

Since the section is symmetrical, the other panel can be built over the plan again. If either of the wing panels appears out of true, steam it straight before continuing further. The remaining spars may now be added, after cutting the spar slots as before. The two panels are then joined, using the ply dihedral braces, before adding the trailing edge. From now on it is a case of detail work, the ailerons being left attached to the main panels for as long as possible. Control linkages are by means of PTFE/Bowden cables, which are taken round in a gentle arc from the servo to the aileron horns. The ribs should be pierced at appropriate points and the outer tube epoxied in place. This is best done after the bottom sheeting is fitted (but before the top!).

#### Fuselage

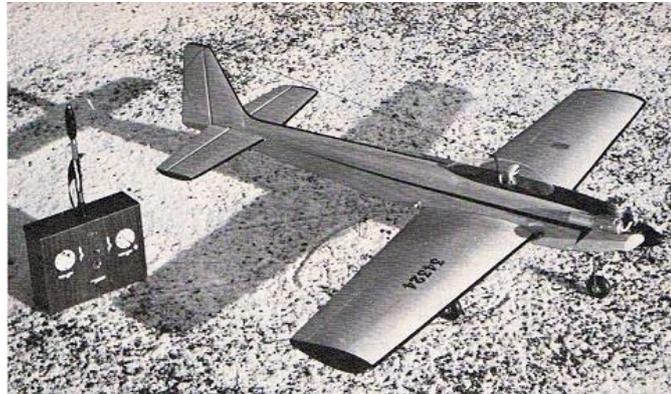
The fuselage should present no problems, the 1/32in. ply doublers being glued to the fuselage sides with PVA before starting assembly. The nosewheel mounting bracket is mounted on the rear face of F1, using countersunk screws, so that the screw heads do not interfere with the motor radial mount. The whole fuselage, except for the rear bottom sheeting, should be made and the top planking carved to shape. Using a fret-saw, the cut out for the tailplane is cut, and trued up with a piece of sandpaper around a length of dowel. The tailplane, less elevators, should be glued in place, and the control cables for the elevators and rudder added and epoxied in place, before fitting the bottom sheeting. The two elevators should be joined before hinging to the tailplane with MonoKote. The fin, rudder and dorsal can now be added.

#### Finishing

Care must be taken to avoid adding too much weight, so do not use too much sanding sealer. The original was covered in MonoKote for the wings and lightweight Modelspan for the remainder. Three coats of clear dope over the tissue areas, were followed by one coat of coloured polyurethane paint, and then the colour trim.

#### Installation

The CG position shown is that of the original, and the R/C equipment should be moved around to achieve this same location. The servos are mounted on large blocks of medium-hard balsa with 3/4 or 1 in, long woodscrews. This method provides adequate support for the servos yet, in the event of a major mishap, allows the wood to split away, releasing the servo undamaged. All the open areas within the R/C compartment, and all around the Deac pack, should be packed with sponge rubber.



#### Rigging

The wing incidence, relative to the tail, is around  $+1/2^\circ$ , and the engine has no side or down thrust. If everything is true, and the CG correct, there should be no problems. The original is fitted with a Super Tigre G23 turning an 8 x 6in, propeller and has power to spare. The upright mounted motor is convenient for starting and is as far from the ground as possible during landings!

Smaller models of this type need a very distinctive colour scheme, to help the pilot avoid becoming disorientated.

## October 2017 Cocklebarrow Vintage R/C. Tony Tomlin.

Sunday 1 of October was the date of the last of the three R/C vintage events at this popular site this year. The event organised by Val and Paul Howkins, was the last Val and Paul intend to run [after 29 years] with Tony and Pam Tomlin taking over in 2018. Preparing the field started Friday afternoon, setting up the safety tapes, fitting up awnings and gazebos, toilet tent, signs etc. etc, we had to put up with rain and a very cold wind but managed the majority of the tasks by the days end. The following day we were very pleased when David Bowl arrived with the ride-on mower [thank you David] and with Paul Howkins in the driving seat the strip was mowed. Sadly the wind did not ease and most of the day was spent dodging heavy bouts of rain, hoping that perhaps things would improve by the important following day.

Sunday started wet but by 10 o'clock the rain had stopped and the wind speed reduced somewhat, although there were some nasty turbulent areas. We were hoping for a few faces to fill what was an unusually empty field for Cocklebarrow, and slowly a trickle of fliers did start to arrive. Sadly the trickle did not turn into a torrent and only 13 fliers signed on, with between them 27 models. Counting heads it was apparent there was a fair number there who decided not to fly but as always enjoyed the chance to talk aeromodelling. However there was a good selection of vintage models signed on including two Junior 60's and 3 Chatterboxes, a Super Scorpion, Scram, Buzzard Bombshell, Miss America, Quaker Flash etc. There were also 2 Sharkfaces, one sensibly stretched by John Davis and a definitely not sensible 20" span Sharkface by Tony Tomlin. John Strutt was flying a recently refurbished 80" span Manx Queen flying wing design from 1947 that handled the conditions well. Ted Tomlin, up from Devon, was flying a David Boddington designed Expo 80 that flew as if there was no wind! It was also nice to see John Barber with a Rudderbug a design rarely seen.

A couple of twin diesels were also flown. Mike Gilham had brought along his nicely finished Electron model powered by his home built Vee twin diesel. This engine, because of its layout, had a separate carburettor for each cylinder and sounded very sweet. There was also a Derek Collin designed and built inline twin diesel that gets better every outing hauling a Harry Hundleby designed Sparky around in a spirited fashion. Although there were times when 3 models were seen flying together they were few and far between. Unfortunately the sun that had shown its face a couple of times in the morning cried enough and first drizzle and then rain returned around 1 o'clock bringing to an end what had been a very quiet morning for a Cocklebarrow event. Within a short time models were put away until the next time and modellers said their goodbyes and looked forward to better weather in 2018.

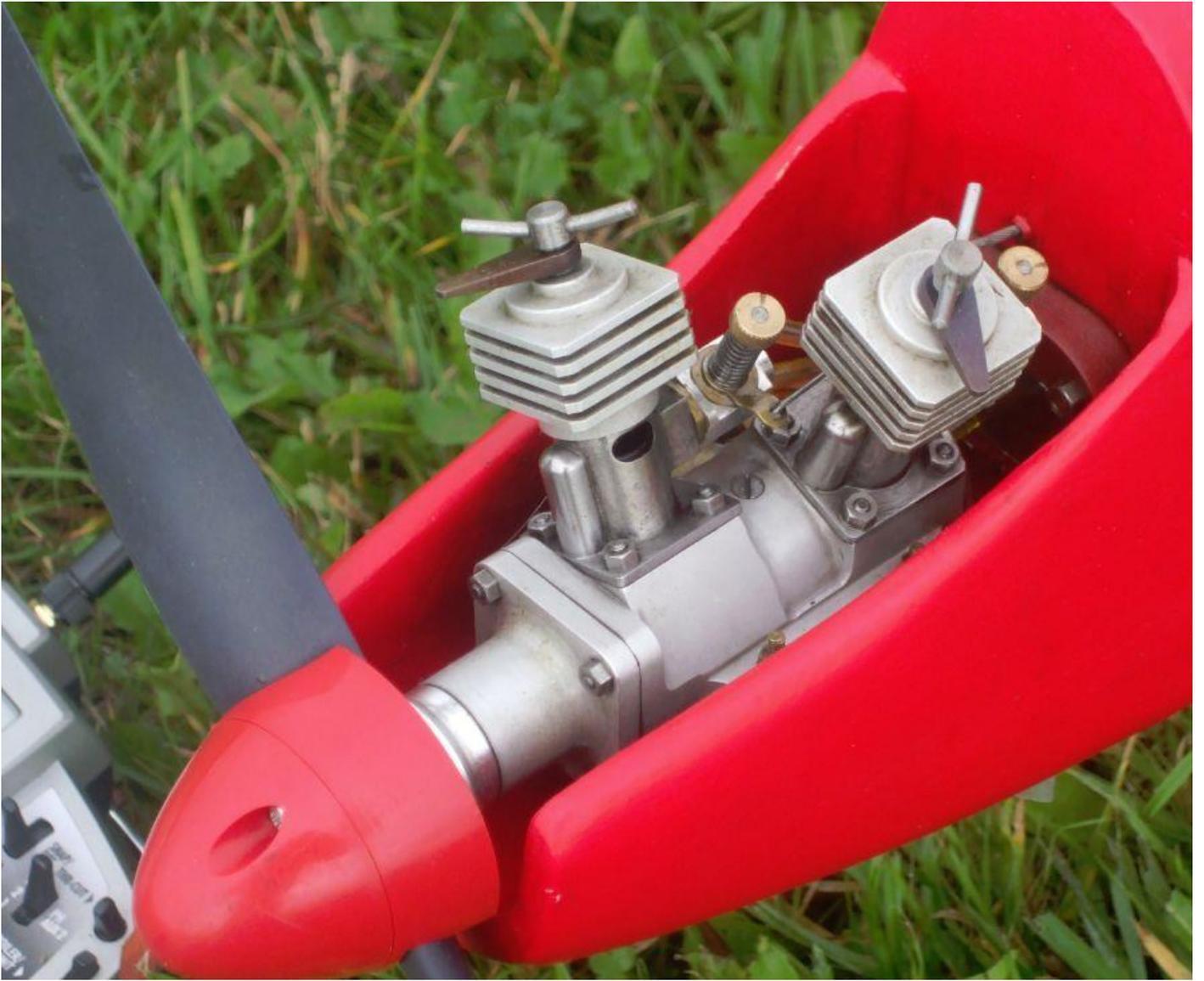
Thanks go out to Paul and Val Howkins for all their efforts over the years, and to the many helpers past and present who make these meetings a success.



*John Davis with a stretched Sharkface*



*Miss America and Super Sixty by John Strutt*



*Twin Diesel by Mike Gilham,*



## Cocklebarrow rallies

We should like to say thank you to all the modellers who joined us over the years and for your good wishes. We have made many good friends and it was a pleasure meeting you all.

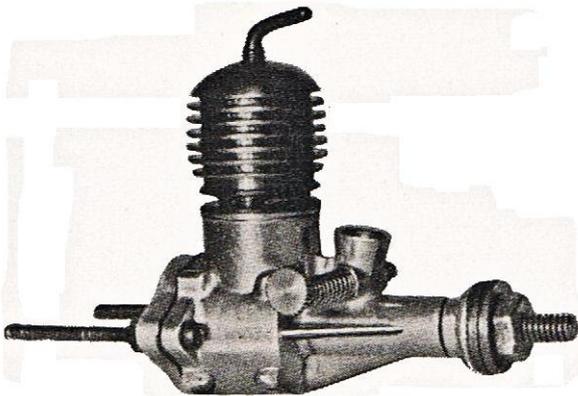
Thanks again for all the help that has been given to us which was much appreciated. However our special thanks must go to David Bowl who, over the years, has brought his ride-on mower for the strip to be cut. Many thanks David.

We are pleased to say that Tony and Pam Tomlin will be taking over in future so that this great tradition can continue. We trust you will all continue to support them and give them help when needed.

We hope to see you all in the coming years.

Paul and Val Howkins

## McCOY .049 DIESEL From Aero modeller October 1953



The McCoy .8 cc diesel, the first American commercial diesel in the “popular” size of model motors, is an exceptionally compact little job, well designed and beautifully made. We had been warned, however, that it was intended to run on McCoy fuel (of which none was available and no formula published) and might prove a little tricky on British fuel. Actually nothing could be farther from the truth. Although Mercury No. 8 as used for running-in was probably not the ideal fuel (judging from the blackened, oily exhaust), starting and running characteristics were as consistent and foolproof as any other engine yet tested in this new series.

Starting, in fact, could be given top points —appreciably easier than some of our own half-c.c. diesels to which class its overall dimensions compare, although its displacement, of course, is more than half as big again. .

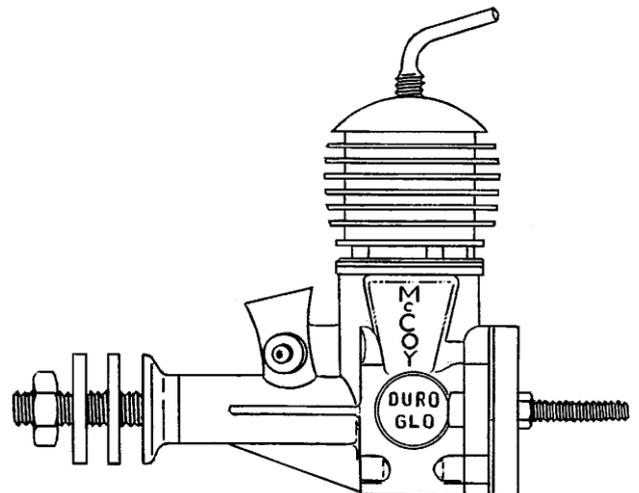
Towards the end of the test period, and just as we were wondering how to acquire a McCoy Duroglo for own personal use, it suddenly” blew up” on us! At the time it was making a high speed run in excess of 13,500 r.p.m. with a small propeller. Exhaust note was steady and there was virtually no trace of hunting. Particularly pleasing, too, was the virtual absence of vibration.

Then, without warning, there was a sharp crack as the crankshaft broke in half and the front part, with propeller attached, windmilled across the room. Subsequent examination showed that the shaft had parted at the point where the intake valve is formed. This consists of a hole drilled to give access to the hollow centre of the shaft, definitely weakened by the fact that a lateral “keyway “ is milled across the shaft at the surface.

The break was a diagonal one, starting approximately from the middle of this “ keyway “, with little evidence of failure due to a material fault.

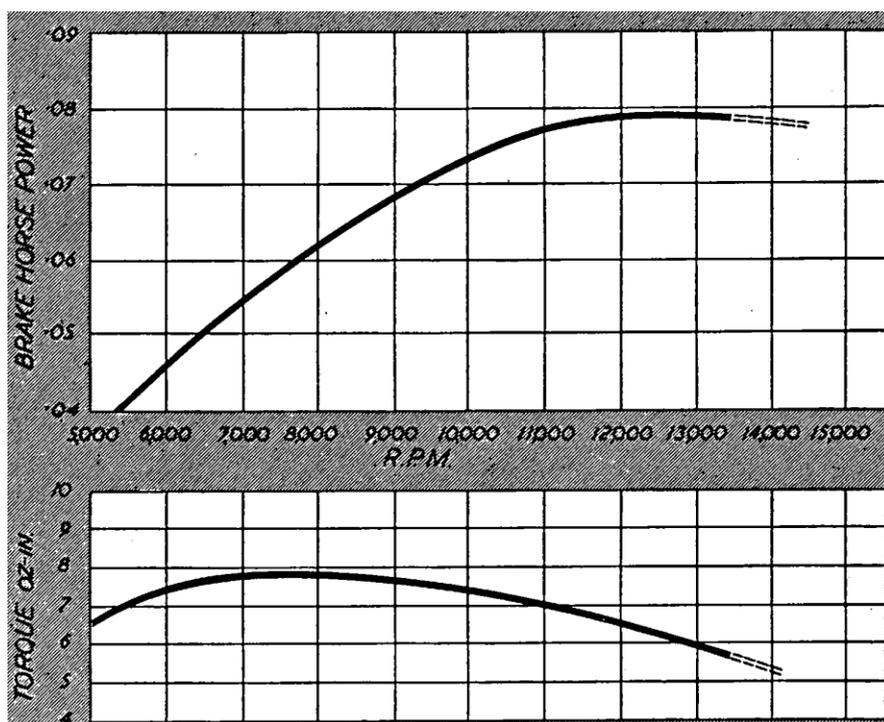
Whether, in fact, the shaft is actually overstressed at this point is a matter of conjecture. Replacement, provided a spare is available, is quite easy. Having no spare shaft available, however, this concluded the series of tests.

Enough figures were available to plot the complete power curve and we were down to the smallest size of likely propellers (6 x 2) and so the test figures are reasonably complete. We had, however, intended investigating starting and running characteristics on various other British fuels to complete the picture. There are one or two “different” features, as compared with small British diesels. The controls do not look any bigger, yet they seem that much easier to



manipulate—a tribute to good design and proportioning. The contra piston, too, is fitted with a synthetic rubber ring to act as a seal, rather than the lapped metal-to-metal fit which has previously been common practice with diesels. The adjusting lever thread also runs in a fibre insert in the head. This gives a much smoother feel “ to adjustment of the contrapiston whilst the plastic ring eliminates sticking and provides a somewhat better gas seal. What the anticipated life of the plastic sealing ring is cannot be estimated. After approximately one hour’s running time, deterioration was marked in the amount of “crumbs “which had flaked off. The compression seal itself was still perfect, however, or near-perfect, for only the very slightest trace of fuel oil could be detected in the head and the contacting surface of the ring seal appeared as good as ever, and its hardness maintained. In other words, the fuel did not appear to attack the synthetic rubber ring but adjustment and pressure might possibly account for some deterioration by mechanical action. It is anticipated, however, that fuel in the head could attack the fibre insert for the adjusting screw. For the initial run it took very little time to establish the compression and needle valve setting for starting. Priming through the exhaust, compression had to be slackened off about half a turn from the final running position. The needle valve was absolutely non-critical over two or three turns. It was also found just as easy to start the McCoy .049 by finger choking, although the procedure differed slightly.

Priming through the exhaust, excessive fuel is introduced into the cylinder and compression had to be slackened off to start. Provided starting compression was within half a turn of running setting, then the engine would continue to run satisfactorily and left plenty of time for final compression adjustment. With finger choking, two turns of the propeller with a finger over the intake produced ready starting with the compression setting left in the running position and no further adjustment was required. Response to varying the needle valve control was particularly difficult to detect. From rich running, continuing to close the needle valve produced a higher exhaust note and slight increase in r.p.m. which was maintained over another turn or so until closed too much and the motor starved out.



The compression control, on the other hand, produced a very positive response. The best running position was very easily found by listening to the exhaust note. Increasing the compression beyond the optimum produced a detectable “labouring “. Slackening off, the exhaust note became sweeter, until finally an occasional miss could be detected. From this point the engine could be slowed right down over a further half turn decrease in compression without stopping, although, running, of course, was now in bursts. Maximum r.p.m. was achieved by using the minimum compression possible without “missing” taking place. The compression setting was not greatly

altered for optimum running at extremes of low and high speed.

Judging speed on the exhaust note can be misleading and particularly so with the McCoy.

Below about 10,000 r.p.m. the engine seems particularly quiet and, apparently, slow running. An r.p.m. check, however, showed higher figures than anticipated. Above 10—11,000 r.p.m. the, true “high-speed” noise appears, emphasised by a particularly gratifying smoothness of running. There was little tendency to hunt at high speeds, even during the initial running-in period when run-in consistency was marked at all speeds produced during the tests. No doubt the counterbalanced crank web contributed materially to vibration less running.

The McCoy 049 appears fairly economical on fuel but response to cut-out action is rapid. Delay between shutting off the fuel supply and the engine stopping is a minimum. What was particularly pleasing, the appearance of an air bubble in the fuel line, produced only a momentary miss. The engine continued to run, in fact, when sucking in a complete length of aerated fuel in the line, missing badly but not stopping, and settling down quickly to steady running once more when a normal fuel supply was resumed. The suction on finger choke is, also impressive, drawing up fuel successfully through a ten-inch length of fuel pipe with a head of several inches, so tank location should be no particular problem.

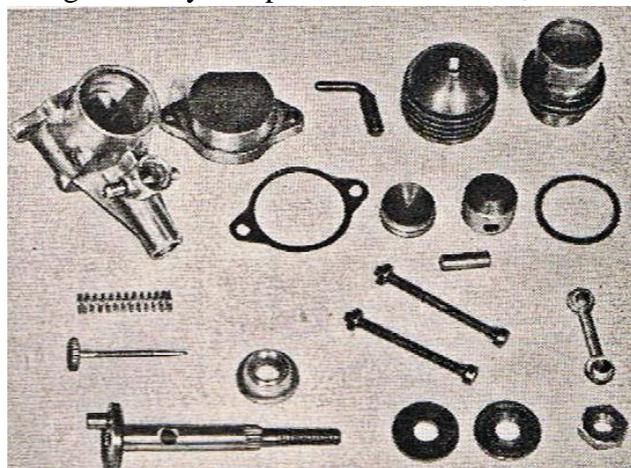
The method of mounting the engine is a little strange to British eyes. The two bolts securing the back of the crankcase are made very long and are intended for radial mounting of the engine. Only one nut is supplied for each, bolt and therefore it is difficult to provide any suitable locking of this assembly when mounted. The thread is an American one. The nearest British equivalent – 6 BA nut is too loose to grip the threads properly. British modellers, in fact, would prefer to enlarge the holes slightly and use standard 6 B.A screws with locknuts for mounting. There is little excess metal on the flanges to permit drilling out the holes the necessary oversize dimension with extreme care.

To sum up, although the particular engine on test suffered a major structural failure we still class the McCoy 049 in the “I want” class. Maybe the crankshaft failure was just an – unfortunate accident. Apart from that, however just about everything with regard to the operation and running of the engine is quite delightful. Power output at various speeds, on the other hand, is perhaps not quite as high as might have been expected from an engine from the McCoy stable, although directly comparable size for size, with current British and Continental diesels.

McCoy’s Comments

In consequence of the crankshaft failure, we were quick to contact the Duro-Matic Products Company so that in full fairness, both to the manufacturers and our readers, we should be able to publish an explanation of the breakage. We are therefore doubly pleased to quote from correspondence received on the subject, which shows that the McCoy people have already made three important changes in crankshaft production to obviate any recurrence of this fracture.

“ . . . assure you that your deduction that the cause was incorrect material was quite accurate. The material has been changed: the heat treat specifications have been carefully engineered ; the method of removing the sharp corner at the intake has been corrected to assure greater strength at that point . . . we are shipping to you a new crankshaft to replace the one damaged in the test. The new crankshaft does, in fact, bear out these points, and we assure readers that no further trouble can be expected.



**Fuel Mercury No. 8**

Note:- For the benefit of readers, Mercury No 8 fuel equivalent formula is:-

- Paraffin        40%
- Castor oil     25%
- Ether            32.5%
- Amyl nitrate   2.5%

**McCOY .049 DIESEL**

**Specification**

Displacement: .8 c.c. (049 cu. in.).

Bore: .405 in.

Stroke: .386 in.

Bore/Stroke Ratio: 1.05.

Bare Weight: 1 5/8 ounces.

Mounting: Radial.

Material Specification

Crankcase: Aluminium Die Casting.

Crankcase Bearing: Plain,

Cylinder: Cold Rolled Steel.

Cylinder Caning: Aluminium.

Piston: Steel.

Contra-Piston: Steel (synthetic rubber sealing washer).

Crankshaft: Steel.

Manufacturers:

DuroMatic Products Company, 8509, Higuera Street, Culver City, Culifornia, U.S.A.

Retail price: \$5.95 (upprox. £2/2- equivalent).

<b>Propeller Dia. pitch</b>	<b>RPM</b>
9 x 4	5,700
8 x 6	5,450
8 x 5	6,200
8 x 4	6,700
7 x 6	5,750
7 x 5	7,500
7 x 4	8,000
6 x 5	10,000
6 x 4	11,650
6 x 3	12,250
6 x 2	13,600

Constant geometric pitch wooden propellers.

## **From Jörgen. Last outing for this season??**

Hello James last sunday was probily last flying for this season 4 deagres and damp some Pictures from the day my Frog 45 and the single channel Damzel and the Moppet. I will go into hybernation well hopefully I will be building some models during the Winter.





## Showscene, from Dave Bishop.

With winter coming on and the early morning discloses that car's windscreen frosted up already, this month's Showscene is a little different because whilst preparing the monthly roundup and perusing the many photographs that I have stored in my computer's hard drive, it occurred to me that some stories that we aeroplane people have been told about aeroplanes and aeroplane people, are sometimes possibly not quite accurate. My office has some 2,000 plus books that vary from Janes all the Worlds Aircraft (some signed personally by the editor John WR Taylor,) right through to a full set of Aircraft of the Fighting Powers. I am a Press Card holder that allows me to responsibly write stories and photograph "happenings" wherever I witness them. My bed time reading is always about things that leave terra firma, albeit aeroplanes, rockets and the people that make that sort of thing happen. It is by analysing the various reports from different editors that sometimes stories vary quite a bit, and it takes me back to when I was a teenager at Littlehampton in Sussex at the beginning of the war when the Battle of Britain was at its height. We lived close to Ford aerodrome and all sorts of aeroplanes flew into and out of the place including Spitfires and Hurricanes. We were fed information about the dashing, fearless fighter pilots who flew them to fight the enemy. One of those wonder boys was the ace leader Douglas Bader who we youngsters looked on as a sort of God.

At this time my father was in ENSA which was a group of talented artists that travelled to many places raising the moral of the troops and Tangmere was one of the aerodromes that they performed at. It was there that he had seen the famous Douglas Bader, who was the star of RAF fighter pilots and at one of the few times that dad was at home, I asked him what was Bader like as a person. All I remember is dad saying a big "hmmm" and that was all. It was not so long later that the impregnable Douglas Bader was shot down and made a prisoner of war. After the war a film was made about the legless fighter pilot titled "Reach for the Sky" and Kenneth More played the part of Bader to the full.

But when you read other post war books about the ground crews who worked night and day servicing the aeroplanes which were flown by these "Gods", you find that some of them were not at all like the people that they portrayed. Sadly, apart from being a person whose protection we all were so grateful for, some of them were quite aloof to their underlings. Apparently there was a whole lot of "them and us" that went on, which is quite sad to me as a reader of those workers who did their best to keep "them" flying. Another film was made of the famous Lancaster's Dam Busters where the name Guy Gibson was the supreme pilot whose name very young boy idolised. Post war books tell some very sad happenings and (apparently) the real Guy Gibson was totally different person from the way actor Richard Todd played him.

I was thrilled to be present the Croydon Club's evening last week when we had a guest speaker who gave a riveting talk about the Falkland's War in 1982. He was a heavy lift helicopter pilot and he was told to take some big load out to one of the aircraft carriers which had already left harbour going South towards Ascension Island. He told us all that the Royal Navy wouldn't tell them where they were. It sounds almost unbelievable doesn't it but that story coincides with yet another one of the books in my office that was written by Commander "Sharkey" Ward titled Sea Harriers over the Falkland's. That book contains stories that if you can find reading time this winter, will make your hair curl and it makes one think that some of the people that did the actual fighting in different places for us people at home, why they even bothered. Now what I have relayed to Sticks & Tissue readers are not my writings or opinions but the stories from people "who were there" who "did it" and "wrote about it" afterwards when the dust had settled so please do not criticise me as I am only the messenger. What on earth is going to happen to all of my many beautiful books I know not, because a fellow writer/reporter tells me that there won't be any newspapers in 20 years' time!

Now up to the present time, when I was invited recently to a radio controlled club competition between the Caterham and Croydon clubs recently and what a great deal of fun it was for everyone. They "did it all" with models competing in water carrying, maximum loops in a set time, donut carrying and bombing and the shortest landing after flying over a limbo tape. Add to that there was a cracking barbeque with a terrific amount of superbly cooked food that was totally mouth-watering from a distance of some 50 yards. Well done to all of the modellers and the accompanying friends and families and especially, a huge well done to James Gordon and his team that did a terrific job. That gifted chap certainly brings the fun back into aeromodelling without a doubt.

A reminder that the Old Warden dates for 2018 are, May 12 -13 - May fly. July 21 – 22 –Scale and September 22 – 23 is the Festival of Flight.

Also some good news as well which is that the 32nd Wings & Wheels Show will take place at North Weald aerodrome on 23rd & 24th June 2018 ... North Weald Airfield, Essex, CM16 6AR, England.

All the best from Dave Bishop of DB Sound.



*A lovely Moth seen on the perimeter tarmac at the public show at Kenley airfield*



*Modelair's Old Warden team of transmitter tent volunteers.*



**A super Moth from the Laser master Neil Tidy at Old Warden.**



***A full size Hawker Hurricane seen at North Weald aerodrome.***



*I presented a show at Dubai in 1998 and this is the line-up of scale models made by the British team and taken there by the Ghost Squadron.*



*My dear old pal the late David Boddington and his large Tomboy now available as a great part kit from Belair.*



*A lovely Renegade model by "E T" seen at the Croydon/Caterham clubs fun fly event recently. It flew beautifully.*



*The Colley family, David, Philippa and Ted, who fly both model and full size aeroplanes.*



*A Lancaster control line model seen some years ago at the British National August championships.*



*The superb Breitling Team of Steve Holland, Sharon and Richard Rawle with Richards designed Boeing biplanes. Steve and Richard fly the complete full size schedule with Sharon operating the girl's arms and legs.*



*A young Sevenoaks club member with his Boomerang 2 by Harry Middleton.*

## From David Bintcliffe

The first photo is a very large double diagonal planked pond yacht being varnished ...this seems to be a skill that I don't possess ...I'm still trying to avoid runs etc

The other two photos are of a very large " Jetex " engine which is photographed alongside a Payloader/ scorpion / and Atom 35 ....Quite big Eh ..... Anyone got any ideas ..? Came via an auction lot in Poole !



## Vosper Fast Patrol Boat

Here are some pics of my Veron Vosper Fast Patrol Boat kitted in about late 1960s early 70s. When my father was selling his Veron plans, he did not have all his kit plans available as complete with the templates needed to finish a model, without a lot of drawing the templates by the builder. So, I decided to do this myself, and his boats plans were missing from the list. I was lucky enough to obtain a Vosper kit from EBay that was partially built with the keel and bulk heads in place. After many hours of late nights and drawing, the plan and parts were finished and I decided to finish this model. Over the spring period of 2015 (some six months) the boat was finished and sailed on Poole park boating lake, and what a sight to see. At first I took the power to half settings and the hull lifted slightly, so it was increased to 80% and the hull lifted and the boat bow planed beautifully and I had a big smile on my face. The motor is brushless Graupner 465Z with a 14.8 lipo, more than enough power, and it will run around for well over an hour. It is a heavy boat weighing just over twelve pounds, (good old English measurement) and is lifted in and out of the water with two car pulley serpentine belts. I have added a few upgraded ancillaries to finish the appearance, and it certainly stands out on the water. Any one who would like to build this boat can contact me, and I have all information at hand to finish the boat from paint codes to deck fittings.





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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



## 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.





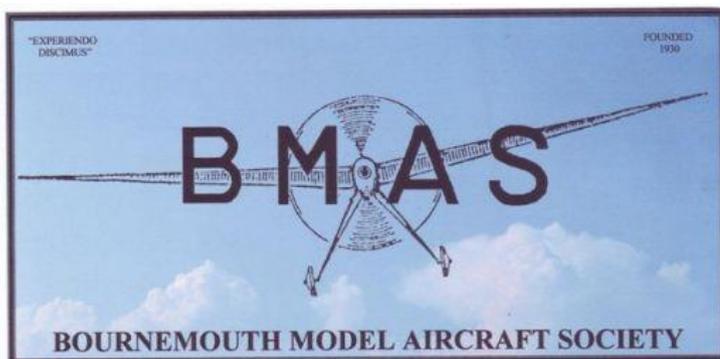
Price: £60.00 Inc VAT  
66.00 USD | 71.03 EUR

Regards,  
Leon Cole  
Belair Kits

Tel: +44 (0)1362 668658

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For your info (S&T Scoop) the two all sheet models (see pic) I had at MW are prototypes for kits...I was test flying them.....both proved to be aerobatic....the Cox powered Pippin uses the cheapest Sure Start motor....the Imp uses a PAW 0.55, but any small diesel will do.....kits probably available early next year.





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