

Sticks and Tissue No 39 – February 2010

I'd like to thank all the contributors, without whom this newsletter would not be possible.

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 NOTE MY NEW EMAIL ADDRESS

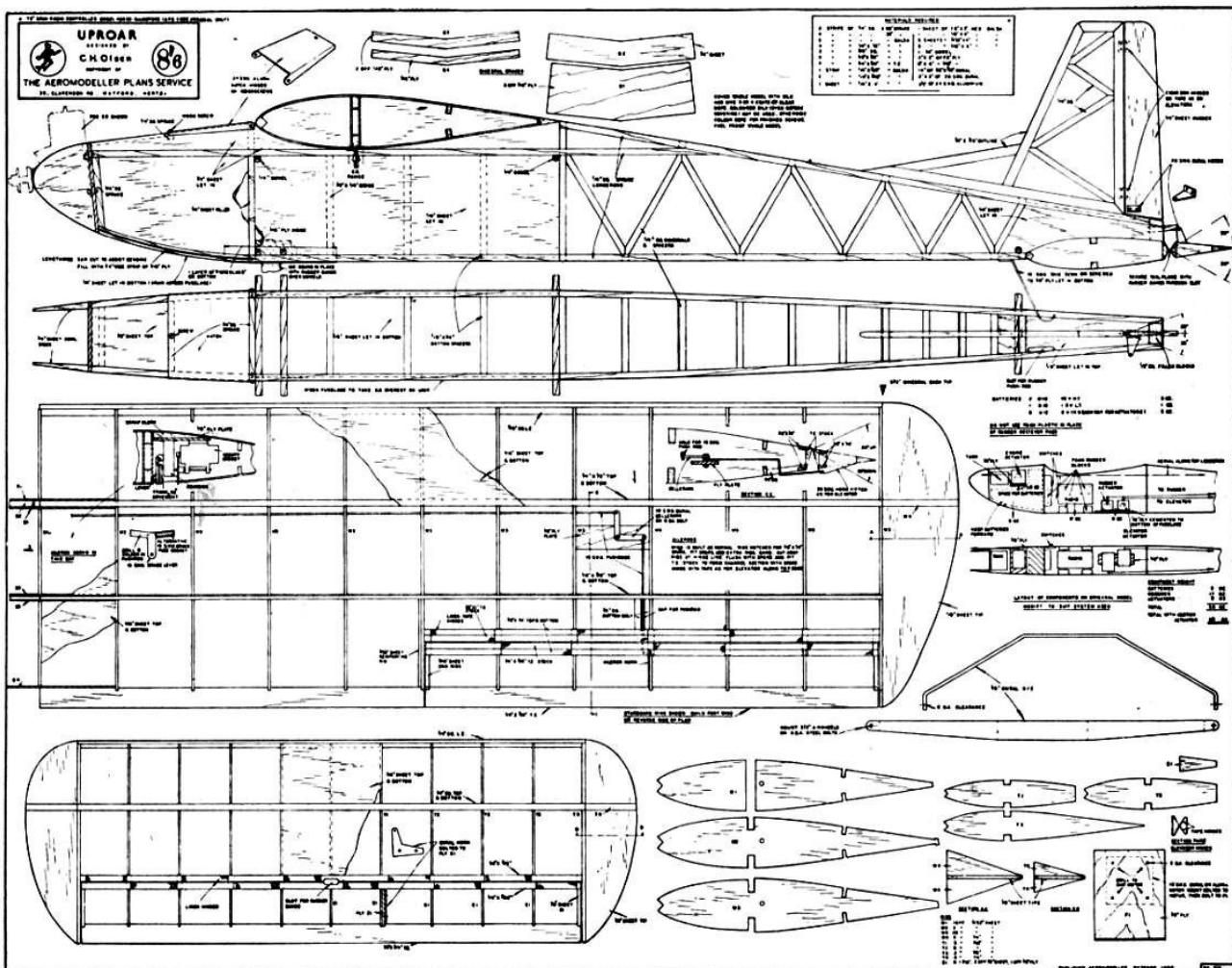
Thanks to Mark Venter back issues are available for download from <http://www.cmac.net.nz/>

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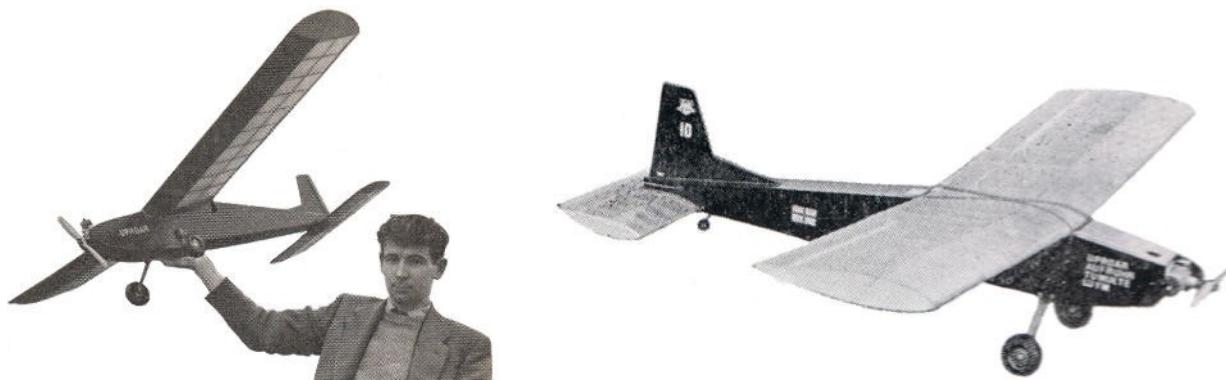


Photo taken at Crawley indoor meeting 7 February 2010 by Dave Bishop

Comment – The addition of more information with plans was well received last month although some of the writing did go on a bit, stick A to B. Peter Michel kindly offered to take the scissors to a few of the plan articles this month, so there is a mix of whole articles and shortened ones. Some of the plans have no additional information as you will see. It's been a funny old month this month, no flying and time in short supply, so my thanks to all who sent in articles and photos etc, much appreciated.



Well known model from Chris Olsen. 72" span fully aerobatic. For Fox 29 or ETA Mk IV. RC equipment weighting in at $2\frac{1}{4}$ lbs. I suspect today it wouldn't amount to 10 ozs or less? Aero Modeller October 1958.



WE ASKED Chris Olsen, current British multi radio control champion "Why 'Uproar'?" . "Have you ever heard a Fox 29 turning over at 12 000 r.p.m.?" was his rejoinder! Chris, a 27-year-old Civil Servant in the Scientific Branch, has quite definite ideas on the subject of radio control acrobatic design, which after a four-year development period have resulted in "Uproar".

He believes in a simple yet strong airframe that is relatively light in weight, this being achieved by spruce longerons with sheet covering only at the nose and radio compartment. He does not advise any "beefing-up" of the structure as this is quite pointless, merely increasing weight, decreasing performance, and if a crash occurs, then it is the engine and radio which suffer instead of the plane, which is after all cheaper and easier to replace.

The airframe can be built in a week and costs approximately £3.

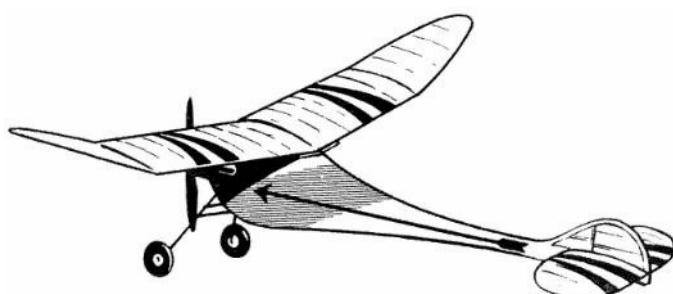
The radial engine mount used is important, as in a crash it gives before the engine and has proved far less prone to vibration than the standard bearer mounting.

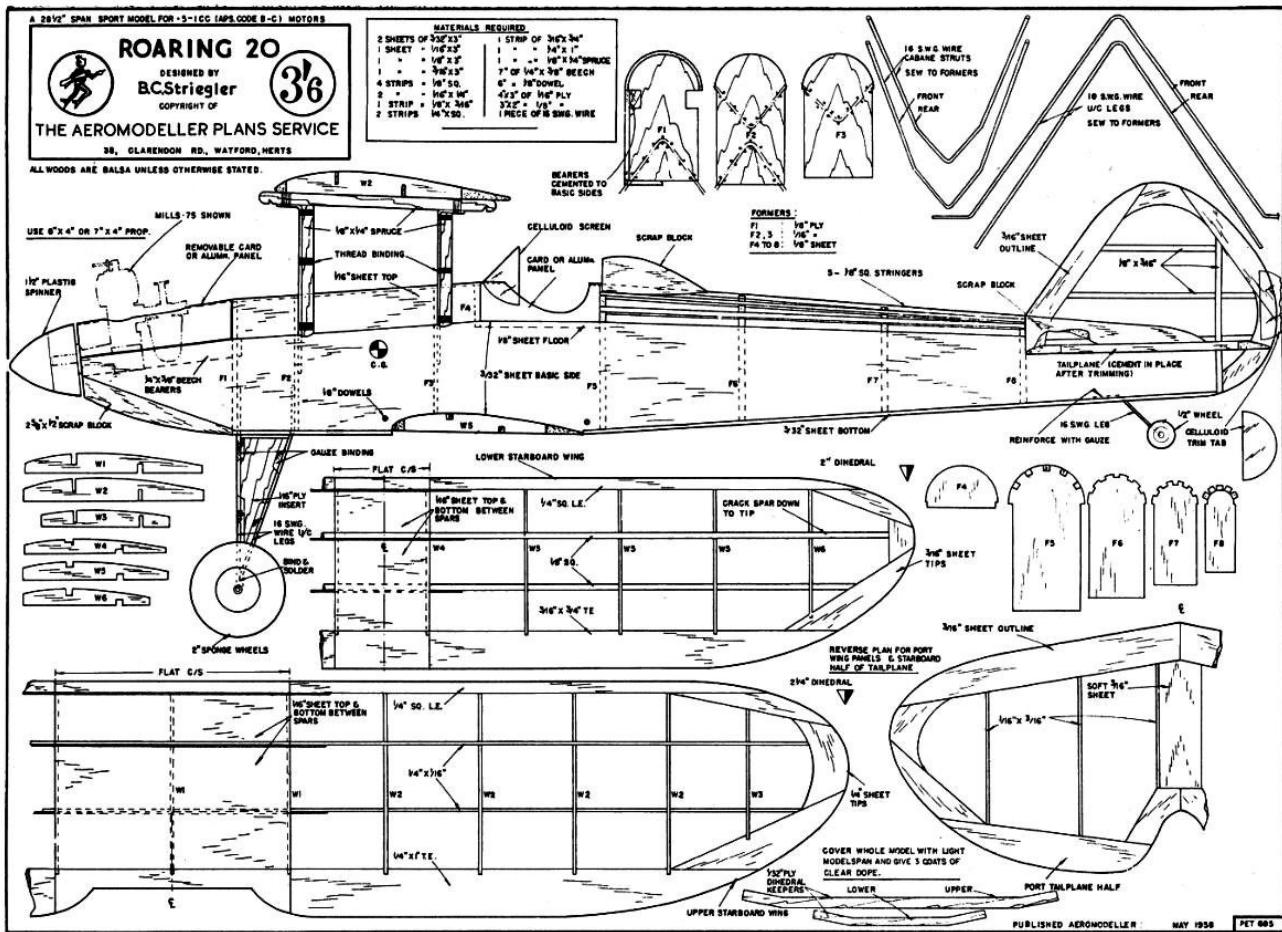
The model weighs approximately 51/2 pounds with a loading of around 16 ounces per square foot; powered by a Fox 29, or any other good 5 c.c. glowmotor such as the new ETA Mk. VI, it has the necessary reserve of power to produce a high rate of climb carrying 2 1/4 pounds of radio equipment. The original is flown with Chris Olsen's home-built version of the Orbit 8 channel equipment, using special servos designed around the Mighty Midget electric motor. We shall be giving working drawings of these servos in our next issue and meantime emphasise that neat, careful, and well-supported wiring of the radio and servo equipment is a noticeable feature of the designer's current machines. The resulting reliability of his equipment has undoubtedly been a major factor in his competition successes and will we hope point a moral to others.

An 18 per cent. symmetrical airfoil gives a fast flying speed, great manoeuvrability, and first class wind penetration; for, as we know, "Uproar" has a repertoire which includes consecutive loops both outside and inside, consecutive flick rolls, figure eights, split S turns and many others, including the most beautiful true spins we have yet seen.

As originally flown, ailerons were not fitted; the designer has, in fact, only been using them this season and we watched some very pleasing rolls as a result during the R/C Eliminators at Cranfield. It is strongly recommended to those other than experienced multi flyers, that they do without this particular form of control in the first instance until plenty of experience has been gained. After all, rudder, elevator, and engine control allow plenty of scope which reminds us that Chris fabricates his own version of the Bramco type throttle for the latter form of control, but says that an Ohlsson Gold Seal glowplug of the shrouded element type is essential for satisfactory results when changing to low speed.

Finally we mention for the benefit of those who wish to install British commercial equipment, that the fuselage will need widening by half an inch to accommodate the standard E.D. Reed outfits.



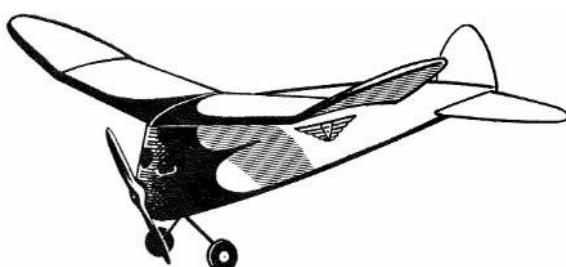


Roaring 20

The Roaring 20 is a nifty 28.5in.-span biplane for 0.5-to-1cc diesels by B C Striegler, of Houston, Texas. The plan appeared in The Aeromodeller of May 1958. It gets its name from the "anything goes" era after World War I. Many small biplanes flitted through the peaceful skies of the time and here we have a model in keeping with the spirit of that care-free age. It was developed to perform realistically without danger of thermal flights. Another requirement was that it had to be easy to transport.

The Roaring 20 is pleasing to the eye and has the type of performance that will endear it to all "sports" flyers. It is easy to build and fly and will give years of service.

The original was powered with a Mills .75 turning an 8 x 4 Tornado prop. All-up weight should be around 13oz.



David Kinsella's Column

Sid and Basil

Good to see radio champion Sid Allen on our cover in November. And just look at that crowd! Sid used ED engines, and thanks to Basil Miles and ED the Channel was crossed by model boat and model aeroplane at this time. Basil's Miles Special, pictured, lead on to singles of considerable size, even to a couple of bike engines. I used to visit Basil, Flo and Chris at their house in Surrey where Basil maintained a considerable workshop. My piece on his life was published in SAM Speaks in c.1991. Basil, by the way, was a very keen model boat enthusiast.



Snow Birds

When it was time to defend their border in the west, Russia urged all to do their bit. Ladies in aeroplanes, many old biplanes, took to the air and were effective. So much so that they were known as Der Nacht Hexen - The Night Witches. Pink scarves and make-up went well with flying gear, and some say that engines were switched off for maximum surprise at the start of a night attack. Better fighters let them take on 109s and 190s, surviving pilots at first amazed that they'd been potted by a blond (long ago Stanford Tuck told me that, in a one-to-one, it was possible for a few seconds to see the opposition, sometimes very close indeed). Several of the Nacht Hexen became aces. Is there a book on all this?

Easing Search

And if you're hunting a rare title try R & R Books (01453 755788) or HP Bookfinders (01877 376377). For rare titles on aviation try 01983 759069.

Kismet

At the end of WW1 pilots and planes were more than plentiful. Out of five hundred pilots Hans Baur was chosen to fly mails around Germany in his Fokker DVII. In 1931 after 100 flights over the Alps to Italy he was presented with a magnificent eagle trophy. Two years later he was personal pilot to Hitler. Note the Sidcot-type flying suit.



A Work Thing

An age ago most folk lived in the country and cities like Manchester didn't exist. Then factories and mass production arrived and hordes rushed to the bench, Henry Ford offering double the rate. The railways here (GWR, LIMB, LNER, SR) were massive employers, as was the car industry and outfits like insurance companies and banks (pre computer, you see) ran daily adverts for staff (so scarce, a friend worked days in one bank and nights in another - he was tough). But it's a touch different now. A radio programme posed the quo vadis question re work. Exams are all very well, but when NASA cut back after the Moon Period, PhDs were pumping gas!

Goodly Supply

Camden Miniature Steam Services (01373 830151) issue a 96 page catalogue covering most things from aero engines to wireless technology. Adam is the expert and visits the big Guildford Model Rally in July. In the aero section is Jim Shelley's book (he's the Minimag man) packed with pictures and information. In print for several years and a delightful read, Adam launched the English edition of the huge book on Chapelon. Jim, of course, built the 260cc engine to power his 15ft Taylorcraft. A flat four with valves on the side, the big motor is called Maltese Falcon (after the 1941 movie?)

Knightly Stuff

A find picture on the wall is always a good idea. Graham Turner's special interest is Medieval Art, a selection covering Agincourt, Bosworth, St Albans and the freezing conditions at Towton. Here Lord Montague, with battleaxe and finery, watches Lord Oxford's men returning to Barnet. Call 01296 338504 for a catalogue. Armour is made today for museums, active use by combat groups at shows and summer festivals, and for a baronial effect in homes of suitable size. For a time the process could be seen in the old Clink building west of London Bridge. Where possible flutes and bevels were employed to avoid a 90 degree strike from an arrow or lance. Good tanks adopted the same strategy as did battleships.



Truly Titanic

Proof by test to destruction, a really big battleship could soak up lots of punishment. For example, the 72,800 ton Musashi took 22 torpedoes and 16 bombs before she went down. Off Okinawa in April 1945 some 400 American aircraft sank Yamato with 12 torpedoes and 4 large bombs and other missiles. Bismark and Tirpitz were designed at 42,000 tons (but 35,000 declared for Treaty purposes) yet the heads of the Kriegsmarine looked to bigger stuff, even a staggering 144,000 tonner with 20-inch guns and a speed of 40mph. It didn't happen, but two of 56,000 were started in 1939. When Tirpitz was struck and Dora turret went over the side, its ball bearings found on land were too big to be lifted by one man!

Nats West

The 1951 British Nationals, held at Fairwood Common, Swansea, saw Lady Whitten Brown present the prizes and remembered names collect them. Weather on the Sunday was not good, but Bank Holiday Monday saw the sun out and friendly winds. Ron Warring of the Zombies took the Model Aircraft Trophy, Sid Allen carried the SMAE Radio Control Trophy back to Battersea and Alan Hewitt won the Gold Trophy for South Brum. (brother Brian having done so in 1949 and '50). A pair of Brixton's best did well in Speed: Taylor and Billington hoisting 5 awards in a spirited field of 36.

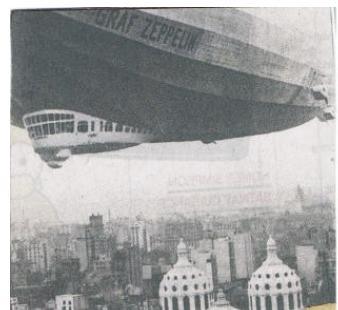
In the Sir John Shelley Cup (134 entries) Pete Buskell and Norman Butcher delivered a fighting fourth and fifth. Here Ron Mead prepares to blast off his McCoy 49 in the big Shelley entry. And, of course, Bud Morgan of Swansea was there (11th in the Shelley), he running his famous model shop in Cardiff's Castle Arcade. Sir Arthur Whitten Brown, who lived in Wind Street, Swansea, and may have been there on the day with his wife, made the Vimy Atlantic record flight at the end of World War One. Sqd Ldr Cable and Flt Lt Verney flew a Mercury Mallard for the RAF on the day, and also seen enjoying themselves were Bob Copland and John O'Donnell.



Classical Gas

A tour of Cardington's sheds and chats with souls who'd seen them soon convinced me that the airships of the 1920's were huge! We had R100 and R101 and Germany the Hindenburg longer than many an ocean liner. With rare wines and potted palms and lightweight grands supporting bands, an

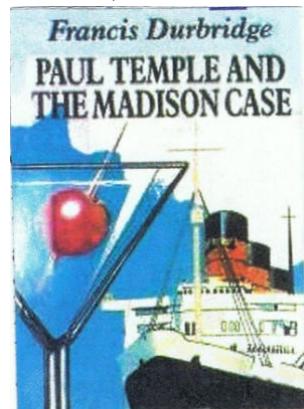
Atlantic trip was memorable. At the FA Cup in 1930 all Wembley looked up in wonder as Graf Zeppelin hung in the air. But in 1928 E F Spanner wrote 458 pages on the grave danger of airships and why



aeroplanes were safer. He said both R100 and R101 were unsound. Big beasts with 5.5 million cubic ft of gas, R101 went down in 1930 and Hindenburg in 1937. America had the safe gas and pressed on, but elsewhere it was the end of an era. Here Graf Zeppelin cruises in South America.

God's Wonderful Assists

Although Dick Barton stands supreme in the realm of high adventure on the wireless, others had a crack at it from time to time. Opening with the sweeping strains of Coronation Scot (ace streamliner of the LMS, yet Vivian Ellis told me he based it on the GWR's Cornish Riviera - but publishers preferred the blue and silver striped wonder) Paul Temple and wife Steve tackled crime from the 1930s to the 1960s from their base in Mayfair. Created by Francis Durbridge, three movies appeared starring a dashing automatic-packing John Bentley. The majority of listeners, sweating along on next to nothing, adored the fifteen minute glimpses of smooth living: Paul wrote best-sellers and Steve was a top journalist, they had a servant (Pryce), a country home and acres of thick carpet to go with cocktails and expensive cloths. Six actors played Paul, but Steve was one throughout (she sounded tall but was only 4ft 10in). Like Barton's thundering intro, the often heard Ellis signature moved mountains for Temple.



With A Woggle

If you're a Scout and thus prepared, the deepest snows are nothing more than a challenge. And so 2000 pitched tents and tackled tough conditions in Gillwell Park in January. Full marks, boys. You showed 'em!: A full range of activities was enjoyed by all.

Super Eta

I remember the day Harry handed that brown box to me at his model shop in Gordon Street, Luton. I still have it plus all the paperwork and the ad hoc receipt written on a page from a diary. Blue Biro on the lid told you that it was an ETA 29 (oooh) and Ken Bedford warned you about all sorts of things by means of duplicated sheets and a stamped warning inside the lid. The orange transfers were wonderful. Years before I'd seen a chap called Duckweed with one at Belfairs MAC and resolved that one day I'd have a 29 too. My early ED Racer was great, but that 29 with its vast exhaust was greater (I could never sin and cut it off). Test runs away from it all on Two Tree Island produced all the melodies I'd longed for, telling Mac all about it in his model shop in Southend's Arcade (terrible pong from the butchers nearby). But the great wheel turns. Old shops go and better engines arrive, flying fields vanish and tastes change. Thankfully, chaps, we who know better are aware of those rare constants - of which, for me, Ken Bedford's ETA 29 is one. Verily.



A True Classic

Mentioned with Rodney Pattison in the Phil Smith Story, the 20ft Flying Dutchman designed in 1951/52 is still an exceptional racing dinghy. An Olympic boat (1960-92) she sails in the Vintage Olympic Class these days and is possibly still the fastest upwind thanks to generous sail areas. Many famous yachtsmen on their way up have enjoyed the FD, including Paul Elvstrom, Keith Musto, Bruno Trouble and Ted Turner (America's Cup).



FD firsts include the trapeze, roller furling genoa, spinnaker chute and composite construction. In wood a Flying Dutchman is a thing of great beauty.

It's Big Stuff

Lift a carpet tile in Docklands, if they'll let you, and below are cables like fat snakes filling the 18in space. Elsewhere are workshops and banks of computers in stone cold rooms regularly checked by security. In the trading areas, big enough for ball games, banks of screens and huge ones around the wall and clocks too tell you what's going on. Running programmes like Sniper and Hammer, Hal-like things beyond the ken of many can steam through 400,000 trades - a second! It's banking, but not as we knew it. Across the Hudson an unmarked building with five levels of entry keep Wall Street pumping, and over here a similar building is going up in Essex. And just in case there's a local 'incident', stand-by floors are lit and ready to take up the slack. Things like 'dark pools' we'll leave for another day. High frequency trading too.

Stunt Stuff

And here's my 1957 Toreador stunter, AM 35 powered. It's a model I'm very fond of, particularly the cockpit and high fin area and the thick and sturdy wings. Alan Walker's colour scheme suits it perfectly.



Proper Lightweight

Essex Aero Ltd of Gravesend did important work for flying legend Alex Henshaw and made, fuel tanks and other parts for Mosquitos. Tasked with making a car for its managing director A E Freezer, the result was a close coupled four-seater in magnesium alloy (DTD 118A). Just how light it was staggered the press in 1952: the complete shell with doors could be held aloft by one man and was a mere 130 lbs. Built on an Allard J2X chassis, a Chevrolet V8 later replaced the smaller 3.9 litre Arduin Mercury. Not seen for a while, this sports job in cream with a red line caught fire outside the Playboy Club in Park Lane (leaking fuel can settle in the valley of a V8, and then in time up she goes!)

Furious Music

The big Class C has a piped OPS. Yet to fly, a static engine run, fuz held by stout webbing to a tree, produced an incredible racket that soon attracted too much attention! I slipped away smartish, VTR hidden by a bath towel. The Mercury kit Class A has a Rivers. Again, Alan Walker at his best.



Guy Remembered

Looking back, of course, but in my area at least Bonfire Night - and a good few either side! - went with a robust bang. It's a traditional thing based on solid fact (Oxford holds one of the lanterns used in the 1605 Gunpowder Plot) and ideally suited to November's chill and mist. And as the rockets were soaring and exploding with a crack, the first of the Christmas card were on their way and soon in force. Artist Barry Freeman sent a super view of a red and gold streamliner of the LMS, his blue and silver rendition enjoyed last summer (S&T No 31). Name plates for these beauties have zoomed since the rise of preserved steam, even £40,000 no guarantee of success at auction. All railwayana is now much in demand and there's a thriving repro industry.

Solid Stuff

Yards of shelves at the Football Association strain under tons of tomes on the history of football and its clubs. And mighty Lord's holds more than I will ever need to know about cricket. Our flying clubs aren't quite that old, but several of the good ones are of mature years. Take, for example, super South Bristol MAC, one of two or three once in the area and founded in 1947. These days South Bristol is going strong with over 40 members and encourages control line, free flight and indoor

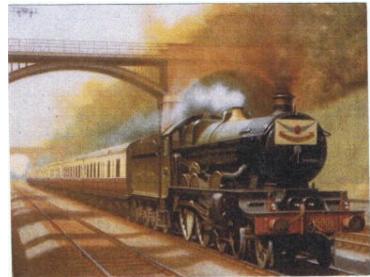
flying (which I much enjoyed at Belfairs MAC). All classes of VTR are supported, Barton B, Tiger Rat, Vintage Speed, Vintage Combat, Weatherman and Phantom roundly enjoyed. Any there's a Gala, usually in June, and its ideal location means that hot munchies and a cool pint come as easily as a one-flick start to an expert. Chum Digby and other good sticks often make the trip to Old Warden and lots of interesting photos can be found on www.southbristolmac.co.uk Cheers, boys! I once lived in St Andrew's, was photographed on a Nail and partied at the Old Vic (Nails, round tables of metal, were where merchants did their business. Hence 'cash on 4iie nail').

It's Only Me

David Acton's piece (S&T No 37) reminded me of a White Plains moment after a day visiting model, kite and book shops in Manhattan. After 35 minutes north on the train, I gave my friend's address to the cabbie and we set off. But I'd mixed it up with an address in Chicago! After an age touring around I recognised a hedge. Bills given to the driver, I pushed through the vegetation - couldn't see the gate - and frightened my friend out of his skin. He was outside looking for a very late me, and thought I was an invader! Well done with the Cloud Elf, David.

GWS Didcot

Perfect for steam railway buffs and those without a car (Paddington trains stop there) all the best of the Great Western Railway: Castles and Kings, carriages and goods trucks, a museum, cafe and workshops demand a full day, more so if there is a special event (visiting locos, art shows, gala weekends). Short train rides are free and there's a shop selling books and another with items from the GWR itself. Brunel favoured the broad gauge track for speed and capacity, and a section of 7ft plus a loco and trucks will let you see how things were when the Great Western ran the fastest railway in the world. Even in the 1930s it was doing well with its famous Cheltenham Flyer at 100mph, holidaymakers zooming up and down in its special 7-coach train. No 5006 Tregenna Castle helmed by Quality Street gave a ride to remember!

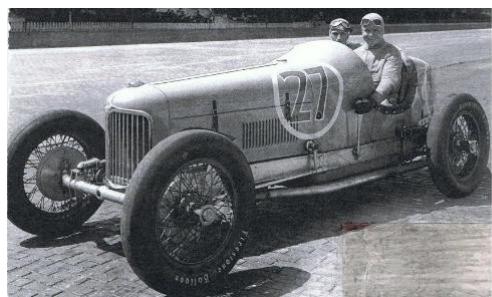


Top Stock

St Martins Accessories (0207 836 9742) sell the best in quality cast model cars and bikes. Not cheap, but hand-lacing tiny wire wheels and bonnet straps requiring tweezers can't be tackled in a rush. Just round the corner from Leicester Square should you fancy a visit. But will that 1:12 scale model of Hawthorn's 1954 Le Mans winner belt your plastic? It's beautiful. And for bikers a BSA Gold Star is on the way.

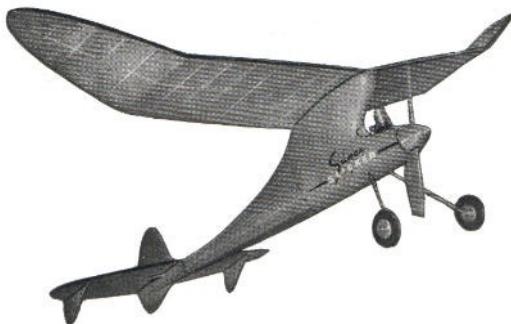
A Miller Masterpiece

Moving on from Cadillac V12s of the 1930s, I mentioned to Alan Walker that somewhere I'd heard of a Miller I6. Time passed...And here it is! Only one made, but it is a Miller V16 from the golden years of Indy and the board tracks on stilts that were a feature of American track racing. Riding mechanics in those days and averages of 130mph. For sale at £500,000 on the West Coast, a new engine was built to fill the space left by the missing original. Pictured at The Brickyard, Indy's Speedway Museum is a must-see if in the area.



Lots Of Interest

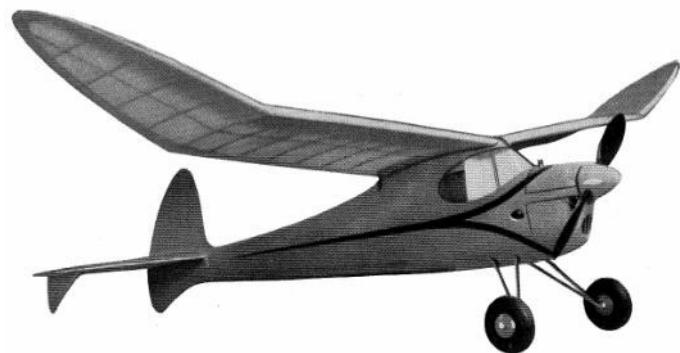
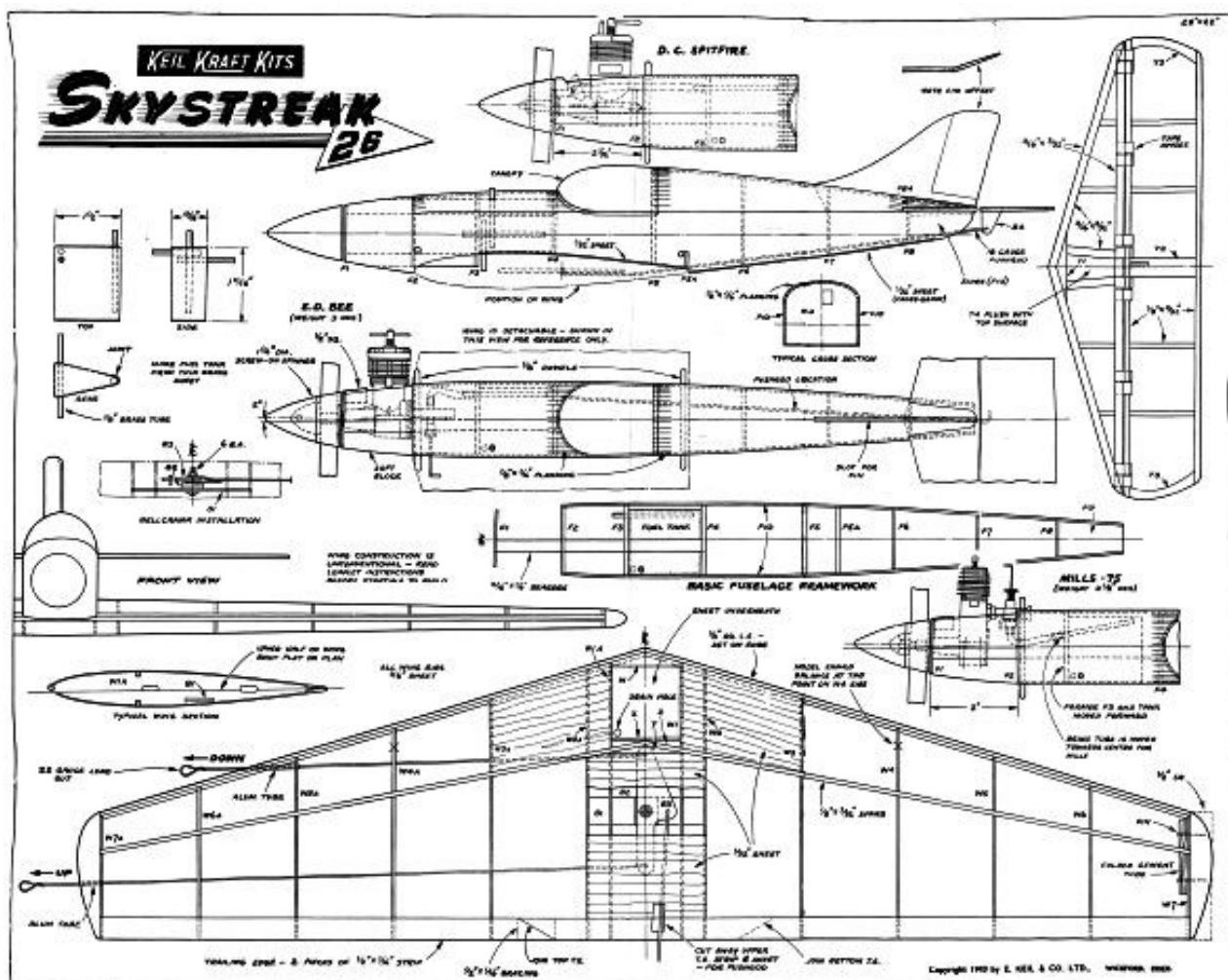
And here's a tethered car from Mike Crisp, 1.49cc and front wheel drive. The first batch has sold, not surprisingly, but more are planned. The sport was big after the war and even supported a magazine and books were written. Restoration of the Old Warden track would cost little and it could kick-start the hobby and add a dimension to Vintage weekends. Well done, Mike. Several cars are owned around the country and interest bubbles under... But what we need is a good track. Better still, two or three. The Mike Crisp car - 10in long and a replica of the one described in The Model Car Manual of 1949 (5 pages and 5 illustrations) - would be perfect as an intro to the sport and possibly the basis for a full class. It's direct drive (wheel on the end of the shaft where the prop would go, the opposite wheel carried on a plug axle which screws into the rear of the crankcase in place of the backplate) and so avoids the expense and complication of a clutch and bevel-gear axle – and so less to go wrong. Sounds good to me! Depending on choice of engine and track surface, speed would be all of 65-75mph coupled with glorious and uplifting sounds. Mike's number is 01473 737393.

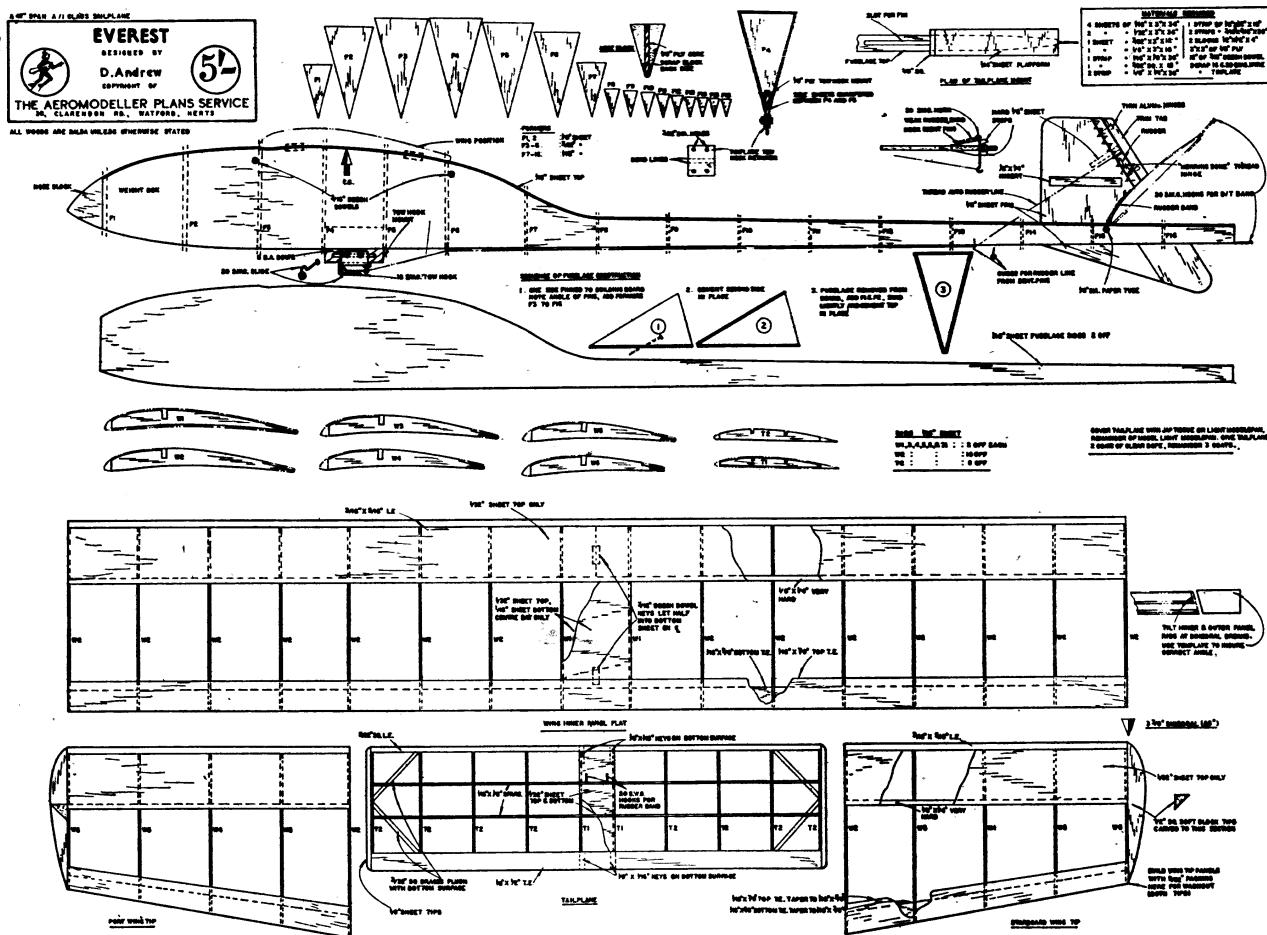


Few words from Gray



Unfortunately, I spent 12 days over Xmas and New Year in hospital with a serious illness and was utterly starved of modelling. I've been spending my convalescence productively though, and have been catching up on some building. One project I've just finished ready to cover is a Frog 'Wren' which I'm quite pleased with, as I missed out on Frog kits in my early days.
Will have some more pics of my output for you soon,



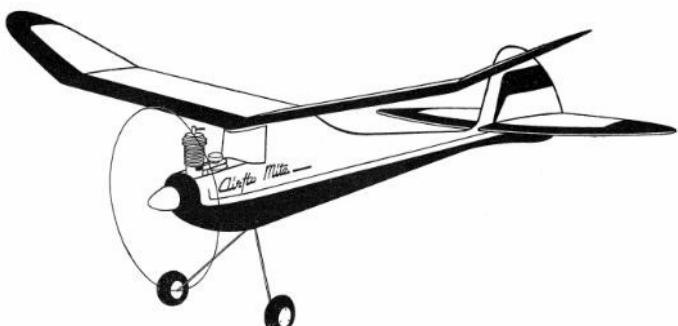
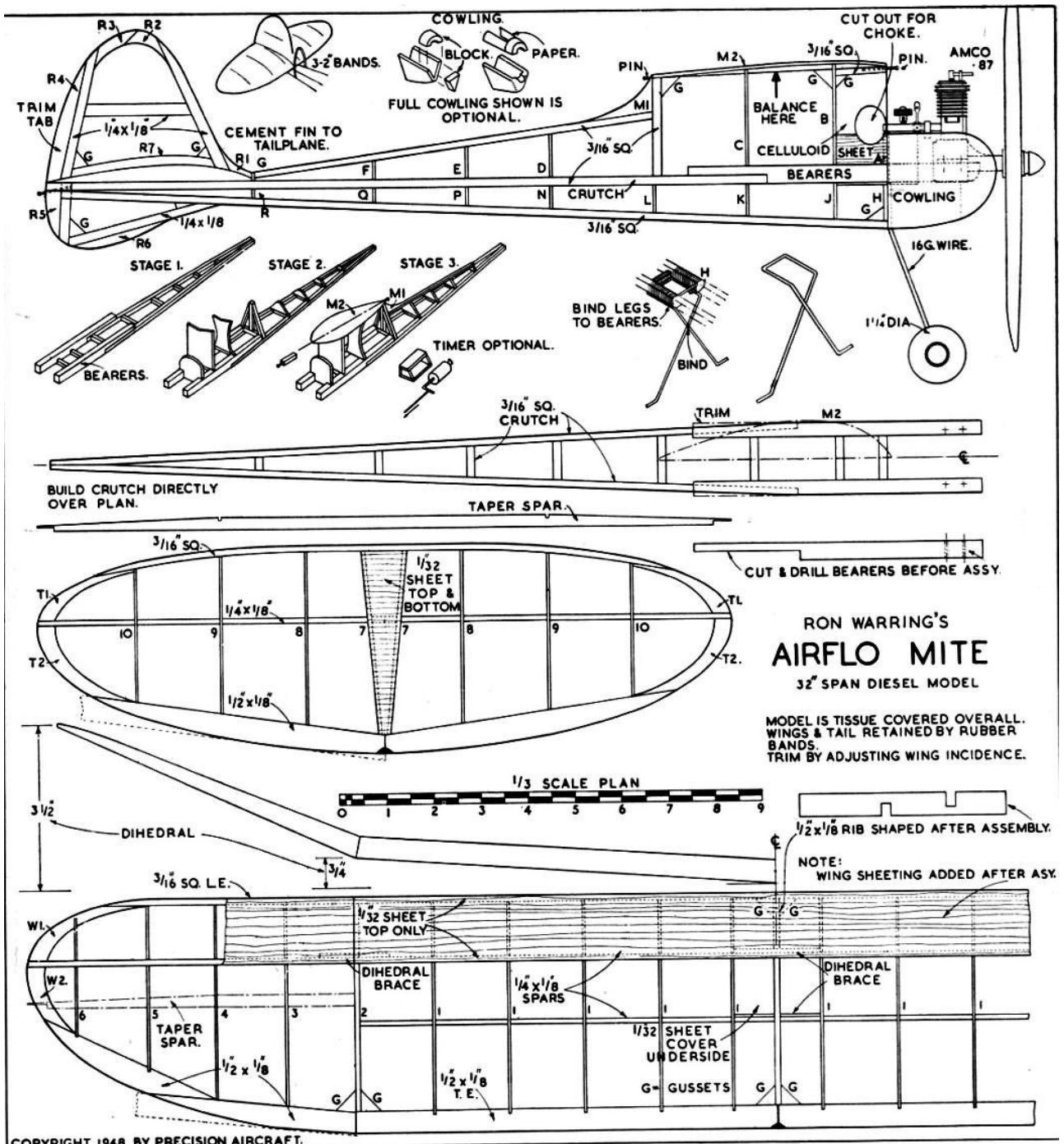


The Everest was an “easy to build” 47in.-span A1 glider for sport or contest flying which appeared in the Aeromodeller of September 1958. It was the seventh and final design of a series developed by David Andrew, a Canadian railway telegraph operator. Here are extracts from the article which accompanied the plan:

Although construction is a little unconventional, and the model bears several unusual features (thick trailing edge airfoil, triangular cross-section fuselage, the combined auto-rudder/trim tab) it is completely functional and devoid of frills or novelties. Incorporated design features make trimming a mechanical routine. (The) model will go to the top of a 164ft. line with a minimum of fuss and remain aloft for two minutes or more, which is an above average performance for such a small glider.*

A centre of gravity position is shown on the plan, but don't pay too much attention to it. The model is designed with a fixed difference in wing and tailplane incidence. Ballast for a smooth glide, and let the centre of gravity fall where it may. In no circumstances should the incidence of the wing or tailplane be altered.

(*Highly doubtful! Glider flyers these days might give it, say, 1:20 off a 164ft (50m) in dead-still air.)



Airflo Mite by Ron Warring

Pocket size contest flier for the Amco .87

appearance was still definitely American, with deep, narrow fuselage and polyhedral wing.

THE original Airflo Baby was produced as a kit design on American lines. That is to say, although featuring a cabin layout, the

Designed around the Mills diesel the prototype BABY proved to be the ideal sports flier. Constructional simplicity was the aim, both from the point of view of making the kit list as straightforward as possible and from the modeller's viewpoint in requiring the least time on the building board. The Airflo Baby was designed to fly—not to absorb hours of building time. The original prototype proved to be quite a duration job and used to float around almost indefinitely if there were any signs of lift about. The second prototype showed up a rather peculiar feature—but one, incidentally, which never detracted from its performance. Trimmed for a near vertical climb the tail would waggle from side to side, but it never got into trouble on this score. We found two cures. Speeding the model up stopped the tail wag immediately, and this was accomplished by either flattening out the climb slightly or increasing the speed of the motor by fitting a slightly smaller prop. A three inch strip of 1/2 in. by 1/8 in. balsa cemented to the fin edge at right angles also removed these peculiar symptoms.

But in the end we went back to the original set-up to make the flight more interesting. On the very next attempt the job found a modest riser and continued up... and up... and up... So we never did find out anything more about tail-wagging on this ship, and the third one we flew behaved as sedately as any other good model.

Around Christmas, 1946, we had paid a visit to J. Colyer of Majesco Miniature Motors—then at Littlehampton when he had just finished the first prototype of the Majesco Mite •75 c.c. diesel. Colyer had it fitted in a straightforward 200 sq. inch job which weighed about 8 ounces and this we flew and flew all one winter's afternoon. Which gave rise to the thought that here indeed was the ideal sports model—something really small and robust. All there was to do was fill the tank, flip the prop (at least Colyer did—we needed more than several flips to get the motor going)—and fly. Soon afterward the Airflo Baby was scaled down to a size to take a diesel of around • 75 c.c. But at that time there just were not any motors of this size available on the market. The prototype had odd flips on a most amazing variety of motors, often with ballast at "strategic points" to bring the C.G. out somewhere near where we knew it ought to be.

It took it all—and then the design went on the shelf until suitable motors made the commercial market. As soon as the Amco was announced we concluded this was just the job. Quite high power for a model of this size—its climbing angle is greater than that of the Airflo Baby with a Mills—but light enough to keep loading right down and reduce that "rate of sink" when the power cuts.

Just a few mods. to the nose end and the Amco was installed. The happy inspiration of cutting a hole in the windscreen so that you can reach the intake tube to choke has paid dividends time and time again. And we never bothered to fit a timer to our job, but simply "guesstimated" the power duration from the tank level before release. However, a timer link-up is very straightforward and is well worth the little extra trouble.

Constructional features are basically the same on the two Airflo models, although the Mite is probably the more rugged of the two.

The fuselage is built on the now familiar crutch principle—the crutch in this case being 3/16 square balsa. This is pinned out directly over a full-size drawing and cemented. Note how the hardwood bearers are shaped and cemented in with the crutch.

All formers are then cut from - sheet stock and cemented at their respective stations on the crutch. Wing platform and keel stringers virtually complete the fuselage assembly.

The 16 s.w.g. undercarriage is first bent to shape and then bound and cemented to the hardwood crutch members. Hardwood wheels are recommended on account of their durability and relatively light weight. These should be of streamlined section; balloon-type wheels only add unnecessary drag. Wing ribs and tip pieces are cut from sheet. These are given full size and only require tracing or marking off on to sheet of the correct thickness. Either place a sheet of carbon paper over the balsa, lay under plan and draw round outline with a pencil; or lay wood under plan and prick around outline with a pin. We recommend the former method.

By shaping the spar ends before assembly the wing can be built in one piece flat over a full size drawing. When set, simply set up at correct dihedral angles and add spar braces.

Note that the centre rib is cut from 1/2in. by 1/8 in. strip stock and then shaped to correct contour after this stage in construction.

Sand down structure, particularly the tips, and then cement leading edge sheeting in place. This sheeting must be cemented to each rib as well as leading edge and spar, otherwise it will cockle when water-sprayed and doped.

The tailplane is very simple--and very light. Cut the ribs and tip pieces carefully, so that everything fits accurately. The spar must be tapered before assembly as shown. The fin is even simpler, the outline cut from pieces of sheet and scrap strip used for the two " ribs " Section is flat plate.

Tissue is used to cover all surfaces. Pin down after water spraying to avoid warping---and again after doping. We strongly recommend that after doping all surfaces be left pinned or weighted down for at least 24 hours.

The fuselage can be single or double tissue covered. Silkspan or thin silk is much better if obtainable. Three or four coats of dope on the fuselage, two on the wings, and one on the tail surfaces are adequate.

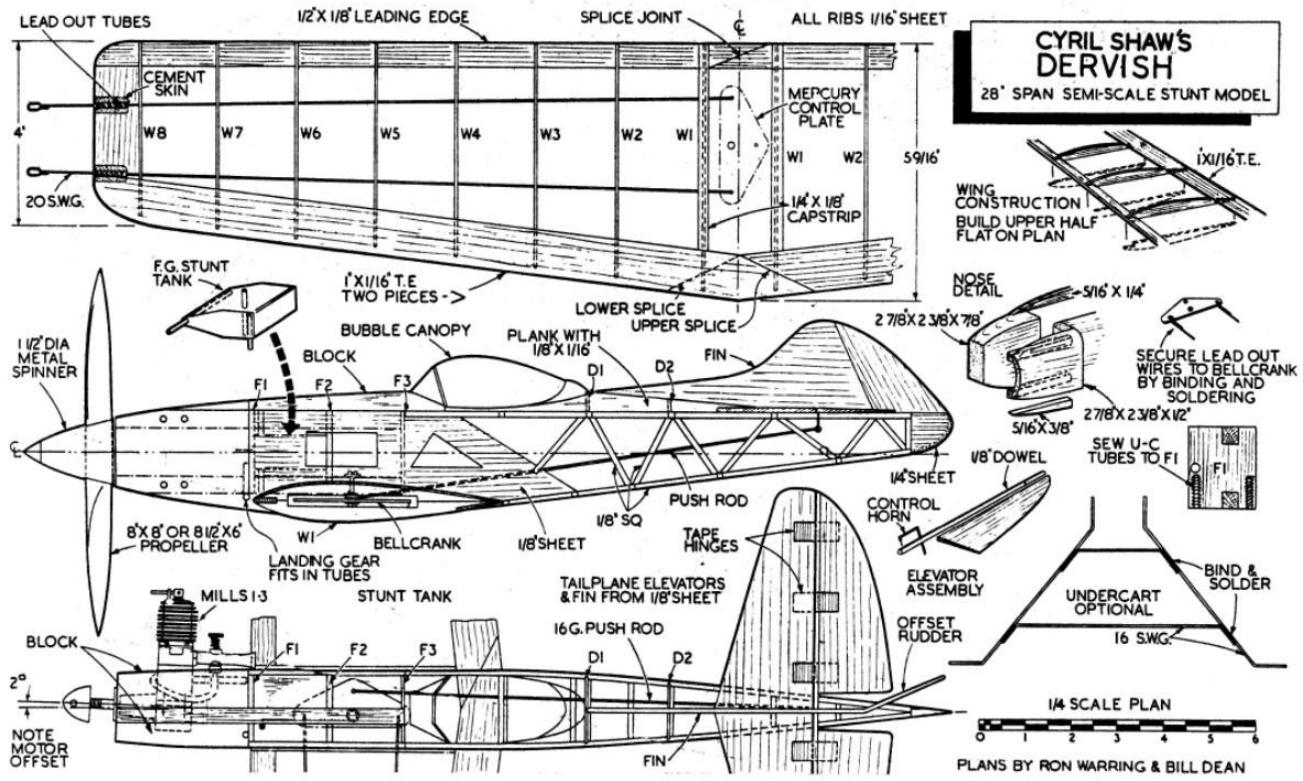
Smaller motors like the Ace .5 c.c. give very pleasing flights—still hot enough for the average enthusiast. Putting in larger motors—around 1 c.c.—will certainly give you climb, but it works out a bit hard on glide with all that extra weight hung out front.

A few hand launches with propeller removed should soon give you glide trim. Add incidence to the wing to cure diving tendency and positive to the tail to cure stall (positive means packing up the leading edge---but only 3/16" at a time). A very slight touch of rudder—right or left—will give a circle on the glide.

Then get the motor revving—and launch! If there are any signs of instability, suspect warps and check accordingly. Stalling under power should not occur—unless the tailplane has been given negative incidence---but, if persistent, can be cured by tilting the motor slightly downwards through shims inserted under rear of mounting lugs.

Follow American practice if you intend to make sidethrust adjustments. Make the bolt holes oversize and simply slacken off nuts and twist motor to setting required; then tighten down securely again. Use lock nuts, where obtainable. Plain nuts have an annoying habit of working loose and becoming lost on the flying field.



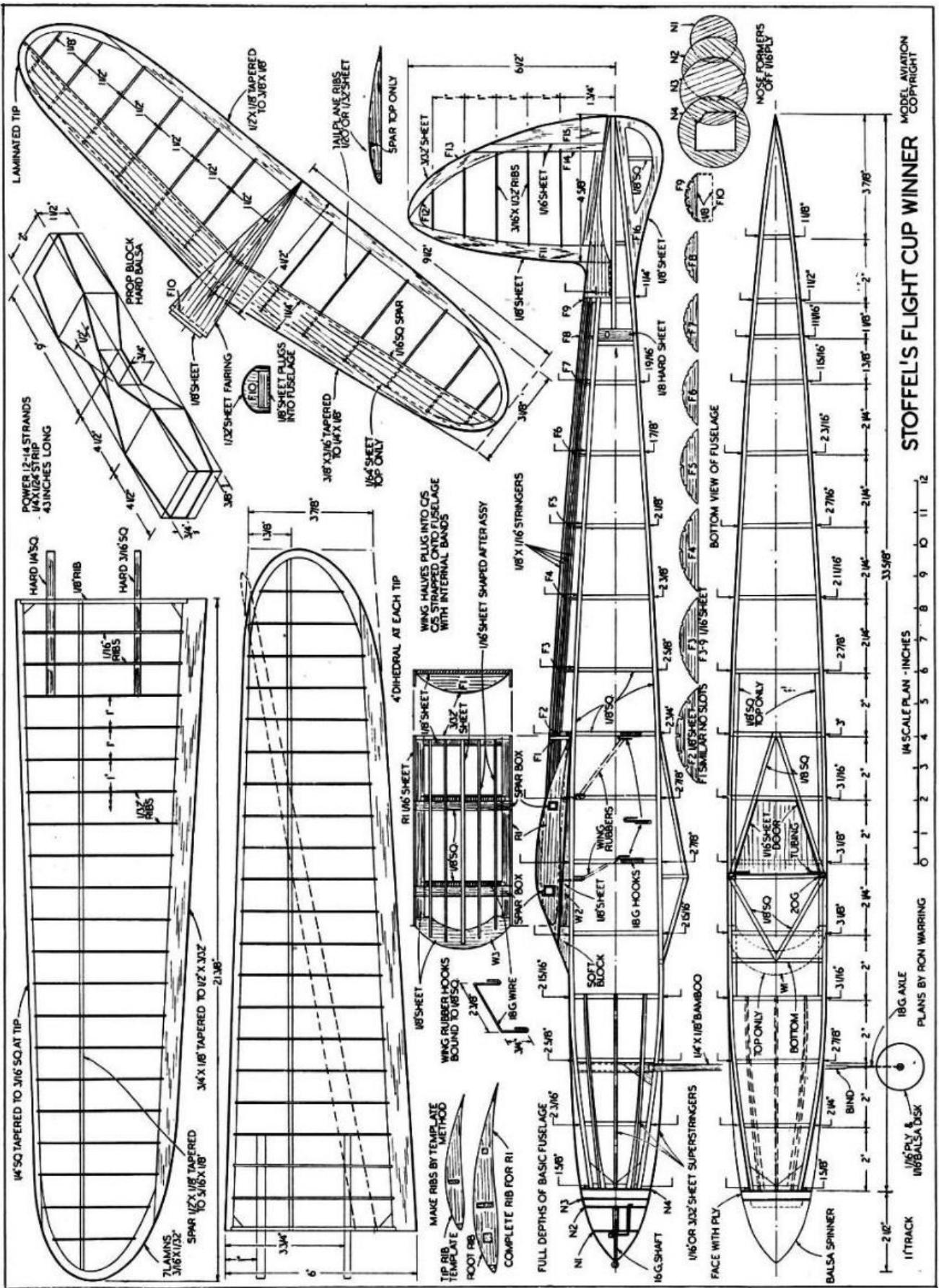


The Dervish, 1949 stunter 28" span control line model by Cyril Shaw



One of the most stylish designers of the immediate post-World War II designers was Cyril Shaw. Every line of his models was "right" including his 28in.-span Dervish from 1949. Whether any worthwhile stunt performance was ever attainable with a Mills 1.3 is doubtful. But in any case the wonderful Elfin 1.8 was soon on the scene. The Elfin would certainly have transformed this and every other small CL model of the era. Here is a summary of what Shaw had to say about the Dervish in his article which accompanied the plan in Ian Allan's Model Aviation: One evening at the 'local' the talk turned to stunt control-liners and the desirability of breaking away from the 'flying barndoors' rut we seem to have drifted into. As a result, preliminary sketches of the Dervish were made in the shadow of a pint pot, several helpful suggestions coming from Ray Jenkins and Doof England. We decided to use the Mills 1.3 powerplant and develop round it an attractive semi-scale with a genuine stunt performance. The result is pleasing to most people and the model will fly with the best of them.

The original model has proved extremely strong and on occasions, unintentional vertical dives into the ground have only resulted in superficial damage to the covering. Side-winder engine installation ensures good power plant protection and provides a smooth side profile. All up weight works out at 9oz., but economical use of dope and trimmings will reduce this figure slightly. Building time varies with individual modellers, but an average builder should not take more than three or four evenings. The model should balance on or near the leading edge of the wing. Use an 8-1/2in. x 6 or 8in. x 8 airscrew and fly on 40ft lines.



1949 Flight Cup Winner by Edwin Stoffel

MY original 1949 Wakefield design was in many respects similar to the "Aristocrat," which appeared in the February, 1949, Aeromodeller. The new model featured a more streamlined fuselage, tapered wings and flight tests showed it to be very stable. However, the duration was not quite as good as I had hoped for and some changes were obviously called for.

When Ron Warring's VOO-DOO design was published in the 1949 Model Planes Annual, this seemed to me to be the ideal contest layout. So in order to try out this idea, a streamlined slab-sider fuselage was drawn up to suit the existing flying surfaces of my 1949 cabin design. The results with

this new combination were such a great improvement over all my previous Wakefields, that I decided to abandon the idea of a cabin layout altogether. It was with this model that the 1949 Flight Cup Contest was won, with an aggregate of 804 seconds.

The model should prevent no difficulties to a fairly experienced builder and therefore detailed building instructions are unnecessary—only a general outline of some of the more intricate points being provided. Plans on the adjoining page are reduced to 1/4 scale—the full size original being available from the publishers. Full size ribs

and other components are given overleaf.

FUSELAGE

The basic structure consists of HARD 1/8" square balsa with 1/16" sheelformers on top - and 1/8" x 3/16" stringers added. The streamlining block in front of the wing is of soft block and hollowed out as indicated. Build up the dethermaliser box from medium 1/8" square and fit a 1/16" sheet trap door. Line the interior of the box with notepaper instead of the usual sheet balsa, to prevent chute "hang-ups." Credit for this idea goes to Dennis (E1mic) Elmes of the Ilford Club. Use 1/8" sheet balsa for the rear peg attachment—with 1/16" ply reinforcements. It is suggested that the "double cementing" method of construction is used for the entire model.

WINGS

The ribs are made in the usual " sandwich " method, making a template for the largest and smallest ribs—then placing the appropriate number of pieces of 1/32" sheet in between and carving to shape. Use the largest template afterwards to cut out No. 1 rib from hard 1/8" sheet.

Laminate ribs Nos. 2 and 3 with extra pieces of " sheet to make up 1/16" thick ribs. Build up the wing centre section on a base of 1/8" sheet, with 1/16" sheet ribs added. Use hard 1/16" sheet for the wing boxes and bind securely with silk strips. The internal rubber band fixing has proved quite successful and cleans up the external appearance considerably.

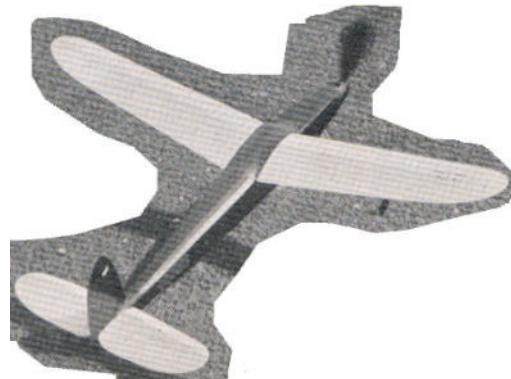
TAILPLANE

Tailsurfaces are built up in the conventional manner and need no description here. The rear tail block consists of a 1/16" sheet base, an 1/8" former and two pieces of 1/64" sheet bent round and laminated together. This is built as a whole and slots for the tailplane and fin are cut out on completion.

AIRSCREW

The airscrew is quite typical and particular attention should be paid in making the roots as small as possible—consistent with strength. A circular root section is best and this measured 1/2" diameter on the original airscrew.

Use the hardest grade of balsa for this component and to still further strengthen the blades, cover them with silk (an old silk stocking will do). Obtaining the finish may take as long as three weeks if you want to make a really good job of it. The procedure is as follows :—One coat of banana oil, one



day to dry, then sand down. Repeat until the standard of finish required is achieved. In view of the time involved, it is advisable to start on the airscrew at an early stage of the building operations.

COVERING

The flying surfaces of the original model were covered with white Jap tissue—white rag tissue being used for the fuselage. Clear dope was thinned down to half strength and two coats given to the wings and fuselage. Only one coat was given to the tailplanes to prevent excessive bowing. After clear

doping, the fuselage was given three coats of water-thin black dope.

GENERAL

Most Wakefield designs available in plan or kit form will give you a stable model capable of a good performance. However, the difference between a really successful contest model and just a mediocre model is largely a matter of final finish and good trimming. It cannot be too strongly stressed, that

such details as sanding trailing edges right down to a knife edge---and not thick--can make all the difference to the ultimate performance of a model.

This particular Wakefield is a good basic design and capable of competing with the best, if you make a sound job of it. At the time of writing it holds the Ilford Club record of 10 : 29.

The power should be twelve strands of 1/4" x "1/24", 48" long. This size motor is capable of taking at least a thousand turns, giving a motor run of approximately 90 seconds.

From Jörgen Daun

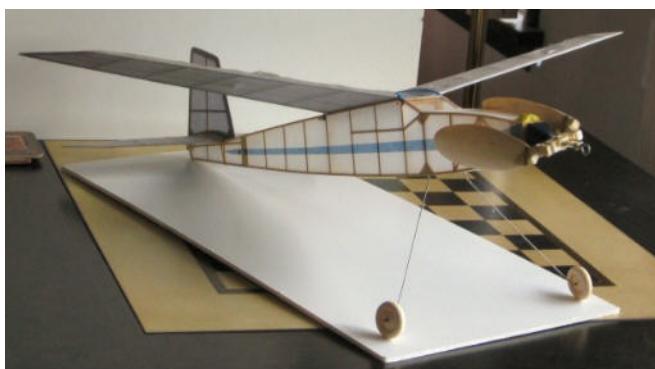
Hi James my name is Jörgen living in Stockholm and I like stick and tissue and have a lot of models my main interest is small oldtimers diesel and cox powered there are also some glow and electrics. I mail you some pics first my Jetco Navigator and Couquette from The old school model factory and last my Tomboy on floats from a Belair shortkit





The refurbished Keil Kraft "Ace" from Karl Gies

I built this KK Ace whilst in a special graduate school program at San Jose State College in 1966 entirely from the KK kit. I had been building models sporadically since getting out of the Marine Corps in 1960. Having time to return to free flight I built a Keil Kraft Ace, a 30" cabin rubber model. The tissue supplied was dark blue and what a terrible color for free flight. With the help of Jack Brown, twice on the U.S. Wakefield team it flew well. I blew the original fuselage up when winding with a cheap Sears hand drill that had a threaded brass screw hook in the chuck and forgot to tighten the chuck





down. Not knowing any better I was winding with the prop on and no blast tube. This scared the hell of a junior high boy in my model club who was acting as my stooge. I built another fuselage and covered it again with dark blue tissue to match the wing and tail-feathers. In the top photo the fuselage has been recovered with polyspan and Japanese tissue trim and it has a folding prop off a another model that I kitted. This was done about eight years ago. I did not know about Japanese tissue over mylar when I did this. The freewheeler that I originally had on it did not survive the probably more than three hundred flights on this model. In the bottom two photos the wing and tail-feathers have been

recovered with Japanese tissue over 1/4 mil mylar and the blue trim is tissue. It has a newly carved free wheeler prop with a 1.57 p/d ratio. This model has always been a stable flyer and I do not remember ever crashing it. This model climbs to good heights and it is a wonder that it was never lost as until it was recently refurbished there was no d.t. mechanism. After building the Ace I built a Keil Kraft Gypsy which was also a good flying model as well as being a terrific looking model. The Gypsy hit a parked car at the SAM CHAMPS at Jean, Nevada in 1991 totally destroying the fuselage and prop. I still have the wing tail-feathers and will build another fuselage for it this winter.



From Mick Butler

I thought your viewers would like to see my winter project. With some help from Bryan Targett in the electrical department. and John Laird for the loan of the plan. A Shereshaw Cumulus, built from scratch to a Klarich drawing, 96" wing span, Covered in Solartex. Weight about 5 1/2 lb. Power is a Cyclon Plug and Fly P&F 40 motor, with a 3,200 mh 4 cell lipo. 12 x 6 Prop. Although it kept me awake for a few nights it is a pleasure to build. It has not flown yet, Waiting for some decent weather, Its got to come sometime...



From Stephen Winkworth

As a follow-up to Tony Tomlin's photo of the large Ionosphere flying wing he is building, here are some pictures of my own-design, smaller, push-pull wing, the 'Guerdon'.

When I first met 'Peter' Fisher, in the early 1950's on Epsom Downs, he was flying a p-p wing, and I distinctly remember it had pylon mounted engines. I was about 14 and was at Winchester with his brother Forest. 'Pete' had just left Eton. He used to drive Lea-Francis open sports cars in those days, and I think he had some difficulty fitting the one-piece wing in beside him. It might have been the 9ft span flying wing he used to boast about carrying in the tube in the rush-hour (bound for Fairlop?). I have some fairly hilarious memories of this larger-than-life character: I'll send you a few words in due course.

My 'Guerdon' has a span of 144cm - a few inches short of 5ft - and is to be powered by a PB 0.33 tractor and a Pfeffer 0.6 BB R/C pusher. The structure follows loosely the techniques I used in building my 'Pteranodon' models - the ones used for the David Attenborough film of the early 1980's. I must say I found my skills had rusted a bit since then.

I plan to build an Ionosphere next. It has a far less fiddly structure than mine. Fisher never seems to have caught up with the Eppler revolution, let alone anything more subtle in the way of aerofoils, so it will be interesting to compare the two.



Whilst on the subject of push me pull me models Tony Tomlin sent a couple more photos of his Ion Mk 21 and here they are. [Next page](#)



Photos of the model covered were literally taken a couple hours before S&T was sent out.



From - Leigh Richardson

I read with great interest the last two issues of "Sticks & Tissue".

Under the name of Rara Avis Designs I have undertaken the task of re-drawing some of the 'lost' models of our aeromodelling past. So it was nice to see Phil Smiths beautiful Apocalypse Glider in print as this is very close to the top of my to do list!

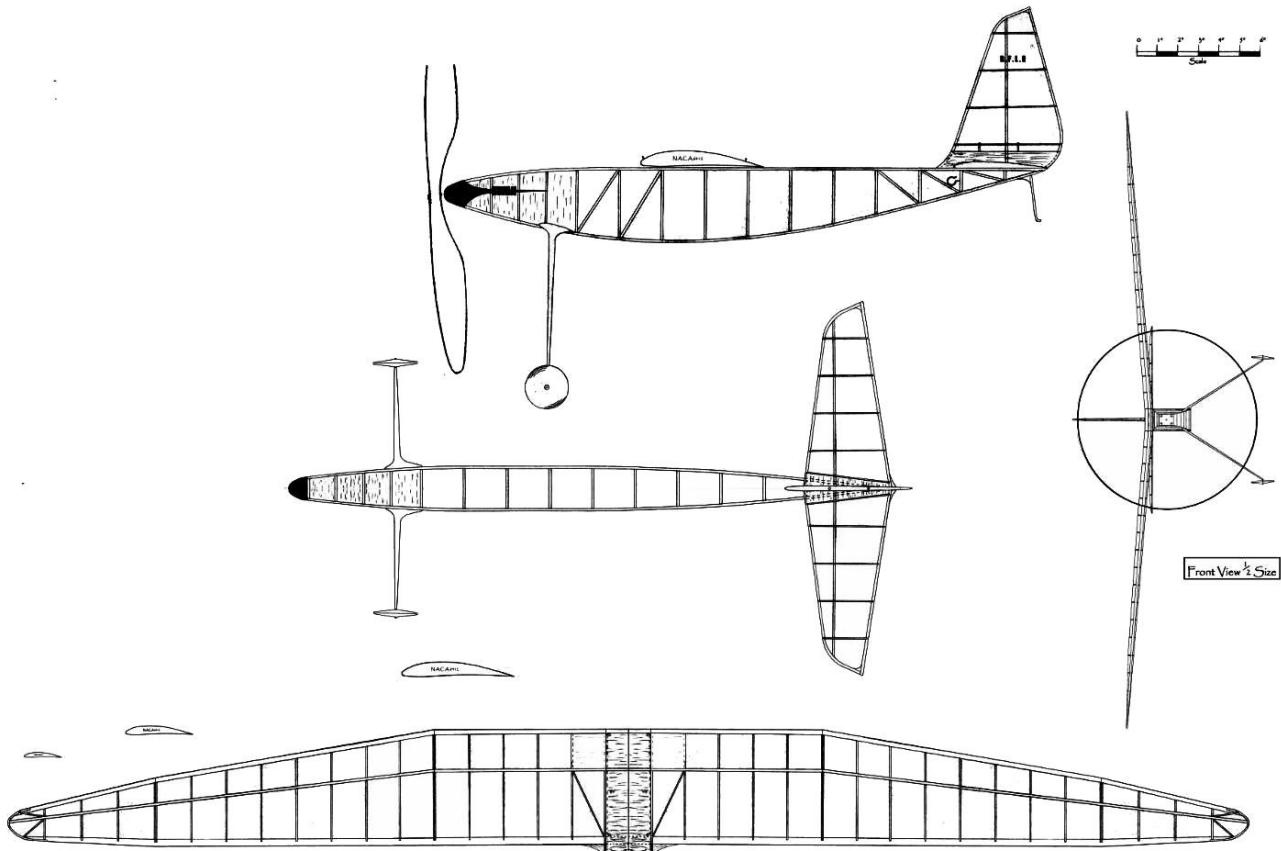
All I use to work from is old photos and any other info I can get my hands on. I was bored of seeing the same old models at the flying field so having a craving for unusual and rare models I decided to draw some up from photos. To date I have over 40 drawings of rare vintage designs, which brings me onto the latest issue of "Sticks & Tissue".....

Again it was a nice surprise to see Tim Westcott's piece on Bob Gosling, as one of his 'lost' designs appears in my drawings, His "SWAN WAKEFIELD" (please see attached drawing - full permission

given to reproduce if you so wish) This model is about to hit my building board!
 Also please find attached some photos of my 1934 C.E.Bowden Moffett entry model & The 1938 Modern Wonder "Martlett".....both rare birds too.
 I am also thinking of running an event for rare modelsphoto of trophy included too.
 Hope this is all of interest to you any further questions please get in touch or see SAM 35 yr book No.14.

Bob Gosling's 1933 "Swan" Wakefield span 60"

(To ease storage and transportation the one piece wing can be modified to break in two at the centre-section. Using 3/16 dia. Dowels in wound paper tubes to join halves, in keeping with Bob Gosling's building practices, he employed this method of wing fixing in many of his models).



Historical notes

Robert Frederick Landor Gosling, more commonly known as Bob Gosling is a name associated more with model gliders than with rubber models, but in the early 1930's he designed and built some wonderfully stylish examples in this field, the best of these being two Wakefield contest types : "Flamingo"" & "Swan".

Bob was a founder member of the Bradford Club in 1931, their flying field was situated on Baildon Moor, where many important model flying meetings were held.

It is thought that the detail Photo (right) & the group Photo (Below) were taken at the 1933 Wakefield eliminations trials for the north-west of England, there were only ten competitors for the trials that year, three of them from the Manchester club, one of them being C.S. Rushbrooke. The Wakefield Trophy Competition of 1933 was



held at Fairey's Aerodrome, London (now Heathrow), and was won by Joe Kenworthy from Manchester, not being a member of a club he was sponsored by The Daily Dispatch newspaper winning with a time of 5 min 21 seconds. The details on the rest of the competition are very sketchy, it being known that C.E. Bowden & James Pelly-Fry also flew in the finals (JPF also Proxy flying for Gordon Light from the USA).

It is not known if Bob Gosling and his beautiful "Swan" made it through the eliminators and onto the finals of 1933.

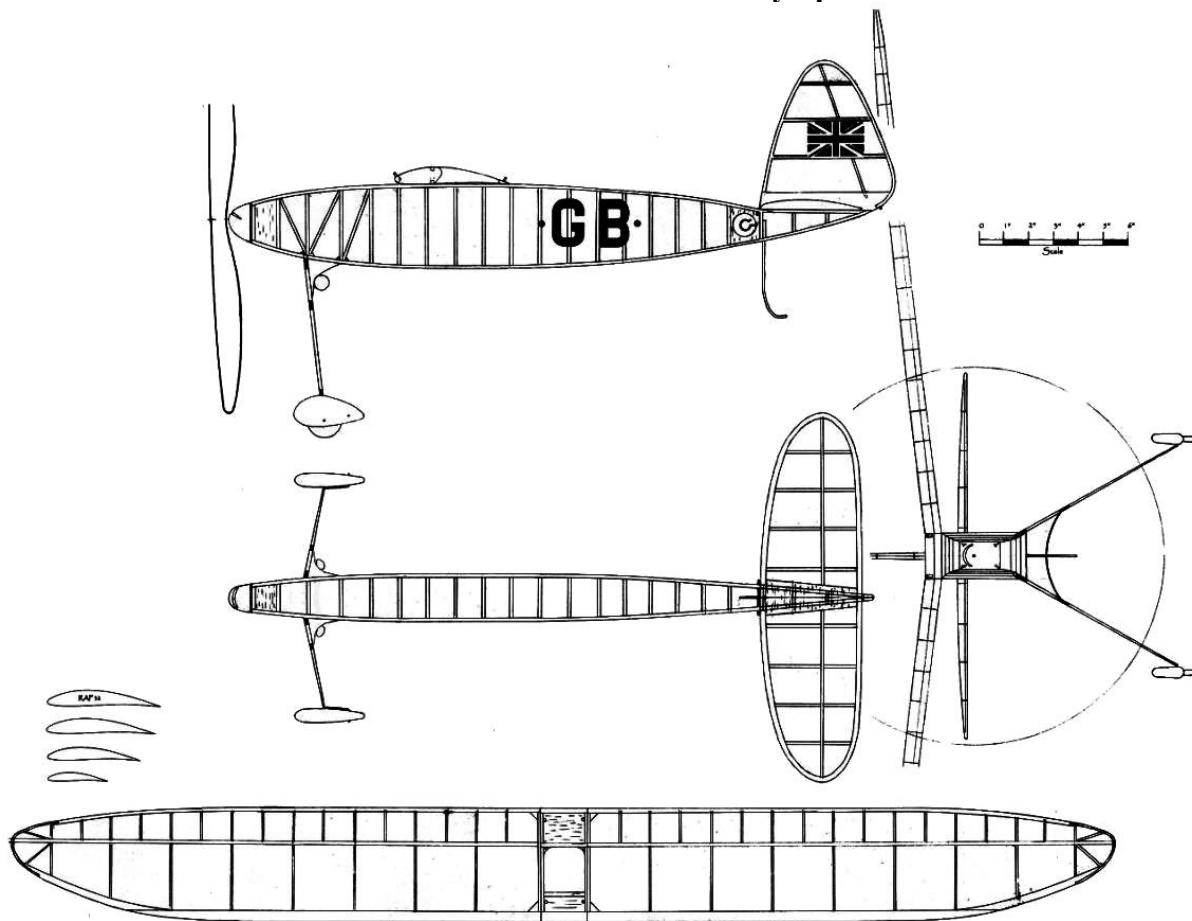
The "Swan" is thought to have been Bob Gosling's first all balsa model, but even then he could not help using hard-wood in stressed areas, a practice he continued with all his models. Robert Gosling died on 29th July 1979 aged 81, the "Swan" is a fitting tribute to a great man from the north.

Bob Gosling's 1933 "Swan" Wakefield is the 6th in a series of plans to be produced by Kara Avis Designs, bringing back to life long lost vintage models from the brink of extinction.



Second from left is a young Alwyn Greenhalgh. Bob Gosling holding model as in photo above to the right. CS Rushbrooke holding model second from the right

C E Bowden's 1934 Moffett Entry Span 44"



Historical Notes

Early in 1934 the NAA informed the S.M.A.E. about the forthcoming Moffett Memorial Trophy and hoped that the UK would be represented in this competition for fuselage models having a maximum wing area of 200 square inches. Normally, eliminating trials would have had to be held to select this

country's team of six models, but it seems that this was unnecessary since only four models were sent from the UK, these being entered by Messrs. Bowden, Capps, Kenworthy and Wood. There was no financial assistance given and the cost of carriage had to be borne by the individuals concerned.

In the event flown at Akron, Ohio, USA on the 28th June 1934, Marvin Schmidt (who did six minutes 6 seconds in the eliminations) was the winner with 2 minutes 42 seconds, the British placings being:- 6th Kenworthy, 1 minute 29.4 seconds (proxy flown by Bert Pond); 8th Bowden, 1 minute 12 seconds (proxy flown by Willis C Brown); 9th Wood, 1 minute 5 seconds (proxy flown by Victor Fritz); 10th Capps, 52.2 seconds (proxy flown by Charles H Grant).

The day was clear and hot and there were a few thermals that were really good, but on the whole there were surprisingly few! The Moffett final started at 3pm but none of the planes struck thermals in that event, their durations were pure performance.

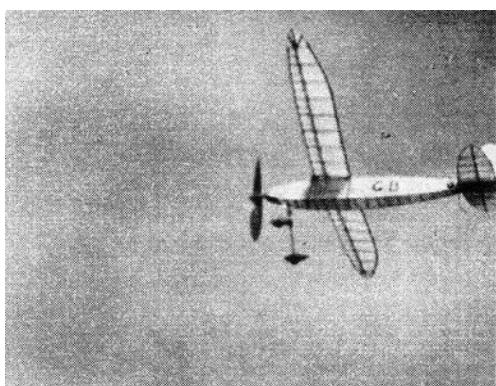
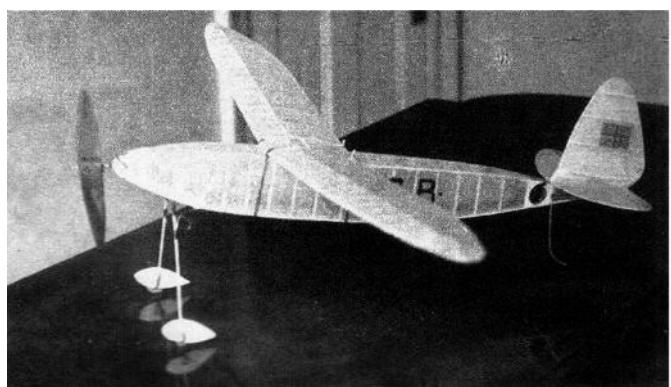
After the event Willis C Brown wrote to C.E.B and commented on his model: "I (W.C.B) read your letter and examined your plane, and it certainly was a beautiful piece of work. A number of interested boys examined it and agreed also. With your heavy motor I had trouble from excess torque, I thought it would crack up once, it went up steeply, rolling with the torque and entered into a dive, but thanks to the good construction it stood up to the bump ok. Then I tried to adjust opposite rudder and elevator to counteract, but it acted very tricky, so I put on the smaller rubber, and it flew stable with a very nice climb. "Your 3 flights were 48 seconds, 53 seconds, and 1 minute 12 seconds. On this last flight I gave it 1100 turns. and boy, did it climb. It most certainly would have been better than Kenworthy's, had it not struck a decided downdraft near the end of the flight, but it's a matter of

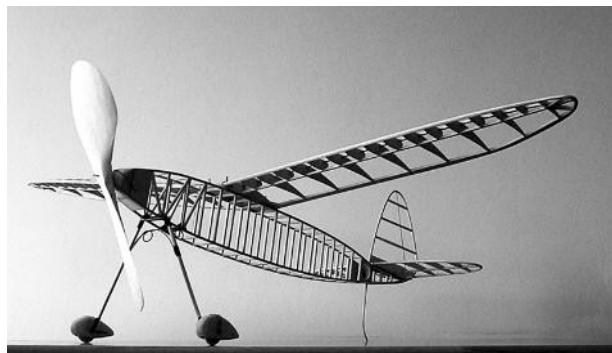
luck with those currents. Your plane stood the flights perfectly".

The above piece was taken from Alex Imrie's Vintage Corner in the April 1995 Aeromodeller magazine, as soon as I layed eyes on it, it was a must build. The drawing is the result of 11 years of part time investigating and eye' balling the only 2 photographs that exist of the original model. The only doubt that I have over its accuracy is the stabiliser shape as both original photo's seem to have conflicting shapes. But time and care has been taken to get as close to the prototype's shape as possible.

The C.E.Bowden 1934 Moffett Entry is the 1st in a series of plans to be produced by Kara Avis Designs, bringing back to life long lost vintage models from the brink of extinction.

Many thanks go to Alex Imrie for Vintage Corner April 1995 Aeromodeller, recalling C.E.B's early years and for the support and encouragement over the phone, also many thanks to Phil Smith for without his kind words, help and support the 1934 Moffett Entry would have never been seen climbing skyward again.





The 2006 Reproduction



Rare Vintage Model Aeroplane Plans From The 1920's, 1930's & 1940's
Recreated From Old Photographs.



Rara Avis trophy



1938 Modern Wonder - Martlett



NORTHERN HEIGHTS GALA REMEMBERED by Dave Ashenden

In January 1956, at the age of 15, I began a 3 year RAF Apprenticeship at RAF Halton near Aylesbury in Buckinghamshire, training to be an Aircraft Engine Fitter.

RAF Halton remains in use today, a very large training establishment located on the estate formerly owned by the Rothschild family - of banking fame. The accommodation and technical training areas are located at the base of a very attractive part of the Chiltern Hills and at the foot of the camp, stretching into the Vale of Aylesbury is a very large grass airfield. Soon after arriving at Halton I found there was a thriving model aircraft club and I was to spend most of my spare time there, getting hooked on the wonderful smell of dope and banana oil in the process.

Prior to joining the RAF my attempts to build and fly model aircraft, both at home and with the local Air Training Corp (ATC) Squadron had been less than successful. For example I had an ED Bee for Xmas in 1953 and never could get it to run.... (I now know that was because I let all the ether evaporate from the fuel...i.e. don't leave the cap off the fuel can!). Initially, at Halton, I couldn't embark on anything too expensive because we were only paid the princely sum of 17 shillings and 6p a week of which 10 shillings was 'saved' for us (I think this was to get us used to the pain of paying Income Tax later in life...!). Club members made both Free-Flight and Control Line models with the latter being the favourite because they could be easily flown on the parade grounds located adjacent to the billets. I recall that Elfin 1.49, 2.49 and ED Racer 2.46 diesels were favourites. I learnt a lot during this period mainly by watching those more experienced than me who, apparently, had access to more funds than myself.

In July 1956 we modellers were in for a real treat as we learnt that the venue for the annual Northern Heights Gala was to be held on Halton airfield. If I recall correctly the Gala was organised by Northern Heights MFC and was held at different venues each year, previous venues having been Radlett and Langley amongst others.

On the day the weather was perfect for free-flight models, warm and dry, a clear blue sky and a very light breeze, a perfect English summers day in fact. There was an abundance of rubber-powered models; Wakefields and other large rubber models were being flown in competition. Also Keil Kraft (KK) Achilles and Ajax and Senator models were being flown. It was also pleasing to see KK Scale and Veron Scale rubber powered sports models being flown successfully, something I had never achieved.

I don't recall any i/c powered competition types screaming skywards but there were lots of delightful sports cabin models powered by small glow and diesel engines. There were plenty of Veron Cardinals and Skyskooters, KK Falcons and Bandits flying and other types that I now recognise as Vic Smeed designs. It was a perfect day for flying gliders even though the guys doing the towing had to have a fair turn of speed on in order to get them aloft. I particularly remember seeing a magnificent KK Chief, high on my then current wish list, being towed up and saw it slip into a well-trimmed circling glide - magic

These were of course the early days of Radio Control, predominantly Single Channel, and before launching there was much twiddling of screwdrivers and reading of meters to ensure the signal was being well received, and then the engine was started and the model launched with some trepidation. It was my particular delight was to see scale models like Mercury Aeronca Sedans and KK Piper Cruisers and Luscombe Silvaires being flown under R/C control to altitude till the engine cut and then to be landed back near the spot they were launched – fantastic stuff. However at the time this technology (and associated cost) was way above our heads. The Mercury Aeronca Sedan in particular is a wonderful looking model and I added it to my then wish list. Many years later I happened to acquire a part built kit and built it take 3-function R/C. I still have it now with 147 flights and 34.5 flying hours on the clock. Every time I fly it I remember the Northern Heights Gala! In fact the last time I flew it was at Middle Wallop, another grass airfield, it was like being back at Halton.

This was the first time I had seen petrol (or Gas) engines in use and it was intriguing to see the different techniques being used to try and coax some life into seemingly dead engines. But once fired up they made that marvellous barking sound as they hauled, sometimes large, free flight models into the air.

Of course not all models being flown that day were in perfect trim so there were many shouted warnings along the lines of ‘mind yer head’ and **watchout!** Thus during the day it was important that you kept your eyes looking skyward in order to avoid wayward models returning to earth, and at the same time trying to ensure that you didn’t tread on any models on the ground! A number of the fitter amongst us apprentices volunteered to act as ‘fetchermites’ an enjoyable experience in that not only did you get your hands on some of these wonderful models, but you also got the chance to ask questions of the owners.

The star of the show that day was undoubtedly a ducted fan free flight scale model of the Fairey FD2 jet research aircraft that had been built and was being flown by, the now legendary Phil Smith of VERON. As I recall it was the prototype of the model soon then to be kitted and marketed by VERON and was an innovative project as ducted fan models were then very much in their infancy. It was also topical because on 10 March of that year the FD2 had broken the World Air Speed Record, raising it to 1132 mph (1811 km/h). Piloted by Lt Cdr Peter Twiss, this was the first aircraft to exceed 1000 mph in level flight. Hence there was a great deal of interest in the model. Phil’s model was powered, I think, by a 1 cc DC Spitfire diesel driving an impeller that Phil had obviously designed and developed. Starting the engine appeared to be a difficult task. However, with the engine running and peaking well the resultant thrust was just enough for the model to maintain level flight. Phil then hand launched it at shoulder height and the model proceeded to fly in a large and level circle with its long needle nose pointing menacingly forward at head level and so Phil had to run after it shouting warnings to the unwary public. 50 years later I was to meet Phil again when he attended a WMAC event and he recalled the day perfectly.

We apprentices could only gape in envy as we saw models being flown that we would have ideally liked to have purchased the kit and built same, but it was way beyond our slender financial resources. It was a wonderful day and for me an unforgettable experience, cementing what was to become a life long and much enjoyed hobby (particularly so now that I’m retired!). One of the joys of reading James Parry’s S&T magazine is that it brings all those memories back – well done James

From Barry Finneran

This months offering is another not often often seen model the Pioneer. Designed by Ben Shereshaw



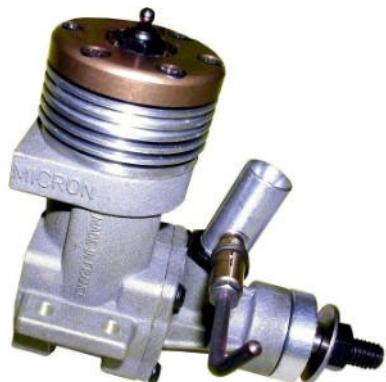
in 1934 as the Speedster, he then passed the drawings to the Loutrel Co in a swap for a gas engine. The now Loutrel Speedster was the first gas engined model to be offered to the public as a kit of parts at \$4.00 , the plan was also available for \$1.00. Later in 1934 Loutrel renamed their business the G.H.Q. Model Airplane Company also producing another model named the Sportster. Not to compromise the

deal he had made with Loutrels, Ben Shereshaw redrew the original Speedster plans in 1936 and renamed the model the Pioneer. The drawing for the Pioneer appeared in the Flying Aces Magazine of January 1938.

The model as pictured here is 80ins span , power is a brushless motor equating to a 45fs ic engine. I have to say



the big dummy petrol engine up front looks the part, but it does beg another question. Should these old vintage designs be converted to or built for electric power, myself, I am sold on the quiet clean electric power so no comment from me .



The Ajax strikes back! (Tremble Peter!) from Brian Cox

Having read Peter Michel's KK Ajax misadventures, I was a little surprised. Peter's writings are usually good-humoured and charitable, but I thought his treatment of the dear old Ajax was a little unkind.

Fortunately, Peter literally asks for reactions. I certainly wouldn't have written this response without Peter's « permission ». So, as a beginner for the last 62 years, and with the greatest respect for Peter's experience, I feel qualified to present an alternative view, as follows:

The problems that Peter encountered seem largely due to his own modifications and to the solutions adopted.

Firstly, a beginner wouldn't have increased the wood sizes in the fuselage, and wouldn't have inserted extra spacers. This would have avoided the rearward CG and the nose ballast, and would also have eased the problem of the nose contours (the thicker wood is more difficult to form), particularly if he twigged that forming the longerons around accurately cut nose sheeting is a lot easier than just joining the sides « in the air » and then inserting the sheeting into a random-shape nose afterwards...

Secondly, a beginner wouldn't have invented a DT arrangement that prevents the insertion of balsa packing under the tailplane (amazing, I thought I'd mis-read that bit!). This « option » resulted in huge changes in wing incidence and, of course, correspondingly huge changes in the thrustline, to keep the two flying in approximately the same direction!

At this point, I wondered whether I was actually reading Peter Michel or listening to Gerard Hoffnung's « Bricklayer » classic... « Half-way up, I met the Ajax coming down! ».

To be honest, I think that most of Peter's options are simply « overkill » (perhaps the result of messing around with 8 oz Wakes!). Peter has more experience than myself, and it's too easy to sit back and criticise, in one's own armchair. But 3/32 square stock is about right for a 30" lightweight rubber model. « Cowhorn » dihedral on the wings is simply down to too much dope and not enough thinners and, while other spar layouts may be preferable, a single spar on the lower surface can't be called a design fault!!! (see Tomboy et al).

Having said that, a beginner almost always has « overdoping » problems and is thus taught the importance of applying dope very sparingly on lightweight structures. However, this would be true of any lightweight rubber model tackled by a beginner. It isn't specific to the dear old Ajax!

OK, so let's make another Ajax:

My own story starts a bit like Peter's... I think the Ajax was the first model aircraft I ever saw... There was an Ajax kit on a shelf, when my mother first took me into our local « Handicrafts » shop, in the summer of 1948, and I was hooked for life. I've always loved the look of the model (I bet I'm not the only one) but, like Peter, and for reasons that we're all familiar with, it took me 50 years to start building... and another 10 to get it finished...

After such a long wait, I really wanted to « get it right », which means using the earliest plan that I could find (I think there have been several drawings), build exactly as per the plan (no mods - OK, I did make one...), and just continue using traditional methods and materials, as always (hi-tech, for me, means using plastic clothes pegs instead of the old wooden ones, and I only changed because the glue used to stick to the wooden pegs!).

The model was built entirely in « medium » balsa, in the sizes specified, and finished in the time-honoured manner (and in KK colours!), with lightweight Modelspan on the fuselage and Jap on the flying surfaces, all attached by flowing thinners through onto the doped framework. This was obviously followed by water shrinking and doping, with well-thinned dope and a little castor oil, all brushed on, nothing sophisticated (I wouldn't know how!). The result is shown in the photo, and there's not a « starved horse » or « cowhorn » in sight.

The only really delicate part of the construction is the forming of the longerons to achieve the nose contour shown on the plan. As mentioned above, they need to be « persuaded » around accurately cut nose sheeting. This can't really be difficult as I've only ever tried it once (on this Ajax) and it worked OK first time (using medium wood in the sizes specified!!!).

The point I'm trying to make is that there's absolutely nothing unusual about my Ajax. I didn't modify anything except the wing mounting. It isn't particularly good, or particularly bad, but it is exactly what I've always wanted, a perfectly standard Ajax!

The Results:

So what did we achieve? Well, my intention was to have a « nice evening flyer », on low power, and the model was built with that in mind. So it's light to the point of being a bit fragile. It certainly wouldn't accept being flown in much wind, or in rain, but when taken out on calm evenings, it cruises beautifully around our local field (on six strands of 45-year old Pirelli!), for a minute or more, on never more than about 60% turns. The model has been happily flying for a couple of years without ever being weighed, as I never intended to write « seriously » about it. However, I've now weighed it and the weights are in the table below.

As built, the Ajax was nose heavy and a very small amount of ballast was necessary under the tailplane (one day, I'll build a lighter prop assembly).

Finally, I have to agree with Peter concerning the « paper bag » hand glides. My own theory is that small rubber models are so light, and have so little inertia (kinetic energy) that if you have a large free-wheel propeller, the kinetic energy (potentially airspeed) used to heave the propeller into rotation kills the airspeed to an extent that it's no longer sufficient for flight. For this reason, I put on a few finger-wound turns for test gliding, just enough to obtain a « zero thrust - zero drag » propeller situation. This also means that the aircraft enters the glide phase with the last few turns running off, which is the way it should be... It isn't entering the glide while simultaneous trying to get the propeller turning. That's only my armchair theory, and I could be totally wrong, but the old Ajax certainly hand glides better with a few finger-wound turns. For athletic types, a similar result could probably be obtained by attempting to run at gliding speed before launching (not for me!). 8 oz Wakes (I've never built one) must have enough inertia to avoid this « paper bag » syndrome, while any sensible lightweight rubber model would have a folding prop!

Ajax component weights	
Fuselage	17.8 g
Wing	12.1 g
Tail assembly	5.2 g
U/C	5.7 g
Prop assembly	13.5 g
Total airframe	54.3 g

Peter, I couldn't wish for a nicer vintage flyer!
So Thanks and so much more to Eddie Keil, Louis A. Heath and Albert Hatfull (who drew my plan)



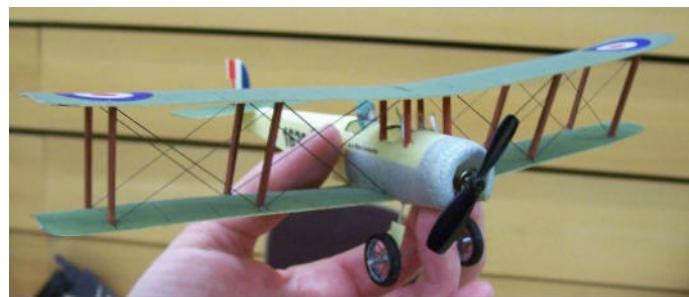
In addition to the above I received the following from James Paton

Peter asks for any more unsuitable beginners models. How about 90% of the K/K range. The only success I ever had with the Flying Scale series was with an undoped (I could not afford it) and therefore lighter, Hawker Hunter with a Jetex 50. By success I mean it stayed up for some of the engine run. Even the Senator is far too tail heavy as designed.

I see some K/K models flying well these days, but not by anyone of the age they were marketed at. Why we all persisted, I will never know! It was definitely despite Eddie Keil in my case. I guess children had so little cash they could not afford larger easier to build and fly kits.



More Photos from Crawley Indoor meeting from Dave Bishop





In addition a gathering at Old Warden, by total coincidence the photo shows on the left Alwyn Greenhalgh and on right James Pelly-Fry both appear in Leigh Richardson's great article. Of course middle left is Henry J Nicholls and mid right Dave Bishop



The Edgar Westbury Atom Minor

Last month we mentioned some interesting engine photos, kindly sent by Tim Wescott. We described the unique George Court diesel and, this month, we're continuing with a look at Tim's Atom Minor spark ignition engine.

This is another engine that was in the custody of the late Alwyn Greenhalgh, and was thus quite probably the property of Claude Bowden, who is known to have done quite a lot of flying with an Atom Minor.

The Atom Minor is arguably Edgar Westbury's best-known design, and its design and construction were the subject of an excellent book, which is probably still available if you know where to look...

The engine in the photograph, if it actually is the ex-Bowden engine, could well have been made by ETW himself (that means Edgar Westbury, not Tim Westcott!).

So again we're asking questions... Does any reader know whether the Alwyn Greenhalgh Atom Minor is actually the ex-Bowden engine and, if so, was it made by Edgar Westbury, and/or have any related anecdotes, etc.

Finally, we can't discuss the Atom Minor without mentioning John Maddaford, generally considered to be THE expert on the Atom Minor.

In addition to his other engine-making exploits, John has probably made more Atom Minors than anyone else, and many of Johns superb creations are flying (or sitting in collections!) in the UK. Obviously, any comment from John would be most welcome.



Frog Engines - from Peter Scott

My early Frog engines all run well, even though the 175 ignition suffers quite badly from arc'ing at the points, which may account for why it has the proverbial lack of power to pull the skin off a rice pudding. It also has a conventional (right-handed) prop thread a la George Court, although the prop nut looks pukka, so maybe it was an early one ? Possibly not I hear you say, because the tank has the later "square" type mounting lugs. Anyhow I reckon George was inspired by the Swiss Etha fin-less diesel, one of which I had back in the 70s (then foolishly sold it), it ran well if a bit paraffinny in my cellar (sorry Neighbours).

Frog 100 Mk1 running>>>>



<<<Etha diesels



Frog 175, 100 Mk2, and 180 prop shafts >>>>>



Couple of photos of Malcolm Jagger's Frog Linnett



Here are a few more photos from Tony Penhall



"Porlock Puffin" 60" C E B design 1936 by Charlie Bruce USA. Atom Engine Plan from Tony £8.95



John Marshall designed World Record Holding "Flying Wing" by my late friend John Howse of Bristol. Plan £8.95



Brian Ferrett with his Berryloid Trophy Winner 72" (Harold Coovert design) £11.95



Grayson Gnome by Ken Croft
Tony Penhall 01480472658

More from Richard “Old Bill” Bavin

Looks like control line rules this month. Enclosed are series of pictures of the American 1946 Perky speed model. Kit produced by Larry Rice in the States, distributed by Dens Model Supplies, for Black Hawk Models.

Original used Ohlsson .23 sparkie, mine has the rotary induction glow motor from 1948 fitted, just to prove it could be done. A challenging build, good kit, CNC parts, no modifications needed other than engine bearer width to accommodate the motor, an enjoy-able build.

These are being flown in the States and Australia with modern motors in many cases and can exceed 100 mph!! Thinking the “Tethered Trainer” is a tortoise, the Perky has to be the hare!

There is currently an American postal comp ending 4 July – the winner being the one closest to the average speed of all



entries, (any over 90 mph will be disqualified) classes for glo, diesel and ignition motors. The idea being to get interest re kindled without being too competitive. Accent on fly for fun – seems like a good idea. Putting

Perky Control Line on Google

provides a great deal of information.

The other model is one of a huge variety of Walt Musciano designs from the 40's for Cox 049 motors, the one being a “Stunt trainer”!!

Originally kits cost about \$2 and were often flown in Cul De Sac roads by enthusiastic young aeromodellers!



Again a good kit straightforward build, a look at Dens Model Supplies via Google displays the huge range currently available, and the Cox motors are now readily available from Den.



Finishing off this S&T at 16.55 Tuesday afternoon the rain is still coming down, cold, windy, dark and no chance of going out flying in the near future if the forecast is to be believed. I've got 6 models all finished and ready to fly but fear that when there is a break in this awful weather I'll probably be at work.

I took a photo of my Chubby (Vic Smeed design) a few days ago before it was finished so thought I'd include. The kit came from Derek Foxwell, Old School Model Aircraft Factory 020 8647 1033. Is easy to make as laser cut actual construction is just a couple of hours, it was the covering or more precise the painting that got me. Using aerosol cans of "aeromodellers paint" proved a disaster in my hands. I could write 40 pages on all the things that went wrong so three models took an extra 4 weeks to finish. The model has a DC Dart in it and I'll fly on 15' lines. The kit contains all wood, tank material and template, wheels, undercarriage pre bent, push rod, ply, bellcrank, horn etc etc.



Still at least there is the new flying season to look forward to with all the meets/events, a busy year is scheduled, some of the first events are as follows:-

28 March first of the Wessex Aeromodellers League Tomboy comps at Cashmoor, Wimborne MAC

4 April Middle Wallop RC vintage and control line not to mention free flight. FF also on 3,4&5th.
11 April Control line day at Wimborne MAC

9 May Middle Wallop RC vintage and control line not to mention free flight.

16 May RC vintage at Wimborne MAC

13 June RC scale day and scale aerotow at Wimborne MAC

20 June RC vintage a Cocklebarrow

Look at the following sites:-

www.wessexaml.co.uk

www.sam1066.org

www.sam35.org

R/C TOMBOY COMPETITONS 2010

There will be competitions for the 36" & 48" Tomboy at the events listed below, (to D. Boddington rules). There will also be a league for both classes where the final positions will be based on a competitors 4 best results.

Dates are on next page I didn't have enough time to bring together Word seemed to be throwing a strop!

MEETINGS	DATE	NOTES
Middle Wallop	04.04.10	All vintage flying incl. Tomboy 3s & Senior [No aileron models please] **Contact Tony Tomlin, details below
Middle Wallop	09.05.10	All vintage flying incl. Tomboy 3s & Senior [No aileron models please] **Contact Tony Tomlin, details below
Cashmoor, Dorset <i>Event organiser; James Parry, t. 01202625825 e.JamesIParry@talktalk.net</i>	16.05.10	Tomboy 3s and Senior **Contact Tony Tomlin, details below
St. Albans <i>Event organiser; Alan Blunt, t.01525860154</i>	05.06.10 NB. A Saturday!	Tomboy 3s and Senior ** Contact Tony Tomlin, details below
Cocklebarrow Farm <i>* Event organiser; Paul Howkins, t.02476405126 e.valerie@larkfieldway.fsnet.co.uk</i>	20.06.10	Tomboy 3s and Senior **Contact Tony Tomlin, details below
Old Warden	26/27.06.10	Tomboy 3s and Senior <u>27.06.10</u> **Contact Tony Tomlin, details below
Cocklebarrow Farm <i>* see above</i>	08.08.10	Tomboy 3s and Senior **Contact Tony Tomlin, details below
Middle Wallop	29.08.10	All vintage flying incl. Tomboy 3s & Senior [No aileron models please] **Contact Tony Tomlin, details below
Cocklebarrow Farm <i>* see above</i>	03.10.09	Tomboy 3 and Senior **Contact Tony Tomlin, details below
Note. There may be a small entry charge at some Tomboy competitions.		For further information contact; Tony Tomlin. t.02086413505 e.pjt2.alt2@btinternet.com