

Sticks and Tissue No 41 – April 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

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

Writings and opinions expressed are the opinion of the writer but not necessarily the compiler/publisher of Sticks and Tissue. The content does not follow any logical order or set out, it's "as I receive and put in".



I had to include this photo of David Boddington taken at Middle Wallop on 24 August 2008
Such a pity he passed away on 9 April I'm sure there will be many obituaries so no words here

Literally a few minutes ago I received this from Dave Bishop I've not read just cut and paste JP

The Other DB from Dave Bishop.

I first met David Boddington some 40 years ago when I was commentating for the model section at a full size Barnstormers aeroplane show at Sywell aerodrome and we shared a commentary box for the first time. In those days the modellers started and finished the show days from 10am till 2pm. Then the full size aeroplanes did their bit for the next two hours and we finished the show at 5.30pm each day. Sywell was the home of the many Barnstormers team and the pilots were mostly radio control modellers packed with thousands of punters and it was all very good fun. David had been a regular writer for some years in the model magazines including RCM&E in the days when that monthly read actually included radio/electrical items for us to build and use in our modelling hobby.

Always smiling.

David would always be smiling when he met so many people and it was great just how everyone wanted to be associated with him. After a while he got used to coming to my caravan and enjoying a decent drop of quality brandy and chat. We could have been associated for an even longer time because I had also been completing my National Service in the RAF at the same time as he did and one of my jobs had been to change the VHF radio crystals on one channel of a squadron of Vampire jet aeroplanes so that they could enter for a near display. It seemed that he had been one of those pilots.

Popular meeting places.

In the early days I was allowed by the BBC to commentate at full size aeroplane shows (with certain conditions) and I often met the members of the team of Barnstormers when they were flying in a slot at those events and I wasn't at the one when on the flour bombing show when the fatal air collision occurred and he lost his close relation but we certainly had plenty of chats when we did meet often late into the night.

I was commentating on the R/C models section at the right hand end of Old Warden (in those days before they changed the layout) when they had a Saturday evenings Twilight event in perfect weather and six of us including David, sat up in my commentary box on the top of my transit van, enjoying the first class view of the full size show in a flat calm clear Blue sky display that started at 6 until 9.30pm.

It was the following day of that event occurred that stopped me ever using a radio microphone at the flight line as I later proved that such implements could be the cause of models losing control. I have never ever done it since except at the demonstration the Croydon Club gave at a school near to Bromley, which resulted in the loss of the clubs trainer. I'm sure that the radio microphone was the cause for one moment the model was flying fine and the next it was out of control and I'm sure the it wasn't anything that the pilot did wrong.

Even Abroad.

We had many meeting places abroad where DB Sound had been asked to attend and commentate and more often or not, David would appear making notes to write up in beautiful longhand writing for his columns in the magazines. One of the shows we were presenting was at an Airshow in Dubai in 1999 and in the scorching sun there he was smartly dressed (British you know) taking pictures and making notes of all of the foreign dignitaries that were present. He had commandeered the desk and chair in the reception of the hotel we were staying at, to work. Nobody asked him to move.

Other places were in Austria where we stayed at John Scriveners hotel in Leck where princess Dianna always stayed for the family winter break. It was at 3,000 feet and the air was as clear as a bell. No erupting volcanoes there!

Goosedale Aviation.

In my early days at Littlehampton, I had been a young Aeromodeller in the West Sussex MAC and one of my control line mates was a chap named Mike Ward. He was the son of a local successful

millionaire boat builder and he eventually inherited his fathers business. Mike could (like his father) sell ice creams to Eskimos and David and I later met up with Mike at his request, at his 75-acre model-flying site Best Wood at Nottingham, which he had named Goosedale Aviation. He wanted to make his place a museum of models with their history written on placards on stands. There were dozens of models that had been used in many films all “loaned” to his museum and many people came and stayed there for a model-flying holiday. The food was excellent and the accommodation blissful. Serious golfers, do the same, I’m told. David and I remarked how the huge Goosedale flying site was mown to a billiard table finish for take-offs and landings in any direction. I remember in a later conversations that David said many times that all of us should have a national flying site similar to that instead of having to ask for many different commanding officers at aerodromes for approval to borrow their aerodromes for a weekends flying to stage the National free-flight and radio control events annually.

Big Ripmax Birthday.

One of the many companies that staged a huge event was Ripmax who celebrated their 50th “thank you everyone” birthday in style at the Madam Tussards Wax museum in London and we were kindly invited. We, (Jan and me) were seated with David and his wife Jill, along with John and Tricia Rudd and his colleague Ian and his wife, from SLEC. The place was packed with so many people from all over the world and everyone was in evening dress. It was a very smart and enjoyable affair and the T/V star Jeremy Beadle came and entertained us all with many of the chosen men left standing on the table in their underpants, including Ali Mashinsky senior. I have had some thoughts on that subject and the only other person who could stage such an event at that “grand do” is possibly Jim Perkins.

Best Man.

David was my best man at my wedding when I married my Jan at our Village of Tatsfield and what a good job he made of it too. It was his personality that scored with everyone and how on earth he got those embarrassing stories about yours truly, I’ll never know!

Departure.

So it was a sad day last Friday April 23 when so many people gathered at the Crematorium at Northampton to say a goodbye to one of the nicest people it has been my pleasure to know. We went to his flying site and there the full size Extra’s of the Jordanian Swords gave a demonstration of aerobatics in formation, followed by his nephew Mathew and Ian castle and another friend flying their Tiger Moths as a final goodbye.

I’ll bet he is “up there” with his Tomboy Senior all fuelled up and ready to go.

He will certainly be at the special Dave Boddington event at Old Warden next week.

All the best dear old Buddy. We all loved you.

Tribute to “Boddo”.

The two DB’s at Old Warden May 2008



Couple more photos taken again at Middle Wallop on 15 March 2009



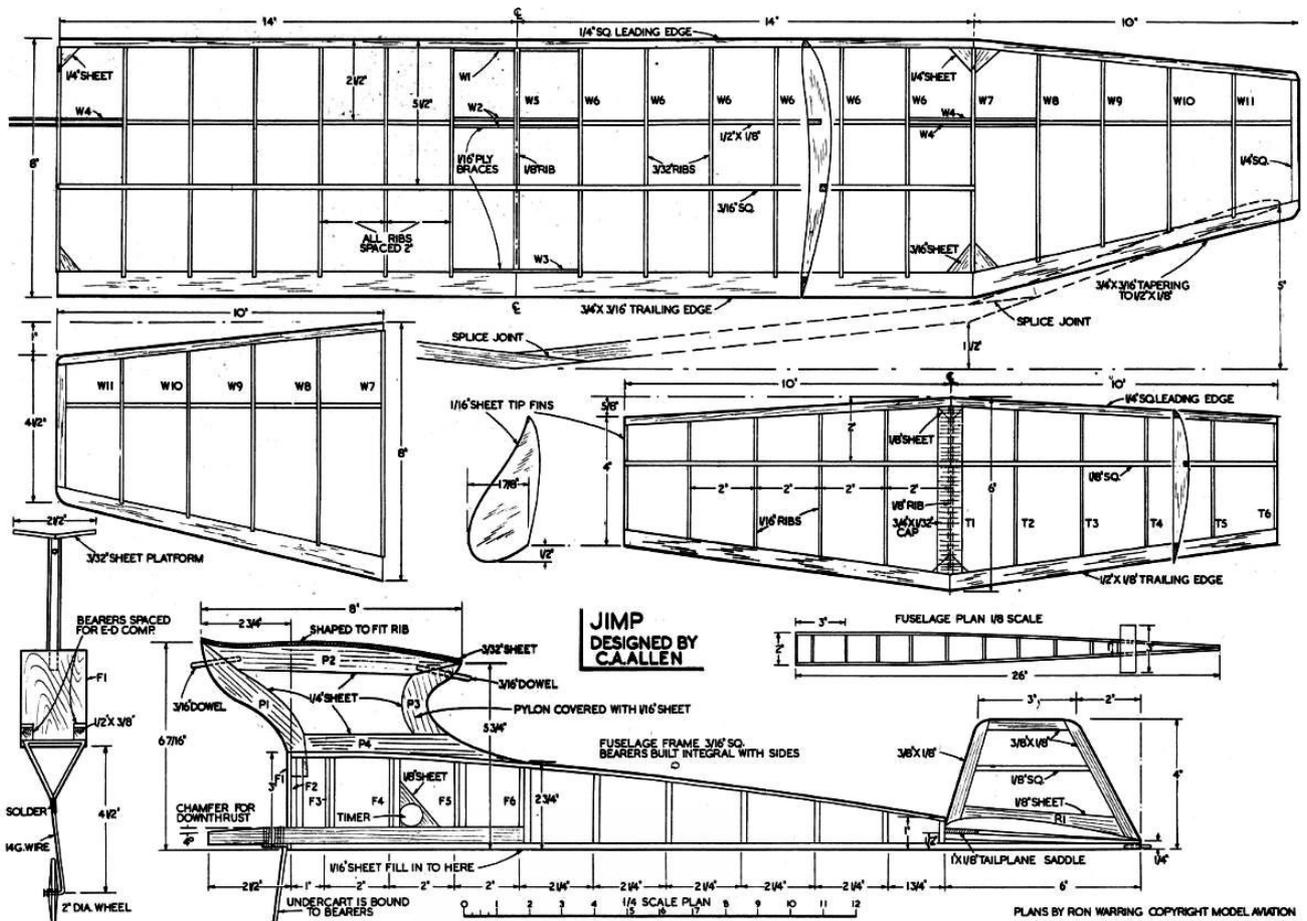
From Bryan Targett

Here are a few pictures of the Carl Goldberg SAILPLANE I have just finished. 78inch W/S
As you can see I have fitted it with a twin wheel UC instead of the original single leg folding original, so it can take off and land on our Tarmac.

It is Electric powered, MVVS glider motor and Spin ESC which has a high power BEC so I do not have to find a space for the Radio Battery, Internal space is rather restricted.

It is covered with Eski Silk over Polyspan, bit more decoration to do, Fuselage and Cowl are painted again over Polyspan and Synthetic silk.





Jimp by C. A. ALLEN 48" span

From Model Planes Annual 1950

Plans and instructions for building the F/F winner of the 1949 Northern Heights Gala.

THIS simple pylon model was especially designed to suit the E.D. Comp. Special, but any similar (2-3.5 c.c.) diesel may be fitted, such as the E.D. 3.46 or Amco 3.5. Glo-plug motors of the Yulon 30 and

ETA 29 types should also be suitable. Still air duration on a 10-second motor run is consistently over 2 minutes. Best flight to date has been one of 5 minutes O.O.S. At the 1949 Northern Heights Gala Day, this design won with a 100 seconds plus on a 5-sec. run. Second place was also gained at the North Hants Rally. The slightest thermal is enough to keep the Jimp floating around and for this reason a dethermaliser is advisable. A fuse-operated parachute of about 14 in. dia. is about right.

Construction of the model is particularly simple and the airframe weight works out very light. Only a few evenings are required for building and field repairs are aided by the straightforward structure. The square-tipped flying surfaces seem to be just as efficient as the rounded type—and have, of course, the advantage of being easier to build. Scale up the drawings to full size or write off for the 40 in. X 30



in. plan to the publishers. Full-size ribs, formers and other parts are provided on the next page. Pinprick or trace these patterns on to the appropriate size sheet.

FUSELAGE

Make up the pylon from 1/4-in. sheet (PI-P4), remove from the plan when dry, then cover both sides with medium 1/16-in. sheet. The fuselage side frames are built flat on the plan in the usual way—one on top of the other. When quite dry, lift the sides up from the building board and separate with a razor blade. Now add the hardwood bearers and join the two frames by means of the formers (F1-F6). Note that the F1 and F2 formers are sandwiched together. Pull in the frames at the tail end, cement, and add the upper and lower spacers. The fuselage is 1 in. wide at the tailplane leading edge position.

Bend the single-leg undercarriage from a piece of 14 gauge wire and bind securely to the bearers. Add the 1 in. x 1/8-in. tailplane saddle and install a diesel type timer behind former F4. Fill in the top of the fuselage back to F6 with fairly soft 1/8-in. sheet to provide a large cementing area for the underneath of the pylon. Cement the pylon in position, noting how the tongue on P1 butts up against F2. Fair in the fuselage/pylon joint with plastic wood.

WING

Begin this component by building up the main spar flat on the plan—using splice joints. Use pins to hold the spar strip to the plan and add the W2 and W4 braces on one side. When dry, lift up and add the braces to the other side.

Build each of the four panels flat on the appropriate sections of the wing drawing. Start with the inboard left panel and pin the spar in position. Next pin the unshaped leading and trailing edges to the plan, followed by the 3/32-in. ribs. Check carefully that the ribs are vertical and notch all except the ones at the dihedral breaks into the trailing edge. The rear upper spar is next added. Note that the W5 and W7 ribs are tilted inwards slightly. When the panel is dry, remove the pins and pivot on W7 until the tip spar is flat on the tip panel. Tip construction is similar except that no upper (rear) spar is featured in this case.

The right hand panels are built in a similar manner and when completed the tips, leading and trailing edges are all shaped to the indicated sections.

TAILPLANE

First pin the leading and trailing edges flat on the plan. Then attach the ribs and follow with the 1/8-in. square upper spar. Cap strip the upper profile of the centre rib with a piece of 1/32 sheet (3/4-in. wide)—to protect the covering from the tailplane fixing bands. Make the fin flat on the plan and add to the tailplane after both have been covered and doped.

COVERING

The fuselage is covered with double weight rag tissue. Cover the wings with eight separate pieces of coloured tissue and the tailplane with two. Give the fuselage three coats of clear dope and the flying surfaces two coats. Finish off by giving the complete model a coat of banana oil. Red or orange tissue is recommended for the flying surfaces as it shows up well at a distance.

FLYING

Test glide over long grass and adjust for trim by altering the tailplane incidence. If the model has a pronounced stall, it may be a good idea to add a spinner and cowl – in preference to making drastic incidence alterations. Try to achieve a gentle turn to the left.

When you are quite satisfied with the glide, give a 5-second motor run at reduced power. Best performance is obtained by turning to the left on both power and glide. The glide circle should be quite tight.

From Barrie Finneran

This month we will take a look at another model from the collection, a very rare bird indeed, the Manx Queen. About 3 years ago the model came to me from Shaun Garrity when he offered it for sale at the BMFA Nationals, I will let Shaun fill us in on the model's life before me.

I originally got the model after it had all but been written off by a friend of mine who built it. He always insists on using the lightest wood possible, even for spars. He looped, and it clapped hands and plummeted to the ground. Basically all that was left were the outer parts of the wings and the two fins.



The model was built from full size plans, published by "Model Aircraft" magazine and drawn/designed by A H Wilson. It won the SMAE Tailless comp in 1947 and was also the winner of the Eaton Bray Pterodactyl Cup in 1947 and was originally powered by a Foster 29 sparker. In its first incarnation before the crash it had an OS40 fs in it, far too big

It had been sitting around in the workshop for a few years when I got inspired to resurrect it I have always liked

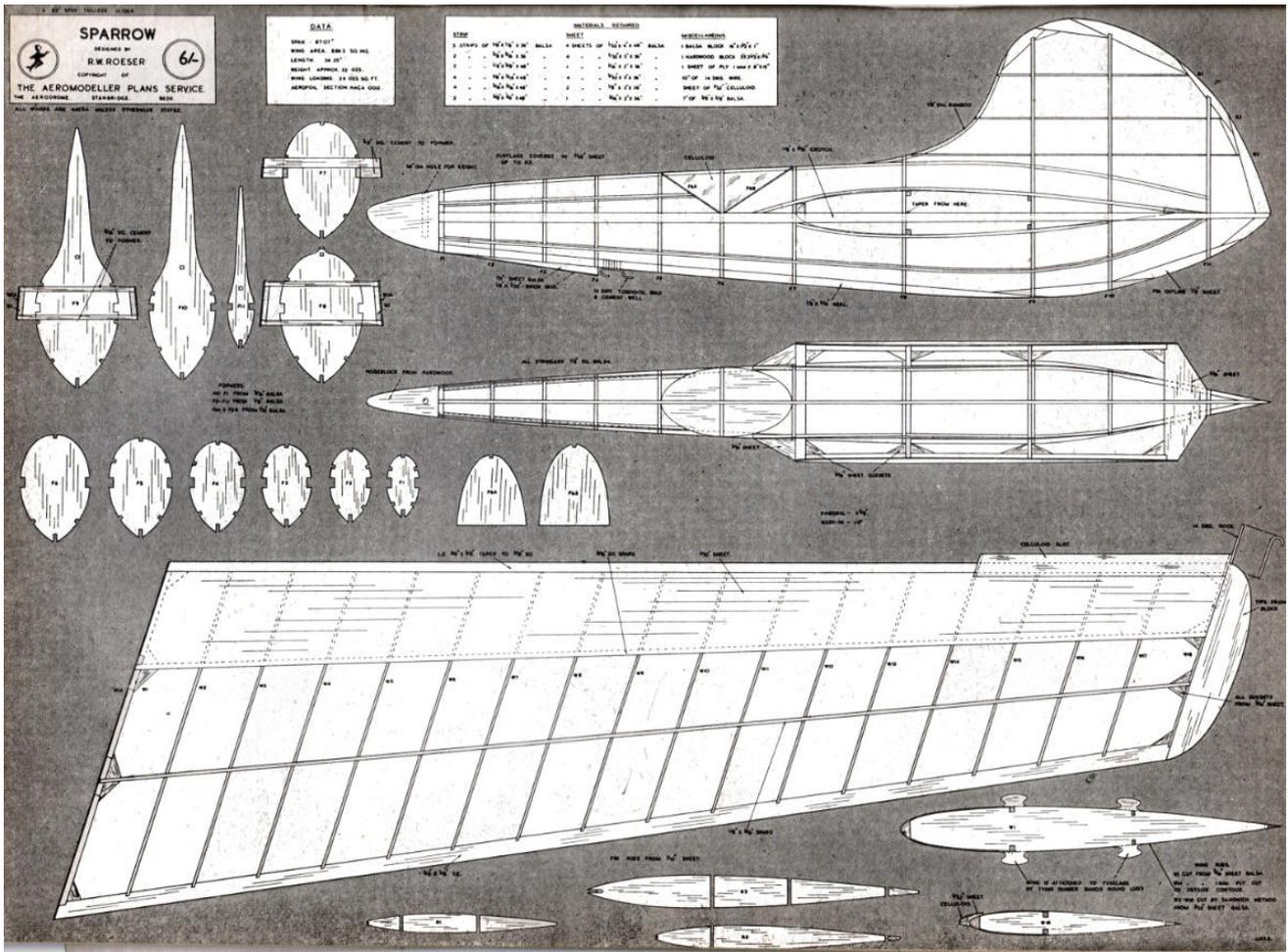
vintage flying wings.

I can't remember the exact date but, do you remember Goosedale Model Museum in Nottingham? I flew there the first year it opened (mid to late eighties I would hazard a guess). My first motor in the rebuilt model (everything except the wing tips and fins as previously mentioned) was a brand new DC Rapier RC from my collection I am a DC engine fan, and it provided just enough power to pull it around the sky in a stately manner, just enough to keep it in the air! I flew it like this for a few years. At the same time I was starting to experiment with E Power in my vintage models and had a spare Astro Cobalt 05 FAI Geared motor and an Astro esc going spare. It fitted easily to the engine bearers with just tie-wraps. That's the reason for some air ducting in the rear cowling to force air onto the motor to assist in cooling. I ran it on a 9 cell Sub C NiCad pack and this set-up with the increased weight provided about the same flying experience as with the Rapier.

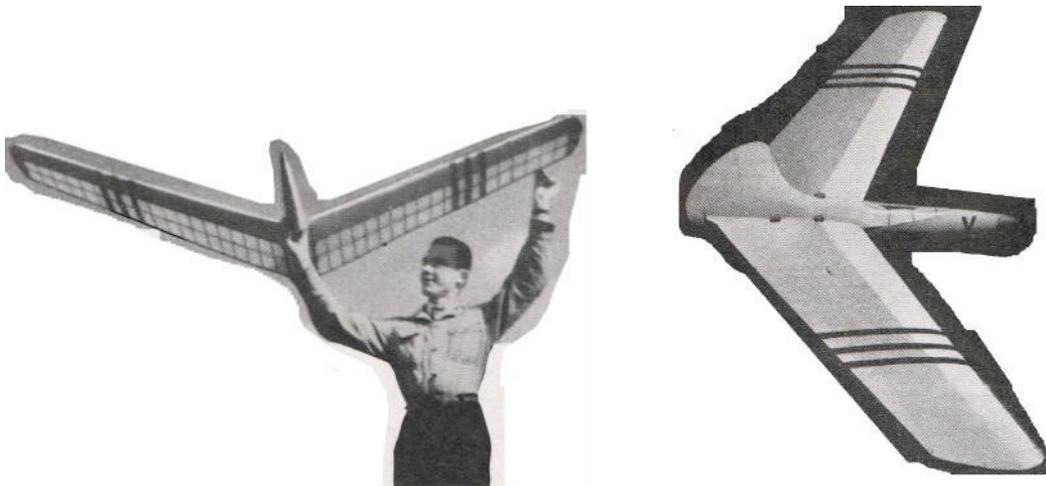


It flew superbly and was very predictable with no nasty habits...As long as the C of G is correct. The model appears slightly nose heavy when launched. I played around with the C of G a bit to try to reduce the reflex on the Elevons, to decrease the drag... it didn't make that much difference really. The back to front wing rib section always intrigued me... It looked so wrong. Just the other day when I was sorting out some plans looking for a new vintage model to build I found a complete set of wing ribs and built tip fins, I always tend to cut 2 sets of ribs as it's just as easy and nice to have spares. I may build another one. Today, with brushless motors and lipos the performance would be excellent and for less weight.

Shaun's reference to the back to front wing section does catch the eye when fitting the wings on, it is unusual, the air cooling shrouds I removed to fit a fatter 550w outrunner motor but these will be refitted. To date, never having flown a flying wing I have not attempted to fly the model, I am still in the look and admire phase. I reckon many of you know the feeling. Although, it was a bit of a tease to get a photo of the model that portrays the image as the eye sees without showing it as a plan view. A very similar model the 114ins span Manx Monack did put in an appearance at one of the Cotlebarrow Farm events but I missed out on it flying. A little consolation though I did see the Tailless rubber powered models fly at the FF Nats.



Sparrow from Aeromodeller



This interesting and unorthodox post-war German design is the second of its type to be produced by Reinhard Roeser. Basically the same as that which we now present, the prototype was of all-ply construction, rib capping-strips being of drawing paper. As would be expected, this model was considerably heavier than the balsa version and its gliding capabilities were less. Designed primarily for slope-soaring, the first "Sparrow" had a fast sinking speed. On a normal tow-line, instability was somewhat marked, but towing became practicable by the use of the L.S.A.R.A. "Rolling Bobbin" and tow-hooks at the wing tips. For those readers who are not familiar with this method, it should be explained that the tow-line terminates in a bobbin through which runs another line with ring at either

end. These rings attach to the tow-hooks on each wing of the glider and, should it slew to either side when being towed up, the bobbin runs along the line and the tow pull has the effect of righting the model in its flight path.

The designer warns intending builders that a few test lights may be necessary before the handling of this type of glider becomes familiar. Glider exponents will, no doubt, be surprised to discover that "Sparrow" has the NACA 0012 symmetrical wing section, with its 12 per cent thickness ratio, more usually found on control line stunt models.

Many readers will remember another interesting tailless of this type, although considerably larger than either of the above, which was featured in the "Operation Research" article in May 1950. This was the scale XFG1 of 13 ft 6 ins span by the Dynamic Model Unit of Dayton, Ohio. Dropped from a full size aircraft, it was radio-controlled and carried a safety parachute for landing. From the data obtained a full size glider of similar layout was built and flown.

Complete instructions for building are issued with each full size reproduction of the 1/5th scale plan opposite, price 6/- post free from the Aeromodeller Plans service.

Middle Wallop Sunday 4 April 2010

Leading up to the day and indeed the three days the event was staged over the weather forecast was not good. For once they got the forecast correct! Heavy cloud, wind, hail stones, drizzle although to be fare the rain kept away for the most part but wind kept on and on.

I was hoping to do some control line flying but with the yet unflown Chubby at just under 4 ozs on 20' lines powered by a Dart I decided against and then caved in altogether and didn't fly the Wessex Wombat! The caulkhheads, from the Isle of Wight, arrived and were soon joined by Terry Baker and Randy and between them they did manage quite a bit of flying.

The RC side was predominantly Tomboy comps, power duration was out of it and only a small number of sport flights were made of which a couple of models were blown over on take off and sustaining severe damage.

The RC and CL packed up by 15.30 so I went over to the FF side and like a switch turning on the blue sky arrived, wind dropped and temperature rose from nigh on freezing to 12°C. Of course those left enjoyed an hour or so of free flight splendour. Enough waffling on with the photos.

Control line



Den's biplane showing Norvel dieselised



Yes that is a FF Sunbeam amongst the CL



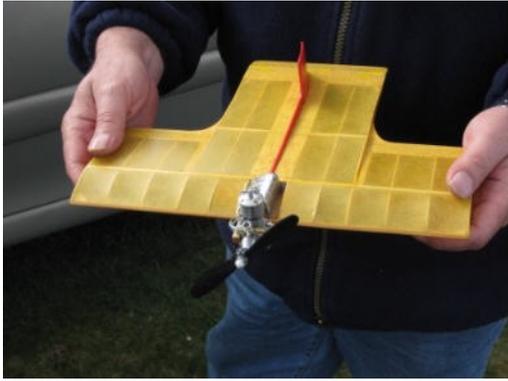
Half size Nobler



Den's Wessex Wombat



Terry Baker's F2B model

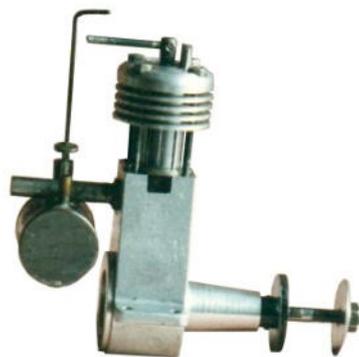


Den's T Tray with a .5 cc Oliver

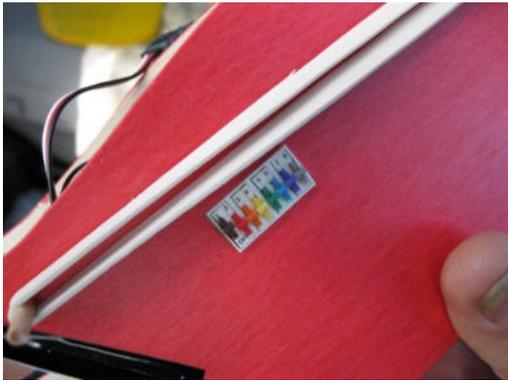
Radio Control



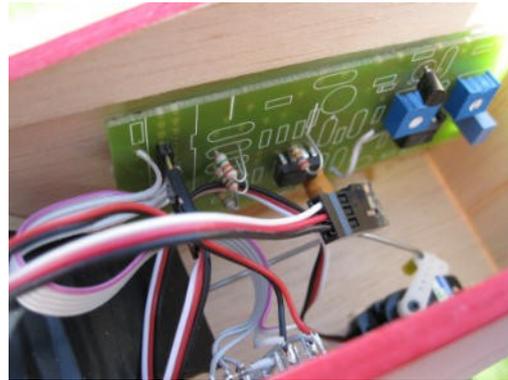
Peter Rose's display of Indian Mills for sale



Free Flight



Paul Netton designed and made up a fantastic timer for his glider. On the side are slide switches to select a DT time of between 1 – 8 minutes.



A pcb board too big he says but to hand, worked out components and soldered together

This is the model's nose. One of the pieces of lead is attached to a string and when the DT goes off the lead drops out and thread attached to rear of model upsets balance and down the model comes



Paul with his Senator about to launch, just in case you hadn't realised. Off it goes



John Taylor and Roy Tiller awaiting the A frame launch.



FF Junior 60



Ken Taylor about to launch Bob Taylor's glider.



Off it goes.



Robb's ED Hunter powered Brooks Bi-plane



Last photo a FF Chatterbox



Middle Wallop Vintage Radio Assist by Tony Tomlin

The first of the 3 Radio Assist meetings planned for 2010 took place on 4th April, [courtesy of the Army Air Corps MAC]. Tony Tomlin and James Parry were the CDs.

On arrival we were met by a cold, sometimes freezing wind. The essential safety tapes and car parking signs were set up, whilst the Control gazebo assembly was difficult, due to the conditions. Pam Tomlin was running the signing on and we were hoping for a few more than the 6 present at that time!.

Radio Assist

As before the meeting was for all non aileron vintage models pre 1969. It was hoped to have a Power Duration event run by Bill Longley, which sadly was not to be due to the conditions. There was also the first round of the Tomboy 3 and Tomboy Senior competitions for 2010 [9 rounds are planned]. Fliers soon arrived and overall there were 22 signed on with 36 models. Of the larger models flown the Southerner 80" of Mike Robertson handled the conditions well as did the two Majestic Majors of

Brian Target and Mick Butler and the Miss America of Garth Pearce. Other models seen were the nicely finished Schiffermuller of Colin Hitchinson and the Aeronca of Dave Ashenden.

Tomboys, both 36" and 48", were to be seen [19 were counted] and most were to fly in the Tomboy competitions. We were pleased to welcome some new faces to this event, with Jeff and Andrew Fellows from Kidderminster, and local fliers Barrie and James Collis.

Tomboy 3s

Due to the windy conditions fliers, [in both classes], had only to achieve one 4 minute max flight instead of the normal two to make the fly off. Seven achieved this but not Barrie and James Collis and Roy Woolston who crashed during their trimming flights, Roy having a miserable day breaking his crankshaft. James Parry who was hoping to fly his new Tomboy was having engine trouble and also could not continue.

The seasoned Tomboyists, Paul Netton, Tom Airey, Tony Tomlin, Chris Hague, Geoff Goldsmith and Tony Overton were joined by Jeff Fellows, flying for the first time at Middle Wallop.

Ian Andrews was the starter and the 90secs start-up time, followed by a 15secs no fueling hold, was adopted for the first time at the venue. All got away together, with much close flying, as the Tomboys climbed rapidly but with slow penetration into the wind [now at around 15mph]. Jeff Fellows seemed to find good air and was climbing well, with Tom Airey and Tony Tomlin close below. Geoff Goldsmith was soon down having a short engine run. Things now settled down as the engines all stopped at around 21/2 minutes. All the models were now steady, facing into the wind, the lucky ones maintaining height, some not so lucky as Tony Overton was down, followed a minute later by Chris Hague. Paul Netton landed gently at a second short of 71/2 mins to claim 4th spot. Tony Tomlin, who after getting down to around 200 ft, had picked up lift and for short time was climbing, finally landed in 3rd place at 8 mins 43sec. Tom Airey and new man, Jeff Fellows, both descended slowly with the honours going to Jeff by the smallest of margins at 3 secs short of 10 minutes.

Results

1/ Jeff Fellows 9mins 57secs, 2/ Tom Airey 9mins 56secs 3/ Tony Tomlin 8mins 43secs. 4/ Paul Netton 7mins 29secs 5/ Chris Hague 6mins 47secs 6/ Tony Overton 5mins 46secs 7/ Geoff Goldsmith 2mins 26secs.

Tomboy Senior

Eight made the Tomboy Senior flyoff. The fliers were as those in the Tomboy3s, with the exception of Paul Netton and Jeff Fellows. Jeff was replaced by son Andrew and the eight was made up by Peter Rose. The start followed the same procedure as the Tomboys3. All got away, but Peter Rose was in trouble, his model blowing back in the ever increasing wind to be down at 10secs. The bigger Tomboys were having trouble penetrating, most of the fliers having to use a lot of down elevator. Chris Hague was off form and landed at a little under 3mins, followed by Tony Tomlin, who later discovered a damaged elevator snake which was restricting down elevator and causing all sorts of dramas! Andrew Fellows flew well but was next down due to launching with a half full fuel tank. At this point Roy Woolston had drifted out of the landing area and was disqualified, continuing his bad day! Geoff Goldsmith whose model had 'parked' in the sky at around 200ft slowly floated in to give a surprised Geoff 3rd place. Tony Overton and Tom Airey were close with Tom taking the honours at one second under 7minutes 9 seconds after Tony.

Results

1/ Tom Airey 6mins 59secs, 2/ Tony Overton 6mins 51secs, 3/ Geoff Goldsmith 3mins 51secs, 4/ Andrew Fellows 3mins 47secs, 5/ Tony Tomlin 2min 55secs, 6/ Chris Hague 2mins 54secs, 7/ Peter Rose 10secs. Disqualified Roy Woolston [landing out of prescribed area].

Due to the rapidly worsening weather conditions, it was decided to hold the Tomboy prizegiving immediately after the Tomboy Senior flyoff. This was somewhat delayed as, with a loud crack, one of the fittings on the gazebo sheared, causing mayhem. All hands were called 'to the pumps' and the whole assembly was swiftly dismantled and stowed away. Sue Airey then presented the certificates

and bottles to the winners. It was generally agreed that the meeting had been a success. We were happy to see so many fliers turn out, as understandably a number did not come, as bad weather had been forecast for the day.

The date of the next Radio Assist and Power Duration is Sunday May 9th, at Middle Wallop.



Pam Tomlin in control tent looking after frequency control etc.



Colin Hutchinson with smart Schiffermuller.



Mick Butler braves the elements with his Majestic major.



Tony Overton 2nd in Tomboy Senior.

David Kinsella's column

Variety

Tony Tomlin gave us a treat with his amazing Ion Mk 21 (S&T No 39). Sure to stagger the masses when push and pull motors take it aloft this summer, Rara Avis Designs from Leigh Richardson will enable others to build and fly something really different. Tony's enthusiasm needs no introduction and parts of the model seen at Raynes Park meetings confirm his ability as a builder of distinction. Well done, Tony!

The Big Show

Once again the wonderful display of aviation art of the Mall Galleries is just weeks away - and time flies! Just five minutes from Trafalgar Square, more than 400 paintings will be on show from 19 to 25 July. All the good lads will be there, entry is free and light refreshments are on site. Not to be missed.

Champion Dive

Raynes Park MAC sent a get well card to Sir Stirling Moss ORE following his fall (a distance of three floors down the lift shaft at his house in Mayfair). But well used to the rough and tumble of an adventurous life at the wheel, the great Moss is as good as new and pressing on. What a man!

Shark Attack

An Aeromodeller cover in December 1956, C Rupert Moore's work shone again in February 2007, within 18 pages on Der Haifisch (The Shark) as the Albatros was known. W E Johns describes them in The Rescue Flight, chasing a pressed two-seater as it hurries west for home. All the greats flew them: von Richthofen, Voss, Udet, Goering, until the Fokker DVII arrived in the Spring of 1918. Note the standing gunner in the FE2b as the Red Baron closes in...



Very Perky

Good pictures from Richard Bavin were a treat, subject matter being the delightful Perky speed model of 1946. Coming to us from the days of Harry Truman and a booming America, 'Old Bill' has gone to town with a scallop effect colour scheme in blue and white. True to its racing livery, modern motors have hauled Perky beyond the 100mph barrier. Kitted in the States by Larry Rice, it's a cracker. Each to his own, but for me the period of interest runs from the Kaiser War to the mid 1950s, innovation along the way but ending before things became too sophisticated. ARTF get thee hence!

Return To 1485

Much digging and renewed interest in Bosworth reminded me of Lord Larry and his rendition of the rotter. With Olivier (1907-1989) you got the works: make-up, revised body shape, voice to suit, gym work if required, then full on in your face and no holds barred. 'Now is the winter of our discontent' - and the film sparks into life, Olivier as Richard scheming and killing his way to the throne and his nemesis in the mud of Leicester. Walton's music, Heller's camera and tips from Yank director Jed Harris delivered the limping crook-back at modest cost. Missed on the stage, a short letter from Brighton was a surprise and is much prized. Front page when he challenged BR over the paucity of kippers on The Brighton Belle, the founder of the National lived in Henry V's Notley Abbey with his movie horses, then finally in Chelsea for later television and movies. Olivier appeared in 45 films and served in the Fleet Air Arm.

Feltham Flyer

Members of the Rivers family supported Mike Smith and David Balch on the flying field, in 1960 the Class A pair winning every event entered bar two. Firsts were reeled off in the Nats and within, weeks at Enfield, Sidcup, Ramsgate and Tangmere for a start. At the South Coast Gala their souped Mk2 Rivers Silver Streak recorded the fastest ever UK time. A square engine unlike the longer stroke ETA I5, the roller bearing Silver Streak cost £8 15s 8d (£8.80) in works tuned form. A stock ED Racer was half the price. Great days with four-ups mixing it at 110mph, Chas and Stoo flying the West Essex flag and from Wharfedale a twin boom A. The red boxed Streak and the blue boxed Arrow (3.5cc) were offered with a fold-out instruction booklet, guarantee card and those wonderful blue and silver transfers. Crikey I can almost smell the ether and castor oil. Graham Rivers sometimes flew in Class A events.

A YEAR OF SUCCESSES FOR RIVERS DIESELS
Mike Smith and Dave Balch First in every Class A Team Race ever entered during 1960 (except H. Wycoroba and Crawford) and fastest time yet recorded in Britain (4:39) at the South Coast Gala.

SILVER STREAK
MARK II
bore .278 in, stroke .378 in, weight 5.8 ounces
2.5c.c.

FIRST—British Nationals (June).
FIRST—Enfield (June).
FIRST—Sidcup (July).
FIRST—Ramsgate (August).
FIRST—Tangmere (Sept).

plus
FREE FLIGHT SUCCESSES
including Argentina Nationals and American P.A.I. National Record

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Crafty

Sent with shorts and pith helmet to cover a distant war, reporters like Waugh hoped for a scoop or at least facts for an accurate story. Even with help from local stringers the plot was sometimes vague or confusing. For a chap called Philips, seldom spiked in Fleet Street and consumed with relish along with the toast and boiled eggs, it was never a problem. Armed with a map or guide book he'd scribble in his hotel room for an hour or two and then descend to the bar for a snort before lunch, fellows from the Daily Spin and London Trumpet amazed at his sangfroid. Chancer Phil, you see, made it up! Long ago a character I knew had a wonderful tan, never did any work, but was always in the top three. What we didn't know was that he sat under a sun lamp each night and put in four hours.

At St Ted's

Gowned and with mortarboard, the Head Master of St Edward's School, Oxford, is with his Prefects. It's 1928 and young Douglas Bader, in the gold and blue of the school, sits second from right. Within two years he would be in a Gamecock of 23 Squadron. With Day and Stephenson (reserve) Douglas flew in the Hendon Air Displays, the three meeting ten years later in a prison camp in Germany. There was a war on and young Bader was famous.



Cheers, Horace!

Schoolboys facing the sepia prints in Dead Poet's Society are urged by Robin Williams to seize the day, at this distance not sure if he followed on with 'put no trust in the future' or words to that effect. Whatever, these days it's good advice even though the Roman who gave it died in 08 BC. With so many variables and unknowns ahead, the only constant is right now! So buy the engine, build that plane, splurge on those books. You'll get through. Procrastination is the thief of time.

The Greater Ajax

Most enjoyable to read Peter Michel in the January edition. The Senator was/is my model I suppose, but that Ajax script (AM picture) has a certain something and the name reminds us of the Iliad and the troops of Salamis against Troy. (the other Ajax, the Lesser, was shipwrecked and didn't do much). And, of course, and as mentioned a few months ago the pocket battleship Admiral Graf Spee was held in the River Plate thanks to the Royal Navy's Exeter, Achilles and Ajax (the last two firing 6 in shells against Graf Spee's 11 in and 570lbs heavier!) Perhaps keen for us to refer to our ink stained history books (it was a while ago, remember) good Albert also gave us Achilles, after the most fearless of all but with concerns about his foot. Cheers, Peter!

And Another

This time it's Peter Wallis telling us about his new Playboy Senior and his flying days with Northwick Park MAC (Greenford way?) and those huge boxes we called 'coffins' and which may have held bulk balsa before we got hold of them. Pictures much appreciated, Peter, and to my mind an old engine is so much better when matched with its cardboard box and papers (even the boxes were better fifty years ago, and those wonderful smells....)

When Needs Must

During an action it was necessary to attend to the breech of a naval gun - from the inside! So, tall and slim, a young sailor was lowered down the sloping barrel of a 16 in gun (so either Nelson or Rodney). Job done, the line around his feet was hauled and up he came, somewhat marked by the rifling. Lowered from its maximum elevation, firing began. As pictured, all big guns of the Nelson class (3 turrets of 3) were carried forward of the bridge. Started by Cammell Laird in 1922 to the Washington Naval Treaty this unusual layout saved armour and weight.



To Coventry

A tight budget left little for a background score and so, Larry Adler told me at a showbiz open day, his mouth organ was pressed into service and made Genevieve (1953 86mins) yet another Kenneth More movie we remember. Open to correction, I believe More drove a Dutch Spyker in his duel with John Gregson during the Brighton Run. Now Spyker has moved to Coventry, making its exclusive supercar at less than



one a week. Back to the movie, fun along the way to Regency Brighton saw Kay Kendall play the trumpet and an event involving a police car and a red KI Allard. Like Todd and Niven and Mills too, Kenneth More knew how to wear a uniform

Farnborough

A sunny day with the British aircraft industry on show was memorable for those lucky enough to experience it. Two of the V Bomber Force - a white Vulcan and a light blue Victor - stood near three Hunters, a Javelin and a tiny Gnat, and elsewhere was a Comet, Viscount, Shackleton and Herald. Order books looked good (250 Viscounts for a start) and the flying was wonderful, Roly Falk in lounge suit rolling the Vulcan to gasps from the crowd. The Fleet Air Arm's Gannet was in light green and next to a Trans Canada Viscount stood a silvery Victor (third of the V Force). Fighter pilot Raymond Baxter kept the nation informed. Those were the days.

Showing The Flag

The British & Colonial Aeroplane Company - Bristol eventually - was founded in 1910 to make engines as well as aeroplanes and later still cars, these roadsters of high performance (big V8s) erected to aircraft standards. We all know the flying greats so no need to mention them here. With patent acquired from Cosmos Engineering, Bristol produced several fine air cooled radials, their Jupiter the power behind the beautiful HP42s of Imperial Airways as pictured in colour in January's edition . Note the flag above the cockpit!



Radio Times

Recently a 1938 edition of Action Comics, featuring Superman lifting a car sold for a record million dollars in New York. From the age of the valve wireless, wooden cabinet and well ventilated at the back, it was first read when Dragnet, Gunsmoke and Johnny Dollar (Dick Powell read for the part) crackled over the ether. Raymond Chandler gave the nod to his radio adventures, although he did not write the scripts, and convincing small arms fire came from a cardboard box struck by a drumstick. Impressive and well remembered was the Lux Radio Theatre: three acts, famous stars and Cecil Blount de Mille at the helm. Starting on NBC in 1934, the Theatre moved to CBS and then to Hollywood where it ran until 1955. Alarming and memorable was the radio announcement by George Orson Welles that the Martian had landed! Ah, nothing like nostalgia.

Gold Star

Matching the Triumph Speed Twin in the cabinet could be the new BSA Gold Star. Approved by Len Haggis who restores Gold Stars for a living, this 1:12 scale beauty even has a touch of blue (for brisk use) where the chromed exhaust pipe leaves the big cylinder barrel. The Gold Star line began before the war, but it was only in the late 1940s that it caught on with the keener bikers. BSA's Bert Hopwood oversaw the development of the machine, notables including clip-on bars, big Amal GP carburettor, raised headlamp and close-ratio gears. And, of course, there was that exhaust which emitted its unique twittering sound on the over-run. Some may be left on 0844 887 8899.



Inspired!

David in Cambridge enjoys S&T and files every copy. More than that, his beloved Mills of 25 years proud ownership will soon find its way into a Tomboy of 36 inch span. That's the ticket, David.

Milani Style Modelling

Piston power from the 1920s to the 1950s saw the arrival of great racers worth modelling. Here's the Jeep campaigned by Art Chester and his boys. Fibreglass Specialities can supply a cowl, spats and canopy for this 7ft beauty built to the plans of Wendell Hostetler. Power should be in the region of 60cc to lift 22lbs. Milani said models should always be big, he amazing fans long ago with Bristol Fighter flights in Kensington Gardens. Cesare Milani's beautiful Brisfit (also known as a Biff) appeared on the cover of Model Aircraft and in Ron Moulton's classic on Scale before a richly deserved retirement to the Imperial War Museum alongside his Caproni bomber. He advised on Glendower Hotel writing paper and drove to Old Warden in his mustard-coloured Jaguar, judging Scale in a lightweight summer suit in grey silk.

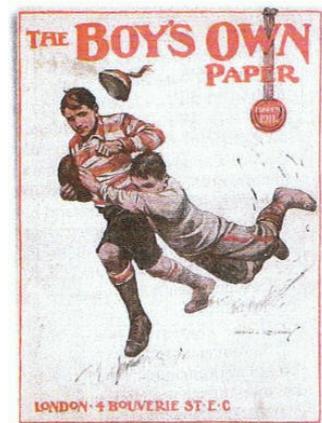


Ken's Titanic

Two years after his Bader, Kenneth More took the lead in A Night to Remember shot at Pinewood, extras jumping into a local lido for extra footage. Ply and plaster in those days, CGI an age away, yet experts marking the filmic attempts put More's 123 minutes in the lead. Certainly the version for grown ups, based on Walter Lord's best-seller, More turned in a good one close to the truth and on a modest budget. Best of four so far.

Boy's Own

Read around the world thanks to the Empire, the Boy's Own Paper launched on 18 January 1879. Soon referred to as BOP and selling some 300,000 copies a week, it countered the Victorian penny dreadfuls by delivering adventure, sport, hobbies, military history and wonderful colour plates in the inches thick annuals timed for Christmas. Dr Grace wrote on cricket, Dr Irvine on rugby, Captain Webb on Channel swimming and Captain Johns on Biggles and facing the Fokkers over France. Published letters were sometimes answered with little more



than 'we discussed this twenty years ago', but in-depth advice on building a canoe, kite flying, making a microscope or stamp collecting kept BOP's presses rolling for 88 years, during which it shrugged off The Captain in 1925 and Chums in 1933 thanks to additional punch delivered by Conan Doyle, C S Forrester and Hammond Innes. Quality paper, canvas and stitching, thick boards and embossed covers marked the BOP Annuals as very special, of an age when things were made to last.

Tog Reactions

Preserved steam lines around the country are now well into their stride for the season. Along the south coast from Hythe to Dungeness, the RHDR operates a full service hauled by an impressive stud of steam locos (II plus 2 diesels) dating from the 1920s and like Flying Scotsman. On Santa duty last December was the RHDR's unique Bug, pictured here with the great man aboard. Having donned the beard, boots and suit when the real Santa was busy elsewhere, reactions ranged from utter joy to hide-under-the-table horror. Long ago and far more powerful was the reaction of the boys in blue when, home transport, failing, I was forced to hitch to Southend Airport dressed as a KKK chief.



Bert's Place

RAF officer and Avro test pilot, Bert Hinkler lived in Southampton in a house he'd built himself and engaged in mighty solo flights between the wars, one to Australia in an Avro Avian (like a biplane Moth or Tiger Moth). He perished in 1933 during another flight to Australia and years later the Hinkler Museum was established in Queensland - complete with the house he'd built in Pompey!

Cup Cracker

Spot the man! At 90ft x 90ft and with a 240ft mast, it's not easy. The latest in a long line of America's Cup boats, she's good for 40 mph on flat water. Advanced it's true, but like the J-boats of ages past any blow over 15mph and there's danger in the air. All that lot coming down in a hurry doesn't bear thinking about. All went well though, and her straight wins took the Auld Mug back to the USA.



Coals To Wood

One of Eagle's standout features was the regular two-page spread on all manner of things that lads liked to know about. Sectioned here and there to show the inside of a car, battleship or power station, one of the regular artists was Mr L Ashwell Wood. Messrs Dunn and Redmill helped out, but LAW was the artist most seen. Dads read Eagle too and soon the doings of Dan Dare, PC49, Harris Tweed and Jeff Arnold were known far and wide. LAW too. One day, a coalman making a delivery to a pensioner, took some into the front room and there - midway through a masterpiece and with support equipment all about - was L Ashwell Wood! Soon after there was a sectioned spread of a coal mine. The full stable - Eagle, Girl, Robin and Swift - had massive reach and so advertising was easy to pick up and thus kept the cover price down by 50 per cent! BSA, Mars, Corgi, Tri-ang and many more climbed aboard. From time to time fleets of cars with giant eagles on top toured the country.

The Right Stuff

Quarter scale with a Lazer 150 in the engine bay, David Finch's beautiful Tiger Moth causes me to reach for the flying goggles (I have them too, a gift from a friend who wore them on the Isle of Man and was regularly passed by Mike Hailwood. Wham! Just like that). Family run for so many years, their products tested by them too, there's definitely something about the great designs from Hatfield. Art in the genes too, for two of the daughters took to the silver screen and starred with the best in Hollywood.

My Tiger, much smaller and powered by an ED Baby, flew and flew and is fondly remembered. Bright red, it looked great.



Swat It!

One day long ago Adolf told an aide to get rid of a fly. The young chap joked that it was a job for the Luftwaffe. Within hours he was on his way to Russia!

From The Heights

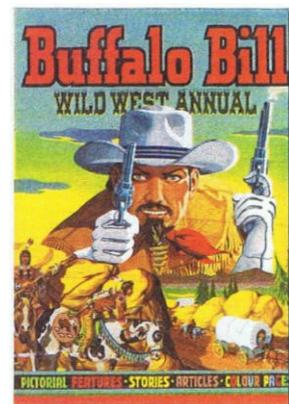
Dick Roberts maintains high standards in The Engine Ear, his eagerly read column in SAM 35 Speaks. He's hands on too, and I have experienced the quality of his work on a number of occasions. In No 16 (January) Dick delivers full measure over 8 fact packed pages, 16 pictures too. Not seen before in a direct drive tethered car, he shows how an early ED Racer was modified and built into a cast Alfa 158 chassis (my one has the Frog 249). Campaigned By Fangio and Dr Farina in the early days, the 158/159 was a thirsty and supercharged screamer, in the end necking close on a gallon a mile! Fine ones on show at the Alfa museum near Milan (where I met Guidotti who won a Mille Miglia with the sensational Nuvolari). Keen going, Dick!

Kaiser War Flying

Cross & Cockade International (01237 474703) produce a magnificent journal and other works on the First World War, not forgetting a fine illustrated calendar. Cross & Cockade also support aviation art, at the big London show last summer Roger Middlebrook benefiting from their enthusiasm and kindness. The July show at the Mall Galleries is a must, 400 works to enjoy and good types arriving from far and wide. There's a dash of the old MEE about it and it runs for a week. Chairs under the trees in the sunshine.

Six-Gun Stories

During the golden age of the Christmas annual, Eagle faced tough competition from Buffalo Bill and his chums of the Wild West. Launched in 1948, sales zoomed to a steady 300,000 copies. Born in Bolton in 1918, Denis McClouchin delivered artwork with punch (60 hours a week for 6 months for each volume) and stories featuring Kit Carson, Jim Bowie, Buntline Specials and Navy Colts were written by Arthur Groom. How they managed it still amazes me, few from here having gone to the USA sixty years ago. During their 13 year run the McClouchlin format remained constant, Arthur Groom delivering yarns which even now can spirit you away to the Owlhoot Trail, derring do at the OK Corral or the Pony Express racing from Missouri to California. A highly detailed map let you spot where things happened, and Jarrold's excellent production skills delivered a quality annual much prized by today's buffs and collectors. Circle the wagons, boys. Crazy Horse is round the corner!



Follow on from David Mills regarding last months DK column

Thought I'd pass along thought that David McCallum is still making himself useful in TV these days. He's starring in the very popular TV crime drama, N.C.I.S. Don't know if y'all receive it across the pond. He plays a Navy coroner, and along with the rest of crew, employ all manner of high tech derring-do to catch terrorists and other multi-national scumbags. BTW, the good doctor drives a restored Morgan on the show and still gets his fair share of tail. Rule Britannica!

I was a HUGE fan of Man from UNCLE growing up. Much preferred McCallum's character to Vaughn's. Things do sort themselves out over time. McCallum is still in hit TV shows and Vaughn is selling cheesy life insurance and fronting "personal liability" law firms on "regional" TV commercials.

Ditto your thoughts are on real military heroes. Compare the bright lights of Clark Gable and Jimmy Stewart with the low glows of John Wayne and Ronald Reagan. (Although Reagan redeemed himself partially as the male counterpart to y'all's Margaret Thatcher.)

On a personal note. Just finished my 1956 Last Resort (Baguley) which I intend to fly in our Nostalgia Rubber event at the Nats against the behemoths of the class. I hope the LR proves to be a giant killer. It sure looks the part.

WESSEX TOMBOY LEAGUE 2010

Scores after Round 2 held at Cashmoor on Sunday 25 April 2010

The second round of the 2010 Wessex Tomboy League was held by kind invitation of the Wimborne MAC. After a week of glorious weather the forecast was most encouraging but the flying conditions turned out to be very windy. However, these 36" span Tomboys cope well with the wind, probably better than their pilots! Nine pilots turned up and arrived from as far afield as Newton Abbott, Bristol, and London. Seven flew in the Tomboy 36 fly-off, but only three managed to land back on the patch. James Parry who struggled to qualify was third with a time of 3 minutes 30 seconds. John Taylor wisely returned early from a downwind position to claim second place with a time of 5 minutes 30 seconds. Congratulations go to Richard Farrer with an excellent time of 7 minutes to win in fine style in only his second event. With a second place finish in his first event Richard now leads the league table with 19 points. Tom Airey climbed up high as usual under power and lost sight of his model in cloud and hasn't seen it since! (*turned up on the Monday, farmer found when tending livestock JP*) Paul Netton and Chris Hague, both of whom should have known better, landed way down wind after flying up near the cloud base for some time - it's so easy to be wise after the event! Barrie Collis, flew well in his first event and was unlucky not to make it back onto the patch.

Wessex Tomboy 36" span league table

		R1	R2	R3	R4	R5			Total
1	Richard Farrer	9	10						19
2	John Taylor	7	9						16
3	James Parry	6	8						14
4	Paul Netton	10	2						12
5	Tom Airey	8	2						10
6	Chris Hague	2	2						4
7	Barrie Collis	-	2						2
8	Derek Collin	-	1						1

1st Richard Farrer 7 min 00 sec; 2nd John Taylor 5 min 30 sec;

3rd James Parry 3 min 30 sec. Landed out: Barrie Collis, Chris Hague, Paul Netton, Tom Airey. DNS: Derek Collin

Wessex Tomboy Senior 48” span league table

		R1	R2	R3	R4	R5		Total
1	Tom Airey	10	10					20
2	Peter Rose	9	8					17
3	Chris Hague	8	9					17
4	Clive Carpenter	-	1					1

1st Tom Airey 5 min 48 sec; 2nd Chris Hague 5 min 31 sec; 3rd Peter Rose 4 min 39 sec. DNS: Clive Carpenter

Four entrants started the day but there were only three entrants in the Tomboy Senior fly-off. Free flight exponent and newcomer to the series, Clive Carpenter, actually flew a qualifying flight without radio. Although the Tomboy was recovered from a mile and half away with no major damage it was too late in the day to join in. The event was won by Tom Airey, his 48” span Tomboy achieving the best launch, while Chris Hague just managed to stay aloft long enough to beat Peter Rose, all three planes and pilots coping well in the strong winds. Our thanks go to our starters for the day, Bill Longley and Derek Collin. Also to the host club the Wimborne MAC for allowing the use of their flying field. And finally, of course, to James Parry for all the hard work he put into organising the site on the day.

Remember, it is the best four scores, shown in **bold** type, to count. The next round will be on Sunday 4 July, hosted by the Wincanton Falcons at their Templecombe flying site.

www.wessexaml.co.uk



Derek Collin with his Tomboy



Winner Richard Farrer with his Tomboy





Looking through the June 1952 Aeromodeller I came across this article which I thoroughly enjoyed reading so just had to include JP

Airfoil Selection By Vic Smeed June 1952 Aeromodeller

A successful model owes its performance to three equal factors — design, construction, and trimming. Equal factors. How many beautifully built models of proved designs are seen turning in mediocre performances, and how many well-trimmed, virtual wrecks win contest after contest. Trimming is the answer, every time, Thoughts of airfoil sections prompt these reflections, for it is not unusual for a really experienced modeller to draw out a nice-looking airfoil and, with no real data on it, trim his model for top-notch performance every flight. He isn't really striking in the dark when he draws his "zip-zip" section, for he knows what he wants and roughly what shape of airfoil will give him those characteristics, which shows that he has used standard sections and studied thoroughly the results given by each. This means some long experience, and unless you've been designing for several years, it is far wiser to stick to known airfoils with known characteristics. That way you are

lessening the " unknowns " about your design and you know that you can repeat the performance with a later design, using the same airfoil.

A lot of fellows get confused, however, with the wide variety of airfoil sections available. They all lift, don't they, and if any one lifts more than the others, why bother about the others? Well, of course, no one airfoil lifts a great deal more than another, and those which have better lift characteristics usually have drawbacks in other ways. We have to sift through the airfoils available to find the one best suited to the particular purpose we have in view; a general idea of what type of section will give the required characteristics is obviously the first step.

Sections are usually compared in the first place on their maximum lift, maximum lift/drag ratio (L/D), and drag. Lift and drag are compared by means of their coefficients. A COEFFICIENT is a rather vague but convenient multiplier which "measures some property of a substance (or shape) for which it is constant, while differing for different substances (or shapes) ". The nearest one can get to it in one word is " a criterion " ; in our cases the coefficients of lift and drag are written CL and CD. Thus, airfoil data is dotted about with CL 1.8, CD .009, L/D 22, or something on those lines.

Naturally, lift and drag vary with different angles of attack, so that the coefficients are given as maximums and minimums, and mention is made of the angles at which the figures apply. The same system is of course used for the L/D ratio. These figures need only be taken as an indication of performance—we don't propose to bring in any abstruse calculations involving them. Other factors—CL at angle of maximum L/D, centre of pressure travel, spar depth, and so on - are considered before a final choice is made. The accompanying table (1) generalises the basic "features" and is useful as a very rough guide; for the purposes of a survey, five broad divisions among airfoils have been made, but it should be remembered that some sections are "cross-bred" and that the tabled characteristics may not therefore be accurate in special cases. A few general remarks about these groups of sections

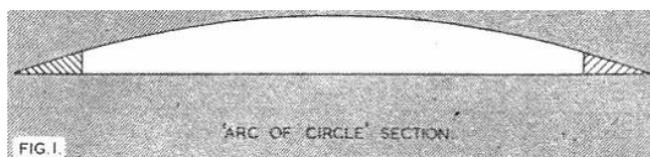
Type	Lift	Drag	L/D	CL at L/D	C.P. Travel	Spar Depth	Uses	Example	Advantages	Disadvantages
Bi-convex	Low	Low	High	Very high	Small	Usually good	Mainly C/L Speed and Stunt, F/F tailplanes	RAF 30 RAF 34 NACA M6	Small C.P. travel, very small drag	Low lift, esp. at model speed
Flat under-surface	Med./High	Low/Med.	Good	Good	Fair	Varies	All models	Clark Y Flatplate Originals	Ease of construction, lack of vices	Tend to speedy glide
Under-cambered	High	Med./High	Good	Fair	Fair/Large	Usually good	All F/F categories	RAF 32 NACA 6412, 4409 etc.	General all-round efficiency	Slightly more difficult in construction
Turbulent Flow	Very high	Very high	Good	Fair	Very large	Usually poor	Mainly lightweight models	MVA 123 SI 64009 Curved Plate	Very high lift at low speed	High drag with slight speed increase; warp-free construction difficult
Laminar Flow	Med./High	Low	High	Good	Fair—varies	Varies	F/F	LDC 2 LDC 3M LPO	Good lift - good L/D	Construction must be very accurate

may not be amiss, so we will briefly outline points of interest in each.

Bi-Convex Sections vary from the symmetrical to the nearly-flat under surfaces. Their small

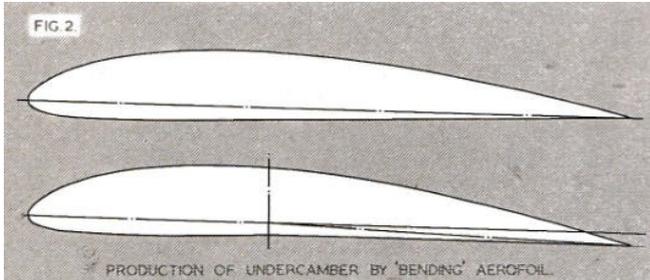
C.P. travel brings them into favour for flying wing types, and it is in this group that we find the few airfoils with rearward C.P. travel with increased angle of attack. The angle of zero lift of a bi-convex Symmetrical section is, by the way, about —1 degrees, and not, as may be imagined, 0 degrees, due to slight compression and other effects.

Flat Undersurfaced Sections are popular because of ease of building and covering. Many original airfoils use flat bottoms, particularly in the U.S.A. where their low drag assists the extremely fast climb favoured over there. The extra height gained in such a climb allows a total duration no different from a higher-drag, " floater " --sectioned model, despite the superior glide of the latter. Such sections do not appear to be critical, since we have had very good results with an airfoil comprising no more than an arc of a circle struck between two trailing edge section spars, giving a thickness of 5/8 in. for a 7 in. chord (Fig. 1) ;



"Oily Boid II", a light model using this section, had a very rapid climb and an astonishingly flat glide. The flat plate proper is used only on tiny models—chords of 3 ins, or less, where it is as efficient as any other section—and as a starting point in the study of aerodynamics.

Undercambered Sections. The effect of undercamber may be generally considered as an apparent increase in angle of attack, with a proportional increase in lift but without the pro-portional increase in drag that would normally be expected. Perhaps this can best be visualised by imagining, say, Clark Y bent in the middle (Fig. 2).

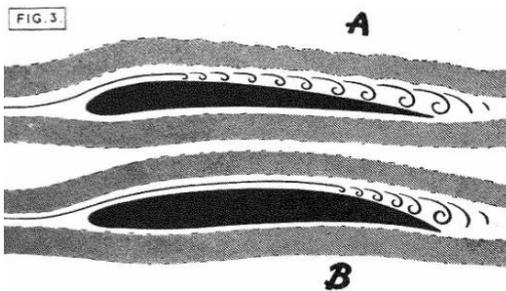


The front half is still working at, say, 3 degrees but if we have bent the airfoil 2 degrees (i.e., increased the camber to its centre line) the rear half will be working at five degrees. To a point this can be advantageous, since the airstream will be guided by contours of the front half and will be in a condition to flow smoothly over the increased angle of the rear. This "preparation" of the airstream is, of course, the reason for our lift

credit being greater than the drag debit. Too much increase of camber will naturally lead to separation of the airflow from the airfoil surface, and will eventually give the effect of having flaps down; anyone who has seen a Horsa "gliding" with flaps down will realise that this is a state strictly to be avoided!

Turbulent Flow Sections stem from the curved plate, but have only really come into their own in the last five years. Generally, they are notable for heavy camber, with the undercamber extending from the leading edge to the trailing edge. The point of maximum upper camber is well forward; the airstream flows smoothly to this point but then separates slightly from the wing surface and breaks into slight turbulence (Fig. 3a). This condition, as may be imagined, creates high drag, but also very high lift, and has the further effect of delaying the stalling angle. Large tailplanes are advisable with these so-called "bird" sections due to their very large C.P. travel; this naturally increases total drag. Since drag builds up as the square of the speed, the high total drag of models using these sections means that low flying speeds are essential for efficiency, and for this reason these airfoils are normally confined to lightweight and ultra lightweight jobs.

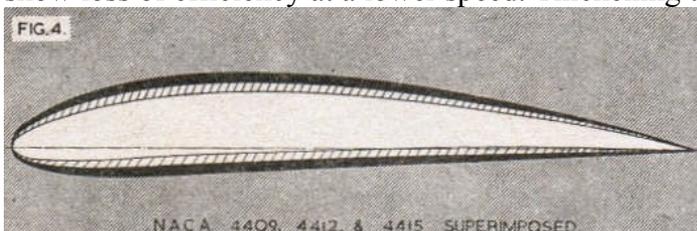
Laminar Flow Sections. Developed especially for model use, airfoils in this category are not highly



popular due to the fact that meticulous construction is essential in order to obtain the slight aerodynamic advantages they offer. They may be flat or undercambered, but are all notable for the fact that the point of maximum camber is aft of mid-chord. Airflow separation thus takes place near the trailing edge, so that the airflow over most of the wing is laminar, i.e., one layer flowing smoothly over the next, a condition which produces the minimum of drag. (Fig. 3b.)

Airfoil Modifications Standard airfoil sections are occasionally modified in some way in order to alter certain characteristics. The three main alterations normally found are increase or decrease of thickness, change of camber, and incorporation of a reflex trailing edge.

Increase in Thickness normally has little effect on the particular airfoil's characteristics, but the change is allied with flying speed. A thin section shows to advantage on a fast-flying model, but may show loss of efficiency at a lower speed. Thickening the section allows similar characteristics to be



exhibited in the lower speed range. Examples of this are the airfoils NACA 4409, NACA 4412, and NACA 4415, which are all basically the same airfoil with slightly varying thickness/chord ratios. (Fig. 4.)

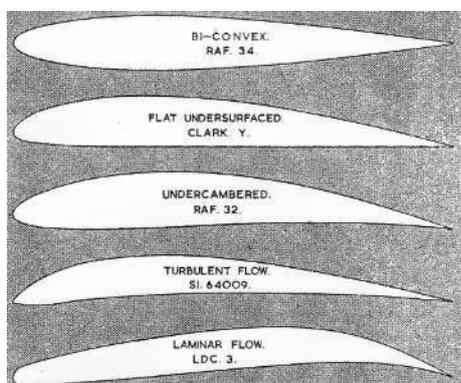
Decrease In Thickness is, of course, the same idea the other way round, although here we often find large reductions in thickness, The classic example of this is Clark Y, thinned variants of which are almost universally employed for lifting tailplanes. A reduction of 40 per cent. in the thickness gives, as may be expected, a handsome reduction of drag; however, the reduction of lift is not by any means so great and all the airfoil's other characteristics—C.P. travel, approach to stall, etc.—remain unchanged. In other words, one retains the good things while greatly reducing the bad. Thickness is also partly tied up with **Penetration**, which is the relationship between forward speed and sinking speed, and is of particular importance in slope-soaring.

Change of Camber—either increase or decrease —affects most of the airfoil's features, virtually changing the whole section. Decrease of camber may be employed to reduce C.P. travel, but it also cuts drag to a large extent and slightly reduces lift. It is useful when developing one model from another, but otherwise it is advisable to select a fresh airfoil with the desired characteristics from the many available,

Reflex Trailing Edges are used solely to limit C.P. travel, which they do most effectively.

Unfortunately, reflexing the trailing edges increases drag and decreases lift to a large extent. An example of this is (once more!) Clark Y; incorporation of a reflex trailing edge (Clark YH) reduces

C.P. travel from 10 per cent. to just about zero, but reduces CL max. from 1.24 to 1.12, and increases CD min. from $\cdot 0085$ to $\cdot 0132$. However, the stability gained is very well worth the loss of efficiency, especially for flying wings and scale models of aircraft with very small tailplane areas.



Reynolds Number

An obscure factor which usually crops up in discussions of airfoils is the Reynolds Number. The easiest way to think of this is the number of air molecules which pass over the whole wing in a given time. Thus, speed, chord, aspect ratio, area, and air density all affect this number. This is not the most accurate

definition, but it is certainly the clearest. The point of it all lies in the fact that R.N. affects the efficiency of an airfoil—doubling the R.N. more than doubles the overall efficiency; this is the explanation for the superior performances expected from a large model, particularly if scaled up from a smaller job. Chords of less than 6 ins, drop off alarmingly in efficiency due to their very low R.N., so that it usually pays to use a lower aspect ratio on wings of under 200 sq. ins. area. A variation on this idea is the L.S.A.R.A. sponsored "critical VL, number" which relates airspeed with minimum chord for any airfoil.

Thought for Today

When next one of your theorist friends natters about the odd tenths of a degree in the angle of incidence of his latest job, it is your turn to smirk. He will point out that he has set the wing at that angle (assuming he builds that accurately!) to ensure the best L/D ratio and therefore minimum sinking speed. A very worthy aim. He will then proceed to trim the model to glide on the verge of the stall—as do 999 modellers out of every 1,000. However, if his particular section stalls at, say, 12 degrees, he is trimming the job to fly with an angle of attack of 10-11 degrees. Where now is his best L/D ? The model will sink faster, despite its slower forward speed. We have proved this on several types of full-size sailplanes—for example, a Kite, stalling at 32 m.p.h., will descend quicker at 33-34 m.p.h. than at 38 m.p.h., the speed at which its angle of attack gives best L/D.

Epsom Downs

Dave Bishop (Mr DB Sound) has something to talk about that at last makes sense. He has made a KK Polydi, plan from Peter Michel, and it has now successfully flown, so for all of you who know him for his commentaries here is a different side of the sound with a model he must be rightly proud of, here are the photos. Sheer pleasure on his face and it flew well, that's what it is all about!



The long walk back, speechless (never been known before).



The young Foxwell launching and below



Clive Carpenter also in the Epsom sunshine

As with the obituary from Dave Bishop he also heard of my including these photos and about five minutes ago I received the following again cut and paste not read JP

Polidy Free Flight Model from Dave Bishop.

Early days.

In 1946 and onwards I was a young member of the West Sussex Model Aeroplane club at Littlehampton in Sussex and whilst attending clubnights, I used to stand and listen in awe at the top people in the club. There was a “miracle worker” with free-flight rubber powered models named Ron Warring who was I believe a mathematician and later on worked for Solarbo Balsa at Angmering, a few miles away. He would trim his aeroplane with Rizla cigarette papers and patiently spend ages getting his models fly a perfect “max” for the required 180 seconds duration each flight.

Also a regular visitor to the club was a Captain (later Colonel) Bowden who made all sorts of models with excessive dihedral. Looking at the pictures of his models that exist today, they look superb but from my memory of them, each one looked like it had been dumped into a drum of white dope similar to the present day cars that receive zinc plating (galvanizing). I thought, (as well,) that the construction of his aeroplanes left something to be desired. Mind you in those days we were now being thrilled to buy one thirty second of an inch real balsa sheet and models were being covered in a new material called rag tissue which, when doped, was extremely strong. Later we had "double" rag tissue for petrol-engined models. At Littlehampton, there was an engineer named John Collier who owned a machine Company and he produced a new 2-stroke petrol engine called Majesco at 4.5cc. I bought number 7 (priced at £5.10 shillings) and it powered a large (for us then) high winged model cabin model named Eros, designed if I remember rightly, by a John Coasby. We made a clockwork timer from an ex-service bubble sextant to switch off the power to the ignition coil on the coil ignition after 60 seconds when flying at Ford aerodrome.

Around that time, I had built the Kiel Kraft kits of the Ajax and Achilles. Both were free flight rubber powered and they flew all right for me at Ford Aerodrome about a couple of miles away from us. We had been given permission to use the whole airfield to fly on every evening and the whole weekend as well. In fact our club were hosts for the SMAE to run a Southern Gala there one-year. It was at that meeting that I later met the famous designer Bill Dean, at Ford Aerodrome who was a God like creature to me as he had designed the contest winning "Slicker" series of models. At that time the SMAE had 7,500 members. I had joined in 1943 with my membership number, (and still is) 6404.

There was only one magazine available for us modellers, the Aeromodeller, which at that time sold some 62,000 copies monthly priced at one shilling, and in it was advertised this new model called a Polidi which was a 40" wingspan rubber powered free flight model. Its price was seven shillings and sixpence. I fell in love with it right away and ordered one from the local model shop David O' Jones. (The shop is still at Littlehampton with his son now in charge selling more fishing things and model trains apparently, nowadays.)

It took a week to build it (no television distraction in those days) and my model was ready for its maiden flight on the following Sunday morning at Ford aerodrome. I wound 300 turns on the eight strands of lubricated rubber and away flew my Polidy in a perfect left climbing circle. It was cruising along beautifully when it caught a thermal and up she went in smooth climb gradually drifting out of sight (OOS) after some 7 minutes. It was never seen again and sadly I hadn't written my name and address on it before launching it.

I wrote to Kiel Kraft and told them of the joy and thrill I had experienced from this latest model but also how sad I was to lose it. Three days later a brand new complimentary kit (priced at seven shillings and sixpence or 35p) arrived by post to my house and I spent another week in building that one.

I lost my second Polidy a few months later when it flew away in a free flight rubber duration competition. This time, it had my name and address written on the fuselage but despite doing that I never saw it again.

Polidi Number Three.

I hadn't seen a Polidi for over 50 years and it was when talking to James Parry awhile back at Pool hospital when visiting a late pal Alex MacDonald that I mentioned what a wonderful aeroplane Polidi had been. Two days later a plan arrived through the post from James and I have had a whole lot of pleasure building it with help of parts and especially excellent Balsa wood from the team at Avicraft who has supplied all of my materials. The airframe building was a joy to make and it was finally covered with my chosen colours of over 60 years ago of Black fuselage and Orange wings and tail. Oh by the way I included my name and address on a waterproof card this time, stuck on the top of the fuselage. I should point out that there is a large plastic propeller, which I would really like to change for a wooden one. I just cannot seem to get a large enough block of balsa wood to carve one though at the moment.

Well the perfect day for free-flight model flying day arrived recently with only a slight drift and it was off to Epsom Racecourse with Derek Foxwell (The Old School Model Chap) and it was assembled and photographed and ready for its Maiden flight.

Some 300 turns were wound on the rubber which has some washing up liquid massaged into its skein of 6 strands (its all they had in stock at Avicraft) and Derek launched it straight and level. Away she flew and all that was needed was a little twiddle on the tail plane and away she flew for the second flight. After two more of satisfaction we headed home for a cup of tea.

The result is that the wing has been moved back half an inch and supplied with a new rubber motor of 8 strands wound into a skein and it will be ready for another airing.

Finally.

As an unknown free-flight new boy I do enjoy walking around the Epsom Racecourse and seeing the superb finish on some of the free flight models that are regularly flown there. It was whilst I was there one time that a chap came up to me and asked if “I was Dave Bishop of DB Sound” and added “not that I would know you of course!” It’s a funny thing but I am sure that same gentleman was later being a bit disparaging about Kiel Kraft rubber powered model aeroplanes circa late 40’s and early 50’s. Well all I can say is that my first Achilles model flew at the end of the war on the Promenade at Littlehampton right off the model board until the 600 turns on the rubber wound down putting the aeroplane into a gliding mode. As I have already said, I followed that with the Ajax and most of the rest of the fleet of Kiel Kraft models. Now I really fancy building a Jaguar Wakefield for it was so many years ago I built two of those and enjoyed flying those as well. Must get a plan from somewhere?

I was hooked such a long time ago and have enjoyed the most wonderful hobby and so many friends over so many years, I feel so privileged to have done so.



Picture of finished Polidi with dancer Jade Hall.



From Model Planes Annual 1950

A lightweight by the 1949 British National Champion

This model was first built for the 1948 "Gamage" Cup. With one test flight it managed to aggregate a modest 318 secs. in foul weather, to place tenth in the London Area and 22nd in the Gamage proper. Rebuilt for the London Cup contests, it flew against Fulham (431 sec. aggregate for two flights); Brentford and Chiswick (591 sec. aggregate for two flights); and maintained a contest average flight of over four minutes for a period of nine months. Its longest flight to date has been one of 21 minutes out of sight.



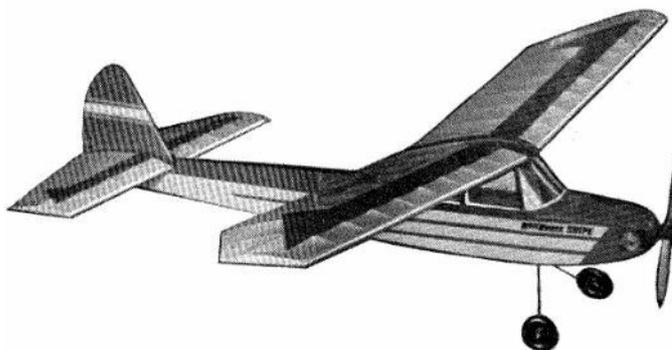
Construction is strictly conventional, although care should be taken over the selection of good grade material. Rock hard balsa only adds unnecessary weight, but soft stock leads to continual repairs. It is recommended that you sand each strip down smooth before building the various frames as this gives a much neater job. Of course, it goes without saying that every part is again well sanded before covering!

Jap tissue is definitely the most suitable covering material, preferably coloured for greater visibility. An all-white model disappears from the sight of the timekeepers too quickly. Failing coloured tissue, use white Jap and spray with coloured ink or dye. Red is by far the best colour.

The fuselage is given one coat of dope after water spraying.

A mixture of 80 per cent. dope and 20 per cent. thinners should be used to dope the wings (one coat); and 60 per cent. dope and 40 per cent. thinners for the tail surfaces (one coat). Pin down wings and tailplane whilst doping and water spraying to prevent warping. Slight washout at the tips of the wings does not matter, in fact it is helpful as regards stability.

Adjust for glide trim by packing the wings. Do not alter the tailplane setting but pack up the leading edge of the wing if the model dives, or pack up the trailing edge to cure a stall. Use the trim tab to obtain a circle of approximately 50 ft. in diameter. Power flights can now be attempted with safety. Approach full turns carefully and note behaviour as power is increased. Side-thrust adjustment may be necessary to hold the required circle and prevent stalling. On full turns the model should climb straight up on the first burst of power and settle into a steady right-hand spiral climb. When the power cuts and the prop. folds the glide should still be in relatively tight right-hand turns, but not so tight that it is on the point of spinning. Duration with optimum trim is 3 1/2 minutes on 900 turns without thermal assistance.



These items are cut from 3/16 in. hard sheet. The control horn should be well cemented in position with Durofix; or you can use "Mercury " control accessories, the control horn item of which may be bolted in position. The fabric hinges should be of tough material—such as black-out curtaining. Jap silk or such-like, is out; I used this stuff early on, but the elevator eventually fell off on a hard landing. Adhesive plaster would have enabled flying to be continued, but I did not have any around. Cement the stabilizer, fin and rudder strongly to the fuselage.

Make up the push rod from 16 G. wire (good tough stuff to prevent buckling when under compression, i.e. when giving "down ") and locate the control plate and control horn by means of soldered cup washers.

UNDERCARRIAGE

Make the undercarriage from 10 G. wire with 16 G. spreader bar bound and soldered to it. Wheels are important, if you anticipate flying from rough ground, 3 in. to 3 1/2 in. airwheels are the things to use. For normal work, the 2 1/2 in. diameter " Micro " wheels are fine. Retain the wheels with soldered washers. If you use "Frog" wheels, be careful not to melt the plastic hubs away when soldering the washers on.

The undercarriage is held on to the firewall by means of 3 "J" bolts. These items are sold commercially in the U.S.A., but I made my own by heating some 14 G. wire in the fire, bending it double, trimming the ends and threading 4 B.A. These bolts hold the undercarriage more firmly than the usual binding method, and are easier to apply.

WEDGE TANK

This is made from tin can, 16 G. and 12G brass tubing. Try to get the thin end of the wedge, which is on the outside of the circle, level with the needle jet to give unaltered fuel flow when flying inverted. Actually mine is not, but even so the motor runs almost as well upside down. The 12 G. fuel outlet pipe should be taken to the rear of the tank so as to feed even though surge might occur when doing vertical climbs and dives. The tank is attached to the extended engine bearers in the fuselage by four No 1 round head wood screws, 3/8 in. long. Take a piece of plastic tubing from the inverted vent pipe to the outside of the fuselage for filling the tank, preferably via a squirt gun. Also fit plastic tubing from the fuel outlet through the firewall to the motor.

WING

Pack up the notched 1/2 in. square leading edge and 1/4 in. by 3/4 in. trailing edge, 3/16 in. and 5/16 in. respectively. Cement the ribs in position with the open ends of the spar slots upward. Cement the spars in place, using Durofix for the pine ones. The fact that the spars lie below the contour of the rib and therefore the contour of the rib is broken at each spar, is of no consequence. However, if you feel meticulous, the gaps may be filled with scrap balsa. Remove the wing from the plan and shape the leading and trailing edges, and cover the centre section with rock hard 1/16 in. sheet balsa. Cement the 1/16 in. plywood lead-out wire guide to the right-hand (inside) tip (the broken contours of the ribs go on the underside of the wing) and add the wing tip blocks and shape. Cover the wing with Silkspan if possible, and give it a number of heavy coats of dope to prevent fuel penetration.

ENGINE

" Barnstormer " started out with a 5 c.c. French Micron diesel as power, but after the first week I managed to get a 6 c.c. Super Tigre G. 16 (Italian), and this is the most powerful diesel I have met so far. However, it seems that with the advent of the glow plug a number of petrol engines would be alternatives. The British Keil kraft K.6. glow plugged should be good and it fits the existing bearers. American engines like the Forster " 29," De Long, Vivell "35" or " 49," and Super Cyke, fitted with glow plugs, would be just the job, as would the new McCoy Sportsman Jnr. which comes with glow plug anyway.

The Super Tigre turns a 12 in. diam./ 10 in. pitch Tekniflo prop at 6,500 r.p.m. The 11 in./10 in. seems better for stunt work and would probably give a static r.p.m. figure of 7,000.

FLYING

"Barnstormer" will be used as a stunt trainer by many modellers, so it is necessary to give flying instructions from the very beginning. Load up the nose with 4 ounces of lead to obtain balance on the

L.E. edge of the wing; this procedure will prevent any tendency for the job to climb at take-off, which can be very disconcerting. Stops to prevent any great movement of the control plate are also useful. Get the motor really turning over, grab the handle, stick your arm straight out and get your helper to let go of the job downwind. The model will take off by itself, and all you need worry about is not to move your arm in large amounts; and wrist movement is positively out. Take the job around for a tankful and let it land by itself.

As experience is gained, take out the control-plate stops and weight at the nose so as to balance the job on the front line. Now for 65 feet lines instead of 45 feet, and more fun.

You will note that the engine runs best (comes in) at a particular period during flight and that is when to do some work. For vertical climb, snap the wrist back and when the ship is going straight up, neutralise. Give down to level out. A 15 feet climb is required in stunt contest rules. Vertical dive is much the same only the movements are reversed, the start is from high level, and the whole procedure is more nerve-racking. A wing-over is a vertical climb in which you forget to give down and the airplane goes right over the top and down the other side. Give the elevator at the bottom. Plenty of power is the requirement to keep the lines really tight overhead.

Have the job going around nicely and about 20 ft. up. Full up all the time will give you a loop and if you want to keep on, neutralise for a bit as the job climbs again to gain the altitude lost on the first loop, and then full up for your consecutive loop. Outside loops from the horizontal position are accomplished by giving full down from really high level flight.

Inverted flight? We, too, are still learning. We get into it via half a loop and out again by half an inverted inside loop or half an inverted outside loop, depending on the height the airplane is above the ground.

Wimborne MAC Control Line Day Sunday 11 April 2010

One of the very few control line events in the South was put on by Wimborne MAC, and very much looked forward to. So much so that Mr Windy and Mrs Gale decided to join in, and they did whole heartedly. Numbers were down as the forecast for the day was actually worse but a few brave soles did come along, Dick James and Terry Bradley from the Crawley Club, Geoff Hickman from Devon contributed to the Chancellor's fund at what 85p a litre tax? Flying was cautious and a couple of models came to grief. The day also saw the Wessex League mini speed comp with three models recording a time. Dick James with his Hallam based model powered by a Frog 150R was easily the fastest followed by Chris Hague with his Wessex Weasel powered by a PAW 150 (clapped out, engine not Chris mind you.....). I flew my Wessex Wombat again with a PAW 150 and a novel fuel tank, so novel that the model was overtaken by a lost hedgehog before the engine finally stopped and landing as these models do which is quite heavily managed to detach the fin. Now stuck back on will be removed permanently very soon. This lead me to inspect Dck's fuel tank, a coffin type. Having got some tin from Derek Foxwell I'm now in process of making one. Whether I ever finish that task remains to be seen! Anyway here's the photos.



Geoff Hickman's Little Warrior



John Myers kindly loaned his models for the day



Admiring fuel bottle while Dave Ashenden's Crusader hovers and also interested!



Dick James's coffin tank



Dick's Weatherman , think he brought along 4 all different sizes



This Weatherman is 40 powered



Hallam mini speed model (for the Wessex League mini speed comp)



Chris Hague's 1.3x Frog Viper with Fox 35



Terry Bradley's Peacemaker



Weasel, Wombat and Hallam



FORTHCOMING EVENTS

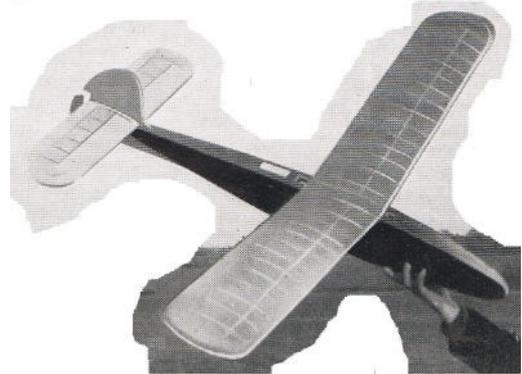
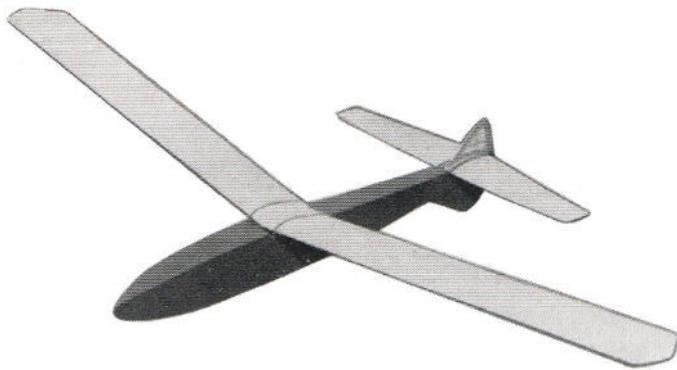
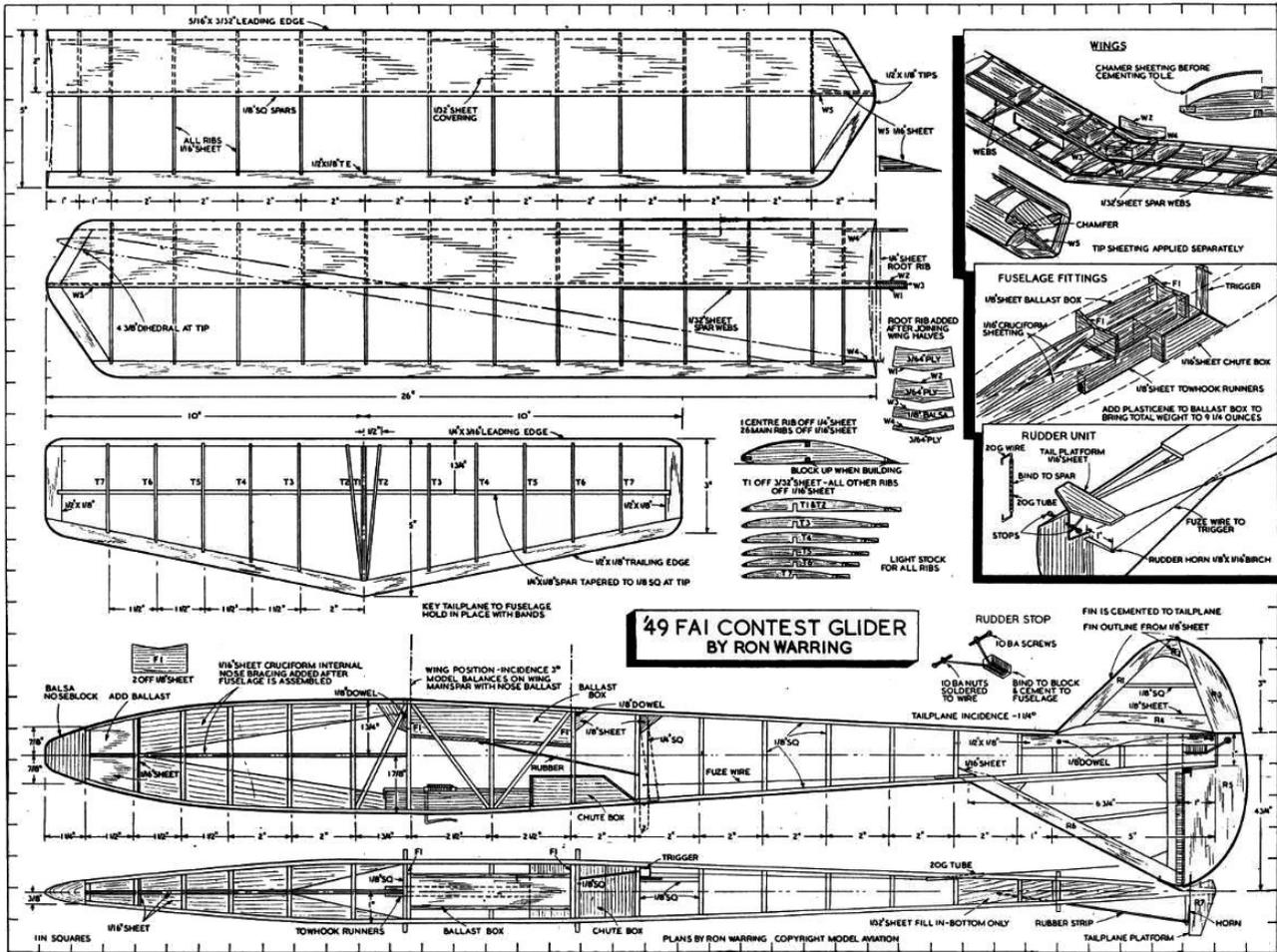
9 May Sunday Do not miss. On 9 will be the usual splendour of free flight, which as always is going to be fantastic. On the Sunday there is the added events as has been for a couple of years now RC Vintage and also Control line. The RC primarily sport flying will also as usual see the running of the National Tomboy competition by Tony Tomlin and also Bill Longley's power duration. The Tomboy is now well established and it would be great to see the power duration develop too. As for Control Line I know the weather has not been good but there are only a very few times in the year in the South where there are big events where CL can take place. Three at Model Wallop and two at the Wimborne club. That's five more meetings than in previous years. The Wessex Aeromodellers League mini speed will be run and if there are greater numbers attending then other events can be included in the future such as some form of stunt but it all depends on numbers coming along. The opportunity is there, so if you don't turn up don't bemoan later. Use it or lose it!

16 May Wimborne MAC RC Vintage event. Now becoming established as a main event, except last year when the weather was awful. There will be a BBQ, you can bring your own stuff to burn or take pot luck on what is there. Usually bacon butties then on to bangers and burgers washed down with tea and coffee. Will also be a ladies only WC.

More details on all above from me James Parry JamesIParry@talktalk.net or 01202625825

Tomboy details from Tony Tomlin pjt2.alt2@btinternet.com or 02086413505

Bill Longley at tasuma@btconnect.com 01258488833



Contest Glider from Model Planes Annual 1950

By Ron Warring

STRAIGHTFORWARD CONSTRUCTION AND EXCEPTIONAL TOW-LINE STABILITY HAVE BEEN WORKED OUT TO THE LIMIT ON THIS DESIGN. BUILDING TIME IS ONLY 8-10 HOURS.

The design of the original Contest Glider was very much influenced by the Bushey Park models which achieved such outstanding success, circa 1945-6. These models featured high aspect ratio parallel chord wings, slabsided fuselages and very light wing loadings. Still air duration from 300-ft. lines was consistently over the 4 minute mark. The original Bushey Park models, however, all

suffered from the fact that they were not truly stable under tow and were very difficult to handle in any wind. Also they flew in straight lines, which is not the ideal for contest work.

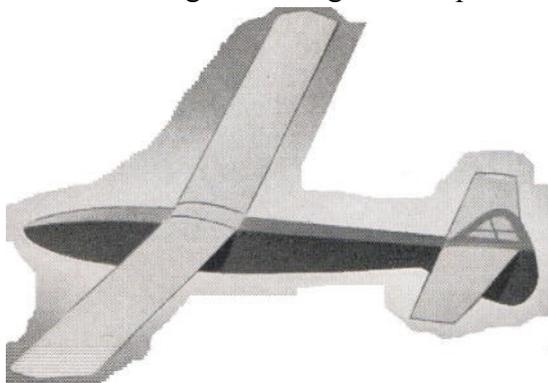
The writer had, about that time, produced a small streamlined F.A.I. glider—the Wraith—which had really excellent towline stability under all conditions and models of this type were lost with monotonous regularity. The Wraith features crutch construction and was designed for quick building. Time to complete was roughly 10 hours and on two occasions a model was built on the Saturday and flown (and lost !) in a contest the following day.

The two lessons learnt at this stage were

1. A contest glider must have exceptional towline stability under all conditions. Models which tow up perfectly well in calm are often unstable in wind.
2. Straight tow generally means a straight rudder setting. Hence some device was needed to offset the rudder or trim tab after release from the towline to give circling gliding flight. The alternative was to use a scheme since made popular by the Croydon club--offsetting the tow hooks to counteract offset rudder under tow. The latter method is not absolutely foolproof and demands considerable skill at times to prevent the model spinning on the line.

Other essential requirements are

3. A dethermaliser is an absolute necessity.
4. To get maximum height under tow several alternative tow hook positions are necessary to meet varying conditions. With the tow hook too far forward it is impossible to get anything like the full height of the line. If excessively far forward it may be impossible to tow the model up at all in a dead calm. With correct tow hook positioning it is quite possible to tow up a large, heavy F.A.I. model to almost the full height of the line in dead calm. But to achieve this, ample towline stability must be incorporated in the design. Some models are quite unstable under tow, even in dead calm, with the hook far enough back to get the required height.



The version of the Contest glider shown on the plan is essentially the 1946 model with several refinements to incorporate some more recent findings. The 1946 model never completed its full three flights in any one contest—being lost on the first or second flight in each case, despite the use of the dethermaliser. But it was a most reliable machine under all weather conditions.

Towline stability was achieved by means of a relatively long nose—the wings being in roughly "rubber model" position and underslung fin. The actual underslung fin area is relatively small and could be

increased with beneficial results. It was found that under rough conditions additional outriggered fins could be used to advantage, preferably under the tailplane where they would be operating in relatively smooth air under tow. These, in fact, correspond to anti-spin fins as used on rubber models, but in this case are used for increasing directional stability under tow. Under calm conditions the upper fin could be removed entirely and give satisfactory towline stability on the rearmost hook. In fact it is doubtful that the upper fin is of much use at all under towing conditions.

Correct disposition of side areas, allied to straight rigging, i.e. fin and rudder neutral, produced all the towline stability required. To give the required glide circle the writer devised a simple rudder-lock device which has since been widely adopted and it is referred to as "the gadget." Details are shown on the plan. Briefly, in this scheme, the rudder is hinged and tensioned against a neutral stop by means of a strip of 1/16-in, square rubber. The other side of the rudder horn is connected to a trigger in the fuselage by means of a length of fuse wire, this trigger being tensioned forward by a rubber strip. In its most forward position the trigger pulls the rudder off neutral, the degree of offset being controlled by means of a suitable stop. The original model used, a 10 BA screw screwing into a 10 BA nut soldered to a length of wire cemented to the rear of the fuselage, permitting a range of adjustment.

If a length of tin $\frac{1}{4}$ in square is inserted in the bottom of the fuselage between the lower end of the trigger and the fuselage frame, the pull on the rudder horn is released and the rubber band pulls the rudder back to the neutral position. This corresponds to the launching position. The $\frac{1}{4}$ in, square, known as the locking piece, is attached to the towline and is withdrawn when the towline releases. Thus, straight rudder for towing; the locking piece is withdrawn with the towline on release, allowing the rudder to move over to give circling gliding flight.

The system detailed is pretty well foolproof, provided the rudder is nicely hinged and the rubber tensions correctly adjusted. The device also allows the model to be trimmed to the very best possible trim for contest work. The model is originally adjusted for a slight stall in flight, when rudder offset is added until this stall just disappears. With such a trim, should the rudder device fail and the rudder remain in neutral for gliding flight, the resulting flight will be simply a series of very bad stalls. But with correct adjustment the possibility of failure is very small indeed. Even if the locking piece sticks, it can be pulled out by a gentle tug on the line. The line joining the locking piece to the towline should be stronger than the towline itself, so that the latter will always fail first.

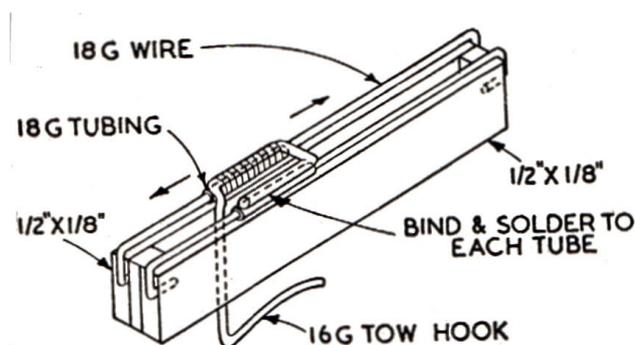
The original Contest Glider was 5-ft. wing span and of very light overall weight. Still air flight time from 300-ft. of line was consistently around the 5 minute mark, but it was a good weather model. In high winds, the wings would flex and twist under tow and hence a stronger wing was built for the F.A.I. version of the design.

Since the original model was so light, wing area was reduced on the F.A.I. version to reduce the amount of ballast to be carried. Span was now 48 inches and the wing further strengthened by sheet covering the leading edge back to the top mainspar. All of these wings incidentally, used a very thin laminar-flow section, which has since been abandoned. The latest version detailed on the plan has a standard RAF 32 section.

To bring up to F.A.I. loading, ballast was carried under the wings, this being preferable to building a heavier airframe throughout. In fact, it has been found that provided the airframe is reasonably strong, the lighter it can be made the better, additional weight added in the form of ballast amidships, i.e. immediately under wings. This minimises inertia forces which may affect stability - particularly under tow.

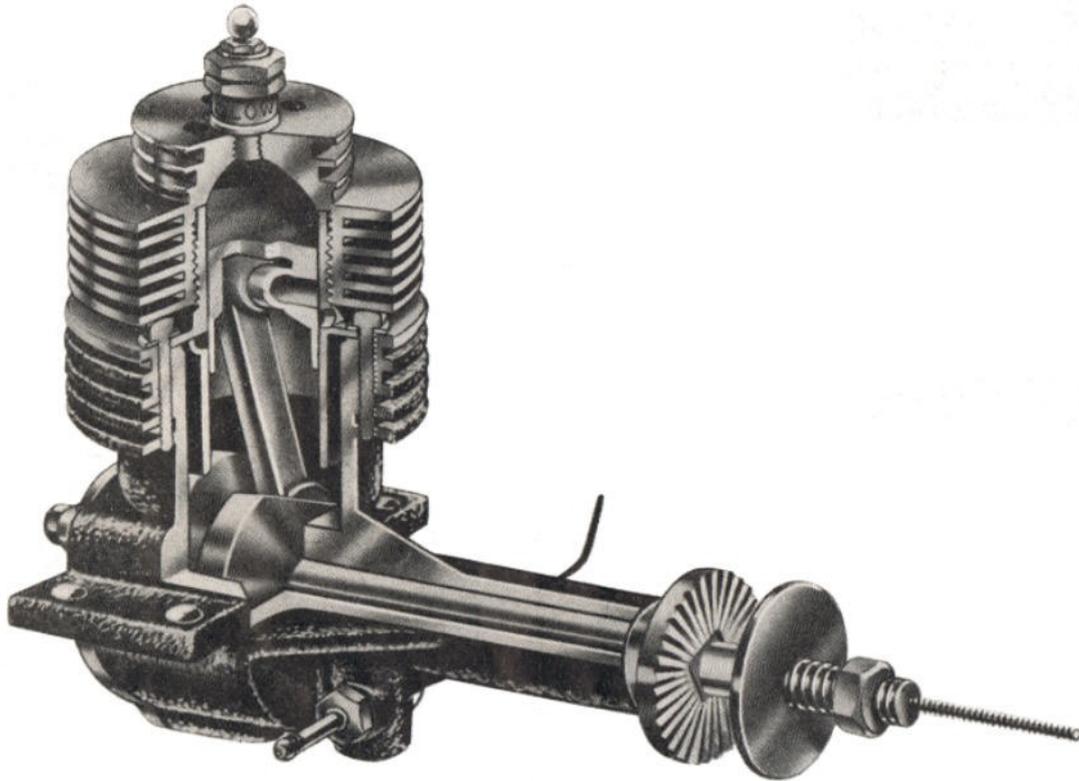
The other new feature to be incorporated is an adjustable tow hook, which has been thoroughly proven on a large-scale Wraith (6-ft. span), this particular model being used as a "guinea-pig" for testing various devices. A single adjustable tow hook allows the hook to be adjusted for the best possible position for any conditions. It is readily possible, on the large Wraith, for example, to bring the model right overhead and release immediately above utilising the full length of the towline. To achieve this consistently, practice is needed in setting the tow hook position and also the lightest possible line should be employed.

All constructional features are detailed on the plan, the airframe being strictly conventional. The only unorthodox feature is the use of 1/16-in. sheet bracing inside the nose to strengthen the nose section against stalled landings. Under optimum contest trim, all gliders of this type should have a tendency to stall slightly when approaching the ground.



Yulon 30

Last months S&T provoked a query regarding the Yulon 30 as in Brian Hewitt's Stunt King. In the same magazine there was a write up on the engine so I thought I'd reproduce here. Makes a change.



By Peter Chinn

One of the highlights of the 1949 competition season has been the outstanding performance of stunt models powered with the new British Yulon 30 glo-plug engine. Commencing with the Evesham Rally on April 17th, and in the space of five months, the Yulon has piled up an impressive list of contest successes which, in addition to the two most important trophies, the old and Model Engineer cups, has included first places at the Blackpool and Fylde Rally, the Midland Rally at West Bromwich, Stourbridge, the Weston Rally, the Walsall Rally and many other stunt contests too numerous to mention, plus a first in speed at the Weston Rally and 1-2-3 placings in speed events at Stourbridge and Walsall.

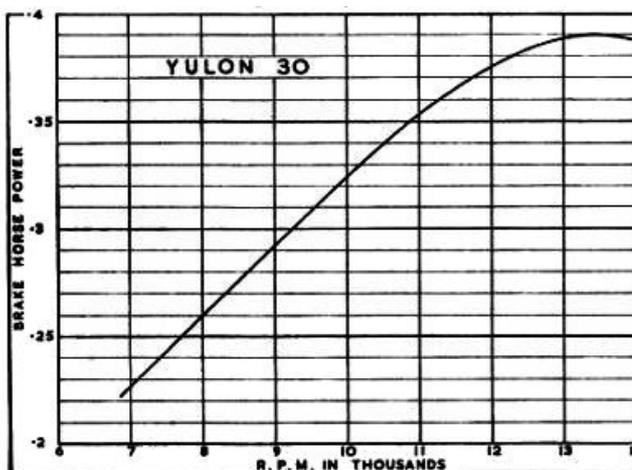
Altogether, a fine start for an entirely new product, the introduction of which had been heralded with considerably less than the usual publicity and which has thus gained recognition in the most meritorious way.

The Yulon is an unusual engine in many respects. Perhaps its most outstanding feature is the very light weight which has been achieved—only 5 1/2 ounces—for a swept volume of 5 c.c. This, combined with a high output, gives the Yulon an exceptional power-weight ratio, a quality which is, of course, highly desirable to meet modern ideas of stunt model design.

Another noteworthy feature is the porting system employed, this being, in effect, a modified version of the 360 degree layout first used by Arden and now found on many small high-performance motors. In the Yulon, the exhaust consists of a ring of twenty-four small circular ports while a true 360 degree transfer passage is employed with cylinder ports drilled below the exhaust ports in place of the transfer grooves more commonly used with annular porting systems. Induction is through a shaft type rotary valve and short intake tube below the main bearing which contributes to the short bearer length necessary or, alternatively, allows the three-point radial mounting studs to be used for direct fixing to a front bulkhead.

The writer has had a Yulon in use for six months past and only when the engine was installed in a model (in this case a " Super-Looper ") did its true worth become really apparent. Such a combination as this, because of the low power-loading obtained which will allow the model to go through any manoeuvre at high speed and without hesitation, can actually be safer to fly than one of the slower types of stunter which were being used a year or two ago. Despite its light weight, however, the Yulon appears to be well able to withstand all the usual knocks which a stunt model gets and although, on one occasion, a 60 m.p.h. plus crash with the "SuperLooper" broke the bearers away from the fuselage, the engine came through unscathed.

This particular engine was tested to determine Power output after a nominal running in period of two hours. More recently, having completed about four hours, a further check was made on the Power being developed and the results of this are shown in the accompanying graph.



It will be seen that the output is now 0.39 b.h.p. at 13,500 r.p.m., a very good performance indeed. Record-Power- plus racing fuel, which is a nitroparaffin content alcohol/castor blend and is now recommended by the makers, was used and atmospheric conditions can be considered normal, relative humidity being about 70 per cent, with the thermometer reading 75 degrees F. From these performance figures, a power weight ratio exceeding 1.13 bhp/lb is obtained. For the purpose of this report, a new Yulon engine was obtained from a retailer's stock and its performance checked against that which had been previously obtained from the older engine. The figures showed unusual consistency, the maximum discrepancy in speed recorded up to 11,000 r.p.m. being to the order of 2 per cent. in favour of the new engine. This engine had the normal open type jet which is now being fitted to the Yulon in place of the spray bar type needle-valve assembly with which earlier models were equipped. This allows a larger intake area and may be responsible for an even higher output eventually being reached.

The Yulon starts easily. The normal procedure employed by the writer is to choke the engine for two or three flicks and, when starting from cold, to prime through the exhaust port. Little or no re-adjustment of the needle-valve is necessary when the engine is suitably loaded and, when warm, the motor can be re-started without further priming. In fact, by locating the tank so as to give a slight gravity feed when full, the new engine, using the open type needle-valve, was found to start under all conditions simply by choking the intake and without recourse to priming through the ports even when starting up for the first time.

Apart from the different type of jet fitted, Yulons now being produced have a slightly higher compression-ratio than the earlier engines with the result that, on ordinary straight methanol-castor mixture, firing is much smoother at reduced revs while starting is, if anything, easier than before. Actually, of course, there is little occasion to run an engine of this type at less than 8,000 revs or so, but, for those who wish to experiment, the ignition timing of a glo plug engine can be adjusted within limits by " winking " the glo-plug-i.e., pushing in or pulling out the element very slightly. For all normal purposes, however, the plug is best left alone. Few engines

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53, WOODLAND ROAD,
NORTHFIELD, BIRMINGHAM, 31

are hard on plugs if properly treated and it may be mentioned that, in the case of the K.L.G. plug fitted to the Yulon, the writer has yet to experience a burnt-out element. By avoiding the use of more than the minimum voltage required to start and by wiring the plug to convenient terminals on the fuselage of the model (do not use crocodile-clips on the plug terminal itself since vibration will loosen the central electrode and ruin the element in a short time), much can be done towards prolonging the life of glo-plugs.

The Yulon crankcase is diecast in DTD.424 alloy and has detachable rear cover. Three studs are provided which replace the rear cover screws to enable a bulkhead type mounting to be used, if desired, in place of the normal beam mount.

The cylinder-liner is of Meehanite, honed and lapped, as is the piston. A one-piece cylinder barrel and head is threaded on to the liner and is machined from low-expansion aluminium alloy.

Crankshaft is of Durachrome on silver steel and a light alloy connecting-rod is used. The gudgeon-pin is of silver steel.

Plain bearings are used throughout.

To summarise, the Yulon 30 is essentially a high-speed engine, possessing an exceptional power-weight ratio and is well suited to stunt and speed control-line models and to high-performance free flight models of the larger power-duration type. There is little doubt that, for a stunt model of around 300 sq. in. wing area, few engines, British or American, are able to equal the Yulon.!

From Stephen Winkworth

Triumph at last! Today was a superb spring day: blossoms out, sun very warm, skies almost pure blue, winds light. I drove up to Greolieres, the ANCA field, arriving about 10.15, to find a gentle northeasterly and full sun. Nobody there, of course (it's Saturday).

Starting the two diesels is something else! But they are both easy starters, the Pfeffers if anything even easier than the PB. The noise of the two tiny diesels on full song is a delight to the ear. We attempted a take-off, but the U/C was not running true, and the rudder had no discernible effect, so a ground loop, with a brief unscheduled hop, was the result. A hand launch resulted in a swift dive and nose impacting the turf. No damage.

'Maybe a touch more up elevator might do the trick', I thought, optimistically. (Dolly the dog was barking furiously in the background, straining at her leash.) So, a few clicks on the trim, start the motors again, another hand launch, and off she goes, in a steep climb. I level off a little, and commence a sweeping climb, with excellent aileron response and easy turns in both directions, gaining considerable altitude all the time. The flight is effortless and smooth, with excellent climbing ability. Throttling back, we fly the length of the field, then back, and at that moment, while some 200ft high, the Pfeffers cuts out. Will she climb or maintain on the PB? Well, she wouldn't actually climb, but I am flying her around, a long way down wind, when suddenly the radio link appears to fail, and she is reluctant to turn, then flicks into a diving turn the other way. All my 'crash mode' instincts are alive: I throttle back, hold the transmitter close in and angle the aerial up - and control is restored! Phew! So I line her up towards me, and she glides down to a perfect landing at my feet.

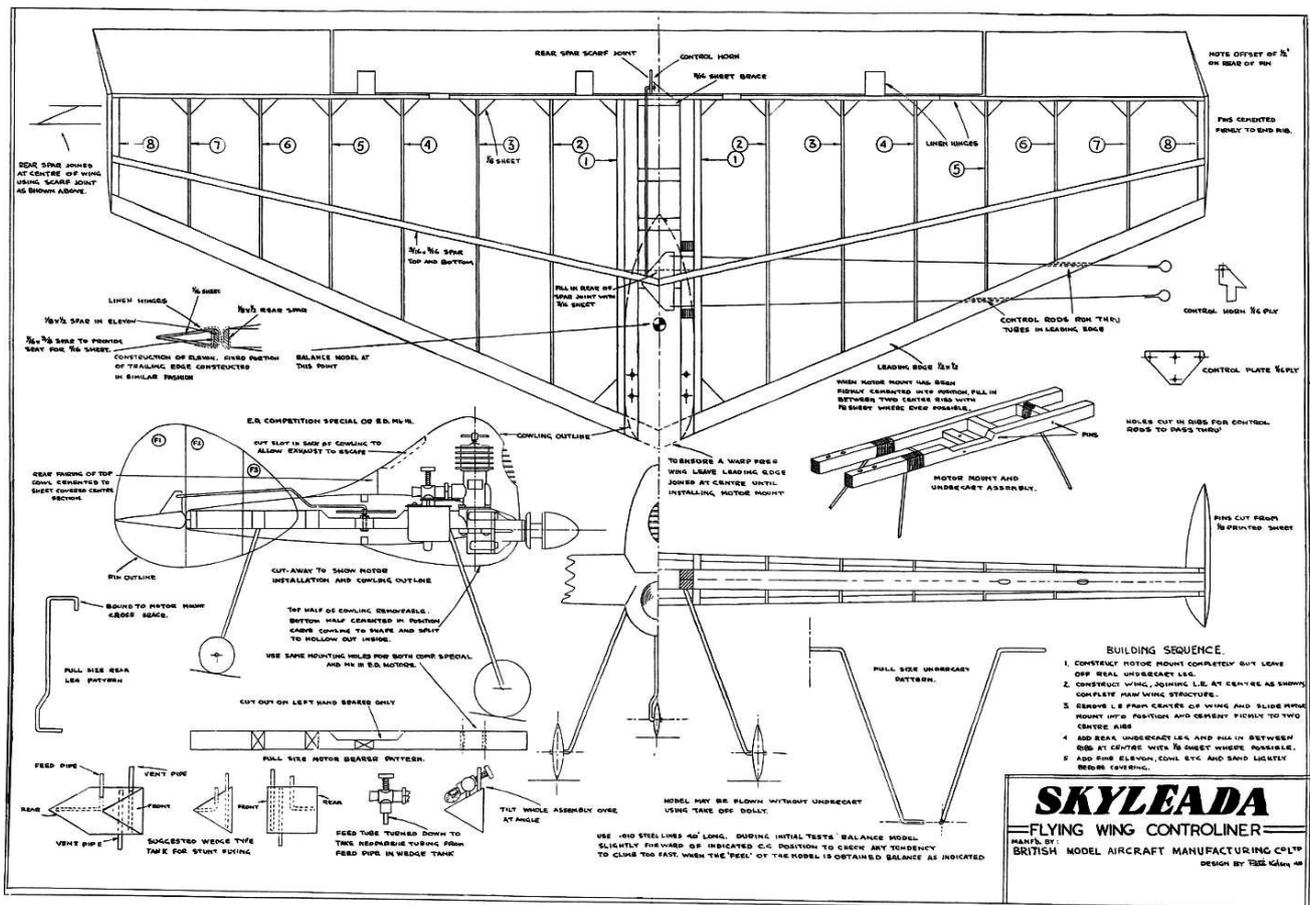
Annoying about the radio fault. I think it may have been caused by interference on 35M/C: there was a car rally in progress down the road, and I am told they sometimes use 35megs. I am also suspicious of model car Tx's. Meanwhile I shall look at my installation - there is ONE carbon fibre pushrod, at right angles to the Rx antenna - could that cause anything? And the Rx is somewhat odd, UK made, and may have needed some special treatment which is mentioned in the instructions but which I haven't bothered with before. Also the wiring is all a bit jumbled up. Needs to be shortened and arranged well away from the Rx aerial. The whole receiver bay is rather a mess, and I had been meaning to make some sort of hinge and catch arrangement in place of the unsightly sellotape you can see in the photo.

I shall try a larger rudder, with a blunter trailing edge, to be able at least to get some ground steering, though turning by aileron alone is smooth and effective in flight.

The final weight, which I have not dared to check up to now, as I get so upset at having to keep adding lead to the nose (probably about 4 oz altogether), is 730gm (1 lb 10oz).

I returned via the Saree model flying field (the Bar-sur-Loup Club), where everyone was very interested and nice about this strange creation. Our local vintage expert, Jean-Pierre Marie, tells me he has rebuilt his 4/5 scale HV 450, which he lost six months ago complete with his home-built replica Allouchery 1.25cc diesel, and has built another Allouchery for the new model, which has now flown better than ever.

Skyleada "Flying wing"



This copy of the plan was kindly supplied by Derick Scott

www.model-plans.co.uk

Following from Richard Bavin

First many thanks to Derick Scott for response to my request for plan of 1948 Skyleada Flying Wing control line model. Plans arrived within a couple of days of S&T issue!! Have always wanted to build one of these (Since 1946!!) and started construction instantly, having never seen one "in the flesh". Have used the ED Comp Special for power, model tissue covered of course. Flair orange tissue with cowling



in black lightweight model span, using up the last of my stock. Went together well, C of G came out as plan so looking forward to seeing it perform.

I enclose photos of completed model for your interest together with Vic Smeed's "Chubby" with DC Dart .5 cc power, courtesy of Old School Model Aircraft factory (02086471033), and a Phantom, Mills 1.3 power built as my personal trainer.



From Jörgen Daun



Hi James I send you some pics, the first three is from last summer one of our busy pit and one of my Sky scooter built from two noncomplete org kits silk and dope and a PAW 1,49 flies great and next is a Tumbletot from aAMI plan and a0,6 Micro diesel .Next is some pic,s from this spring first is the Varsity from a Klarich short kit eng, is a Modela 2 cc silk and Randolf dope and next is a Senior Tomboy short kit from Belair Indian Mills 1.3 and last my little Falcon 36 from Falcon models with an Allbon

Dart and covered with silkspan and Aerogloss dope.





From Jim Paton

I am just finishing my Korda 1949 8 oz. Wakefield. I could not help noticing the similarity with my previous project, the KK Achilles. I guess the Korda design was the height of development at the time and therefore a good starting point. The Achilles is very close to a half size Korda as the attached photos show. The fuselage and cabin are very alike. With the supplied prop for the Achilles



the flight duration was not good. I glued 1/32" balsa sheet to the front of the plastic and made it into a 10" prop. This simple temporary measure produced a huge improvement in climb and duration. So I then carved 2 more props, an 8" for use in vintage comps, and a 10" for sport. It has a fuse wing DT. That way I can keep the tail and rudder consistently in position for trimming. The climb is initially a bit erratic, but I am slowly getting there. Trimming small rubber models without wing wigglers, vit and auto rudder is not easy! Why were the supplied KK props always too small? I know the answer, but what a huge improvement could have been made with a larger plastic prop for the extra tuppence.

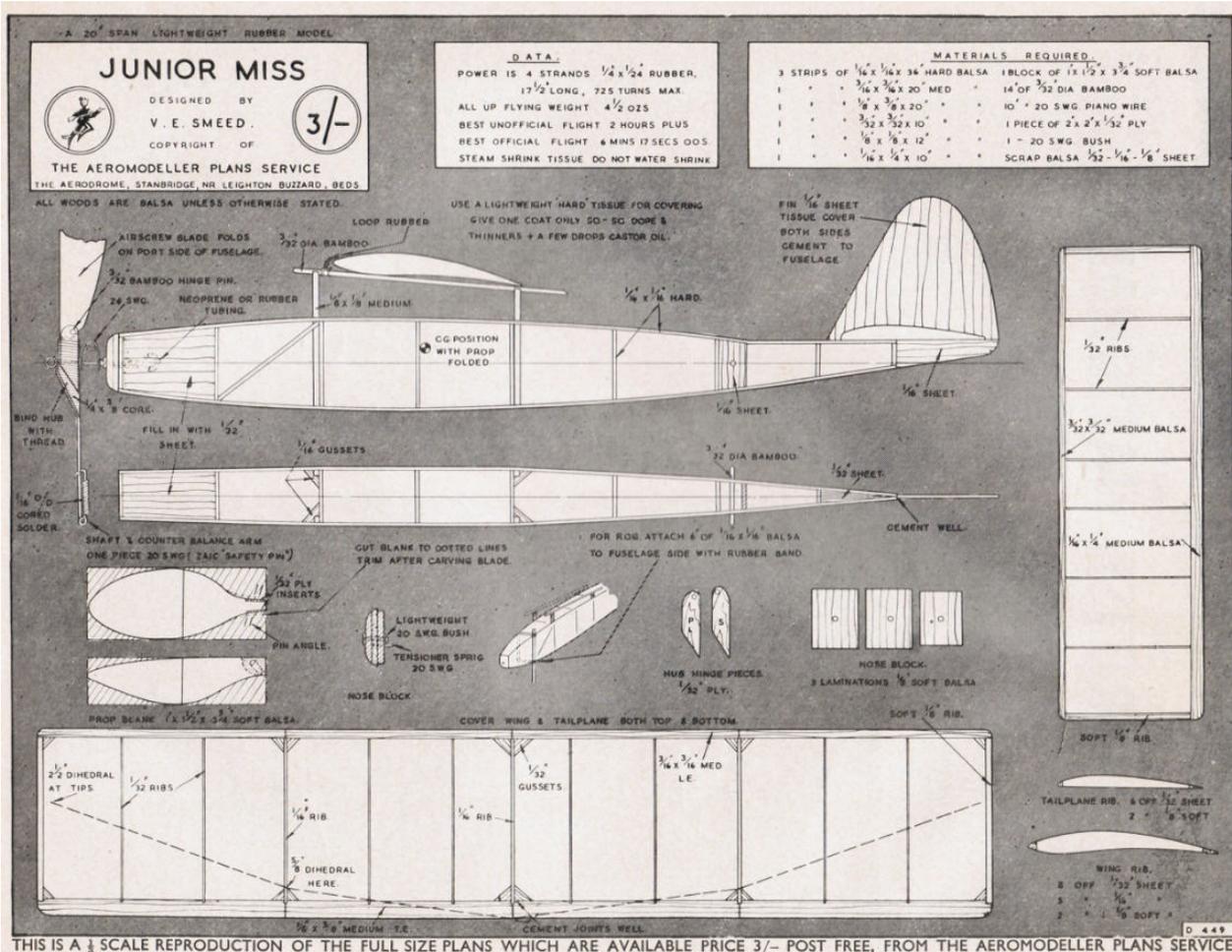


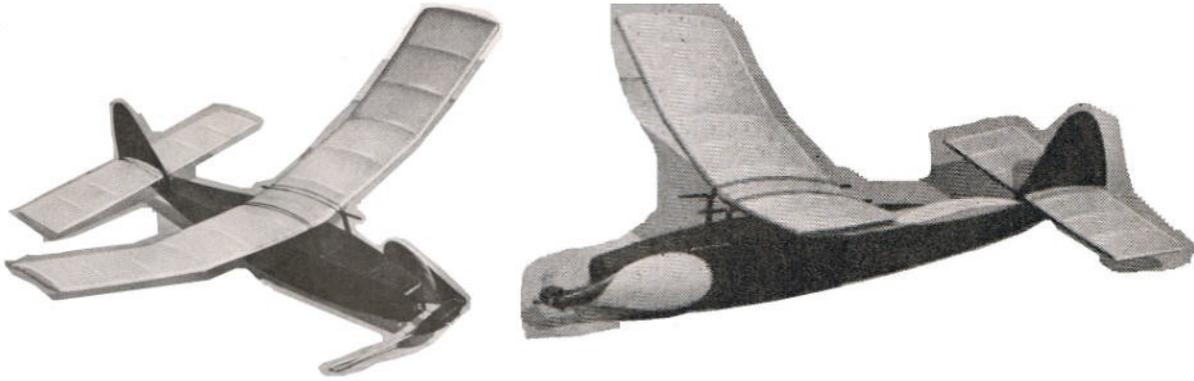
From Peter Scott

I wanted to let you have the attached list of 1950's F/F sports designs (from my master "Aeromodeller" index) for the benefit of S&T'ers who may want to build something suitable from APS. (Sorry I haven't got to fit the page properly JP)

Year	Month	Page	Name	Designer	Description
1951	April	206	Aquarius	Heginbotham	511/2" flying boat 2cc
1951	July	400	Ascender	Fullerton	40" Canard 0.75 to 1.49cc
1955	April	180	Bi play	Holland	Free Flight Diesel Biplane
1959	February	78	Boom	Fleming	Free Flight sports model for 0.5 to 0.8cc
1952	November	650	Brooks' Biplane	Brooks	Semi Scale Biplane designed by Brooks for 2.5cc
1956	May	258	Bullet	Peacock	36 span all sheet high wing sport flyer for 0.5 0.8cc
1959	October	480	Changi	Healey	38 inch Free Flight Sportster for 0.75cc to 1cc
1958	December	642	Chatterbox	Smeed	Free Flight power Plan Free Plan
1956	March	138	Cherpa	Ellis	Free Flight unorthodox swept wing tailless pusher for 0.75 - 2.5
1957	December	640	Chloe	Darr	36" span high wing sport model for 0.5cc engines
1956	July	354	Clywd Queen	Wilde	Universal 63" span power or Glider tailless 2 class British record
1952	June	332	Consul	Neal	Low wing Free Flight power 1.3cc
1950	July	416	Coquette	Smeed	Free Flight Biplane
1957	June	306	Courier	Cracknell	Plan and Construction article for Free Flight sport model
1952	December	740	Debutante	Smeed	0.5 to 1cc engine Free Flight designed by Vic Smeed
1952	November	654	Delta 1	Lancaster	Free Flight pusher delta for 0.75 - 1cc diesels
1957	February	71	Delta 707	Biesterfeld	36" span semi Scale delta either Free Flight or radio control for
1951	August	488	Dorland (converted to Diesel)	Stothers	0.5cc to 87cc power
1955	December	672	Druine Turbulent	Moulton	Free plan F/F scale
1955	December	648	Duckfoot	Swinden	Free Flight winner of Bowden Trophy 1955 amphibian
1957	March	136	Dunne Tailless	Males	Plan and Construction article for semi Scale Dunne Tailless
1958	April	215	Ebenezer	Striegler	Plan and Construction article
1952	January	16	Envoy	Shaw	40" power cabin 0.5 to 1.5cc
1951	November	654	Fledgeling	Shaw	331/2" span for 0.3 to 0.87cc
1951	July	404	Ghoul III	Gates	352 sq in flying wing Jetex to 1.49cc
1959	August	358	Javahawk	Norman	Ducted fan for 1.5cc engines radio controlled 271/2 inch span
1955	March	126	Javelan	Ellis	Delta Diesel Free Flight Power

1957	August	414	June Bug	Davies	Super stable 4ft span Biplane for either Free Flight or radio control
1956	November	596	Junior Jim	Jacobson	40" span parasol wing sport flyer for 0.75 1/3cc
1952	February	83	Kalpie	Robson	0.5cc sheet power
1955	June	307	Lil Plank	Wyatt	Full size Plan Flying Wing Diesel
1952	April	202	Madcap	Callon Smeed	45 1/2" sport model for 1cc
1955	December	672	Mam'selle	Smeed	Pretty F/F 0.5 - 1cc
1951	January	16	Manx Arrow	West	66" 0.5cc pusher flying wing
1955	October	523	Miranda	Holland	FloatPlane high wing cabin diesel Free Flight
1951	May	278	Pete's Plank	Wyatt	650sq in 54 1.5cc power
1951	February	80	Phoenix	Woollett	72" Cabin power 3.5 to 5cc
1951	December	720	Popsie	Smeed	38 1/2" span high wing for Radio Control or Free Flight 75 1cc
1950	October	634	President	Hatfull	Free Flight power Plan
1956	April	186	Pteranodon	Guntrip	55" Free Flight twin engine canard for 2 - 4cc ideal for radio control
1950	May	276	Queen Bee	Grimwade	Radio model
1950	January	22	Rebel	Twomey	Free Flight power V Tail
1958	May	256	Roaring 20	Striegler	Sports Biplane for .75 cc diesel Plan and Construction article
1956	September	460	Scytale	Chivral	78" span high wing cabin semi Scale for sport or radio control
1958	March	157	Sea King	Ellis	Plan and Construction article 45" float Plane
1955	May	246	Snow White	Bridge	Sport High wing Cabin Diesel Free Flight
1950	February	78	Sporty	Humphreys	Free Flight power Biplane Plan
1952	July	396	Sultan	Wildman	Mid wing Sportster for 1.3 - 2cc
1959	September	438	Susie	Baker	44" mid wing Sportster Free Flight for 0.75cc to 1cc engines
1952	July	412	Titch	Warring	Sports model for 0.5cc
1950	November	710	Tomboy	Smeed	Free Flight beginners power model
1956	February	88	Vampie	Naughten	Free Flight all sheet sport model for 0.75cc with twin booms
1950	September	564	Venture	Campbell	Semi Scale Biplane Free Flight Plan
1951	June	332	Wyvern	Dunmore	1cc Bowden Trophy 26"





Junior Miss by Vic Smeed. An easy quick to build lightweight model of proven abilities, suitable for the beginner and experienced flier alike.

From Aeromodeller October 1951

TWO-HOUR flights—even unofficial ones—are not frequently encountered, especially with rubber models, and more especially with a midget rubber job. " Junior Miss " turned in one such flight, however, and the designer is still pinching himself ! The official time for this particular flight was a modest 6 mins 17 secs. o.o.s., but the model was followed for twice this time before disappearing immediately overhead in a clear blue sky. A conservative estimate based on maximum possible drift speed and distance covered indicates that the actual time-in-air must have been a minimum of two hours. Unfortunately the finder had a four-year-old child, and a few scraps of balsa and a bit of well-chewed rubber was all that remained for ultimate collection.

The normal flight time which can be expected from a well-trimmed " Miss " is about 90 secs. plus, on full turns, but the model has a very flat glide and is susceptible to very small patches of lift, so that a dethermaliser (pop-off wing or 6 in. parachute) is a worthwhile investment.

Most of the construction can be made up with the scraps found on most modellers' work-benches, but even if all materials are purchased the total cost of the model, ready to fly, can hardly exceed 3/6.

The time spent in building is about the minimum possible for a rubber job, and despite its small size, performance is good enough to intrigue the hardened rubber man. Transportation is hardly a problem —" Junior Miss " will tuck away in almost any odd corner of the box.

Construction

Follows conventional lightweight lines and is perfectly straightforward. Note that the wing and tailplane are double surfaced, being covered top and bottom with " Swedish " or " Jap " tissue, not Modelspan. The covering should be steam-shrunk and treated with one coat only of 50-50 clear dope and thinners to which has been added a drop or two of castor oil. Water or neat dope will twist the surfaces beyond use. New in this country is the " safety-pin " counter-balance on the prop, originated by Frank Zaic. Use the thinnest type of cored solder (about 1/16 in. o.d.) for the balance, and coil it round the shank of the pin. The solder is not secured to the wire in any way, and it is a simple matter to add or remove a turn to balance the prop exactly.

The undercarriage, if R.O.G. is required, is merely a length of 1/16 in x 3/16 in balsa held to the fuselage side by means of a rubber band looped round the fuselage. This is renewable each flight if necessary.

Power is supplied by four strands of 1/4 in x 1/24 in. rubber, max turns 725 approximately. Weight with motor should be about 1 1/2 ozs. Put a few turns on the motor and allow to run until the tensioner stop engages, then, with prop folded, move the wing until the model balances at mid-chord. Check the glide and when satisfied mark the wing position clearly on the runners. Wind on about 100 turns and launch. The model should be too busy getting upstairs to worry about turning; no downthrust should be required, but in the event of a sharp left turn a sliver of right-thrust may be advisable. The climb to aim for is straight up from the hand, when after about 30 – 40 ft. the model will suddenly half-roll and face the other way with no noticeable check in the vertical speed. The final part of the climb will then smooth off into widening left circles, " Miss " rolling easily into a right glide circle

when the prop folds, due to the weight and drag of the counter-balance. Any peculiar glide characteristics may normally be traced to the prop-blade folding incorrectly—it should lie flat, parallel with the fuselage side. Minor adjustments may be made by warping the flying surfaces slightly, or if necessary by cutting and hinging a trim tab in the 1/16 in. sheet fin. These measures will not be needed if the model is truly and accurately built.



Derick Scott as mentioned above has a phenomenal supply of plans I believe he mentioned 100 pages worth, must be thousands. If there is a plan you want contact him via his website

www.model-plans.co.uk

Peter Rose's new Indian Mills are for the FF ones .75 - £70 and 1.3 - £90 he can be contacted on

g4yqv@tiscali.co.uk

Derek Foxwell (Old School Model Aeroplane factory) 02086471033 has a new kit, which should be available in about ten days. It is Doug McHards Wee Snifter in both FF and RC you choose which you want. I've seen the first build and it looks really good.

THE END