



# Model Aeroplane Club

Founded in 1946 by Ray Malmström

May 2015

Edited by Bryan Gostlow  
Distributed by Tony Harper



As you all may know Chris Strachan announced at the last A G M that he was standing down as Chairman this year and asked if anyone would take up the mantle. After long deliberations and talking to Chris to see whether anyone had come forward, I offered my services, which has been accepted.

I feel that we all should express our many thanks to Chris for all the years of hard work that he has done for us, and for the stalwart work he has done on our behalf. I don't know how many years it has been, but he seems to have been doing it since I returned to the club in the early nineties.

I feel the Club is in a fantastic place because of Chris. He has kept us all informed of the programme ahead, done all the difficult negotiations with the College and represented us with the B M F A. And done many other things behind the scene.

The Open Days have been the big success for the club, and I think Chris was the driving force for these, not forgetting all the other helpers from the club.

Chris has offered to help me in the background to carry on with the running of the club as have others, I will do my best, but I should say he will be a hard act to follow.

Once again Chris very many thanks to you from All the members of I.V.C.M.A.C.

*John Wynn*



# Aiming for the Nats

foam builder **John Valiant** writes

The model is a Doflug D-3802. I like to try and find models that are a bit unusual and I have not seen modelled before. Searching the internet I managed to find the documentation needed to enter this years British Peanut Nationals in April and so began building last September. Built with blue foam and hand-painted with acrylics.



## TRIMMING

The original had a four bladed prop. Not sure how the model would behave I decided to be safe and go for a two bladed prop for the first trimming session. I always start with the model flying in left-hand circles with down aileron on the inboard wing and up on the outboard. Left rudder, balance just behind the leading edge, a little right thrust and a short length of rubber from prop to motor peg.

Ready for the first flight with a few turns and crouch down to reduce the height if anything drastic should happen for the first release. Promising, it flew level in a tight circle. Add a bit more right thrust to open up the circle and a touch of down aileron on the inboard wing plus a few more turns. Even better, I can still add more right thrust to open the circle and more turns.

Releasing at standing height the model was flying as it should with a steady climb. wide circle and coming steadily down. I flew it with this setup for another half a dozen flights to make sure it was behaving consistently before I increased the length of rubber which means a little extra nose weight to keep the balance right. With that setup the next flight was higher and longer with a slight stall so a touch more nose weight was added. It was then flying well, again three or four more flights to make sure it was consistent. With that setup I started to change rubber length and widths to try and improve duration for the rest of the day. Next session I will try the four bladed prop and see what problems will occur.

## DOFLUG D-3802 INFORMATION

The Doflug D-3802/ Morane-Saulnier M.S.540 was developed in Switzerland from the M.S.450 and was basically an improved version of the M.S.406.

Developed in France in response to a 1937 call for a new single seat fighter. It used more modern construction methods and a more powerful engine made it the first member of the M.S.406 family to exceed 400mph.



Development of the M.S.450 family ended in France after the armistice of June 1940. Two years later the Dornier-Werke AG (Doflug), a Swiss subsidiary of the German company, was asked to develop a single seat fighter to replace the D-3801. Their response was the D-3802, which took many of the features developed for the M.S.450 and improved on them.



# RAF Museum, Hendon

organiser Margaret Staples writes



The trip to RAF Hendon on 7th March was a very successful day. Some said we were not there long enough! There is always something new to see. This time it was the 1st World War exhibition in the Grahame White Factory. A number of items were suspended from the ceiling in that hall so if you visit again then do remember to look up!

The restaurant food was very good, much improved from our last visit. I didn't visit the hangar next to the restaurant but those who did, said it was very interesting with a number of German aircraft. Maybe next time I will get there.

Some Club members spent most of the time photographing the aircraft and so I am wondering if we are going to see an influx of scale models at the club in the near future.

Suggestions for the next trip are RAF Museum Cosford or Newark Museum. If you have any other ideas please let me know and a vote will be taken later in the year.



## Royal Aircraft Factory R.E.8

Another flying replica from TVAL

The RAF Museum Hendon has introduced a number of replica and restored aircraft which not only extend the collection but give a feel for how these looked when factory fresh.



## Sopwith Dolphin 5FI

A museum restoration which I first saw in the workshops at RAF Museum Cosford

## Albatros D.Va

A flying replica built by New Zealand based TVAL the Vintage Aviator Ltd

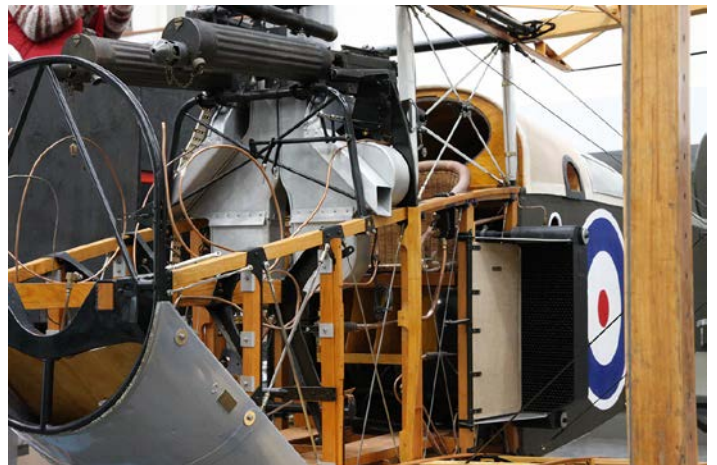
Much more information can be found on the museum website under: "On display"



strut mounted ASI



they had their work cut out



## Ask a man who knows

We ask Richard Crossley about covering with ESAKI



This photograph was taken when Richard brought a number of models along to the March Public meeting. He's a busy guy and so as editor I'll admit to a bit of a cheat here: this advice is pulled from various articles he's written over the past year or so - with Richard's permission of course!

### Wings

*Before building* lightly sand spars and edges of ribs. Trailing edges should also be tapered.

Apply tissue paste to edges and ribs - for this I use clear UHU paper glue. [try Staples - Ed] Squeeze out a drop then apply with finger or small brush - it can be thinned with water.



Arrange for the paper grain to run spanwise and cover the bottom of the wing first. Cut off excess. Cover the upper surface leaving 1/16" all round then fold and glue over the leading and trailing edges. Water shrink [or steam] then pin to the building board with 1/8" spacers. Dope with two coats of thinned dope.

The key to getting a realistic, neat looking wing on a model where the original was a metal stressed-skin type is to use multiple 1/16" spars, almost like a stringered wing I guess. Once built the method I use is to sand the ribs flat between the spars. This is similar to the way I scallop the fuselage formers between the stringers so that you can't see any unsightly bumps. Doing the same to the wing sounds like a strange idea, as you will have a 'faceted' wing section. In reality it makes the wings look really slick. Its not right to see ribs showing through the tissue on metal type aircraft.

One thing to remember, make sure you only sand a flat between the spars, don't scallop them concave, as this will look awful when you stick the tissue to the ribs!

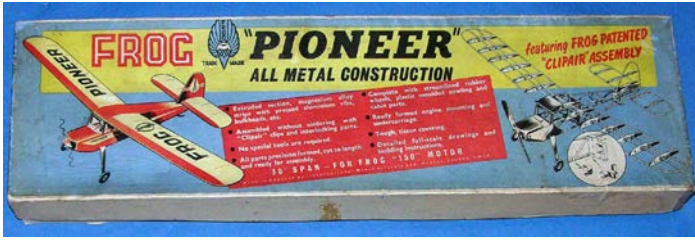
If you can design the wing so that the spars coincide with scale panel lines, then all the better.



'before' and 'after' covering Richard's Ki-43 Hayabusa

# FROG's Pioneer

Alan Hunter is rarely surprised by what eBay turns up



Did you ever own one of these? Alan found one for sale on eBay and watched it for a few days. He says, "the FROG Pioneer finally went for £265 with a dozen bidders."



This August 1955 advert has it for sale as 59/6 or, adjusting for inflation, £72.88 today - quite an expensive model. The idea was to create a simple-to-build model along Meccano lines which didn't require any woodwork skills or special trimming. It proved unsuccessful because the weight proved too much for an effective flying model.



# Clever Dickery

Trim sealing iron



This useful trim sealing iron comes with interchangeable tips and is available from the Sussex Model Centre



## Plasticising

In "Flying Scale Models of WW11", jointly produced by Doug McHard, Bob Peck, Bill Hannan and others, Clarence Mather writes, "If the model is to be doped, use thin, well plasticized dope, and spray lightly. Use two parts thinner to one part dope and add ten drops of castor oil per ounce of dope. Castor oil works fine with nitrate dopes or lacquer"

I checked with John Hook of [Flitehook.net](http://Flitehook.net) and the dope they sell is definitely Nitrate dope.

## Precision Saw Set

Model Craft have come up with this precision saw set

The blades are just 0.010" thick



## Cross & Cockade International

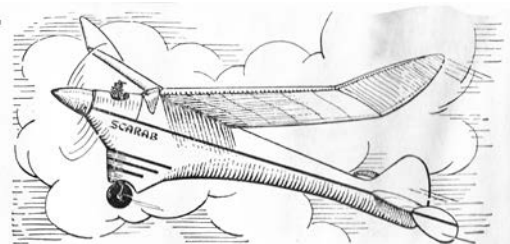
If you're not familiar with this First World War Aviation Society then check their website: [crossandcockade.com/](http://crossandcockade.com/) for books they publish and much more.

## For Better Flying in 1949

### Build the "SCARAB"!

Unique design from the Board of Ace-designer Albert E. Hatfull, which incorporates many new features — Free Flight.

Quality of Kit Guaranteed



SPAN-35 ins.—Ideal for Amco .87 and any .5 to 1 cc. Diesel. Kit Price **15/-**

# Covering larger models

*an enthusiasm for Polyspan*



A youthful Gotthelf is pictured here with his Spectre, but it might have been his T-Bone Gas or Wasp. He enjoys building and flying larger models. Recently he's been at work on 62" Belair Viking.

To begin with he covered the model in Solartex [around 90-95 g/sq metre] but found he would need to add an awful lot of lead up front. So, he peeled off the Solartex and began afresh with Polyspan. Just re-covering the tail saved 10g and a further 50g of nose ballast.

As you may know Polyspan is only available in white. Having tried a number of schemes, Alan Hunter has found a work around. His preferred approach is to support a panel, cut oversize, on an adjustable frame before airbrushing Daler – Rowney acrylic artists ink. Gotthelf prefers to apply a second skin of Esaki tissue. This is how he goes about it:

1. Polyspan attached with heat activated glue (Balsaloc or similar)
2. Shrink polyspan with iron at ca 120 degrees
3. One coat of 50/50 clear shrinking dope
4. Wet tissue either on model or before laying on, and tease into place (accompanied by much cursing). The secret is to keep the tissue wet at all times, so you can take your time getting it in the right place. In future I won't use dope at this stage, only water and a soft brush, which helps to push the tissue flat, accompanied with lifting the tissue here and there to get rid of wrinkles, ridges and creases. Large panels are the worst, some people advise to tackle in sections (not sure if they mean cutting large panels into smaller ones, or wetting parts of the panel at a time).
5. Once tissue is nice and flat on the polyspan, brush on thinned non-shrinking dope (thinned to something less than 50%) The shrinking activity of the tissue is quite strong enough, there is no need to taughten the whole thing even more with shrinking dope, especially on lighter structures.
6. Several coats (at least two) of banana oil, the first coat quite thin to ensure the tissue and polyspan get nicely attached to each other. This adds amazingly little weight to the plane (2

coats of banana oil added only 1 gr to the entire 62" Viking wing).

I also did a test wetting the tissue with thin-ish wallpaper paste, then placing on top of the polyspan. I left it to dry (i.e. did not apply dope afterwards), but the tissue could be pulled off quite easily, so I am not sure if this is any good at all. May be I should have added dope straight away, but what's the point of the wallpaper paste then?

Polyspan and tissue as applied above is 51.5 gr/sq metre, compared to something like 90-95 gr for Solartex. I will let you know Viking weights when finished, but I reckon that I will save 48 gr in covering and another 50 gr in nose ballast, some 3.5 oz in total.

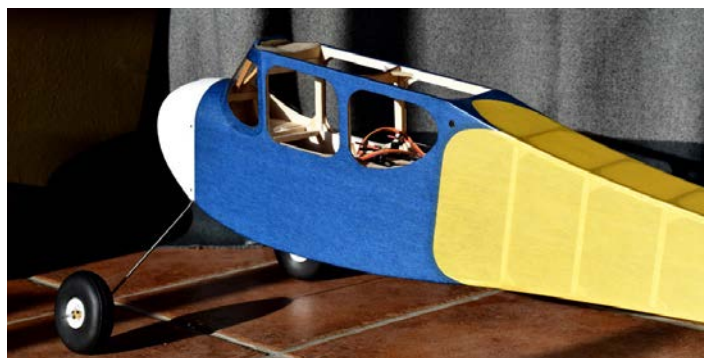
I would like to add that the interaction of water in damp tissue and dope causes white blushing when the tissue dries. However, this pretty much disappears when applying one or two coats of banana oil, especially if the first coat is well thinned.

The article below is the best I have seen on mylar and tissue, much of which applies to polyspan and tissue. Among other things it mentions that Flitehook sell (or at least sold) non-blushing thinners).

<http://newsarchives.yolasite.com/resources/S%26T/ST76.pdf>

*then turn to page 25*

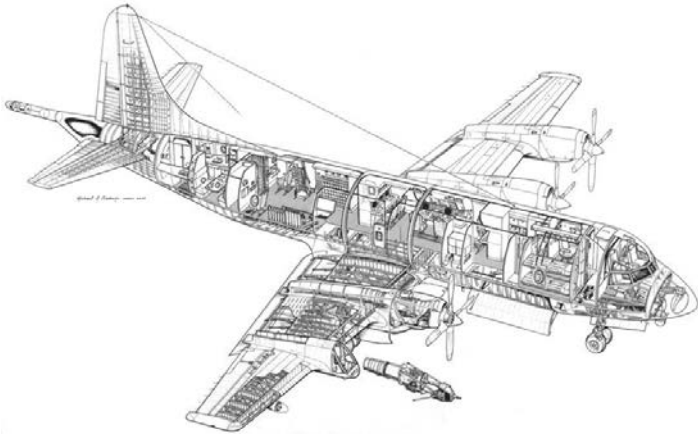
A lot of work but judge the result for yourself



# Looking Up

a report from Tony Harper

The winter, hopefully now past, has been very quiet. There have been the usual “suspects” of course, Hercules, KC135’s and F15’s but now, from early February, things have started to get interesting. My first sighting of note was of an aeroplane I have liked for many years. As a type it was a frequent visitor to Mildenhall at a time when there was a permanent United States Navy presence. In 1965 the USN “Silk Purse” Control Group arrived at Mildenhall with a small group of EC135’s which were used as airborne command posts. However, the aeroplane I’m raving about is the Lockheed P3 Orion. It’s now an old aeroplane but to my mind is still a very nice machine. In common with most aircraft it has a very distinctive sound and it was a pleasure to hear one after several years’ absence.



The Orion was never part of the “Silk Purse” unit because it is a maritime surveillance aircraft not an airborne command post. It was developed for the US Navy and introduced in the early 1960s. Lockheed based it on the L-188 Electra commercial airliner but you don’t see many, if any, of those these days. One of our guests at our March Sunday meeting, Richard Crossley, has built a rubber powered foam model of the Electra with four rubber motors. Another naval sighting, this time the Royal Navy, was a Lynx helicopter, unusual this far inland and inbound to Mildenhall. For the last five or six weeks the RAF has been quite prominent. Tornados have been passing over Ely on approach to Mildenhall, wings fully upswept and with Dunlops dangling. When a Tornado is flown in this configuration it requires a certain throttle setting which I can only describe as noisy and more than enough to rattle the windows, marvelous stuff. Hawk trainers have been about quite a bit dashing around making nice noises. I’m not sure I like the overall black colour scheme. I’m a bit old fashioned about things like that, if I had my way they would be overall silver or light grey with yellow training bands around the wings and aft fuselages, I always thought that was very smart. Towards the end of February I saw a trainer from an earlier era in RAF history, a Hunter T7 there are two or three on the UK register but I don’t know which one this was. Another helicopter going East to West and again unusual was a Royal Air Force air/sea rescue Sea King. Might have been some of Prince Willie’s mates on their way home after calling in for a spot of tiffin.

I have mentioned in the past that I don’t see C17 Globemasters very often. When I do they are on approach to Mildenhall and appear in two’s and three’s. So when one came over one morning in early March I expected another and, true to form,

another appeared about five minutes later. Again after about five minutes another in the distance but it didn’t sound right nor did it look right. It took several seconds to arrive at what was wrong, it had propellers!! Now, I should point out at this stage that I have developed an allergy to sulphites and as a result have given up the booze so inebriation was not the reason I thought I was seeing things. Never the less I had no idea what this aeroplane was and my confidence was somewhat shaken. A quick phone call and all became clear, it was not a C17 with props it was an Airbus A400M “Atlas” belonging to the Turkish Air Force. I also found out that The RAF have an order for 21 on the books with some already delivered. The name Atlas was a bit of a coincidence, days before a Boeing 747 belonging to Atlas Air landed at Mildenhall. Civil airliners often arrive bringing families in or taking them home.

I know some of you have seen some A10’s buzzing around. The two I saw were near enough to make out the letters DM on the fins. This told me that their home base is Davis Monthan air base just outside Tucson Arizona. Most USAF fighting aircraft have tail codes which signify the home base, for instance if you see an F15 with LN on the fin that will tell you its home base is Lakenheath. There were four A10’s in all and they were only here for a few days before returning to the US. Apart from making local flights they were due to use the bombing range at Donna Nook on the Lincolnshire coast but that was cancelled for some reason. As an aside, if you can Google have a look on Google maps around Tucson a bit to the South East. It shouldn’t take you long to find the “Boneyard”. This is where the US break up their surplus military aircraft and it’s worth a look. A week and a few days after our Sunday meeting I heard a very unusual sound and due to the cloud I couldn’t see anything, all the best sounds happen when it’s overcast. I found out after a while that the aircraft was a Grumman C2 Greyhound.



It is a carrier based aircraft and its primary task is to carry cargo to the carrier and mail for the carriers’ crew. Two had flown to Mildenhall, after landing at Stansted to get customs clearance, and news reports have confirmed that the carrier was the USS Theodore Roosevelt. Also in recent weeks there has been a lot of AAC activity, Apache longbows from Wattisham and the occasional Chinook. Now, on Easter Sunday, real aeroplanes started to appear, just two and a sound. The two were the Auster Arrow from Witchford and the silver Classic Wings Rapide from Duxford making its first appearance over Ely. The sound was unmistakably Merlin, but what it was keeping in the air was anybody’s guess.

## An object of curiosity

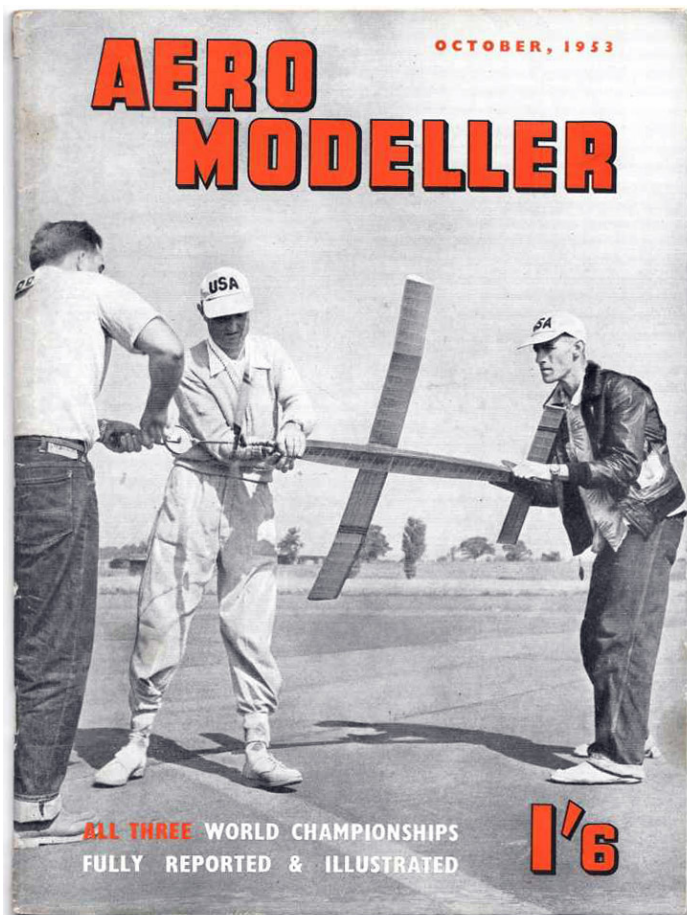
turned up by Raymond Fella



Raymond recently turned up this 'computer' for prop carving. You set the wingspan and AR [top] then read all the data you need to compute the size of blank you should be using. Has anyone used one of these or can remember when and where it was produced?

## Great Covers

Aero Modeller Oct 1953 chosen by Chris Strachan



What makes it special? I was thinking of building a Vic Smeed Pushy-Cat for radio flying on the Sports Field, did a search on ebay and there was this back number. Special if I get round to



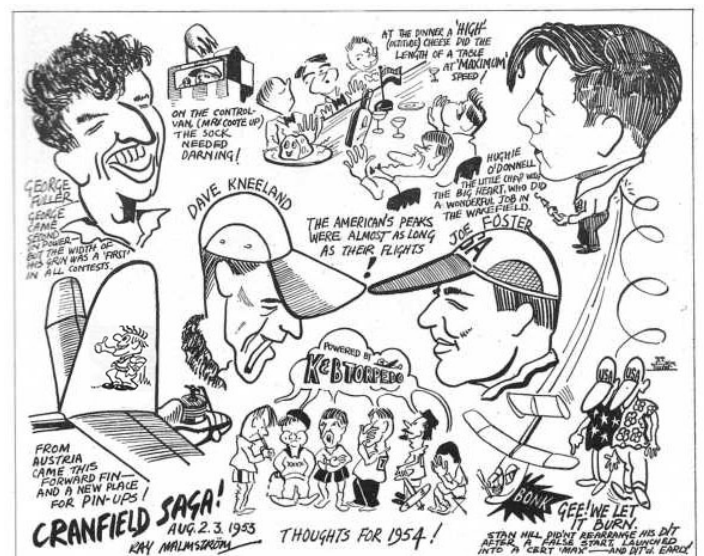
Found on the interweb: Chris Hinson not only greeting customers at the door but [those were the days] wearing a suit.

building it but much more so because it takes me back to when I was 12 years old and just starting to be interested in model aircraft.

Within another 5 years I had joined the Exmouth Club, got interested in competition rubber models and been helped and tutored by Alan Parker and have been flying Free Flight Competition ever since - all be it with a 20 year mid-life break!

This magazine gives an insight into how it was then, at the start of the fifties. Reports on all 3 World Championships (separate ones in those days). All featuring models built by the flyers and within reach of any young person who wanted to build a replica. A composite of the competitors by Ray Malmström. The rest of the magazine full of plans and semi technical articles. Who could fail to be enthused?

No negatives about today implied - but those were the days!





## Public meeting

a great talk by Ivan Taylor



Ivan's D.H.103 Hornet

Ivan Taylor is well known as a Wakefield flyer but in the last couple of years has turned his hand to Rubber Scale and is clearly having fun. He brought along several models which track his progress in a new field from kit to scratch built. He entertained by recalling having to get to grips with canopy forming, non-folding props [but which double as undercart] and getting the colours 'just right'.

He shared his artist's perspective of colours close up and at a distance, something I'd never really considered in relation to scale.

Preferring to cover with mylar he then prepares it with a thin initial coat of thin clear dope before applying an acrylics finish.

Another very interesting tip is to employ strimmer cord for attaching balsa prop blades to the hub with sufficient resilience to avoid breaking on landing.



In the period of questions afterwards there was a lot of interest in his use of winding outside the model - commonplace in duration rubber model flying but unknown in the scale world. The questioners were attracted both by the better control of the winding process and by the possibility of a rear anchorage without any external evidence and hence no penalty in scale judging (something that does not concern the duration flyer!



# Anatomy of a kit

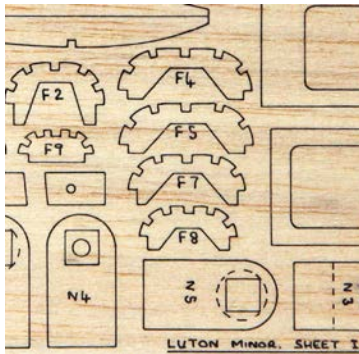
Luton Minor by Andrew Moorhouse

In February's BFMA News Andy Hewitt talks about, "The fantastic kits made by Andrew Moorhouse, which have never been beaten."

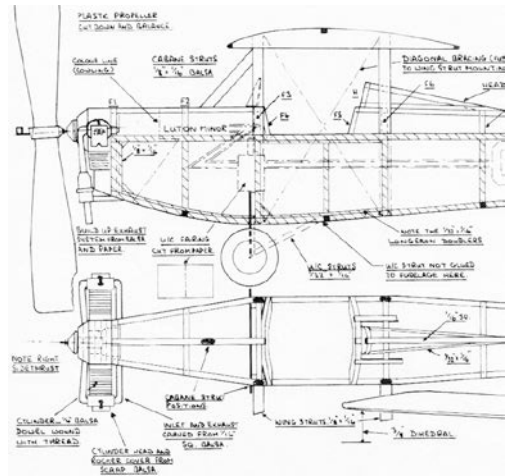
Fortunately Alan Hunter has an example of Andrew's Luton Minor and offered to lend it so that I could write this piece.



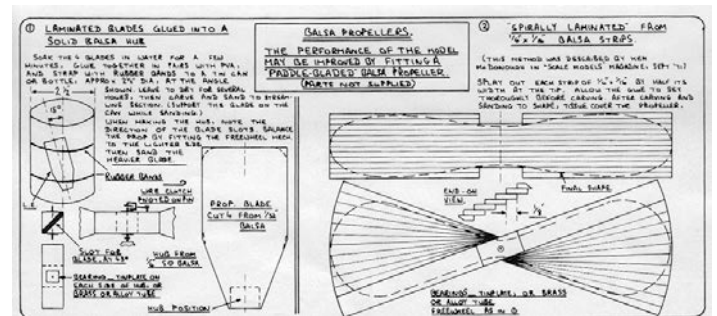
First impressions are that this is a very complete kit and the wood quality and printing is superb.



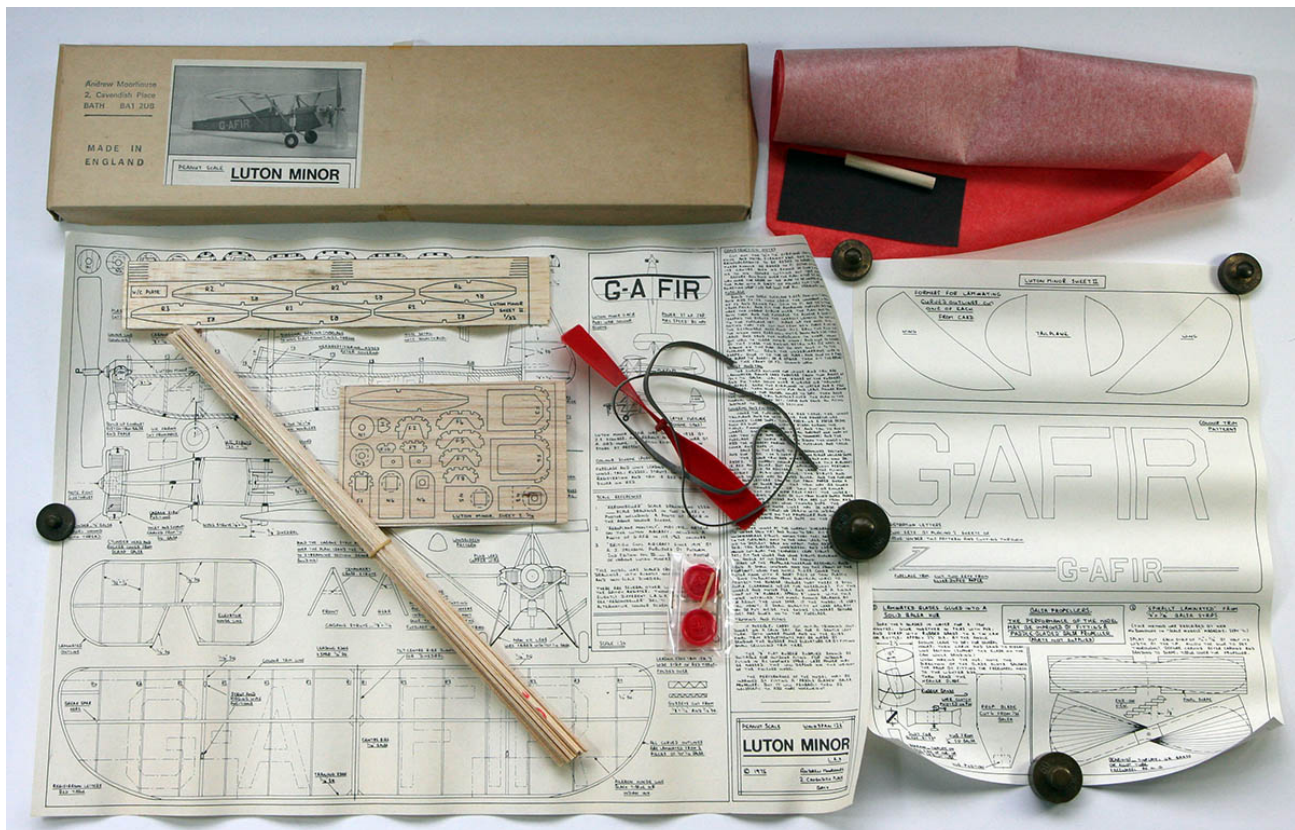
Everyone who's seen one talks about Andrew's plans and the amount of detail included.



If you don't want to use the plastic prop included with the kit then Andrew provides two sets of instructions on making one from balsa.



It's right what people say - kits that have never been beaten!



# News of a Malmström *Athene*

an update from David Hunt



In November's newsletter there was a little piece on the Athene that David flew at Old Warden. The short version is that it flew beautifully but wouldn't respond to turn commands! Over the winter David has added an aileron servo in a compartment below the main receiver/servo board.



above Spektrum 6400T



below Spektrum AR 2000



David writes: *Attached are some photographs of Athene Mk. 2 as she is at present. I have included a few detail shots showing the motor installation (Parkzone P51 motors), the main receiver and servos board (Spektrum 6400T), the aileron servo (Spektrum AR 2000), which is accessible via a hatch in the belly, as well as one of the ailerons and the tail feathers. The aileron installation is a bit Heath Robinson and not the way I would have done it had I been installing them from scratch (I would probably have used a torque tube in each wing) but I wanted to avoid too much rebuilding so I settled for what is generally known in the full size aviation world as "a suitable system of levers and linkages". The downside is that it's a bit more weight than I would like but you can't have everything I guess. The cowls, belly hatch and the side hatch seen just behind the cockpit on the left-hand side are all held on by magnets whilst all the control surface hinges are pieces of tracing film superglued into slits in the wood. Covering is Esaki tissue, the fuselage having something like 36 separate pieces.*

*Apart from the obvious alterations to Ray's plan such as the tail feathers and nacelles, I altered the aerofoil section as the original was too deep for a model of this size with such a tiny Reynolds number. I also increased the wingspan a little and*

*moved the wing slightly forward to give a slightly greater tail moment.*



Parkzone P51 motors

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## Competitions for Summer 2015

Friday evening dates from Michael Marshall

|               |   |
|---------------|---|
| 24th April    | CLG                                       |
| 8th May       | Bostonian                                 |
| 29th May      | Malmstrom rubber models.                  |
| 12th June     | 25 inch Rubber                            |
| WED 24TH June | Rencup at Newmarket P30 or 25 inch rubber |

From Clive King's proposals there will be a single model competition to run between 24 April and 31 July with the Viking - page 82 of the book Ray Malmstrom, *60 years of IVCMAC* - or contact Michael Marshall or John Valiant.

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## Free to a good home

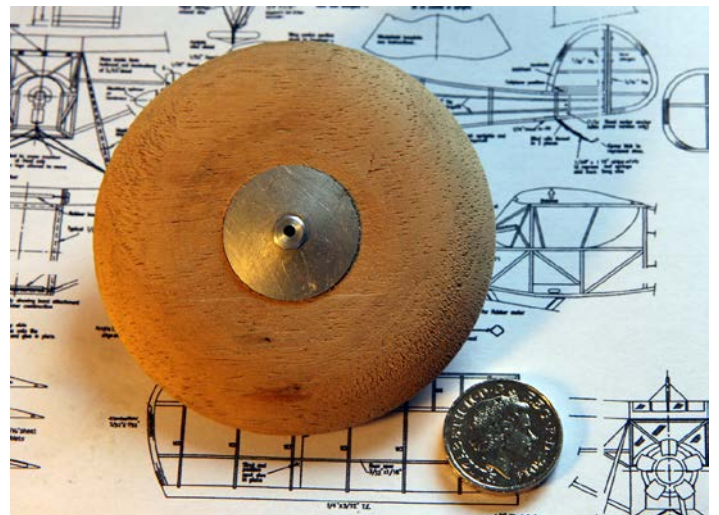
contact Mick Staples

Free to anyone interested 8mm cine projector with some Old Warden film. Worked when I last used it many years ago! A hobby on its own!

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## An object of curiosity

turned up by Alan Hunter



## Early Days at Stag Lane

even De Havilland began small



Both huts got very cold and de Havilland used to look in at the drawing office and say, "Ten minutes off for football". Out they would troop for a warm-up. Lighting was a great trial. It came from a 60-volt d.c. generator coupled to the line shaft which drove the wood-working machines. That was driven by a fifty-year-old 7 h.p. gas engine with tube ignition and if Jack Speller was taking a heavy cut on spruce spar scantlings down went the revs. - and the light. Often the relative urgency of the spars or the drawing office work had to be carefully weighed.

Mr Nixon eventually let go £5 from petty cash to buy a surplus 120 h.p. six-cylinder Beardmore aero-engine from the Aircraft Disposal Company - which at that time had rows and rows of upended D.H.4s, Bristol fighters, Avros and D.H.9s and stacks of engines of all kinds in warehouses at Croydon and elsewhere. Three cylinders of the Beardmore were blanked off and still the power was ample. It was a beast to start and Eric Mitchell once broke his wrist cranking it, so thereafter a rope was wound round a drum on the shaft and several of the heavy gang crept through a hole in the back of the shed and could often be seen falling backwards on the neighbour's field like a successful tug-of-war team.

Knocking-off time was announced by Tom Sayers, the works police force, by beating an old Gnome cylinder. He used to say that the rats left the works at 7.30 a.m. and came in from the hedges at 5 p.m. to the clang of the old cylinder.

When it went at midday out came the packets of sandwiches, eaten in the sheds or huts in the winter-time, or sitting under the trees when the warm spring days came. One tree came to be regarded as the directors, lunch shelter.

Mitchell and his mate Bill came to start the reluctant power plant after lunch one day. 'Give 'er some more gas, Bill.' 'No, some more air.' After several exasperating failures the whole exhaust system was filled with a ripe combustive mixture - and then the engine started. A shattering explosion shook the neighbourhood for miles around. Silence, Then a surprised squeak from Mitch: "Ear that bloody bang, Bill?"

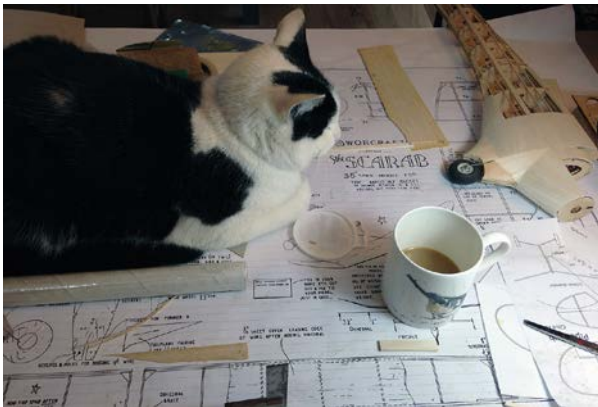
One fine day a gipsy woman came along with eatables for sale, rose to the business chance, and thereafter served *al fresco* refreshments for a year and more from her caravan pitched a few yards from the works. Then they contrived a canteen of their own.

Stores were not issued with ravis abandon. In fact, Mr Hearle found it prudent to keep the roll of fabric under his desk. If a dope-shop girl wanted 5 yards to cover a rudder he would say: 'Do you really need all that? It's expensive stuff, you know.'

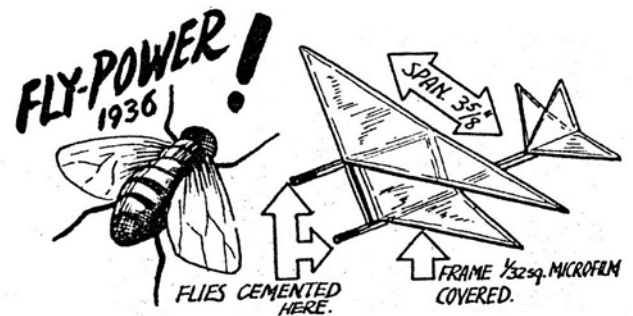
D.H. A history of de Havilland  
C. Martin Sharp

## Snapshot

a view from the workbench



Almost on a daily basis I'm ambushed by *Butters* on my way to the shed first thing. He's a very friendly cat, just not ours.



This small 'twin' was featured in January's newsletter.

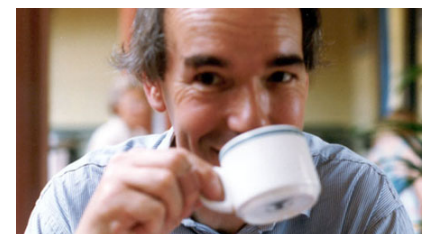
**Ian Cowley** has a trimming tip: *attach your 'motor' about 1/4" back from the very end of the stick, otherwise motivation falls away after about the third collision with the wall.*

## Footnote

A comment or two from the editor

Have you noticed what a high profile IVCMAC has right now? With Clive's regular *Inside Indoor* column in the *Aero Modeller*, Michael's coupe successes recorded too - and you can't open any magazine without seeing Garry and Gerald looking just a bit anxious!

If you've contributed to this issue of the newsletter in any way, thank you.



Finally, a huge thanks to Chris for holding it all together so well and for so long!