



# Model Aeroplane Club

Founded in 1946 by Ray Malmström

September 2015

Edited by Bryan Gostlow  
Distributed by Tony Harper

## The 2015 Ren Cup

Michael Marshall writes



Wednesday 24 June was blisteringly hot mid-morning but had cooled slightly, accompanied by a mild breeze by the evening. This was the date chosen for the Ren Cup competition to be held on the Newmarket racecourse for P30 or models with a wing span of less than 25 inches. The wind was blowing from the grandstand towards the town and it was decided that the maximum should be one minute 30 seconds with three flights to score. P30's were flown by Phil Bailey, Phil Haines, Terry King and Andrew Moorhouse. Chris Strachan was flying a Fledgling and Michael Marshall a King Harry. Margaret Staples and Rosslyn Haines with stop watches and binoculars took up position to time the flights. Good flights were had by nearly all with all models landing safely on the field. Only Andrew achieved a full house with Chris and Phil tying for second place. The magnificent trophy will be presented again to Andrew, at the Christmas party meanwhile bottles of wine were given to the first and second place winners. Extra support was provided by Clive King, it was good to see him there, Mick Staples, Ray Fella and Bryan Gostlow to whom we are indebted for the pictures.

1 <sup>st</sup> Andrew Moorhouse	4:30
Phil Bailey	4:23
Chris Strachan	4:23
Phil Haines	3:33
Terry King	2:36
Michael Marshall	2:21



# Evolution of the electric Wasp

an account by Gotthelf Wiedermann



I first saw the 'Wasp' by L.S. Wigdor in the July 1981 *Aeromodeller* and instantly liked it for its primeval, insect-like looks. Wigdor designed the 40" span model in 1937 for the new Elf 2.3 cc petrol engine, permitting the design of a 'really small petrol model' compared to the usual 6-8 ft petrol jobs current at the time. The Elf engine weighed a mere 4 oz and used a single cell flight battery, which further kept the weight down. The original plan appeared in the April 1938 *Aeromodeller* as a double-page centre spread.



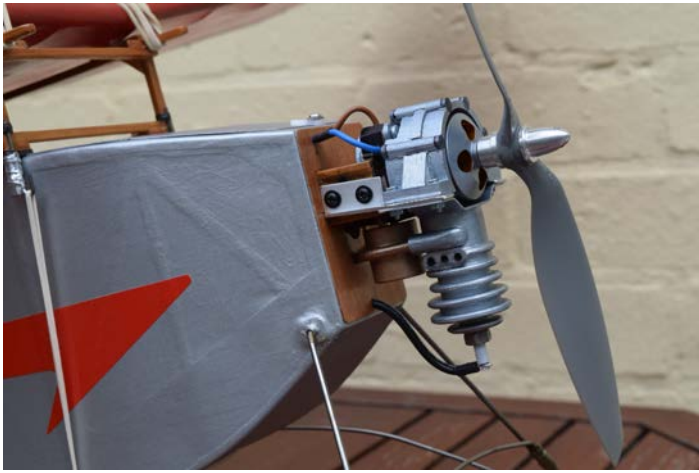
In its first incarnation, my Wasp was tissue covered in black and red, powered by a Mills .75 and fitted with rudder-only R/C. I built it in 1984 while living in one of the boarding houses of the Leys School where my wife was a house tutor. Test glides from the flat roof caused a lot of amusement and talk in the school at the time. I remember the model flying very well, but requiring careful trimming as the relatively big rudder and short fuselage made it a bit twitchy.

Eleven years later it put my thumb through the fuselage covering and was surprised how brittle the tissue had become, even though I had covered it with two layers of Japanese tissue. So, the tissue was removed and replaced with nylon – fuselage silver, wings red – and the tail plane was covered in Litespan. I also removed the radio equipment intending to fly the model like a vintage purist. This too flew well, very slowly with a long

glide, but there were so few opportunities to fly a power model that it spent the next 20 years in an old trunk under the staircase.



Having discovered the advantages of electric flight, I decided it was time to open that trunk again and replace the Mills diesel with a brushless motor, as well as fitting 2-channel R/C. The tail was stripped of its covering, the trailing edge cut out and turned into elevators with their servo hidden in the stabiliser's central section, while the rudder servo was fitted up front, operating via a pushrod the crankshaft-like rudder axle – so all R/C almost completely hidden. The tail feathers were then covered with Polyspan and Japanese tissue. Visually, the model requires a petrol engine, as it is an essential part of its original character, so I built a mock Elf petrol engine from wood to fit around the electric motor. This caused as much head scratching as all the other modifications together, but I think it looks quite convincing. Test flights (prior to fitting the mock engine) proved entirely satisfactory, and I am pleased that my 32 year old Wasp has a new lease of life and is likely to see a lot more service now than it has ever seen before.



Technical data: Wingspan 40"  
 motor: 1400KV 38g A2822-14T - from BRC Hobbies (95W on two cells and 9x4.7 SF prop)  
 battery: 2S-1000 mAh LiPo; prop: 9x4.7 ASP slow fly weight 520 gr (18.5 oz – the original weighed 17 oz!).

All I need now is a wooden SF prop and a sound system to reproduce the crackle of a vintage petrol engine.

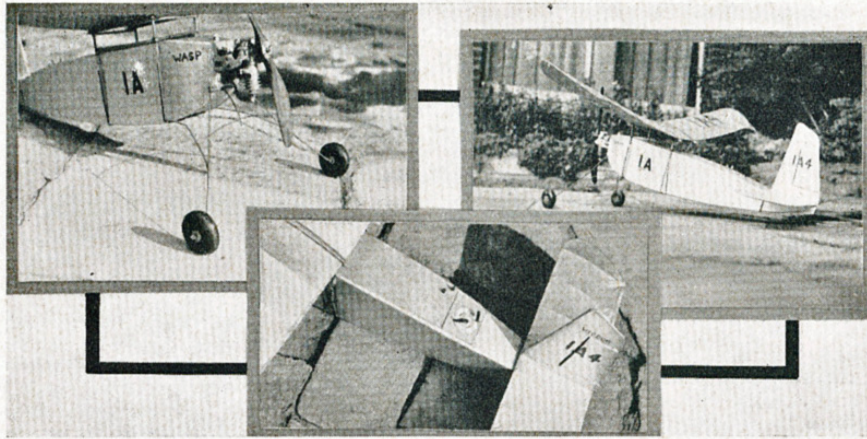
Gotthelf Wiedermann

## The Wasp back-story

April, 1938 THE AERO-MODELLER

### “THE WASP”

A 40-inch  
 SPAN  
 PETROL  
 'PLANE



Designed and constructed by L. S. WIGDOR.

Back in July 1981 Alex Imrie, President, SAM 35 (UK), was writing a series in the Aero Modeller called, “THE VINTAGE CORNER”

He wrote, “Various vintage modellers have offered help with material for this column, and I am sure that many fine contributions will be received in due course. However I am pleased to report that the most active response has come from original vintage modellers who are still very much with the hobby today. This month, L.S. Wigdor, who has been at the game for almost 50 years, provides the source.”

In 1937, L.S. Wigdor received a small Elf petrol engine from his pen friend, Elbert J. Weathers, in California. This engine, although of limited power for its 2.3cc capacity, was a smooth-running sand-cast beauty, and had an ignition coil that would work satisfactorily on only 1.5 volts. A feature of this engine was its very great fuel economy. It could drive the 12 x 6 Chauviere-type propeller supplied with the engine at 3500 rpm for 40 minutes on one ounce of fuel!

Other features not usually found on so small an engine were a float chamber carburettor, adjustable and completely enclosed contact breaker points at the rear of the engine, three piston rings and a “full-size” type of airscrew hub which, in addition to the normal crankshaft nut, also used four bolts which passed through the propeller into tapped holes in the drive washer.



## Athene conversion

David Hunt *updates us*

Back in 1946 Ray came up with Athene. David Hunt has been drawn to it and added electric power and RC. First seen at Old Warden last summer, and reported on in the November newsletter, it suffered from poor directional response. Now David has completed his upgrade and writes,

*"I thought you may like to see the Athene Mk 2 as she now is. I flew her last weekend and the addition of ailerons has cured the directional response problem. In rebuilding, though, I have got the CG a bit further back and the model is somewhat unstable as a result so some lead will be added to the nose. The colour scheme is a fictitious sort of navy affair applied with Humbrol enamels thinned with cellulose thinners and transfers done on my computer and inkjet printer varnished over after application."*



## You couldn't make it up

*answering the question posed in July's newsletter*

The genesis of the B-36 "Peacemaker" can be traced to early 1941, prior to the entry of the United States into WW II. The XB-36 featured a single-wheel main landing gear whose tires were the largest ever manufactured up to that time, 9 feet 2 inches (2.79 m) tall, 3 feet (91 cm) wide, and weighing 1,320 pounds (600 kg). *These tires placed so much pressure on runways, the XB-36 was restricted to the Fort Worth airfield adjacent to the plant of manufacture, and to a mere two USAF bases beyond that.* [maximum takeoff weight 186,000 Kg]



At one point, a tank-like tracked landing gear was also tried on the XB-36, but proved heavy and noisy and was quickly abandoned. Eventually the single-wheel gear was replaced by a four-wheel bogie.





## Alligator

From Sydney Zoo  
An Alligator  
Was put on board  
A flying freighter.  
He ate the pilot  
And the navigator  
Then asked for more,  
With mashed potater. SM

## Friends of Scarab

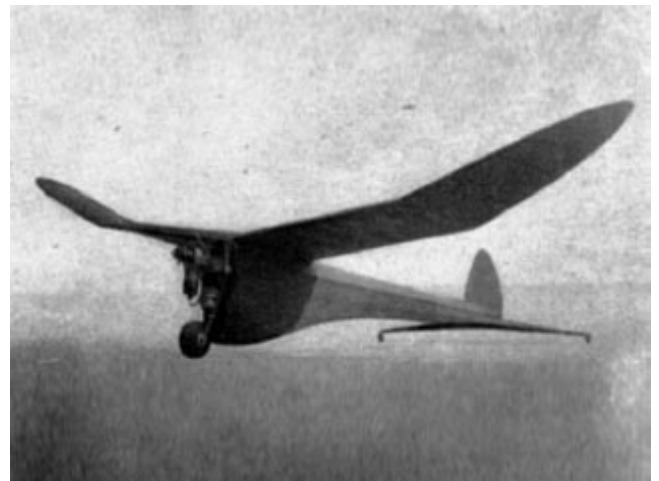
It's been a while since there was any mention of Scarab in these pages . .



What you see here is my prototype built up from laser cut bits and flying with motor and rudder only - a delight to fly. Since then I've had another ten sets of parts cut and they are with various IVCMAC members - though, so far, only Richard has completed his. I thought it might be interesting to have a larger version, scaling up from 36" to 54", and Charlie at the *Manzano Laser Works* has cut me a couple of sets of bits, but that is likely to be a winter project. Meanwhile I've tried to research, as much as I can, how Albert Hatfield came to create the Scarab. It came after his time working for Eddie Keil, more or less for his own amusement, but then the design was sold to Worcraft. He said in an interview,

*"But I sent the design to Worcraft and to my surprise they kitted it. The design took a long while to work out. I mean, the old Junior 60 is a bit of a workhorse. You couldn't say it was pretty. But I can still look at the Scarab and say to myself, "Yes, I like that."*

When so many designs are derivative the Scarab is a breath of fresh air. I've often wondered what was the trigger and just recently came across a US design called the "Record Hound" by Henry Struck and published in *Air Trails*, August 1939. At 72" it was twice the size but had a number of similarities - maybe Albert was aware of it when he drew up Scarab around ten years later.



# Indoor Scale

*two bolts from the blue*

Three issues ago we were treated to a piece by Garry Flack on how he approached building a model to compete in the Indoor Nats. In the next issue John Valiant covered trimming his Doflug in preparation for competition before going on to cover what documentation is called for. Finally, Gordon Hannah gave us an insight into what it 's like to try and judge these models. And that was to be it - except that John had a surprise when he discovered his model Doflug was on the July cover of Flying Scale Models.

He emailed, "The picture was taken at the BMFA Indoor Free Flight Scale Nats at Wolverhampton University Sports Centre in Walsall, 19 April by Alex Whittaker.

Another picture of the Doflug also appears in the article with images of Garry Flack's Westland Wyvern, Pistachio Focke Wulf Ta 152 and Gerald Cooper, John Wynn and myself viewing from the mezzanine.

I wasn't aware of the publication until one Friday evening Tony Harper asked for my autograph. I queried what for and he replied that he had spotted the front cover in is local newsagents."

You'll guess that I was pleased to receive the following email from Andrew Hewitt:

*Hello Bryan, I liked the report on judging, I have done a fair bit of this sport to help out, from Pistachios to F4C team selection. For me the faster it is done, the better! I find that if you start dwelling on what is in front of you, you will talk yourself out of the correct score. I find that you can get a very quick impression of "does it sit and look like the photos or not?" If it does then scoring is easy, just looking for faults in shapes or markings is straight forward. If it doesn't look like the photos then it is easy to hammer the marks down by counting all the clangers up and taking them away. Nearly right models are the difficult ones, these can be very difficult to assess, since you know they are wrong, but not too bad and often the judge next to you will see it as wrong, but in a different way and this leads to heated discussions and lots of wasted time. A nearly model can take ages to score, a world champion model can take 5 minutes, and you want to admire the posh ones, but end up arguing over the duffers! I think to be a judge, you need to love the sport and also it would help if you have done some models designs, so that you know what to look for in shapes. You also need to keep your concentration levels up, so that they all get the same scrutiny (easier said than done). I try to keep to 10 minutes a model, since there are often lots of models and little time, so you will make mistakes, I am human. The standards vary through the different disciplines, some of the best models I have seen are not the big radio ones, they can look great, but do not stack up against their full size information and yes they sometimes do have a dicky fit! We just have to have thick skins, I normally ask them to build something better, that usually does the trick... My two most favourite modellers to judge are of course Peter McDermott's fantastically researched models and Brian Taylors masterful ability to capture nasty shapes and simulate metal, best of the best. There are many models out there that I am sure are not a single modellers effort and benefit from printed markings and bought items, they are easy to spot when compared to the rest of the model usually, but you have to take the signed declaration for granted I am afraid, but it does get my goat, I hope they crash..... I think that most scale modellers would benefit from judging, if only once, to see what it is like and what is being looked at, could save you a lot of work on your next project! Regards, Andrew*

You can follow Andrew's series *Scale Rubber Powered Flying Models* in Aero Modeller



congratulations John

When I took over the newsletter I had in mind to draw in other interested modellers - after all, IVCMAC does get a lot of things right. John Upton has been great in adding successive newsletters to the website:

[http://www.ivcmac.co.uk/ivc04\\_newsletters/ivc\\_news.html](http://www.ivcmac.co.uk/ivc04_newsletters/ivc_news.html)

and a number of modellers follow it from there.

You can read more about the Indoor nats, Gary, John and Chris's exploits, on Mike Stuart's pages:

<http://www.ffscale.co.uk/page3ae.htm>

*and the second bolt?*

## Something a bit special

spotted at Old Warden



I've made space for an extra large photo of this Meteor Monoplane by Richard Ginger - but if only I could bring you the sound of that superb motor!

Fairly simple construction and a large model at 8 feet span but not huge by current standards - just about on the limit at OW.

Richard Ginger

*The Meteor is a Triplet plan and was designed by a Scandinavian, Christer Lagerstadt who knew the local importer of Saito engines and specifically designed the model for the Saito 325R5 53cc radial which is what I also have. The full size was built by the General Western Corporation in the USA around 1932 and 6 were built of which NC 12294 was the second. They went bust a couple of years later, not surprising in the prevailing economic climate. The full size used a Kinner 5cyl radial so the model does have the right sort of powerplant although mine is uncowed mainly for effect! There are no surviving examples although one did keep going for some years as a crop duster but powered by a massive larger radial. There are very few photos either - in fact there are probably more of models of the type! I know of two more built from this plan - one is all yellow and has an ASP radial and the other is also silver and has a seven cyl. Siedel, all these are glow engines. Mine has logged over 200 flights and the engine was recently rebuilt with new bearings. I normally do all my own engine work but these go back to the factory as the valve timing is set using a special jig. My plane took about 5 months to build but being retired does help, as does having a really supportive wife (she bought me the engine!). I didn't take any build photos, however (although I have done so for the last 5 scale projects!).*

On the subject of motors, take a close look at this:



George Kandylakis built this marvellous Avro 7 for Open Rubber (2013 Indoor Nats). It had only been finished just before George flew over, so was untrimmed. The stunning engine was made by the 3D printing process using a CAD model created by George. Have you seen a better one on a flying model?

no pressure Gotthelf . .

## Model flying - another aspect?

an account of the Oxford Rally by Michael Marshall

There has been a free flight competition at Port Meadow in Oxford for almost thirty years organised and controlled by Andy Crisp. He is well known in the free flight community as an artist, a musician and for his glider designs. Port Meadow is not a recognised free flight site but a swathe of common land between the river Isis and the town of Oxford. Over ambitious flights may end up in the river, canal or even on the railway lines so some discretion is required of the flyers. The other weakness is that cars have to be left at the entrance gate and it is necessary to carry one's kit to the chosen up wind spot. By carry I mean by using a barrow or trolley similar to those used by fishermen.

Chris and I made this journey last weekend when it was dry and not too windy but a bit overcast. Because of the restrictions cited we both decided to fly tailless models, which are a bit out of the norm, and we considered that we could keep them on the field. The flight maximum was set at one minute thirty seconds with three flights to count. Unusually I was first to fly with a flight that achieved the maximum. My second flight was only for one minute, twenty two seconds. *Dommage!*



Meanwhile Chris was maxing for all his flights. My third flight at around 2 pm was launched into really good air and disappeared over Oxford in four and a half minutes.

What to do now? It's relatively easy and perhaps fun to build another model but the trimming may not be so simple and there is also the loss of the tracker radio, 80 Euros and a four week delivery. We were soon looking at the OS map, to find the line and then into Chris's car with a 5db gain aerial on the roof connected to a portable receiver. It was necessary to stop and listen at two or three locations before eventually receiving a signal. Out of the car we followed this alongside a river using a Yagi aerial and were eventually able to receive a signal on the portable radio. It was still some walk before we came to the model resting upside down in a field of green barley. Probably four to five kilometres from the launch site. Models are usually brought down with a dethermaliser device, clockwork but in some case electronic, and this appeared to have released so there is a question why the model had not descended appropriately.

We were both back in time for the prize giving. Chris first, me second. Prizes at this competition are always special because Andy Crisp always makes something artistic. In the past there have been clay pots, papier mache plates and more often water colours of Oxford University. This year a little illustration and a bottle of wine.

## Trexler Balloon Wheels



Yes I know they cost an arm and a leg and then you have to look after them - don't leave them inflated - always use the inflation pump and so on . .

**But**, there's nothing to compare with a set of Trexlers

I was under the mistaken impression that manufacture had ceased, that is, until Gotthelf said that Sussex Model Centre had them online.



I checked with SMC and they replied:

*We have been struggling with stock on the Trexler wheels. Our stock comes via the European agents in Germany (Kavan). Although they have shipments every 8 to 10 weeks it is the USA distributor (Sig) that has been the problem, believe some of the sizes have been back ordered for 6 months or more. Next shipment is mid August so we are hopeful that the missing sizes might be included in this forth coming delivery.*



# FAI Model Classes

*find them confusing?*

F1 - Free Flight models

F2 - Control Line models

F3 - Radio Control models

F4 - Scale models

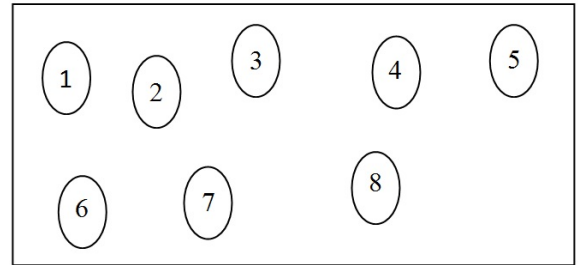
F5 - Electric models

Class F1	Free Flight	Brief Description
F1A	Gliders A2 models	surface area 32 - 34 dm <sup>2</sup> minimum weight 410 g maximum loading 50 g/dm <sup>2</sup> maximum length of launching cable 50 m
F1B	Rubber Powered Wakefield Models	surface area 17 - 19 dm <sup>2</sup> minimum weight 190 g maximum loading 50 g/dm <sup>2</sup> maximum mass of the motor 40 g
F1C	Power Models	maximum swept volume of motor 2.5 cm <sup>3</sup> minimum total weight 300 g minimum loading 20 g/dm <sup>2</sup> maximum loading 50 g/dm <sup>2</sup> maximum motor run 7 s
F1D	Indoor Models	Rubber powered models flown indoors maximum span 650 mm minimum mass 1 g Category I ceiling height less than 8 m Category II between 8 and 15 m Category III between 15 and 30 m Category IV higher than 30 m
F1E	Slope Soaring Gliders	Models with automatic steering maximum surface area 150 dm <sup>2</sup> maximum loading 100 g/dm <sup>2</sup> maximum flying mass 5 kg
F1F	Helicopter Models	
F1G	Rubber Powered	Coupe d'Hiver models
F1H	Gliders	A1 class gliders
F1J	Power Models	1/2 A class power models

This is a changing picture and, even if I've got it right for now it will soon be out of date. [credit Raymond Pike]

# Photo quiz

easy, just name all eight flyers



Address your entry to Tony Neal . . who will be donating the prize!

## Delanne

an unusual subject



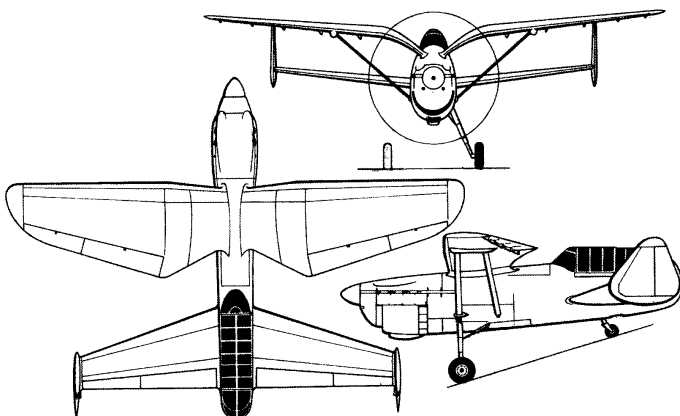
Apologies for the image quality, but this is Doug McHard - or rather Corporal McHard - aged 24, and I'm guessing caught up in National Service. A special friend of Ray's and IVCMAC.

His choice of model is unusual to say the least: a tandem wing fighter with the crew sitting in the tail.

Wikipedia explains: *The Arsenal-Delanne 10-C2 two-seat fighter, designed by Maurice Delanne and built by the Arsenal de l'Aéronautique, was of so-called Nenadovich biplane or tandem wing configuration, the tandem-mounted wings providing a continuous slot effect and offering exceptional center of gravity range. The fighter was of all metal stressed-skin construction, which used a sandwich technique, with a smooth dural skin welded to a corrugated sheet. Pilot and gunner sat in tandem under a single canopy at the rear of the fuselage, which was level with the rear wing, which carried twin tailplanes. This arrangement gave the gunner a clear field of fire for his planned armament of two 7.5 mm machine guns, which was to be supplemented by a 20 mm cannon firing through the propellor hub and two more machine guns in the wing. The aircraft was fitted with a retractable tailwheel undercarriage and was powered by a single 860 hp (641 kW) Hispano-Suiza 12Ycrs 12-cylinder liquid-cooled engine.*

*The Arsenal-Delanne 10-C2 prototype was virtually complete at Villacoublay when German forces occupied the factory in June 1940. Work on the aircraft continued in a desultory fashion and the first flight test being made in October 1941.*

Reading Doug's article in the Aero Modeller it's clear it wasn't at all easy to trim, but he got 2 m 5 s (rubber) and 1 m 10 s from a CO<sub>2</sub> version. It strikes me that only the very brave or a Doug McHard would attempt an electric conversion, but if you're tempted the plan can be downloaded from Outerzone.



## Snapshot

we look in on Peter Cunnison in his workshop



Peter wins the competition for the biggest workshop hands down - it's huge, but then he does spend much of his time maintaining full size gliders.

We got talking, as you do, and I learnt that Peter served an apprenticeship with Handley Page where he qualified to fly both gliders and light aircraft. He takes up the story:

*Then the chance came up to be a flight engineer with BOAC. I didn't get in on the first intake because, I found out, I didn't have a year's experience of maintenance which is what they wanted, and so I - you can't do it these days but then you could go in and buttonhole somebody in their personnel and I said, "how about if I go on the hangar floor for a year?" To which they replied, "well come along for an interview". So, I went on the hangar floor for a year and my seniority, which is very important in the airlines started from the day I went on the hangar floor meaning I was senior to people who went on courses before me. So I did that then did the flight engineers course on the 707, did that ('67 I joined BOAC on the hangar floor) then it was just 707's and four years later the 747 until I retired from BA.*

*Next Virgin called me up and said, "do you want to fly for us?", and that was the icing on the cake so I joined them. They were like a breath of fresh air after BA, towards the end the accountants were getting in at BA but within six years at Virgin they were getting the same way too. Virgin were getting bigger - I didn't see the real friendly thing when they started about six years earlier so I came in on the tail end of that but they were very good really.*

*Working long haul you were away for anything from three days to two weeks depending on whether you were going to the far east or just across the Atlantic - so you'd get there an hour before departure to go through flight plans. It was a three man crew on the 747s and so we were all pretty well integrated - everyone kept an eye on everyone else so it was a complete thing. Some airlines the engineer just sits at his panel sideways and doesn't dare interfere in what's going on at the front. So you'd talk about that and go out to the plane. There you'd go*

*through the pre-flight checks, look at the refuel and look at the tech logs - sometimes you carried deferred details - you had a book this thick with stuff you could carry, but not all at the same time! After then you just went to wherever you were going and coped with anything that happened.*

*I only had two engine failures in the whole of my career, or ones that I noticed anyway.*

*At the very beginning, I came in about 2 years after the 747s stated flying and the early engines were very delicate and inevitably you were always carrying a spare engine under one wing to somewhere down the route to where an aeroplane was on the ground wanting one, and we used to say it was a 50:50 chance that you'd need that engine yourself before you got there. It was a new technology, the big fan engines and when you were taxiing you only had to turn out of the wind and they could surge if the wind was strong. So we got on top of that with Pratt and Whitney. Thing was it had about twenty holes in the engine which had to open and shut at various times. They got it down to about eight in the end, less things to go wrong as a lot of them weren't necessary - so it was a learning curve and once you got on top of that it made life easier.*

*Then we got the Rolls Royce engines which were a lot better and easier to handle and normally I just went round with a charmed life - only had two bad failures: one was going over Yugoslavia - we'd left Turkey behind us and we were getting engine vibration on one engine. The throttle starts chattering and the warning light came on on the vibration meter so we did what we were meant to do in those days and just throttled back until the vibration stopped, and that was all right. Then we pushed the other three up and worked out our three engine height in case we had to shut it down, and we were at our three engine height so that wouldn't have been a problem. But the noise came back and the chattering started - pulled it back a bit more. The RR engine is a three spool engine and we lost one of the spools well we didn't lose one of the spools but the rpm indication went to zero, but we knew it wasn't. A short time after another one disappeared - there's a big toothed wheel inside with a sensor and I said, "something in the middle is getting chopped to bits".*

Captain wasn't happy but eventually said all right we'll shut it down. They reckoned that as soon as we shut it down and it lost the urge to make it turn, it stopped dead and with the precession and what have you, well it felt like it had flipped the a/c on it's back, but was probably only about 70 degrees.

They're not belting at over 30,000 rpm they're only turning at 8,000 rpm but Christ the vibration with the fan not turning! So, until we slowed it down to about 250 knots, only then sanity prevailed. I remember I called London on the HF radio and said the problem we had - the flight plan we had took us to Rome and we had just enough fuel to get to Rome provided we had all the right flight levels and things like that - they said, "Oh can you come on to London?" and we said no way we've just about got Rome. Anyhow the cabin crew weren't happy and the passengers weren't happy with all the vibration, so - just tell them the truth and most people accept that and that quietened them. But I've never seen such a mess of an engine when eventually we touched down - you could see daylight through the core.

So anyhow, they're so reliable now. I used to say I wouldn't go across northern Canada or Greenland on two or even three because the Tri-star all the DC 10 if they lost an engine they were below their safety height over northern Canada on the other two at certain stages of the flight but with four engines if you lose one its just a nuisance. Although there's no role for the flight engineer now, but there's talk of the danger of a two man crew following the crash in Spain/France which might be the only, or possibly the second time, its only dangerous from that point of view. I used to enjoy all the little problems that came up. You had to stay ahead of it, it wasn't just sitting there which is what a lot of people think. The thing is they say, "Oh no you've got the autopilot in." We had three autopilots and sometimes they let me fly at altitude but that's the only thing you can do at altitude. Any little twitch and you're on a knife edge all the time and you wouldn't be able to do anything else.

Whilst I was still flying with BA I started flying at Bourne and then started helping them with the maintenance and because going frequently to America I could always get spare parts cheaper (a merry tail there). Later I came back to gliding here at Gransden. Someone from this club was taking a PPL at Bourne

and said, "why don't you come up to Gransden for the evening, flying?" and I did and was bitten.

I asked Peter about favourite airfields:

Favourite airfield to land was the old Kia-Tak on runway 13. Start off by aiming at a small mountain with a final turn at about 500 ft. Decision height was 700 ft by which time you had to be visual with the runway to continue and land. If not it was use the ILS to runway 31, accepting any tailwind up to 10 knots or divert to Manila.

Delhi and Bombay OK, Calcutta not so much. It was Detroit that was the worst in the early seventies (no go areas all around the hotel) until we moved out to the university town of Ann Arbor. Now it is probably Jeddah and Doha.



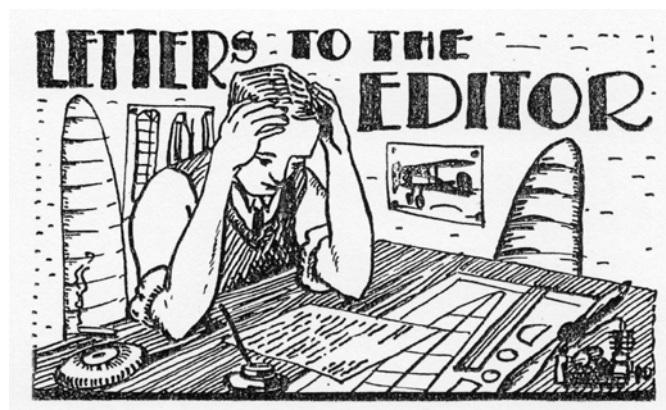
thanks Peter

## 60 Years of IVCMAC

*cri de cœur* from Richard Staines

I wonder if you would be good enough to print a request in the next issue?

In the past I have only browsed my copy of the Ray Malmström book but now, having been paying more attention to the contents I find I have a rogue copy .... I have pages 63 to 78 inclusive duplicated but more importantly am missing pages 47 to 62 inclusive. Is there anybody out there who could provide me with the missing pages. I will of course be willing to exchange those I have duplicated if there is another rogue copy.



# Keil Kraft Bandit

*a cracking model*

I was reminded recently about "Sticks and Tissue" which if you haven't come across it is an online newsletter filled with interesting stuff.



## Sticks and Tissue

If you're tempted then this link points you to the back issue folder: <http://sticksandtissue.yolasite.com/>

I read a piece about the KK Bandit written by George Stringwell - a modeller known to many of you - and I contacted the editor James Parry to ask if I could 'lift' pieces of the article. I assume he agreed because the next thing I read was an email from George saying how much he'd enjoyed reading in the July newsletter about the FROG Pioneer . . . I hadn't put two and two together, but his was the review of the kit.

This is part of what George had to say:

*Here are some pictures of my latest electric R/C version of an old free-flight favorite. This is a Keil Kraft "Bandit", a design with which I have a lot of history and a strong emotional involvement.*

*My first power model was a Bandit, built in 1954 and powered by an E.D. Bee which my brother-in-law Eric bought for me. I had been building flying models for four years when, at the age of ten, I first met Eric when he started "courting" my older sister, and his arrival gave my modeling career a considerable boost. Although a great aviation enthusiast Eric had never built a flying model so, strangely, it was I who took the lead in our building exploits, but his support in things like transport and financial aid coupled with his infectious enthusiasm once he had discovered the delights of model flying was invaluable. Over the next twenty years we progressed through sport free-flight (including no less than five more Bandits!) and contest free-flight and control-line flying ending up with single channel and GG radio before I married and moved away. I had always intended to build an R/C Bandit, and finally got around to making a start at the end of March this year after being inspired by an internet friend on RC Groups starting to build one. It was a shock and a sad coincidence then that I received the news just a few days later that Eric had passed away at the age of 89, and this really made this particular build take on much greater significance for me. It is also the reason why the model, unusually for me, carries a name on either side of the nose - "Spirit of '54".*

*So my Bandit number 7 is pretty much as per plan except for an additional 10 mm on the nose length a slightly enlarged and structurally changed fin plus of course rudder and elevator control surfaces. Power is a 120 watt out runner providing 70 watts at full throttle through a 9" x 4.7" APC Slow Fly prop, supplied by a 2S 1300 lipo and 12 amp ESC. As with all my*

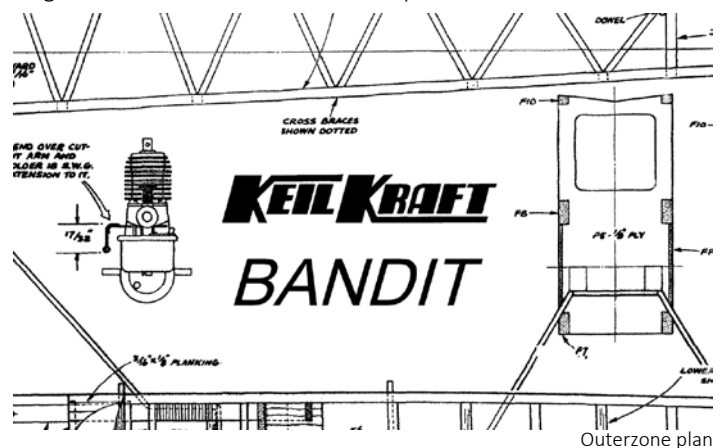
*models the covering is tissue but this time over 38 micron document laminating film rather than the 10 micron mylar I normally use, finish is nitrate dope. All up weight is 16.5 ounces, which, despite the nose extension and having the biggest possible lipo as far forward as possible, includes an unfortunate but necessary 28 grams (1 ounce) of nose ballast to bring the CG to 5 mm behind the plan position, which is 4 ounces or so more than that first E.D. Bee F/F one weighed.*

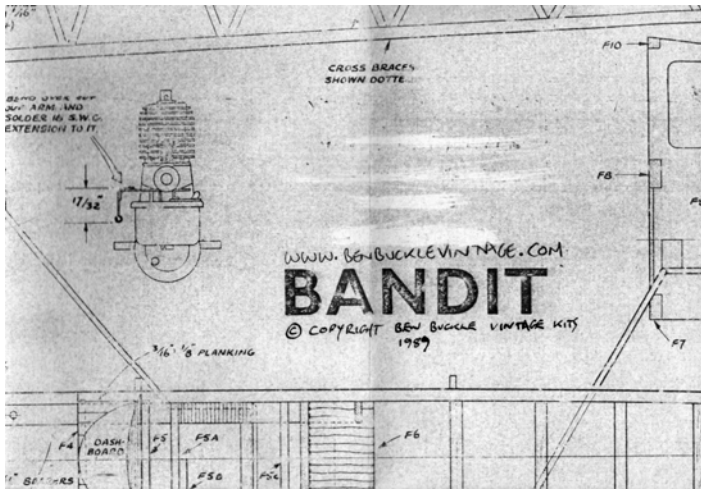
*It flies very well, especially after I steamed a couple of degrees of washout into the elliptical tips to counter a slight tip stalling tendency discovered on the first flight. Cruise is at just over half throttle, a little more gives a nice steady climb and at full throttle it climbs in a nice, steep left hand spiral without any interference from me on the sticks, just like my later F/F ones with Frog 150 power did and certainly faster than that first E.D. Bee powered one. Watching it cruise around brings back many very happy memories of time spent with the earlier models and my late flying companion.*



Following up, in preparation for this item, I asked Alan Hunter if he just happened to have a KK Bandit in his loft . . . and I wasn't disappointed! He brought it along to the club, not a KK Kit but one produced by Ben Buckle.

I wanted to know just how the Ben Buckle kit compared to the original and so I downloaded the KK plan from Outerzone





Ben Buckle plan

Some use of Tip-Ex there I'm guessing on Ben's part - otherwise the plans are identical. (George suggests this wasn't out of character)

There's one other person I know with an extensive collection of kits and that is our Chairman, John Wynn. No, he didn't have a plan but had some photos of Garry Flack flying his Bandit.



I understand that Garry has built both noisy and electric versions of the Bandit. So what you see here is a Mills 1.3 up front, but not any Mills 1.3 - rather one (of two) Garry knocked up for himself. Now that's real modelling! He's agreed to tell me more for a future newsletter.

Going back to Alan's Ben Buckle Kit - the quality of the printing and wood selection looks good and I'm sure you could make him an offer (you'd be wasting your time!) Replikit had a laser cut version on the market but I think they were leaned on by the people who own the rights to many of the Keil Kraft designs. But don't give up because there is a kit being marketed by the Vintage Model Company.



They offer a short kit for £42.95 or a full kit for £88.50

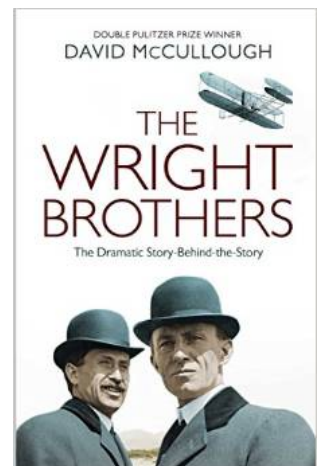


And, for the moment, that's where the story of Bill Dean's Bandit ends.

## Reading

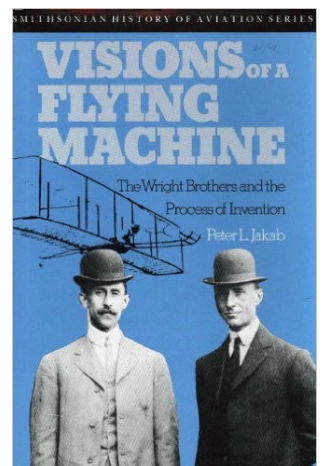
*a couple of good biographies*

Recently I was given a copy of David McCullough's 'The Wright Brothers.' and found it hard to put down.



My second recommendation is Peter L Jakab's 'Visions of a Flying Machine' and is the more technical of the two.

Read either book and you can't fail to be impressed by the qualities of these two men.

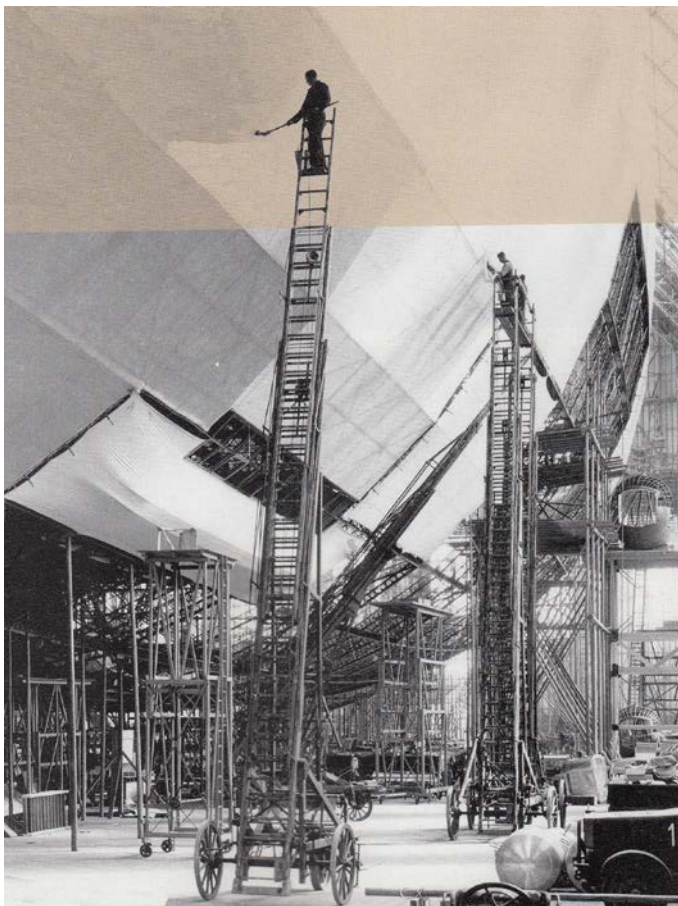


Read both and your jaw should drop!

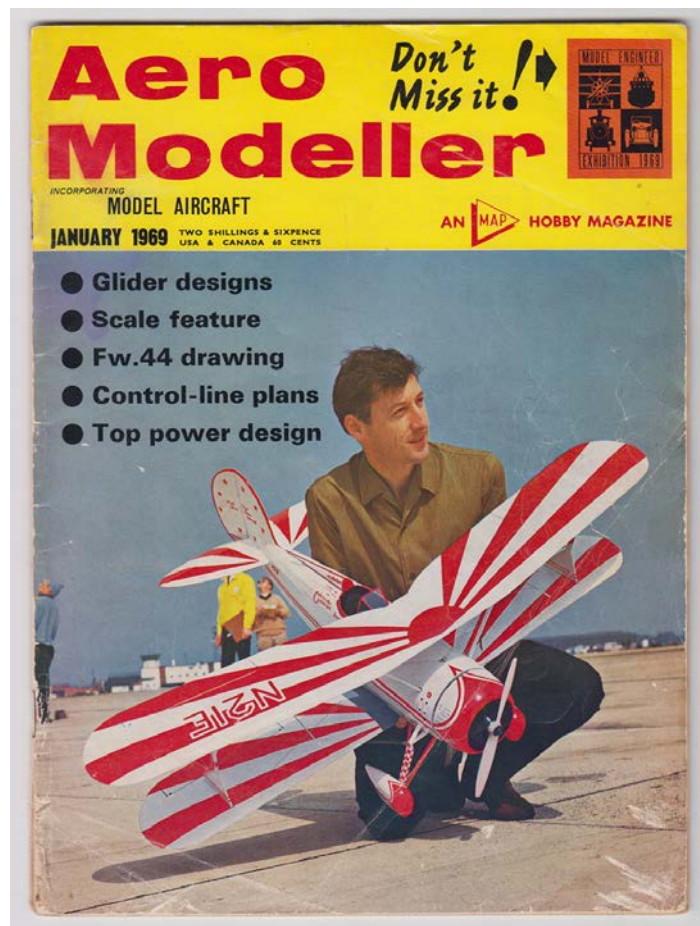
## Caption Competition

and they don't get much bigger than this . .

Recently Raymond Fella visited the Zeppelin Museum and brought back a superb brochure. In there you can see a photo of a man applying dope to a zeppelin and if that doesn't shout out 'caption competition' I don't know what does.



"Tony, were gonna need a bigger tin!" - after Jaws



Thanks to Mark Miller for suggesting this cover for the newsletter. A number of you will recognise local modeller Clive Hall. Pictured here holding his Great Lakes Special.

## 'A' fixed wing testing

by Alan Hoensch

The meeting started at 0900hrs on a gorgeous sunny day with little wind, Steve was the first to arrive followed by 3 other club members. The first job was to set up the flying field by marking out the pit and flying area, on completion of this task the next thing was to move four goal posts from the area, all preparation complete fly started at 0930hrs.

After some practice flights the test for the BMFA Fixed wing A certificate started as follows:

Pre Flight Checks,

Circuit either left or right over flying the take-off and landing area,

Figure of 8 maintaining the same height,

Dead stick landing within the landing area,

Take off after checking aircraft,

Circuit over flying the area opposite to the one first completed,

Landing under power within the landing area,

End of flights checks,

Number of question about the safety of flying model aircraft,



Alan Steve Gotthelf and Mark

# A salutary tale

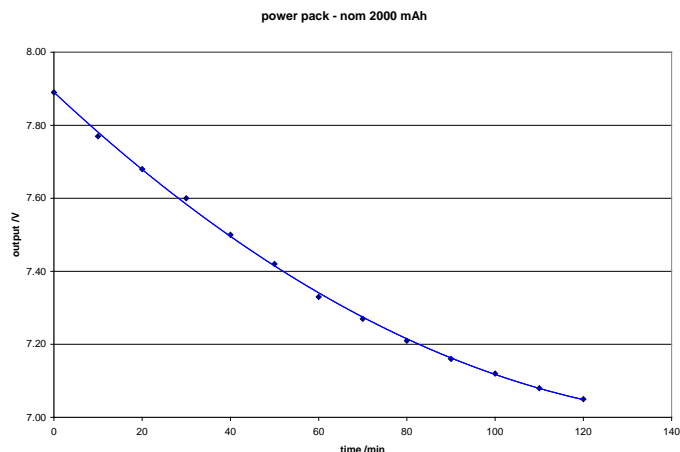
## problems with lithium ion

One Friday evening, not so many weeks ago, Fliar Phil was bringing his model in to land when the motor cut and he found there was no response to any movement of the sticks. The transmitter display showed a completely flat power pack. Fortunately the model came down safely.

Going back a week or so, Phil had upgraded his transmitter decided to buy a Spektrum DX6/DX7 battery pack with integrated charger (see the BRC hobbies website). This has 2000 mAh capacity and should run for hours. We swapped battery packs and, sure enough, there was nothing wrong with the Tx. I offered to have a look at the battery pack and next day checked it with a digital voltmeter - it showed 0.000 V (give or take a 0). I'd expected the output to be well below 7.4 V (perhaps 2.7 V per cell) but *something* at least.

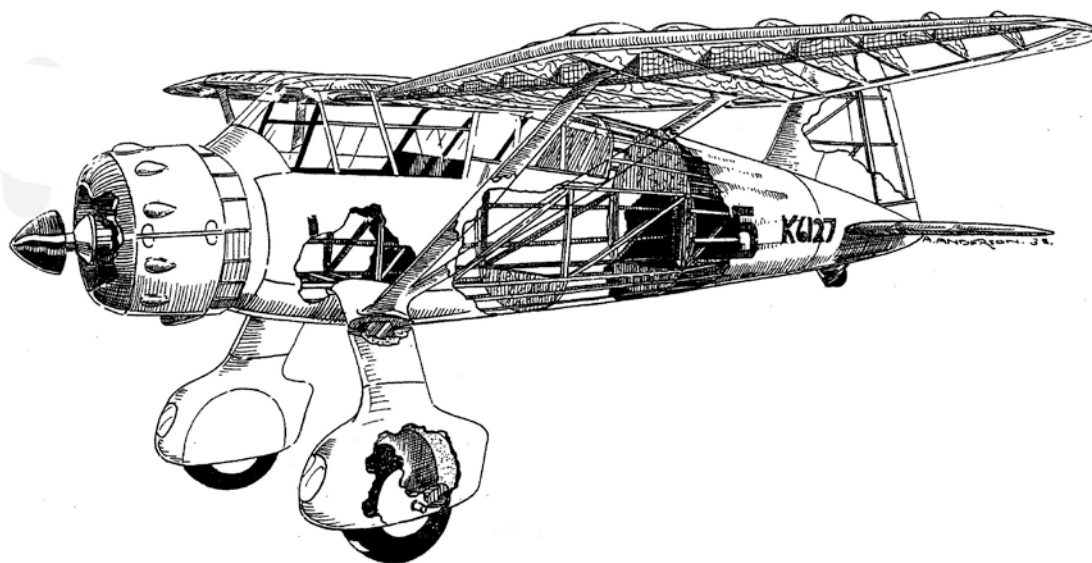
I cautiously tried recharging the pack (monitoring the current just in case there was a dead short somewhere) but it picked itself up and looked fine. A puzzle.

Lithium ions packs shouldn't be taken into deep discharge and have a built in circuit board to detect this situation and disconnect themselves from any external circuit. Fine if its powering a laptop or mobile phone, but a transmitter? Thinking this might reward further investigation I charged the pack up to full capacity (~4 h at 0.5 A). Then I created a dummy load and monitored the output as the pack gently discharged.



For two hours the pack behaves perfectly well, but then - nothing - it switched off! It still held around 1000 mAh capacity but it's interior circuit board had shut it down. It should have continued until the voltage reached something like 5.4 V Fliar Phil's supplier accepted the pack was faulty and made a full refund.

My take is that Lithium ion is the wrong battery technology for this application - the last thing you need is a pack switching off without warning and leaving you to clear up the mess. For now I'll stick with a NiMH pack.



## Footnote

*a comment or two from the editor*

The newsletter has expanded by a page or two for this edition. It's distributing the paper copies that needs to be considered, but Tony thinks he may have a fix. If you're reading this on paper but have an email account then you're missing a trick (such as colour and some excellent images).

If you've contributed in any way to this edition, thank you.



Dubious photo of Ed back by popular request (well, two of you)