



# Model Aeroplane Club

Founded in 1946 by Ray Malmström

January 2015

Edited by Bryan Gostlow  
Distributed by Tony Harper

## Rubber Duration Contest

Bruce Lindsay reports

This competition was held in the big sports hall with an eclectic selection of lightweight models. It was suggested it should be a precision contest but as it was announced as a duration contest then that is what it would be. Because some types would have a similar duration it could be hoped that some may just rise above their class due to a poor result by others or by a good performance for their type.

Mick Staples made an unfortunate start with a time of just 24s with his first flight of his Gyminnie Cricket but went on to improve times greatly. I was flying a film covered Easy B and the first flight was the best it had. David Leach was using an LTC 94 designed by Bert Bailey which was performing very well. Every 'Saturday do' David and I have fun comparing our flight times which adds to the fun of Saturdays because the performance is fairly similar. Michael Marshall had a plane similar to mine but was covered with condenser tissue. Chris Strachan had a living

room stick model and Clive King had a Penny Plane. Also there was Chris Hinson with a Butterfly.

The results might be considered a forgone conclusion, but to attain our best results a fair bit of knocking around in the rafters had to be done, which could end up stuck in the girders, hitting the walls or landing inverted which was often the case. Those things were all that separated myself, David and Chris Strachan which made it all the more fun.

1st	Clive King	799s	Penny Plane
	Bruce Lindsay	764	Easy Bee
	David Leach	709	LTC 94
	Chris Strachan	653	Living Room Stick
	Michael Marshall	329	Easy Bee
	Mick Staples	153	Gyminnie Cricket
	Chris Hinson	130	Butterfly

## Famous Flyers



Following on the success of *Famous Flyer* in the Nov/Dec newsletter, here's another chance to score.

Points awarded for correctly identifying any or all of the flyers including the model. Points will be deducted for those of you who claim to recognise the motor as that's just showing off.



## RAF Museum, Hendon

7th of March 2015

Margaret tells me that you should book your place if you would like to join the 2015 visit to RAF Hendon. The coach will leave the college at 9am sharp.

## The Interview *with Steve Mynott*



*What tool wouldn't you want to be without?*

Having been brought up with Micrometers and Vernier Callipers, a Digital Calliper is the tool for me especially now my eyesight is no longer as good as it was.

*Do you have a favourite model past or present?*

One past and one present. My first ever Control Line model was a Phantom Mite. I've got another one now which I flew earlier this year. I has my original 1963 DC Super Merlin 0.76cc up front which only just gets it airborne. My present favourite is a Radio Control Acro Wot.



The kit built one is a brilliant aeroplane. I think Chris Foss designed it is at least thirty years ago. It'll still do all the aerobatics that I am capable of and much more with a more experienced pilot. Coincidentally it's now also available as an ARTF from Ripmax.

*I hate having to use, and am never happier than when I'm*

I hate Cyano but I do use it if I've done some damage to a model it's the easiest / quickest way to tack it back together and then do a proper repair later.

I get great pleasure from repairing old models and getting them in the air. I build models occasionally but really enjoy picking up damaged or half built models getting them airworthy and flying them. My mentality of mend and make do came from my grandfather who would repair and make anything. My father

always bought new and would hardly repair at all. My grandfather was born in 1899 and fought in the Great War. In the depression in the 1920's when he couldn't find work my grandmother worked and he stayed at home and looked after my mother and her two brothers. He would repair old furniture, mend clothes, sole and heel shoes and repair agricultural machinery. As a youngster I often had a go at these skills with him in his shed.

*What got you started?*

I suppose my desire to fly goes back to my father who was literally born on the end of the runway at Duxford. If you turn off the A505 at the roundabout and drive towards the village half way down on the right there's a house which used to be the Flower Pot pub, my father was born there. He saw a lot of activity at Duxford in the interwar period and during the 2<sup>nd</sup> World War, so his early years were spent watching aeroplanes. When I was small he told me stories of Silver biplanes and Spitfires, so from the age of around five all I wanted to do was to build and fly aeroplanes.

*What do you fly?*

I fly two different model disciplines. Control Line, and RC.

I compete in CLAPA competitions [Control Line Aerobatic Pilots Association], a BMFA affiliated group:

<http://www.clapa.org/index.htm>

I fly a profile Nobler and a Mike Nelson built profile Oriental.



I also fly various RC sports models and gliders. I find RC gliders very challenging because you've got no vario [variometer], no

seat of your pants, and no feel on the controls, just visual clues of how the model is reacting with the air.



A couple of years ago I was flying my Junior 60 at Girton with Richard Staines when the 60 ran out of fuel at about 200m, Richard was flying a full house electric full glider with a barograph. We both climbed in the same thermal up to 600m . At that height the Junior Sixty was looking the size of a match head and I was in serious danger of losing sight of it. Eventually after what seemed like an age the Junior 60 returned to earth on the sports field at Girton.

In the summer I Thermal fly 2 Chanel gliders off a Bungee and it is not uncommon to have flights of well over 1 hour.

When I joined the club I was still flying full size gliders. I started model flying again in my 50's after nearly a forty year break. I found out about the club when I used swim at Impington with my son Tom. One week there was a notice that advertised indoor model flying. Tom and I came along to the October 2001 meeting, Tom was absolutely fascinated. We came to the club for the rest of the year and joined in Jan 2002.

I always wanted to fly Control Line aerobatics. I think I read about it in the Eagle Annual in the late 50' or early 60' and had seen a picture of Jim Walker the pioneer of control line, flying with one model in each hand and a third on his helmet .. So I've always wanted to do control line aerobatics and it's been a big challenge to get where I am now. Radio Control I've found much easier I don't know why. With radio you're probably a couple of seconds away from a crash but with control line it's more like milliseconds.

*A time it came close to disaster or phew, only just got away with that!*

Most weekends I come close to disaster especially if I push the boundaries, but I think it's the only way to improve my skills.

*When I'm not aero modelling. .*

I like sport. I played football and cricket in my youth and I still watch them both regularly. I flew gliders for 25 years at Duxford Gransden and Wattisham. I also sailed and raced a Laser dinghy for ten years.

I did 17yrs instructing in gliders. I packed up full size flying in 2004 as the modelling bug had taken over. I remember sitting in the back of a K21 glider with a student in the front at 5,500 feet over Wattisham looking down at the model club and thinking I'd

rather be down there, so I stepped out of that glider and called it a day.

*An unfulfilled ambition*

What I'd like to do is to complete all the model projects I've got waiting at home., I hear other people often saying "I haven't got enough time" and unfortunately I'm beginning to realise that. Things that I used to do quickly when I was younger, I now spend too much time pontificating about how to do it. My wife thinks I have a problem because I can't bring myself to throw stuff out. It probably my grandfather in me.

*Love the smell of hate the smell of. .*

I love the smell of diesel. I think it's even better when it's been burnt coming out of the exhaust and it lingers on your clothing until you get home.

I *hate* the smell of Cyano.

*Old dog new tricks*

Always trim a model so it will fly hands off.

*What's your favourite covering material and adhesive*

Profilm *because* it's very strong and provides good torsion stiffness.

Original Araldite - the type that takes twenty four hours to cure. I still have one tube of it left which I only ever use sparingly. It must be thirty years old – it doesn't seem to go off with time unlike some modern brands.

*Do you have a favourite model of Ray's*

The only one I know well is Tony Welch's Sweetheap . Tony has modified the wing from Ray's original.

*Where does it happen. .*

The Garage is both a Workshop and Hangar it hasn't seen a car for over 10 years.

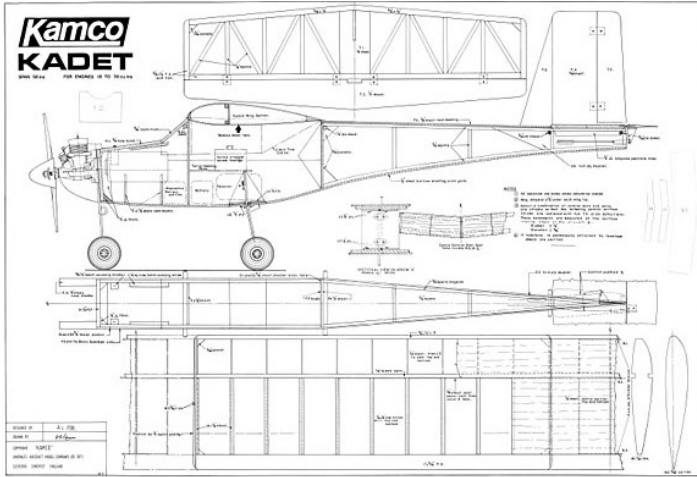


*If you could turn the clock back. .*

If I could turn the clock back I would have kept going at modelling instead of packing it up in my middle teens.

## Bringing back memories *by* Bob Piggott

When Gotthelf described his visits to Model Mania in King's Street it brought back several memories to me. The owner was Leo Bevan and I still have an unfinished airframe of a Kamco Kadet RC model, built from a kit, bought from Leo at a reduced price because the box was smoke damaged. The stained box is still on my shelf.



Running a model shop was very different from the profession in which Leo trained and worked. He was one of those gifted aircraft technical illustrators who produced wonderful exploded views of aircraft structures. I met him when he was working in the technical office of Marshall Aerospace.

The artistic people like him worked at one end of the vast office and I worked as an aircraft stressman at the opposite end. At that time work in the office involved aircraft including Canberras, Comet 2's and 4's, Viscounts, Valiants and many other projects.

In that same group of talented artists was one who has become well known in the field of aviation, namely Gerry Coulson. At that time I just knew him as a friendly office associate who I spoke to as I passed through his section or at the tea and bun queue. I have several of his early prints produced for trade calendars long before his famous pictures appeared.



Gerald Coulson

I am sure there are some members who remember the Battle of Britain displays at Waterbeach in the early 50's. On one occasion 4 Meteor 8,s were performing aerobatics in a box formation and to the spectators horror two aircraft collided and both tail sections fell away. The pilots ejected, one parachute was seen to open but the other failed, the ejector seat and pilot were seen to fall to earth.

It was again in the same technical office that I met the pilot who survived, he was Ft Lt Len Smith who at that time lived in Sawston. Not only did he recall that incident he also showed me a photo of himself with Kenneth Moore, the actor, taken alongside a Spitfire at Duxford during the filming of the early Battle of Britain film. Len was in fact the pilot of the Spitfire in that film.

Also working in that design office at the same time were two well known Cambridge modellers, the Firman brothers, Peter and Paul. Paul of course was the one who was always seen with a Sherlock Holmes pipe.

# MILLS

FOR UPRIGHT AND INVERTED RUNNING

**The Modeller's verdict :**

"A sound and clean engineering job . . ."

"The engine runs quietly, so quietly that I was completely deceived as to power ; but tests showed revs to be 6800 to 7000 with the 9½" prop. supplied . . ."

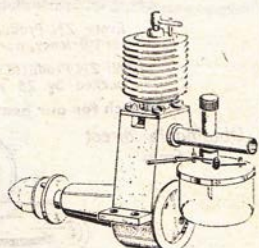
"The cut-out mechanism has never failed . . ."

Capacity : 1.3 cc.

Range : 5000 to 7000 r.p.m. with 11" to 9" Airscrew.

Weight : 4½ ozs.

Quick-action Cut-out for connection to Flight-timer.



Price : £5:5:6 (INCLUDING AIRSCREW)

## Capturing the sound

I've arranged with John McIntyre to borrow his recorder with the aim of capturing the sounds of some of these engines before they disappear into storage for ever.

If you think you might like to help in any way then please let me know.

I'm not sure how much space is available on the IVCMA website, but then we could always upload the recordings onto YouTube

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## Autumn Public Meeting *by* Gordon Hannah

Once again the club put on a bumper function for all to enjoy. Our open day continues to be popular despite the limitations of the venue – our hall is far too small for effective indoor flying especially when compared with other venues.

So what is special in our case? First and foremost is the convivial atmosphere. This is brought about by the informality of the occasion, all in Ray Malmström's dictum and the club's motto of 'Flying, friendship and fun'.

The major, if not unique, contributions to our day are the catering arrangements. Time and again we get complimentary remarks about the provision of an ongoing 'brunch', plus superb cakes being available all day. Then we have the popular lecture which is always well attended and at which we all learn something. This year Andy Sephton's advice on how to get our models to take off was really an eye opener, with really simple solutions to a perpetual problem.

All through the day models were in the air – about 70 had turned up, so not surprisingly we were quite busy. Modellers are getting used to our hall and sensibly were keeping to the side without having to be reminded. Fun flying and competition flights for the Canard-Air and Bostonian events all mixed in without any problems.



John Valiant's Messerschmitt Bf 109K

Our regular car race was the usual distraction and continues to attract enough entries to cause amusement. This year's winner was a new entrant – Andre Bird with a very smart gold painted monster with large wheels and clearly a powerful motor. We didn't get to see the motive power as he disappeared to the adjacent gym to do his preparation!

The finale was the mass fly off, with about 30 participants. As usual we played a dirty trick and announced just before the launch that the prize would not be for the longest flight but for the model which landed closest to a 35 second flight. It turned out that two models landed more or less at the same time so both got prizes.

Our exhibition did not have as many models on show as usual, but quite outstanding was the almost complete Avro Shackleton by Monique Lyons, for 4 rubber motors. A superb example of the model makers craft.



Tony Johnson's Phantom Mite



Martin Skinner's Canny Canard

All this was made complete with the support of George Wallbridge of SAM's models. What would we do without the availability of this Aladdin's cave of goodies. Here's to the next time. After all we have been putting this on for only 14 years.

Results :

**Canard Air** (best 3 flights) - 6 entries

1 <sup>st</sup>	Clive King	224 s
	Bruce Lindsay	207
	Clive Anderson	144

**Bostonian** (best 3 flights) - 3 entries

1 <sup>st</sup>	Gordon Hannah	183 s
	Peter Adams	134
	Don Reede	66 (off 1 flight)

**Car Race** - 5 entries

1 <sup>st</sup>	Andre Bird
	Chris Strachan
	Dave Banks

**Mass Fly off** - joint winners

Clive Anderson and Sam Hasted

## Update on Athene *from David Hunt*



As you said in the article, I had some trouble getting the experimental Athene to obey turn commands - sometimes she

would not respond even to full opposite rudder once established in a turn. However, she flew virtually 'straight off the board' with just a slight adjustment of the CG so that it came just forward of the front spar and in a straight line or steady turn was very stable. In fact, that was the problem, she was too directionally stable!! Perhaps Ray did too good a job of building directional stability into his design! The conclusion that the 'committee' who considered the problem reached was that ailerons are needed rather than just rudder so over the winter she will be rebuilt with ailerons as well as rudder, probably interconnected via my Spektrum DX7S. It will probably come as no surprise that Athene drew many admiring comments at Old Warden and quite a few old timers nodded sagely when I said that she was a modified Ray Malmström design. I hope that next year will see her performing properly and giving some more folk a chance to see how one of RM's designs can translate forward the best part of 70 years into the micro technology age.

## Eagle Cam



In the Nov/Dec newsletter Gotthelf described mounting a small camera on his FRED and went on to explain how to edit the 'footage'. Well, with no disrespect to Gotthelf, I think this adventure tops that.

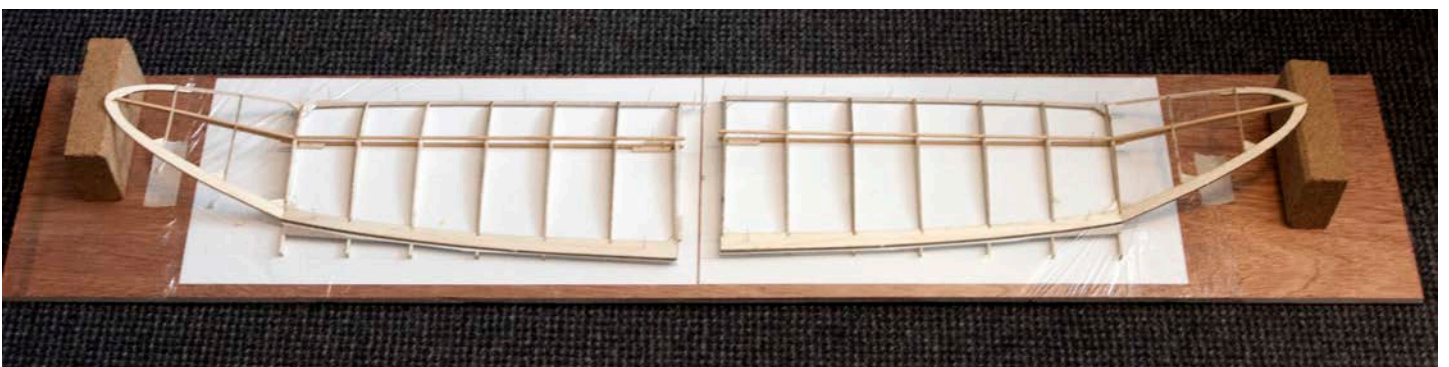
A white-tailed eagle, extinct in France for over 50 years, soared from the top of the Eiffel Tower in Paris and flew over the Seine with a Sony camera mounted on its back. Its handler, **Jacques Olivier Travers**, hopes to re-introduce the eagle into its natural habitat in the French and Swiss Alps.

In this image the eagle has crossed the Seine and is circling momentarily while searching out it's handler.

you might like to take a closer look:

<https://www.youtube.com/watch?v=QwNc0SF1p-o>

## Scarab *slow progress*



## Clever Dickery *previously called: Old dogs . . new tricks*



**Tony Welch** has made up this demo of how to make a neat job of joining two thick, stranded conductors:

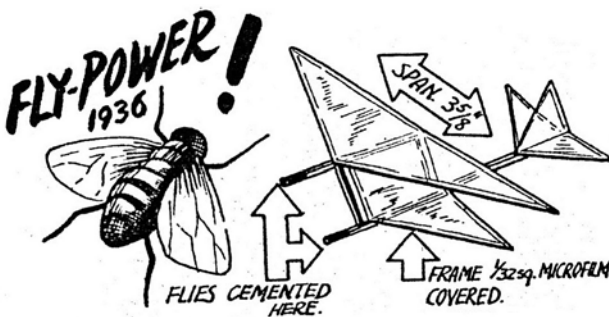
- Strip a length of insulation off each cable then divide the strands into three and twist together.
- Interleave the two sets of three and gently twist.
- Pull apart slightly and continue to twist
- Solder and apply heat shrink



○ I can't remember where I first read about this, but it's a good tip and one that I try to stick to: Rather than getting out just the one knife, make a point of always reaching for three. Keep the sharpest one for those times when only a *really* sharp edge will make a difference but use the others for routine work. You'd be surprised how long it extends the life of the 'good' blade. When the sharpest blade has passed it's peak then move it down to 2nd best and the 2nd best to 3rd best . . You'll need to label them. I've gone for Sharp, PDS (pretty damn sharp) and RBB (rough as a badger's bum)

○ Queuing at the supermarket counter for ham the other day I noticed that the ham got wrapped it in a single sheet of plastic *before* going into another plastic bag before, finally, the price label/barcode was attached. I was intrigued to know why they'd go to so much trouble and guessing the first sheet was to provide some sort of barrier. On getting it home I washed the grease off the sheet and tested it with a few spots of glue, of one sort and another. Sure enough, once given time to set, I could peel off the glue as easy as pie. So now I use the sheet where I want to keep glue away from plans and so on. Try it.

( I heard the phrase 'Clever Dickery' used on the Today programme and thought, "I'll have that!" - Ed )



From an old newsletter, a suggestion for indoor fly-powered twin . . "Tip: keep the flies in the fridge until needed"

*So, how about it Bruce?*

## Freydis Sharland pilot born in Cambridge

Do you remember a piece in July's newsletter about Freydis and her work with the ATA? Well, emailing **Mark Miller**, I found that he was able to add colour to the story:

*Freydis Sharland? I had her in the back of my cab in 2009, for the 70<sup>th</sup> anniversary of the ATA. In 'the first photo she's at bottom right.*



*In the second, the lady at the front is Molly Rose, born Molly Marshall and Sir Arthur's sister. She too flew in the ATA.*



*On the same day we flew a formation of Anson and Rapide, being two of the main types used by the ATA for taxi purposes.*



Mark has sent an account of the heroic restoration that his father and he carried out on the Rapide. I'll be returning to this in later newsletters.



## A message from our President

Out of the blue the other day I took a phone call from our much loved president, **Peter Hoskison**. Naturally, I respectfully got to my feet, listened intently and took notes!

He called to say that he's an avid reader of the newsletter and asked if there were plans to publish it monthly . . . phew

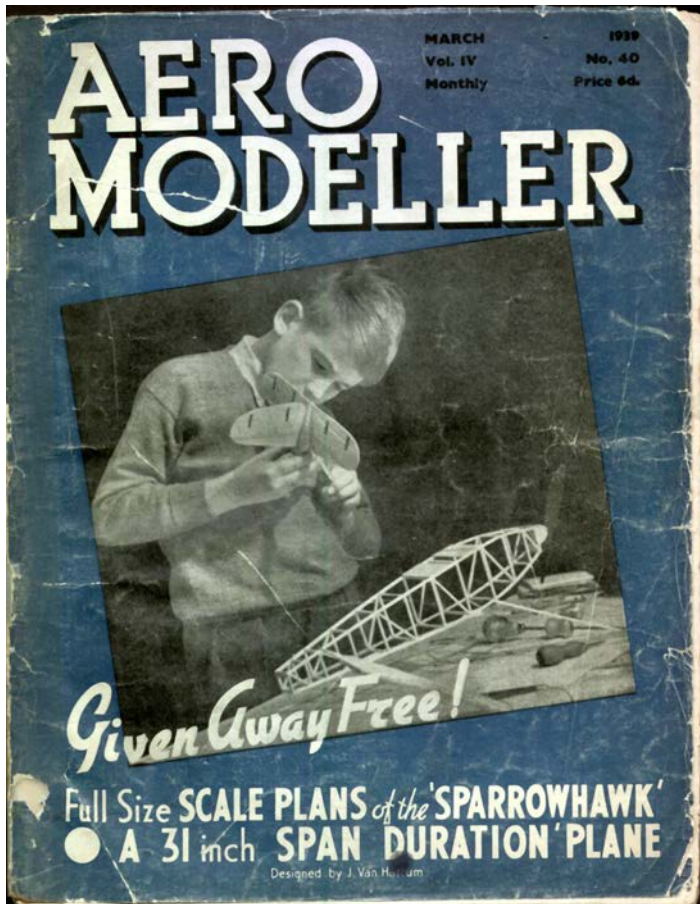
It was Peter who began the newsletter and which, for a while, appeared every week!





## Great covers

*Aero Modeller* March 1939



I'm guessing that, if we were honest, this cover represents the internal picture many of us have for the hobby - a lad working on his rubber powered, stick and tissue model.

But if he was 13 in 1939 then he'd be 88 today and you've only got to look around on a Thursday evening to see that the fascination of building and flying has, by and large, skipped a generation or two.

Ray Malmström's vision for a model aeroplane club and founded on "Flying, Friendship and Fun" has served us well for 68 years, but now we find ourselves at something of a cross road.

You'll hear Chris described as, "a hard act to follow", undoubtedly true, now stepping down after brilliantly piloting us through thick and thin. Let's hope that someone can be found with the energy and vision to continue.



Dropping the Pilot - Punch 1890

## In a class of their own



Gary Flack's Hawker Tempest MkII

John and Gary have been creating their blue foam peanuts for a number of years. At the public meeting it was clear to me that these guys are in a class of their own.



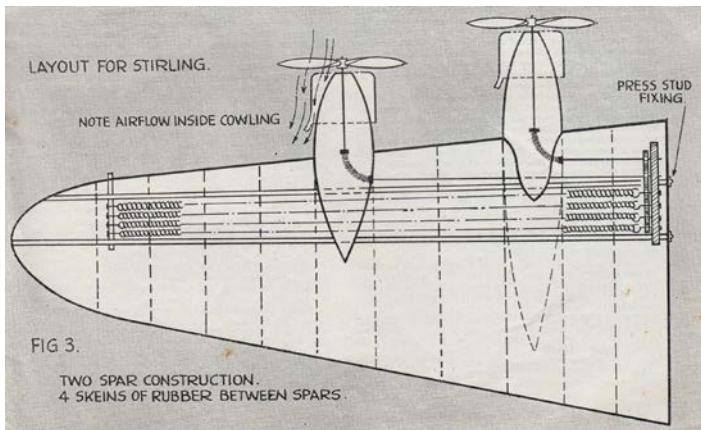
John Valiant's Ilyushin IL-2 Sturmovik

Now Gary has agreed to photograph and record the making of a new model and give us a blow by blow account in an upcoming newsletter. Something to look forwards to!

## Fearless builders of the past



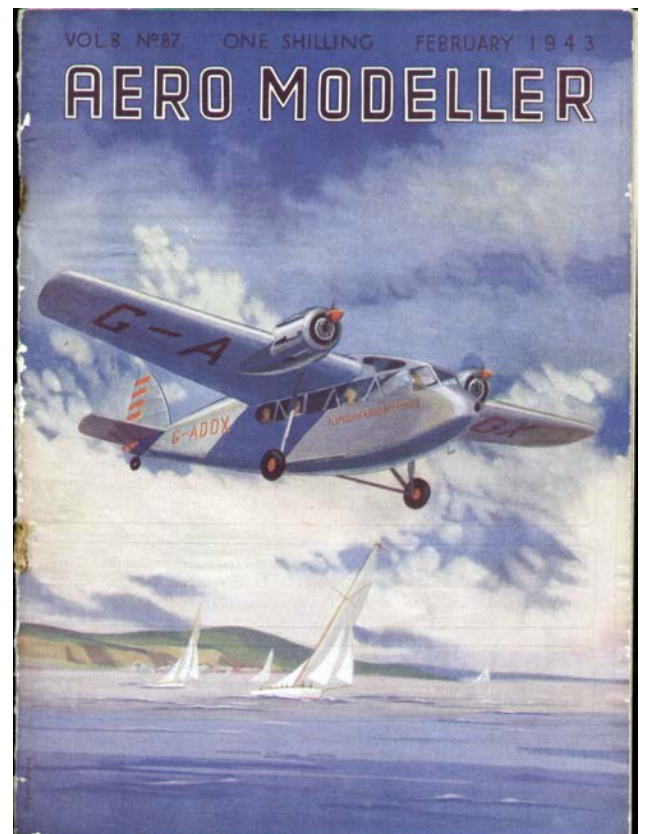
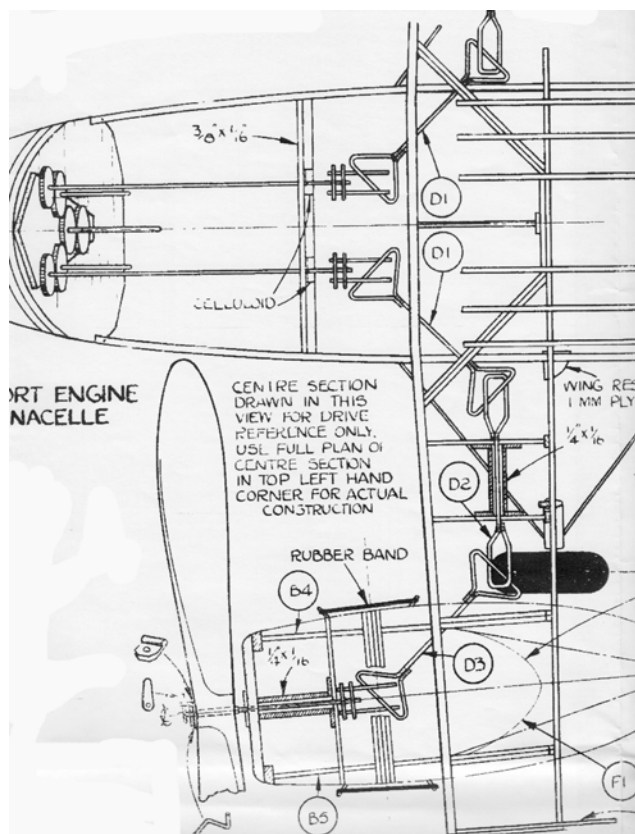
Scratching around on the interweb I came across this piece: Modellers who have poured over the pages of *Aeromodeller* circa late 40's will instantly recognize the name C Rupert Moore as cover artist, model designer and patent holder of the "Moore Drive" and the "Moore Diaphragm" which is a device to prevent rubber bunching causing CG change induced trim shift in his big, rubber-powered scale models like the 44" Tiger Moth and others.



circa 2003: Ron Moulton is pictured next to Mike Beach

I came across these two illustrations in an old copy of *Aero Modeller* Richard lent me (July '41 possibly) and was taken aback by the complexity of the drives buried in the wings. More recently I ordered a copy of C Rupert Moore's *Short Scion* and, once again, was impressed by what I saw. Here's a flavour:

In the foreground is **the** Moore "Viper", the original, recently restored by Mike. The model, although not a true scale design, is representative of what a between-the-wars RAAF interceptor monoplane may have looked like..



# Water-Slide Decal Paper

There's a company called Crafty Computer Paper that stock both Inkjet and Laser water-slide paper.



If you look on their site you'll see both clear and white decal paper, as single sheets, x10 or x50 . . your choice and starting from as little as £ 0.79p

<http://www.craftycomputerpaper.co.uk/default.aspx>

If, like me, you began with painting roundels on the back of gummed paper labels then you'll realize what a huge step forward this represents.

The white paper works best on dark surfaces and you'll need to trim around them. The clear can be used on light surfaces and represents a good place to start.

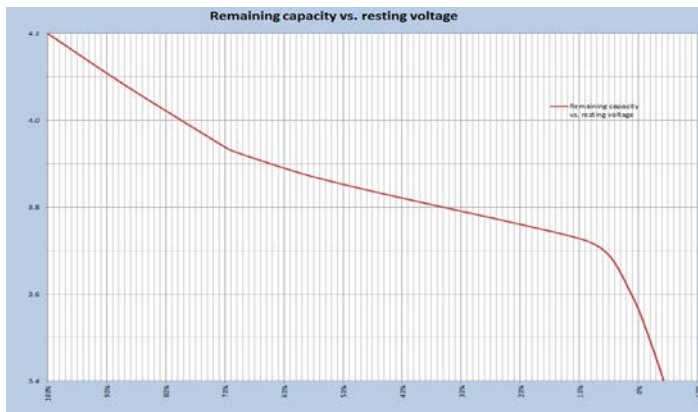
Laser printing requires little or no finishing but Inkjet needs protecting with acrylic spray. On the website you'll find video clips explaining the processes, step by step.

This model may not be your thing but it gives an idea of what can be achieved.

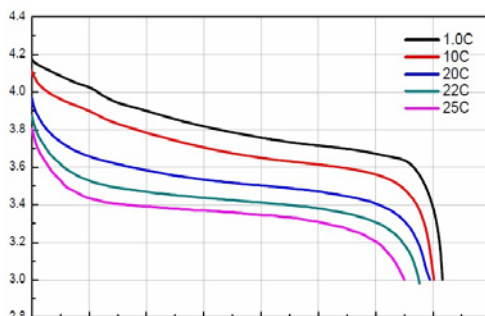


# Understanding a LiPo

There's a lot to know about a LiPo, but here let's look at just one aspect: Remaining capacity



Don't worry if you can't read the scales on this graph as, for our purposes, they're just illustrative (voltage against capacity). Fully charged a LiPo cell will have a resting voltage close to 4.2V but as we draw energy from it the voltage will fall: close to 3.85V at 50% capacity . . and something like 3.75V at 20% capacity. After that the voltage more or less falls off a cliff. But that's for a *resting* cell.



If you were to make a similar measurement while *actually* powering something then you'd get another set of curves, similar in shape, but below the first one.

What this shows is that the faster you drain your LiPo the less voltage will be available *as you're using it*, but that's not so important here.

So is there any point to all of this? Oh yes!

Before you fly and after you've landed the LiPo will be at rest - *and this isn't a euphemism for dead!* In the air the voltage will vary depending on how much capacity you've used and what power your delivering, but on the ground the picture is *much* simpler . . it's always the first one.

Get your hands on one of these, or similar, which has that resting voltage curve programmed into it. It will precisely measure the voltage at the balance cable and look up how much capacity remains.



The display reads: LiPo 3S 12.549V 98% capacity

Use it as a check before you fly and then again on the ground to see how much capacity you've used: maybe you could have flown for longer or maybe you could still have another flight.

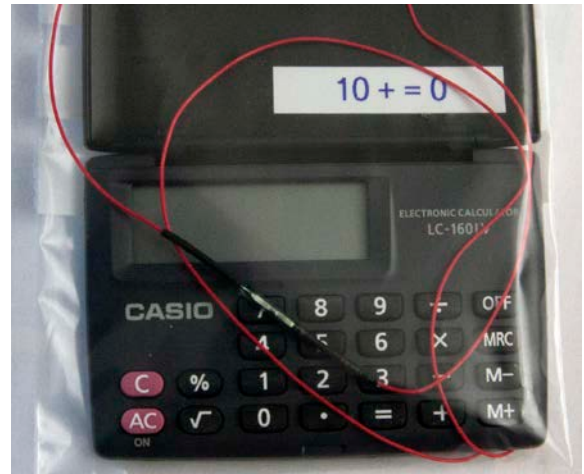
## Stern words

The other evening I was, as usual, losing count of just how many turns I'd wound onto a Gyminnie when the Chairman looked over and said, "I'd thought you'd have some sort of gizmo to do that." I was crushed! Then at the public meeting I saw Tony Johnson had a solution:



After turning it on he enters: 10 + = 0 and then every time the = button is pressed 10 is added to the total (substitute 6 for ten if you're using a x6 geared winder). Rather than keep pressing the = button he has arranged for the handle to trip a micro switch . . . simples!

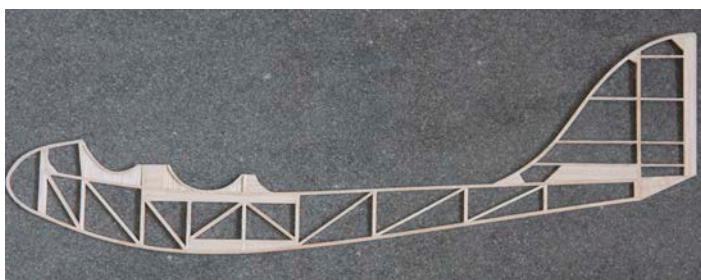
I had a fiddle with the calculators in Rymans and checked that the "trick" worked before buying five at £3.99 Taking the back off I managed to locate the part of the PCB track which corresponded with the = button and soldered on a pair of leads. Rather than use a microswitch (fiddly to mount and about the same price as the calculator) I substituted a reed switch and mounted a magnet on the winder. Job done! Those five have all been taken but let me know if you're interested as I have a few reed switches to spare.



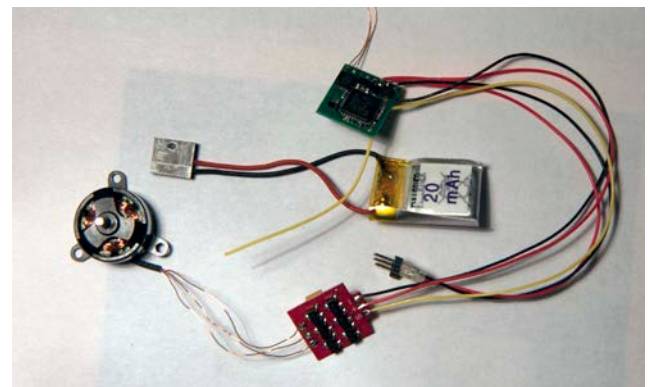
## Do the numbers add up?

an rc indoor profile

Gyminnie prop and 0.090" motor 5.4g  
miniature receiver, single cell ECS and brushless outrunner 3.5g  
20 mAh LiPo 1.1g or 50 mAh LiPo 1.9g  
Anyone up for building an indoor rc profile model? The bits aren't cheap but enough people fly a Parkzone Vapor and they're not given away in Cornflake packets any more . .



CW-1 Junior 1.5g



I keep coming back to the Curtis Wright CW-1 JR . . but don't hold your breath!

## Footnote

*a comment or two from the editor*

We've received a postcard from a Mrs Trellis of North Wales in which she asks, "Why do you keep changing things? Those were lovely titles Roger Hines came up with in 2000 but now I see it's gone all blue. Just change for change's sake if you ask me."

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

