COURT CIRCULAR

Spring 2005

THREE KINGS
AEROMODELLERS

The Newsletter of The Three Kings Aeromodellers
London, United Kingdom

Affiliated to the BMFA

Cockpit Comment

Welcome to the latest issue of the Court Circular, I ve been busy flying, yes really!

Mick Orchard and I have been busy getting on down and racing with some success, I ve been busy trawling through my Aeromodeller library for bits and bobs to help me and hopefully you will find them equally interesting.

Naming and Shaming

Recently I read a piece in the Guardian that was about restaurants and the level of service that they provide.

It suggested that when the level of service that is provided is below grade and not up to what you expected: “Go online to the plethora of restaurant punter review sites and name and shame them.”

With this in mind I thought that I would share my disappointing recent experience of my dealings with a national chain of model shops and the letter that resulted.

Dear Hobby Stores

A most disheartening experience.

Last month I went to my “local” model shop. The Camden branch of the national chain; ‘Hobby Stores’. Whilst never renowned for its friendliness towards aeromodellers of the round and round kind, it did have a staff member , a lad of about 25 who said he flew a bit of CL with the Peterborough club, knew of the 3Ks’ and was knowledgeable enough to know the difference between a diesel and a glow and who knew what F2C and Goodyear were.

On my visits he was always there and was always chatty about CL, and aeromodelling in general. Whilst never being a ‘big buck’ customer, I have spent enough of my hard earned’ to expect a certain level of customer service from my ‘local’ model shop, a level of service, which was sadly missing on my last visit.

I dropped in to buy some cyno, copper tube, some various bits of brass and some Zip kicker and whatever else caught my fancy, the bower bird trait in me, I am afraid, costs me a fortune in things that I think might come in useful one day!

However on this visit I was served by a new assistant, I enquired as to the whereabouts of the afore mentioned lad. “Oh we fired him! He was rubbish! “ was the surprising answer that I received.

Now whilst being an incredible breach of staff confidence, the manner in which I was told this information, was particularly distasteful.

But it gets worse; believe me!

I was then asked by the new assistant “What do you want all these bits for?” An interested question from a fellow modeller, I though, I answered that I was making a tank overflow and exhaust prime for a CL Team Racer.

“Eh? Control line? I thought that was dead, that is old boys toys, you want to fly RC or race nitro trucks!”

“No thanks” I said,

“I fly FAI and Vintage CL TR, much more fun!”

He was not to be put off,

“No way mate, dead boring!” he quickly turned his attention to a new customer who was enquiring about the “Petrol remote control truck?” “£500 on the road mate” answered the assistant, quickly ignoring the low deal CL modeller. Obviously the truck buyer was a worthier customer!

At that point any loyalty on my point as a customer went out the window, we are all customers, but because we don’t buy Nitro trucks, there is no reason to shun us.

My point is this; as CL flyers, we may not spend £500 on a nitro truck or car every week, but we do form the back bone of the model shop clientele, we go back again and again, buying props, balsa, glue etc, etc etc, thereby providing the shop with a useful revenue stream and unfortunately the money to employ rude and arrogant shop assistants.

So what I am asking of Hobby Stores is;

Pick up your game.

We maybe not the big players in terms of cash modellers, but we make up an important part of this sport of ours. I for one will take my custom else where. I might fly CL, but I do not expect to be treated like an idiot!

I realise that running a model shop is not a huge money spinner, but if it is the aim of the chain to alienate those that do not subscribe to the instant gratification of ARTF models and nitro trucks, it is to the detriment of the sport as a whole, aeroplanes, boats, cars and all that makes up the wonderful world of modelling.

I do not wish to have to find another model shop and I hope that you will be able to inform me that this was an isolated incident and that I will be able expect the level of non patronising service that I have experienced on my previous visits.

I look forward to a positive response.

Sincerely

Duncan Bainbridge
Hon Sec Three Kings Aeromodellers- 3Ks
Member Oakington Association of Kontrolliners - OAKS

This is a copy of the letter that I have sent to Hobby Stores, I wait with baited breath for a response.

The Future: A Polemic on our existence

Last month in my Editorial I posted earlier a polemic to encourage debate, it seems that some people have the same ideas, I would like to think so, if not we will fade away and become a pleasant memory.

The Three Kings, being a CL club has the majority of builder flyers who take pride in their achievements and enjoy flying them as much as building them, as a F2C flyer, I personally agree that RTF has much to offer, however some of my own built efforts still manage to get in the air!

The Three Kings is not a unique club, there are others like it, but what is great about the membership is that they enjoy building and flying and we are actively encouraging new members with their own projects. After all, the market is not exactly flooded with RTF CL models.

Membership is on the rise and members, peers and the public's interest in the Three Kings, the Patch and all the activities that go with that has never been higher.

Whilst the rise in interest and membership is wonderful news, the downside is that because of the nature of our sport and the technicalities that are required of it; coupled with the rise of the instant gratification society, skateboards, computer games, TV advertised nitro cars, and ARF models; is the natural wastage of the years.

Ours is no longer a seemingly youth friendly pastime, but appeals to those who are currently part of it and those who built and flew models during their younger days.

These people have grown up, got married, had families and careers and are now remembering the enjoyment that they got out of aeromodelling and have now returned.

But finding a like minded bunch of aeronauts can sometimes be a thankless task, as I well know. But the rewards for those that persevere are incredible and provide a wonderful outlet for the energies of retirement.

Feelings at seeing a model fly off the boards and the joy of mentoring younger people in the basically affordable and mentally invigorating pursuit of aeromodelling excellence are incalculable.

Whilst the $64 million question as how do we encourage young people into the sport, one which resonates around the world remains!

Bearing in mind the plethora of alternative sports, both extreme and couch potatoesque? what makes our sport unique and why do we believe so passionately in it, what do others think that we can do to make sure that we are not the last generation?

So lets try and stimulate some worthwhile discussion that can be examined and be utilised in the form of suggestions that could be made to the BMFA if it is felt that they are the correct people to assist in the creation of a solution. This is a world wide forum, so the thoughts and ideas of those outside the UK are especially valid.

Come on ladies and gents, let us get our thinking caps on and lets make a difference.

How do we get model aviation into the Sun, The Daily Mail, Wall Street Journal, The Sydney Morning Herald.

I have ideas but PR is my business. it is important to get ideas from people that can think outside of the box.

People that maybe can identify something that we others, ie the PR people are missing.

So I am opening the floor, what are we doing that is right, and more importantly WHAT ARE WE NOT DOING and why?

DB

Here are some of the Replies

I also posted my original piece on the Barton Club CL . Org website,

From Tim H North Lincs UK
Enjoyed your post Duncan, the comparison to a nitro car hit home. I started modelling at 9 and I've been back to it about 3 times in my life. What brought me back the last time was visibilty. I spotted the word "Ruteress" on the cover of a radio mag and picked it up. Next trip was to a model shop but no one there knew any control liners.

In any Model shop theres usually a few rtf radio things hanging from the ceiling. I wonder how many we'd attract if there was a typical control line model hanging up with contact/club/site details attached. Worth a try.

Tim
From Dallas Hanna, Richmond, NSW, Australia

Hi Duncan
The questions you are asking are still the same when we were all together at the old CLAS meetings at Bankstown in the 70s and all these years later the answers coming back are the same. The youngsters have too much in the way of alternative entertainment such as TV, video games, cars, women at an earlier age!, and so on. In the 25 years I have been with NSW TAFE, there has only been about 2 students in all of that time who have been interested in modelling and both were into R/C. Don't even mention C/L as they didn't want to know about it. I guess that is what progress has given us. Back in those early 70s, proportional radio sets were still new and out of the reach of many so C/L was still surviving. Here in OZ, a set of 5 chanel Futaba sold for around $375 when wages (trades) were around $90/week. In 1976, I think I upset the sales gentleman in Henry Js shop in Holloway Rd by asking if the Futaba sets were 2nd hand. With the exchange rate at $1.38 to the GBP it was about half that in the shops here. Now you can get a far better product for the equivalent fraction of that price.

As well, we have the market flooded with the ARF radio models which anyone can assemble in a couple of nights so the youngsters can still rage around doing “the modern kids life” and maybe fly these ARF/radio models at some time. They are not interested in doing what you and myself (er, a few years before you I guess!) did with a few sticks of wood, an engine and create a competition model. My son is a prime example. He could fly C/L round and round and also fly R/C quite ok but only if I provided the models and only at the flying field when he had nothing better to do! I had news for him!!

As well as these obstacles, there is the continuing loss of flying fields. Can you remember the United R/C club at St Marys..... Gone soon to a housing development with a few hundred members without a field. Others have been lost over the last 10 years thru plain stupidity and sadly, these were C/L fields, the result of the members “exercising their rights” as they felt and flew at early hours which did upset the natives.

I don’t think there is an answer to the lack of new members coming into the C/L ranks and maybe we have to accept that in 2005, the youngsters have too many other, as they consider, less expensive methods of entertainment. Gone are the days of spending every night for weeks after school or early years of work to build a model and demolish it on a wingunder on the second flight!

Well that’s the scene here in OZ. What about elsewhere?

Dallas Hanna

From Jim Hatch Darwen UK

This has been a topic of discussion several times between myself and Ray Lloyd and I tend to agree with Ken on this. Both Ken and I have seen attitudes change in kids.
Ten to fifteen years ago the sound of a motor cracking up would have brought every kid within earshot rushing to see what it was and they would have spent ages standing there open mouthed. Now it holds no interest for the stated reasons.
ie Too much like hard work building - not as much fun (to them) as playing on the PS2 etc etc
I remember being at a centralised F2B competition (used for allocating points to select British team) in Nottingham about 3 years ago and a group of young lads was crossing the field to play football. Not only did none come over to have a look but not one of them even turned to watch the action.
Ray reminds me that folk were talking about the demise of control line 20 years ago because of the lack of new blood but that it is just as strong now as it was then.

What worries me is that it is in the main still the same folk flying CL as it was then!

Looking arround some are getting a bit long in the tooth now - in fact at nearly 58 I am one of the youngest.
Last man standing - I will make the team yet!!!

Jim

Jim Hatch again

Just how we can attract new blood to the sport is the $64000 question. I used to be a radio ham and we had exactly the same problem. We tried to encourage folk to build their own gear but most would just buy it anyway as it was easiest. When we tried to encourage young ones to take an interest in radio the usual reaction was “I can just phone them on my phone” Truth be known it involved some work and that put them off. The studying for the Class B and then morse exam for Class A was too much like hard work.
Young ones now want quick fixes (don’t take that literally) If there was a ready supply of RTF models at affordable prices then they may,just may, have a go. It is sparking the interest and getting them going that is the problem. We had a young lad come down to the Barton site with his grandfather a year or so ago and showed real interest. Ray Lloyd gave him a mini- goodyear model complete with motor. We never saw him again.
The young ones that are doing CL now are in the main the sons of fathers who themselves did or are still doing it. Perhaps our National body the BMFA should do more to promote it. You can be sure that if a Brit came first in some obscure event (World championship wellie throwing!) it would be on the National News but get a World Champion combat flyer (thinking Merv Jones a few years ago) or Speed flyer then probably no mention at all in the national press and just a 1” column in his local rag.

Dallas Hanna again

Ken, Jim and all

The “no new ones”, even during the mid 70s to early 80s here in NSW there was a great following in F2B with up to 25+ entries necessitating a top 15 for 3rd round. Where did they all go?? Change of jobs, family commitments all took their toll on many of our numbers as well as losing a couple along the way to workplace accidents etc. Also, what some consider natural progression, moved on to R/C. Some still flew both and others never returned to the C/L scene. My own reason for being absent from 1980 to around 1994 in C/L was work and of course family although I did show up at odd comps but will have to admit..... I did fly R/C thru those years non stop as it required less discipline than the continual practice to stay around the top.

In these “twilight years” of our modeling it sure is sad that we turn up at a comp the same faces are there that we all knew as kids are there and the kids we taught later on are now around 40! Just think how much modeling we could get in if we weren’t sitting at our computers talking to each other. But then again we don’t have to prove anything, no more sheep stations to compete for, designs haven’t changed much in the last 20 years, even though there hasn’t been a perfect pattern flown no changes have been made since around 1964, flying fields aren’t easy to find due to the urban sprawl and the list goes on. I know, a few technical points in the pattern has changed but little else.

Hmm, must get up to the shed now and decide if I sand

the resin on the R/C model or build the cowl for the C/L model!

At least us oldies can look back at the past in contrast to the new generation of kids who can only tell you at best how they flew using Microsoft Flight Simulator.

DH

Interesting or what, good to stimulate some debate.

So sit back, put your handle down and have an enjoyable read.

Cheers to this month's contributors.

Enjoy ***your*** Court Circular.

– And don't forget Let me know what you are up to.

It's your newsletter. Remember help in the form of pictures, stories and even dare I say it gossip is always gratefully received.

Duncan Bainbridge
duncan@east-two.co.uk

Letters to the Editor

Dear Duncan

Thank you once again for producing a magnificent edition of the 3K Circular.

You are absolutely right and I whole-heartedly agree with your editorial: at every opportunity we must tell people what we do and raise the profile of model flying. I have to say that I am not keen on the word "aeromodelling" - not snappy enough & a bit old-fashioned. In fact we (Peter and I) don't tell people it's model flying until we have them hooked! I would also add that we should always refer to it as a sport too. And I agree: best fun you can have with your clothes on!

I loved the quote too and will remember and use that. Mike North's model looks good and the photos were first class. I enjoyed the Club Combat article too. In fact I read all of the Circular and enjoyed all the sections - even the bits I read first time round in the 70s!

To you and your contributors: "keep up the good work!"

Kind regards, Jo
BMFA Competition Secretary
BMFA Control Line Technical Committee Secretary

From Ken Shepherd Editor Model Flyer

Duncan - thanks for the eloquent letter! Your newsletter is very impressive. I wish one of your members would contribute regularly to Model Flyer - with everything that is going on with your club, it wouldn't be particularly onerous and it would reach a far wider target market - maybe even get even more recruits to the round and round brigade! I would like to have regular CL content in Flyer, but it takes commitment on behalf of the contributor to regularly provide good interesting stuff - perhaps something every other month. If you know someone would is up for it, please tell them to get in touch. Ken

As a result we may now have a regular column written by Mike Waller appearing in the Modelling Press.

Club Contact Details

Chairman
Brian Cordwell
15 Anglesey Gardens, Carshalton,
Surrey, SM5 3JD
T 020 8669 3021

cordwell6@blueyonder.co.uk

Secretary and Editor
Duncan Bainbridge
31 Glyn Road
Hackney E5 0JB
T 020 7682 0421

duncan@east-two.co.uk

Treasurer and Patch Contact
James Parry
49 Onslow Gardens
Wallington
Surrey SM6 9QH
T 020 8647 6021

james.i.parry@tinyonline.co.uk

Comp Sec and PRO
Mike and Steve Waller
272b Woolwich Road,
SE2 0DW
T 020 83106101

SWSE20DW@aol.com

The Court Circular

The Court Circular is the Newsletter of the Three Kings Aeromodellers, and is produced by the Club for the members and selected affiliates and aeromodelling contacts, the views and opinions expressed are those of the correspondents only and do not necessarily represent the official view of the Three King Aeromodellers. Any comments or questions should be addressed to the specific author.

The Editor accepts no responsibility or liability for any loss or damage incurred or suffered by anyone as a result of this publication or in reliance upon or as a result of acting upon anything contained in this publication.

Copy is welcomed by the Editor from members and readers. But please don't forget that it is your newsletter, so remember that I am always on the lookout for interesting items for the newsletter, so don't be shy.

If you want your name in print remember it is your club and your newsletter.

I am particularly interested in photos of people's models, Engine and Product Reviews, Comp Reports, etc anything is very welcome.

Copy Deadline

As the CC has now become a Bi Monthly newsletter, send any contributions, photos, ideas, letters, etc, send them when you can, when you have written, built, flown, crashed the article or model to me at the address above, by fax or by email, duncan@east-two.co.uk as an attachment in Word for PC, or send it on disc with a hard copy or in the last resort, as a paper copy if you have no computer.

News and Views

Hats T shirts and sweatshirts

These are still available as follows: -

T Shirt

M	L	XL	XXL
£3.76	£3.76	£3.76	£4.00

Sweatshirt

£8.82	£8.82	£8.82	£9.23

James will bring along to the next club meeting which and events at the patch.

Monthly Flying Days at Croydon in 2005

If you look at the members list you will quickly realise that our club membership is spread far and wide.

However the common denominator is the fact that we all like to fly and the added bonus of belonging to a club that still has a very good flying site.

For info on flying dates call Mike Waller
T 020 83106101
Email: - SWSE20DW@aol.com
Or James Parry
020 8647 6021
Email: - james.i.parry@tinyonline.co.uk

Let's get out and use it.

Sport Flying at Croydon: -

All are welcome to bring along any C/L model and fly over the tarmac or grass but all are subject to any competition taking precedent.
In the past this has not been a problem with at least one tarmac and one grass circle being available for sport flyers at any time.

All are welcome, the more the merrier.

Any queries please to James Parry 020 8647 6021 or email: - james-i.parry@tiscali.co.uk

Club Meeting dates for 2005

It was decided to continue the re-established evening meeting but on a bi monthly basis, therefore dates were set at the 1st Tuesday in the month;

DON'T FORGET NEXT MEETING

June 2005

Stanley Park High School
Stanley Park Road
Carshalton, Surrey

8.00 p.m in the Canteen at the school.

Follow 3ks sign in grounds.
Please contact Brian Cordwell on 020 8669 3021 for directions.

Comps at the Patch

For 2005 I am helping Mike and Steve out and putting on some competitions for Racing.

Come along and support your club, who knows; You might even become enthused and decide that Racing is your thing...

17 July 2005 Vintage Team Race ½ A and A class

16 October 2005 F2CN and British Goodyear Training Day

Getting our house in order

Our hard working club members have been hard at work getting the Patch up to scratch, new lines and some major gardening have seen the Patch all ready for the 2005 season, here a few photos of the hard working crew in action, making your site useable.

Round & Round

Duncan Bainbridge

Barton Club T/R Meeting 20 March 2005-04-02
Roy Vaughn

It's many years since Steve and I journeyed up the M6 to Lancashire for a T/R comp. In that time Three Sisters has become defunct but is replaced by a new site on Barton Aerodrome quite close to the centre of Manchester. The reason we stopped travelling, except to the Nats, was the disappearance of competition at Centralised meetings. Things now seem to be on the up, due mainly to the enthusiastic encouragement of Dave Holmes and Duncan Bainbridge and the availability of components and ready built models from Mike North. The prospect of more competition, the new tarmac circle at Barton and a promising weather forecast tempted us out. The long cold spell in February didn't help my preparation work (my workshop is the detached garage), but a bit of midnight oil burning the week before got a British Goodyear and the F2CN ready although the good intentions of some practice down at The Patch went by the board as usual.

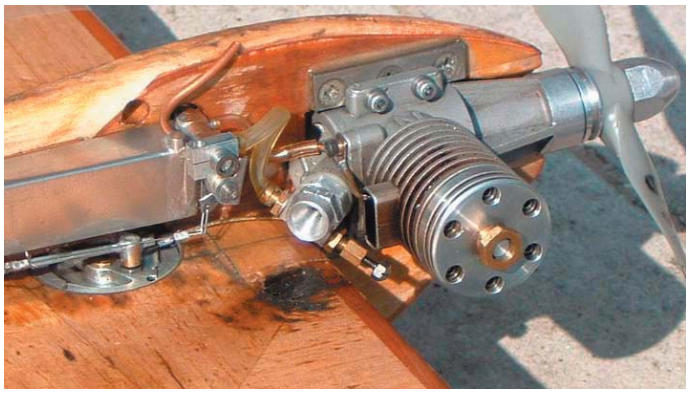
Steve and his wife had planned to travel up to Scotland that day anyway, so my wife and I drove up independently. The Barton site is in an interesting location just outside Manchester's orbital motorway and sandwiched between the M62 and the Manchester Ship Canal. Journey time was just over 3 hours from our place near Bracknell, almost exactly the same as it was to Three Sisters. The route is extremely simple: exit the M6 at the junction immediately following the Thelwall Viaduct and follow the A57 until you reach the aerodrome on the left. The only tricky bit is spotting the entrance to the small side road to the site, which is tucked into a corner of the drome, itself busy with light aircraft and microlight movements all day. Being on an active airfield and close to two motorways the site appears to be as noise-insensitive as can be achieved in this crowded isle.

The site now comprises a tarmac racing circle and several grass circles. The racing circle is the type with a tarmac centre circle separated from the pitting area by grass, with nicely painted pitting segments protecting the tarmac from fuel erosion.

We arrived early enough to get in a couple of practice tanks on the F2CN, which we were flying on solids for the first time. My previous experience with single strand wire was in the days when it came on a card from Keilkraft and I was concerned the whole lot would bind up and spoil our day. However, the day was dry and we had no problems at all. We found a fair turn of speed from my 1980 vintage Nelson RIRE F2C motor, 21.9/10 to be precise and about 37 laps and no problem at all in getting a good race setting. There was no time to practice the BG/Y, we left it to the races to attempt to get a decent setting.

There were actually three events on the programme for the day: Brit, F2CN and Barton B. The latter is a Barton club class now being flown more widely. The idea is to fly classic Class B T/R designs with a single approved motor type, the Irvine 25. In fact it's even more restrictive than that: the rules on the Barton web site state that the Irvine 25 must be "to Barton B spec". I found out at the meeting that this means it must be one of a batch assembled personally by Pete Halman with matched components to guarantee matched performance. The initial batch having been sold, there won't be any more apparently, so I don't know where that leaves newcomers to the class. Anyway, they go fast and make a nice noise, but, strangely, they don't all fly at the same speed despite the standard motor, fuel and props!

Racing got underway about 11 o'clock under the management of Mike Fitzgerald. F2CN drew an entry of five teams, three of whom are new to the class, which is excellent news. Racing was close and far more "sophisticated" than Brit. The tank capacity limit of 15cc is generous compared to F2C and could be used to single stop the race but the rules mandate at least two stops, so that's what everybody does. Combined with similar airspeeds, this means simultaneous pit stops (which shouldn't happen in a properly run BG/Y race), just like F2C, with all the extra scope for mishaps that this entails.



I think everyone was using RV Nelson of some sort or other. These motors have been extremely reliable over the years. Mine has seen quite a lot of service in Goodyears but still goes well even with a "blued" crankpin. Clearly competition is going to be stiff and something extra will be required soon to keep up with the pack, so, given the very good US dollar exchange rate, I ordered a new rear induction, side exhaust motor from Henry. It turned out that this uses the very last casting he had in stock and he was not inclined to get a new

batch cast. However, since he had sold four motors to my knowledge in the last few weeks, I suggested there was a market. If you want a competitive motor, and there is no better source I know of off-the-shelf kit, get on to him and persuade him to make some more. If you want to buy in more components you could start with Mike North's product list which is on the Barton site at http://www.controlline.org.uk/phpBB2/viewtopic.php?t=299 and look for the "price list" link following the photographs. If you want plans, I have three designs available, just give me a call.

F2CN

POS'N	NAME	RD 1	RD 2	FINAL
1	Barker/North	04:33.1	04:26.4	08:31.6
2	Toogood/Ward	04:36.6	04:59.3	09:28.2
3	Crawford/Vaughn		04:34.6	37 Laps102 Laps
4	Sharp/sharp	38 Laps	04:50.9	
5	Eyre/Bellamy	06:51.8	Ret'd	

British Goodyear attracted six entries of whom two had to scratch with various early season problems. Technology in this event doesn't change, we are flying the same gear we flew fifteen years ago! Nobody has seen fit to sort out new motors from the approved list, some of which should be quicker than the PAWs. Despite, or perhaps because of, this, the racing is still close and competitive (if you've prepared properly) and is still a good introduction to racing.

British Goodyear

POS'N	NAME	RD 1	RD 2	FINAL
1	Crawford/Vaughn		04:52.6	04:40.7 09:32.4
2	Barker/North	36 Laps	04:49.0	09:53.0
3	Daglish/Winstanley		05:17.6	06:55.2 198 Laps
4	Eyre/Bellamy	08:36.8	05:48.5	
5	Cannon/Cannon		Ret'd	Scratch
6	Ross/Court	Ret'd	Scratch	

While we were racing around, our wives toured the gardens of Manchester, and had nearly as good a time as us! Thanks to the Barton Club for running the event and to Mike Fitzgerald the CD. Here's to the next time!

News in from Down Under,

The Rocket

A great model rocketing in is John Hallowelll's Classic B racer, a great model to build for Barton B, full size plans are available from John via Duncan for £5

ROCKET CONSTRUCTION NOTES

T he first Rocket ship was built in the late 1990's. It was a bright red racer, powered by a MRS tuned Royal .28 and campaigned in Class 2. On it's first flights down at the Frankston field it made 124mph. A real eye opener! It won the Class 2 event at the Canberra Championships in a new record time. The red Rocket was then given a dual u/c and an OS25 for Classic B. It made the Nats final at Albury in 2001 in the competent hands of the Hunting brothers.

The next Rocket was all white and purpose built for Mark McDermott's effort at the next Albury Nats. The model set a new heat record which was to stand for 18 months. It also made the final and was just pipped by the 'Flying Purple People Eater'. The new Rocket is based on this triple Nats winner, with construction and systems almost identical. It could be called an elliptical winged version of the FPPE.

Building this racer is easy …it's not really rocket science! Just follow these simple step by step instructions.

Firstly, select the 10 and 5mm balsa for the wing and tail. Chose the wood carefully as it will pay dividends later.

Join the two wing sheets together. Before you glue, ensure they fit together without any gaps. If you can, use 2 sheets of glass with weights to ensure the wing blank dries absolutely flat. Draw the outline in your preferred way. Carefully cut a straight line in the outboard wing for the strengthened leading edge. Epoxy the spruce strip separately to the 10mm sq. hard balsa. Use clamps for a tight join.

When dry, use strong rubber bands to clamp the laminated edge to the wing with epoxy. The epoxy glue allows positioning flexibility and the extra weight is good for the outboard side. Now sand the wing to exactly fit the plan outline. When the shape is perfect, use thin cyano all around the 10 mm edges. This will help make it stronger

when carved down to a 1mm trailing edge. A building tip is to make a cardboard template of one of the wing outlines. Then you can match to see if the elliptical shape is exactly the same on both sides.

Next cut out the bellcrank mounting hole. With the wing blank shaped, using a new or really sharp scalpel blade, make two cuts in the inboard wing for the internal leadouts. Remove this section and carefully cut a groove in the middle of both sides for the leadout wires. Then groove each side of the wing blank so the hole is centred in the cut.

When finished, use 5 min. epoxy to glue it all back together using two well greased (general purpose grease is good) 14 g. wire rods to form the leadout channels. Make sure everything is perfectly flat and that you regularly twist the rods around during drying. You should end up with two fuelproof leadout guides. Next install the 3mm ply bellcrank mount and the nylon leadout guides. The Pylon brand yellow ones are excellent.

Add the 1. 5 oz tip weight and begin shaping. The wing is a 2/3rds –1/3rd section with a 25% high point on top and a 15% high point underneath. Carefully mark all edges and surfaces for accurate shaping. Leave the centre section square to ensure a perfectly flat surface to mate with the crutch. Use a small razor plane to start shaping and then use progressively finer sandpaper, finishing with 600 wet and dry. Take your time and make sure the wing section is as accurate as you can get it. Sand 1mm washout in each tip. It can make a difference to the way a model flies and glides.

The same procedure applies to the tail. Cut from a 5mm sheet, get the shape exactly right, cyano the edges and start shaping to a symmetrical section. When finished, go through the same process as the wing right through to glassing. Now cut out the single outboard elevator. Make and install the 16swg one piece control horn (no solder joints to break). Use a piece of the 14swg pushrod wire in a vice and just wrap the other wire twice around it. Before final bending, make sure you slide on a 15mm long piece of close fitting brass tubing for support. Use one piece R/C hinges with holes to make an invisible elevator attachment.

The wing and tail can now be give a coat of 50/50 dope & thinners and allowed to dry thoroughly. They can then be covered in 3/4oz glass cloth. Sand both to a smooth finish and then install a fully bushed bellcrank, leadouts and pushrod.

For the leadouts, attach a 40 mm piece of 16swg with a Z bend to the bellcrank. File a flat surface on top of the wire, then bind and silver solder heavy duty Pylon brand leadouts to each wire. Bind tight but not too closely as the solder must be allowed to penetrate. The idea is to make the controls bullet proof and last for a very long time. Grease the controls well after soldering and before final assembly.

It's time to start work on the crutch. There are two options here. You can begin with two 12mm x 3mm strips of spruce and build it up using epoxy. Or find some basswood or even a light piece of radiata pine and jigsaw and mill from a solid 12mm blank. Your choice.

Use hardwood to mount the 4.40 Du Bro threaded brass inserts to hold down the laminated pan. Only drill three quarters of the way through the hardwood bearer stock to stop the inserts working their way up. The strongest glue is 24 hour epoxy. It is recommended for the crutch and hold down cross members.

Start the engine pan by cutting two bearer lengths. Rock Maple is great if you can get it. Use your motor to get the correct spacing and glue to a 3mm ply base. Add the cross supports. When dry, laminate fibreglass cloth between the ply and the top balsa block.

Clamp or use weights for a strong join. You will need to use a strip of 5mm balsa on each side of the pan to get the required 2 inch width at the pilot's location Line up and drill the holes for the 4.40 hold down bolts. Now make up the steel motor mount from 3mm stock. Carefully lighten by drilling underneath in non critical areas. 2024 aluminium is an alternative, but steel will last longer. Dremel out sections for the electrics and tank as shown. Face the bottom of the pan with light spruce strips. Make sure all is perfectly flat and ready to mate with the crutch. Finish the shaping.

Now is a good time to make up the 30 cc tank. Use low temperature silver solder for stronger joins. Pay particular attention to the two mounting brackets as they need to be strong. Test underwater for leaks when finished. The tank is removable and is held to the pan by two self tapping screws. When re–installing the tank after painting, use some silicone to help absorb vibration.

At this stage it is time to hook up the controls and glue the wing and stab to the crutch. Careful alignment is critical at this stage. Remember to slip the support tubing over the pushrod wire before making the bends.

Next comes the 5mm fuselage sides. The extra width over 3mm balsa allows for shaping and gives extra strength. Shape the cowl blocks to fit around the motor with a 2mm air gap and glue in place. Make holes for exhaust, plug, needle and fuel tubing. Finish the bottom sections before starting on the top by positioning the tail fin. The fin can be glassed and finished before installation. Plank the rear fuselage and glue the fin support blocks in place.

You are now ready for final sanding of the fuselage. Use fillets to strengthen and streamline where the wing, tail and fin join the fuselage. Sand smooth and give the balsa a coat of thinned dope. When dry, sand again with 400 wet & dry and then cover the engine pan and fuselage with lightweight glass cloth. Sand well, but be careful not to cut through the glass cloth. You are now ready for priming and the 2 pack paint colour of your choice.

Motor used is an OS25 FP, although the LA25 and Thunder Tiger 25 will also work very well. The motors used by

Keith Baddock and I have been modified for team racing by Robin Heirn of Model Racing Services.

You will note that no shutoff has been included. The speed style tube crusher units are very light and can easily be fitted.

We have not found them necessary in Australian rules Classic B. It is something else to go wrong, i.e.; accidental shutoff taking off into a strong wind or taking evasive action to avoid another model.

However, they can be justified on safety grounds.

The finished model should weigh somewhere between 20 and 25 oz. It will depend on wood selection, glue application and the amount of resin and paint used. Obviously, the lighter, the better!

Flying is easy with no handling vices. Balance point is 28 mm back from the wing leading edge. As with all control line racers, lead the model

on takeoff and you'll be right!

It should be steady enough to fly 'eyes off' yet respond quickly to control input. Moderate wind will not worry the Rocket. Good flying!

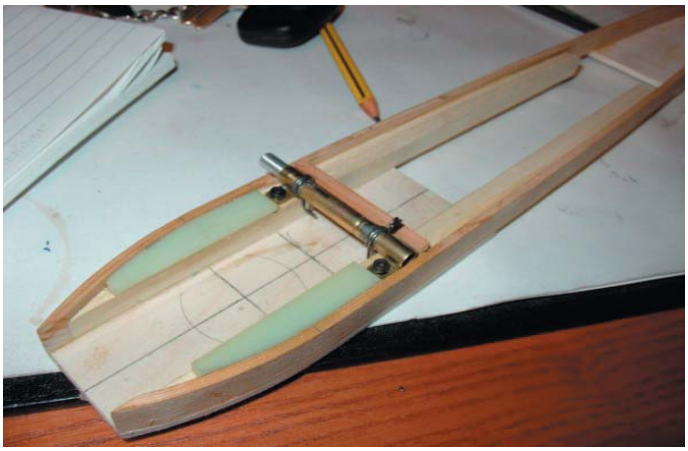
Contact John at videoline@pacific.net.au for a copy of this great model, yours for only 10 Aussie dollars.

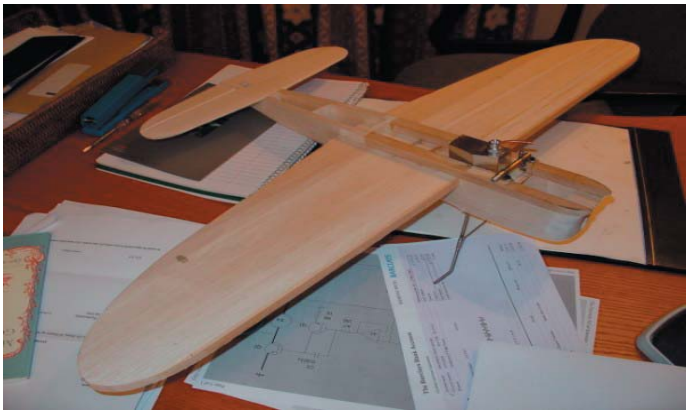
John Hallowell,
VH 1984.

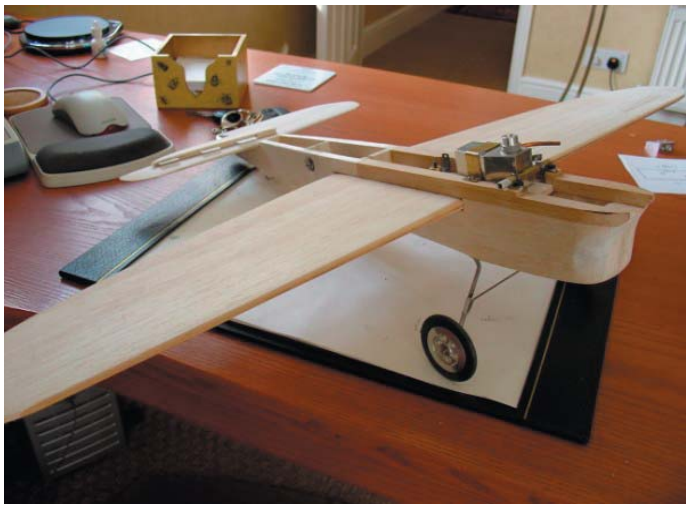
The UK Rocket

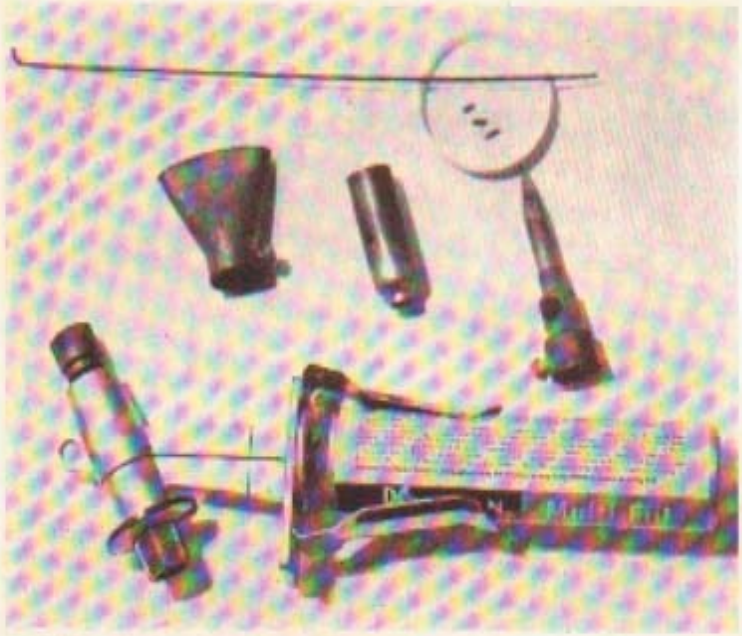
Felllow modeller Adrian Moore from Canterbury is building one.

Here are a few shots:









BASIC METALWORK

Part III

by Bill Burkinshaw,

concerning the joining

of metals

A butane torch such as the Ronson Varaflame (left) is ideal for hard soldering, while the substitution of a copper bit also enables it to be used for soft soldering. Useful for field repairs too. Available from ironmongers or do-it-yourself shops.

IN THIS SECTION I will deal with the various different methods of permanently holding together pieces of metal that are readily available to the 'table top' modeller.

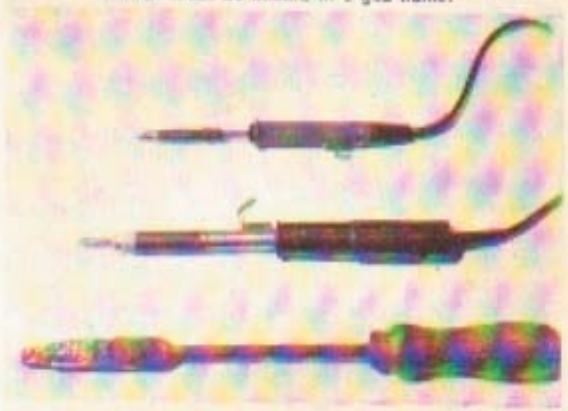
The most common method used by the aeromodeller is soldering (soft soldering as apposed to hard soldering – see next section). Not only is it the most commonly used, it is often the most commonly abused to judge from the number of leaky and very heavy fuel tanks and 'drop-off' pushrods seen on control line models. Before giving some tips on soft soldering a brief explanation of the theory and 'chemistry' of the process might help. Soft solder is an alloy of tin and lead, the more tin the alloy contains, the lower the melting point (and greater the cost). Melting point varies from approximately 180°C-300°C depending upon composition. When molten solder comes into contact with clean metal it alloys or combines with the surface of the metals to be joined and when solid a permanent joint is made. It has a tensile strength of approximately 4 tons per square inch, so you can see that the joint made should be very strong – in fact it should mean that two one inch square bars soldered end to end could support a weight of some 4 tons.

Two points in the above description give the clues which will solve most causes of soldered joint failures: they are MOLTEN and CLEAN. Only molten solder will adhere to clean metal properly: even though a piece of metal looks clean it is not if it has been in contact with the air around it. Oxygen in the atmosphere reacts with the surface of the metal to produce oxides which coat the entire surface of the metal, and solder will not adhere to oxide. So the first thing to do is remove oxide and then prevent it from reforming. The solder is kept molten by using a sufficiently large 'iron' for the job in hand.

The iron is basically a heat store which is used to melt the solder and also to heat up the article to be soldered to a temperature that will not cool the solder and cause it to solidify when it comes into contact with it. This means that the iron used must be of adequate size to heat up not only its own 'bit', the solder, but also the object being soldered as well. Conversely the iron must not be so large that it damages the components being soldered, e.g. transistors and similar electronic components. The answer to these conflicting requirements is to have more than one soldering iron. I personally use a small electric iron of 10 watts for electrical work and a plain gas-heated copper bitted iron for larger work although this does mean that a gas cooker needs to be available. However, if your home does not boast a gas cooker, an electric iron of 60 watts rating would be necessary.

The formation of oxides is prevented by using a flux. The cheapest way to solder in the long term is to buy a stick of solid tinman's solder and a tin of resin flux, e.g. Fluxite for electrical work and Tinplate plus a tin of Bakers fluid for steel, brass and copper although solder can be obtained with both resin and acid flux cores. The flux has a dual action: it helps to lift oxides off the metal surface, and also by melting over the clean metal, it prevents air from getting to the surface and causing further oxidation. Some metals have the ability to oxidise more quickly than others, so they require fluxes with a more powerful action. Tin is slow to oxidise and a resin flux can be used on it; brass, copper and steel should be soldered using an acid flux. The acid fluxes remain active after soldering has finished and residues will corrode components if not washed off. This is, of course, a good reason for not using acid fluxes on electrical and electronic work as the working of residual flux would not do a radio receiver very much good! I have not mentioned the soldering of aluminium yet because it requires special solders and fluxes. Ordinary tin/lead solder cannot be used nor can fluxes of the

The equipment for soft soldering: at left, is a variety of solder and below, a selection of soldering irons, the top two electrical, the bottom one consisting purely of a copper bit which must be heated in a gas flame.



FLUXITE BAKERS FLUID type be used. It is possible to obtain the necessary materials for soldering aluminium in small quantities although they are fairly expensive. *Camping Gaz International* make packs of solder and flux for aluminium and the cost would be approximately £1.25 for both. My local hardware dealer informs me that any Gaz retailer should have no difficulty obtaining supplies of these materials. I have not used Gaz's brand of aluminium solder but I have used the industrially available equivalent and provided the particular brand instructions are followed carefully, results have been very successful.

After this preamble some practical tips. Firstly, soldering together a fuel tank shaped up from tinplate. You will need:

(a) Prepared parts for the tank: all parts bent, holes drilled, vent pipes cut to length.
(b) Pair of pliers (used to pick up the hot tank).
(c) Soldering iron (60 watt electrical type).
(d) Resin cored solder or tin-man's solder and resin flux.
(e) Bakers fluid.
(f) Emery cloth or old file.
(g) Vice and blocks of wood.

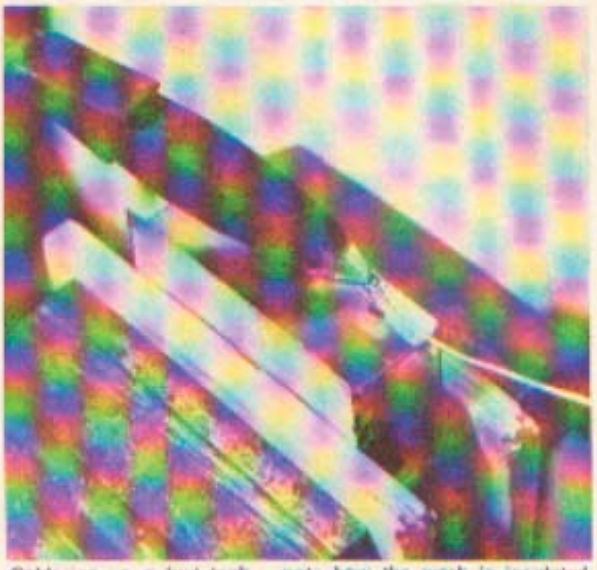
Method

1. Tin the soldering iron, a procedure necessary from time to time as the iron's bit becomes pitted and dirty. To tin, heat up the iron and melt a few blobs of solder into the tin of flux. With an old file or emery cloth shape up the bit of the iron whilst it is still heated until you see clean bright metal and have corrected any deformation, then quickly plunge the iron into the flux tin onto one of the previously melted blobs of solder. There should be a great cloud of smoke and a horrible smell. When you can see again, the surface of the iron should be coated with a bright, clean layer of molten solder. Repeat when necessary.
2. Using blocks of wood as insulators clamp the tank parts in the vice using wood blocks to prevent the large lump of metal that is the vice from 'soaking up' all the heat from the soldering iron.
3. Smear a thin layer of flux along the tinplate joints to be soldered. Leave the soldering of the brass and copper tubes for the moment.
4. Dip the iron into the flux then melt a small quantity of solder onto the tinned bit.
5. Place the iron firmly into contact with the start of the joint line to be soldered.
6. Wait for a few seconds (very important this. The iron must have time to heat up the metal and melt the flux.)
7. Now draw the iron slowly along the length of the joint. A smooth fillet of solder should be deposited behind the iron as it moves along. If the solder does not flow cleanly you probably did not wait long enough for the iron to heat the work initially.
8. Allow solder to cool. It is possible to note the difference between the shiny surface of molten solder and the dull surface of the solidified solder.
9. Repeat as necessary.

Fixing Tank Vents and Soldering Piano Wire

Brass and copper tube as well as piano wire really do need an acid flux for best results when soldering. I know ordinary resin cored solder will make a joint, but remember those leaking tanks and drop-off pushrods? The first essential is to clean up the area of the joint with emery cloth. Yes, even if you only finished the shaping and emery clothed it yesterday. Having done this proceed as for steps 3-8 with the additional step of washing off flux residues when the job is completed. This is necessary anyway with a fuel tank as I do not think that even resin flux is a recommended ingredient of either diesel or glow fuel! Remember with a fuel tank to check for leaks at this stage by placing fingers over all the vents and immersing the tank in hot water – the heat causes the air inside the tank to expand and force its way out of any holes. Incidentally, it is not a particularly easy task to solder a tank before the vent holes are drilled as the heat from the iron expands the air in the tank and causes difficulty with sealing the last little bit of the joint.

There are, of course, instances when one feels that plain soft soldered joints are just not strong enough, e.g. heavy gauge wire undercarriages, cabane struts and propeller hubs. If the means are to hand, the first alternative would be hard solder (more later) but as is often the case cost of necessary materials is prohibitive or you have run out of matches to light the gas and soft solder has to do. The joint can be very successfully reinforced with a binding of wire before soldering so that when soldered the wire binding becomes bonded into the joint completely. The most commonly used material for the reinforcement is fuse wire but this is not the only material. Strips of tinplate wrapped round the joint or a piece of tube slipped over the two components can also be used (Fig. 1). Whichever method is adopted it is essential if full benefit is to be



Soldering up a fuel tank – note how the work is insulated from the jaws of the vice with wooden blocks. Failure to do this would result in a very poor joint, as the mass of the vice would cool the tank so much that the solder could not 'run' properly.

obtained, that the reinforcing is completely bonded in. If piano wire is being reinforced, acid-flux must be used to ensure that the piano wire is soldered inside the wire, etc. binding.

If the tube method is used the joint should ideally be 'sweated'. To do this the ends of the wire should first be cleaned off with emery-cloth, then coated with a layer of solder all over. Then, if possible, the ends of the tube should be emery clothed. The rods and tube inside are assembled with plenty of flux inside and the whole assembly is then re-heated with the iron from the outside until the heat conducts through and fuses all the solder together inside the joint. On really big work of this nature a bunsen burner or butane gas torch would be played over the outside of the assembly until the solder ran. If necessary feed in extra solder during the sweating process until it is seen to run out of the opposite end of the joint. This method can be used to solder straps onto fuel tanks, etc. by tinning both the strap and tank, placing the tinned surfaces together then applying heat and pressure with a soldering iron until melted solder is seen to ooze from the edge of the joint. Still on the subject of soft soldering there are several handy tips that might help to alleviate a certain amount of frustration which I can pass on at this stage. They are:

(a) *Cutting and soldering Bowden cable:* this is a multi-stranded steel cable which is frequently used for R/C model control linkages and also for flexible leadouts on control line models. The secret is to tin the cable in the area of point to be cut before cutting. If you do not do this the cable tends to unravel itself when you cut it, meaning punctured fingers when trying to re-wind it or a Bowden cable with a strand missing. Use plenty of Bakers fluid and really let the solder soak well into all the strands of the cable. Allow to cool, then cut with side or end cutting pliers. Now whatever you wish to join to the cable can be joined and then very thoroughly clean off residual flux because it tends to be trapped in between the strands of the cable and corrosion will set in very rapidly.
(b) Similarly, when soldering *multi-strand electrical flex*

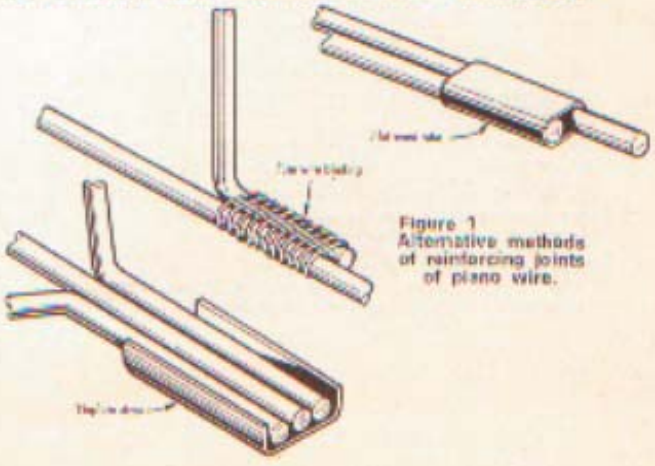


Figure 1
Alternative methods of reinforcing joints of piano wire.

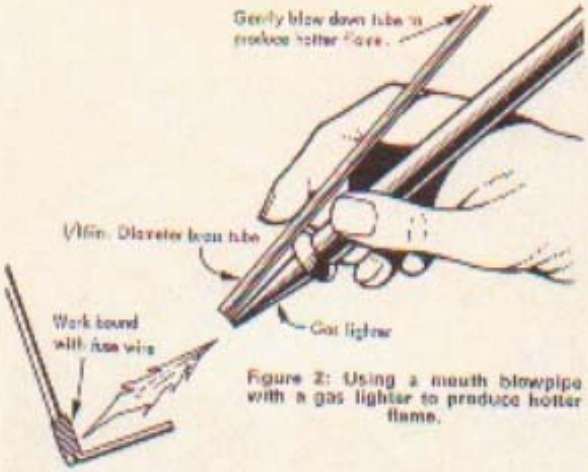
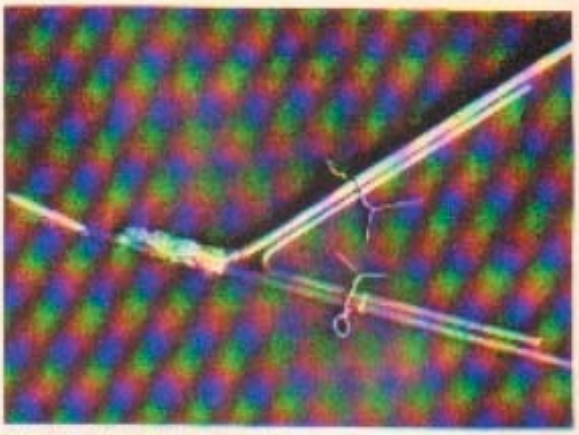


Figure 2: Using a mouth blowpipe with a gas lighter to produce hotter flame.



Best way to hold pieces of piano wire together during the soldering operation is to use twists of soft iron binding wire as shown in the picture above – this is quick, easy and does not conduct the heat away. Forget Sellotape, it melts . . .!

onto R/C slide switches for example, even when the strands are firmly twisted together as you try to poke the end into the minute hole in the tag on the switch the odd strand seems always to escape. So – bare the core of the flex, being careful not to remove any of the multiple, tiny wires it is made up from, then twist tightly together. With resin cored flux, tin the bare end then shape the tinned flex into a little hook, and hook over the tag. A touch with the hot iron and the job is nearly done.

(c) *Soldering on wheels* so that they revolve and push-rods so that they push. The difficulty here is that the easiest way to solder on the wheel is to turn the model on its side so that neither the wheel nor the retaining washer falls off. Unfortunately, under the influence of gravity the collet or washer falls down the wire and when soldered is hard up against the wheel thus preventing rotation of same. To overcome this difficulty, and also to prevent the iron from spoiling the now very common plastic wheel hub of those £1.00 per set wheels, place the wheels on the axle, then place a piece of thick brown paper or thin card onto the axle, followed by the washer and finally solder on. On removing the paper there will be clearance between the washer and wheel and burn marks will be on the discarded paper (see Fig 3). The same method can be applied to soldering pushrod and leadout connections at bellcrank and control horns.

(d) *How to gauge the heat* of a soldering iron heating up on the gas stove? Insufficient heat will have obvious results and overheating will completely oxidise the coating of solder on the bit (carefully tinned prior to start of working) necessitating yet another tinning and a further reduction in the size of the copper bit. This one is very simple, look at the colour of the gas flame heating the bit; when it goes bright green around the copper bit the iron is at the correct temperature.

Hard Soldering

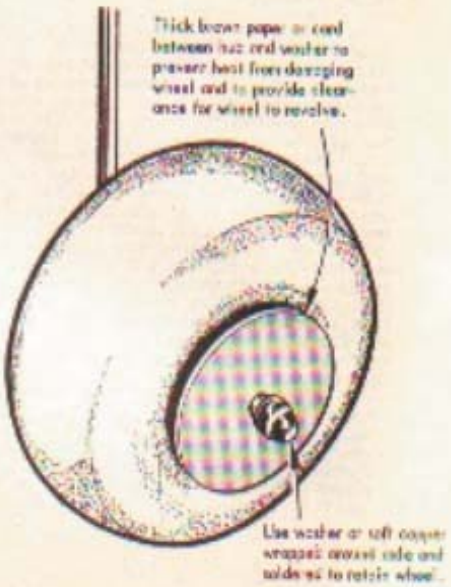
Having mentioned hard soldering several times I suppose I had better mention some basic points so that the experimenter can have a go. Hard solder (or silver solder as it is sometimes called) is an alloy of mainly silver and copper. It is obtained in rod (1/32 in. – 3/32 in. – 1/8 in. dia.) and 1/8 in x 1/2 in. flat strip commonly. Different grades are available which have been very precisely alloyed and have stated melting points. By taking advantage of the differing melting points it is possible to make several subsequent joints close together without the first falling apart as subsequent joints are made. This property is not really of very great importance in the context of aeromodelling, but the very great strength of joints without resource to binding and other reinforcement is. I always make my own needle bars jets, spraybars, etc. and hard solder the needle into the brass thimble. The press-fit type and even soft soldered examples are prone to come adrift. Also brass control horns and elevator and flap joiners where the joint area is very small and soft solder could fail. The solder does need a flux – there are self-fluxing varieties around but the varieties generally available need a flux. The fluxes used are based on Borax which can be obtained cheaply at a chemist and used on its own mixed with water. The solder has a melting point depending on grade from 600°C-800°C so obviously a soldering iron will not do. A blowlamp of some sort is necessary to heat the metal for joining. Butane torches such as the Ronson Varaflame, methylated spirits 'French blowlamps' or even a gas jet or maths burner and mouth blowpipe can be used (see Figure 2).

Some preparation of the pieces to be joined is necessary. Firstly the pieces of metal – brass, copper, steel or piano wire – are cleaned thoroughly with emery cloth. Then a simple system of holding the parts temporarily together must be devised. The usual way is to hold the pieces together with soft iron binding wire such as the wire used for holding packing cases together. Having held the pieces together the flux is then mixed into a thick creamy paste with water. As I said, Borax can be used or a proprietary brand such as Johnson & Matheys *Easi Flo*. This paste is then applied to the area of the joint. Be sparing with the spreading of the flux because the solder will flow everywhere there is flux. Clean the solder with emery cloth and cut some small pieces off the stick, with side cutting pliers size 1 in. long., 1/32 in. dia. if using 1/8 in. wire. Allow two such pieces for a butt joint 1 in. long between two pieces of 10 swg wire. Place the solder in the flux on the joint. Now fire up your heating appliance and commence to heat the joint area gently. The flux/water mixture will commence steaming and should be heated gently to avoid bubbling which could cause the pieces of solder to fly off. When the water has all boiled off, heat more strongly until firstly the flux melts and then the solder melts and flows into the joint. Bear in mind that steel will be almost red hot at this point and small brass articles can be melted with a butane torch. When the solder has solidified it can be quenched in cold water and flux residues cleaned off. For those really interested in further information on soldering and brazing there is an M.A.P. book on this subject entitled *Soldering and Brazing*, price 50p.

Incidentally, when it comes to buying the various items listed in this and previous articles, it is well worth contacting Whistons of New Mills, Stockport, Cheshire, who are a marvellous source of supply for all manner of tools, materials, metals, plastics, flux, nuts, bolts, washers and many ex-government surplus odds and ends. Their catalogue is well worth getting and even the saving on an order for 6 and BBA bolts would make it worth your while to pay for the necessary stamp, etc., to get one. Whilst on the subject of sources of supply, Maple Models (Prop. Steve Blake, control line stunt expert) of 16 Maple Road, Luton, Beds., are able to supply most of the tools and materials including silver solder, fluxes, tinplate and, I believe, some non-ferrous (copper, brass, aluminium) metals by mail order.

To be continued

Figure 3: Soldering wheel retaining washers.



The 2005 BARTON BASH
14th-15th May 2005

The Bainbridge/Orchard/Delgardo Team ventured north to this now legendary event and had a great time, although not that successful, but it is the taking part that counts isnt it? Bollocks, we go to win and we were not lucky this time, only squeezing a third in V1/2A, but there is always next year, we had a great time, apart from nearly burning out the clutch in Alex's car trying to tow the caravan across the dam ground!

We met lots of folks and caught up with some old mates, and had some great racing, which is what it is all about. Though it wasnt just racing, our very own admiral Housden was there with his Carrier Battle Group, putting loads of missions and there was a lot of activity in the stunt circles, lots of folks enjoying the fabulous facilities that the Barton Club have worked hard to create, it is a great event and a credit to the CD's and those that worked hard to make it so successful, many thanks. we will definately be back next year.

I am indebted to Peter Branigan and Jim Hatch for the following reports, comments and results taken with permission from Circle Talk, the Barton Newsletter.

Barton is a great site and offers:

- plenty of space with minimal noise worries
- superb smooth tarmac circle
- 5 grass circles
- no restrictions on flying times
- all-day access 364 days of the year
- full-size light aircraft drifting overhead
- a hangar full of scale subjects - you need permission of course - to inspire you to build the definitive scale model.

Barton Member John Whiteside also commented;

Anybody who is anybody in control line is a member of our club and readily available to help and encourage newcomers and improvers alike.
With the tales of woe in the model press about lost sites and shrinking venues, this really is count your blessings time for us at Barton.

I wholeheartedly reccomend it, lets support when and where we can as Southerners and hopefully they will support us. - Ed

Tarmac Circle Racing

VINTAGE '½A' TEAM RACING (5 entries)
CD: Dave Rudd

Pos	Team	Heat 1	Heat 2	Final
1.	Smith/Bollen	4.15.1	4.26.3	9.32.1
2.	Toogood/Ward	4.31.0	83 laps	9.50.6
3.	Bainbridge/Orchard	4.30.0	34 laps	10.59.1
4.	Green/Long	4.55.3	5.02.3	
5.	Simon/Winstanley	7.03.8	5.26.5	

VINTAGE 'A' TEAM RACING (11 entries)
CD: Dave Rudd

Pos	Team	Heat 1	Heat 2	Final
1.	Toogood/Ward	3.25.1	3.34.0	7.30.6
2.	Ross/Yeldham	Disq	3.47.2	7.37.4
3.	Fitzgerald/Court	3.47.5	4.00.2	8.04.5
4.	Smith/Bollen	4.01.2	3.49.9	
5.	Langw'th/Broadh'd	3.58.4	4.26.5	
6.	Bainbridge/Orchard	4.56.0	4.03.9	
7.	Barker/Taylor	4.32.8	4.28.4	
8.	Green/Long	Disq	69 laps	
9.	Simon/Winstanley	Retd		
10.	May/Mealing	Retd		
11.	Flack/Springham	Retd		

VINTAGE 'B' TEAM RACING (8 entries)
CD: Dave Rudd

Pos	Team	Heat 1	Heat 2	Final
1.	Green/Long	3.21.4	Retd	7.05.3
2.	Ross/Millar/Court	3.37.3	3.36.0	7.10.1
3.	Toogood/Ward/Toogd	3.36.7	3.21.9	7.21.0
4.	Fitzgerald/Taylor	3.48.2	74 laps	
5.	Bainbridge/Orchard	4.07.2	42 laps	
6.	Flack/Springham	4.33.2	4.28.1	
7.	Bailey/Pickles	Retd	5.01.6	
8.	May/Mealing	7.05.2	12 laps	

'BARTON B' TEAM RACING (11 entries)
CD: Dave Rudd

Pos	Team	Heat 1	Heat 2	Final
1.	Toogood/Ward/Toogd	3.24.0	DNF	7.06.3
2.	Barker/North/Moore	3.40.6	3.41.3	7.57.1
3.	Smith/Yeldham	3.47.1	3.33.7	8.57.2
4.	Bailey/Pickles	62 laps	3.48.8	
5.	Green/Long	4.09.1	3.59.2	
6.	Fitzgerald/Taylor	4.33.6	4.00.4	
7.	Ross/Tennant/Lloyd	5.14.4	4.06.4	
8.	Langworth/Broadhead	4.37.0	4.19.5	
9.	Walker/Peart	Retd	DNF	
10.	May/Mealing	Scratch		-
11.	Alexander/Millar	Scratch		-

BRITISH GOODYEAR RACING (5 entries)
CD: Dave Rudd

Pos	Team	Heat 1	Heat 2	Final
1.	Daglish/Worgan	4.28.2	4.29.6	9.07.7
2.	Barker/North	4.48.9	4.39.5	9.27.9
3.	Ross/Court	4.51.6	4.48.8	9.58.9
4.	Fry/Winstanley	6.45.7	35 laps	
5.	Eyre/Bellamy	Disq	7.26.4	

MINI-GOODYEAR RACING

Pos	Team	Time
1.	Broadhead/Langworth	9.48.8
2.	Daglish/Morrell	171 laps – Retired
3.	Eyre/Bellamy	138 laps – Disqualified

PHANTOM RACING

Pos	Team	Time
1.	Daglish/Lever	7.16.1
2.	Morrell/Waterland	7.39.2
3.	Fry/Winstanley	40 laps – Retired

CLUB SPEED

Pos	Pilot/Team	Speed
1.	Morrissey	94.35 mph
2.	Morrell/Daglish	93.14 mph
3.	Long	87.44 mph

Aerobatic Circles

VINTAGE

Pos	Pilot	Points
1.	G. Tennant	525
2.	J. Allcock	508
3.	G. Stevenson	460
4.	E. Hawthorn	458
5.	T. Lloyd	456
6.	J. Major	373
7.	D. Saul	337
	T. Hughes	Scr
	D. Underwood	Scr

PEACEMAKER

Pos	Pilot	Points
1.	B. Waterland	485
2.	J. Allcock	482
3.	G. Church	465
4.	D. Underw'd	436
5.	N. Stewart	416
6.	G. Stevenson	416
7.	B. Lever	407
8.	D. Goddard	291
9.	K. Powell	230
	T. Hughes	Scr

NOVICE STUNT

Pos	Pilot	Points
1.	Ron Newbury	69
2.	Bob Phillips	50
3=	John Phillips	46
3=	Terry Baker	46

Carrier Circle

BASIC CARRIER
CD: Andy Housden

Pos	Pilot	Locat'n	Prototype	Engine	Score
1.	I.Gilbert	Ipswich Gr.	AF Guardian	Webra 40	232.8
2.	P.Tribe	Dartford	W'land. Wyvern	West 36	229.9
3.	R.Phillips	St Albans	Super. Attacker	Leo 37	226.4
4.	G.Church	Witham	Gr. AF Guardian	OS 46	218.4
5.	M.Welch	Marlboro'	Fairey Fulmar	SC 40	216.3
6.	R.Green	Orpingt'n	W'land Wyvern	Irvine 36	212.4
7.	D.Rigg	Colne	Gr. F6F Hellcat	Irvine 40	153.3
8.	J.Phillips	St Albans	Fairey Firefly	MDS 38	137.3
9.	A.Garnett	Colne	Hellcat	MDS 40	60.8
10.	N.Crabtree	Sheffield	Gr. AF Guardian	0S 46	

THE 2005 BASH IN RETROSPECTIVE
John Noble (CD for Grass Circle Racing and Speed) writes:

Club Speed
1. There were two interpretations of line length: 42' and 13.50m (otherwise 44'3"). Both represent Mini-Goodyear line lengths, old and current. For this event I decided to allow both and decide the result upon calculated speeds; no one objected. It was felt by all that the new length of 13.50m should be adopted and that this should be publicized so that confusion does not arise in the future.

2. Perhaps we should make sure that all competitors know that if you call a flight as a practice then you cannot change your mind should it prove to be winningly fast. What would there be to stop a flyer making repeated attempts until he produced one he felt to be satisfactory? (I have tried it on in free flight without ever getting away with it!).

Phantom
It seems to be the general opinion that the line length should be increased to make it a bit less hectic and less off-putting to potential flyers… though I have to say that the experts flying on the BASH weekend put on a fine display of piloting straight out of the textbook. (I can't really comment, my own experience with Phantoms being with a Mills 1.3 version and ending in September 1948).

Mini-Goodyear
The recovery of planes that go into the circle on landing arrival is a perennial problem. However, instead of the 'leopard crawl' used by pitmen when on tarmac, pitmen tend to go in over grass on all fours or merely crouching. Perhaps small planes over grass do not appear to be so threatening?

In the final, the Eyre/Bellamy plane cartwheeled in level with the Daglish/Morrell segment – just as Len signalled Martin to come in. Len immediately signalled Martin to put it down a quarter-lap further on. Unfortunately, Mike Bellamy half stood up and removed one wing of the landing Daglish/Morrell plane with his helmet. Happily, the engine was stopped and the hit was on the helmet and not a few inches further down.

Most of us remember a similar accident – with much more serious consequences – involving Bob Horwood some years ago. Can any one come up with some ideas? Where, when and how can/should pitmen recover models? If strict 'grown up' team-race rules had been applied then at least half of the Mini races I have seen or taken apart in over the last thirty years would have been won by the last plane in each heat to be disqualified! JN

Dave Roberts (CD for Vintage Aerobatics and Peacemaker Stunt) writes:

Aerobatics
From the comments received from many competitors, everyone seemed to enjoy the event and be pleased with the general organisation.

Ray Lloyd was obliged to run the Novice Stunt competition on Sunday rather than Saturday, which had suffered from strong and gusty winds. With beginners' entries seeming to be rather low, consideration should be given to running either an F2B or Classic competition on Saturday next year. My personal preference would be for a Classic event, as this would seem to be more in keeping with the spirit of the BASH.

However, apart from the Nationals, Classic events are not all that well supported, which may be the determining factor when the issue is debated in Committee. DJR

BARTON B' TEAM RACE

20th March 2005 at Barton

John Whiteside reports:

A large contingent of racers gathered on a cool bright morning at Barton for our first races of the season. Mike Fitzgerald ran the event with assistance from John Noble. Ken Morrisey had his magnifying glass and tape measure on hand to check and process the models, while Tom Hughes checked safety matters and lines.

The result was a fast, safe and exciting day's racing with some surprising results. Dennis Ward brought his precision and practice to the class and showed every one the way. There were faster models at times but Dennis is consistently fast and he demonstrates great teamwork - that's what wins races!

Also fantastic to see both the current British Team Members in F2C Team Race, Langworth/Broadhead, - I would like to say legends but that would embarrass them - and the new F2C Team Members Barker/North all having fun in this clubman's class. Malcolm Ross and Derek Heaton also added a touch of class to this "racers' event". JCW

'BARTON B' RESULTS 20.03.05
CD: Mike Fitzgerald

Round 1

Heat 1	Time	Heat 2	Time	
Toogood/Ward	3.36.2	Barker/North	3.41.4	
Bailey/Pickles	4.32.1	Langw'th/Broadh'd		3.45.1
		Ross/Court	5.51.8	

Round 2

Heat 1	Time	Heat 2	Time
Toogood/Ward	3.40.1	Bailey/Pickles	4.24.4
Barker/North	4.02.4	Ross/Court	4.49.3
Langw'th/Broadh'd		5.20.5	

Final	Time	Pos
Langw'th/Broadh'd	7.58.1	1st
Barker/North	8.00.0	2nd
Toogood/Ward	9.53.3	3rd

Postscript: John Noble, who provided the results for Circle Talk, commented on the exceptionally close finish, less than one lap apart in 150! (Toogood/Ward were unlucky enough to blow a plug).
John also observed that the jurying standards were a bit lenient on this occasion but that all the crews were experienced and well capable of looking after themselves.

'BARTON B' RULES UPDATE

John Whiteside clarifies matters:
Race length is to be 75 lap heats and 150 lap finals. This works well as most people are doing about 34 laps!

Only APC 8X8 or Graupner 8X8 props are allowed. You may remove a small amount from one blade for balancing, although these props are pretty good from the packet! We have a gauge to check these now so you will be caught if you do fiddle.

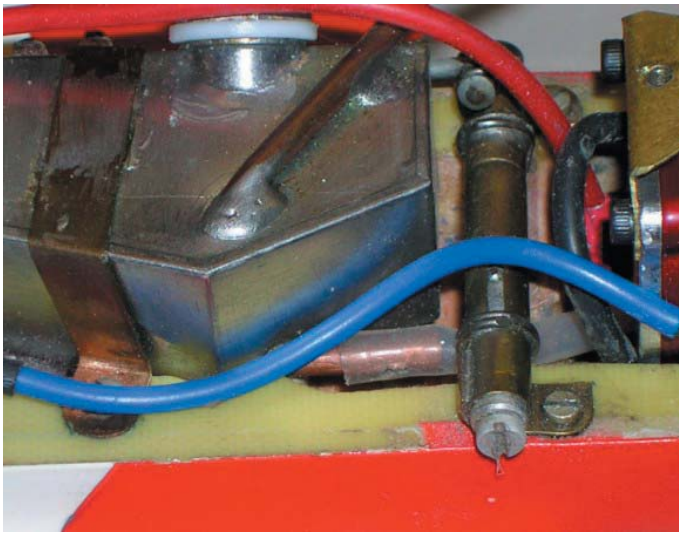
There has been a bit of controversy about the machining of the exhaust stack to allow the motor to slide down through the bearer crutch. Let's be clear about this.
You cannot remove the exhaust stack completely as in Vintage B – though you can reduce the width to allow it to drop in… BUT you must be able to fit the standard silencer in the original mounting holes when you have finished. Opinions are mixed about the thermal value to the engine's operation of removing metal, so this is for mounting convenience only.

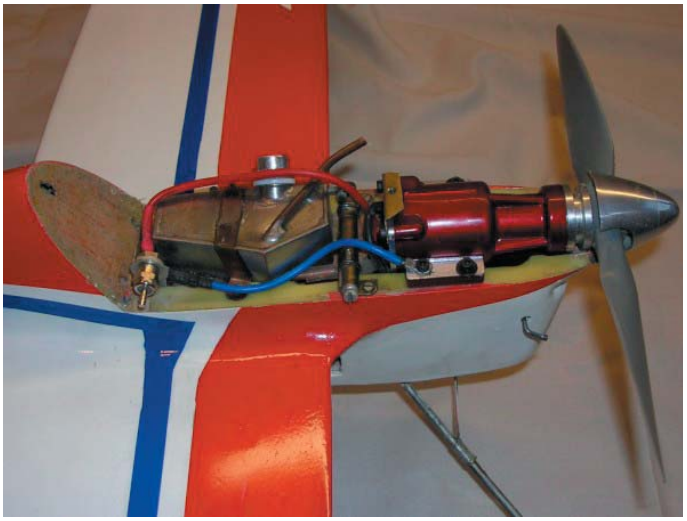
Remember: if you are going faster than the others by a large margin, Ken Morrissey will be on to you and any motor that appears to have been modified will result in the team being disqualified for LIFE.

Close, fast racing with excellent teamwork is the aim - not someone running away to take the pots! JCW

BARTON B PICS

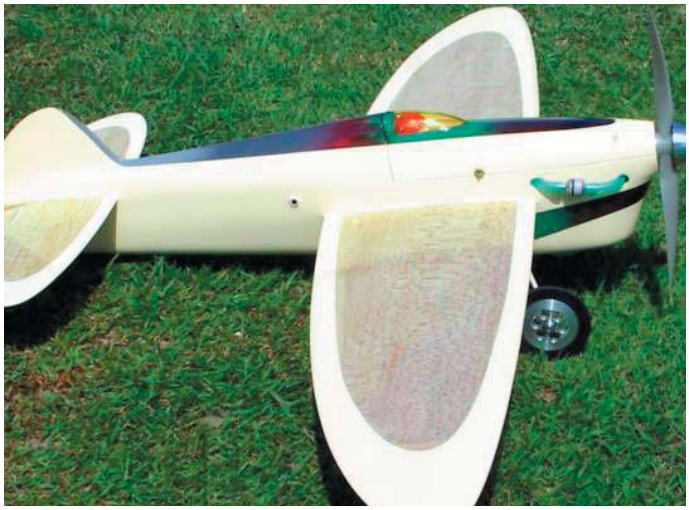
Barker/ North Tigress I think?





AUSSIE CLASSIC B MODELS

A clutch of Galaxie's, New and old! Its Double Dice influence very apparent.
Qld'er Mark McDermott's version
Victorian and Classic Originator John Hallowell's version and the original by CL Nostalgia web site owner - David Kidd



Another Aussie, this time the Grassfire, original OS powered version on the right, new OS FP version on the right.

James P's Bits and Pieces

James Parry

Three kings Club Committee

For those who attended the last AGM, or read the subsequent report in the newsletter, it may be recalled that I resigned as Treasurer but agreed to temporarily carry out the duties until the new membership enrolment etc had been completed.

This has now been done with very little remaining work required to be carried out until the next AGM, apart from paying in any monies which may be received for such things as the sale of club clothing.

The next few months are, for me, very busy with personal commitments and aeromodelling events covering C/L, F/F and R/C vintage. When the modelling dies down in about October much of my free time, as it will be between events, is going to be taken up with the aforementioned commitments, which, will peak, from November for at least a year.

It is therefore with regret that I will no longer be able to perform the Treasurer's duties or be able to have much input into the club apart from attending the odd meeting which if held will probably mean indoor and some Tuesday night club meetings.

Due to my resignation now taking effect please will anyone able to put themselves forward seriously consider it and volunteer to become the new Treasurer?

It is not an odious task, the majority of the work e.g. paying in subs, sending cheques to the BMFA, paying patch fee and sitting on the club committee takes place from December until about March requiring an hour or so a week plus meetings.

However the "workload" can be adapted by the individual and if cheques are paid in every say two or three weeks and applications similarly submitted to the BMFA this time can be reduced.

Beyond this the "Job" is what you make it with opportunities to make a big impression on the running of the club in agreement with the other committee members and of course members in general.

The only other duty, if it can be called that, is apart from keeping an eye on the finances is to store and make available for sale at meetings the club clothing,

I also have some of the poles for the erecting of bunting tape, when there is a meeting at the patch.

Please consider putting your name forward and participate in taking the club forward over the next few crucial years.

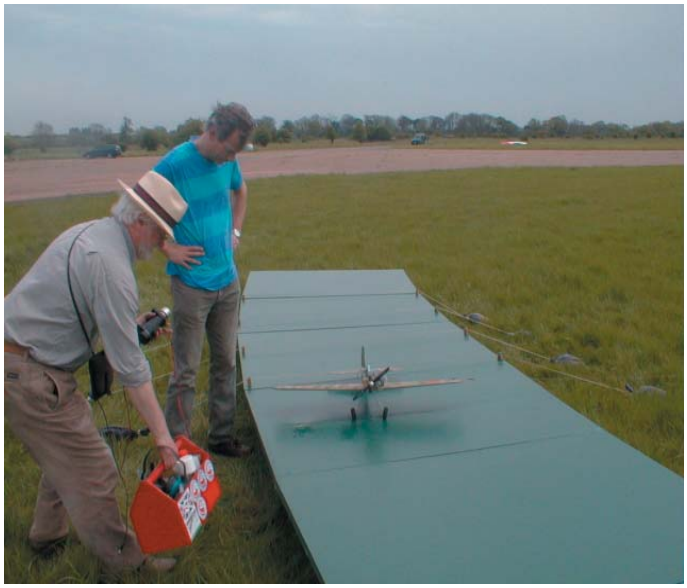
Please contact either myself or any other committee member if you are prepared to put in some time and effort.

James Parry

Member's Models

John Winkworth's leathal 1/2A model

Carrier action from Oakington - Steve Waller



Electric Models

The Problem

Here in the Dartford/Bexley area we have had many problems with trying to find a flying site, well the real problem being that we no longer are allowed to fly in any of these boroughs now. The problem started when sadly a girl was killed by an R/C model on Dartford Heath, the modeller who caused this accident was not experienced and his models were well under air worthiness.

Although we have the Three Kings site, this is too far when we want to pop to a local field and have a quick fly, we used to do this after work (was school in my case) up at Dartford Heath, we even test flew a carrier model in our lunch break once!! For a long time now we have been thinking making electric control line models similar to the park fly RC models. We started to wonder would flying a quite electric model be the answer to our problems? (I was always tault 'there are no such things as problems only opportunities'!), well we figured 'No noise no Problem'.

The Electric Revolution

While this thought had crossed our minds, we had seen CL electric models before, slow, low performance and quite complicated. However a good friend of mine Gary Church presented me with this small electric RC 3D looking thing, and was amazed when it had lines. A minute latter he was in the air and the performance was really good, Gary threw it around most of the stunt schedule. This was all I needed, Gary gave me the details of the engine set up, cheap 400 £3 engine and £15 battery pack was all that was needed, oh and a very light model.

There where three options Battery on board (cheap end of the market), battery on board brushless motor (expensive) or power down the lines. While we weren't going to reinvent the wheel, Steve decided to make a carrier model with power down the lines, Mike made a scaled down peacemaker with the same set up as Gary.

The Carrier Model

After some evening searching in our books, Steve discovered a Fairy Barracuda and a weekend later we were in business with a scaled up plan from the copy shop. Just take the small 3-view and tell the shop how big you want it. Its surprising what they can do. Perhaps not quite good enough for a top class scale model but quite good enough for us! For materials we decided to use foam board, just to be different, and on reflection it was the first move to park fly quick build techniques. Foam board is quite simply foam with card each side to make a composite, it is a bit heavier than balsa wood but can be finished more quickly. Once the pieces where cut out, with ply doublers for strength and balsa tail plane we were set to glue the bits together, we used epoxy for fast build time, it's a shame that super glue couldn't be used because this could have been done a lot faster.

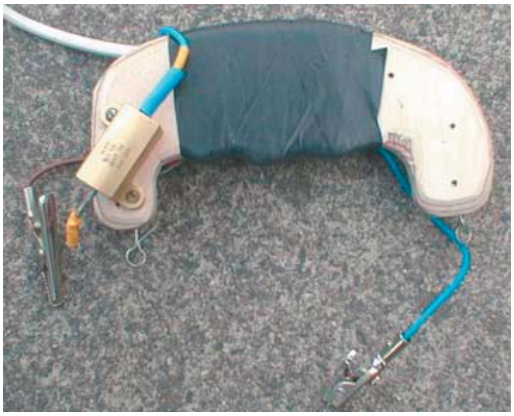
The down the lines power system

We went for a simple system. The lines are enamelled copper (which is insulated provided the enamel layer is not damaged. In our first efforts we used 27swg copper. This has proved to be strong enough for the small models we are using and, despite our concerns, has lasted for at least 10 flying sessions. We will next look towards flying outdoors on slightly longer lines and 25 swg to allow a similar voltage drop. Its no good thinking that copper is a 'good conductor' so you will get no problems with the resistance it has, you should have learnt in school that copper is a *relatively* good conductor. We finish each end of the lines with a loop of piano wire soldered. This enables a flying lead to the motor to be soldered on or a conductive area for a crocodile clip. We have used a system that has the lines permanently connected to the model and the other end free to connect to a handle in the conventional way. Our line length (for flying in a school sports hall) is just over 20 feet.

We fashioned a simple handle from 9mm plywood with a microswitch to give on-off control. The handle has flying leads fitted with crocodile clips or spade connectors to connect to the batteries.

We used two 12v sealed lead-acid burglar alarm batteries (not new and not matching!) for power connected in series to give (potentially!) 24v at the handle.

For use with our prospective carrier model I fitted a second microswitch that in the 'normal' position shorted out a resistor which was connected in series with one line. Take care the resistor will get hot. We used a high power 5 ohm resistor. This does need a bit more work so that on 'slow' the model has just a little more oomph.



The Carrier model takes flight

The model performed well in testing and flew well on a 400 motor, we did try a 480 but this engine proved to be too heavy and the model just able to maintain forward motion. With the 400 motor it flew very well. The model although ok for carrier flying was also good for training and the granddaughter of the family get her first flying lessons using the model.

The Peacemaker or now named the 'Pacemaker'

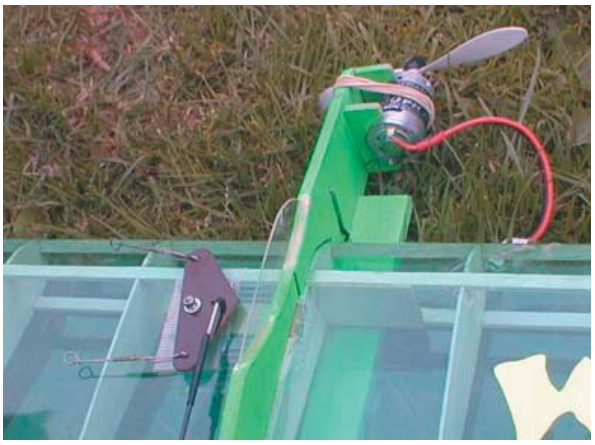
Once I had found the Peacemaker 1/2a version I decided to use the same size as this, it looked about right. I then proceeded to draw the plan on CAD, I

always do this so that I can make the ribs and bits and bobs fit perfectly, printing out copies and spray mounting them on the material and peeling off afterwards. I decided to keep the wing light and quite a thick section, to provide a slow flying speed but more lift when performing manoeuvres, ¼" X ¼" hard balsa was used for the TE & LE, the ribs then just slot into place, with some spars to stiffen. I used for the prototype model foam ribs, for this we retained some meat packing trays, this worked very well and they are very robust. We had to use PVA, which is a glue I do not like to use, on the second model we used 1/16th balsa ribs, which worked well, but I do not think it was as light. The fuselage was made out of foam board, with ply doublers for strength. Foam from meat trays was used for the fin and tail plane. In future I would just use balsa for the tail plane. On the second model I used ¼" balsa for the fuselage, this was a bit heavy (much lighter wood could be used. Light slow fly type wheel was used, this soon broke, and a light weight wheel was substituted and this worked very well. The wing was covered in light flower packing film, thined down evo-stick paint on to model and wait to dry. The film can then be ironed on, more Evo-stick where the film is to be stuck on to film. Once completed the film needs to be shrunk.

Once the model was made we hadn't really worked out where to put the battery, after lots of dead ends, Peter Noble from the Cosmo and 3K clubs suggested that we used a bit of wood under the wing, which then held on with rubber bands. We tested this idea and instead of using rubber bands used some Velcro, this allows you to change the CG after each flight and remove the battery for charging, this has turned out to be a really good feature as you can change to suit your mood or wind conditions.

The battery on board system

We found that the easiest and cheapest was to use plastic push one props, these seem to provide ample power and can easy be replaced when broken. The battery pack is a 1050 APH KAN cell set up from Overlander and the motor just a 400 delta from Overlander. We found a 12V smart charger best, because you can charge and discharge the batteries fast or slow and take the set up to the flying field. We used standard Tamiya connectors to the motor but we removed the catch to made the easy removable if crashed or for general use. But in future we are planning to try another method because these seemed heavy.

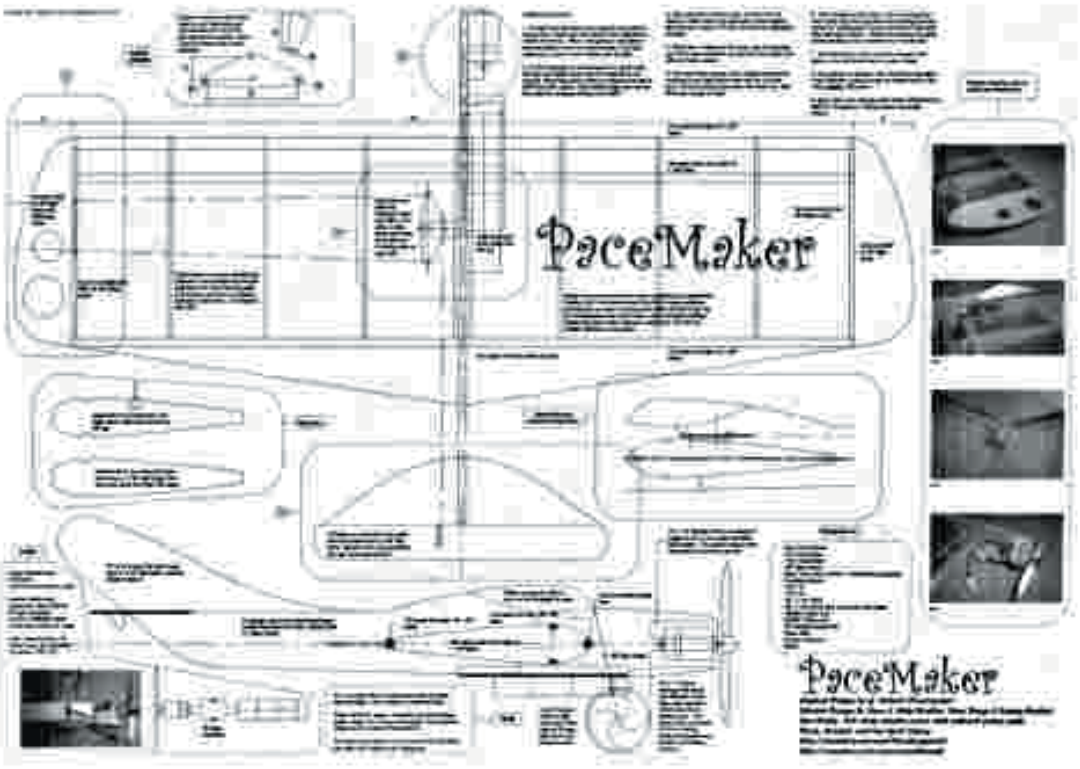


The Pacemaker takes flight

We tested the model indoors on a club night meeting, we were restricted with the hall size, so it was just flat out, after everyone had a go, passing the handle around, it was clear that a more height it would be all systems go. One problem we found was flight length, 10 minutes!! Too long!!

The next weekend we just went to the local park!! Just 1 minute in the car or a 5 minute walk!! What bliss, no long drive! After a minute all systems where go, camera set up, and Mike took it off. Level flight was soon replaced by pushing the limits of it height, it would happily cruse at 75° . I start to dive and climb which it done, and then a loop, wow, slow down a bit, It didn't like the loop. Steve took over and tested it some more. When looping it slowed down and was stalling when leaving the loop, a bit too much up and down. Another loop same problem, another and it was a lot better, then inverted and then and eight just about! Then invert again followed by a smash!

We figured after the test it had far too much elevator movement, after limping home



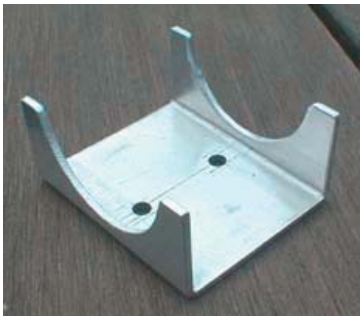
and some glue and TLC we where back in the afternoon. Less movement made the model a lot better, but you still had to fly the model with care. It flopped on the ground when the battery ran out.

After many happy flights, lots of people are now building this model and they fly well, a bit of a acquired flying style but so much fun.

The above plan is available from us directly.

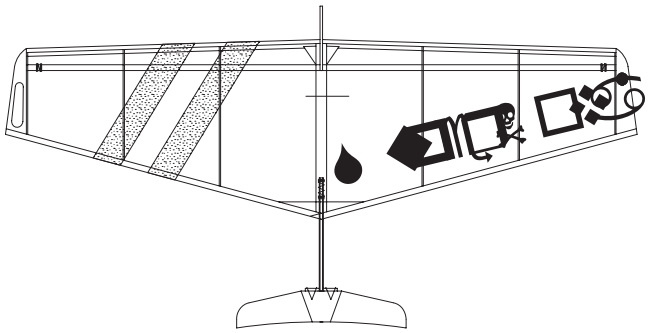
Stop Press!

Peter Last has fashioned some ali motor mounts which we hope will be lighter and a bit more durable than the ply ones!



The Future - 400 series combat!!

Whilst we had good results with our carrier model we knew that we were getting a lot engine power using power down the lines. We were keen to make a combat model type, after an evening on CAD I had a rough design drawn up. As you can see by the pictures I opted for an American style combat wing. Construction was kept very simple following the say ideas as the pacemaker, with just simple ply pod and a rubber band, external bellcrank and we where away.



After the first flight we had very poor results, this turned out to be because the batteries were not at full charge, but it was very sensitive. The next weekend, flat winds and charged batteries we headed up to our local park. Fist flight was a bit scary it was like flying an F2D model, we were got about 30-28secs for 10 laps. The model was very fast and went and did every thing you wanted it to do, dummy turns, eights over head eights, inverted, everything and it would also keep going and didn't slow at all. The great thing was that I was using the carrier handle so was able to slow the model or stop the engine!

I am going to build more models, with a bigger wing area, so that we can have a go at some combat!! Watch this space, hopefully for next indoor meeting!!

The Final Word

We have flown many different types of control line model, all except speed models, with experience we know that the models we make will fly virtually with no trimming. But this has brought back the days where we would make a model and where not initially sure whether the model would fly or fly well, which they didn't with out some figuring and crashes. I don't think we have had so much fun in a long while, infact perhaps in ten years when we built a Falcon and a Red Arrow model (both Aeromodeller plans) or the numerous models I design and built when I was

Dear Member.

After a successful trial of our safety measures to deal with the bikes and after a discussion at the meeting on the 10th of May, please could you adopt the following when using the site.

- Ring the Security guards up if you see any bikes on the open space.
- It is advisable that the area below the tarmac area to have a line of barrier tape and stakes, these are available from or James Parry ?phone number? (Treasurer). This measure is to be carried out whenever any flying is taking place. See map attached for stake positions. People holding events or competitions should contact myself before holding the event at least two weeks in advance.
- There are to be no less than two people when flying, one person to act as look out when other is flying.
- DO NOT UNDER ANY CIRCUMSTANCE, discuss the: club's agreement with Croydon Council to use the site, divulge the cost of hiring the site, health and safely concerning our models, the bylaws effecting the site, our agreement with the security guards or any other matter concerning the club with the bikers or any other member of the public. Direct any enquiries to the Council, shown on letter and number on back of membership card.

On a much more positive note the patch has now been repainted and a lot of repair work done (thank you all who have helped with this), however there is a lot more work to be carried out. So when you are next flying please bring a spade and broom with you. I would also like this opportunity to remind members the events that are happening at the club in the coming months;

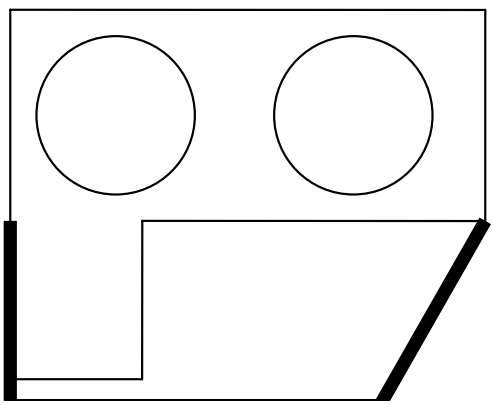
- Fun Fly, every third Sunday (the June one has been cancelled due to the cabbage patch nationals). Please could you ring Steve or myself on 0208 310 6101 or 01474 871569 to confirm these events.

I hope to see some of you at these events, you are more than welcome to turn up and fly sport models when the competitions are happening, subject to the comp taking priority on the competition area.

If any member would like to discuss these matters please ring me on 01474 871569.

Michael Waller. Comp Sec

Map, bold line indicates where barrier tape should be placed.



Contest Calender

26 Jun	Dartford	F2C	Chris Barker 01420 543905
	Bristol	VTR	
3 Jul	Barton	F2CN + Brit GY	Chris Barker
	Hucknall	VTR All Classes	
	Milton Keynes	F2B	John Benzing
10 Jul	Slip End	F2B Chiltern Cup	Glen Alison
16-24 Jul	Hungary	Euro Champs All FAI	Jo Halman 01582 424398
17 Jul	Croydon	VTR No B	Duncan Bainbridge 020 7682 0421
24 Jul	Oakington	VTR	
	Barkston	Combat	Mick Lewis
30-31Jul	Old Warden	SAM 35 Gala	
7 Aug	Scampton	F2B, F2C, F2D	Chris Barker
	Barton	VTR + Barton B	
14 Aug	Pepinster	Belgian Intl All FAI	
	Milton Keynes	F2B	John Benzing
27-29 Aug	Nationals	BMFA Office 0116 2440028	
4 Sep	Albermarle	F2CN + Brit GY	Paul McPeake 0191 4889724
	Slip End	F2B	Glen Alison
11 Sep	Barkston	F2A, F2C	Chris Barker
	Old Warden	V Combat	Mick Lewis
18 Sep	Dishforth Northern Gala	F2C, 1/2 A, B	Barrie Pickles
	Barton	F2B	Ray Lloyd
25 Sep	Oakington	VTR	
	Barkston	F2D	Mick Lewis
	St Albans	F2B	Gary Chiurch
2 Oct	Oakington	F2A, F2C	Jo Halman
	Barton	F2B	Ray Lloyd
	Scratchwood	F2D	Mick Lewis
9 Oct	Dishforth	1000 Lap B	Barrie Pickles
16 Oct	Croydon	F2CN + Brit GY	Duncan Bainbridge