



NEW Clarion

SAM 1066 Newsletter

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Contents

| | Page |
|----------------------------------|------------------------|
| Editorial | 2 |
| Thorns Indoor | by John Andrews 2 |
| Ron Draper's Crescendo | by John Thompson 5 |
| BMFA Indoor Conference | by John Andrews 7 |
| Wakefield Cup Winner 1935 | by John Andrews 10 |
| What Goes Around | by Peter Michel 12 |
| The Balsa Story | by Ted Horne 16 |
| Crookham Gala Report | by John Thompson 19 |
| A Few Glider Pictures | by Ted Horne 21 |
| The Importance of Wearing a Hat | by Peter Hall 22 |
| David Baker Heritage Library | by Mike Parker 23 |
| 8oz Wakefield Volunteer required | by Vic Willson 24 |
| Old Warden Swap Meet | - 24 |
| Chobham Tree Chop | - 25 |
| Brownhills Indoor | - 25 |
| Derek Gamps Plans | by Andrew Longhurst 25 |
| B'ham Thorns Indoor | - 26 |
| Cranfield Classic | - 26 |
| Wickham Indoor | - 27 |
| Bournemouth Indoor | - 27 |
| Events Calendar | - 28 |
| Useful Websites | - 29 |

Guest Editorial:

Just in case it escaped your notice on page one, the *New Clarion* has a guest editor this issue. Our editor Vic Willson has reluctantly had to pass the reins to myself for this issue as he is currently in hospital. I'm sure I speak for you all when I wish him well. I trust that I will not let him down and if, in the words of Ernie Wise, you fail to see the join then I'll be a happy man.

Thorns Indoor: by John Andrews

Snow delayed the January meeting of the South Birmingham indoor flyers, there is a steep slope down to the centre and Colin Shepherd thought it wise to postpone the event until the snow had gone. Sound move.

January 23rd and we were back inside, seemed a long time since any flying activity. I had been building a classic '*Last Resort*' and it was getting on well for me until I got to the wing. I had had difficulty with the tail plane bending the tips and resorted to bamboo in the end, so for sake of continuity I used bamboo on the wing tips. I failed to strip the bamboo thin enough and although I heat bent it into approximate shape the bamboo pulled the wing frame all shapes and I think I can say that the wing of this *Last Resort* is the worst wing I've built in a long time, and that's saying something as I'm not the best of builders anyhow. To cap it all the 1/16th square wing spars I stripped from too softer sheet and they started cracking when I was doping. I'll try to fly it as is but I think I'll have to build another wing in the end just to save my blushes on the flying field.



Just look at the state of this, have I no shame?

The fuselage and tail turned out quite respectable, although I did set up a production line for the fuselage spacers and got their length wrong. The fuselage is that simple that I did not bother to build on the plan and I was halfway through the build before I noticed the error, any way you are allowed to modify the nose for winding tubes and it's just one long nose really, so I think I can claim it's legal.



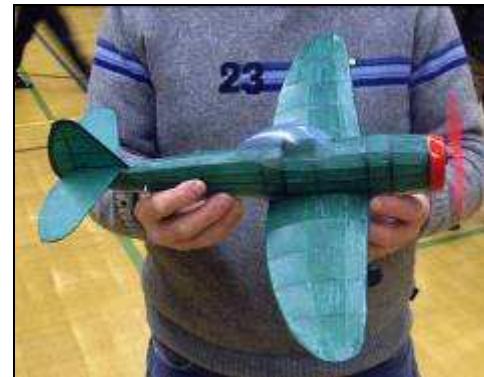
On the plus side, I did manage to stick a bit of Christmas silver wrapping on the fin in the hope of a little reflection if I ever get the model up in lift. At least it will look like I know what I'm doing to strangers.

The king of digressions has struck again, this epistle was supposed to be about the Thorns Indoor meeting, 'ah-well' on to the next paragraph.

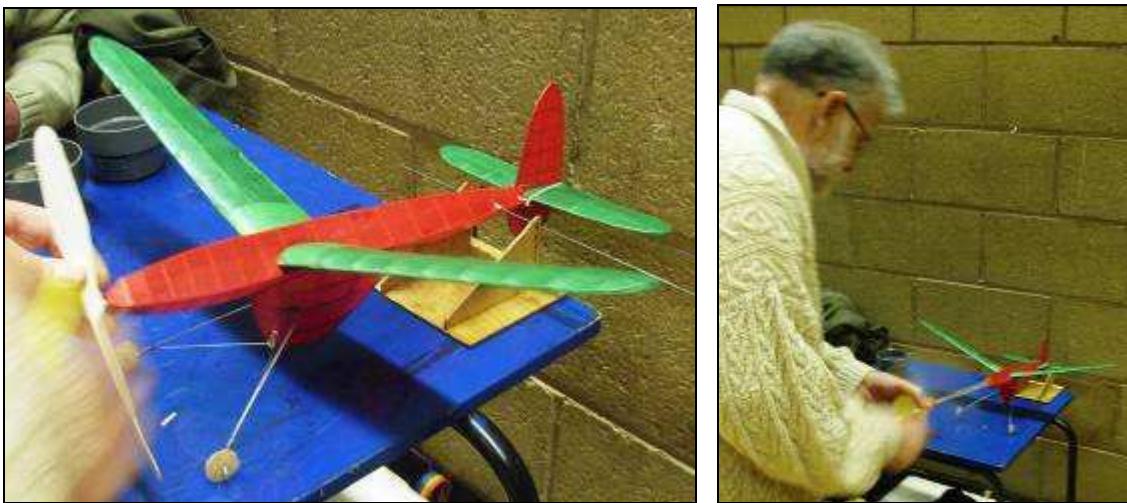
A few new pictures, I'm not sure about all the models, I know I have photographed David's Biplane before but at least the pictures are new.



Above is another picture of David Vaughan's 'BE C2' and a half-size Wakefield of unknown name and builder, not much of a reporter am I?

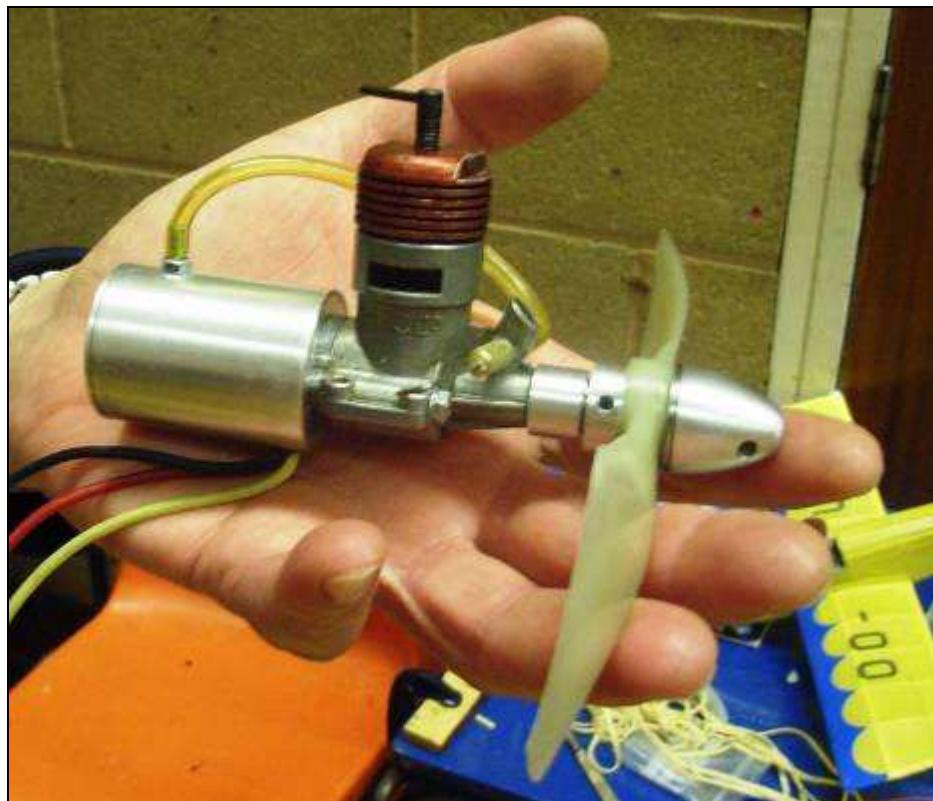


Two of Derek Kirby's models, a 'Luton Minor' and a 'Thunderbolt'. Models are currently undergoing trimming before decoration.



Mike Brown was airing his new half-size 'Jaguar' Wakefield. The dihedral angle on the Jag looks a bit fierce but Mike says he tried to build it to the plan angles and that's how it turned out. Not altogether a bad thing for the tight turns required flying indoors.

The final picture below is a very interesting object, it could be described as the ultimate solution for silencing a diesel engine.



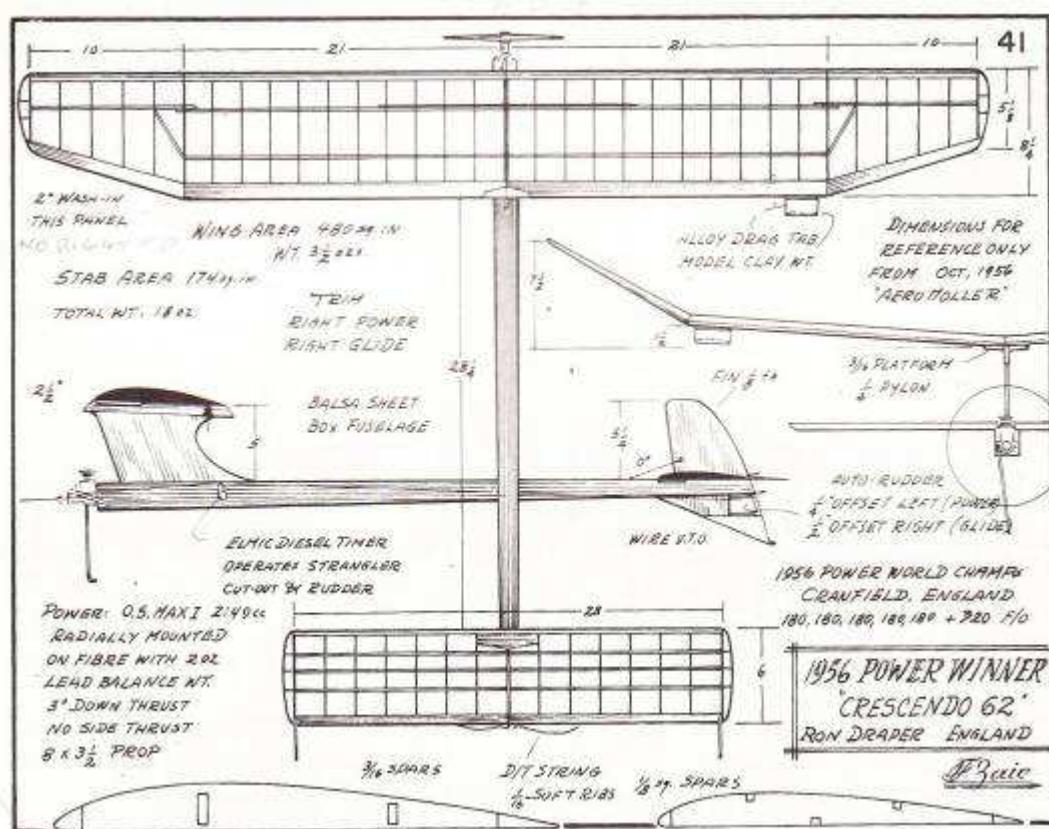
I had just retrieved my lightweight *Hanger Rat* from a 1-59 flight (I can't get 2min these days) when Colin Shepherd approached me saying "come and have a look at this engine" and he led me across to Jack Prichard.

Jack was holding the DC Sabre above. Colin then passed the engine to me saying "feel the compression on this". I innocently took the motor and did the normal turn it over and it felt all notchy and, as I rotated the prop, I was looking into the port for the piston to see what might be wrong. I turned the motor over a couple of times and the piston did not appear, the penny had still not dropped. I then noticed the three large wires emerging from what I thought was a big fuel tank. As I recognised the notchiness as the poles of an electric motor, Colin said "it's electric".

Jack had grafted an AXI 2212/20 electric motor on the back of the Sabre and ball raced the shaft which now turns an 8x6 prop at 6,000 rpm.

That's all folks - John Andrews

Ron Draper's Crescendo: - by John Thompson



Ron won the 1956 World champs with this model .

He had developed the model over a number of years, starting with a John Gorham Lil Aud. this was too complicated and weak so Ron adopted a straight forward approach, with easy construction and repair.

He experimented with under cambered wings but decided he did not like the "on power" flying results, so settled for flat bottomed wings. Further for this model he was determined to try a sharp pointed section with no turbulatating spars top or bottom. This he constructed by building a flat

bottomed wing with a large main spar going from the bottom but not touching the top of the ribs. He then glued 3/32" square ribs to the bottom and sanded them to a streamlined shape, thus the covering underneath would not touch the spar. This effectively gave a very "flat" semi symmetrical section. It works wonderfully well.



The model was lightly constructed and ballasted up to the FAI weight of 500 grams. He was one of the first to consistently use an auto rudder, he said it guaranteed a proper pull out and transition to the glide how ever the model in turbulence etc finished up at engine cut. For him the extra complexity was well worth the benefits.

Another reason Ron did so well, he enjoyed and knew what to do to hot up engines, he had the "luxury" (for those days) of access to a tachometer which allowed him to ensure that the engines were top class and gave maximum power.

John's Auto Rudder shown here



John's engine, fuel and shut-off mechanisms



Ron and I built replicas for the 50th anniversary of the 1956 World Champs. He used the original engine. The model is not yet flown, Ron not really having anywhere to fly locally. The original model with a OS 19 was stolen downwind at a comp some months after the World Champs.

My replica flies well and is powered with either a Max 3 or 4. It climbs in a beautiful spiral, excellent transition and good glide. It is competitive in modern nostalgia competitions.

The plan shown, has a drafting error, the wash-in should be on the right wing not the left. The wing section is shown as flat bottomed - not as I have explained above - this was because no one believed that a semi symmetrical section would be used !

Ron has a plan available which he drew up for the 50 anniversary.

Have a go, a straight forward build with excellent performance,

ask Allan Brown.

John Thompson

BMFA Indoor Conference - by John Andrews

I attended the BMFA Indoor Technical Committee's conference at the BMFA's Leicester HQ on Saturday 6th Feb. The title of the conference was "The Future of Indoor Duration" and about 30 or so members were present. It was an all day do 10-30 am until 4-00pm with a buffet lunch break.



A view of the meeting during the lunch interval

The purpose of the meeting was to promote discussion on all aspects of indoor flying to provide the ITC with information as to the BMFA membership's requirements in order that they, the ITC, could better fulfil their office and advance indoor flying.

A number of the well known names were there, Brian Lever (SAM35), Chris Strachan, Bob Bailey, Clive King, Mike Woodhouse and Laurie Barr. who was not at all well and had to leave the meeting early.

A great deal of information was passed around as we worked down a structured agenda. John O'Donnell was unable to attend but had submitted a letter containing his thoughts on the subject. JOD's letter was well received by the meeting and all thought it was an accurate assessment of the current situation (*very unusual for John not to be controversial in some aspect or other*)

I'll try and summarise the conference the way I saw it.

On encouraging new fliers it was thought that the best source would be from existing BMFA members, two or three present had made good contacts with schools but it was felt that it did not produce any lasting results. Mentoring was seen as the best method of keeping newcomers interested.

The meeting got sidetracked somewhat by Laurie, who is a critic of the tail-plane size on the 'Gymnie Cricket', and a lot of discussion took place on details of models for beginners which I felt was not relevant to the meeting.

Laurie's opinion, that the ITC's is overlooking Cardington as a reliable venue for indoor, led to an argument with Mark Benns. I can see both points of

view, the weather dependency of Cardington, due to the well perforated roof, rules out any event that cannot be cancelled at short notice, ie. internationals and national championships, but I am sure that BMFA centralised meetings are a possibility as Laurie proved with the series of meetings he ran in 2009. Incidentally Laurie cited myself and the SAM1066 Clarion as the only advertisers bringing fliers to Cardington (*one up to us*).

Clive King criticized the ITC and the BMFA newsletter for lack of publicity and I also got a mention again as Clive said he was only able to get some nationals results from my articles in the Clarion, (*well done us again*). The ITC accepted the criticism stating it always proved difficult to get content onto the web-site and of course the newsletter needs someone to write for it and no one is forthcoming. I believe it should be the responsibility of the ITC to provide or solicit content.

One point that came out at some time during the debate was that the emphasis on "duration" in the title of the conference and in event advertising, was probably wrong and misleading as the majority of fun fliers had little or no interest in competitions and possibly were put off from attending events promoted with duration leading the advertising. Listening around the room I formed the opinion that meetings in the north did have low key competitions in their events where here in the midlands we do not, I don't know about the south.

Radio control was discussed briefly and the ITC advised that it had been decided that R/C was outside their remit. Some clubs reported that they integrated Free-flight and R/C in their events, some by time slots and others by informal separation. Chris Strachan made a force-full statement that FF & R/C don't mix and added, tongue in cheek, that the two should be separated by a wall, the higher the better. I agree whole heartedly with Chris and I feel that any integrated meeting will slowly and surely be overpowered by the R/C content. I would personally be prepared to pay more for any meeting that was solely FF.

The problem of affordable venues was batted around at some length and the thought was aired that we were not prepared to pay enough for our flying. Cross funding of events was active within some clubs and the ITC would look at it for anything they may do in the future. There was an appeal from the ITC for all of us to poke our noses into any site that looks suitable and report back any positive responses.

The subject of International team trials and championships was the final item on the agenda and did not take too long. It transpires that there are

only normally about six contenders for places and the cost for self-financing trials is large but if a cross funding policy was adopted this burden could be eased, however this would mean that the ITC must promote more informal events to build funds.

All in all I saw the conference as a positive move by the ITC and it should have provided them with a good background knowledge of indoor flying as it is currently practiced successfully by the clubs around the country which, after all, was the object of the exercise.

Wakefield Cup Winner 1935: - cribbed by John Andrews

The Wakefield International Cup
by Charles Dennis Rushing



1935 Gordon S Light, 22, USA

In 1935 the SMAE again received boxed Wakefields from America. Team USA consisted of Frank Zaic, of NY, NY, who was a 1934 Team member, Donald Mertens, Vernon Boehie, Ralph Kummer, and Gordon S Light, the "Unofficial 1932 Wakefield Champion", who placed third in 1933, and whose Wakefield was destroyed on the field in 1934. Light was very determined, in fact he made simulated attempts with this year's Wakefield; first he would disassemble it, pack it carefully into its container, shake the container as hard as he could, and removed it from the container, and reassemble it, then he would fly it, and check its adjustments carefully. Light did this over and over again, until he was assured that the aeromodel, and the container, was ready for shipment to Great Britain.

Monday, August 5, 1935, dawned clear, calm, and warm at Fairey's Aerodrome, Hayes, Middlesex, a simply superb day to fly rubber power Wakefield aeromodels. The USA Team boxes containing Wakefields were there, we do know that. Alex Imrie, writing in "AeroModeller, Vintage Corner", in July 1986 wrote "Unfortunately ... full flight details have never been published on this (Wakefield) Event..." If Alex, was still alive to read this, I can state unequivocally that very little has ever been recorded about any pre-1948 Wakefield Event, until this book was written. Most of the information, if any was available comes in snippets, often disassociated from the subject. I will attempt to stitch together these snippets of history to describe what Imrie and I think occurred.

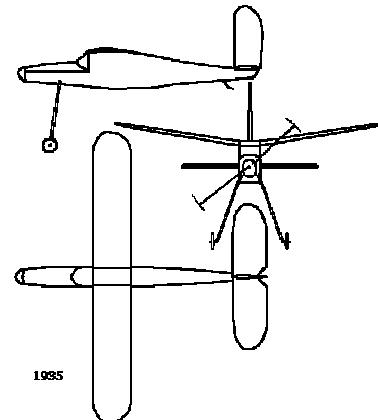
Along with the USA Team boxes there were also Team Australia boxes containing aeromodels sent by: Milton Boss, Jim Fullarton, J Danks, J Donald, A Flew, and H J McKay, all to be flown by the Proxy Team. John Hamilton, writing in the publication "Wings", names the Proxy Team member Tommy Ives as the person who was selected to fly Gordon S Light's Wakefield. I have drawn a sketch of Tommy holding Gordon's ship just prior to its first and only flight. Tommy Ives removed Light's aeromodel from its container, and following Light's written instructions, test flew it, Again this was a beautiful design, developed since 1932, into a consistent flyer, and Tommy had no problems with it. Tommy, again following Light's instructions, packed 600 turns into the "T-56" brown rubber motor, on a motor stick, outside of the fuselage, than hooked up the wound motor inside the fuselage, set it on the take-off board, assumed the prescribed "by

the rules position", by holding the tip of the propeller, and the tip of the right wing. Tommy let her go, and go she did! This was a towering flight of 7 minutes 30 seconds OOS, straight up. More than two hours later Light's Wakefield arrived back at Fairey's in an airplane flown by a pilot who had found it at Hanworth Aerodrome, where it landed after a two hour flight! Gordon S Light was the 1935 Wakefield Cup Champion! He never quit, and he never gave up trying. His Wakefield is now located in the AMA Museum, a place of honor for it, and for a person who epitomises what this Wakefield Cup Event is all about.

Now aeromodellers the world over, because of the determination shown by Gordon S Light, and his fellow Wakefield flyers, like Frank Zaic through his publications, were committing their energies to the design of aeromodels especially for the Wakefield event. Nations were now sending six person teams or their aeromodels to be flown at the Wakefield events. The 1936 Wakefield Cup event would be held in the USA, at Detroit, Michigan, and Team Great Britain was sending six persons to challenge the World.

| Place | Name | Country | Round 1 | Round 2 | Round 3 | Average time |
|-------|----------------------|-----------|---------|---------|---------|--------------|
| 1 | G S Light | USA | 440.0 | ? | ? | 213.0 |
| 2 | J B Allman (1934 WC) | GB | 170.0 | 128.0 | 125.0 | 141.0 |
| 3 | Vincre | France | 180.0 | 75.5 | 157.8 | 137.6 |
| 4 | ? | ? | ? | ? | ? | ? |
| 5 | M Boss | Australia | 59.0 | 413.5 | 66.7 | 113.0 |
| 6 | R N Bullock | GB | 83.0 | 107.5 | 121.0 | 103.8 |

| WINNING WAKEFIELD 1935 | | |
|------------------------|-----------------------|-------------------|
| component | inches | mm |
| wing | 39.5x5.5 | 1003x140 |
| tail | 20x4 | 508x102 |
| fuselage | 34 | 864 |
| propeller | 17 dia 28 pitch | 432 dia 711 pitch |
| rubber | 1/8" 12 strands 4.1oz | |



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What Goes Around, Indoor RTP - by Peter Michel



The picture above will no doubt be familiar to anyone who was a young aeromodeller in the Second World War. It comes from the cover of Ron Warring's *Indoor Flying Models*, a 1942 publication which was to have a lasting effect on many of us. And, indeed, there were many indoor meetings like that at the time in church halls and Scout huts. Look at the man on the right, hat in hand, who has just arrived at the busy scene and has not even had time to take his coat off... and the young lad still in his school uniform who could have been me. Well, sort of... All gone, alas, like our youth, too soon.

The scene now moves on 68 years to a chilly scene in February outside the Rubbing House pub overlooking the race course at Epsom Downs. It was "Bangers & Mash" day, our local get-together on the first Wednesday of the month. In this instance the first of 2010; the January meeting having been cancelled because of the big freeze-up. Around a dozen of us had just enjoyed a lunch chosen from a menu which was certainly not restricted to bangers and mash. And we were looking forward to stepping out on to the Downs for an afternoon's long-delayed flying when, what do you know, it started to rain...cold, sleety stuff which put flying out of the question.

As we ruefully regarded the scene, B&M stalwart Robin Willes mentioned R.T.P. (Round The Pole) indoor flying and said he knew of a hall we could hire for a couple of quid a head. It was then that the cover of *Indoor Flying Models* sprang to mind, with all its cosy connotations. It sounded great idea and on a whim I emailed all members of the B&M set to see what they thought. The result was a cascade of replies with memories and anecdotes,

particularly from Laurie Barr, flooding the screen. I mentioned in my email that the Ajax-type pusher depicted on the cover was flying clockwise, but that there was a picture on Page 7 in Warring's book of a very serious group of Northampton M.A.C. modellers flying a model anti-clockwise. Who was right? Back came the following correspondence, abridged in some cases, but in chronological order. Not only did we get the answer, but an insight into what it was like, flying indoors in the dim and distant past...

From Robin Willes, Feb 3

Model Aeronautical digest (1944) seems to suggest you can go either way; we went same way as control line when we did R.T.P. at Epsom club in the '50s.

From John Knight, Feb 3

I am too far away to take part in your suggested R.T.P. meeting but hope it goes ahead. The cover picture from Ron Warring's book brought back memories of making one of his designs and flying it in the living room at home on a short line. I wonder if Laurie [Bar] remembers how he and I were part of a London Area R.T.P. team that travelled up to Manchester one winter in the late 1940's for an Inter-Area meeting?

From Rod Green, Feb 3

A great idea if we can hire the hall. I am very interested in indoor flying and have quite a few indoor models in my hangar. I used to fly at the Rainbow Centre in Epsom, but when it was rebuilt the price of evening flying was prohibitive. If anybody is interested I have quite a few indoor model plans that could be copied, one of which is a 4 min. "Baby" micro film model by R H Warring. This model could be covered in mylar film. Look forward to future meetings.

From Tim Westcott, Feb 3

What rain? It seems OK outside the window here in Florida!

I think I have one of those Dynajet powered models that should look good nipping round and round indoors. Actually, I do have a R N Bullock original indoor model too. The idea is a good one but I think people will travel miles to fly models outside but for some reason the thought of travelling long distance to fly indoors does not seem so attractive. Come to think of it though, I seem to remember seeing another large box in the loft which has 'Indoor Models' written on it so when I return I'll have a closer look.

From Nick Farley, Feb 3

Brief reply but a very good idea. Is that outfit in Tunbridge Wells still a source of all things R.T.P.?

From Laurie Barr, Feb 3

Hello, to John Knight! Yes John, I do remember well that trip to Manchester as a member of the London Area R.T.P. team. We travelled up late evening by train with our "Team Manager" (name?) who seemed to have forgotten we had nowhere to stay! We spent part of the night at Miller's Café. It was a real greasy spoon, with many "ladies of the night", resting their feet! From time to time, a policeman would come into the darkened café, pull back the head of a drunk sleeping it off, and shine his lamp in the wretch's face to see if it was someone on the wanted list.

Our so-called team manager eventually got us into a hotel's downstairs basement gents' washroom to freshen up. I think it was Ian Dowsett who squeezed his bar of soap too hard. It described a perfect arc, straight down an open plughole never to be seen again! We just collapsed. When our very tired team finally arrived at the Corn Exchange building we saw Ted Muxlow flying his variable-pitch prop, microfilm-covered R.T.P model at close on seven minutes, which was about three minutes more than any of us, had thus far achieved!

I was then part of the Greenford club, and I have a great memory of the time the mighty Northern Heights club team, Bob Copland, Ken Tansley, and another I cannot fit a name to, coming to us for an inter-club R.T.P. comp. We thrashed them! Happy days! What about re-creating copies of those great R.T.P. models? I am sure Bob Copland's Thistledown was published, along with others. Ronnie Rock of the Streatham Club, was good at this, as well as Jimmy Wingate.

From Ramon Alban, Feb 4

[On whether to fly R.T.P. clockwise or anti-clockwise.]

Do you think that a conventional tractor rubber powered airplane on R.T.P. would prefer to turn right (clockwise) under power to avoid a torque-induced dive to the left? On the other hand, would any left wing down tendency in that mode be corrected by the pull on the right wing tip from the tether? On the other, other hand, would turning right against torque essentially waste power in trying to impede the model's natural tendency? On the fourth hand, would the natural dive to the left when turning left (anti-clockwise) be similarly corrected by the pull on the LH wing tip? So many questions, so many options, it's like suffering from indecision whilst being on the horns of a dilemma!

From Laurie Barr, Feb 4

I honestly cannot remember which way we flew, but logic suggests it was anti-clockwise. If someone can find the drawing of Bob Copland's Thistledown R.T.P. duration model, I would expect it to show a cotton loop, at the port wingtip, where the tether line would be attached? After the

London team's demoralising trip to Manchester, we then found out that one of the reasons for Ted Muxlow's high times was the use of a single tungsten wire, .001" in diameter, and thus its low drag!

If this R.T.P. thing ever gets going, I have lots of .001 tungsten wire, we "Flimsy Flyers" use to brace our motor sticks. Re Ballards R.T.P. gear, I am sure I have somewhere just such a gadget. It is more heavy duty than the out-and-out duration boys would use, but O.K for scale & heavyweights!

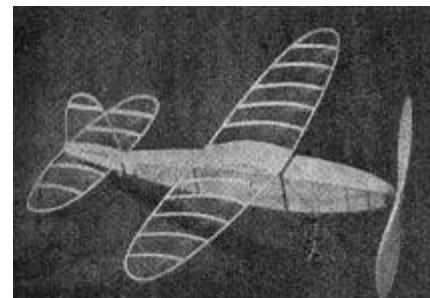
From John Knight, Feb 5

My thanks to Laurie for recalling our somewhat disastrous trip to Manchester in Feb 1949 as part of the London Area team. His memory is even better than mine! I have an extract from the April 1949 Model Aircraft reporting on the event. It was the 3rd and final time that I was a member of the team and (it was) the first time we had lost. John (Jimmy) Wingate was in the 1948 team. I am sure Bob Copland held the record for a time with 5:20 and I have seen the plan somewhere. Can someone tell me what the rules were for pole height and line length and fuselage cross section? It might fit into a large living room so that we could do it at home and compare times.

From me to B&M members, Feb 5

Here it is -- Bob Copland's Thistledown!

[Picture, right] Rex Oldridge hunted for it and found it in the wonderful Christmas 1947 edition of The Aeromodeller. Span 21.5in . Class A. Best official time: 5min. 36sec. Copland's accompanying article contains more than the likes of yours truly will ever need to know about R.T.P. contest flying. And the line attachment on the Thistledown is on the *starboard wing*, giving clockwise rotation. Mystery solved.



Rex also says that the "Ajax-type pusher" on the cover of Indoor Flying Models was one of a series of small kits produced at the time. Skyleada springs to mind. The question now is: Do we want to hire Robin's hall for "a couple of quid per head"? I hope the answer is "Yes".

From Ed. Bennett, Feb 5.

I remember winter Tuesday nights at the Woodside school hall. Croydon competed in some sort of London Area League. Cannot remember if it was "Knock Out" or for points. Speed models were flown from time to time. Bernard Chandler ("Chan") produced a Ronnie Rock type speed model and yours truly being youngest/smallest member was detailed to get into the middle and ensure the pole remained vertical. As I am currently in the process of dipping my toe into indoor, I feel R.T.P. would be a good idea. I

have a "Clarion" with a full page plan of Copland's "kipper fuselage" duration models. Also a number of copies of the 44 Digest, acquired as a result of placing third far too often at David's comps. These I would be prepared to loan to anyone having a need.

From Robin Willes, Feb 6

I suppose I should 'own up' now to having been a member of Epsom DMFC during the last days of Jetex speed flying. The wings on the planes were quite small and so I took it a step further and made one with no wings. It flew on a combination of lift from the fuselage and centripetal force from the line. It wasn't specially fast - only about 100 mph - but I was using ordinary Jetex fuel and I suspect some of the fastest models were on 'home brew'. Bill Tinker, the Jetex speed expert, was working in a laboratory at the time.

From Ed Bennett, Feb 9

Many thanks for the plan, which arrived this am. I agree; probably not an easy build, as I am finding with the "peanut" indoor scale model with which I am currently engaged. My fingers are far too large, I need clip-on magnifying glasses and progress is very slow. At least with the Thistledown there is no need to produce your own microfilm as we did in days of yore. 'Hookie' sells it off the roll. One might try using our usual mylar on the fuselage and the really thin stuff on wing, stab and fin.

So there you go. Is there a new future for Round The Pole? Or is it R.I.P., R.T.P? Certainly it's a great pity that all the R.T.P. expertise of the war years and just beyond was allowed to wither on the vine.

Next issue The Thistledown in detail.

The Balsa Story - by Ted Horne

Until about 1930 balsa was unknown in the modern civilised world, and as far as I know only existed in Ecuador where it was considered to be a weed. Wind blown seeds of the balsa tree lie on the forest floor for many years until the right conditions for germination occur. The right conditions in Ecuador occur when the natives clear a patch of forest for cultivation allowing sunlight and hence heat to fall on the dormant seeds on the forest floor thus starting the process of germination.

Young balsa seedlings grow faster than any of the other seedlings which are found on the rain forest floor, and they develop enormous leaves, which in an adult tree can be as much as eighteen inches across. These leaves in turn block out the sunlight and warmth from all the other plants, including weaker balsa seedlings, which just shrivel and die though lack of light. It is for this reason that the forest dwelling Ecuadorians consider the balsa tree

a weed, as it is of no use to them as food, too soft for construction purposes, and to harvest it commercially requires a certain amount of skill and careful husbandry.

Young balsa trees grow very fast and can reach a height of sixty feet in less than eight years, and yet have a diameter of only ten inches. If the tree is left to grow to a maximum size, it could reach a height of one hundred feet, and be as much as eight feet in diameter. The density, however, would be in the order of fifty or sixty pounds per cubic foot; this is of no use as a modelling material. A tree of about eight years, providing it has had the right treatment, nutrients, sunshine etc., will have a density of between four and eighteen pounds per cubic foot, and it is at this age that the tree will be harvested for the purpose of supplying the modelling industry. Should the main trunk be rubbed, bumped, or bruised at any time during these eight years, hard areas will develop which will destroy its value.

When the raw log is taken to the sawmill it is cut up in such a way so as to get as many boards as possible out of a single trunk. This ignores the way in which the growth rings lie relative to the way the board is cut. The board that passes right through the centre of the tree will be quarter or 'C' grain, and be very stiff when it is bent across its width as the growth rings will be closest together and lie at right angles, relative to the width of the board. As the boards move further away from this central board, so the growth rings tend to lie in line with the width of the board and as a result the boards become more flexible across their width. The board closest to the outside comprises just two or three growth rings instead of ten or so. This board is known as 'A' grain and is very flexible across the width of the board. Boards between types 'A' and 'C' will contain what is generally known as 'B' grain which is a mixture of 'A' and 'C' with some 'A' at the centre and some 'C' at the extremities. The exact ratios will depend upon the position relative to the central board.

From the above it can be seen that very little 'C' grain wood is produced from a single tree, maybe less than 10%. To cut a tree up in such a way as to produce a reasonable quantity of 'C' grain wood, would create such an unacceptable quantity of waste, that the price from the sawmill, and consequently the model shop, would have to double, or even treble.

When I go into my local model shop to buy wood I often see somebody buying 20 or 30 sheets of say 1/8" wood, and just taking the first 20 or 30 sheets out of the rack, without thinking about the grain or the density. For me, if I want 1/16" 'C' grain sheet I pull a whole rack of sheets out and

examine each sheet individually and maybe select one sheet in ten or less, I then weigh them and invariably reject at least 50% as being too heavy. I am most grateful to those people who just take the first 30 sheets because it means that there is a good chance that there will be some sheets that fulfil my requirements, unless of course someone like me gets to the rack before I do.

Most of the small models that I build contain about 70% 6 pound per cubic foot or less 'C' grain wood, and the power models perhaps 40%. If I can't get what I want from the local shop I go to someone like SAMS, Mike Woodhouse or John Tipper where I know that I can specify the weight and grain and get just what I want. The price that I have to pay is higher than the local shop, but as the quantity of wood I use during the year is relatively small the cost is not a real factor.

Knowing the density of the wood that is needed for a particular component, there is only one set of figures that need to be remembered before buying a sheet of wood, and these are:- 1 sheet of 1/8"x 4"x 36" six pound per cubic foot wood weighs 28 grams, or to be exact 28.35 grams. Using these figures it is not very difficult to work out that if the selected sheet weighs 35 grams, then the density is $35/28 \times 6$, which is 7.5lb wood. Similarly for 3" wide 6lb density wood, it would weigh $\frac{3}{4} \times 28 = 21$ grams. From this single set of figures the density of any single piece of wood may be established, by using a set of scales calibrated in gram increments, and a simple calculator.

Identifying the different types of grain can sometimes be difficult, bending them across the grain is a good test with thin sheets, but with thicker sheets it is a bit more difficult. 'A' grain wood generally has long straight grain lines and be uniform in colour, whereas, 'C' grain tends to have short grain lines, as well as very short lines which go across the sheet, and almost appear like circular saw marks. If a thin sheet is held up to the light, these marks become very apparent. To me, 'C' grain has an almost satiny sheen to its surface and appears blotchy whilst 'A' grain is smooth, has straight grain lines, and is very uniform.

You may think by now that you know all there is to know about buying wood of the right quality for the job in hand, but nothing is quite that easy. During the life of our tree it may have had a year of poor sunshine which resulted in one of the growth rings not developing properly allowing the individual cells to grow closer together, thus creating a hard area on one side of the sheet. Your scales may say the sheet is eight pound wood, but the reality is that one side may five, and the other eleven pound wood. Holding it up to the light will quickly tell you which is which, if you have not already done the finger nail test. There are two more areas that can give

you incorrect densities on thin sheets of wood, and these are:- 1) 1/16" sheet (.0625") can vary by as much as 15% in thickness, and 2) The thickness across the width of the sheet can vary, again by as much as 15%. I have come across both of these faults, but mainly in kits that I have been asked to build and review.

With large radio models the density of the wood used in the construction is not the critical factor that it is with indoor models. The first Lacey M10 that I built, albeit from a kit, weighed 15 grams, the last one, less what I considered some unnecessary structure, came in at $8\frac{1}{2}$ grams which in ultimate performance gave a significant increase. Don't be put off by all of the foregoing when you go to your local model shop to buy wood, but be aware that with a little bit of careful selection, your finished model could perform well instead of having the characteristics of a brick.



**Ted's latest Rapier Powered Models
Douglas Skystreak & Focke Wulf Flitzer**

Crookham Gala Report - by John Thompson

A brief report on the goings on at Wallop 7th Feb.

As George Formby sang "It's turned out nice again" the weather was beyond belief during this awful winter. A 3/4 mph variable easterly wind, overcast, and a bit nippy to say the least, was good for us with models not going too far etc.

Some 80 cars turned up with 41 entries in the competitions, the remainder being "sport" and "Sparkie" flyers.

Competition results as attached, with max's galore (still air performance?). No real lift was experienced in the Fly Offs, except for Coupe where the "low tech" approach of C Chapman and A Longhurst (both OOS, a very vintage phrase) eclipsed the "high tech" R Vaughn approach. P hall last years

overall champion, was out of the running possibly because of the "haircut" (an in joke that will be revealed in the next article)

Notable in Mini-vintage, 1st. place taken by a glider, 2nd by a power model and 3rd by a rubber model, this variety does not happen very often and certainly not in that order. A grand day was had by all.

I thought you might like to see the actual result sheets so here goes.
(more readable versions will appear on the website in due course)

John Thompson

| COMBINED POLECAT | | | | | | | |
|-------------------------|----------|-----------|------|------|------|------|---------|
| NAME | BIRFO NO | CLASS | 14 | 7+ | 3+ | 730 | PER 100 |
| 1. T. GUY | 33877 | Criveller | 2.32 | 2.32 | 2.32 | 7.30 | ④ 2.46 |
| 2. Scammon | 16221 | Woolton | 2.32 | 2.32 | 2.32 | 7.30 | ④ 6.45 |
| 3. Padova | 34657 | Criveller | 2.32 | 2.26 | 2.52 | 7.26 | ③ 11 |
| 4. T. PAWE | 32531 | D. V. L. | 2.32 | 2.32 | 2.32 | 7.30 | ⑥ 13 |
| 5. D. COX | 72114 | Criveller | 2.32 | 2.32 | 2.32 | 7.30 | ③ 1.45 |
| 6. W. W. ROY | 34365 | " | 1.52 | 1.18 | 1.38 | 4.48 | |
| 7. Finlay | 7674 | Row | 2.32 | 2.32 | 2.32 | 7.30 | ④ 26 |
| 8. Feltham | 50853 | Criveller | 2.32 | 2.32 | 2.26 | 7.26 | ③ 26 |
| 9. Albion | 61472 | " | 2.32 | 2.16 | 1.33 | 6.19 | |

| NAME | RACE NO. | CLUB | COUPE | | | | | | WIN | FO |
|-------------------|----------|---------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------|--------|
| | | | 1 st | 2 nd | 3 rd | 4 th | 5 th | 6 th | | |
| 1. P. Hall | 112155 | Goodwin | 200 | 200 | 200 | 0.49 | | | 6.49 | |
| 2. D. Grawes | 9641 | Br.W | | | | | | | | |
| 3. R. J. A. G. H. | 69977 | Cook | 200 | 200 | 200 | 200 | | | 8.00 | ⑥ 433 |
| 4. D. Throssell | 50600 | Graves | 200 | 1.50 | 1.58 | 200 | | | 7.48 | |
| 5. P. H. H. H. S. | 112840 | Hoggs | 200 | 200 | 1.37 | 1.19 | | | 6.55 | ② 7.16 |
| 6. D. Longmore | 43732 | SAW'S | 200 | 200 | 200 | 200 | | | 8.00 | |
| 7. J. M. M. M. | 51365 | Rugby | 1.35 | 2.00 | 1.37 | 2.00 | | | 7.12 | |
| 8. G. Stimpson | 61305 | E. G. | 2.00 | 2.00 | 0.10 | 1.38 | | | 5.48 | ② |
| 9. C. Chapman | 26746 | Br.W | 2.00 | 2.00 | 2.00 | 2.00 | | | 8.00 | 7.38 |

| NAME | BRIGADE | CLUB | COMBINED GLIDER | | | TOTAL | PER CENT |
|-----------------|---------|----------------|-----------------|-----------------|-----------------|-------|----------|
| | | | 1 ST | 2 ND | 3 RD | | |
| 1. BOB TAYLOR | 19368 | EAST GRINSTEAD | 211 | 140 | 124 | 519 | |
| 2. G. SMITH | 14370 | E.M. | 230 | 218 | 230 | 718 | (3) |
| 3. M. COOK | 66798 | Crawley | 230 | 230 | 230 | 730 | 94.00 |
| 4. THOMAS | 31424 | Can. 35 | 135 | 230 | 227 | 632 | |
| 5. P. MICHARD | 77746 | Sus. 25 | 227 | 211 | 230 | 708 | (1) |
| 6. R. V. NIMBON | 075584 | " | 230 | 230 | 140 | 640 | |
| 7. K. BURT | 405894 | P. & W. | 102 | 220 | 217 | 509 | |
| 8. RADLEY | 63974 | E.M. | 204 | 230 | 228 | 702 | (0) |
| 9. D. LOK | 73114 | Crawley | 230 | 230 | 230 | 730 | 94.43 |

A Few Glider Pictures

by Ted Horne

(Editor: I don't know much about gliders but Ted sent these and I thought we needed a bit of colour about now. Looks damn cold with the 'Horseman'?



The Importance of Wearing a Hat: - by Peter Hall

Although a calm Summer evening is the most desirable flying condition it is a rare bird in our increasingly turbulent climate and so we must depend upon these winter calms to get our trimming done. So I've been out in the ice and cold of Chobham Common to trim Coupes.

About twenty feet up on the burst, the Coupe stopped suddenly, as if it had forgotten something, the prop fell off and the rest floated gently down. The motor which to my surprise in the cold had taken 440 turns and shown good torque had exploded. Half an hour later I had extracted the remains from the motor tube and was nearly up to full turns on the next motor, Bang! (well, snap really, this was not an F1B) - a sudden shocking pain in my head. The motor had broken at the peg end, flown out of the winding tube and landed in my hair. The mass of entangled hair and rubber writhed around then came to rest like a grotesque pigtail anchored to my head at each end. Having your hair pulled as a child is one of the minor growing pains, this was something else. There was something alien about this monstrous leech that had attached itself to my head and was trying to scalp me. What to do? Packing up and going home was out of the question as it would take me an hour and I would not only have to endure the pain but the astonishment of all the people I would meet at my inexplicable hairdo. I fumbled about for my craft-knife and sawed away at the monster until it was in two halves sticking up like a pair of horns. A few hundred yards away three Vintage diehards had spent the last hour or so trying to start their diesels and were still there flicking and cursing. I trotted over to them rehearsing what to say. Ten painful minutes later the monster lay in pieces on the ice.

I reflected that this June '09 Super Sport promising though it is, may be unstable in low temperatures. I also reflected on the effect of having an F1B motor, or worse, a 50 gram or even worse an eight ounce Wake motor round your head like an excruciating turban or fatally, like a giant boa constrictor round your neck. I reflected how fortunate! I was to have three seasoned aeromodellers close by who had quickly understood, acted efficiently and only laughed moderately. Can you imagine approaching a lay man walking his dog, waving your craft knife and inviting him to cut this inanimate thing from your head? For there would be no possibility of an explanation, short of half an hour with a flip-chart and a felt tip pen and every chance that the police would be called.

So the importance of wearing a hat lies, not in preventing 60% of your body heat escaping from your head and not in improving your social mobility, as in the old tag 'if you want to get ahead, get a hat', but in warding off flying motors. As to the type of hat, your knitted bobble

much favoured by aeromodellers is clearly unsuitable, they are often hairy and the bobble is vulnerable. I would rule out exotics like fedoras, sombreros, pith helmets, deerstalkers, or anachronisms like the trilby and bowler because you are seeking protection, not making a statement. After some thought I would recommend the bathing hat as worn by Olympic swimmers, and you might as well include the goggles as well. In these Health and Safety conscious times it might be appropriate to ask the BMFA Technical Committee for their advice.

Postscript: Enough of this jolly banter, there is a serious point here. We are all familiar with the hazards of power models, the problem there is complacency. As a lad, having seen my mate lose an eye to the flying blade off his Mills 1.31 still wince as I see props whirling close to people's faces as they tune the motor. Rubber models look and sound innocuous but my little accident makes me think. It is probably a very rare event but readers may have tales to tell and I am sure the Editor would be interested. John Thompson tells me that Peter Tolhurst reports an incident in France with an F1B motor. The victim lost a lot of his hair.

David Baker Heritage Library - By Mike Parker

Consisting of books, plans and other related material, this library is the result of many years enthusiastic collecting. It is now in the process of collation by Roger Newman who is also initially administering the library. At this stage it consists plans (part 1) only.

Yes there is more, the other material will be listed when collation is complete. The present list can be viewed by using the Hyperlinks on the SAM 1066 website.

NOTE: The document is in both Microsoft Word and Microsoft Excel, please follow the appropriate link.

If you want a copy of any of these plans, please read the following:

A fee is charged to cover:

- (i) A set copying cost, dependent on the sheet size & number of sheets.
- (ii) Cost of packing & postage (1st Class), rounded up to nearest whole £.

Note 1: this is a non-profit making activity for the benefits of SAM 1066 Members (& other like minded aeromodellers).

Note 2: Any accruing balances will be passed to SAM 1066 Treasurer.

The process for obtaining a plan copy is:

Email request to rogerknewman@yahoo.com, quoting Plan Name & I.D. number (1st & 2nd Cols respectively in the list).

An e-mail response is sent back with cost estimate of plan plus package & posting charges. (typical for an AO size single sheet plan posted 1st Class within UK, this would be £5.00).

Original requester sends email reply to confirm cost is OK & that the fee has been posted to:

| | |
|-------------------|-----------------------------------|
| Roger Newman | A cheque or cash is acceptable. |
| 35, Russell Road | On receipt of fee, the plan is |
| Lee-on-the-Solent | copied & posted to the Requester. |
| PO13 9HR. | |

An appeal from Vic for an 8oz Wakefield League organiser

VOLUNTEER(S) REQUIRED

Unfortunately, due to health problems, I will be unable to run the WAKEFIELD or TAILLESS leagues in 2010.

John Minshull has generously offered to operate the 4 oz League, but volunteers are still required for the 8 oz and Tailless events.

So if any one has an ambition to oversee the continuance of these events, please contact myself vw756726@aol.com or Mike Parker.

SWAPMEET - SWAPMEET - SWAPMEET - SWAPMEET

New date for your diary:

21st March 2010 @ OLD WARDEN (Russell Hall Complex in Agricultural College).

This event is intended to fill the gap in the calendar caused by the demise of the Watford Swapmeet (Flitehook will be in attendance).

Further details will be made available via the modelling press in due course.

BROWNHILLS INDOOR FLYING - FREE FLIGHT

Brownhills Community Association, Deakin Ave, Brownhills, WS8 7QG

Just off the A5

Saturdays 2.00pm until 5.00pm - £6

2010 dates:- April 10th – May 8th.

Contact - Tony Eadon-Mills

Tel: 01952 240451 - e-mail: tonyeadonmills@gmail.com

Derek Gamps Plans Collection - Via Andrew Longhurst

Derek rang me to say that he has a large collection of plans acquired over a lifetime, power, rubber etc. that he would like to distribute to people who want them. Derek is no longer very mobile and so the first step seems to be for a member to go over to his place near Cambridge and help him to go through them to get a list which we can put in Speaks. Alternatively, to take them away to be put in an archive. If any member can go over for a day to help sort them out Derek is at 27 Pelham Way Cottenham, Cambs CB24 8TQ. Telephone 01954 250636.

SAM 1066 seems to be fairly well represented in the Cambridge area, so hopefully someone will be able to take this on. It could be an opportunity to expand the Vintage plan collection. - Ed.

Indoor Flying with the Birmingham Cub
Free Flight Only

Thorns Leisure Centre. Stockwell Ave.

Off Thorns Road – Quarry Bank – West Midlands – DY5 2NU
 Saturdays 1pm until 4pm

2010 dates:- 3rd April & 1st May

Admission – Flyers £5.50 – Spectators £2.00

For further information phone or e-mail Colin Shepherd
 0121 5506132 or colin@colinwilliam.wanadoo.co.uk

Cranfield Classic 50th Anniversary

2010 is the 50th anniversary of the 1960 world FF power championship which produced no outright winner. After a 17 Max marathon, five joint World Champions were declared.

To celebrate this unique event, a contest is to be organised for replicas of the models flown by these five great F/F power flyers, at the 2010 BMFA Nationals.

The models are.

Mr Max - Rolf Hagel Sweden/Gloworm - John Sheppard New Zealand/
 No 18 & Ascender - Sandy Pimenoff Finland/
 La Bestia - Giovanni Guerra Italy/Lucky Lindy - Larry Conover U.S.A.

***Reduced scale drawings of all five designs are featured in July's edition of the NEW Clarion - Ed**

I can supply full size drawings for La Bestia, Gloworm, Lucky Lindy & No18. A good drawing of Mr Max is in June 1960 Aero modeller.

All are in the 1959/61 Zaic year book.

Models to conform to a known drawing. No scaling. No weight limit.
 Engine runs to be decided on the day but probably 15* & 12 seconds for a full Max. Three flights.

(*To be allowed full engine run) Engines must be 2.5cc(.15) available before Dec 1960, or OS Max 15 III /OS Max 15 IV, PAW 15 non BR

A reduced engine run will be allotted to models with engines other than above.

NO ABC or Schnuerle engines.

For more information. Contact. Allan Brown. Mobile 07714103515 Home 01913866709
 email allan.030@btinternet.com

INDOOR FREE-FLIGHT DATES 2009/10

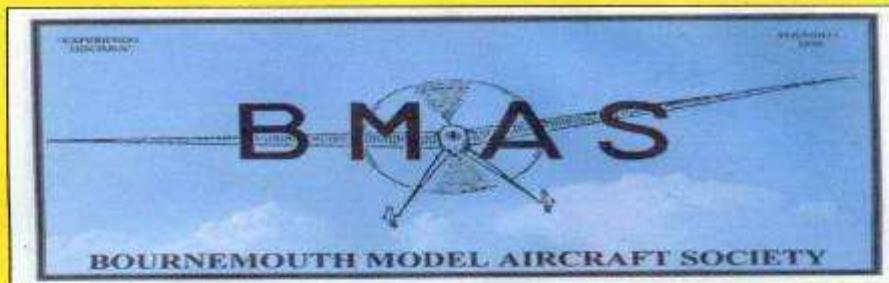
At

Wickham Community Centre,
Mill Lane, Wickham, Hants, PO17 5AL

Thursday 28th January 18:30-22:00
 Thursday 25th February 18:30-22:00
 Thursday 25th March 18:30-22:00
 Thursday 29th April 18:30-22:00
 Thursday 27th May 18:30-22:00
 Thursday 24th June 18:30-22:00
 Thursday 30th September 18:30-22:00
 Thursday 28th October 18:30-22:00
 Thursday 25th November 18:30-22:00
 Wednesday 29th December 10:00-16:00

NEW DRINKS MACHINE ON SITE

FLITEHOOK IN ATTENDANCE AT MOST MEETINGS



INDOOR FLYING

TUESDAY 26th JANUARY 2010

TUESDAY 23rd FEBRUARY 2010

TUESDAY 23rd MARCH 2010

7pm to 10pm

ALLENDALE CENTRE

HANHAM RD. WIMBORNE BH21 1AS

FREE CAR PARKING IN PUBLIC CAR PARK IN ALLENDALE RD

FREE FLIGHT ONLY

INFORMAL COMPETITIONS

FLIGHTHOOK IN ATTENDANCE

Adult Flyers £4 Accompanied Juniors & Spectators £1.50

**CONTACTS: JOHN TAYLOR TEL. No 01202 511502
ROY TILLER e-mail roy.tiller@ntlworld.com**

Provisional Events Calendar 2010

with competitions for Vintage and/or Classic models

| | | |
|-------------------------|-----------------|---------------------------------------|
| January 31st | Sunday | BMFA 1st Area Competitions |
| February 7th | Sunday | Middle Wallop - Crookham Gala |
| March 7th | Sunday | BMFA 2nd Area Competitions |
| March 21st | Sunday | BMFA 3rd Area Competitions |
| March 28th | Sunday | Middle Wallop - Trimming Day |
| April 2nd | Good Friday | Church Fenton - Northern Gala |
| April 3rd | Easter Saturday | Middle Wallop - Glider Day |
| April 4th | Easter Sunday | Middle Wallop - BMAS Day |
| April 5th | Easter Monday | Middle Wallop - Croydon Wakefield Day |
| April 18th | Sunday | BMFA 4th Area Competitions |
| April 24th/25th | Sunday/Monday | Salisbury Plain - BMFA London Gala |
| May 9th | Sunday | Middle Wallop - Trimming |
| June 13th | Sunday | BMFA 5th Area Competitions |
| June 20th | Sunday | Odiham BMFA Southern Area Gala |
| August 8th | Sunday | BMFA 6th Area Competitions |
| August 28th | Saturday | Middle Wallop - SAM 1066 Euro Champs |
| August 29th | Sunday | Middle Wallop - SAM 1066 Euro Champs |
| August 30 th | Monday | Middle Wallop - SAM 1066 Euro Champs |
| September 4th | Saturday | Salisbury Plain - Southern Gala |
| September 19th | Sunday | BMFA 7th Area Competitions |
| September 26th | Sunday | Middle Wallop - Trimming |
| October 10th | Sunday | Middle Wallop - Trimming |
| October 17th | Sunday | BMFA 8th Area Competitions |
| December 5th | Sunday | Middle Wallop - Coupe Europa |

Please check before travelling to any of these events. Access to MOD property can be withdrawn at very short notice!

For up-to-date details of SAM 1066 events at Middle Wallop check the Website – www.SAM1066.org

For up-to-date details of all BMFA Free Flight events check the websites www.freelfightuk.org or www.BMFA.org

For up-to-date details of SAM 35 events refer to SAM SPEAKS or check the website – www.SAM35.org

Useful Websites

GAD - www.greenairdesigns.com
SAM 1066 - www.sam1066.com
Flitehook, John & Pauline - www.flighthook.net
Mike Woodhouse - www.freeflightsupplies.co.uk
BMFA Free Flight Technical Committee - www.freeflightUK.org
BMFA - www.bmfa.org
BMFA Southern Area - www.southerarea.hamshire.org.uk
SAM 35 - www.sam35.org
Martyn Pressnell - www.martyn.pressnell.btinternet.co.uk
X-List Plans - www.xlistplans.demon.co.uk
National Free Flight Society (USA) - www.freeflight.org
Ray Alban - www.vintagemodelearplane.com
David Lloyd-Jones - www.magazinesandbooks.co.uk
Belair Kits - www.belairkits.com
John Andrews - www.freewebs.com/johnandrewsaeromodeller