

	<h1 style="color: red;">NEW Clarion</h1> <h2 style="color: red;">SAM 1066 Newsletter</h2>	Issue nc112022
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	Contents	Page
Editorial		2
Crookham Coupes	Peter Hall	3
Topical Twists	Pylonius	6
A Taste of the Southern Gala	Alan Brocklehurst	7
Engine Analysis: Fuji 29 & Taifun Hobby	Aeromodeller Annual 1958-9	8
Book Review	Alan Brocklehurst	9
Blast from the Past	Model Aircraft October 1047	10
Email to the Editor	Allen Teal (New Zealand)	12
Heard at the Hangar Doors	Aeromodeller February 1956	13
7 th Area Barkston	John Andrews	15
The Boulton Paul Defiant	Wikipedia	17
Couprofile No.6: Andrew Longhurst	Peter Hall	19
The Pee Wee	Ray Malmstrom	26
Crookham Gala	Tony Shepherd	28
Indoor isn't for everyone 58	Nick Peppiatt	31
Croydon Coupe & SAM1066	Ray Elliott	34
The DBH Library (Magazines)	Roy Tiller	35
Secretary's Notes for November 2022	Roger Newman	38
Events and Notices	-	40
Provisional Events Calendar	-	51
Useful Websites	-	52

Editorial

The Free-Flight outdoor season draws to a close and the Indoor meetings now take centre stage. Here in the Midlands around Birmingham there will no longer be any indoor meetings as Colin Shepherd has had to call it a day with his meetings and Sneyd has not been able to restart post covid lockdowns. I will therefore have no meetings to report on so I now appeal to you Southerners to please send in a few words and pictures from your indoor meetings, **pretty please**.

For your delectation in this issue we have:

Peter Hall reporting on Coupes at the Crookham Gala. The format of his reports using submissions by individual competitors is a stroke of genius. One gets a set of varied opinions of the weather & wind and an insight into the trials and tribulations of the individual competitors.

Roy Vaughn provides the results.

Next we have a swipe by Pylonius at the 1953 International Power Contest at Cranfield. His somewhat sideways look at events always amuses me, how he dreams it up is a mystery.

Alan Brocklehurst pens a few words on the Southern Gala and features his picture of the George Fuller Dixielander competitors.

Engines this month are the Fuji 29 and the Taifun Hobby.

Alan Brocklehurst weighs in again this issue with a book review, 'Test Pilot' by Chris Taylor.

The 'News Review' from October 1947 covers several issues, the principle being the secretary's resignation. Other issues were, a new constitution, professional aeromodellers, French flying grounds (*it appears that loss of venues was already causing difficulties on the continent and hints at similar problems in the UK*). Finally timekeeping, an experiment showed that 25% of timekeepers could not read a stopwatch properly, today's digital watches should have gone some way towards eliminating that problem.

Alan Teal from New Zealand sent in an email with a few pictures of one of his models.

I report on the 7th Area comp at Barkston from the safety of my car, I did manage to get a few pictures taken from within.

Peter Hall has been chatting with Andrew Longhurst and has produced another of his Coup profiles. Andrew goes into the fine detail of his approach to F1G.

I dug out one of Ray Malmstrom's diminutive designs from the IVC MAC book, it's 'The Pee Wee', an indoor model suitable for beginners and can be flown in your own home.

Our chairman Tony Shepherd writes a report on the Crookham Gala, seems it was good competition. He managed to get a selection of pictures of the George Fuller Dixielander contestants and of course the group photo.

Nick Peppiatt, for the 58th time, weighs in with yet another epistle, this one is more on CO2.

Ray Elliott sent in the results and a couple of pictures from the Croydon Coupe day including the SAM1066 element.

This issue winds up with Roy Tillers dive back into past magazines and the monthly report from our Chairman Roger Newman together with his usual 3 plans. Roger's report is a little brief due to a prolonged holiday.

Editor

**Crookham Gala,
Salisbury Plain 18th September
Ninth Round Southern Coupe League 2022**

A good turnout but a disappointing day for most coupe flyers. Three flights were required and nine flew. Only nineteen flights out of the possible twenty seven were attempted and only seven of these were maxes. Two flew off and Alan Brocklehurst won the Crookham Coupe trophy. Only two entered vintage coupe but made no flights.

Why such a poor showing? We were on the 'trimming field' and the cool northwesterly delivered many flights straight into the jaws of Death Valley. The restless gusty air made thermal picking impossible for all but those with hypersensitive skin and Job's patience. Struggling up and down the steep sides of the Valley through the unmown hay on legs long past their best before date and after dropping your flight seemed less appealing than an extended lunch and chatting with friends.

Alan Brocklehurst reports:

With a 10-12mph wind from the North West (NNW later), it was never going to be easy as models were taken away from the 'trimming field' across the valley. It was clearly my lucky day, as I managed 3 maxes while most others dropped time, all except Rick Ewing, visiting from Seattle, USA, who also maxed out. (It was great to meet Rick again and it brought back memories of flying at Andy Crisp's event at Oxford in 2014 when Rick's carbon model did about 2 minutes in the fly-off, but unfortunately landed outside the field for a zero score, while Roy Vaughn did a similar time just within the boundary to win. On that occasion I came 3rd, after I failed to max in the last round. Rick remembered that the evening before, a cow had tried to eat the wing tip of my Coupe after I won the progressive Champaign fly-off, nice to reminisce, but I digress).

Three flights on Salisbury Plain in a brisk wind which sometimes took models towards the trees is enough for anyone and after a friendly discussion with Rick, we both opted to preserve our models in the fly-off by D/T'ing at 2:00 for a 'last-man down' and launched together on the count of one, two, three! Rick's model climbed well, but mine somehow found better air and D/T'd from greater height on the southern side of the valley, to land just short of the trees. Afterwards we retrieved together. Rick is a great sport and I'm sure he enjoyed the day. I look forward to flying against him again whenever he is able come over here in the future. The idea of launching together in a D/T fly-off adds to the excitement and makes it easy to compare the flights, especially on the undulating terrain of Salisbury Plain.



Rick Ewing in second place writes:

I was encouraged by the beautiful weather when I arrived. For the 1st flight I waited for a temperature rise followed by what I thought was "fill", and threw the plane up into a nice strong thermal. It took me longer than I expected to walk out and get the plane back. The weather report that I had seen indicated higher wind speeds later, so I got the 2nd flight off pretty soon after, and was lucky to put it in another big thermal. The wind had really picked up when I got back from that flight and I was worried that the afternoon might get too rough for me. So I quickly put up the last flight, after waiting thru a clear lull, launching into the gust that followed. The plane went down wind in a hurry, but also up and I fortunately had found another big thermal. Although it actually calmed down some after that, Alan Brocklehurst and I agreed that a fly off with DT timed to the ground seemed like a civilized way to conclude. As Alan and I got ready to launch together, I attempted to latch my prop blade hold open springs and found that one would not engage. So I bent it to what looked about right and got it to hold open for my instant prop start to function. But my nice climb was followed by an awful glide. After retrieving the model I found that the hold open spring had not disengaged, so I think that spoiled the glide, and I feel lucky that it didn't spin in and get damaged. I had a great day, except I wish I had taken more time to meet and speak with more of the other flyers.

Chris Chapman, third place, comments:

The Crookham Gala as always was well run and very sociable. The fresh breeze from the north created tricky low-level turbulence over the hilly terrain. My three flights all struggled to climb above the rough air. I was surprised to finish in third place. I must say that Alan and Rick coped extremely well and are to be congratulated.

Dusan Jiricny, fourth, tells us:

This time the weather was quite unpredictable. Very strong gusts made even the preparations difficult. I wasn't cautious enough and a sudden gust threw my model on the winding stooge. So I had to fix the model even before first flight. I managed it and maxed. I dropped 16 secs in the second flight. However model landed quite hard. Not having a second one and not being able to fix it on the field left me with single choice, to enjoy the rest of the day with my family in Salisbury.

Ray Elliot in fifth place regrets:

The only positive comment I can make about my performance is that at least I made all three flights (I had to get my tenner's worth). All three flights were made in what felt like reasonable air but the model never got to a decent height. I think the main reason for this was that through a combination of foolishness and laziness I hadn't made up new motors. Using previously wound (thrashed?!) motors clearly didn't help. So the moral must be to only use new motors for contest flights. But we all know that, don't we!

Ben Hobbs in sixth place laments:

Not a good day for me (but most enjoyable). Best not write about it!

Martin Stagg, seventh, admits:

I can't say much about the Crookham gala. As usual I was a bit late. Joined Alan Brocklehurst who was preparing for his first max in coupe. It was quite windy and a bit chilly so my models stayed in their box (wimp). The format was three flights in coupe which was sensible given the conditions and ageing legs.

The Dixielander comp attracted a good entry, the climb of some of these models would have surprised even George Fuller. Very impressive.

Alan, meanwhile had maxed out along with an American visitor (whose name escapes me) and it was agreed that a 2:00min D/T fly off would decide. In the event the American gent's very 'state of the art' model was down in less than two minutes leaving Alan's 2:45 odd a worthy winner. Chris Chapman had been plugging away and was pleasantly surprised to come third. At the All in all even though my unsuccessful season continued it was good to be out, being part of B & W's achievements and enjoying the company of all my aeromodelling mates.

Ken Taylor, eighth place tells us:

His first and only flight was launched some distance back from the valley edge and flew out of sight in just over a minute behind the bushes and parked cars. The length of the retrieve showed that he would have maxed. Launching closer to the valley would have avoided the problem but placed his coupe in the rollover.

Peter Hall, ninth, complains:

I was careless and impatient. Usually I get a sense of the air before flying, but not this time. The gustlets were short and rapid apparently without pause so I didn't wait long and chucked into a downer of course. A shallow climb then a fast descent out of sight into the valley for fifty five seconds - that's about the length of the motor run. The wind above ground level was carrying models further than expected. I did not intend to stay for a fly -off, only for the satisfaction of maxing out, now denied. I consoled myself with lunch, mature stilton with caramelised onion pickle on toasted ciabatta again, with half a pint of coke followed with chocolate digestives. Why not?

Results (Courtesy Roy Vaughn)

Crookham Gala			
Place	Entrant	Club	Score
1	A. Brocklehurst	B&W	12
2	R.Ewing	USA	9
3	C.Chapman	B&W	8
4	D.Jiricny	Birmingham	7
5	R.Elliott	Croydon	6
6	B.Hobbs	Oxford	5
7	M.Stagg	B&W	4
8	K.Taylor	Crawley	3
9	P.Hall	Crookham	2
10	W.Butler	Crookham	1
11	J.Paton	Crookham	0

Only one round in the league to go for this year, Coupe Europa on Salisbury Plain, Sunday October 9th. Gavin Manion who was in the lead, missed Crookham suffering a back problem and has now been Covidised !! Alan Brocklehurst, last year's winner, will keep the league cup unless he stays in bed and Gavin wins Europa. Don't bet on it.

Peter Hall

TOPICAL TWISTS

by pylonius

OCTOBER 1953

MODEL AIRCRAFT

Topical Twists (at Cranfield)

Feeling it wrong for England to Suffer Alone this column sallied forth to inflict its unpleasant attentions upon the international gathering at Cranfield. Arriving at the front gate we duly presented our credentials, but after being thrown out three times we eventually gained admission cunningly disguised as a crate of models from Lower Pylonesia. Only once was this subtle disguise pierced, but, fortunately the bradawl happened to be rather blunt.

After being processed by way of the imprint of a large boot in our maximum cross-section, we donned a pair of dark glasses to protect our eyes from the blinding glare of the transatlantic shirts, and went out to take a look at the weather. Immediately we encountered an aspect of this cosmopolitan convention which to our British eyes was the most foreign of all—the calmness of the air. In fact, it was even more breathless than the wonder with which the British contingent regarded this rare phenomenon.

Up to this time, Old Man Weather, who simply loathes model aircraft, had enjoyed a very successful season; having cleaned up, or, shall we say, washed out, every major (and minor) event to date. Not surprising then that the pre-contest weather mood was one of decided pessimism. Even the original idea of tricking up the British Boys in track-suits was gloomily discarded in favour of "wind-cheaters," thus spoiling a perfectly ghastly crack we had lined up about improving the overall standard of flying.

The blouses, in an eye-catching shade of royal blue, were apparently designed to make our boys easily recognisable on the flying field, although, in the absence of any wind, they could be readily picked out by their natural inclination to lean at a forty-five degree angle.

It was noticed that our youngest competitor was somewhat disconcerted by the appearance of a large fiery globe in the sky. It took some time to allay his fears, and convince him that it was merely a star called the Sun, which a few of the older members dimly recalled having seen before in their extreme youth.

In spite of this surprise appearance of the thermal producing gadget, the up-currents present were all of foreign import—smuggled in with the model crates.



Getting on to the take-off site proved something of a problem. A special armband was needed, of which only a limited few thousand were distributed. The customary rule of allowing all officials to be accompanied by their wives and pet dogs was observed, and we managed to slip in disguised as a Black Spaniel (being, of course, a bit of a wag). At first we trotted in as a Retriever, but this ruse came rather unstuck when we were banished to the far end of the airfield.

Reports on the power contest from an Advanced Spectator Post indicated very few models trying to crash through the ground barrier. In fact, the only really big crash of the day came when we were thrown off the field for a punning reference to the 'igh scream of the Italian engines.

But, perhaps, an even higher scream issued from the thrusty throat of the all-conquering American "Torpedo," which ploughed its way through the Atlantic seas to establish America as the World's Premier "Power." Owners of itchy, oil-stained hands are observing no scruples in their eager efforts to acquire one of these potent prop-spinners—thus giving emphasis to the old saying that "absolute power corrupts."

With so many countries present, it was remarkable, how in the midst of all this multi-tongued babel, everyone managed to understand each other, apart from a little difficulty between the Cockney and Lancashire elements of the British team. Perhaps the only real language problem was in getting the women and children out of earshot when a rubber breakage occurred.

In retrospect, one most encouraging feature of the event was the widespread publicity it was accorded. In many newspapers this epic occasion in model history was treated on a common level with the opening of the marble season. A few, fugitive snippets of model news even managed to escape the confines of the Children's Corner to more adult spheres, where some condescending consideration was given to the type of veteran modeller who had been flying model aircraft for close on forty years—man and toy.

As far as Radio Publicity went, their main theme seemed to be that the ambition of the modern kiddiewinkie was no longer the traditional one of becoming an Engine Driver, but with the help of his toy aeroplane, to aspire to the heights of an Aircraft Designer.

And a few tail twists

The biggest draw of the meeting was crazy cartoonist, Malmstrom, who drew everyone and everything with indefatigable relish. At prizegiving he also drew the loudest round of applause for his "flying scale" caricature of the power contest winner.

In a lesser artistic vein were the caperings of the final beano types, who only succeeded in making sketches of themselves.

Downraughts of beer from the Wakefield Pot at 3 a.m. resulted in quite a number of late risers.

Pet indulgence of the French Team was a series of war whoops each time one of their models became airborne. Needless to say, they put up a "brave" show.

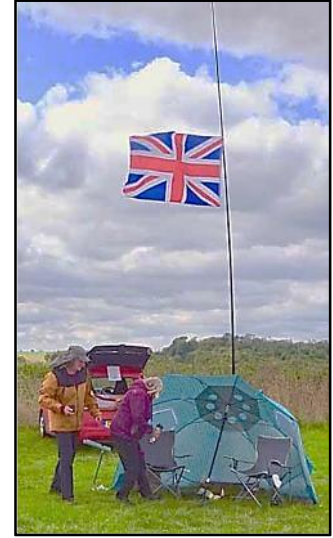
Pylonius

A Taste of the Southern Gala

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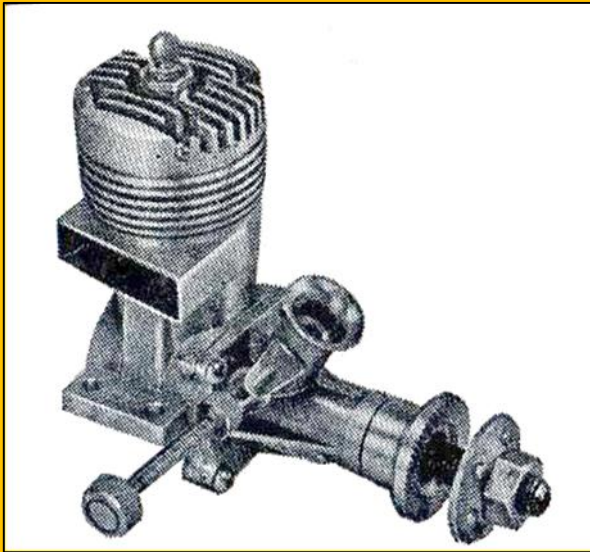
Alan Brocklehurst

Here are a couple of photos from the Southern Gala. Quite a good number of people/cars attending on what was a day with a tricky wind direction. I thought it was a nice touch to see someone with the Union Jack at half-mast on their streamer pole.



You may well be bombarded with the Dixilander Group Picture, but here's the one I took.

*Alan Brocklehurst*



FUJI 29

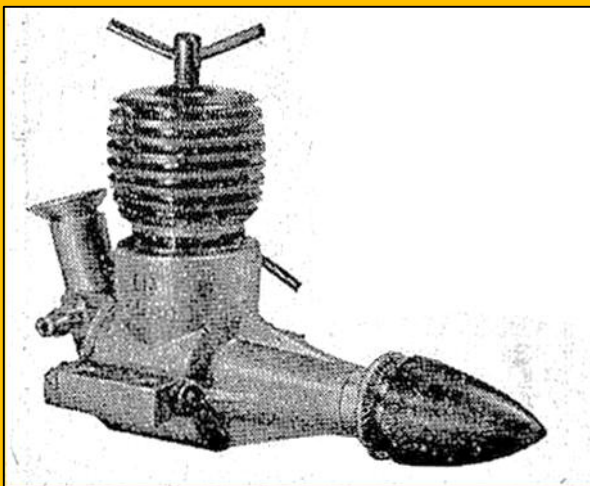
Manufacturers:
Fuji Bussan Co. Ltd.,
Hokkaido, Japan.

Specification

Displacement: 4.814 c.c. (.2936 cu. in.).
Bore: .747 in. Stroke: .670 in.
Bore/stroke ratio: 1.1:1.
Weight: 6½ ounces.
Max. B.H.P.: .40 at 12,400.
Max. torque: 36.8 ounce-inches at 9,800 r.p.m.
Power rating: .083 B.H.P. per c.c.
Power/weight rating: .064 B.H.P. per ounce.

PROPELLER—R.P.M. FIGURES

<i>dia. × pitch</i>	<i>r.p.m.</i>
9 × 4 (Stant)	12,300
8 × 4 (Stant)	14,500
10 × 4 (Trucut)	10,800
9 × 5 (Trucut)	13,000
8 × 4 (Trucut)	14,700
7 × 4 (Trucut)	15,900
8 × 3½ (Tiger)	15,500



TAIFUN HOBBY RS

Specification

Bore: .4215 in. Stroke: .434 in.
Displacement: .995 c.c. (.0605 cu. in.).
Bare weight: 2⅞ ounces.
Max. B.H.P.: .071 at 12,000 r.p.m.
Max. torque: 6.8 ounce-inches at 9,000 r.p.m.
Power rating: .071 B.H.P. per c.c.
Power/weight ratio: .028 B.H.P. per ounce.

PROPELLER—R.P.M. FIGURES

<i>dia. × pitch</i>	<i>r.p.m.</i>
7 × 5 (Trucut)	7,200
8 × 3 (Trucut)	8,000
6 × 4 (Trucut)	11,200
6 × 3 (Trucut)	11,500
5 × 3 (Trucut)	13,200
7 × 4 (Frog Nylon)	10,100
6 × 4 (Frog Nylon)	13,400
9 × 3 (Stant)	6,800
7 × 6 (Stant)	9,500
6 × 8 (Stant T/R)	12,200
7 × 4 (Tornado)	11,000

Test Pilot

An Extraordinary Career Testing Civil Aircraft by Chris Taylor

£25 cover price, www.pen-and-sword.co.uk, or also available from Amazon.

(I was lucky and obtained a signed copy after his talk for only £20)

A month or two ago, I went along to the 'Sherborne Science Cafe' (my first attendance, post-Covid!), to listen to a talk by Chris Taylor. Chris started his career flying the Wasp and later Lynx helicopters for the Navy, then joined ETPS and gained experience on flying and instructing on fixed-wing aircraft before becoming a test pilot for the CAA.

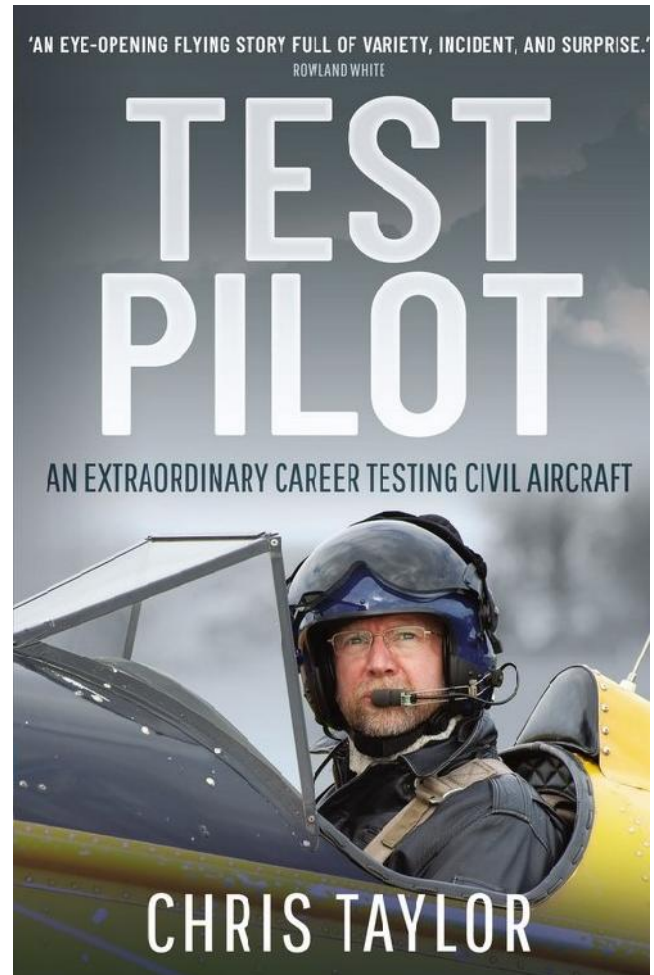
He has flown over 400 different types of aircraft (not quite as many as Eric Winkle Brown!). His unique background meant he then got to test-fly both helicopters and general aviation business and light aircraft, including microlights and autogyros.

The book covers many aspects of flight testing and is split roughly 50/50 between helicopters (handling, vibration and autorotation) and aeroplanes (engine failures, stalls and spins).

It is written in a non-technical, 'tales-from-the-pub' kind of style, so is quite readable (although his fondness for copious glasses of wine annoyed me a little towards the end - but I think it reflects his work-hard and relax-afterwards kind of life style).

Certainly you have to be of the right stuff to work as a test pilot and many times he describes his near-death experiences in a matter-of-fact and light-hearted way.

As a (lapsed) pilot and someone who knows too much about helicopters to want to fly in them, I take my hat off to him! All in all a very interesting read for those who want to fully understand what test-flying aircraft is all about.



Alan Brocklehurst

An excerpt from the book:

Holy Moses!

I was doing over 30 mph... I was in a helicopter ... I was on the ground ... I was going sideways ...

I couldn't steer and sparks were flying everywhere ... I could do nothing but 'Keep calm and hang on'

I was testing the emergency landing characteristics of a Polish helicopter in Arizona, USA on a very warm day at an airfield that was a mile above sea level. As I slid sideways with the metal skids kicking up an almighty cascade of sparks from the tarmac runway you might conclude that I was mad, bad or stupid; for me this was just another typical working day in my life as a test pilot.

October 1947

NEWS Review

Cover Story

Varied are the methods of coaxing awkward engines into life that one sees on the flying field, some of which are rewarded with success and some not.

A popular scheme is to prime the cylinder direct through the exhaust ports, but one can easily be too drastic with this method and make matters worse than ever through introducing an excess of fuel owing to careless manipulation of the syringe or fuel bottle.

A. P. Cox has, however, found that a hypodermic syringe gives a useful measure of control over the amount of fuel injected, and he is shown successfully utilising this technique during his attempt in the Power Contest at the recent Reading Rally, held at Theale.

S.M.A.E. Secretaryship

some anxiety, particularly now that Mr. L. M. Walker has indicated his inability to continue to fill this post any longer.

It will be recalled that at the last A.G.M. the ballot for the officers of the Society for 1947 was declared void owing to the unfortunate omission of the country members from the mailing list for ballot papers. At this meeting the existing council were charged with the task of continuing the administration of the Society's affairs until such time as a fresh ballot could be held, a task which they accepted unwillingly. It was particularly unfortunate, therefore, that in the second set of nomination papers returned no nomination whatever was received for the all-important post of secretary from any of the clubs, and in spite of efforts by the council to find a suitable nominee for this post, no name has yet come forward.

Obviously, any ballot which does not include a nomination for this important post would be futile, as no new council could operate efficiently without the support and co-ordination of a secretary, and this problem has now become the Society's No. 1 priority.

It is essential that someone with the necessary qualifications should be found with the least possible delay, and it is up to the clubs to comb out their membership with a view to finding someone with the qualifications and time to devote to this important office. The work of the secretary has, of course, been relieved considerably since the A.G.M. by the appointment of a full-time assistant secretary, but there is, nevertheless, a considerable amount of business and development work to do which cannot be delegated to an assistant, and nominees should possess considerable tact as well as ability.

All clubs, but particularly those in the London area, since it is advisable for the secretary to be domiciled within reasonable distance of Londonderry House, should make a special effort to find suitable candidates without delay. It should be every club's main concern now that the contest season is over.

The New S.M.A.E. Constitution

By the time this issue reaches you all clubs should be in possession of the draft constitution of the S.M.A.E.

The formation of the Society into a limited liability company without share capital under the Company's Act of 1929 marks an important step forward in the development and stabilisation of the Society which should reflect considerable advantage to its members.

The terms of the new constitution are therefore worthy of the closest attention on the part of all clubs to ensure that they are both sound and comprehensive, since so much of the future progress of the Society depends on them.

There is also another reason why they should be given close consideration. When they are finally approved and officially sealed, alterations can only be made to them under government approval and at some expense. The old method of altering them at will by a majority vote at an A.G.M. will not suffice as any alteration has to be submitted for official approval and ratification before they can be incorporated.

It is, therefore, in everyone's interest that the terms of the constitution should be made as watertight as possible.

Professionalism

Mutterings have been heard at various contests this season against the participation of professional or semi-professional aeromodellers in competition against enthusiasts of purely amateur status.

This is, of course, nothing new and argument on this point has cropped up from time to time ever since model aeroplaning was in its infancy, without the matter either coming to a head or being satisfactorily settled.

The argument put forward on behalf of the professionals that they are still keen aeromodellers and participate in contests because they enjoy the sport and still get a kick out of model flying is quite true of the majority of the professionals in this country, but at the same time it is equally true that they have

an advantage in time and facilities over the normal amateur.

The large number of aeromodellers who have entered the model aircraft business on demobilisation has altered the balance of affairs in this country, and the matter now has considerably more incidence, while on the Continent it has definitely come out into the open and there is a strong movement to debar professional modellers or semi-professional modellers from participation in events of national or international status.

Whether or not discrimination should be made in this country between amateurs and professionals on similar lines to other sports is open to argument and in order that both sides of the case may be adequately ventilated we are proposing to open our correspondence page to letters on the subject from both sides. Let's have your views!

Speed

The world speed record achieved by Group Capt. Donaldson on the Gloucester "Meteor" appears to have started keen competition in this sphere and the British performance has been beaten several times lately.

A speed of 623.8 m.p.h. was registered on the Lockheed "Shooting Star" in June by a unit of the U.S. Army Air Force, which was later improved upon by the "Douglas Skystreak," which achieved a speed of 640.7 m.p.h. under the pilotage of Commander Turner F. Caldwell, at Muroc, California.

This in turn has been beaten by a speed of 650.6 m.p.h., achieved on the same machine, by Major Marion Carl, of the United States Marines.

The Douglas machine has a span of 25 ft., a length of 35 ft., and is powered by one of the General Electric Company's TG-180 Axial Flow Turbo Jet power units, giving a maximum thrust of 4,000 lb.

But Britain is not altogether behind in the world of speed, since Group Capt. John Cunningham, flying a De Havilland "Vampire" during the Cinque Ports Flying Club Meeting, held at Lympne on August 31st, set up a new international closed circuit record of 496.88 m.p.h. over a distance of 100 km. The previous record was held by a Lockheed "Shooting Star" at 493.88.

At the same meeting, Squadron Leader R. L. Porteus broke the international record for 100 km. for aircraft fitted with an engine of under 2 litres capacity by averaging 123.7 m.p.h. over a closed circuit on a Chilton monoplane, beating the record of 115 m.p.h. established in Germany before the war.

Flying Grounds

News from France gives indication that they are encountering similar flying ground difficulties to our own, and that the activities of aeromodellists in Paris and district have been seriously curtailed since the termination of the war owing to the lack of suitable flying sites.

As we go to press we learn that permission has now been granted for them to use the old-established

aerodrome at Issy-les-Moulineaux on the outskirts of Paris, and as this is served by the Metro (the Paris underground), it should be convenient of access from all parts of Paris.

Our congratulations to our French friends in their success in this direction. We hope it will be the signal for a strong revival of aeromodelling in Paris.

1948 Contests

Now that the 1947 outdoor flying season is over it is advisable to consider immediately the contest programme for next season, firstly, to give constructors the maximum possible time to design and build their models for 1948, and secondly, to gain maximum benefit from the lessons learnt in 1947 before they are dimmed by time.

It is encouraging to find that the contest organising committee of the S.M.A.E. have already held a meeting on this subject and that the broad outline of the suggested contests for 1948 and the modified rules have been publicised in their News Sheet.

This, together with the proposal to hold the A.G.M. in November instead of next February, should go a long way to help members and avoid the short notice of contests and their rules which has been an annoying and undesirable feature of the past few years.

Timekeeping Errors

At a recent meeting of the London Area Committee, the accuracy of present day timekeeping was discussed, and as an experiment at the London Area Centralised Contests for the National and C.S.S.A. Cups, one official was delegated to read off the times on the stop-watches at the end of each flight.

At the conclusion of the contests this official reported that in his opinion only one third of the timekeepers could be relied upon to read their watches correctly, and without the check major errors would have occurred in 25 per cent. of the times.

The most common fault was the recording of a flight of, say, 1 min. 45 sec., as 145 sec. Watches with 30 sec. dials were also responsible for many incorrect readings. MORAL: All clubs should make certain that their timekeepers are able to read a stop-watch accurately.

Stop-Watches

At most of the major contests held during the past season there has been a shortage of stop-watches in addition to official timekeepers. Now that Government surplus stop-watches of good quality are available from a number of trading establishments specialising in the disposal of such surplus goods at approximately £3 3s. od. each, there exists a good opportunity for clubs and individuals to obtain suitable watches at a reasonable price.

The S.M.A.E. will be pleased to put those who are not familiar with a source of supply in touch with a suitable concern.

I appreciate receiving the Clarion each month and enjoy seeing what modellers are up to on that side of the world.

Always enjoy looking at the photos.

Looking at the recent issue of Clarion, I saw the plan feature of the Druine Turbulent. I built on off this plan about six years ago, in fact I still have it.....on display in a glass cabinet!

It has only had one brief erratic flight due to incorrect balance before we made a move of location. It was a delight to build so perhaps one fine calm day I may get it out for a surprise outing.

Anyways, thanks for the regular mailings of the newsletter/magazine.



Allen Teal (New Zealand)

Heard at the HANGAR DOORS



"Gadget" Gibbs and Fred Carter at the pylon, inset is the "Nipper" powered record breaker

Record Round up

We recently had the pleasure of witnessing probably the most correctly conducted speed record attempt in this country, when Ray (Gadget) Gibbs of the East London Speed club set up a speed of 123.5 m.p.h. (198.8 k/hr.) in the 2.5 c.c. class at Heston Airport on the 4th December.

Unfortunately, hopes of submitting this as an International Record were dashed when an F.A.I. Circular received the day following gave the Class I record to J. Koci of Czechoslovakia for a flight of 203.5 k/hr., made on the 11th September, 1955. For international recognition, claims must exceed the existing record by at least 5 k/hr., so it is only possible to credit Gibbs with the British record. Discussion at the S.M.A.E. Council level elicited the fact that for record purposes only, there is no limitation on line thickness etc., so future attempts on International Records will have certain handicaps eliminated.

We have considerable doubts on the advisability of such freedom, for it has apparently been overlooked that under such "free" conditions the vital factor of safety is discounted, and for our part we deplore any International regulation that does not take this important factor into account. However, if overseas fliers may set up records in this manner, the British modeller must operate under the same freedom, so it appears that we are in for a spate of "anything goes".

On the 18th December, Gadget had a further go at the record, this time using thin lines, and pushed the speed up to 129.3 m.p.h., equivalent to 208 k/hr. It is anticipated that a claim will be lodged with the

F.A.I. for recognition, for the F.A.I. rules state that a speed shall be recorded as the next whole kilometer below that achieved, and therefore (technically) Koci's record should have been ratified as 203 and not 203.5 k/hr.

Supersonic Modeller

When we visited the R.A.F. Model Flying Championships at Horsham St. Faith last summer, main topic of conversation in the mess was the absent Fighter Command power flier who was "in dock" following a high speed bale out. As it turned out this rather understated the case as F/O H. Molland of Wattisham flying a Hunter in a high speed dive over the East Anglian Coast, did in fact bale out at a speed of between 710 m.p.h. and 765 m.p.h. when the controls failed. In doing so he sustained a broken arm, two black eyes, and a fractured pelvis. His crash helmet, gloves, wrist watch, and one shoe were all blown off during ejection, and although in baling out he became the second man to do so above the speed of sound we imagine he would have preferred to have kept off this particular honours list.

We talked to F/O Molland who is still convalescing, and it seems he is an aeromodeller of some seven years standing, flying gliders, sport, power models, and scale models. The latter class of model is his particular interest and we bet that right now he finds them a nice quiet peaceful change after Hunters!

"No. 1" Reminisces

In a fascinating speech at the 1955 S.M.A.E. Annual Dinner and Dance where he was the guest of honour, Lord Brabazon of Tara suggested that aeromodellers could do much useful and practical work at the lower end of the air speed range. He pointed out that little research had been done in this direction and that knowledge of really low speed flight, particularly with full scale machines, was scant indeed, and that models were ideal for this type of investigation. Reminiscing, Britain's pioneer aviator acknowledged the invaluable work the S.M.A.E. had performed during the 46 years it had been in existence, and stated that it was now an accepted part of the aviation world. He emphasised that since the very beginnings of aviation the model had preceded the full size aircraft and quoted with surprising accuracy details of Langley's famous flying machine of 1896, which took the air seven years before the Wright brothers. Continuing the theme of low speed flight, he recounted how in 1909 he covered a distance of 18 miles in a Short-built Wright Biplane at an

February, 1956

67

average speed of 32 m.p.h. with a wing loading of less than 16 ounces per square foot, which is about the same as the average radio control model of the present day, and as Lord Brabazon remarked, contrasts greatly with current full size loadings of 100 pounds per square foot and upwards.

On the subject of his own aeromodelling career Lord Brabazon mentioned how he and "Charlie" Rolls inveigled themselves into the Albert Hall through "connections" on the maintenance staff, and how they tested model gliders in the spacious surroundings of this famous building. We wonder how many readers remember pre-war Indoor Meetings in the Albert Hall where Bob Copland set up his famous record of 18 minutes 52 seconds, which stood right up until August, 1954.

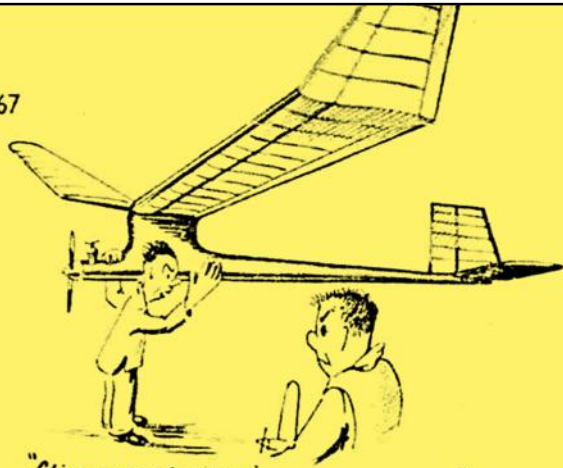
Henry Nicholls replied at length on behalf of the Society and emphasised how much the aeromodellers of this country appreciated the real interest Lord Brabazon showed, and went on to say what a pity it was that the full size aviation industry did not share the same enthusiasm. Drawing attention to the serious shortage of technicians within the industry at the present time Henry pointed out that they neglected a very lucrative field of labour recruitment by not supporting the aeromodelling movement.

After the speeches, Lord Brabazon presented some 42 trophies to national contest winners, and although this is a formidable task we do deprecate the bad mannered few who left in the direction of the bar whilst the prizegiving was in progress. Possibly some better solution to this somewhat lengthy process can be found for future S.M.A.E. Dinners, but on an occasion such as this there is no excuse for plain bad manners.

Dancing and general festivity continued until midnight and general opinion has it that this S.M.A.E. Annual Dinner and Dance was one of the most successful yet held.

Loading the power

The storm of comment on doubling the power loading factor in International contests, amounting to 14.12 ounces per c.c. engine capacity, has promoted considerable speculation as to the type of model likely to make the most of the heavyweight ruling to be applied in 1957. One point which comes to mind immediately is that by altering the power loading, without adjustment of the wing loading, modellers will be able to retain the same weight per square foot at the expense of adding more area. Thus the F.A.I. defeats its original purpose in calling for 2.5 c.c. as the maximum capacity for a *convenient* size of model. But will modellers jump to a 900 sq. ins. wing for this capacity? We doubt it. Few finalists work to marginal figures, and most of the successful models are loaded to 4½ oz./sq. ft. On that basis alone, we can visualise the current 400 sq. in. wing growing to 700 sq. in. for 2.5 c.c. How will it fly? We have previous examples which approach the proposed rule change, in the 2.5 c.c. International PAALoad class, the winner of which (at the U.S. Nationals in 1955) had a wing area of only 530 sq. in. for a total weight of



"Clipper cargo la dama" —
its my new 35oz 8Fr F.A.I. model for 1957!!

35 ounces. His 5-flight total was 13:18, or 1 minute 42 secs. below the absolute maximum score showing that although the weather might have been favourable, the higher-than-average wing loading had only a moderate effect, when spread over five flights.

If 2.5 c.c. engines can take care of 35 ounces, how does the extra power loading affect other capacities? The 1.5 c.c. engines have, in the past, stood a fighting chance of a win and three of the four British power teams selected to date have included a 1.5 c.c. representative. But now that this capacity has to carry 21 ounces, opinion may change.

For the small engines, we can discount 1 c.c., for the weight of 14.12 ounces minimum is higher than that of the average sport model for this size. The .8 c.c. and "point-fives" could offer a different story. These are the capacities least affected by the change, for the wing loading has always been against them for F.A.I. use in the past, and now that they are obliged to be heavier, it is possible to build a model down to both minimum loading factors, and still have a presentable size of design.

The popularity of the "Half-A" (.8 c.c.) free-flight contest in the U.S.A. indicates the possibilities of these almost "Wakefield" size power models, but we should not lose sight of the fact that the American approach is to employ a surface loading of only 2 ounces per sq. ft. On the other hand the .8 c.c. glow engines seem to have but little difficulty in lifting a total of 50 ounces in Clipper Cargo, so a mere 11 oz. should be nothing for a fast Merlin or Piccolo to handle,—in theory!

For a time there will be diverse opinion as to which is the better avenue to explore; either a larger 2.5 c.c. model with the most powerful diesel obtainable, or a minimum wing loading .5 or .8 c.c. design. Both are relatively unknown factors, and until example designs have been built and fully tested, we would hesitate to commit ourselves, except to say how much better it would have been to let the modellers have their say before such drastic changes are made.

The following table indicates approximate weights and sizes to provide a minimum area loading and minimum power loading. Figures in brackets show the current vogue for 1.5 and 2.5 c.c.

Capacity	Weight	Wing Area	Tailplane Area
3 c.c.	8 ounces	209 sq. in.	84 sq. in.
8 c.c.	11 ounces	288 sq. in.	108 sq. in.
1.0 c.c.	14 ounces	350 sq. in.	150 sq. in.
1.5 c.c.	(108) 21 ounces	(275) 530 sq. in.	(110) 220 sq. in.
2.5 c.c.	(141) 35 ounces	(400) 900 sq. in.	(160) 360 sq. in.



The favorable weather forecast for Sunday 2nd October prompted Rachel & myself to have a day out at Barkston to do a little spectating. We did not arrive early and the crashgate entrance was closed. Stuart Darmon arrived on the airfield side of the gate but he did not have the lock combination. We hung around until a couple of other cars arrived, presumably radio club fliers, and they had the combination so we got on site about 1pm. Straight into the toilet was the first order of business, then on to the flight line. We parked in the middle of the line at first, then at the far end but we were looking into the sun, so no good for pics, we then moved to the up sun end of the line. Never set foot outside the car but took a few pics from inside.





In the words of the boy scouts song "All our eyes on the distant horizon"



Getting ready for a contest flight: Kath Best, Stuart Darmon & Steve Phillpott

We left about 4pm and motored off to 'The Fox & Hounds' pub which we had dicovered on our previous visit. The pub is open for food all day and also does a Sunday Carvery. Unfortunately the carvery had run out of meat so we ordered from the Sunday menu. Having eaten and consumed a pint and a large glass of wine for m'lady, all was well with the world. We left for home into the setting sun, a good day out but not a pleasant journey home.

John Andrews

The **Boulton Paul Defiant** is a British [interceptor aircraft](#) that served with the [Royal Air Force \(RAF\)](#) during [World War II](#). The Defiant was designed and built by [Boulton Paul Aircraft](#) as a "turret fighter", without any fixed forward-firing guns, also found in the [Blackburn Roc](#) of the [Royal Navy](#).

In combat, the Defiant was found to be effective at destroying bombers, the role it was designed for,^[2] but was vulnerable to the [Luftwaffe](#)'s more manoeuvrable, single-seat [Messerschmitt Bf 109](#) fighters. The Defiant had been designed to destroy unescorted bombers by means of beam or ventral attacks^[3]^[4] and therefore lacked forward-firing armament, that proved to be a great weakness in daylight combat with fighters. It did, however, find success when it was converted to a [night fighter](#).^[5] It eventually equipped thirteen squadrons in this role,^[6] compared to just two squadrons as a day-fighter,^[7] though this was mainly due to slow initial production.^[8] In mid-1942 it was replaced by better performing night-fighters, the [Bristol Beaufighter](#) and [de Havilland Mosquito](#).^[6]

The Defiant continued to find use in gunnery training, target towing, [electronic countermeasures](#) and [air-sea rescue](#). Among RAF pilots it had the nickname "Daffy".^[9]



Boulton Paul Defiant Mk I

Role	Two-seat fighter, night fighter, trainer, target tug
Manufacturer	Boulton Paul Aircraft
Designer	John Dudley North
First flight	11 August 1937
Introduction	December 1939
Status	Retired
Primary users	Royal Air Force Royal Australian Air Force Royal Canadian Air Force Polish Air Force
Number built	1,064 ^[1]

During the 1930s, the increasing speed of military aircraft posed a particular challenge to anti-aircraft defences.^[10] Advances in aircraft design achieved during the 1920s and 1930s had resulted in a generation of multi-engined [monoplane](#) bombers that were substantially faster than their contemporary single-engined [biplane](#) fighters then in service. The RAF came to believe that its new generation of turret-armed bombers, such as the [Vickers Wellington](#), would be capable of readily penetrating enemy airspace and of defending themselves without any accompanying fighter escort, but also recognised that the bombers of other European air forces, such as the [Luftwaffe](#), would similarly be able to penetrate British airspace with impunity.^[10]

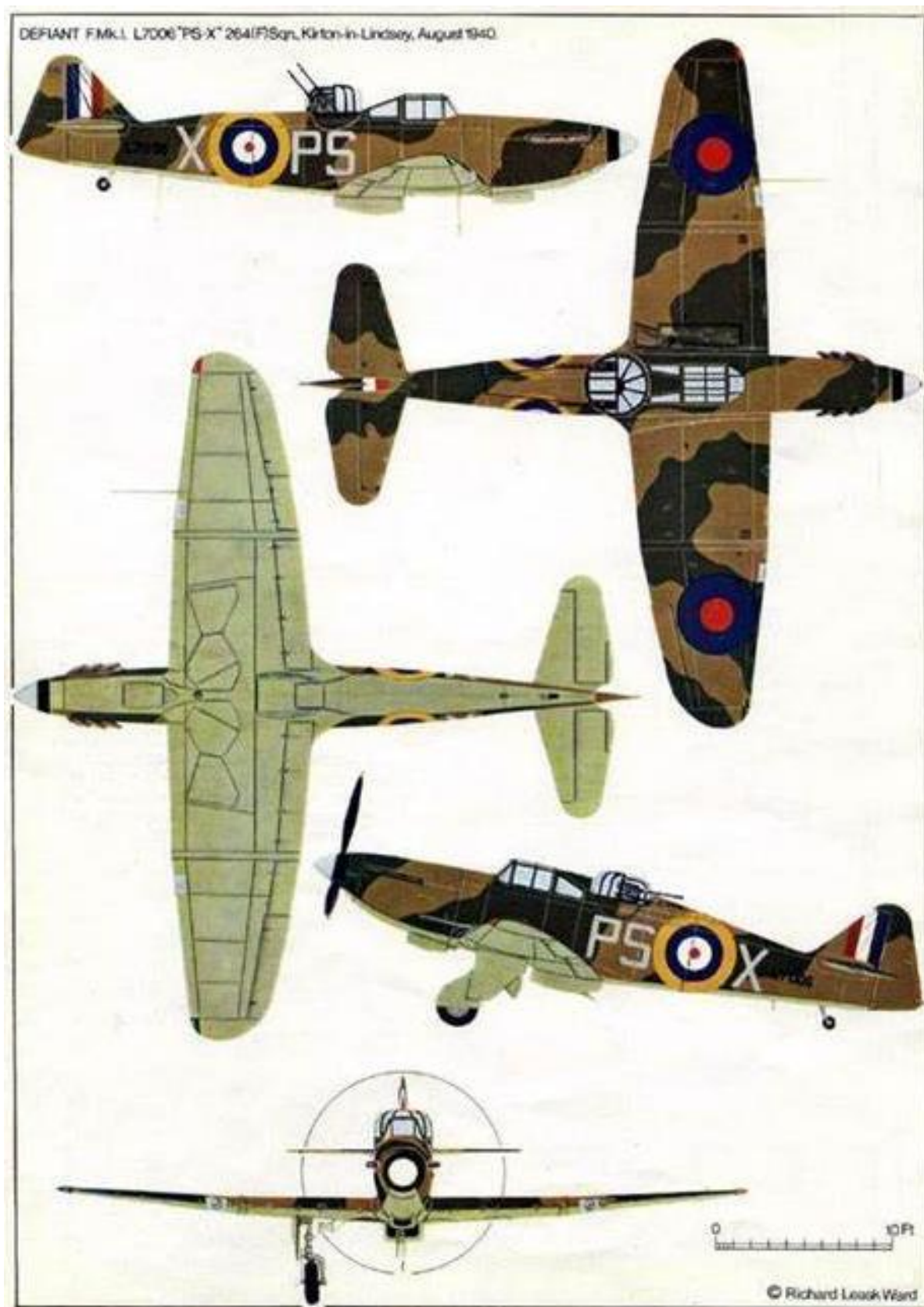


Defiants of No. 264 Squadron in 1940.

During 1935, the concept of a [turret-armed](#) defensive fighter to counter the bomber threat emerged during a time in which the RAF anticipated having to defend Great Britain against massed formations of unescorted enemy bombers.^[11]^[12] The RAF did not expect bombers to be escorted by fighters because fighters would not have the range to reach the UK from Germany.^[13] In theory, turret-armed fighters would approach an enemy bomber from below or from the side and coordinate their fire. The separation of the tasks of flying the aircraft and firing the guns would allow the pilot to concentrate on putting the fighter into the best position for the gunner to engage the enemy. However, manually-traversed turrets were viewed as having becoming more problematic and

increasingly inadequate to effectively respond to ever-faster hostile aircraft, thus there was considerable interest in using a power-augmented turret.^[10]

The earlier [Hawker Demon](#) biplane had tested the concept with 59 of the fighters, which had been manufactured by Boulton Paul under a sub-contract, having been equipped with a [hydraulically](#)-powered rear turret, while a number of aircraft already built were also converted as such.^[14] Boulton Paul and its managing director [John Dudley North](#) had gained considerable experience with defensive turrets from producing several earlier aircraft, including the [Boulton Paul Overstrand](#) bomber, and had devised a four-gun power-operated turret, the concept and development work of which would later be a core part of the Defiant design.^[10]



(There was an error in Chris Chapman's Couprofile last month, the model depicted at the end was actually one of Alan Brocklehurst's. The similar egg box construction probably caused the error)



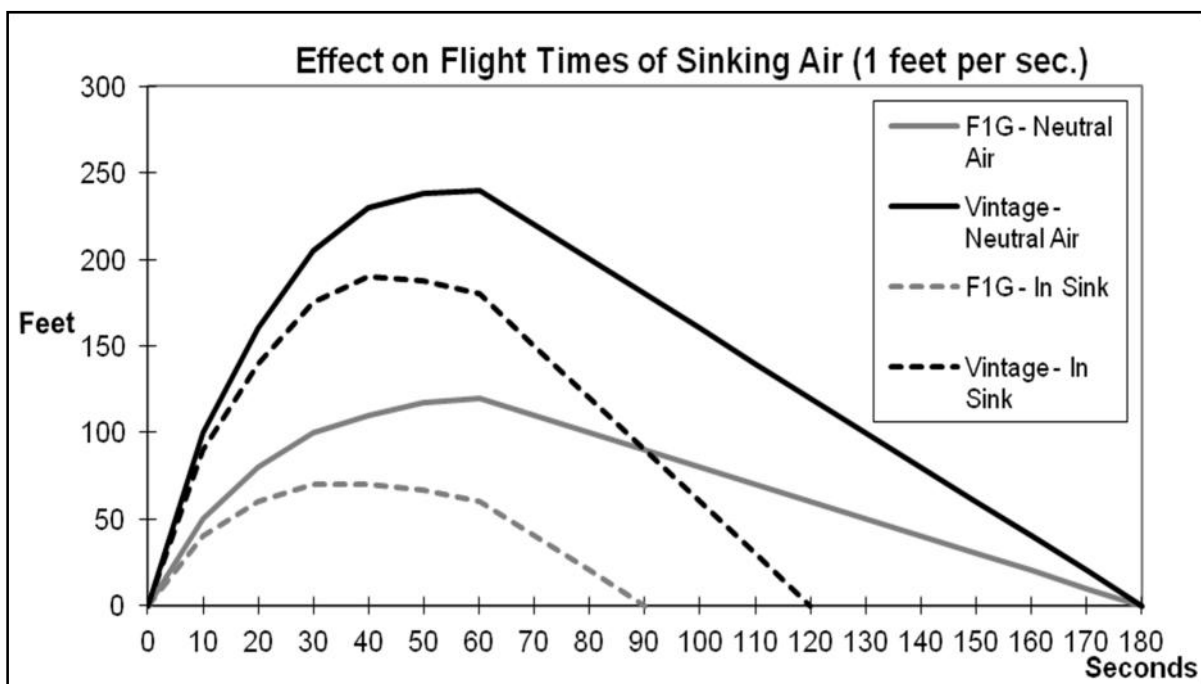
1. Your article 'The British Lightweight 1942 - 53' published in Free Flight Quarterly October 2006 did much, I am sure, to promote interest in the class - it certainly encouraged me. You have an outstanding record of publication and competition success in this class and in Coupe. Could you comment on this history and the dedication it demonstrates ?
2. You favor locked down coupes and traditional materials - why?
3. How do you pick the air?
4. What is your current practice?

Flying Functionless F1Gs

This is my philosophy for functionless F1Gs. As I hope to persuade you, the low wing loading that characterizes this class makes Coupe flying almost unique in free flight because glide and cruise speeds are very low and therefore sectional efficiency and the boundary layer have a particularly critical relationship.

Some years ago, I was timekeeping for Gerry Ferer. It was windy and we were crouching near the ground waiting for a calm patch and Gerry said, "You know, Coupe is just an exercise in air picking". You may think this is the case with all classes of free flight but you would not be theoretically correct. The more ballistic the flight path, the less it will be affected by vertical air movements and it follows that Coupes, being the antithesis of ballistic, are most affected. To prove the point let us compare a typical Coupe and a typical vintage model such as the Senator. All have, shall we say, a motor run of one minute and a still air glide of two minutes. However, the Coupe has a better glide by far and sinks at one foot per second compared with two f.p.s. for the vintage model. It follows that the vintage model must climb twice as fast to attain twice the altitude. What we do know is that both models can and do produce similar times to the ground. This is diagrammatically shown by the two continuous lines in Fig 1.

Now let's introduce a downward air movement of one f.p.s. and we find that the vintage model has still secured the two-minute max but the poor old Coupe has not (Fig.1 dotted lines). If that seems to deny logic, it is easier to understand the opposite case. If the Coupe finds air rising at one f.p.s. it will never come down but the vintage model surely will.



What has this to do with functionless Coupe trimming you may ask? To find out you have to follow my argument which begins with the following premise: It is more important for Coupes to find neutral air or better than most other classes of free flight because the chance of dropping a flight is much higher. If you fly Coupe, you will know this is true.

So how would that fact modify your behavior? As in many other classes you have two ways to go. But in this case if you make the wrong choice the stakes are higher. The first option is to take risks and climb as high as is possible. The second way is to have absolute reliability and maybe climb less high. From the first paragraphs you will see that however high-tech your model you cannot escape the air picking bit, so it follows that if your flying machine is a Coupe, reliability is paramount.

Systems equipped models come with more risks than the most, obviously. The late Pete King won't mind me mentioning that he once connected the D/T line to one of the other functions and was down in 30 seconds. That's an obvious risk but there are others. Having a model which is inherently unstable at some parts of the flight envelope is another. Systems are heavy, particularly wing wigglers. Ending up with an overweight model which costs climb height. It's just physics but is often forgotten.

I made a VIT coupe once and lost it with an 8 minute OOS fly-off. As luck would have it, I completely messed up the launch and the plane spent the first five seconds flying very fast parallel to the ground. Of course, it was the superb glide in gentle lift that in the end rescued the flight. From that day on I bothered no more with VITs as launch angle turned out to be an unexpected risk in using it.

So, if you like technology, my advice would be to concentrate on your portable weather station and understand what it is telling you. I don't bother with one but that is only because I always seem to be a bit too busy. I suppose a lifetime obsession with toy planes helps sense what the air is doing.

So, you are now in complete agreement that reliability is a necessity and a system-less model is more likely to achieve that goal. No? Well don't discourage me right now because I am ploughing on regardless. To do without systems I think you would not dispute that you need to keep the prop turning for quite a long time because short motor runs are yet another risk. Fifty to seventy second run is good. The reason is that Coupes fly very slowly in the second part of the climb and can often stall or semi-stall. This I believe is much to do with variation in the shape of upper surface separation owing to the low RN. Someone once described low speed aerodynamics as like flying through treacle. It's sticky stuff and great lumps are sticking to the top of the wing, then breaking away and/or dissipating. The plane is in a wrestling match where the pitching moments are varying. To hold the plane at the correct attitude, it is advisable to have large stabilizing forces in terms of dihedral, CG position and tail volume. The late Anselmo Zeri advised me never to stint on tail volume as there is no point in doing so with the F1G rules as they are. You can't deny the truth of that, but you see a lot of Coupe flyers with models that ape F1Bs complete with tiny stabs.

Some years ago at the Coupe Europa, I befriended this French chap who parked alongside. He had a magnificent Coupe with a long fuselage and a tiny all-balsa tailplane avec dihedral. He was giving me the raison d'etre about it in Franglais but I was secretly skeptical. It was windy and I had a battered old SoCoupe, with of all things, a triangular fuselage. It looked pathetic compared with his machine but the old SoCoupe kept struggling for height all through the day and the French threat swooped up and down, well, mainly down. When I collected the pot, I caught sight of him at the back of the hall looking rather quizzical.

The advocates of system equipped models will recognize that the great advantage in varying incidence is to reduce drag at high power and it certainly gives an impressive initial climb. Inevitably the motor run is short because this is the best way to exploit the acceleration that low incidence provides. Sometimes I have seen runs less than 30 seconds. This leaves the poor Coupe with a long glide to make the max. I can't help feeling sorry for the little darlings - the models that is. Even without incidence reduction you can still get an impressively steep initial climb through patient trimming. By trimming I mean not just a turn of a screw or a bit of packing, you may require alternative props and stabs. Wings even.

*So, the trimming tools at your disposal are: Right/left and right/right trim;
Prop diameter related to wing area and aspect ratio; Left rolling differential wing warp
Tail size and section; Right thrust; Rudder; CG position*

I will now take things in the order I would follow when out in the park with a nice new model.

Trimming for the Glide

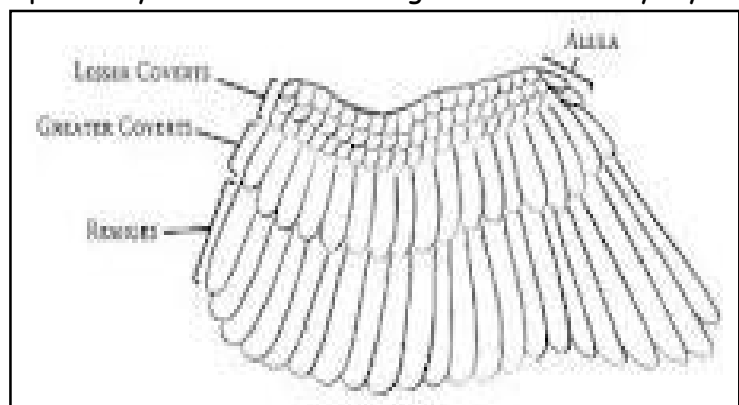
Before doing anything, I like to be sure that the wing is working. Some wings work better than others for reasons to do with the formation, separation and fluctuation of the boundary layer. Hand building must be where the variations in shape or texture occur. I don't know whether the use of a molded D box entirely resolves this problem but I have heard tales suggesting that it may not. Anyway, in my experience you have to identify bad wings quickly and burn them otherwise they waste an enormous amount of time.

I always hand glide a lot with a stopwatch to see I am getting 6 seconds or so. If I am in doubt, I will swap a wing to check it out. If a stick and tissue wing does not work you can play with turbulators but I prefer to give it a Viking funeral because although you can improve it, you can never cure it. Of course, if you have a D box wing you will probably know if it requires turbulating strips. Incidentally, I have tried a balsa D box with a single 1/32 down step in the top of the section - it didn't work.

My models glided noticeably slower than most other Coupes. My timekeepers were always remarking on it. This is either due to the fact that I would never fly more than 2 grams over the weight limit or it may be to do with being able to operate nearer the stall. To explain why this might be so, I now role out a concept first aired to me by Sean O'Connor, that is, you have the standard two dimensional "wing section" but also a three dimensional concept where the section and its surface treatment become the whole machine. A wing with thread turbulators shows consideration of 3D requirements but it looks like a compromise based on a love affair with the section itself and a dismissal of the importance of surface texture. I would argue that a system of surface lumps and bumps is proper 3D because the section is constantly changing spanwise. What is the point of that? Well, this is what birds do. In birds you see 3D turbs everywhere. If you can get on top of a cliff and look down on gulls slope soaring below you can see it in action. The small front feathers (lesser and median coverts Fig 2) are constantly being lifted up and down by local fluctuations in pressure. They don't all lift up together in a straight line except possibly when deliberately stalling to land. At lesser angles they lift seemingly at random but in fact precisely as needed to energise the boundary layer.

They are the most sophisticated automatic 3D turbulators imaginable. In Fig 3 we see some old Stork deliberately stalling her wing to land. Her Coverts are lifting to both delay the stall and act as a stall warning. In Fig 4 we see a gull just hanging at the stall. The low pressure caused by the inverse dihedral break is demonstrated by the uplifting of the feathers in that area. When soaring birds need to fly near the stall, as we are trying to do, they operate this device constantly.

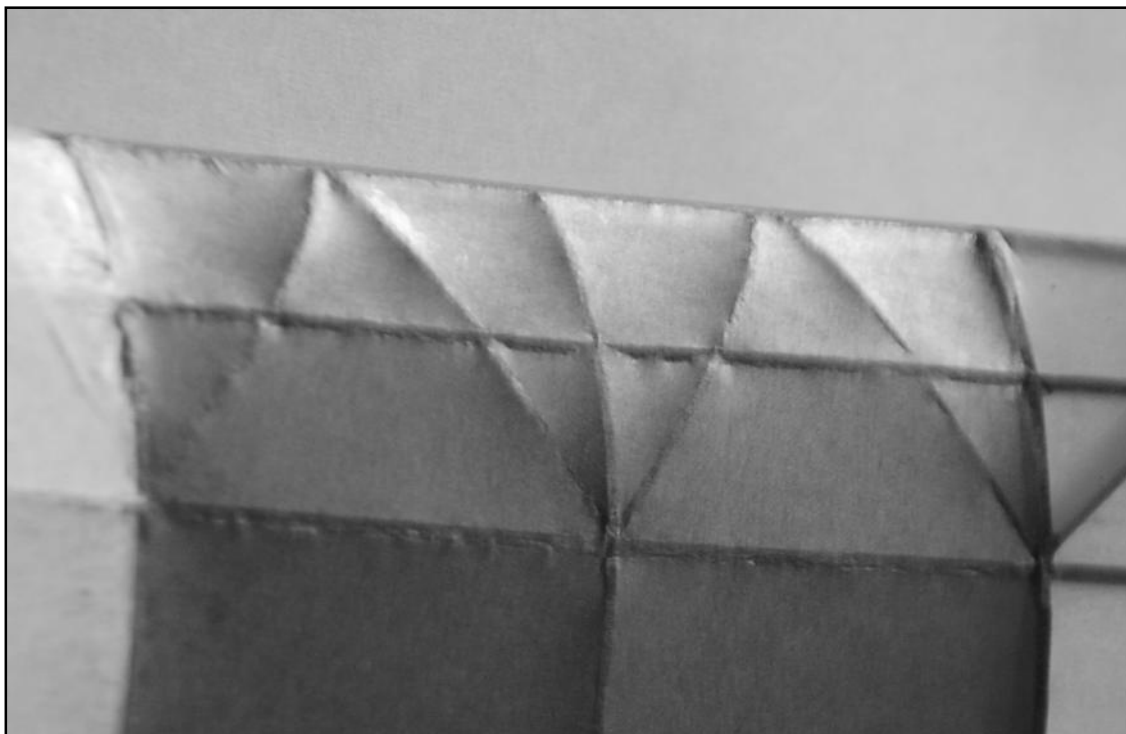
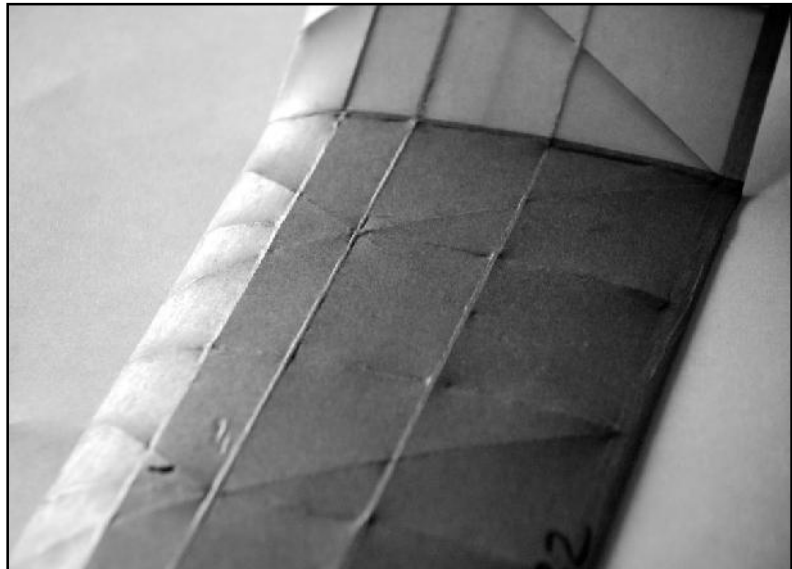
In my opinion, the surface of the wing is much more important than the section itself. If you look at the FFQ Coupe Review you can see that this is true because there is so much variation in sections used by successful models.

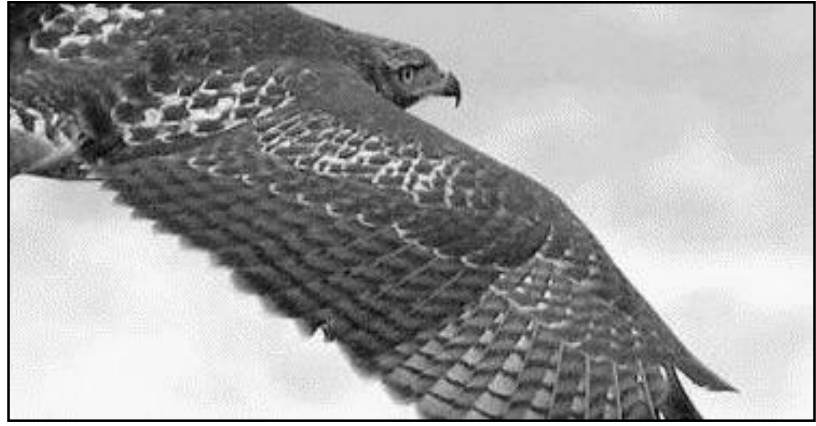
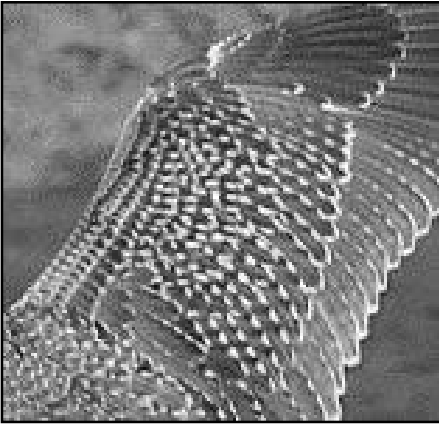


Yet you are reading this without wholly believing it. The truth is that we adore our wing sections. They may be science but they are definitely art as well. There is a grace and femininity about the shape that subliminally captivates us.

For Coupe (note) I believe that the only important things as far as the section is concerned are the thickness and nose radius. Even the camber is, irrelevant (within limits) to performance although it may affect the ratio of importance between climb and glide. Therefore, playing with Profilli and X Foil is not for me because they pretend to know what we just don't know.

In figs 5 and 6, I have snapped a couple of Couper S wings under oblique light to show the effect the diagonal truss construction and tissue sag. Compare this with the wader and hawk wings in figs 7 and 8. I think the sophistication in the feathered surface is self-evident compared with anything we can do. But I like to think that we can make the connection that smooth surfaces are wrong for gliding and cruising.





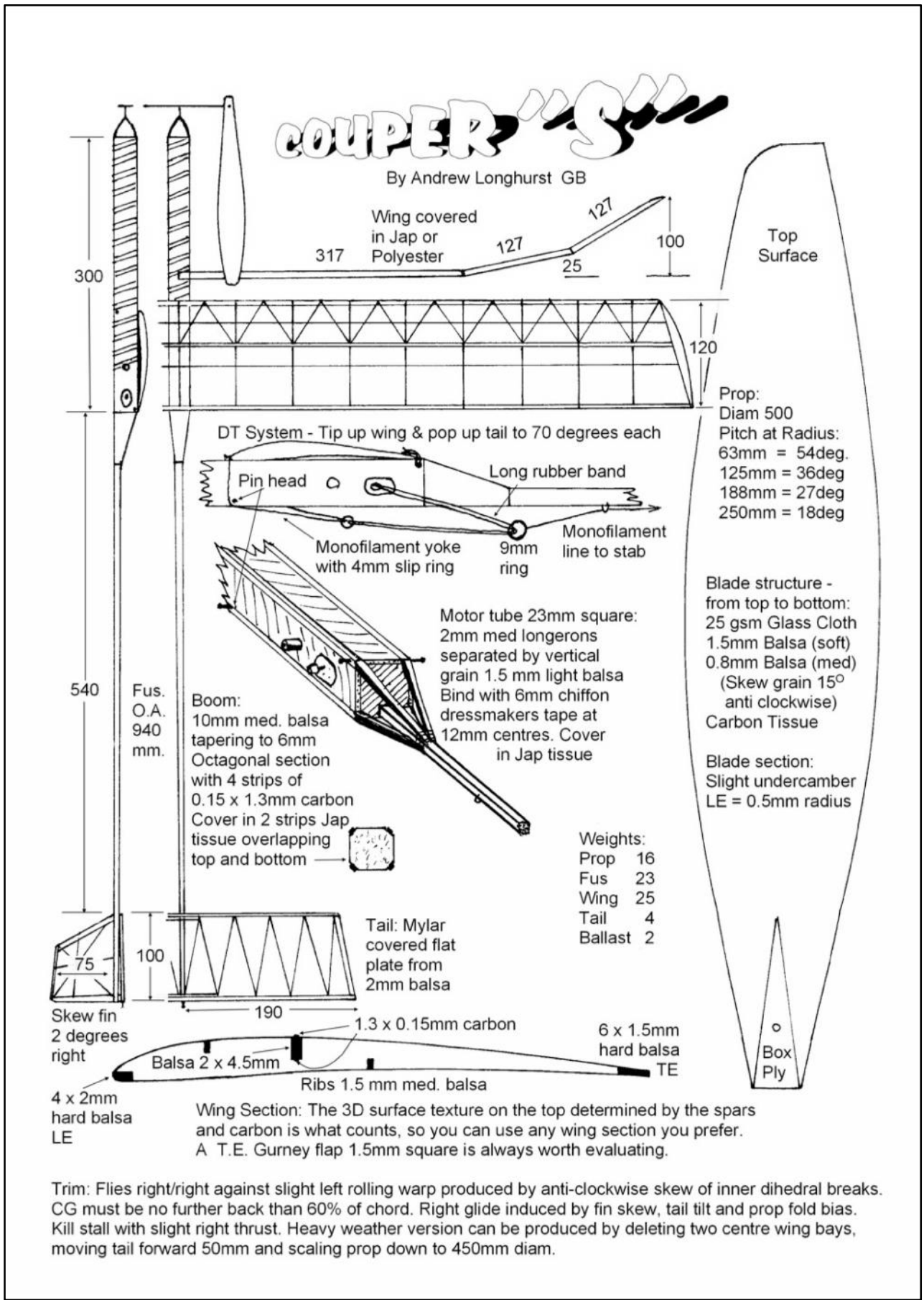
Trimming for Low Power

Whether a lumpy bumpy wing is of any use at the start of the motor run is unlikely, probably the reverse, because the attack angle is much lower. Another reason to use a longer motor run perhaps? But before we get there we have to trim for low power. Here we are looking for a steady and very stable climb all the way to the end of the run with a smooth transition to the glide. Once the first five seconds are over, the model is basically a powered glider flying slowly, often slower than when gliding. The point where the first burst expires is a danger area. To help it, all you can do is provide attitude control for the wing via tail volume. In this respect I have never been able to get a reliable coupe with a CG further back than 60% chord no matter how big the stab. Further back than that and they will suffer the occasional prolonged dive when disturbed. If you are using a lifting tail section you can appreciate that you may be exacerbating this tendency. I soon moved to symmetrical sections for Coupe tailplanes so that says something although possibly limited to my own layouts.

Lastly, do you induce turn by right thrust or right rudder? There is also the position of the folded prop blades. I have found that a little right skew on the fin coupled with a little right bias from the folded blades are all you need to get the model to glide right. Consequently, I tended to use hardly any right thrust. There is a theory that right thrust is better than right rudder because were the speed to drop off and the model be in danger of a stall, prop power will be pulling it the right way. Unfortunately, the prop will probably also stall at this point owing to the rise in wing drag. I have never got on with this concept which probably forces the use of right/left trim or auto rudder to make it work. Of the two I have only used right/left trim with a slightly shorter motor run and it has worked well. Unfortunately, trimming in a small field, the prolonged straight bit of flight before the glide turn sets in can be an embarrassment. Not with radio DT though - but that's an extra 2 grams over a Tomy.

Props

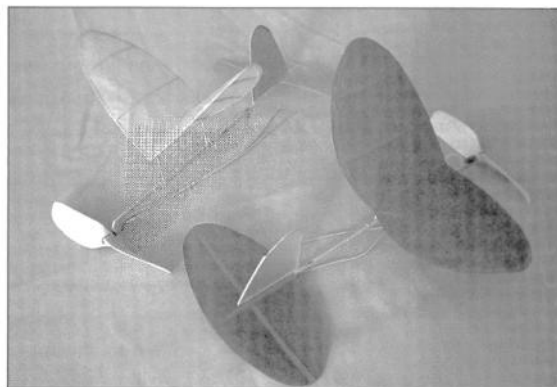
I always used Pete King designed props as he was dead clever and props are insanely complicated. His Linda prop was as good or better than anything else I tried. Coupe blades also operate at low RN so I keep the top surface textured with coarse glass cloth. For 200 to 220 sq.ins wings I use either an 18ins prop on 10 strands of 1/8 or a 20ins. prop on 12 strands. I found the smaller prop to be a little more conservative and better for windy weather. I do not subscribe to the view that shorter runs are better when it is windy. If the wind is coupled with turbulence, often from trees, you get no second chance if it power stalls half way up. With a longer run it can stall, recover and still have enough gasp to max if the air you chose is half decent. My self-crafted Montreal stops are 34 times more likely to go wrong than my spring stops so that's what I used. This introduces a possible problem with the prop fold fouling the wing. I therefore used wire blade mounts of a suitable length to prevent this happening.



From the book *60 years of IVCMAc* courtesy Chris Strachan

THE PEE WEE

Designed by
RAYMOND MALMSTRÖM



ALTHOUGH primarily designed for the beginner, the performance of this diminutive little 'plane should recommend it to all those who enjoy indoor flying in their own homes, and who have not, as yet, mastered the advanced technique of microfilm. The leisurely way in which it flies round even the smallest room makes the two or three hours spent in its construction more than worth while. The plan is full size, and can be worked from directly.

Fuselage.

The "fuselage" is simply a stick of medium hard balsa $\frac{1}{8}$ in. by $\frac{1}{16}$ in. by $6\frac{1}{2}$ in. A block of balsa $\frac{1}{4}$ in. by $\frac{1}{4}$ in. by $\frac{1}{8}$ in., shaped as Fig. 1, and through which a hole has been carefully bored with a fine needle (noting slight down-thrust), is cemented to one end of the stick. The other end is notched. Into this notch a piece of $\frac{3}{32}$ in. sheet is cemented to carry the tail-plane. A small rear hook of .014 gauge wire completes the motor stick.

Wing.

Trace off the rib and cut 5 from $\frac{1}{32}$ in. sheet. The ribs are shortened by cutting the trailing edges. The tips are 1-64 in. sheet. The leading and trailing edges are $\frac{1}{32}$ in. square. The wing is built up on the plan, and when dry cracked in the centre, and the correct amount of dihedral given, the crack then being recemented. A strip $\frac{1}{32}$ in. square joins the leading and trailing edges of the centre rib, and to this strip the two upright pieces, $\frac{1}{16}$ in. by $\frac{1}{32}$ in. are stuck. The lower ends of these two pieces are then stuck to another strip, $\frac{1}{8}$ in. by $\frac{1}{32}$ in. by 3 in. The wing is then attached to the motor stick by means of two pieces of $\frac{1}{32}$ in.

square rubber, tied as shown in Fig. 2. The wings are covered with superfine tissue.

Tailplane and Fin.

The tailplane is simply cut from tissue (with no framework), and reinforced by the two pieces of 1-64 in. strip. The fin is a framework to which is stuck a piece of sharpened reed, and then is cemented into the motor stick. It should be set at the angle indicated.

Propeller.

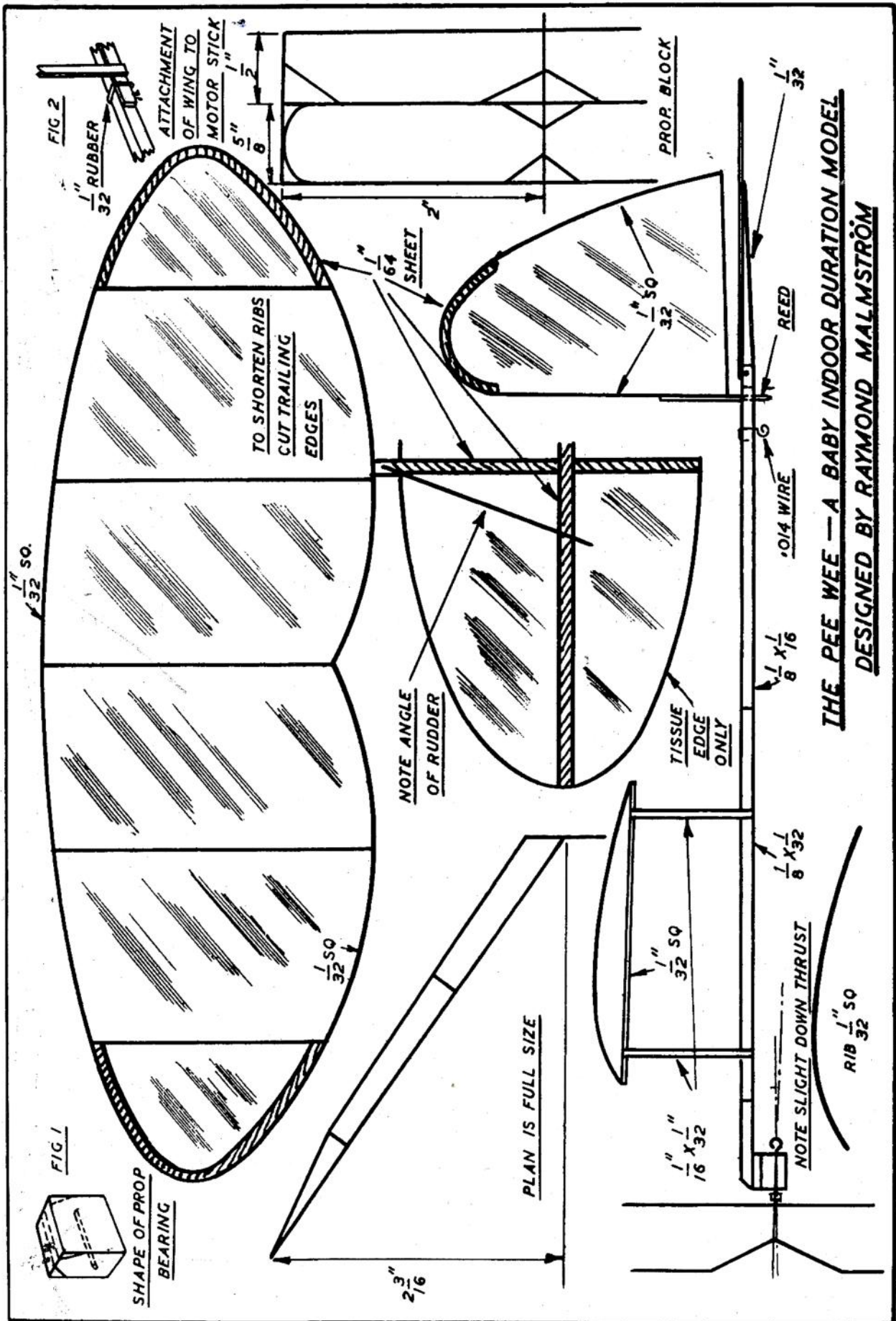
This is one of the most important parts of the model. A 4 in. machine-cut balsa propeller, well sanded down to a light weight, will prove very satisfactory. The block measurements for those who wish to carve a propeller are furnished on the plan. A piece of .014 wire is used for the shaft, and a tiny bead, with a washer cut from .005 sheet aluminium, completes the propeller assembly.

For power the most suitable rubber is $\frac{1}{32}$ in. square. Of this you will need a loop roughly $10\frac{1}{2}$ in. long. Fold this in half, making 4 strands, approximately $5\frac{1}{4}$ in. in length. Smear with lubricant lightly, and put on to model.

Flying.

Before actual flying it is important to note that the leading edge of the port wing should be warped *up*, and that of the starboard wing warped slightly *down*.

Although of such a small size, the Pee Wee will take 250—270 turns with complacency, and on this will turn in delightfully slow and stable flights of 30—40 seconds consistently, the flight path being circle to the left.



**THE PEE WEE — A BABY INDOOR DURATION MODEL
DESIGNED BY RAYMOND MALMSTRÖM**



Salisbury Plain Sunday September 18th.

This year's Crookham Gala took place on a bright and breezy September day on Salisbury Plain with prizes of wine and cash on offer. The standard Gala classes were flown comprising F1G, Mini Vintage, E36, Combined Glider and Combined Power. However the last of these was something special this year in that it marked the tenth anniversary of the passing of the designer of the Dixielander, George Fuller, by awarding very generous prizes to those flying George's designs and in particular the Dixie.

Given how many of us have ageing Dixie's in our hangers or at least a copy of the plan to build one from, it was not surprising to see all seven entrants in Combined Power flying them so it became a Dixie Derby rather than just a Fullerfest. They ranged from Brian Silcock's battle-worn version with its AM35 on the front to Chris Redrup's almost new model with a very potent, OS15 mk4. The breeze was constant throughout the day with lulls being short lived making air picking particularly difficult when launching i/c models. The trimming field was blessed with short grass but all of the adjacent fields were still uncut so even comparatively large models tended to vanish on landing. This certainly caused problems for Brian Silcock and Bernard Aslett who both had lengthy, early retrieves leading to them finishing without getting three flights on the board. Meanwhile Roy Vaughn's Dixie had a dreadful pattern on its first flight from which he luckily escaped but it was still sufficient to scupper his day. The outcome was decided by a DT fly off between Chris Redrup and Simon Dixon with Chris scooping the top prize by 19 secs.

In other classes, F1G saw 11 entrants and a fly off between Alan Brocklehurst and Rich Ewing (who was visiting from Seattle) with Alan winning by a comfort margin.

Mini Vintage had 4 entrants and saw Tony Shepherd and his ageing Le Timide taking on below Dave Norwood (who came all the way from North Wales) with his first-time-out Wally Simmers, Dyna-Moe, in a DT fly off which Tony won by 14 secs.



The other two classes each had just two entrants. Trevor Grey won E36 with the only full house whilst in glider Simon Dixon's two maxes were sufficient to pick up the top spot.

The Dixies



Chris Redrup



Dave Cox



Brian Silcock



Bernard Aslett



Peter Watson's



Roy Vaughn's



The Contestants



Simon Dixon



Tony Shepherd
'Spot the Mini-Vintage'

Tony Shepherd

Shark variants revisited

In response to my enquiry at the end of IIFE 56 (NC September 2022) about further Shark variants, our good friend in California, Buz Cederlof, came up with another marketing variation, the Hobby Shack Shark with "No-Name" and supplied a copy of the instructions - see below.



Instructions for Shark with "No-Name"



Humbrol mach 2 CO₂ motor

In IIFE 54 (NC July 2022), we saw a box lid showing the PMS1, PMS2, PMS4 and PMS5 motors. Buz also asked the very good question - what was the PMS3?

Humbrol mach 2, again

I also reported in IIFE 56 that Gerard Moore had got Lindsey Smith's Humbrol mach 2 running and stated that 'we now have a rare working example of the Humbrol mach 2 motor'.

When I tried it after he returned it to me, I thought I had spoken too soon. I was having problems filling it - Gerard had mentioned that the filler valve was a bit sticky, but got one run.

On managing to fill it a second time, the safety valve went, in that the O-ring extruded. Tony Brookes in his book 'CO₂ Powered Model Aircraft' briefly mentions the mach 2 describing it as 'a total failure in both technical and marketing terms'.

I felt that this example was living up to its reputation. However, I wondered what diameter rubber slug Gerard had used in the filler nozzle, as I had had previous problems using a piece of 0.070" (1.78mm) diameter cord in a Shark nozzle. On checking my Sharks I found that the slug diameter was, in fact, 1.6mm, and Gerard had used 1.78mm. For information, 1.78mm and 1.6mm are both standard O-ring cord diameter sizes.

To change the sealing rubber slug of course meant some dismantling. The tank unscrews from the filler valve, but it is important to remember that there is a port at the top of the tank that aligns with the gas passageway to the cylinder head. So before doing anything, scribe alignment lines on the tank and the plastic holder so that the tank can be fitted in the correct position on re-assembly.

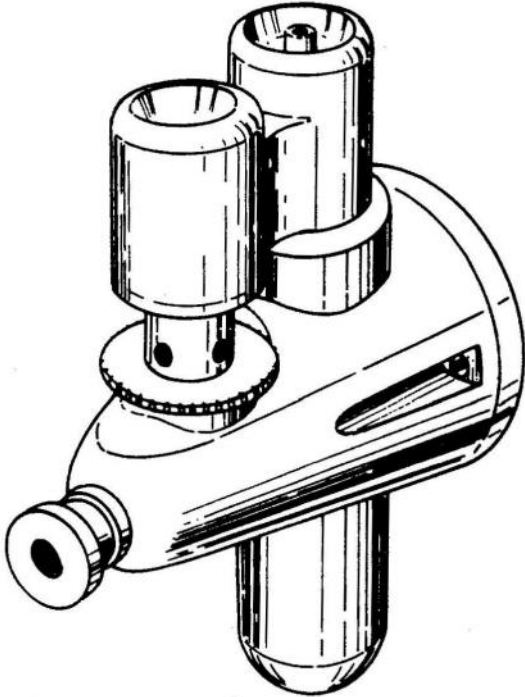
If the filler valve rotates with the tank there are a couple of flats that take a small spanner (11BA). Replacing the slug with one of 1.6mm diameter sorted the filler problem, but what to do about the so-called safety valve?

It is not clear to me how this was intended to work. There is an O-ring retained in a triangular shaped groove in the moulding holding the top of the tank and the filler nozzle, which was not

fully supported by the diameter of the top of the threaded plug, although Gerard did replace the plug because of a stripped plastic thread.

The head diameter of the replacement does not look as large as that shown in the photo of Joe Northrop's motor (IIFE 56). The O-ring that came out was 2.5mmx1mm, and had remnants of what appeared to be an adhesive attached to it. I have no idea whether this adhesive was on the motor as originally supplied. However, I used a replacement 3mmx1mm O-ring and to help retain this in the triangular groove under pressure, fitted a metal washer on the threaded plug, as can be seen in the photograph. I also used a small piece of PTFE tape on the plug thread. This may not now work as a safety valve, but at least gas is retained so that the motor can be run!

United States Patent [19]		[11] Des. 253,824
Hargrave		[45] ** Jan. 1, 1980
<hr/>		
[54] GAS ENGINE		OTHER PUBLICATIONS
[75] Inventor: Glenn K. Hargrave , Shannon, Ireland		Model Builder, 12/76, p. 7, Motor, center right side of page.
[73] Assignee: Technopower Enterprises Limited , Shannon, Ireland		<i>Primary Examiner</i> —James M. Gandy <i>Attorney, Agent, or Firm</i> —Richard C. Sughrue
[**] Term: 14 Years		[57] CLAIM
[21] Appl. No.: 834,944		The ornamental design for a gas engine, as shown and described.
[22] Filed: Sep. 20, 1977		DESCRIPTION
[51] Int. Cl. D15—01		FIG. 1 is a front perspective view of a gas engine showing my new design.
[52] U.S. Cl. D15/3		FIG. 2 is a side elevational view thereof.
[58] Field of Search D15/1, 3; 46/78, 249, 46/39; 123/179 AS, 185 D; 244/53 R, 61; 35/12 T; D34/15 S		FIG. 3 is a bottom plan view thereof.
[56] References Cited		FIG. 4 is a top plan view thereof.
U.S. PATENT DOCUMENTS		FIG. 5 is a front elevational view thereof.
D. 138,311 7/1944 Arden D15/3		FIG. 6 is a rear elevational view thereof.



The site indicated that a certain Glenn Hargrave was involved in the design and development of both the Telco and Shark motors. In Eric Coates' 'Flying Scale Column' in the October 1975 edition of *AeroModeller* there is a photograph of a 'prototype British plastic /metal CO₂ motor by Glynn Hargreaves (sic) in Alan Callaghan's Sopwith Tabloid', but the photograph is not really clear enough to show whether the motor is related to either the Telco or the Shark, but the filler appears to be like the latter's.

On a search for information about Mr Hargrave, I came across the United States design patent, first page shown above on page 32.

This looks very much like a precursor to the mach 2. Here he is clearly based in Shannon, and I recall the late Butch Hadland once telling me that one of his collaborators on the Telco project had moved to Ireland.

It is surprising to me that the patent document is for an 'ornamental design of a gas engine'. I would have thought that the speed control mechanism used in the Humbrol motor could also have been patented.

I've found two references to the Humbrol 'all-in-one' CO₂ motor in the *AeroModeller*. In the first part of Ian Peacock's 'CO₂ - It's a Gas' June 1979', there is a photo where the crankcase and tank holder moulding is like Lindsey's example, whereas the photo in Part 8 (January 1980), this moulding is more like that in the patent drawing. There is also some text in this article: -

'Surprisingly the **HUMBROL** "all-in-one" motor shown for the first time at the Toy Fair in January 1979 has still not yet materialised. I understand from the *Humbrol* team that considerable mass production problems have been encountered and that much new (and expensive) manufacturing machinery has been purchased from abroad to overcome difficulties. When it goes into production though, it will considerably ease the use of CO₂ motors for the younger modeller as there will be no fragile pipes to get broken.'

So why is the mach 2 motor regarded as a technical and marketing failure? From the marketing point of view, as I have mentioned before, I was barely aware of the motor in the 1980s, when I was very actively building and flying CO₂ powered models.

In any case, the "all-in-one" construction does not lend itself well to tidy installation in scale models and smaller versions of the early gas (petrol) models. Technically, there are a lot of joints in its construction that require sealing with O-rings. These require particular attention to the surface finish of the mating parts, small housing gaps to avoid extrusion and care in assembly.

Then there is the sealing of the cap of the adjustable cylinder head ball valve seat and the apparent weakness of the safety valve! On the other hand, the motor installation is simple and the throttle control makes the motor speed extremely straight forward to adjust.

Maybe, there were just insufficient younger modellers who were interested, and the marketing did not reach those that were.

That is probably enough on the ill-fated Humbrol mach 2, but both Gerard Moore and I would be very interested to hear from anyone who has more information on Glenn K Hargrave and his activities, particularly in regard to his work on CO₂ motors.

Nick Peppiatt

**Results from Croydon Coupe Day
Salisbury Plain, Sunday 9th October**

Vintage Coupe:

1st Tony Shepherd (Etienvre) 3.00
Would have made the 3rd flight but for a wing break on retrieval after the 2nd flight.

FIG:

1st Dusan Jiricny (O/D) - 3.52; 2nd Alan Brocklehurst (O/D) - 3.00;
3rd Ben Hobbs (O/D) - 0.41

Alan was another victim of the gusty wind, breaking a wing tip either on or after landing on 2nd flight; leaving Dusan to make a third token flight to win.

SAM1066 Mini-Vintage:

1st David Cox (Nord) - 4.30; 2nd Nick Peppiatt (Pinochio) - 4.22

SAM1066 Combined Vintage / Classic Glider:

1st David Cox (Hyperion) - 4.30; 2nd Dave Ethertom (Inch Worm) - 2.35.

What more to say about David - imperious in the strong breeze!



Coupe Winner, Dusan Jiricny

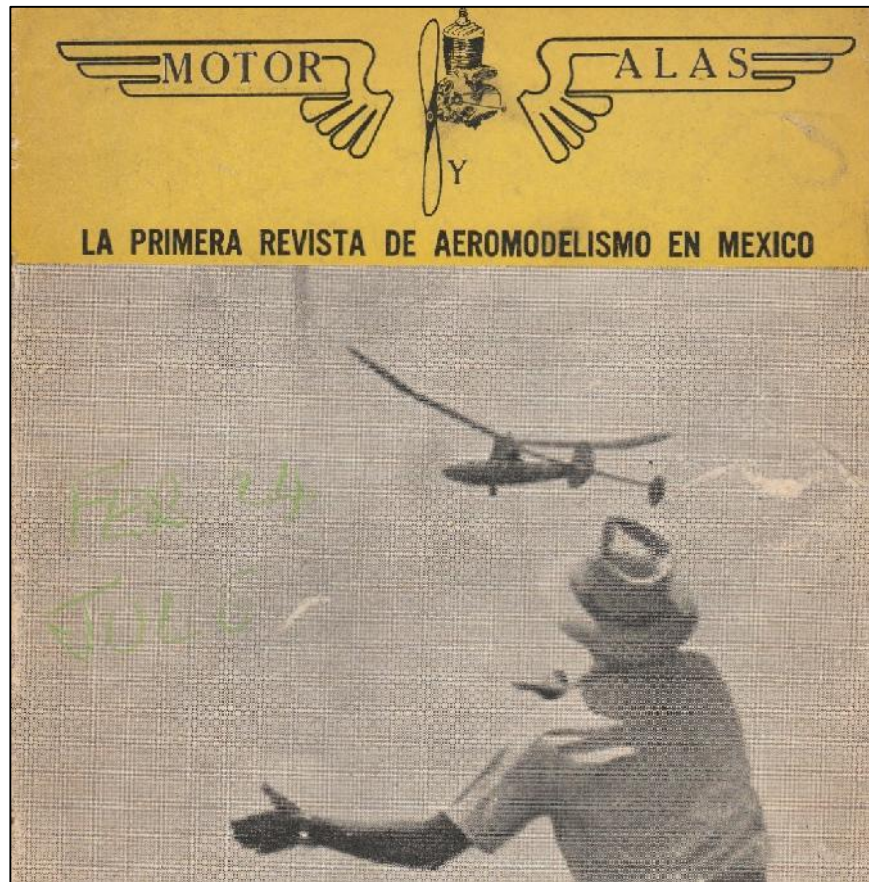


Runner-up, Alan Brocklehurst

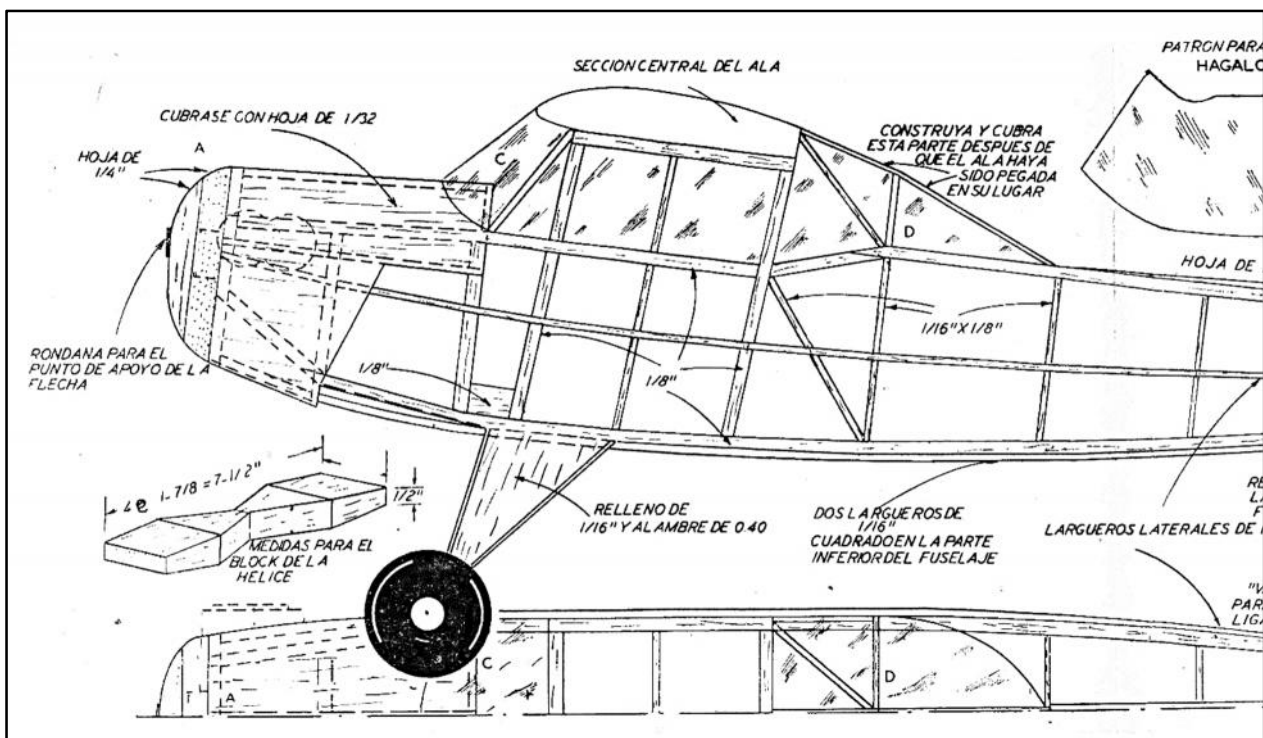
Report No. 141 Our earliest magazines, continued.

Yes, we are back to our earliest magazines, having left Italy two months ago and travelling alphabetically we arrive at Mexico. We have just the one copy of the magazine titled **MOTOR Y ALAS** which translates as Motor and Wings and claims to be the first aeromodelling magazine in Mexico. This magazine is about A5 in size and runs to 24 pages plus, in the case of our April 1948 issue, an inserted full size plan. The content covers building tips, photographs of modellers and their models, principals of Gas (i.e. Petrol) engines and several pages of description and instructions for the inserted plan for a "Jeep Volador" which translates as "Flying Jeep"

MOTOR Y ALAS	
JEEP VOLADOR	
ENVERGADURA	20"
LARGO	12.5"



The article reveals that the "Flying Jeep" is in fact a 20" wingspan model of the "Taylorcraft L-2B". See below for part of the drawing which has no designer's name, just the initials M.H.K.

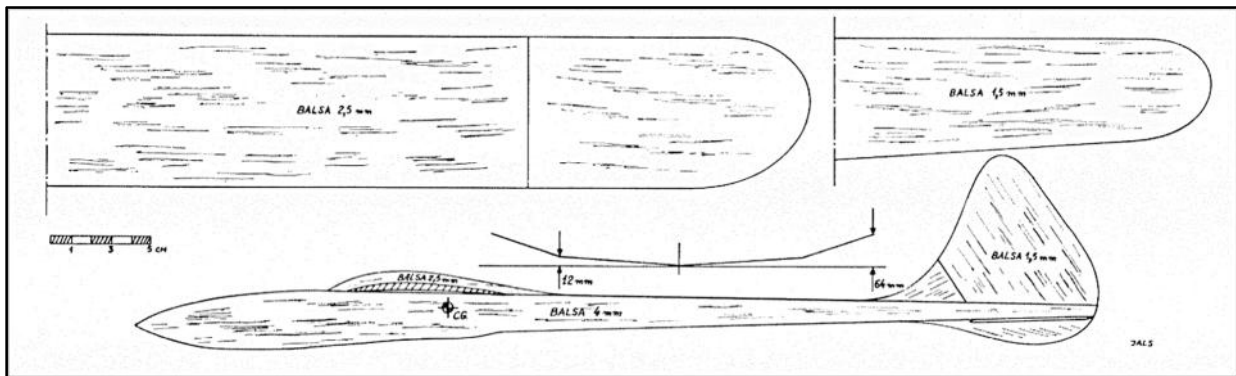
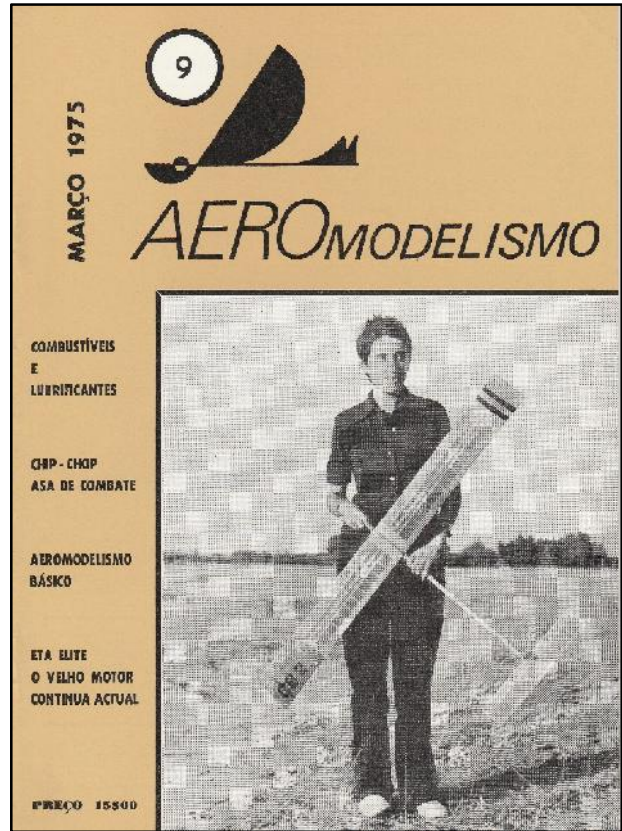


If you would like a 20" version of Sidney Struhl's 24" original from Model Airplane News May 1943, this is it. The giveaway is the drawing style with just a change of language.

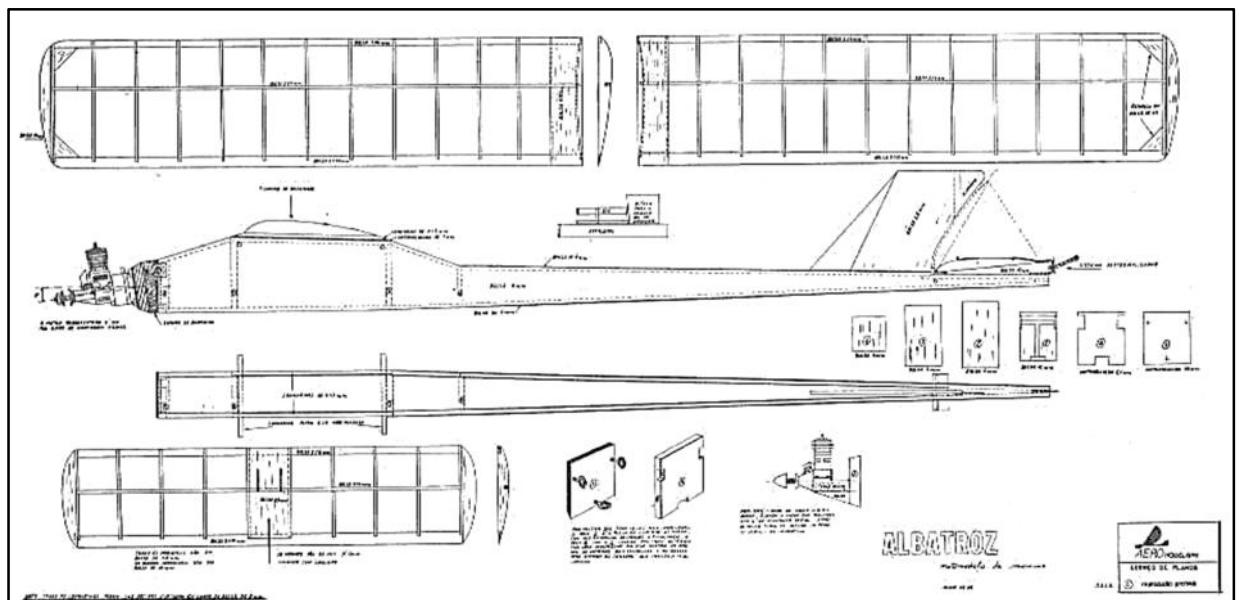
Back across the Atlantic to Portugal for eleven copies of **Aeromodelismo** dated from April 1974 to April 1975. No need for a translation of the title of this, rather larger than A5, publication of 28 pages. The content covers most aeromodeling disciplines, with a strong focus on control line, some unmentionables beginning with R and some free flight, of which examples can be seen below.

O TEU PRIMEIRO MODELO

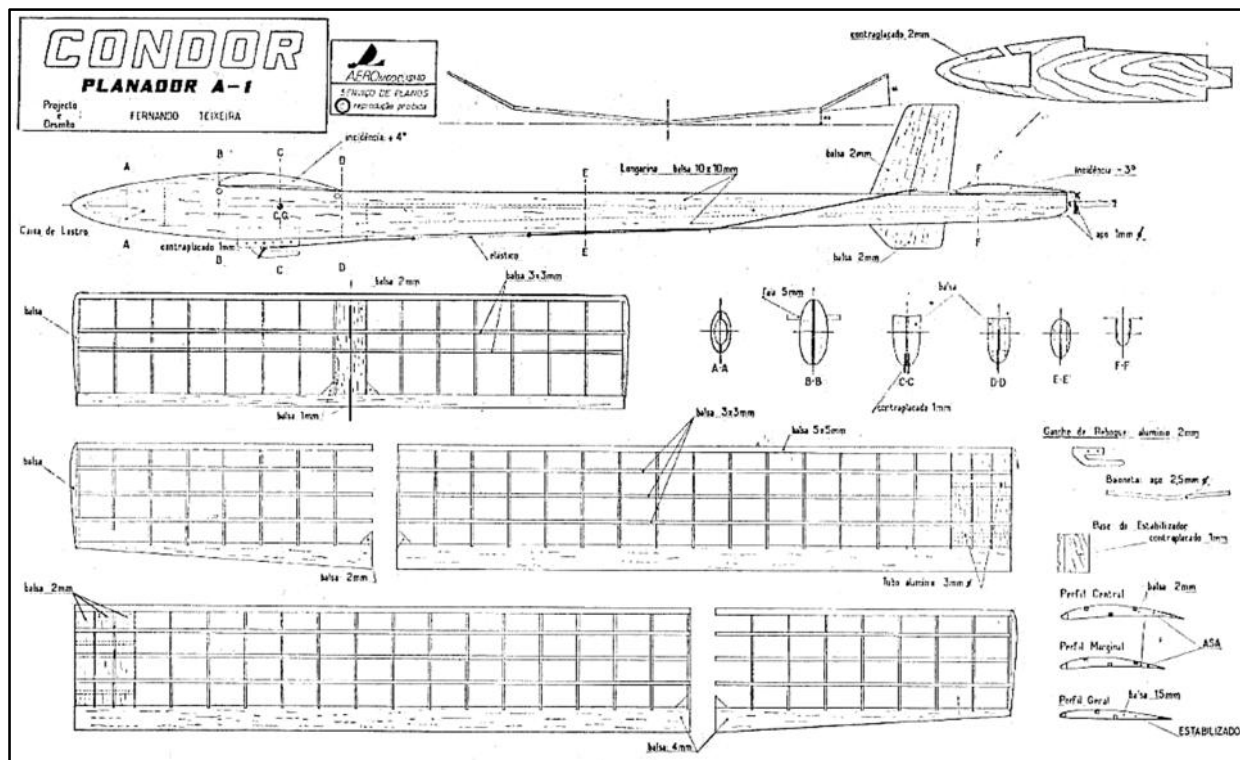
"Your First Model" The hand launch glider shown in the plan below is accompanied by full build instructions. There is particular emphasis on maintaining everything true and in line with no warps and the correct CG position being achieved by the addition of lead pellets. The model is stated to be suitable for flying in large sports halls or out of doors.



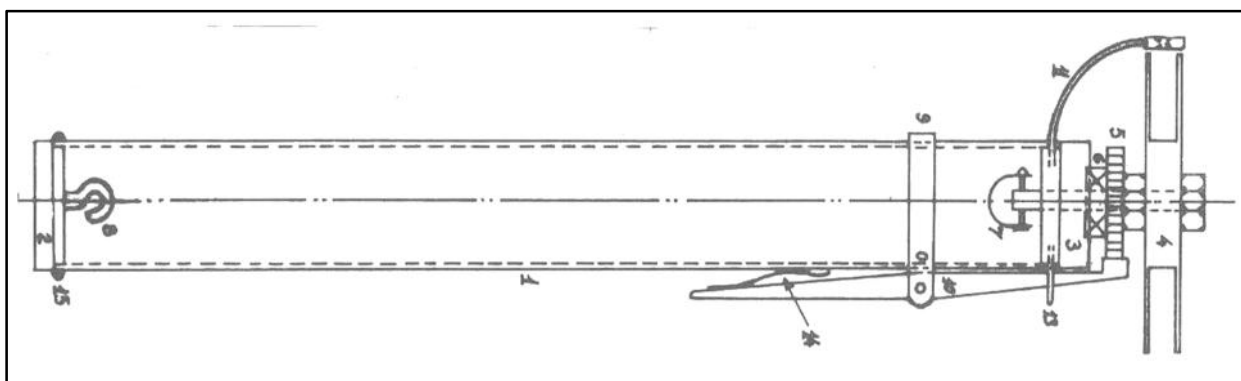
The "Albatroz" shown in the plan below is described as a first power model.



Google translate coped quite well with the translation of the "Albatroz" article apart from insisting on every occasion that "motomodelo" means "motorcycle". Please do not take your motorcycle to the achievable 150 meters of altitude, but if you should do so, you can rely on the DT system to ensure a safe return to ground level. The article includes comprehensive building instructions, including the operation of the DT system, but nothing on trimming the model.



The plan above is of the "Condor" A1 class glider designed by Fernando Teixeira. The quite short accompanying article concentrates on the choice of wing section with co-ordinates being given for NASA 6409 and Gottingen 795



The heading for the object in the drawing above very reasonably translates as "Gadgets" but what is it? At first glance I thought that it might be a rubber power unit in a tube rather like our Arden units. Quite wrong, it is for winding in your glider launch towline, with a guide to direct the line onto the spool. There is a lever operated lock to hold the rubber motor in the wound-up condition once the line has been fully extended. The article does not claim that it is a new idea but a rehash of several earlier ideas.

Next month our earliest magazines from Sweden.

Roy Tiller, tel 01202 511309, Email roy.tiller@ntlworld.com

Roy Tiller

As I'm still away from home no date has yet been set for the AGM, but now almost certainly to be an early Dec date via Zoom.

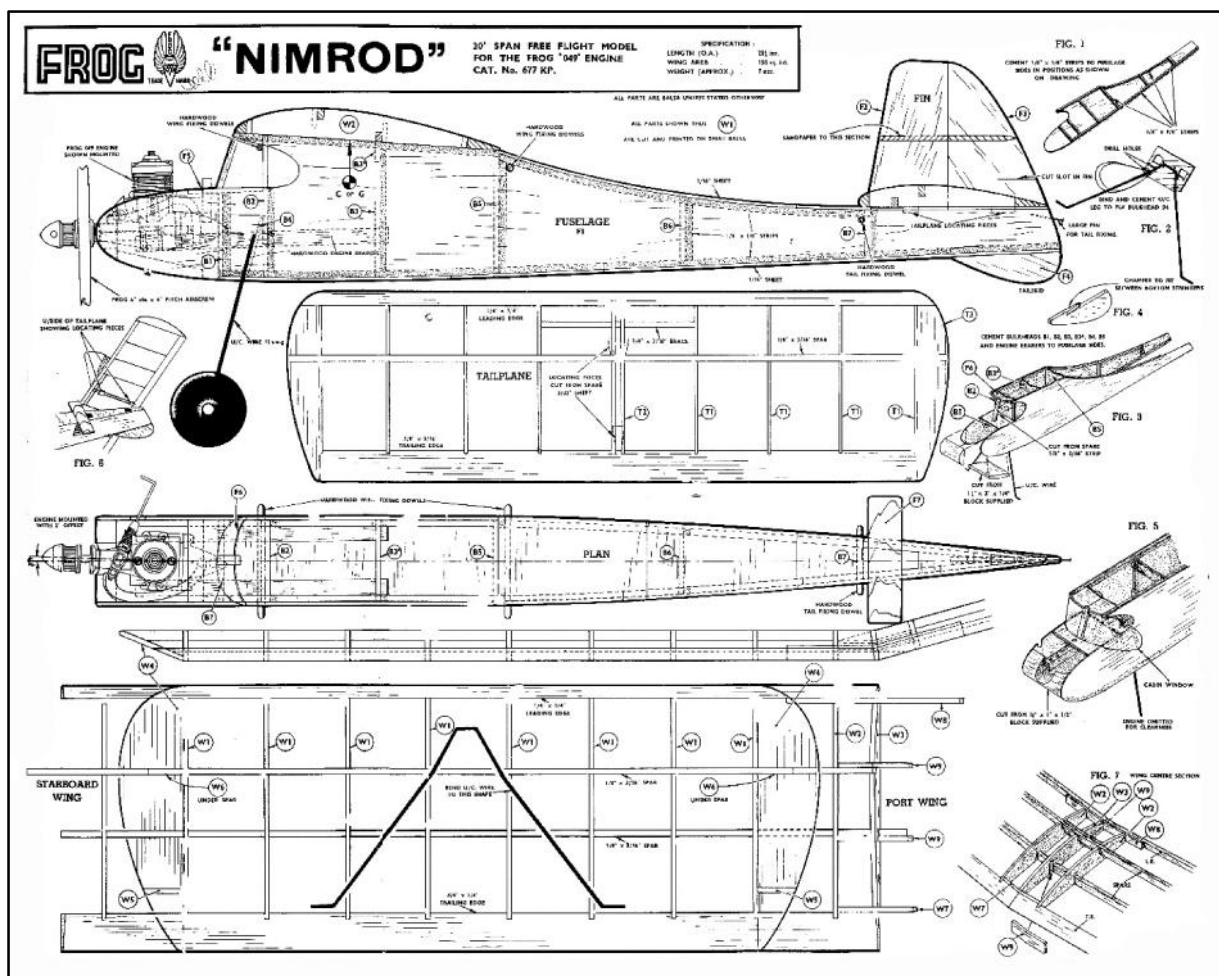
Very little to report this month other than a successful Croydon Coupe day in quite breezy weather, which is documented elsewhere in this issue.

The 1st BMFA auction should be held at the end of October. It should be successful, with both personal attendees & on-line bidding.

Internet access is very limited where I am located so apologies for the brevity of these notes. Hopefully a little better next month.

Plans for the Month

Power: Frog Nimrod pretty conventional design for Frog .049 glow



BUILDING INSTRUCTIONS Read these Instructions carefully before commencing.

FUSELAGE: Remove fuselage sides from their panels using a sharp razor blade or balsa knife to cut the retaining pieces. Cement $1/8$ in. sq. strips to the sides as in FIG. 1 (shown shaded on side view drawing). Make sure to build one side opposite to the other. While these are drying, bend the undercarriage wire to the shape shown on the drawing and mark its position on the ply bulkhead 8.4. Drill holes where indicated in FIG. 2, then bind and cement the undercarriage wire to the bulkhead using strong thread. Assemble this unit to the fuselage sides, together with bulkheads B1, B2, B3, B3A and B5. Before fixing the engine bearers, lightly spot-cement the 1 in. x 1 in. x $1/2$ in. block into position and carve it to shape, cutting away where necessary to clear the engine crankcase, then remove it. Drill the holes in the engine bearers and with the throttle needle remove, mount the engine on them with the 2° offset shown on the drawing. Then thoroughly cement the assembly in position. Cement pieces F.5 and F.6 in position followed by the windscreen-strut cut from spare $1/8$ in. x $3/16$ in. strip. Chamfer the rear ends of the fuselage sides as shown on the plan view, cement together and insert bulkheads B6 and B7. Chamfer the top edge of the tail-skid F4 as shown in FIG. 4 and cement in place between the bottom fuselage stringers—Drill holes in the fuselage sides and insert $1/8$ in. dia. hardwood wing and tail fixing dowels. Cement in place the 2 in. x $1\ 3/8$ in. x $1/4$ in. lower* cowl block, leaving an exhaust aperture behind it, and finish by sanding to shape. Cement the ply tail-steady F7 in position and cover the rest of the fuselage with $1\ 1/16$ in. sheet balsa cross-grained. Cut out the areas shown on the drawing to house the tailplane locating pieces. Finally sandpaper the whole structure smooth, trim the cabin window to fit round the wing-fixing dowels and cement this in place, starting at the centre.

WINGS. Before commencing with the construction it is advisable to lay a sheet of greaseproof paper over the drawing to prevent the cement sticking to it. Begin with the Port wing, and pin the leading and trailing edges, and the lower spar down onto the drawing. Cement ribs W1 and rib W2 in position followed by the leading edge brace W8. And the trailing edge brace W7, Cut one end of the top spar to match the angled face of the tip W4 and the other end to accommodate the Starboard top spar in a "scarf" joint, then cement in position. Cement fillet W6 under the spar at tip, and W5 in the position shown on the drawing. Cement the two spar braces W9 in position followed by the centre rib W3 at the angle shown. When this has set remove it from the drawing and commence to build the starboard wing in the same manner. When the starboard wing structure has set, cement the port wing to it so that with one wing flat the other wing should

have 5 1/4in. dihedral at the tip. Leave the whole assembly to dry. When it is quite set, shape the leading edge as shown in the side view, and sandpaper the whole structure smooth.

TAILPLANE AND FIN. Pin the leading and trailing edges of the tailplane to the drawing and cement the ribs T1 and T2 in position as shown. Cut the ends of the spars to match the angle of the tips T3 and then cement the spar and the tips in position. When set, remove from the drawing and cement the 1/8in. x 3/16in. centre section brace in position. Cut the locating pieces from spare 3/32in. sheet and cement in position so that they locate with the respective holes in the fuselage. Cement the two fin-halves F2 and F3 together and pin down onto a flat surface until dry. Shape the fin to the section indicated, and sandpaper both the tailplane and fin smooth. It is advisable to leave the fixing of the fin to the tailplane until they have both been covered with tissue.

COVERING. Apply a coat of clear dope to the structure before covering, to seal the grain of the wood. The fuselage, wings and tailplane are covered with tissue paper, using paste or dope as an adhesive. Use a separate piece for each side, and aim at getting an even surface without any large wrinkles. Do not attempt to pull it tight, the water-shrinking and doping afterwards will ensure a good finish.

Start with the fuselage. Cut two pieces of tissue for the top and bottom first, allowing about 1/4in. overlap all round. Use dope to fix the paper down: start at one end and work along the fuselage applying the dope liberally. Trim off the excess, and smooth down the edges. Repeat this for each side, then put aside to dry.

Cover the wing, starting with the underside, and adopting the same method as with the fuselage. The top surface requires a little more care, to prevent the paper sagging between the ribs. Fix the tissue over the structure, pulling gently all round. Trim off the excess paper, and smooth down the edges.

Follow this method for the Tailplane covering. If Dope is used as an adhesive, allowance must be made for it drying very quickly, so apply it to a small area at a time. When the paste is quite dry, spray the tissue with water, and leave it to dry. Spray one half of the wing at a time, and pin it down to a flat board to prevent warping when it dries out. Apply a coat of Dope when the tissue is thoroughly dry, and several coats round the engine mounting and cowl, rubbing down lightly between each coat.

DECORATION. The model can be painted according to the builder's taste, but it is advisable to restrict it to the fuselage, and the edges only of the wing and tail unit, to save weight, unless the paint can be sprayed on very lightly. Otherwise it should be applied with a soft brush. Use cellulose lacquer, and apply it quickly and evenly. It is advisable to proof your model against the fuel. Use a well-known fuel-proof Lacquer.

Contrasting colours can be used for lining, as shown in the illustration, using "Scotch" tape for masking the edges, to get a clean finish.

Fix the Frog transfer to the fin or wing, and a label with your name and address in a convenient position.

WING AND TAILPLANE. Before assembling the wing and tailplane, check that they have not warped in any way. If they have, they can be corrected by gently twisting the component the opposite way in a jet of steam, or in front of a gas or electric fire A few seconds at a distance of 18in, or so, is sufficient.

Assemble the model for testing. Check the balance of the model before flying. To do this, support the model under each wing at one of the rib stations, find the balance point and mark it. This should be close to the C. of G. position shown on the plan. If it varies more than 1/4in. either way, add some ballast to the other end of the fuselage to correct it. Otherwise a small tail adjustment may be sufficient. This can be checked by a test glide.

FLYING. Make sure that the wing and tail are "in-line", and the fin upright before attempting to fly.

Choose a fairly calm day for the first tests. Glide the model into wind, if any, and preferably over short grass with no obstructions. The model should glide straight and flat, and any tendency to turn is due to a warped wing or fin. Correct this as described above.

If the model tends to nose-up and stall, raise the leading edge of the tailplane about 1/32in. with a piece of balsa strip. This is a positive angle adjustment, and is limited to this amount. If this is insufficient to correct the trim, a small amount of ballast weight can be added to the nose of the fuselage: but this should not be required.

If the model glides too steeply, or dives, raise the trailing edge of the tailplane. This is a negative angle adjustment, and can be increased as required, but if a large trimming adjustment is necessary, a small ballast weight should be added to the tail end to keep the tailplane near the original angle.

When you are satisfied with the glide, try a short flight with the engine running at half speed, by reducing the compression. It should make a wide left-hand turn, induced by the torque of the motor. If the turn is too tight, bend the trim-tab about 1/16in. the opposite way. Another method is to increase the offset of the motor to the right. This is done by enlarging the holes in the bearers and twisting the motor to the right when remounting.

A small amount of "wash-in" * on the Port wing near the tip, or "wash-out" on the Starboard wing will also help, and also prevent the model banking too steeply. When the trim seems right, gradually increase the speed of the motor with each successive flight, making further adjustments if necessary.

It is advisable to meter the fuel out in small quantities for testing. A 20 secs, motor run is sufficient.

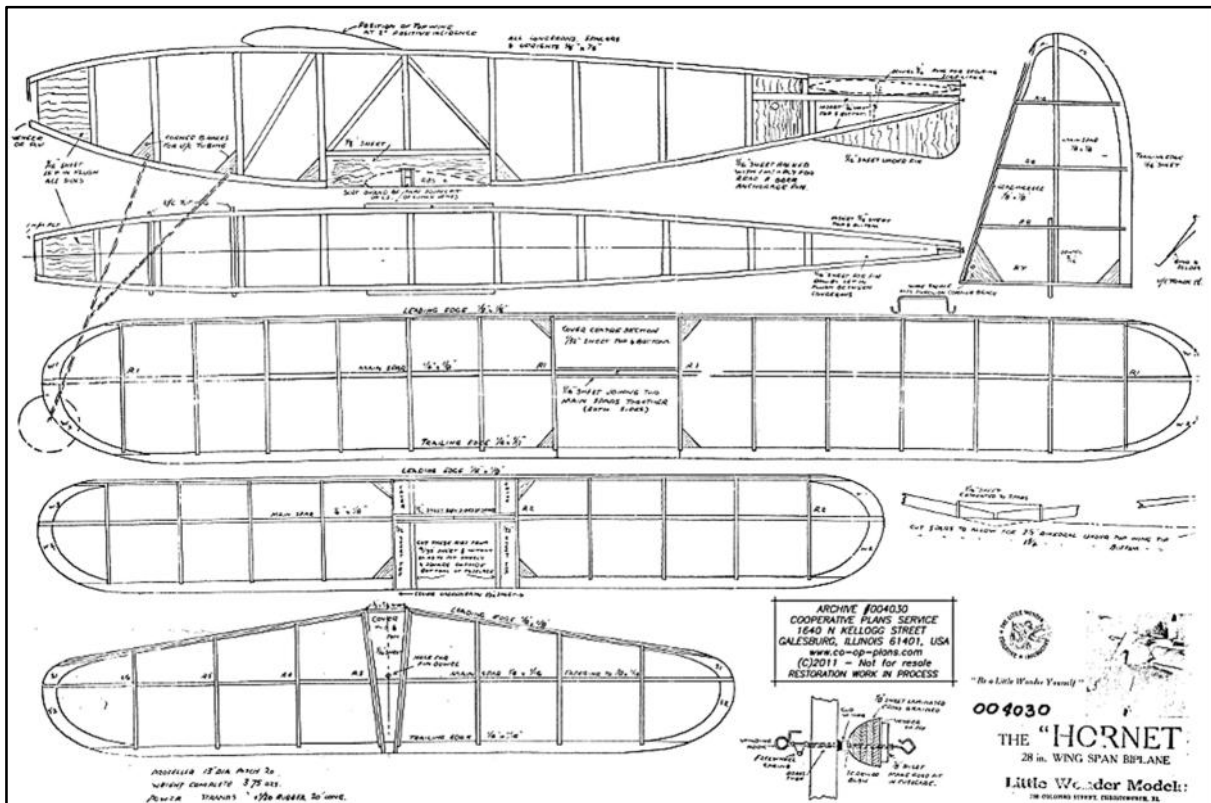
Alternatively, a mechanical timer and fuel-cut-out can be fitted if obtainable.

* "Wash-in" denotes a twist in the wing to increase the incidence, i.e.: trailing edge lower. "Wash-out" means raising the trailing edge.

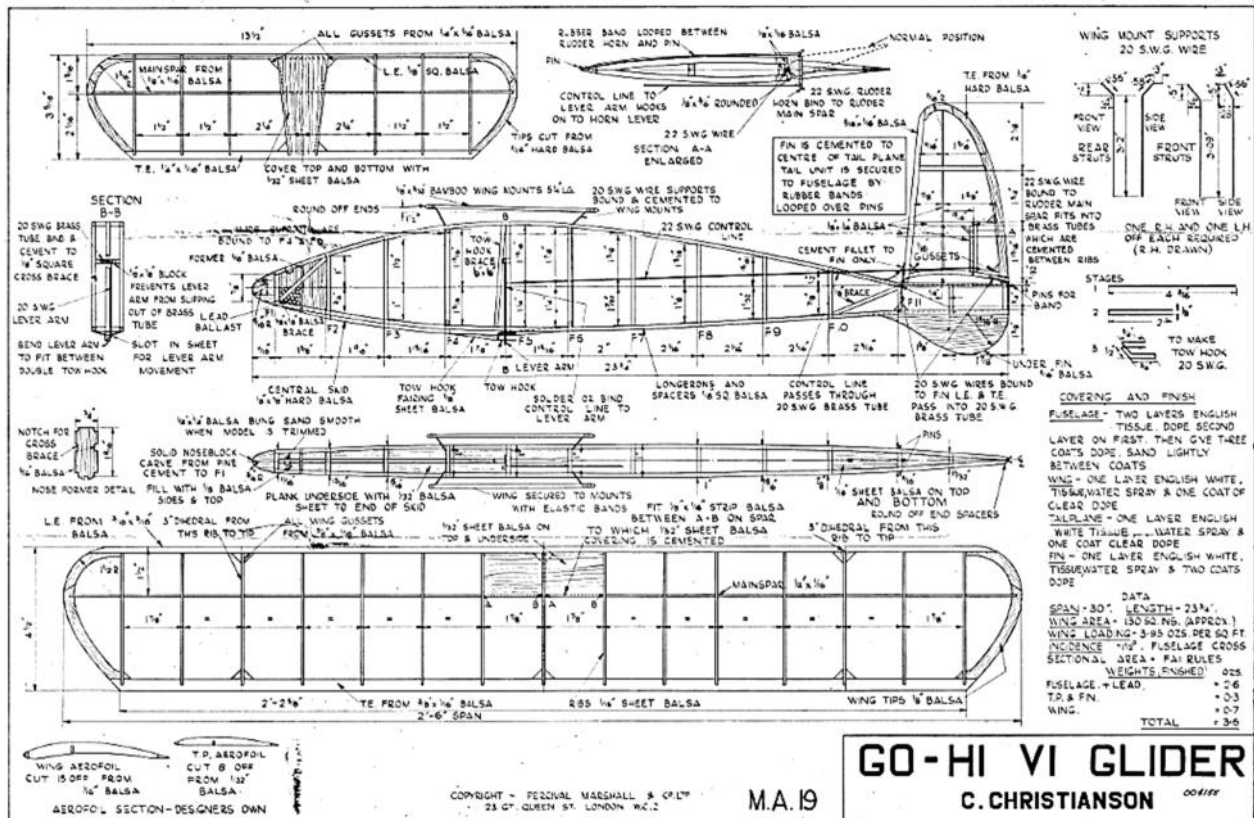
Caution should be exercised when flying on a public ground. Take special note of the paragraph concerning Insurance, which is mentioned below.

Do not forget to put your name and address on the model.

Rubber: Hornet - small bi-plane from New Zealand



Glider: Go-Hi Vi - a parasol wing job from an early Model Aircraft plan, unusually with auto-rudder



Roger Newman

Kits for Sale

I recently bid for and bought much of the Aeromodelling stuff left by Alan Wiggs who passed away last year. Alan was a great pioneer of the vintage rubber brigade. I first met him the 80's at the model Engineer Exhibition when it was at Wembley. He was manning the SAM 35 stand and got me to join. My membership was rewarded with a free plan of the Prefect rubber model. I still have it (but I have never built one).

I was interested in all the models but had to pay quite a lot because there were some nice unused kits including a pre-war Club Kits Super Duration - so old and yet it's all there. Anyway, I loaded up my hatch-back to the roof with various kits, propellers, wheels and loads of built models and got them home. I am busy refurbishing eight of Alan's models but there are many complete kits in original boxes which I will never build (see list).

Pre War Club Kits Super Duration 40ins
Arden Geared Propulsion Unit
CM Products Soaring Glider 30ins (repro)
Comet Sparky 32ins Rubber Model
Cosmo R1 Spar Tractor - Tissue on bamboo frame 19ins
Easybuilt Jimmie Allen Skokie
Frog Redwing Senior Series 18ins
Hyper Cub Plan and Gearbox no wood
KK Achilles
KK Ajax 30ins
Sleek Streak 14.5ins
Star Flyer (like Sleek Streak)
Veron Comper Swift
Veron Swordfish
Original KK 7 and 12 ins Props

So, if you are interested, I would like to sell the kits to SAM readers before they go on Ebay.

Call or e mail me anytime. Andrew Longhurst
Tel: 07948 706402 or email: andrewlonghurst@yahoo.com

Books & Journals from Lindsey Smith's Estate

All proceeds to SAM 1066 Funds

the asking price excludes postage & packing

(see note at foot of ad regarding postage & packing costs)

Item	Description	Asking Price	Package & Postage (see notes at foot of table)
1	SAM 35 Year Books – Complete set of 16 volumes: most are “as new”. <i>Sold only as complete set.</i>	£80 for set	£6.95
2	Aeromodeller Annuals: all well used but complete. Years: 1948; 1949; 1950; '55-56; '62-63; '64-65 (2 copies); '65-66; '66-67; '67-68 (2 copies); '68-69; '69-70; '70-71; '71-72; '72-73 (3 copies); '73-74 (3 copies); '74-75 (2 copies); '77-78	£3 each	£2.15 per volume or Small/Med parcel rates for multiples
3	Zaic Year Books: 1937; 1957-58; 1964-65	£3 each	£2.15 per
4	Fifty Years of Aeromodeller by Vic Smeed (as new)	£3.00	£2.15
5	Bill Dean's Book of Balsa Models	£2.00	£1.65
6	Flying Models – Favourites of the Fifties by Vic Smeed (as new)	£3.00	£2.15
7	Model Flying – the First Fifty Years by Vic Smeed (as new)	£3.00	£2.15
8	Plan Parade compiled by Vic Smeed	£2.00	£1.65
9	The Best of the Golden Age of Flying Models	£2.00	£2.15
10	Rubber Scale Vintage Plans Volume 3: (189 pages – poor cover but content ok)	£3.00	£2.70
11	Peanut Power by Bill Hannan (80 pages/A4 size)	£3.00	£2.15
12	Scrapbook of Scale, 3-views & Nostalgia Vol. 1 by Bill Hannan (56 pages/A4)	£3.00	£2.15
13	Model Plans & 3-Views International by Bill Hannan. Vols 1 & 2. (25 pages/A4)	£2 for both	£2.15 for both
14	Models & International Modellers by Bill Hannan. 3 Vols. 26 pages/A4)	£3 for all	£2.15 for all
15	Aeroplane for the Creative Modeller & Aviation Historian by Bill Hannan. 5 Vols. (30+ pages/A4)	£5 for all	£2.70 for all
	<p style="text-align: center;">Packaging & Postage: All P & P prices are based on Royal Mail current price list for 2nd Class Standard delivery. If an alternative is required, please ask – it will cost more. Email me at rogerknewman@yahoo.com</p>		

L'AQUILONE SAM 2001

TOMBOY RALLY INTERNATIONAL POSTAL CONTEST

01/07/2022 - 30/06/2023

We wish to present this competition to all the lovers of this nice model with the only aim of having fun in a postal contest which is organized to provide some fun flying together or at the same time as are all postal contests. The Tomboy Rally wants to prove the performance of this model along with the ability of the builder and pilot, without reaching the peak agonism of usual contests and only wishing to fly the model having fun in a relaxed manner. After having carried out some tests we have decided to admit the use of I.C. engines and electric motors trying to reduce the gap between them.

Model

- The 36" or 44" wing span (as per plan Aeromodeller) and 48" (as per Boddington plan or 36" scaled up) models are admitted;
- Models may be fitted with floats as per plan (scaled-up for 48" version);
- no minimum weight;
- reinforcement or lightening of the structure with respect of the basic outline of the original model are admitted;
- materials to be used are those found on the plan;
- plastic covering in place of tissue, silk or other is admitted.
- More than one person can use same model;
- Same model can flight in L.G. or float version;
- Lane fillers can self launch and time

Engine/motors

I.C. engines and electric motors are admitted within the following limits:

36"-44" WINGSPAN

I.C. Engines:

- Any engine with 1 cc. maximum displacement;
- Fuel tank : 3 cc.
- R/C carburettor is admitted.

Electric Motors:

- Any electric motor is admitted with direct drive
- The engine cannot be stopped and started again: the motor must run continually without interruptions till the end of the battery charge or competitor's decision;
- no folding prop is admitted; if a folding prop is used the blades must be held open with a rubber band;
- freely assembled admitted batteries:
- 400 Mah 2 cell LiPo
- separated batteries pack for Rx alimentation is allowed

48" WINGSPAN

I.C. Engines:

- Any engine with 2, 5 cc. maximum displacement;
- Fuel tank : 6 cc.
- R/C carburettor is admitted.

Electric Motors:

- Any electric motor is admitted with direct drive - The engine cannot be stopped and started again: the motor must run continually without interruptions till the end of the battery charge or competitor's decision;
- no folding prop is admitted; if a folding prop is used the blades must be held open with a rubber band;
- freely assembled admitted batteries:
- 500 Mah 3 cell LiPo
- separated batteries pack for Rx alimentation is allowed

Flights and results

- Each competitor may fly as many flights as wished during the admitted period but only the best flight will be considered for the final result.
- Hand launches are admitted.
- The flight time start when the model is released or takes off. The flight time ends when the model lands or hits a fixed obstacle. In case the model flies out of sight the timekeeper will time for 10 seconds after losing sight of the model. Timing will continue if model is seen again or stopped after 10" deducting this time from the total time of the flight.

Awards :

A diploma for all competitors and prizes for the first three in each version rank. Special prize for best flight in float version.

Results

Results, address, photos and technical specification about model must be forwarded to the Organization within the 15th July 2023 to Curzio Santoni (cusanton@tin.it) or to Gianfranco Lusso (gfl@orange.fr). Many pleasant flights and happy landings to ALL !!!

SPECIAL PRIZE VIC SMEEDI

SAM 2001 have scheduled an extra Diploma that will be awarded to the best flight in Tomboy floatplane version (36", 44" or 48") taking off from water. The Editor will send to the winner a Diploma signed By SAM 2001 President and a bottle of special Italian Wine to drink to Vic Smeedi

Good ROW and flight

SPECIAL PRIZE DAVID BAKER

The 2012 was the 5th edition of SAM 2001 Tomboy Rally and we have scheduled a special prize for the three best

flights obtained with 36" Tomboy F/P. Only engines diesel max 0.75 c.c. shall be used. The other rules are the same for 36" or 44" wingspan type. It is possible to use a R/C Tomboy, however, being this a free-flight contest, the time must be stopped when transmitter is used, since the aircraft model should fly freely from any control

from the ground.

Good thermals

Salisbury Plain Permits

Salisbury Plain Area 8 will be available for General Sport Flying and Trimming every weekend (Saturday and Sunday) plus Bank Holiday Mondays, in 2022, from January to December.

During this period flying on area 8 is subject to clearance being granted by Army Air Operations on the preceding Friday. When the clearance is given, a clearance number and the times available will be notified to users via their email addresses.

Users must be in possession of a current permit. To apply for a permit you must complete the application form to be found on the 'Free Flight Technical Committee' website. The cost is £20. Retain the conditions of issue and code of conduct for future reference.

It is important that you read and understand the conditions of issue and code of conduct before submitting your licence application.

Please note that the use of Salisbury Plain Area 8 for Model Flying is delegated by the MOD DIO (SPTA) to the BMFA via the management of the FFTC.

No other use is permitted.

Flying on Area 8.

Flyers are reminded that it is Military (and therefore BMFA FFTC) requirement, that when civilians are accessing areas away from public rights of way that an adequate number of Red Card holders must be present. A Red Card holder is deemed to be responsible for up to 6 non-Red Card Holders.

It is also imperative that a Red Card holder phones 24 Hrs. Ops. before any flying takes place, and at the conclusion of flying. 24 hrs. Ops. need to know that there are civilians on a restricted Area, and that air movements are likely to take place. Remember that we have authorised, controlled access, and these requirements are for the safety of all concerned. Failure to observe these simple requirements could have consequences.

Anyone wishing to obtain a Red Card, can obtain one by attending a briefing at Westdown Camp.

I can arrange this.

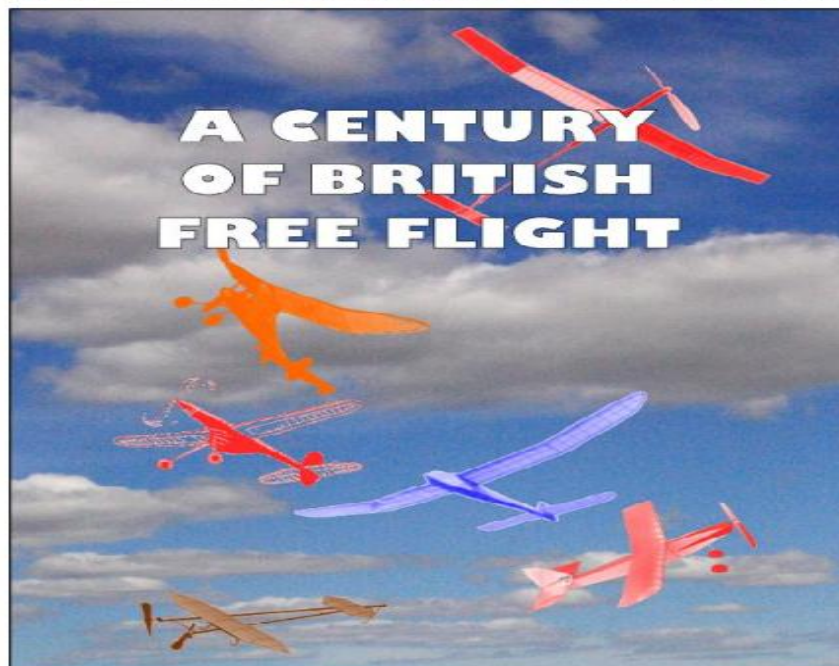
Peter Watson. e mail. peterwatson47@hotmail.com

A CENTURY OF BRITISH FREE FLIGHT

A new book, A Century of British Free Flight, has just been published to mark the BMFA's centenary. 155 pages of text, plans and photographs in colour and black and white trace the development and history of free flight from before Bleriot crossed the Channel to the present day. Nine authors have pooled their talents to cover everything from the rise of the Vintage movement to electronic timers and GPS tracking.

The histories of gliders, scale, rubber, electrics, power models and indoor are all explored by people who've spent most of their lives flying their classes. Although there's no 2022 Free Flight Forum Report we think A Century of British Free Flight will more than fill the gap. All proceeds will go towards defraying the expenses of those representing the United Kingdom in teams competing at the World and European Free-Flight Championships.

The UK price is £20.00 on the flying field or £22.00 by mail; to Europe it's £25.00 and anywhere else it's £28.00. Cheques should be payable to 'BMFA F/F Team Support Fund' in pounds sterling, drawn on a bank with a UK branch; you may also order by credit card, which is a lot easier (and cheaper).



Copies are available from:

Martin Dilly, 20, Links Road, West Wickham, Kent BR1 OQW
or by phone: (44) + (0)20-8777-5533,
or by e-mail to martindilly20@gmail.com.

La Eighth^{eme} Grande Coupe de Birmingham

With the approval of the FFTC this event will take place
at its traditional home

MOD North **Luffenham** on:

Sunday DECEMBER 4th 2022 starting at 10:00

F1G for the Aeromodeller Trophy: Two flights between 10:00 & 12:00
then three rounds to published timetable.

Pre 1970 Coupe Three flights (no rounds) start 10:00.

Within this event models which meet our pre 1958 cut-off date
will fly as Vintage Coupe.

Pre 1970 Coupe may double up with F1G as at last year's event.

Contacts below for details if unsure.

Both events finish at 14.45 followed by fly-offs as required (Not DT!)

Maxes will be determined by conditions on the day.

Prizes for 1,2 & 3 in F1G, Pre 1970 Coupe and Vintage Coupe.

The winner of F1G will be awarded the Aeromodeller Trophy
and in Vintage Coupe the Vintage Plate.

Entry Fee £10 covers both events
(includes £5 field fee for ALL competitors)

For further information contact:-

Gavin Manion at:

gavin.manion84@gmail.com tel 01543 422509

Or Stuart Darmon at ;

stuardarmonf1a@yahoo.com tel 01858 882057

Colin Shepherd's
West Midlands Indoor Meetings
Mainly Free Flight
Leasowes High School
Kent Road, Halesowen, B62 8PJ

All meetings
CANCELLED

increasing costs and falling attendances have
made the meetings unsustainable

Ultra-light (quad copters or heavy fast flying models not accepted)

For further information phone Colin Shepherd
07749817767 or 0121 5506132 or e-mail cosh43@hotmail.com

Indoors in Wales

At

Canolfan Hamdden Plas Leisure Centre
Coetmore New Road, Bethesda LL57 3DT

Free Flight rubber and Small electric RC, Scale,
small helis and small quads etc.

Sundays 1.00pm til 4.00pm

2022

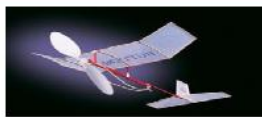
Oct 2nd - Nov 6th - Dec 4th

2023

Jan 8th - Feb 5th - Mar 5th

Contact:

Martin Pike: martin.pike.xray@btinternet.com



Flitehook
Indoor Free Flight
West Totton Community
Centre
SO40 8WU



2022 Autumn/Winter Dates

**Weds: 21st Sept; 19th Oct;
16th Nov; 21st Dec;**

12.00 noon – 4.00 pm

BMFA Membership mandatory

£8 per session

Easy access; Café; Toilets; Parking

Flitehook Sales Table

Spectators & Juniors are free of charge

Any queries – email rogerknewman@yahoo.com or phone 02392 550809



Supported by Southern Area BMFA

Waltham Chase Aeromodellers Indoor Free Flight Meetings

At

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

Thursday Evenings 7-0pm til 9-30pm, £5

2022 Dates:

**Jan 20th - Feb 3rd - Feb 17th - Mar 3rd
Mar 17th - Mar 31st - Apl 14th - Apl 28th
May 19th - Jun 9th - Jun 23rd - Jul 7th
Sep 22nd - Oct 6th - Oct 20th - Nov 3rd
Nov 17th - Dec 1st - Dec 15th**

Due to current restrictions, for the immediate future the organisers will need attendees to pre-book their slot at each meeting with the maximum number of attendees being set at 14. If the number of pre-bookings is significantly less than 14 then the organisers may have to reduce the meeting duration to avoid running at a significant financial loss. Hopefully, in the not too distant future, the coronavirus situation will calm down and we will enjoy greater numbers of attendees such that pre-booking and event duration adjustment will not be necessary. For the time being it is also a requirement that you wear a face mask.

To book a slot at a meeting (and for any further information)

contact the meeting organiser, Alan Wallington,
via email at alan@ajwallington.co.uk or by phone on 01489 895157.

This should be with Alan by the morning of the Wednesday
before the meeting you wish to attend.

You will receive confirmation of your slot on the Wednesday evening.

And finally all flyers must be current members of the BMFA.

Please bring your 2022 certificate with you to your first meeting or
alternatively email it to Alan with your first pre-booking request.

Peterborough Model Flying Club

Free Flight Indoor Flying

at the Veracity – Bushfield Leisure Centre,
Orton, Peterborough, PE2 5RQ.

Car Park on site.

Contacts Brian Waterland 07717461000
or Martin Skinner 07774863008.

Small Rubber/electric or Co2. No R/C, Drones or shockies.

Dates

30/10/2022.	Sunday.	10:00 AM to 1:00 PM.
12/11/2022.	Saturday.	10:00 AM to 1:00 PM.
26/11/2022.	Saturday.	10:00 AM to 1:00 PM.
7/1/2023.	Saturday.	10:00 AM to 2:00 PM. Extra hour.
5/2/2023.	Sunday.	10:00 AM to 1:00 PM.
4/3/2023.	Saturday.	10:00 AM to 1:00 PM.

E30/RDT/BMK/E20 Batteries

The 75mAh lipo's which I sell for E30 now come with Micro JST plugs which make them suitable for BMK timers etc. Since they do not have the current limiter, they work well with the Band Burner and can also be used as lightweight E20 batteries. Just send me £10 and I will put 4 in a Jiffy bag. I still have some without connectors which are now 5 for £10. Ron Marking, Pros Kairon, Pennance Road, Lanner, Redruth TR16 5TF. Alternatively, use PayPal but e-mail me your address. ron.marking@btinternet.com

CARBON BOOMS For Hand Launched Gliders

If you need tapered carbon tubes for HLG booms I may have what you want. As supplied they are 99cm long, taper from 5.2mm to 2mm and weigh 6.4gm. As a rough test a 58cm length, suitable for a Yashinskiy type of model, weighs 3gm after a little application of wet-and-dry paper (used wet, of course) and it looks as if there's quite a bit more that can come off. The thin end that's left is good for a catapult glider.

Price is £7.00. In normal times I'd sell direct at contests, but postage and packing would be extra, depending on how many you need.

Contact Martin Dilly to order

Tel: 0208 7775533 or e-mail martindilly20@gmail.com.

FREE FLIGHT SUPPLIES

MICHAEL J. WOODHOUSE

12 MARSTON LANE, EATON, NORWICH
NORFOLK, NR4 6LZ, U.K.

Tel/Fax: (01603) 457754 International Tel +44-1603-457754

e-mail: mike@freeflightsupplies.co.uk.

Web site: <http://www.freeflightsupplies.co.uk>.

Face book <https://www.facebook.com/groups/266212470107073/>

I supply items, which are needed by the free flight modeller, or any other modeller, items that cannot be readily obtained through the normal model shop outlets. I also believe in the builder of the model principal so what you will find, on my list, are components, plans and kits etc. Although I am not a shop, if you are passing through Norwich, you are welcome to call in, a quick telephone call first to check that I'm at home will save a wasted diversion.

ORDERS and PAYMENT

Place your order by telephone, by e-mail, CASH, DIRECT TO FREE FLIGHT SUPPLIES BANK ACCOUNT, CREDIT/DEBIT CARD, MORE!

WESTERN UNION, PAYPAL

AVAILABLE

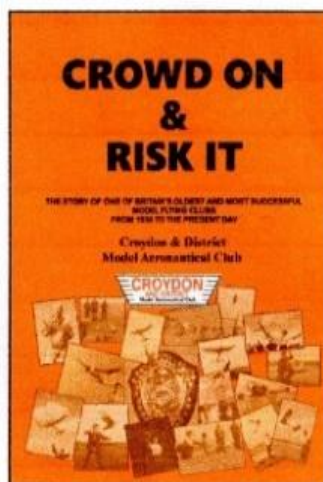
LIGHTWEIGHT COVERING MATERIALS - HI-TECH MATERIALS - FIXINGS - RUBBER - RUBBER MODEL PROPELLERS - TIMERS - KP AERO MODELS - TOOLS - PLANS - KITS - "HOW TO DO IT" PUBLICATIONS - BOOKS.

Full details of the above items are on the Free Flight Supplies Web site.

CROWD ON & RISK IT

This is the story of one of Britain's oldest and most successful model flying clubs, Croydon & District MAC, from 1936 onwards. The club contributed much to aviation, both model and full-size, and the late Keith Miller compiled its history till around 1960. Now, this up-dated 73 page version of the club's history, copiously illustrated with many previously unpublished photos, takes the Croydon saga up to the present. Contributions by past and present members vividly capture the atmosphere of the heyday of free-flight, with almost weekly contests at Chobham or Bassingbourn.

53 designs by Croydon members have been published in the model press and 24 of its members have represented Great Britain in World and European Championship teams. Several have gone on to notable careers in aerospace. Crowd On & Risk It covers all this and more.



Just £8 by PayPal or cheque.

Contact Martin Dilly (martindilly20@gmail.com), phone/fax 020 8777 5533 or write to 20, Links Road, West Wickham, Kent BR4 0QW for your copy.

DILLY JAP IS BACK

After a bit of a gap since the final 5 yards came off my last bulk roll of Japanese tissue several people have asked if it will be available again, so I've just received my seventh roll. Doing the sums, that means that there's now just over a mile of Dilly Jap covering models all over the world.

To re-cap on the details, it's 12 gm/M2 and has a strong unidirectional grain. It's white and low absorbency, so remains very light when doped. For those of you old enough to remember, it's identical to the Harry York tissue sold at his South London model shop in the 1950s.

Anyhow, since the last roll came in 2015, the price is slightly higher (maybe as a result of you-know-what ...xit and its effect on sterling), but it's still only £13 for a five yard roll a yard wide, or £15 by mail to the UK. I normally sell it in rolls at contests, but lately many people have had it sent lightly folded, so I can do that if you prefer.

I'm on 0208-7775533 or e-mail: martindilly20@gmail.com

INDEPENDENT REVIEW OF DILLY JAPANESE TISSUE

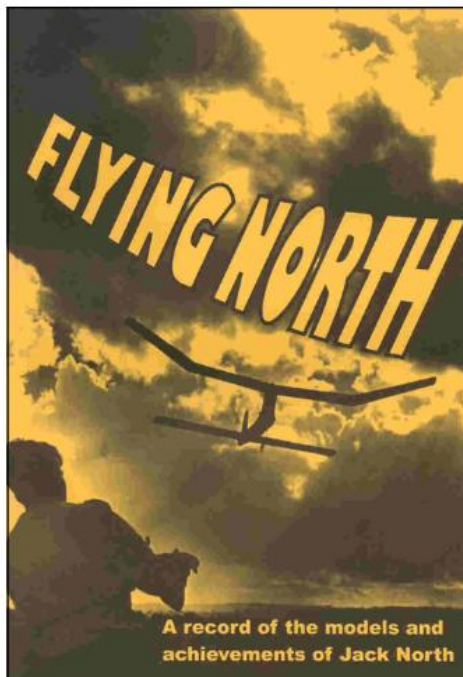
The following appeared on the Hip Pocket Aeronautics Builders' Forum. Nine different tissues were tested, doped and un-doped.

"I am really impressed with how well this tissue performed. Dilly Jap tissue with 2 coats of thinned nitrate dope is around 8% stronger than the old 00 Silkspan with 2 coats of dope, yet Dilly Jap is 0.09 grams per square foot lighter. Here are the test results:

Test#	Tissue Type	gm/sqft	Avg Ten Str lb	Spec Str lb/gm
9a	Dilly tissue (UD)	1.20	14.74	12.28
9b	Dilly Jap Tissue (D)	2.04	19.70	9.66

So far, the Dilly Jap tissue has the highest specific strength of all the tissues and Silkspans tested. Doped Dilly Jap has nearly double the strength of doped Japanese Esaki tissue and yet doped Dilly Jap weighs 0.1 grams per square foot less than doped Esaki. Dilly Jap can't be beat for weight critical contest models requiring the torsional rigidity afforded by tissue papers!"

THIRD RE-PRINT JUST ARRIVED



A record of the models and achievements of Jack North

FLYING NORTH A goldmine for vintage and nostalgia model flyers -

FLYING NORTH traces the model flying career of Jack North, one of only three people to represent the UK on all three outdoor free flight teams, - Wakefield, Power and Glider. It covers his flying and models from 1938 onwards and includes no less than 24 of his previously-unpublished designs.

FLYING NORTH was compiled and edited by two of Jack's Croydon clubmates, David Beales and Martin Dilly, who had access to Jack's extensive notebooks, photographs, drawings and his original models.

FLYING NORTH is a fascinating 163 page book and includes 130 photographs, reminiscences by colleagues, re-prints of all Jack's published plans and articles, including his later extensive work on thermal detection, and an outline of the professional career that also made him such a respected name in high-speed aerodynamics.

FLYING NORTH proceeds go towards the costs of the national teams representing the UK at World and European Free-Flight Championships.

Price £20.00 in the UK, £24 airmail to Europe and £30 elsewhere.
Contact Martin Dilly on +44 (0)208-7775533 or e-mail martindilly20@gmail.com

ISSUE 285

OCTOBER-DECEMBER 2022

SAM SPEAKS

THE WORLDWIDE VOICE OF VINTAGE AEROMODELING



In this issue:

- RC Ramrod 600
- "Flip Stick" 1942 HLG
- Garofalo's "Arch Angel"
- Midwest SAM Champs
- Speed 400 replacement motor
- Shulman's "Zoomer"
- Receiver Pack Considerations
- Ed Swinton's C Stick

This bi monthly emagazine can be obtained from the
 Society of Antique Modellers. Web site
<http://www.antiquemodeler.org/>
 for the modest cost of \$30 pa.
 Quite a few UK people already belong,
 but a few more might help our Parent Body!

FREE FLIGHT FORUM REPORT 2021

Indoor Duration - A Challenge to Conventional Design - Tony Hebb
 Coupe in a Box - Gavin Manion
 Building Other People's Mistakes - Stuart Darmon
 The Models of Ray Monks - Simon Dixon
 Simulated 3D Flight Dynamics - An Approach to Gain Insight for Trimming and Aircraft Development - Peter Martin
 Building During Lock-down - Phil Ball
 Tame Your F1B and Related Thoughts - Mike Woodhouse
 What Next for a Lady Flyer - Sue Johnson
 F3 RES - RC for the Aging Free Flighter - Andy Sephton
 From Wichita to Robin III - Mike Fantham
 Further Thoughts on Carbon-Skinned Wings for F1A - Stuart Darmon
 Geo Fencing and Electronic Stability - John Emmett

The UK price is £13 including postage; to the rest of Europe it's £16 and everywhere else it's £20. Forum Report sales help to defray the heavy expenses of those who represent Great Britain at World and European Free Flight Championships. Cheques should be payable to 'BMFA FF Team Support Fund' in pounds sterling and drawn on a bank with a UK branch. You can also pay by credit card, which is far easier (and cheaper).



Copies are available from: Martin Dilly,
 20, Links Road,
 West Wickham,
 Kent
 BR4 0QW

Or by phone: +44(0)2087775533
 Or e-mail: martindilly20@gmail.com

FREE FLIGHT FORUM REPORTS OVERSTOCK SALE

There's an excess stock over the years of the following Free Flight Forum Reports – 1997, 1998 and 2016. There's an enormous amount of information there on a wide range of free flight topics as the following contents list shows.

1997- Slow Open Power - One Man's View by Dave Clarkson; Vintage Lightweights by Andrew Longhurst; Testing Balsa Quality by Bernard Hunt/ John Taylor; Return of an Old Tosser by Chris Edge/ Mike Fantham; Some Rambling Thoughts on Free-Flight Aeromodelling Design Trends by Andrew Crisp; Electronic Timers - An Overview by Chris Edge/Martin Gregorie; Selecting Slippery Stuff by John Barker.

1998 - Computer-Aided F1A Fuselage Layout by Mike Fantham; Fast Track to F1C Flying by John Cuthbert; Micro-Meteorology and Thermals by Mark Gibbs; The Latest Thinking in F1B Trimming by Peter King; F1A Tailplane Structures by Mike Fantham; Is the Weather Better on a Sunday or a Monday? by Phil Ball; A Practical Introduction to Electric Free-Flight by John Godden; Avionics and the Future of Free-Flight by Mike Fantham; GPS - A Global Position Paper by Julian McCormick; Builder of the Model - Where Next? by Mike Fantham

2016 - Indoor Scale Free Flight Gliders by Andy Sephton; Juniors in Free Flight by Mark Gibbs; Carbon Fibre for Aeromodellers by Mick Lester; The Making and Testing of F1B Rubber Motors by Peter Brown; Computations at Low Reynolds Number and a New Aerofoil for F1G (Coupe d'Hiver) Models by Alan Brocklehurst; Carbon Fibre Covered Prop Blades from Simple Tooling by Phil Ball; Weather Forecasts - How Good Are They and How to Interpret Them by Mark Gibbs; Capitalising on Low Drag Aerofoils and All That by Alan Brocklehurst; Basic Propeller Theory by Andy Sephton; Methanol to Lithium by Peter Watson; Some Interesting & Successful Models from 2015 by Phil Ball; Dave Greaves 1942-2016 - An Appreciation

To clear the excess we're offering all three Reports together at a special discount price of £15.00, a saving of £21 on the single copy prices. To Europe the cost is £18 and anywhere else it's £21. Cheques should be payable to 'BMFA F/F Team Support Fund' in pounds sterling, drawn on a bank with a UK branch; you may also order by credit card, which is a lot easier (and cheaper). Copies are available from :

Martin Dilly, 20, Links Road, West Wickham, Kent BR4 0QW

or by phone: (44) + (0)20-8777-5533, or by e-mail to martindilly20@gmail.com .

Provisional Events Calendar 2022

With competitions for Vintage and/or Classic models

All competitions are provisional and Covid restrictions may apply, **Check websites before attending**

February 27 th	Sunday	BMFA 1st Area Competitions
March 27 th	Sunday	BMFA 2nd Area Competitions
April 3 rd	Sunday	Le Petit Classique de Brum, N Luffenham
April 15 th	Good Friday	Northern Gala, Barkston
April 18 th	Easter Monday	Croydon Wakefield Day + SAM1066 , Salisbury Plain
May 1 st	Sunday	BMFA 3 rd Area Competition
May 7 th	Saturday	London Gala, Salisbury Plain
May 8 th	Sunday	London Gala, Salisbury Plain
May 29 th	Sunday	FF Nationals, Mini , N Luffenham
June 4 th	Saturday	FF Nationals , Salisbury Plain
June 5 th	Sunday	FF Nationals , Salisbury Plain
June 19 th	Sunday	BMFA 4 th Area Competitions
July 10 th	Sunday	BMFA 5 th Area Competitions
July 24 th	Sunday	SAM1066 Club (BMFA) Centenary event. RAF Colerne
July 30 th	Saturday	East Anglian Gala, Sculthorpe
July 31 st	Sunday	East Anglian Gala, Sculthorpe
August 6 th	Saturday	Southern Area BMFA Gala, RAF Odiham
August 21 st	Sunday	Southern Gala, Salisbury Plain
September 3 rd	Saturday	Peterborough Flying Aces, Ferry Meadows
September 3 rd	Saturday	Stonehenge Cup, Salisbury Plain
September 4 th	Sunday	Equinox Cup, Salisbury Plain
September 11 th	Sunday	BMFA 6 th Area Competitions
September 16 th	Friday	Indoor FF Nationals, Daventry Leisure Ctr.
September 17 th	Saturday	Indoor FF Nationals, Daventry Leisure Ctr.
September 18 th	Sunday	Indoor FF Nationals, Daventry Leisure Ctr.
September 18 th	Sunday	Crookham Gala, Salisbury Plain
October 2 nd	Sunday	BMFA 7 th Area Competitions
October 9 th	Sunday	Croydon Coupe Europa + SAM1066 Salisbury Plain.
October 16 th	Sunday	BMFA 8 th Area Competitions
October 29 th	Saturday	Midland Gala, Venue T.B.C.
November 6 th or November 13 th	Sunday	Buckminster Gala
December 4 th	Sunday	Coupe de Brum, N Luffenham

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 Salisbury Plain check the Website -

www.SAM1066.org

For up-to-date details of all BMFA Free Flight events check the websites

www.freeflightuk.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

SAM 1066	-	www.sam1066.org
Mike Woodhouse	-	www.freeflightsupplies.co.uk
BMFA	-	www.bmfa.org
SAM 35	-	www.sam35.org
National Free Flight Society (USA)	-	www.freeflight.org
Ray Alban	-	www.vintagemodelairplane.com
Belair Kits	-	www.belairkits.com
Wessex Aeromodellers	-	www.wessexaml.co.uk
US SAM website	-	www.antiquemodeler.org
Peterborough MFC	-	www.peterboroughmfc.org
Outerzone -free plans	-	www.outerzone.co.uk
Vintage Radio Control	-	www.norcim-rc.club
Model Flying New Zealand	-	www.modelflyingnz.org
Raynes Park MAC	-	www.raynesparkmac.c1.biz
Sweden, Patrik Gertsson	-	www.modellvänner.se
Magazine downloads	-	www.rclibrary.co.uk
South Bristol MAC	-	www.southbristolmac.co.uk
Vintage Model Co.	-	www.vintagemodelcompany.com
John Andrews	-	www.johnandrewsaeromodeller.webs.com

control/left click to go to sites

Are You Getting Yours? - Membership Secretary

As most of you know, we send out an email each month letting you know about the posting of the latest edition of the *New Clarion* on the website. Invariably, a few emails get bounced back, so if you're suddenly not hearing from us, could it be you've changed your email address and not told us? To get back on track, email membership@sam1066.org to let us know your new cyber address (snailmail address too, if that's changed as well).

P.S.

I always need articles/letters/anecdotes to keep the New Clarion going, please pen at least one piece. I can handle any media down to hand written if that's where you're at. Pictures can be jpeg or photo's or scans of photos. I just want your input. Members really are interested in your experiences even though you may think them insignificant.

**If I fail to use any of your submissions it will be due to an oversight,
please feel free to advise and/or chastise**

Your editor
John Andrews