NEW Clarion

SAM 1066 Newsletter

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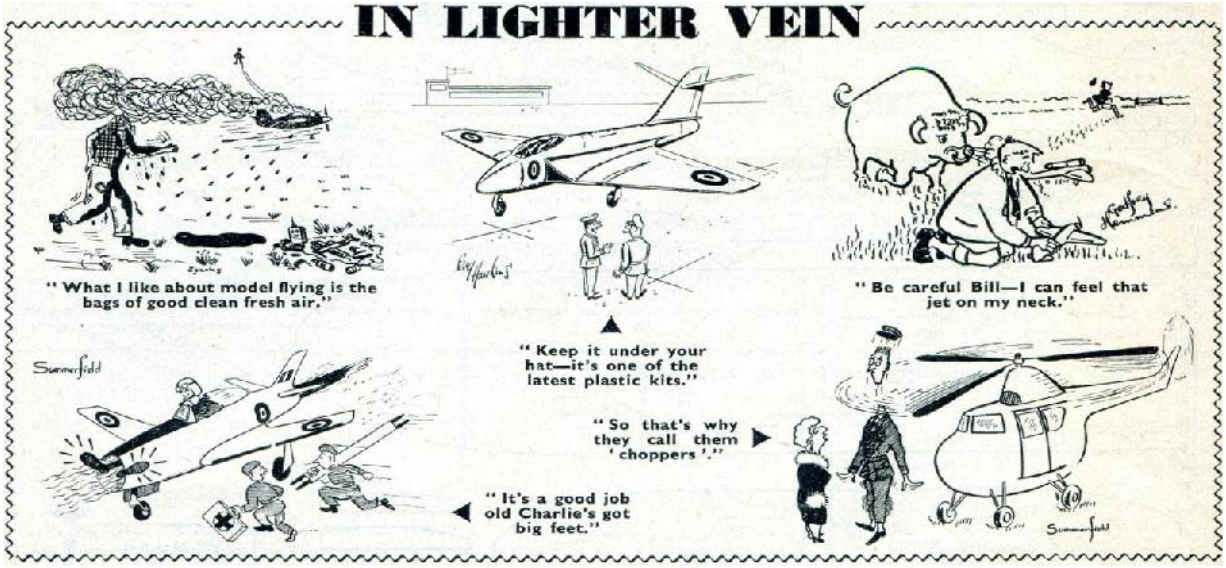
Editorial:

First off we have a few corrections to last months edition:
In Keith Millers article the picture captioned as Brian Yearley & Flying Minutes is actually Peter Brown & 1938 Copland.
The last picture in Bob Jones's piece sees Mike Hetherington incorrectly identified as Harrington.
Finally, in the Provisional Events Calendar the venue for **The Northern Gala** is incorrectly stated as Barkston, **the event will take place at Church Fenton.**
Sorry folks.
Standardisation; the acronym **RDT** is to be used for Radio Dethermaliser. I suppose the ideal RDT would a mobile phone activated device although the odd wrong number might create a few problems.
The outdoor season got off to a really cold start for the first area events, I was at Barkston, little or no wind but damned cold which, together with my poor performance, left me quite miserable. More of that later.

I don't know if any of you have read the article in the AMI by Alex Whittaker reporting on the Bardoe Retro Classic R/C event, but you should. The man used his report as a platform for publishing a deeply insulting diatribe against the SAM membership. I am told that he is a 'tongue-in-cheek' writer but in this particular article I just don't see it. It appears as if he cannot appreciate that some aeromodellers interests lie in spheres other than his own.
By 'some aeromodellers' I mean the vast world-wide SAM organisation who are dedicated to researching, building and flying vintage designs. Interest and research into history is not just the province of SAM but Genealogists, Archaeologists and the like are all dedicated to investigating the past.
As far as interest in old un-flown designs is concerned, who would decry the team that built and flew Leonardo Da Vinci's glider.
It is amusing to see Whittaker's attack on SAM in an article reporting on a 'Retro Classic' event which is, after all, antique modelling.



Warwick Wakefield Meeting 1984 - Harold Rothera

The meeting was a particularly rewarding one for me because it was there that I caught up again with my school friend Alwyn Greenhalgh, after a gap of many years. Alwyn was, of course, the official historian for the SMAE and the owner of a large collection of original, restored or replica vintage models. Tim Westcott became the custodian of that collection on Alwyn's death in 2002.

Alwyn adjusts the JB Allman 1934 'Grasshopper' watched by Vic Dubery. Then waits for the right moment

My own interest in aeromodelling stemmed from the aeromodellers' club at Bolton School, where Alwyn was the star, having been, as an eleven year-old, in the 1936 British team at the Wakefield Trophy competition in New York. After Warwick, I became more involved in Old Boltonian functions, at Alwyn's prompting.

It was at Warwick, too, that I was finally introduced, by Alwyn, to Frank Holland, also from Bolton, who had so often been in Wakefield teams in the late '40s and 1950s, flying Warring's Zombie designs - and proxying on other occasions. Subsequently, as we were both living in Swansea, I came to know Frank very well and I now have his model box, containing his last two Zombies, built in the mid-80s, in our loft.

Warwick marked Frank's return to modelling. He flew one of those Zombies and I smile when I recall his disbelief that day at the variety of ROG launch techniques that were permitted. He had instinctively adopted the rigorous 'prop and wing-tip hold' of the golden era.

Warwick was notable for the range of vintage Wakefield models flown that day. It was an appropriate response to the 50th Anniversary status of the meeting, but Warwick itself now invites nostalgia, given the narrower range of models now deployed in contests, experience having proved which models are the most competitive.

I took a number of photos that day and I am disappointed not to find the William Ying Wake among them. That model, flown by Bryan Spooner, stayed in my mind, as did Rex Oldridge's immaculate Peter Capon Krusader.

However, it was Reg Parham's Frank Zaic 1934 Wakefield which attracted much admiration, not only from me. Impeccable in its finish, it had remained uppermost in my memory, though it is only now, on re-finding its photo, that I fully appreciate why. At the time I was extremely impressed by that planked fuselage, but I doubt that even Reg Parham was able to reproduce the all-up weight of the original 42 inch wingspan model -just over three and a quarter ounces, rubber included!


Rex Oldridge with the replica Peter Capon 'Krusader' – Reg Parham's Frank Zaic 1934 replica

The photo of Reg winding his 1934 Gordon Light model reminds us that Reg was always as spruce as his models.. That day,too, Mike Hetherington, flying the only Getsla model, cut an elegant figure. The invitation to modellers to adopt the more formal dress of the 1930s obviously had its effect. Bow ties and straw hats were notable. Our guest from the US, Walter Getsla , whose model had been proxy flown at Warwick in 1934, provided the contrasting dress of the typical 1980s American modeller.


USA's Walter Getsla, in his period dress, chats with Alwyn and the Mayor of Warwick, many others also dressed in the sartorial elegance of the period.

Bernard Aslett in blazer, bow tie and white hat – Mick Howick? in Plus fours – Rex Oldridge in a straw boater.

Alwyn was just his usual be-suited self, as he demonstrated his replica of J B Allman's geared 1934 Wakefield, Grasshopper.
My focus that grey, windy day was almost entirely on the rubber models. However, one could hardly ignore the Thunderking glider replica! it's 11ft 4ins wingspan compelled attention... I don't think it flew that day, but the design had impressed at the 1949 Fairlop Nationals, when Laurie Barr's model won the Thurston Cup with a three flight total of 569.4 sees. There were 298 entries in Glider that day!

It was not all Wakefields that day, there were gliders and power models

A scene setter, the town in the distant centre, landing area for many models.
Brian Yearley (David Baker's son-in-law) launches his replica ' Flying Minutes ', designed pre-war by the Halifax aces, Norman Lees and Len Stott.
Dicky Skinner won the Caton Trophy with the design in 1940

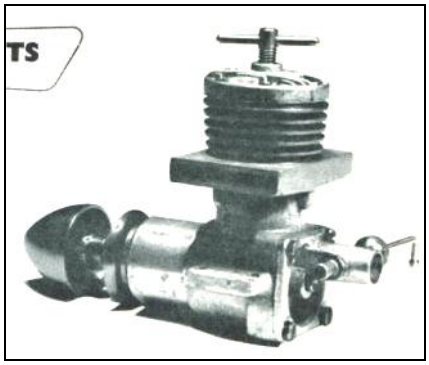


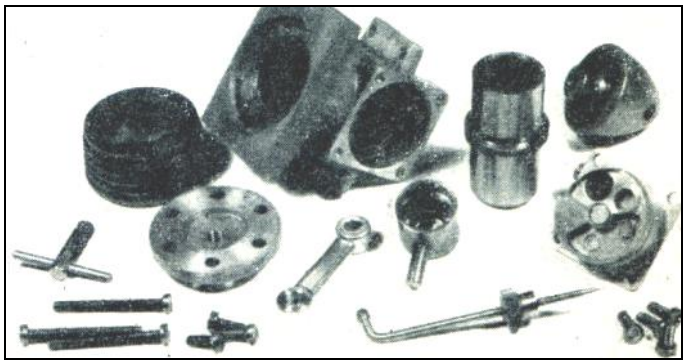
How quickly the years pass! Our younger daughter was with me that day - she is now 50! Forgive the wider context into which this letter drifts. I am sorry not to have clearer memories of the unfolding of that day..

Harold Rothera

ED Racers - Model Aircraft & Aeromodeller

The 1957/58 **E.D. 2.46 "Racer"** The engine has, of course, been dealt with previously in this series. However, as this was some years ago (in March, 1952), it is felt that a further report on this popular engine is justified if only for the* benefit of MODEL AIRCRAFT'S large number of new readers.





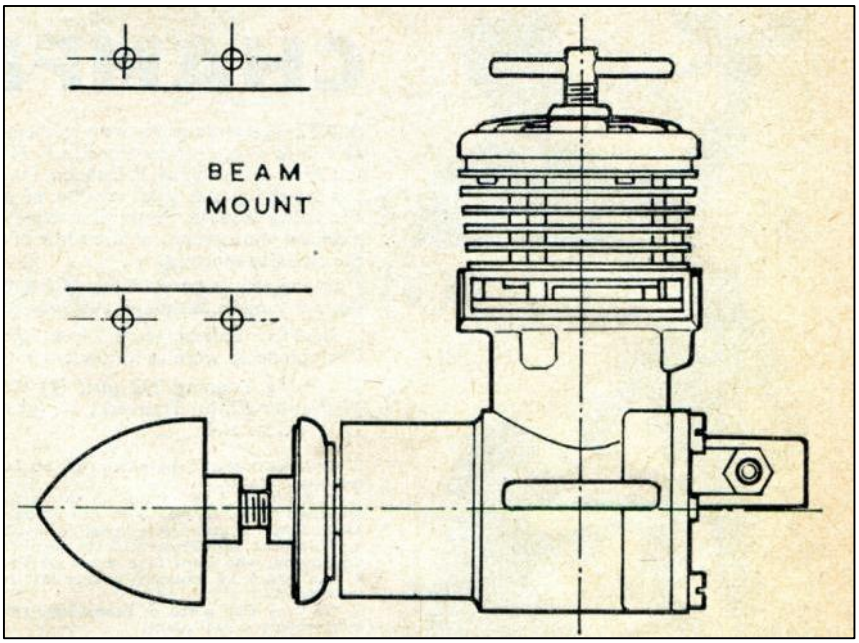
It is actually seven years since the 2.46 first saw the light of day in prototype form. Production models first appeared early in the 1951 season, when, on the performance side, the 2.46 was without equal in the 2.5 c.c. class. Although a few more powerful 2.5's of both British and foreign manufacture have since become available, the "Racer" is still an engine to be reckoned with on the contest field and in the right hands.

Its specification—notably by the inclusion of a twin ball-bearing crankshaft and disc type rotary admission valve—is such as to virtually put the "Racer" in the " luxury " class, yet its price remains extremely competitive at slightly under £4. For the modeller who requires a powerful, easy handling and well-built 2.5 c.c. motor, but to whom price is a major consideration, it is an excellent choice. This is further qualified by the fact that the 2.46 is a very good multi-purpose engine and will serve a wide variety of different types of model almost equally well. For F/F work it has demonstrated itself successfully in both power-duration and non-contest types and has also been used to good effect for R/G models. Yet the " Racer " has proved at least equally at home in C/L stunt and team-racing and, with glowplug conversion, has even put up some creditable performances in speed events.

Model engines are seldom beyond criticism and it has been suggested that the 2.46 is a trifle more bulky and heavy than is strictly necessary. We grant that the rearward facing intake and large exhaust ducts may slightly complicate installation in models having a closely cowled or an otherwise restricted engine bay, but, as regards weight, this is no greater than that of the majority of ball-bearing diesels. A minor criticism is the use of a rather large diameter boss on the propeller driver and spinner nut, requiring props to be opened out to 3/8th in. bore.

The E.D. 2.46 has changed very little since its introduction, but recently it has been given a new main casting which alters the appearance slightly and also offers a mechanical advantage over the previous pattern. The casting, which comprises crankcase, main bearing housing, and the lower .cylinder casing including exhaust ducts, now has a plain, cylindrical housing carrying the two-ball journal bearings, in place of the webbed housing previously employed. Internally, it has three lands, spaced at 120 deg., to support the cylinder liner walls.

A slight modification has been made to the needle-valve assembly. Instead of the familiar 2.46 threaded needle, ratchet-tensioned by means of a wire acting on a knurled drum, the 2.46 now uses a threaded brass thimble, snubbed by means of a coil spring compressed against the spray-bar retaining nut. Both the thimble and the brass operating knob on the end of the needle-valve stem are brazed on, so that the annoying habit (prevalent in soft-soldered assemblies) of the needle coming adrift from the thimble should not arise.



A further modification to the "Racer," suggested by the makers, is the replacement of the existing spraybar type needle-valve by an open type jet assembly, as fitted to the 5 c.c. E.D.-Miles engine. This merely involves tapping the carburettor to take the new jet and needle-block and, at the same time, the carburettor venturi can

be reamed out to a max of 1/4 in. bore. Our test engine did in fact have this small modification, and although one might suppose that the extra power liberated—admittedly small— would be apparent only at ultra-high speeds, it was evident that a slight increase in torque actually resulted at low speeds also.

As regards workmanship in the engine generally, the new 2.46 continues the traditions of the earlier version in being finished best where it matters most—inside.

Specification

Type: Single-cylinder, aircooled, reverse-flow scavenged two-stroke cycle, compression ignition. Disc type rotary-valve induction. Annular exhaust and transfer porting with conical piston crown.

Bore: 0.590 in. Stroke: 0.550 in. Swept Volume: 0.1505 cu. in. (2.467 c.c.). Compression Ratio: Variable.
Stroke/bore Ratio: 0.932 : 1 Weight: 5.707.

General Structural Data

Pressure diecast magnesium alloy crankcase and main bearing housing. Detachable rear cover of pressure diecast aluminium alloy with integral carburettor intake. Aluminium alloy valve rotor. Counterbalanced hardened alloy steel crankshaft with 1/4 in. dia. shaft and 3/16th in. dia. crankpin and running in two Hoffmann ball journal bearings. Drop-forged duralumin connecting rod. Cast-iron piston with fully-floating gudgeon pin. Alloy steel cylinder liner. Separate finned alloy cylinder barrel and die-cast cylinder head. Cylinder assembly secured to crank-case by three machine-screws from cylinder head, with three extra screws securing head to barrel. Spraybar type needle-valve assembly fitted as standard. Beam mounting lugs.

Test Engine Data

Running time prior to test: I hour. Modifications from standard: E,D.-Miles-Special needle-valve assembly fitted and carburettor choke opened to 1/4 in. dia.

Fuel used: 38 per cent. I.C.I. Technical Ether 688.579, 35 per cent. " Pink " paraffin, 25 per cent. Castrol " R," 2 per cent. Amyl-nitrate.

Performance

The general handling characteristics of the E.D. "Racer" are certainly among the best to be found in the 2.5 c.c. diesel class. No port priming is necessary for a start from cold; two or three choked flicks being the only preliminaries normally required, and we found that the carburettor modification to our test engine in no way reduced these easy starting qualities.

Diesels not infrequently suffer from an annoying habit of " freezing " their contra piston when hot. From our experience with about six different 2.46's over the past few years, however, the E.D. "Racer" does not share this fault. The smoothness with which the c.p. moved on our test engine, hot or cold, was most noticeable. Both controls, in fact, are excellent in every way. Also worth noting was the manner in which the engine held its speed, with only a minimum loss of power on warming up—even with negligible running-in time.

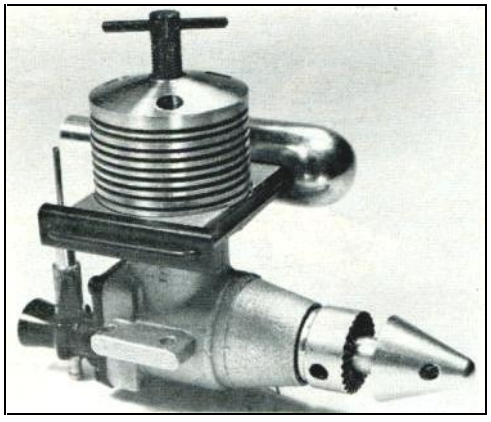
Earlier 2-46's averaged about 0.255 b.h.p. at 13,500-14,000 r.p.m. and the slightly above-average example tested previously recorded 0.265 b.h.p. at 13,800 r.p.m. We confess that the present model shows no appreciable increase on these already very useful peak figures, but a slightly higher low-speed torque was apparent in our tests where the engine reached a relative b.m.e.p. of 58 lb./sq. in. which, of course, is very good.

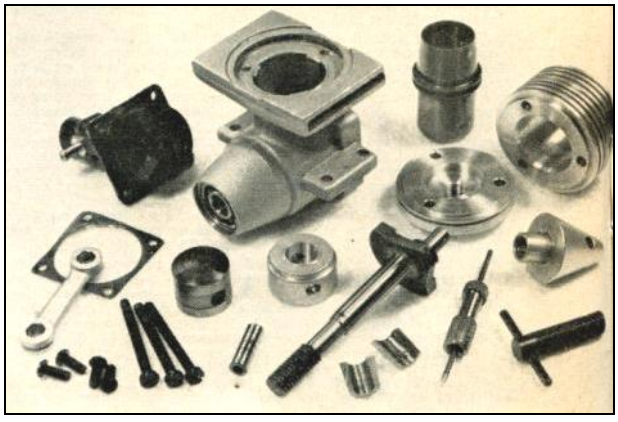
The past six years have shown the E.D. 2.46 "Racer" to be one of the best all-round model i.e. engines ever to come from a British manufacturer and it seems quite likely that it could survive for another half-dozen years.

Power I Weight Ratio (as tested): 0.74 b.h.p./lb.
Specific Output (as tested): 107 b.h.p./litre.

The ED Super Racer 1969

IT WAS in 1951, nearly eighteen years ago, that the original E.D. Company, Electronic Developments (Surrey) Ltd. of Kingston-on-Thames, announced the 2.46 c.c. E.D. Mark III Series 2 engine, otherwise known as the 'E.D. Two-Four-Six' and later dubbed the 'E.D. Racer.' Designed by the well-known model marine engine expert Basil Miles, this engine became the most successful E.D. motor ever built. At the time of its introduction, it combined ease of handling with a power output unexcelled in the 2-| c.c. class, and, even after its performance, as a contest engine, had been surpassed by later designs, it remained a favourite with discerning free-flight and control-line enthusiasts for many years.





The new *Super-Racer* that is the subject of our present report and which is manufactured by the present E.D. firm at Surbiton, bears only a superficial resemblance to the earlier Racers. Nevertheless, under its skin, the latest model retains the basic layout and most of the features of the earlier Racers. It has the same bore and stroke measurement and it still has a unit crankcase, bearing housing and lower cylinder casing with rectangular exhaust duct having outlets each side. It remains a rear disc-valve induction engine with annular cylinder porting. The cylinder assembly is basically the same and the crankshaft still has a small (1/4 in.) diameter journal supported in twin ballbearings.

Writing of one of the earlier Racers, we commented that it was 'finished best where it matters most-inside.' Which was a polite way of saying that, outwardly, the engine lacked the crisp appearance of some other makes. We make no apologies for saying the same about the present model Racer. After all, one should never judge an engine by external appearance: it is the inside that really counts and the Racer is not found wanting here.

Earlier Racers had two 1in. o.d. ball-bearings and the 1951 model had a clearly defined large diameter outer bearing housing on a small diameter extension of the crankcase. In 1952, strengthening webs were added between this and the crankcase proper and in 1957 the entire front end was modified to a straight cylindrical form. With the present model, a smaller (5/8th in.) o.d. front bearing has been adopted and this has allowed the front end to be tapered and slimmed down considerably. A smaller diameter prop driver is used and is fitted to the shaft by means of tapered half-collars rather similar to those sometimes used to retain valve stems in four-stroke engines.

In place of the aluminium rotary-valves used previously, the new Racer, following current practice, uses a non-metallic valve rotor- in this case of black nylon. E.D. have taken this a stage further in the Super-Racer by making the complete rear crankcase cover and carburettor body of black nylon also.

SPECIFICATION

Type: Single-cylinder, aircooled, compression-ignition two-stroke with disc rotary-valve induction and twin ball-bearings.

Bore: 0.590 in. Stroke: 0.550 in.

Swept Volume: 0.1505 cu. in. – 2.467 c.c.

Stroke/Bore Ratio: 0.932 : 1.

Weight: 177 grammes – 6.24 oz. (less silencer). 202 grammes – 7.13 oz. (including standard silencer as supplied).

General Structural Data

Diecast aluminium alloy *crankcase/main bearing housing* with integral exhaust duct. One-piece counterbalanced *crankshaft* with ¼ in. dia. main journal and 3/16 in. dia. solid crankpin. Shaft supported in one ¼ x ⅜ in. front and one ¼ x ¾ in. rear brass-caged Hoffman *ball journal bearings*. Hardened steel *cylinder* with separate machined aluminium alloy *finned cooling jacket*. Separate machined aluminium alloy *cylinder-head*. Lapped cast-iron *piston* with fully-floating 3/16 in. dia. tubular *gudgeon-pin*. Forged duralumin *connecting-rod*, unbushed, with oil slits at both ends. Aluminium alloy *prop. driver* keyed to shaft with two tapered half-collars. Machined aluminium alloy *spinner nut*. Moulded nylon *induction valve rotor* with integral 5/32 in. dia. solid steel pin rotating direct in backplate material. Moulded nylon *crankcase backplate* attached to crankcase with four round-head screws. Moulded nylon *carburettor air intake*. Brass spraybar type *needle-valve assembly*. Beam mounting lugs.

OPTIONAL EXTRAS:

(a) Expansion chamber type silencer (supplied), weight 25 grammes – 0.88 oz.

(b) Angled exhaust stub pipe, weight 14.5 grammes – 0.51 oz.

(c) Curved exhaust stub pipe, weight 16.5 grammes – 0.58 oz.

(d) R/C type backplate assembly with barrel throttle carburettor.

(e) R/C type backplate assembly with barrel throttle carburettor and downdraft intake.

TEST CONDITIONS

Running time prior to test: See text.

Fuel used:

(a) Keilkraft diesel fuel.

(b) E.D. Economic.

(c) 46 per cent. Kerosene, 30 per cent. I.C.I. Technical Ether, 20 per cent. Duckham's Racing Castor-oil, 4 per cent. Amyl-nitrate.

Air Temperature: 60 deg. F.

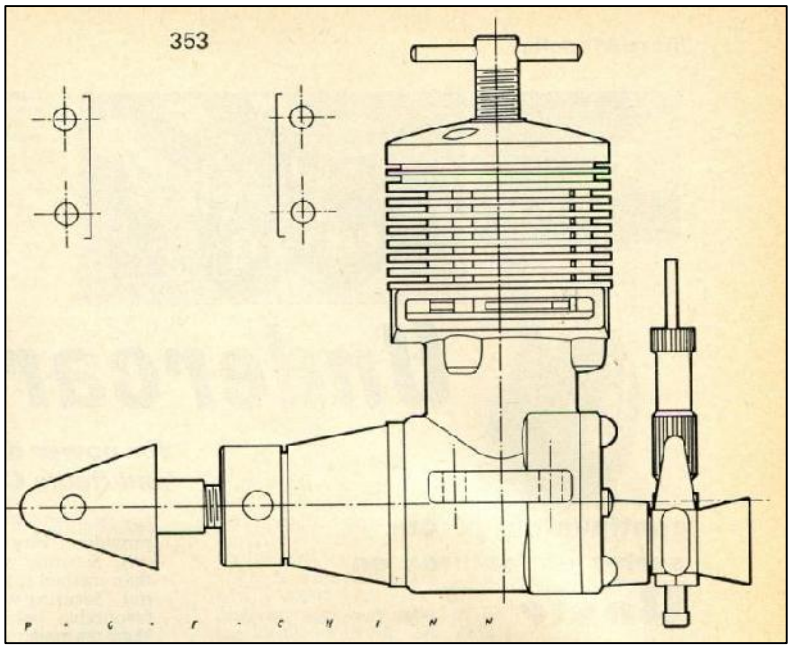
Barometer: 29.6 in. Hg.

Silencer: Maker's single expansion chamber type as supplied.

Piston weight has been reduced by 25 per cent, in the Super-Racer. The piston has a shorter skirt length and a domed crown rather than a conical one. A 3/16 in. dia., instead of a 5/32 in. dia., gudgeon-pin is used but at no increase in weight since it is tubular instead of solid. The piston diameter, incidentally, is reduced approximately .005 in. in the vicinity of the gudgeon-pin band to minimise frictional losses. The o.d. of the cylinder-liner is now tapered towards the bottom, from the port belt, to aid gas flow from the crankcase.

Performance

Our test motor was received direct from the manufacturer and had apparently had some running additional to the normal factory check run. We took the precaution, nevertheless, of giving it about an hour of running time prior to taking any test figures.



Starting qualities were excellent, irrespective of whether the silencer was used or not. Port priming was not necessary, we simply choked the air intake for two or three preliminary turns of the prop, and a start was then usually obtained within two or three flicks. This ease of starting persisted on all propeller sizes down to an 8 x 4 nylon. Only on light, fast, wooden 8x4s or smaller sizes, did starting become at all critical and this is of little consequence since there is no point in reducing prop, load to produce *static* r.p.m. above 11,000 (C/L) to 12,000 (F/F) with the silencer, or 12,000 (C/L) to 13,000 (F/F) r.p.m. less silencer. As the performance graph shows, our test unit peaked at approximately 13,000 r.p.m. with silencer and at just short of 14,000 r.p.m. without silencer.

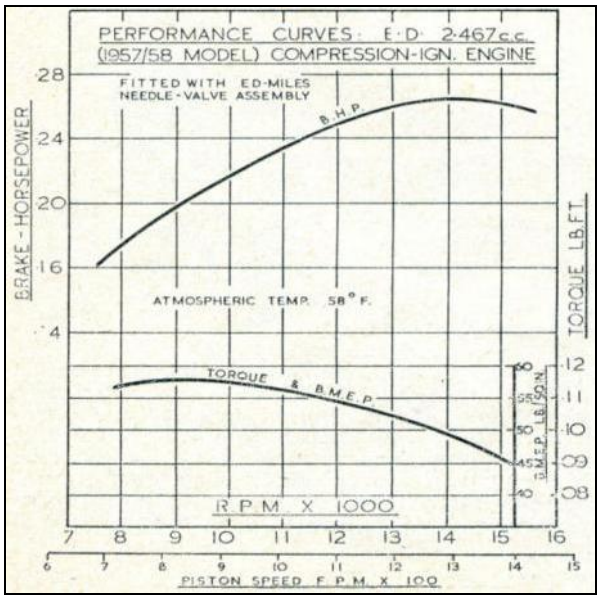
Unlike the typical modern 2.5 c.c. glowplug engine, the E.D. Racer diesel is capable of operating quite happily when loaded down with a big prop. Static r.p.m. obtained on various props, were as follows (figures in brackets denote r.p.m. obtained with silencer fitted): 6,700 (6,500) on 11 x 5 Top-Flite wood; 8,000 (7,900) on 10 x 6 P.A.W. Trucut wood; 8,400 (8,200) on 10 x 5 P.A.W. Trucut wood; 8,900 (8,700) on 10 x 4 P.A.W. Trucut wood; 9,000 (8,700) on 9 x 6 P.A.W. Trucut wood; 10,100 (9,800) on 9 x 5 Top-Flite wood; 10,500 (10,200) on 9 x 4 Keilkraft nylon; 8,500 (8,300) on 8 x 8 P.A.W. Trucut wood; 10,800 (10,500) on 8 x 6 Top-Flite nylon; 11,400 (11,100) on 8 x 6 P.A.W. Trucut wood; 12,100 (11,700) on 8 x 5 Power-Prop wood; 12,500 (12,000) on 8 x 4 Top-Flite nylon.

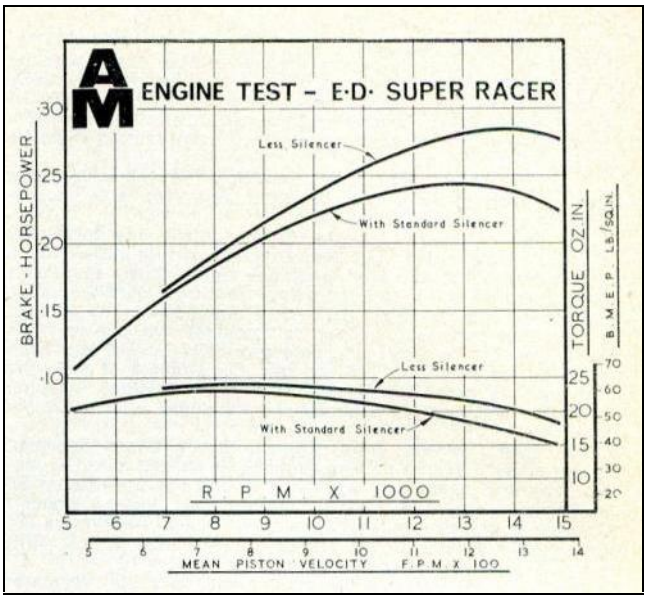
Running qualities were generally good. Both the needle-valve and compression lever were responsive and held settings firmly. For load speeds of up to 12,000 r.p.m. or so, ordinary standard-price commercial grades of diesel fuel such as Keilkraft and E.D. Economic were adequate. Beyond those speeds, the balance of compression to mixture adjustment became more and more critical and we found it necessary to use a more heavily nitrated fuel in order to avoid intermittent misfiring when the needle and compression were set for maximum power. In order to promote smooth combustion at speeds of up to 16,000 r.p.m. (for the purpose of determining the torque and power curves) we used 4 per cent, amyl-nitrate in the fuel. For speeds of up to 14,000 r.p.m., however, 2-3 per cent, should be adequate. The extra nitrate, of course, has the effect of advancing the ignition timing to cope with the higher crankshaft speed without recourse to an excessively high compression setting and/or an over-rich needle setting which could result in the loss of between 200 and 500 r.p.m.

As supplied, the Super-Racer comes complete with standard E.D. silencer and this can be located on either side of the engine, a blanking plate being used to cover the unused exhaust outlet. As alternatives, E.D. can supply angled or curved stub pipes and there is also a complete replacement back-plate assembly with throttle type carburettor for those who wish to use the engine with speed control for R/C

Power/Weight Ratio (as tested): 0.73 b.h.p./lb. less silencer. 0.55 b.h.p./lb. with standard E.D. silencer.

Specific Output (as tested): 114 b.h.p./litre less silencer. 99 b.h.p./litre with standard E.D. silencer.





My BMFA 1st Area Comp - John Andrews

The 29th January, it was ruddy cold. The forecast for little or no wind however inspired me to take the trip to Barkston Heath for the BMFA 1st area comp.

I took only my three BMFA 50gm models for the combined rubber event, I've not yet started on my new one. I had, which is quite unusual for me, made some preparations for the comp in so far as I had looked into my rubber box, lubricated and restrung the three 50gm motors.

On arrival at the field we, the wife and I, drove around to the far side and surveyed the scene. I could not believe the goings on, streamers were limply indicating drift across the field but models were climbing up and drifting off the

airfield in completely the opposite direction. Although the landing area was clear, it appeared to me to be a really muddy looking field that most of the flights were dropping into. I decided that this was not the place for me. I hung around for a while to see if there was going to be any change in drift but none appeared imminent so I went to control, entered rubber, then upped sticks and moved round to the other side of the airfield by the gate.

Your scribe takes on fuel in apparent desolation on Barkston as he contemplates his failure

The only other persons to accompany me, apart from the trouble and strife, to the opposite side of the field was Howard Smith *(the MAD CAP pole dancer from last November issue),* and his flying companion. We had that side of the airfield to ourselves.

The move was the only thing I did right all day.

First mistake, I assembled my latest '0-4' and absentmindedly fitted it with the '0-3's wing. The wings were supposed to be identical but a half turns test flight resulted in the model, after a good climb out, doing flat descending circles until it flew into the floor. I picked up the model altered the side thrust and repeated the exercise. Then the penny dropped and I changed the wing. Looking at both wings it seems that I have more R/H wash-in on '0-4' than '0-3'.

After a further test flight with the correct collection of components, I wound for my first comp flight and a strand broke, I knotted it and carried on to 550 turns on the 12 strand motor. The better half, Rachel, stood by with the watch and I launched '0-4'. The model climbed away well but after the initial burst the cruise was hopeless and height gained was poor. The flight time was an inadequate 1-48 and my day was effectively over.

I decided to give it another go and wound for a second flight. Now things really started to unravel, another strand broke. I replaced the motor and on winding again a strand broke near the front bobbin, fed up I ignored it and carried on.

The motor broke smacking an already cold Rachel on the fingers as she steadied the model and for some reason I was not as sympathetic as I should have been.
A cup of tea, a ham & cheese sandwich and a biscuit or two later I decided that something must be wrong with '0-4', on several occasions in the past my first flight had resulted in similar poor performances but changing to '0-3' to carry on resulted in better flights being made. I decided to check and so I assembled 0-3 and 550 turns later launched. The model stalled on the burst, hovered around a bit and rolled before climbing on,the prop then folded wrong side resulting in the glide circle being left instead of right but in spite of all this, although I still did not achieve a max, the flight was higher and longer.
About this time the mass exodus from the far side had started to arrive but we were so cold by now we packed up and were back on the road home early.
Travelling home I decided that I was going to have to do a little comparison work with the two models to see if I could figure out why the difference in performance. Both models had the same wing areas and section and identical tailplanes. '0-4' had a slimmer fuselage otherwise the same proportions. I figured it might be weight.
Next day it was out with the kitchen scales and I weighed the bits and pieces of each model.

The kitchen scales weight inquest,
the scales only weigh to 1gm but that was enough for this exercise

The results of the weight investigation only clouded the issue as on total the older model '0-3', which had been subject to many major repair exercises, was significantly heavier than the later '0-4' by a considerable margin.

Airframe weights

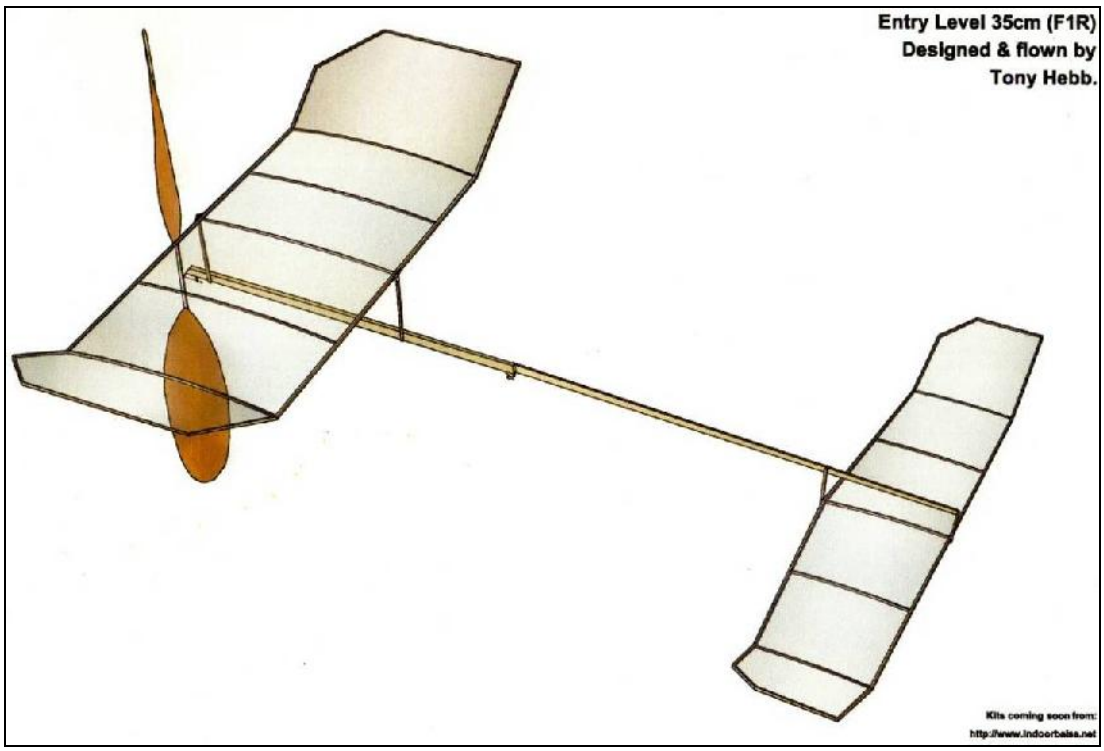
Model	Fuse' Front	Fuse' Rear	Wing	Tail	Prop	**Total Weight**
'0-3'	36gm	12gm	28gm	10gm	33gm	**119gm**
'0-4'	32gm	12gm	27gm	10gm	27gm	**108gm**

Obviously it was not weight causing the apparent difference in performance.
I do not normally time my motor runs but on reflection I felt that the turns on '0-4' seemed to spin off quicker than '0-3', so I looked at the props. The basic root pitch angle was set up on the same simple jig but on closer investigation I noticed that '0-4's blades had more helical twist than '0-3's (ie. more washout at the tip.) possibly due to laminating at too big an angle on the paint tin.
I've now cooked '0-4's prop blades with the hairdrier and have managed to remove a lot of the washout to make it look similar to '0-3's. It now remains to be seen if this makes any difference, fingers crossed.

John Andrews

35cm Indoor Model - Tony Hebb

The purpose of this model is to provide a step on from, say, a Gyminnie Cricket that will provide excellent duration times whilst remaining easy to build. I say easy - but having built the prototype and tried to keep everything within the bounds of what a normal modeller will have available I realise that this is still difficult, but hey, you can build this model without milligram scales, a digital thickness gauge or a sophisticated balsa stripper.
Kits will be available from **www.indoorbalsa.net**
As your confidence and skills grow you can build new, lighter components whilst still remaining within a recognised duration class.



You will need the following tools:-

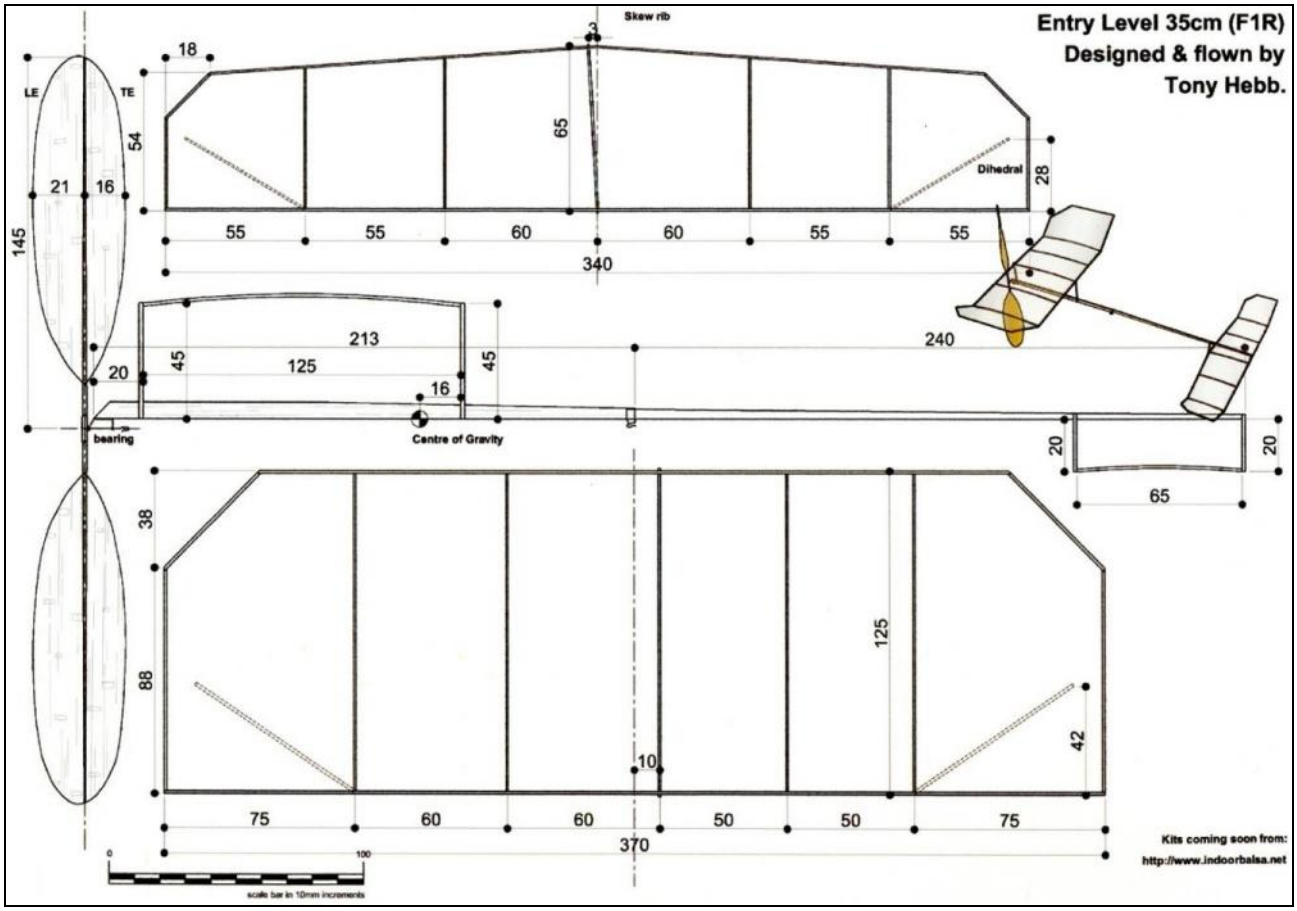
A metal straight edge, preferably 24": Modelling knife: Carbon steel razor blades Razor Plane: Pins: Balsa cement – ideally 80% Ambroid/20% cellulose or acetone. (If not available use UHU from the yellow and Black tubes, again thinned 50% with above.):Small round nosed and needle nosed pliers: Small side cutters: and Fine sandpaper contact glued to a balsa block about 1.5" x 4"

From a material viewpoint you'll also need:-

A "Dual" prop bearing for an EZB model from SAMS or Flitehook.
.013" piano wire or .013" steel guitar string: Film covering: Indoor quality 1/32, 1/16 (.063") and 3/32 balsa, ideally in the 5 to 6 pound range.
Indoor .013" balsa for the prop blades, 4 to 5 pound C grain good
You might consider buying one of the EZB kits that are available and using the wood from it.

Build Notes.

First of all I am not trying to give a blow by blow construction account. Please, please find and read **Larry Coslick's Hobby Shopper EZB article** (Indoor News and Views) – he does this far better than I can and I still reference it today!



What I shall do is describe how to put this model together with as little fuss as possible and still get a decent duration model out of the other end – you will not use these construction techniques much in your indoor future!

Wing and Tailplane.

Measurements – 1/16 sheet is .063", make 2 reference strips, one half this (.030") and one 3/4 (.045") just by eye is quite good enough. These will allow you to gauge the finished ribs and spar thicknesses quite well.
Put a new blade in your razor plane and adjust it so that it takes the finest continuous shaving possible.
Cut a piece of 1/16 sheet about 8" long by 1" wide. Mark across the top surface with a felt pen – lightly.
Take 3 shavings off the sheet starting at 2"from the tip, then at 4" and finally 6", just let the plane do the work, no pressing down, then lightly sand the sheet to give a smooth taper to about .045 at the tip.
Cut 4 spars off the sheet, cut the taper (.063 at the root) by eye so the spar is about .045 at the tip, pair up the spars and sand to match along the length. Best to straighten up the edge of the spar sheet after each pair of spars to keep the grain along the spar. Cut diagonal joints at the centre, pre glue then cement together, press against a straight edge to keep the bottom flat.
To make the ribs cut a template from stiff card, you can sand it smooth and if necessary a bit of superglue will harden up the edge. Break a razor blade in two and put some tape across the broken edge to hold it by. Use your .045" measure and a good eye to slice off 5 ribs from the 1/32 sheet.
Stick ¼" squares of sellotape over the plan where the glue joints fall, then pin pieces of straight edged balsa to outline the wing frame. Set the spars in position, holding them in place with soft balsa "clamps", don't pin the spars directly. You should pre glue all joints. I attach the ribs first at the leading edge, then cut to length using a NEW piece of razor blade and glue to the trailing edge.
The tailplane is the same, except of course the spars are thinner (taper from .045 down to .030) – the ribs can be a little thinner too. Note the offset on the centre rib.
Covering is OK with Pennyplane film or lighter(eg. OS film), there are various articles describing the techniques available on-line. It's really not that difficult and so much better than condenser paper.
Finally cut and glue the spars on the wing and tail to form the dihedral breaks, make a few "rugby post" jigs to help keep things flat, makes life easy and doesn't take much making.

Motor Stick and boom.

Cut the ¼ wide MS from light, stiff 3/32 sheet, reduce the front and rear to 3/16 by taking a few shavings off with the razor plane, sand it smooth, go on you can even round off the corners ever so lightly! Make the boom from 3/16 x 1/16 at the motor hook tapering to 1/8 x 1/32 at tailplane TE) – worth the effort though, this is an important piece of the model, needs to be as light and stiff as you can make it. Emphasis on the latter!

The wing posts are 1/16 square rounded (rotate gently between two pieces of sandpaper glued to a couple of flat pieces of balsa) – you only really need to round the ends. Make them a nice snug fit in the 1/16 tissue tubes. Something a little smaller diameter (about .045+) for the tail posts will be fine.
Glue the boom to the MS with a ¼" overlap joint; make sure it's straight along the bottom edge.

Next add the front bearing with 2 to 3 degrees left thrust, 0 degrees downthrust, then add the rear motor hook. Add some tissue reinforcement to both these metal to wood joints for security.
To mount the posts I glue one in place first, then use the completed wing/tail to mark the location of the other. Finally put the tubes on the posts and with the wing propped up at the right height glue the tubes to the LE and TE spars. Make sure the wing/tail surfaces are flat at this point. When you glue the tail tubes in place build in about 3/8" tail tilt (port tip high) to help the left turn. Let the joints dry *thoroughly* before handling!

Propeller.

Ideally buy some light .013" C grain sheet for the blades and make as per the Hobby Shopper article, otherwise its sand down from 1/32 – a bit of a task I know.
Form the blades wet over a bottle as per the Bob Bailey article for the Gyminnie Cricket on the BMFA website – I'd recommend just a 10 degree offset and use a larger diameter bottle (than standard wine one!) for a former to avoid over cambering the blades. Using a pitch jig is better but needs more work to produce, for this size prop. the bottle method is OK. Attach the blades to the propeller spar with 20" pitch.
Prop spar - use slightly harder balsa than for other components. Make two halves, tapering as for the wing spars to match them and join at centre with scarf joint. Form prop hook, push shaft through spar at scarf joint and bend a U at the front end. Attach with cement or thin cyano, making sure shaft is at right angles to spar. Attach blades to spar using cement as for other joints.
Prop pitch set by making tip angles about 28 - 30 degrees to shaft (make sure both are the same!).
The prop. is the heart of a duration model and time spent here will be well rewarded.

Flying.

This model is going to climb like a homesick angel, so for a typical sports hall and to speed up the trimming process I'd recommend using a 1/3 motor with a 2/3 spacer – make it from hard balsa or a bamboo skewer with 20g wire ends. The size and weight of your motor (and therefore spacer) is going to be dependent on the finished weight of your model, my model weighs in at 1.25g and a full motor in

the region of 1g is OK. Try about .050" thick rubber to start with. The motor is made to 1/3 weight and 1/3 distance between prop. hook and rear hook.
Hang the motor (+spacer if using) between the prop. and the rear hook and check that the model balances around the indicated CG, if not add blue tack or similar to make it do so.
The wing is set at zero incidence and the tail at -2 or 3 degrees to start with. Put on a couple of hundred turns and try it, aim to fly nose up with a left turning circle of 15 to 20' and enjoy.

Conclusion.

I hope that you'll be able to get someone to help with the model as this makes all the difficult bits much simpler and they will have access to wood, rubber, scales etc. that makes everything so much easier. You can go it alone but eventually you have to fly the thing somewhere anyway, so why not get in touch up front?
Once you've made a model if you want to improve it there are many areas to try. It'll probably be heavier than you'd like, now is the time to get fussier about weight and stiffness of the balsa you use. The spars can definitely be reduced, but remember it has to support the final weight of the model! Try to get a model built at around 1.0gm. The propeller blades can easily be made from .010" balsa or even try a built up propeller! Using OS film for covering will also save 100mg or so – I find this easier to use in fact as it seems to have less static charge. Or how about a rolled motor stick?
All part of the challenge.....have fun!

Tony Hebb

Brownhills Indoor - John Andrews

Saturday Feb.11th saw me back indoors at Tony Eadon-Mills indoor meeting. Another cold cold day but at least we were indoors. Attendance did not suffer too much unlike the Thorns meeting on the snowy Saturday previously where attendance was down by about 50% and one or two left early when the snow started. I had chickened out completely as I did not fancy the probability of 50miles of motorway in snow.

Back to Brownhills, Pete Hales was there again, this time flying small radio, he was supposed to be wearing yet another of his wife's masterpieces but he could not remember which he had worn before and we think he picked the one he wore before at the xmas do pictured in the January issue of the New Clarion. I call your

attention to the lefthand side of the picture, someones grandson getting elevated on my chair for launching his all sheet rubber model. My own flying was without incident, my legal eagle performed reliably as did my 'Gyminnie Cricket'. Three minutes twenty or so was the best time I achieved with the cricket. I like to get four minute flights but I feel the cold air was not aiding performance.

It was a similar story with my old EZB, the model is heavy at 3gms but it is built for the knock about of sports hall flying, however it will still do over 4 minutes in good conditions and a bit of fortunate ceiling bashing. At least everything I flew was OK and no mid-airs or hang-ups.

Mick Brown was present airing his half scale version of Canadian Robert Morgan's elegant Wakefield from 1937/39 era. The original fullsize model took first place in the Canadian Nationals in 1939.

In spite of the absence of Tony Eadon-Mills and his huge modelling table/sideboard, Tony was missing on domestic business, we all had a reasonable afternoons flying without any major upsets. My roach pole was called into service on a couple of occasions but no damage resulted from release of the stranded models.

A good afternoon out in good company and back in time for tea.

John Andrews

More on Competition Diet - Jim Paton

In response to Peter Hall's erudite submission, in the January issue, concerning dietary requirements for competitive aeromodellers I offer the following:

After an in depth discussion with my erstwhile friend Dr Shipman before his recent troubles, my preference is for maintaining blood glucose level between 5 and 5.5mmol/l. Below this level mishaps resulting from over-winding your Tan 2 without a hat become more frequent. (Ref previous Clarion contribution by said

Prof). Above this level there is a risk of diabetic coma, often indistinguishable from "post recovering model syndrome" (PRMS). Not to be confused with "PMS" (Excuses for Grumpy women syndrome). How to achieve this happy mean depends on the venue. At the mown lawn of Middle Wallop a regular supply of chocolate is good enough, between main courses of Champagne and Salmon sandwiches, carefully prepared the night before by the good wife.(Where can I find one?).
At the slightly more hilly Salisbury Plain, more extreme methods are required. Keeping the blood sugar up requires at least 3000 calories per hour, best achieved using an intravenous drip of glucose solution and a syringe driver. Both are available from your friendly G.P. at less than the cost of an Andruikof F1B. Of course high calorie drinks are an alternative, but the effects of isotonic glucose on the bowels, whilst in area 8, has been well publicised, and does not endear us to our generous benefactors.
There is the alternative approach of using anabolic steroids. These are readily available from any winning sportsman of other non-aeromodelling disciplines. Users are easily recognised by an aggressive manner, a receding hairline, and small testicles. The advantage here is that SAM do not routinely test for prohibited substances. Make the most of this opportunity. If all else fails, get some ecstasy from your friendly local drug dealer. Taken early they obviate the need for any food at all till after the fly-off.
However, if you really want to win, forget all the above and send me a £20 note for my guaranteed thermal visualising spectacles. Now that I have learned to launch just after Peter Hall they have become redundant.

Jim Paton

Wakefield Cup Winner 1971 - Charles Dennis Rushing

1971 Josef Klima, 29, Czechoslovakia

Modellflygforbund took a gamble and bet that the tiny aerodrome at Save, near Gothenberg, Sweden, would contain F1A, F1B, and F1C, because the yearly weather almanac said that the wind would be calm during early August. Had this trilogy of Free Flight events lasted one day longer, they would have been wrong. Flying this year would begin at 4:30am, stop at 10:00am, and begin again at 5:30pm. In the "Land of the Midnight Sun" there would be no element of luck, or so the promoters said.
F1C did start at 4:30am like they said, but by 8:30pm nineteen contestants were standing by ready to participate in the first round of the fly-offs. This crowd included Thomas Koster, the 1965 Wakefield Champion. When the dust cleared R Hagel of Sweden was the winner, beating Koster by six seconds.
There was a fly-off in F1A also, but only for two, with P Dvorak (of Czechoslovakia, unrelated to Franisek Dvorak) declared the winner over N Munnukka of Finland by twelve seconds.
Sunday, July 4, would be F1B day, beginning at 4:30am. Twenty-seven nations had fielded 71 contestants, some in matching warm-up uniforms, in their countries national colors with nationalist bunting, umbrellas, and flags, so much for "friendly" international competition! The contest officials had banned "thermal detection devices" from the marked flying zone, in an effort to level the playing field. Lately teams were showing up more and more with "thermal detectors" that recorded the wind, change in temperature, and

graphically displayed the events simultaneously on a paper record sheet. All of this required poles of varying sizes scattered all over the field, and it was these that the officials took exception to. After all the F1B aeromodel was assuming a formula characteristic that made them similar in both appearance, and flight pattern, and the "thermal detector" was only another tool like the aeromodel itself! With all this baggage, not to mention the motorcycles which were especially indispensable to the American aging population for retrieval of their F1B aeromodels, the modern free flight flying field was becoming quite cluttered.

ROUND 1-7: At 4:30am the skies were clear, and the wind was calm. Denmark was clearly in the lead with perfect rounds for the entire Team. During Round 4, Bob White of Team USA watched helplessly as his "Twin Fin" dived into the parking lot for a delayed flight. Inspection showed only the propeller to be damaged. Bob quickly changed propellers, and flew again to max the round. The "warm-up" to the "real contest", ended with round 7, where we find twelve contestants to compete for the Cup in the fly-off rounds.

ROUND 7: The round opened at exactly 8:10pm with clear skies, but cool temperatures. This would be the 240 second round. The first contestant off was Josef Klima of Czechoslovakia. Keld Kongsberg of Denmark wound up only to blow a motor, as his Team quickly worked to repair his first F1B, he then wound up his spare F1B, meanwhile his first F1B was ready, and he wound it up again! Keld did all of this winding in less than four minutes! He finished seventh. No one did the 240 second maximum, and the contest came to and end.

Now the officials confiscated all of the F1Bs for final processing. There had been a spot check made at the end of the sixth round, and Bruce Rowe of GB had been disqualified for being underweight. Now consternation reigned as they discovered that Josef Klima had removed his motor from his F1B! The officials called for all of his officially weighed, and stamped, motors! Some were found to be over the weight limit! It was found that the rubber had been weighed on another scale, and the two scales were not balanced alike! Another conference by the officials, and finally Josef Klima was declared the 1971 Wakefield Cup Champion! The difference between first and tenth was one minute.

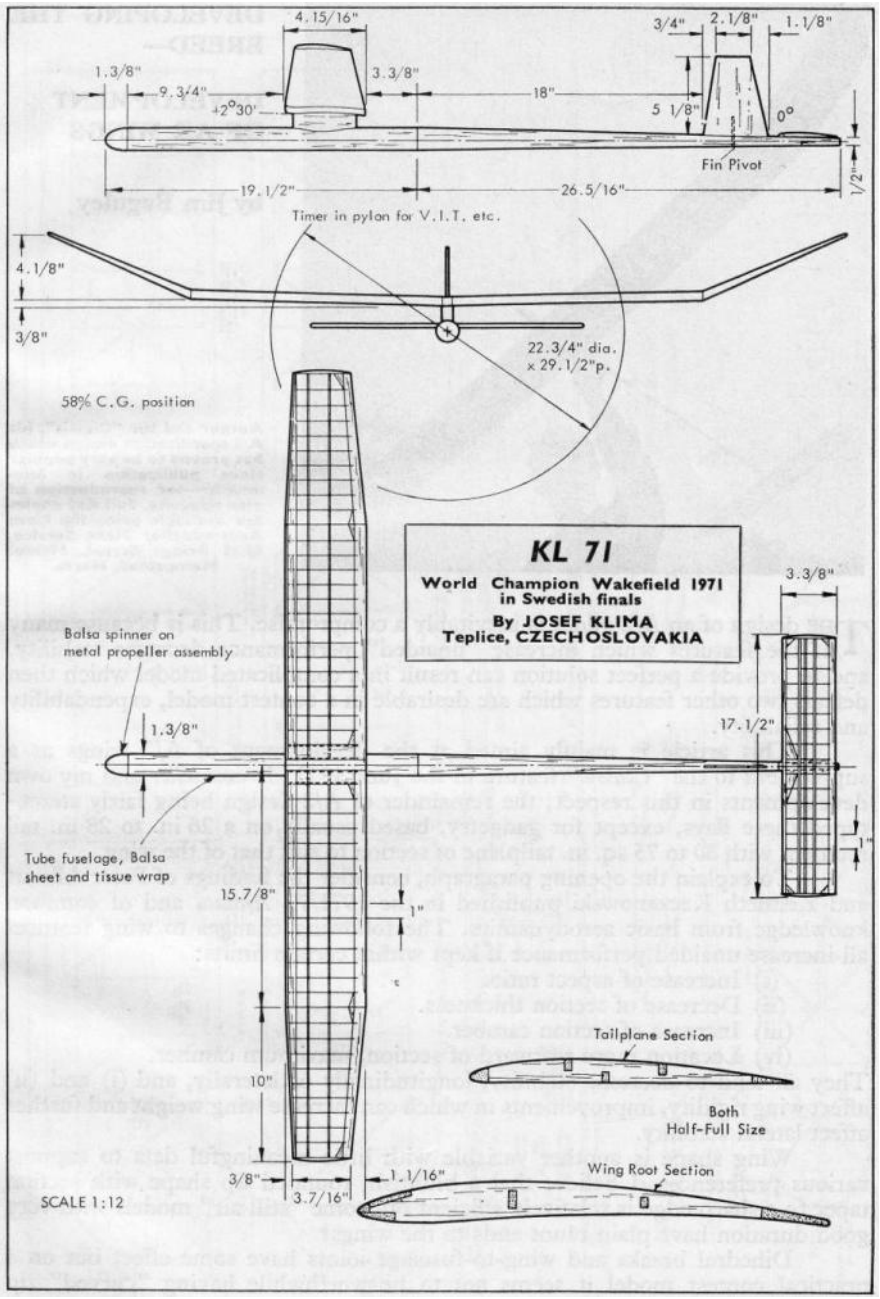
Individual Placings

Place	Name	Country	Round I-7	Round 8
1	J Klima	CS	1260	232
2	V Kmoch	YUG	1260	226
3	R White	USA	1260	214
4	R Hofsass	BRD	1260	210
5	A Lonardi	ITA	1260	199
6	K In Sik	DPRK	1260	187
7	K Kongsberg	DEN	1260	186
7	K Dong Sik	DPRK	1260	186
8	Jourov	CCCP	1260	184
9	C Schwartzbach	DEN	1260	182
10	L Dupuis	FRA	1260	174

1971 Team Results for Penaud Cup						
Place	Country	Abbreviation	Total	Team member places		
1	Denmark	DEN	3762	7	10	17
2	France	FRA	3726	11	19	22
3	USSR	USSR	3723	9	14	29
4	Dem.Rep.Germany	DDR	3717	13	18	23
5	North Korea	PRK	3696	6	7	38
6	Fed.Rep.Germany	BRD	3679	4	12	43

Charles Dennis Rushing

The following images are courtesy of Roy Tiller and the DBHLibrary



Josef from Modellflygnytt
Issue 4 1971 of, Sweden

Later in 1980 from Vol Libre
review of winners taken in CSSR

Roy Tiller

Those Were the Days

October 1929 It is an interesting point that when any type of model aeroplane has reached a certain standard of performance its place as the leading type is taken by another. Following the twin-pusher r.o.g. machine came the spar tractor, which point had been reached about the summer of 1914. There followed a gap of five years, and in 1919 many of the old hands had been swallowed up by the War, or had lost interest.

For a time the pre-war types of model aircraft were built, but soon the demand for a new field to conquer became evident, and the fuselage machine made its appearance as a successful type.

Stanger made a record flight of 51 seconds in April 1914 with a PETROL DRIVEN MODEL; then a few years later a man well known in model power boat work, Westbury, designed a petrol engine which was built into a scale model of the Cranwell light monoplane by aircraft apprentices. (See the recently published book "Jet" by Sir Frank Whittle.—*Ed.*)

"I have not said anything about the wireless control of models, for if I know little about engines, I know less about wireless. It does seem though that at least we have reached the size of model which justifies the use of wireless control, but what form it will take I have not the slightest idea. May we be preserved from the "scale" fiend who will not be satisfied until he has inserted his "scale" pilot with joystick grasped in one hand, and feet on the rudder bar! Whatever happens, the rubber driven model will continue to be built in increasing numbers, for the petrol plant will only be available to the prosperous few who have time and money to devote to it." (The foregoing is extracted from an article by "R.L." in the S.M.A.E. Journal for October 1929.)

1928 Rockets In 1928 the S.M.A.E. exhibited at the Schoolboys' Exhibition, and early in July entertained a team of aeromodellers from America. At Croydon Aerodrome a contest for spar models was won by Ford Grant of the U.S.A. with a flight of 79.2 secs., England winning a fuselage type event with Plater's 48.4 secs. The speed competition brought forth a surprise model in the form of a rocket plane by B. K. Johnson. R. N. Bullock won with a speed of 34 m.p.h. Fuselage model records were again beaten by T. H. Newell 76 secs. h.1., and 65.2 secs. r.o.g. by Mr. Bradley.

Formulae Controversy When fuselage models were first flown the fuselages varied considerably in cross-sectional area and in some instances veneer tubes of about one inch in diameter and three feet in length were deemed by their designers to be fuselages, inasmuch as they completely enclosed the rubber motor. The committee of the S.M.A.E. decided not to allow this, and thereupon agreed that the cross-sectional area of a fuselage should have a reasonable and definite relation to its length, so that a model should at least have some appearance of the full-sized machine. (The original formula of $\frac{L2}{100}$ was later modified to the F.A.I. requirement of $\frac{St}{80}$ where St represented the total surface area of the machine. The right to limit designers to any resemblance to full-size practice is still one of hot debate wherever aeromodellers gather.—*Ed.*)

Crookham Gala - Roger Newman

The first meeting of the year at Middle Wallop was held on 12th February, in very cold but otherwise excellent flying conditions, attended by a bunch of hardy & enthusiastic fliers. There was still some snow on the ground but it didn't stop the tent from being erected by those of us who have become (relatively) quite expert in this task.

The wind was pretty light & from NNE, so we were positioned on the tarmac apron adjacent to the main road. Maxes were set at 2 min 30 secs for the combined events & 2 mins for F1G & Mini-Vintage, with all flights landing well inside the field. Competition flying commenced at 10.00 am under the competent organisation of Roy Vaughn. There were even a few keen sports fliers doing some early year trimming.

Peter Hall sniffing the air for lift

Where's that gone Ted

Comp flying finished at 3.15 pm, with all four classes then requiring fly-offs. Given the low wind speed & permission from our friendly farmer to go "anywhere", the fly-offs were unrestricted. The longest flight time was 3 mins 34 secs, achieved by Andrew Longhurst in winning F1G, his "traditional" model landed nowhere near the edge of the field.

A relaxed Andrew Longhurst

Ted Tyson, Mini-Vintage winner

The three entrants in Combined Power all flew electric, with Trevor Grey achieving quite an astounding height. Mind you, Ted Tyson was getting to the same sort of height with his mini-vintage rubber model. Jim Paton & Chris Redrup were particularly active – each flying in three comps! Andrew Longhurst was quite relaxed with two comps & two fly-offs!

Results were as follows:

Combined Glider (3 rounds x 2.30)

Place	Competitor	Total	Fly-Off
1	Dave Cox	7.30	2.53
2	John Hook	7.30	2.32
3	Andy Crisp	6.06	
4	Chris Redrup	5.58	
5	Steve Brewer	5.49	

Combined Power (3 rounds x 2.30)

Place	Competitor	Total	Fly-Off
1	Trevor Grey	7.30	2.33
2	Jim Paton	7.30	1.51
3	Daniel Chilton	6.47	

F1G (5 rounds x 2.00)

Place	Competitor	Total	Fly-Off
1	Andrew Longhurst	10.00	3.34
2	Dave Greaves	10.00	3.12
3	Peter Hall	10.00	3.01
4	Chris Redrup	9.37	
5	Ted Tyson	9.30	
6	Jim Paton	9.01	
7	Peter Tolhurst	7.05	
8	John White	5.55	
9	John Minshull	1.59	

Mini-Vintage (3 Rounds x 2.00)

Place	Competitor	Total	Fly-Off
1	Ted Tyson	6.00	3.07
2	Fred Chilton	6.00	2.42
2	Andrew Longhurst	6.00	2.42
4	Jim Paton	6.00	1.49
5	Chris Redrup	5.51	
6	Andrew Chilton	4.40	

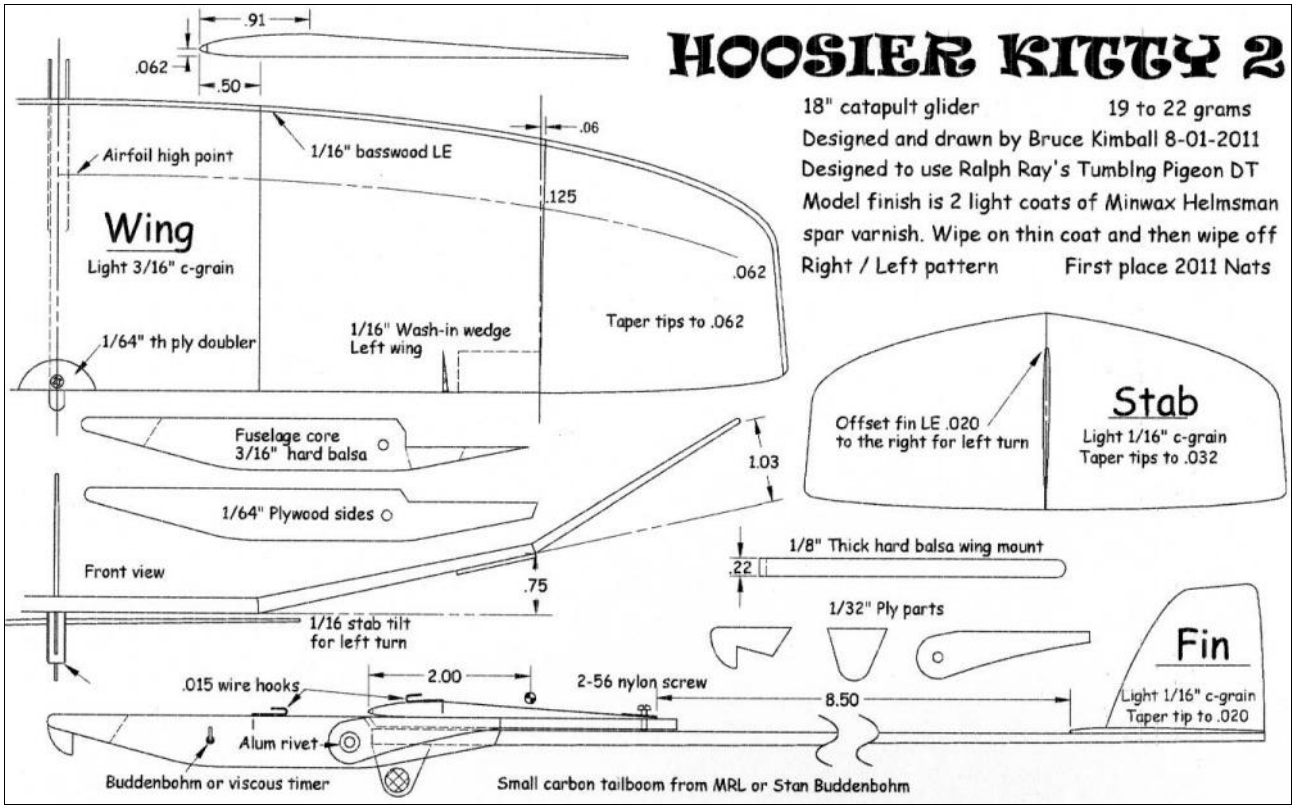
Amongst the attendees was Bruce Kimball from Seattle, USA who was on a wind tunnel assignment for Boeing at RAE Farnborough. He had heard about MW & was keen to see what all the fuss was about! Anyway, Bruce came with his own design CLG & proceeded to show us some amazing launches. He told me that he came 2nd at the recent Canadian Nats & that the winner was flying the same model. Bruce is scheduled to be back next month & hopes to attend our March meeting, so we'll include a CLG comp (for fun) in this meeting. Peter Tolhurst knows Bruce well & has kindly passed on a copy of Bruce's CLG for SAM 1066 readers. It appears in this edition of the NC. So have a look at the note on our March meeting below & get building!

Unfortunately the date for this years Crookham Gala coincided with an Old Warden Swap meet & a Totton Indoor meet, hence attendance was lower than anticipated plus the dire weather forecasts from earlier in the week probably contributed to a few missing out. Nevertheless, a good time was had by all who made the effort. (Mental note – how to avoid date clashes for next year?)

Congratulations to the Crookham Club for putting on an excellent show.

Roger Newman

Hoosier Kitty 2 - Bruce Kimball



Bruce told Roger that he came 2nd in the Canadian Nationals but added that 1st place was taken with his model design.

Further info: Bruce won CLG at last year's (2011) FF Nats with a different model - he has competed over here a few times over the years.
He also won the 2011 US Nats CLG event with this very model.

Bruce Kimball

Model Aircraft February 1960

Free Flight

In view of the complexity of rules and restrictions attaching to this type of event, the council discussed the possibility of renaming it. However, owing to the various international interpretations of the term it was decided to defer the issue.

Free-flight finals will now be flown as eliminators. The eliminating process will begin in the small hours of the morning and continue on a systemised scramble basis until all but one of the victims, or rather competitors, are knocked out. At the end of the marathon it is hoped there will be at least one survivor to receive the pot, providing he is strong enough to carry it.

All claims for long distance walking records, made during the event, will be sympathetically received.

To suit the new conditions the Recovery Service will be extended. In addition to the usual first aid facilities there will be the provision of pep up pills, foot baths, artificial respiration, and all modern means of resuscitation. After the sixth fly-off bathchairs will be issued at the discretion of the judges.
Next year's competitors are strongly advised to participate in the current spate of marching stints as a necessary part of their training.
It is not yet known whether World Championships will be held yearly, two-yearly or five-yearly. Much will depend on whether anyone is prepared to run them, and also how long competitors take to recover from the previous endurance.
Formulae will remain every bit as complicated as before, with the usual grim grms and dim dcms to confuse the sporting British. Give these foreigners an inch. . . .
Personally, I don't see the point of this decimal system, anyway, as the modeller said, taking his 0.294 scl- m- Wakefield out of its matchbox.

Sheer In-comp-etence

Contest organisation has always been a fruitful subject for this off-beat column; engaging some of its wilder flights of fancy. But now, I feel utterly ashamed at the lack of imagination displayed when confronted with the glorious improbabilities of the real thing as currently applied. I can only take off my tattered titfer to the sheer inventive goonery of it all.
Even in one of its more delirious moods, this column could never have concocted anything so fantastic as the " Phantom Rally." Without doubt this is the practical joke par excellence. Just imagine the side-splitting hilarity of it as the travel-stained comp fanatics stop short at the tightly closed airfield gates. And what about that riotous cross talk act with the equally baffled guard commander? Such a giggle for the organising funsters as they lay snugly in their Sunday morning beds.
On a lesser level is the " do-it-yourself" rally. This provides the date, the airfield, the downwind forest, " no flying whilst aircraft are operating," and all the other familiar rally amenities, but the joke is there is no one there to run it. Not a sign of an official or anyone with the least clue.
After waiting around until about 4 p.m., which is the time even the best organised events usually get started, the competitors decide to hold their own scratch contest. Needless to say, under such unusually expert management, it turns out a complete success.
This is a fair enough joke, and one which, I think, has definite commercial possibilities. The " do-it-yourself" rally kit would become a must for any contest enthusiast. Among other things the kit might include a dummy stop watch, set at three minutes, flight cards, labels, lolly making outfit (refreshment and litter), a cardboard cut-out trophy, prize giving speech on plastic record, and a forged airfield pass.
With slight modification the kit could be used as an ideal club game for the winter evenings. All that would be needed is a slightly altered snakes and ladders board and a dice cup. Then, when the motor cycle gossip begins to flag, out could come the game for the club to enjoy a hectic hour of all the fun and excitement of the contest field.

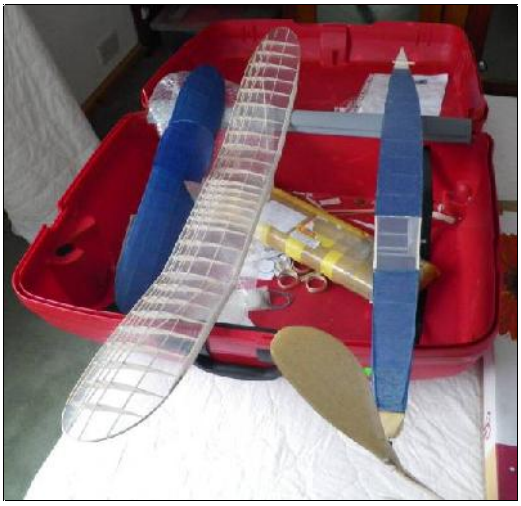
Under the Counter

Our counter spy service reports something quite new in the kit line. A non-plastic model constructed of a revolutionary new material called Balsa. Exceptionally light, this wonder material can be cut with a razor blade. The kit also features a very simple but highly effective form of motive power. Strands of rubber strip are connected between hooks, and when wound turn the propeller. Cheap, economical and safe.
Our glow plug expert advises against going into the model shop and asking for a couple of U.as. Comes under the heading of insulting behaviour, or something.
Reading of a model which suffered a rubber explosion in mid-air, we are now pleased to report that explodable rubber, as used by the British Wakefield team, can now be obtained from any good toy shop. This does not come within the province of the Dangerous Explosives Act (1066) and is available with full ignition mechanism, which, of course, does not come under the Small Arms Act.
Which just about winds the whole thing up

Pylonius

Picture Gallery

A couple of pictures from Jim Paton



Unpacking a part finished 4oz Wake built in New Zealand

A couple of Buckeridge Lightweights just waiting for the right weather

Another Spencer Willis masterpiece
The simple elegant 'Eurika'

Garth Pierce with his 'Mercury V' *(a Tony Tomlin picture)*

Chris Chapman winds his Hurricane for the Eal Stahl Low Wing.
Well known spectator in the background bows his head awaiting the bang
(a Keith Miller picture)

Archive Action No.11 - Roger Newman

Plans Library

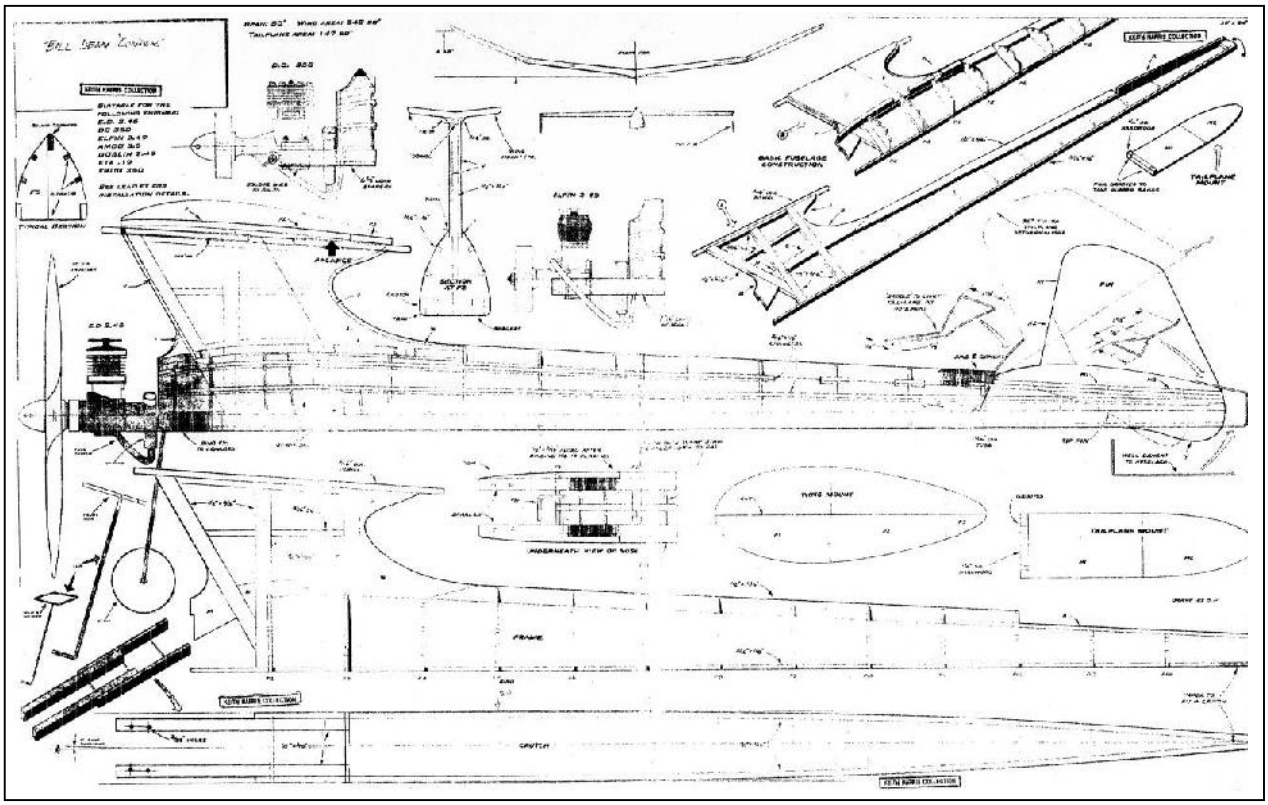
A few hiccups lately. For reasons unknown, my wireless router developed a propensity for low power RF radiation which meant my regular PC couldn't pick up any signals – result no Internet. Resorting to a laptop bought its own bag of problems, as my regular PC is on Windows XP, whilst the laptop is Windows 7. Apart from the learning curve difficulties, this resulted in having to swap various data files between PC's & inevitably losing some information along the way. Problem now sorted by hard wiring the router round the house into my study, where it is then hard wired into the back of the regular PC.
However, some plan requests took rather longer than normal to fulfil, plus Roland in the USA (who does quite a bit of scanning) has been extra busy so turnaround on requests to him have been taking longer as well.
So apologies to anyone who has suffered – we should catch up in the near future.

I have catalogued the last few plans donated by Derek Ridley & will now start on the Bournemouth Club library plans, then a few from Peter Giggle will be added to make up the next release – I guess some time in late Spring.
Look out for paper copies on sale at our MW meetings – either in the back of my van or with Roy Tiller's magazine sales.
These are plans that have been scanned so are now surplus to requirement.
All paper plans are 50p with proceeds going straight to SAM 1066 funds.

Sequel on Keil Kraft Condor

For those who can recall my short piece on the Keil Kraft Condor last November, I received scans of the plan back from Derek in Lancaster & forwarded these to Mark in New Zealand, informing Les in Australia of progress.
There then followed a three way email dialogue between Mark, Les & I on various points of discussion regarding details of the plan – not the least of which concerned a possible very slight sweep back of the wing leading edge, which none of us could quite believe but was definitely visible on the paper plan.
These have now been more or less resolved & Mark has finished cleaning up the digitisation, so we now have the Condor plan in the library (DBHL 1488).
A copy has also gone to Devon Sutcliffe in NZ as he has joined us in putting this model on the build list. Hopefully, at least one will appear during this year, complete with an ED Racer up front.
The picture following in this issue shows the cleaned up fuselage – compare this to the image in our November issue & you can see what is possible.
My thanks to all concerned for the hard work they have put in over the past couple of months.

Roger Newman



DBHL 1488, Improved 'Condor' fuselage plan

RDT Part 1: – the radio link - Martyn Cowley

R/C — what is it, how does it work, how can I use it for F/F DT ?

In response to Peter Michel's recent request for help with RDT, let's start with the expensive bit: The Radio Transmitter and Receiver (Tx & Rx)…

Modern 2.4 GHz R/C is very complex with literally dozens of special functions and features. But don't worry about all that, because you won't use 99% of these capabilities. All you need for F/F DT is to plug the DT Servo into one channel of the Rx (say Throttle or Flap), plug the battery into the appropriate Rx socket, then switch this channel on and off at the Tx, to hold the DT position or activate it. Don't forget to keep the batteries charged. That's really all you need to know. — End of story !

Control Channels:

But for those dedicated F/F'ers who really have no idea how modern R/C Tx function, here's a quick overview. 2.4 GHz R/C equipment is often referred to as being a Computer Radio, but don't let that put you off. You don't have to know how to operate a computer. It's really just a few button-presses and switches to be set, just follow the Instruction Manual. First thing to do is to switch on both the Tx and Rx, to "Bind" the Tx to the Rx, so that the transmitter knows which

receiver it is supposed to be operating ! Next select and save the Model set-up and Mode for your radio by choosing the Model type: for F/F DT you could choose either Glider or Aircraft mode, which then assigns different functions to the Tx controls to suit an engine powered Aircraft or Gliders (they are different, especially Helicopter, which is not an ideal choice for F/F, because it has a different concept for failsafe mode, to avoid a power-off free fall — more later…)

All 4-channel transmitters have two primary joysticks (for channels 1 through 4), which are sprung loaded to the center for neutral control deflection, and then you move the joysticks side-to-side or forward-and-back for Rudder, Elevator or Aileron control (depending upon the chosen operating Mode). You could use any of these channels for RDT, but you will really only get half of the servo travel (from center-to-left, or center-to-right, etc) which may NOT be ideal for activating a DT.

Typical R/C transmitter, set up for Mode 2 control, with Throttle on Left joystick

Therefore, a better choice would be to use the Throttle joystick (the forward-and-back joystick on the left side of the transmitter, in Aircraft Type, Mode 2), which does not have a spring-loaded return-to-center ie it will stay at whatever throttle setting you choose until it is moved. But for F/F you can hold the joystick at full travel with a rubber band, to avoid knocking it and accidentally DT'ing the model ! Using the Throttle channel you can use full throttle, stick forward (= full servo travel one way) to hold the DT down, and zero throttle, stick back (= full servo travel the other way) to release the DT line (This on/off orientation is IMPORTANT for F/F DT failsafe, again see below …).

5 or 6-channel Tx also have one or two other switches on the top (for channels 5 & 6), used for Flaps or Retracts, which also operate essentially as on / off switches and provide full servo travel one way or the other.

So either of these channels would also be a good choice for F/F DT.

Failsafe is a Good Thing !

All modern radios have a "Failsafe" capability, which means that if the Rx gets beyond the range of the Tx and looses the signal, it will switch to a pre-set memory in an attempt to save the R/C model , or at least minimize the damage. This is possibly the BEST feature for F/F DT use, because in the (very unlikely) event of interference, or loss of signal due to extreme range, once the signal is lost, the Rx switches the servo position to the pre-set default, ie, in the case of F/F this can be set to activate DT-mode. That's exactly what we want for F/F. So this facility virtually guarantees that your model will DT anyway. It doesn't matter if you do it deliberately while the model is still within range, or whether it happens automatically if the model should fly beyond range. Either way it's gonna DT (unless you let the Rx battery go flat) ! Hence you should also acquire a cheap Volt meter and always make sure, throughout the day, that your Rx battery in the model is still sufficiently charged. Otherwise you are guaranteed NOT to DT !

Of course this does require you to read the instructions and program the failsafe, before you go flying, or ask your local R/C expert to help you. There are usually at least two failsafe setting you can choose:

1) "Hold Control", which lets the model maintain the last received command, in the hope that radio link will be re-established quickly, within a few seconds, and then the R/C pilot can continue the flight — which is NOT what you want for a F/F DT, otherwise it's just going to keep on flying with the tail held down in its free flight configuration , and risks loosing the model !

2) "Pre-Set", in which the modeler can choose what position he wants each servo to move to (see the Manual for how to set this using the Tx controls) in an attempt to keep the model straight and level until, hopefully, the R/C flyer regains control. You DO want to use this function for F/F DT, by setting the failsafe to move the selected servo to DT position, so that if the model flies beyond radio range the failsafe setting will automatically move the servo and DT the model. Test this by simply switching off the radio Tx to make sure the model DT's —Perfect !

3) But there is also an easier way for F/F DT. Modern Rx failsafe memories are always factory set to cut the throttle (in Aircraft setting) any time the radio gets beyond the range of the Tx (which makes perfect sense for engine powered R/C Aircraft, but not for Helicopters !). So, provided that you have set-up your radio as Aircraft-type (ie not Glider or Helicopter) and you are using the Throttle channel to activate your DT servo function, you will get an automatic redundant failsafe capability. To test this feature, again switch on the radio, set the DT and then switch off the Tx and the model will DT by itself. So really all the hard work is already done for you should your model fly beyond R/C range.

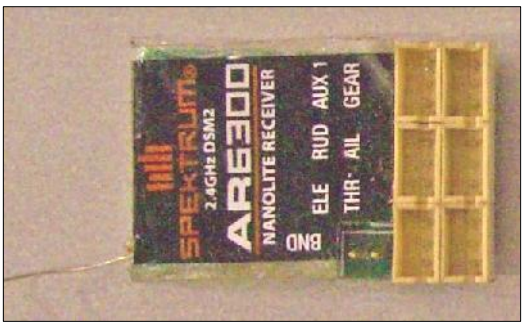
How far is Far Enough ?

Basically all the leading R/C brands are about the same in terms of quality and performance. But in speaking to the various R/C equipment manufacturers, they are all very guarded about revealing the actual performance of their equipment regarding operating range, which makes absolutely no sense to us modelers — ie we the customer !

Admittedly, radio range is somewhat unpredictable, due to environmental factors and the requirement for an unobstructed view from the Tx to the Rx. But in our case with a model high in a thermal on a long flight, it will have the best possible line-of-sight from the model Rx to the Tx, so we should get the absolute best possible range from the equipment. For flights that are a long way out, but low to the ground, there may be some degradation in the signal due to trees, foliage and undulating terrain that could reduce the operating range performance, but in this case the model is probably not going to fly away and is likely close to landing. And in the event that the R/C signal is blocked, the Failsafe Mode will kick-in and automatically DT the model anyway.

However, there are basically 3 types of R/C Rx standards, for all manufacturers within the industry, as follows:

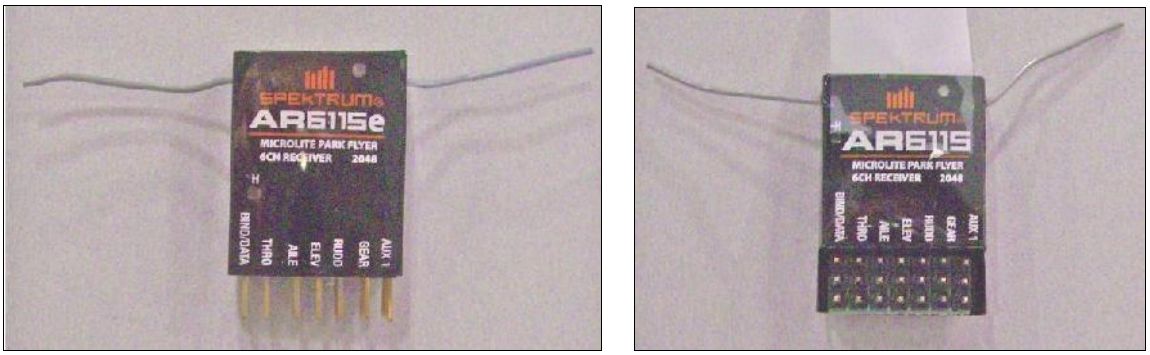
Indoor: Actually the smallest and lightest equipment (literally only 2g or 3g for a 6 channel Rx !) which may seem most appealing to F/F'ers. But beware, the range is very limited and hence is definitely **NOT** Suitable for F/F RDT ! Indoor R/C is generally intended to be operated within the confines of a typical sports hall building, so the signal guarantees no more than a couple of hundred feet range maximum.



NOT suitable for F/F, typical "Indoor-type" R/C Rx have very limited operating range.
JR weighs 2.0g Futaba weighs 3.3g. Note tell-tale single wire antenna and micro-JST style connectors.

Park-Flyer: Also quite small and light (typically 4g to 6g for a 6 channel Rx), and quite likely OK for F/F. Park-Flyer R/C is considered to be Medium range equipment, but what does that mean ? Manufacturer's say out to line-of-sight for small models (24 to 36 inch span ?), but how far is that. However, R/C modellers generally report that in use, modern equipment is far BETTER than these manufacturer's guarded claims. So in reality if you can still see the model you probably still have control (likely true for model up to 50 inch span) such as small Rubber and Glider. Note: Park-Flyer-type Rx also typically only have a

"single" antenna, but with "two ends" protruding from the Rx case, aligned opposite each other (a dipole type configuration)..



"Park-Flyer-type" R/C Rx claim line-of-sight range for small models.
Left: end-plug style weighs 4.0g vs. (better fit for slim fuselages)
Right: front-plug option weighs 3.4g. Note two opposed wire antennas.

Full-Range: BEST choice for F/F — heavier than the other two types (typically 7g to 9g and upwards) but offers the longest range available from R/C equipment, generally referred to as "beyond-line-of-sight" even for larger size models, so that even if you cannot see the model, the radio link is probably still operational. R/C modellers generally report that this is probably good for several miles, so is ideal for any large F/F Glider or Power model. Note: Full-Range-type Rx have 2 separate wire antennas, either aligned at 90° to each other, or (if you read the instructions) with longer antenna wires, which are to be mounted at 90° to each other, which gives the Rx two chances of receiving a weak incoming signal, depending upon the present orientation of the model to the Tx.

Full-Range-type R/C Rx,
claims best available out-of-sight operating range, but slightly heavier at 5.5g.
Note two separate antenna wires (much longer than shown) should be mounted at 90° orientation to each other.

There are also many stand-alone off-brand 2.4 GHz micro Rx available, which operate with the major manufacturer's Tx equipment, which can offer less cost and weight — Just make sure you know what you are buying regarding Medium to Full Range capability.

Another Factor — Operating Voltage:
Another important specification for F/F application is the type of battery required in the model. Gone are the days of needing a battery pack comprising 4 or 5 heavy NiCd cells to produce the necessary 4.8V to 6V for the older 35 MHz (UK) or 72 MHz (US) equipment. Today's 2.4 GHz Rx are designed to run very efficiently at lower Voltage, which can be achieved with a single Lithium Polymer (LiPo) battery cell, which start at 4.2 V fully charged and run down to 3.7 V before needing to be re-charged. Here the best choice for F/F appears to be the Spectrum brand of R/C equipment, as their receivers only require a single LiPo cell. Most other brands require two cells. So again, less complication and weight for F/F applications.

For F/F applications you can choose the smaller single LiPo cells, starting at around 30mAh weighing 1g, 60 mAh at 1.5g, 90 mAh at 2.5g and so on. But obviously you will need to keep track of the battery state of charge throughout the day, versus the power consumed by your chosen Rx and actuator combination. Consequently, the use of spare charged batteries may be needed for longer flying sessions, or use bigger batteries if your model can handle the added weight, ie for gliders probably not a problem.

But Wait — There's more!
If you already own a suitable R/C system, or can pick one up second-hand cheap, using off-the-shelf 2.4 GHz R/C equipment to DT your F/F model will work — but such equipment is rather big and heavy for our modest purpose and is really overly complex. And running off downwind with a Tx in hand might be rather cumbersome, as there are lots of switches and buttons to break-off along the way ? Bottom line: the total weight and bulk of an R/C-based system, will be too much for all but a large A/2-size Glider (which must carry nose ballast anyway) or for a Power model with higher payload capability. So a different solution is likely required for lightweight Vintage Rubber or Coupe models.

But if you are contemplating spending £100 to £200 on new R/C equipment, considering that RDT has been legal for FAI classes now for over three decades, why not instead consider using one of the many available small, lightweight, dedicated, F/F RDT products ? Instead of operating on the 2.4 GHz radio band, these F/F RDT systems typically use other ISM (industrial, scientific and medical) radio bands, which are governed by the various Radio Communication Authorities around the World. The ISM band is referred to as the unlicensed spectrum and manufacturers can essentially do whatever they want, under certain restrictions on power levels and other rule constraints.

There are many different frequency bands, but the most popular are the 2.4 GHZ, 900 MHz and 815 MHz bands. Even the standard commercial 2.4 GHz R/C equipment we use, works by sharing the same radio band as other WiFi,

Bluetooth, cordless phones, microwave ovens, and all kinds of other electronic stuff and everything actually works! However, the lower frequency 900 MHz band and below, offers better operating range for RDT for any given signal strength power.

Of these dedicated F/F RDT suppliers, two of the leading brands in Europe and USA are:

Massimo Ursicino's FFElectronics in Italy: http://www.ffelectronics.com/

Ken Bauer's AirTek: http://mysite.verizon.net/resrqa3z/airtek/
(The original longstanding US Airtek modeling manufacturer — *not the recently named UK Airtek modelling brand — a very confusing choice of name !*):

Both offer similar small lightweight Rx and Tx units, which are easily fitted to models and carried in the field, with excellent full range capability of many miles, which in practice extends literally beyond practical sight for F/F models. Of the two, Ken's Airtek RDT is the lightest system weighing just 1g for the Rx versus 2.5g for the Aeris RDT Rx.
Ken offers 3 types of RDT Rx, available in 2 power levels, making 6 RDT Rx's in all, and all weighing the same at just 1g;

1) Electronic Timer version:
   compatible with most commercial timers to trigger DT
2) Servo version:
   plugs directly into any standard R/C servo to activate DT
3) Pager Motor version:
   connects directly to any standard Pager Motor to activate DT

Each of these 3 types of Rx is available in a Standard low-power version for most models (which consumes just 2mA for longest battery operation) or Fast version for power models, which might need instant DT action if it goes out of control (which consumes more electrical power, at 6mA to 20 mA).

Another advantage of these dedicated F/F RDT systems is that the Tx remains switched OFF until needed, thus saving battery power throughout the day, or more crucially to avoid accidentally pressing the DT button before the max ! Whereas the R/C equipment system MUST remain switched ON, otherwise the model will immediately DT once the signal from Tx to Rx stops. So you might need to take some spare batteries along for a full day's flying. Here again the Spectrum brand Tx operates on rechargeable AA-size cells, so it's cheap and easy to carry a few spare sets.

Summary:

RDT is here today and ready to go for almost any F/F model:

1) **Ken Bauers Airtek Rx** (1g), with pager motor (0.9g) and 30 mAh LiPo battery (1g) is the lightest solution at under **3g (1/10 oz) total**, for even the lightest F/F model !

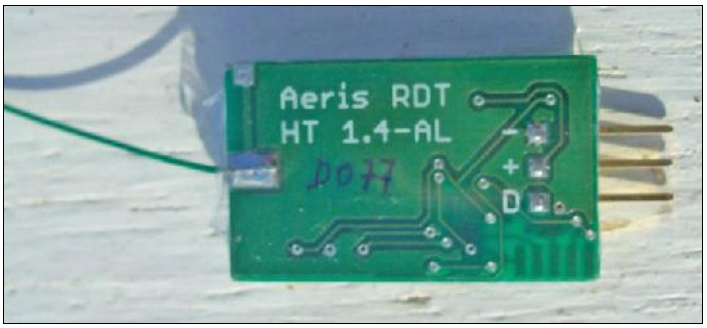
2) **Massimo Ursicino's Aeris Rx** (2.5g) with R/C micro servo (3g) and 60 mAh LiPo battery (1.6g) is a close second at around **7g (1/4 oz) total**, for most small F/F models.
3) **2.4 GHz Park Flyer R/C Rx** (4g) with R/C micro servo (3g) and 130 mAh LiPo battery (3.4g) at around **10g (1/3 oz) total**, may work for medium size F/F models.
4) **2.4 GHz Full Range R/C Rx** (7g to 9g) with R/C micro servo (3g) and 130 mAh LiPo battery (3.4g) at around **15g (1/2 oz) total**, is still practical for any larger F/F model.

Left: Comparison of typical Spektrum 2.4 Ghz R/C Transmitter to Alex Andriukov's dedicated "Simplicity" F/F RDT Tx, small and light enough to wear like a wrist-watch. Red button activates DT, Green button adds 1 minute to set DT time to safely over-fly obstacles if necessary, such as busy roads, parked cars, crops, lakes or woodland.

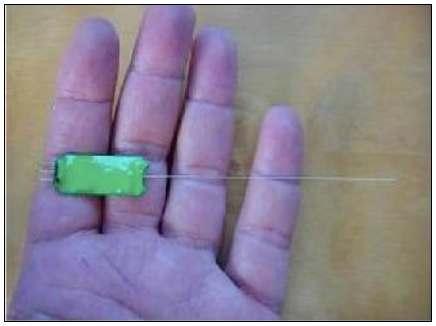
Right: Bauer's Airtek F/F RDT Tx, can be worn on wrist, ready for immediate action if needed in case of impending emergency DT action.

Left: Ukrainian F1A World Champion, Victor Stamov, wears his Favionics RDT Tx on armband, to avoid accidental operation while towing, but always ready for quick DT when needed.

Right: Britain's well known glider flyer John Cooper favours the Italian-made Aeris RDT system, fitted with lanyard to wear around his neck.



Aeris RDT Rx unit small and lightweight at only 2.5g



Ken Bauer's Airtek RDT Rx with 3 inch antenna, is smallest and lightest known full-range unit weighing just 1g

Next Month: More details of the cheap bit: the various ingenious, lightweight DT mechanical actuators which F/F modelers have devised to make the system work reliably.

Martyn Cowley

Readers Letters

RDT for Peter Michel:

At last I can use my Aeris RC DT in competition. The last time the better half was not around, 2 years ago, I treated myself to this bit of kit from www.ffelectronics.com . I think it now costs about £150. For not too many euros I have control over DTing my open rubber model.. The heaviest part is the servo. As it does very little work I am going to try an even lighter servo in the next model. The receiver and battery and servo can easily be transferred between models as a unit. With the supplied servo it weighs 6.5g which is about the same as a mounted Tomy. I thought radio dt might be allowed last season, so I am now champing at the bit to use it in public. I can recommend this system as being light and reliable. I reckon it has already paid for itself in models not lost or treed.

Jim Paton

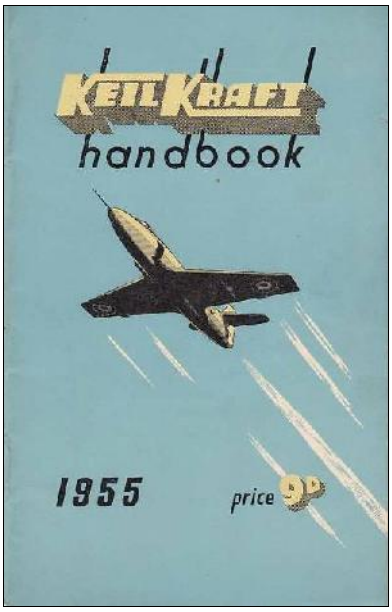
The DBHLibrary(Magazines) - Roy Tiller

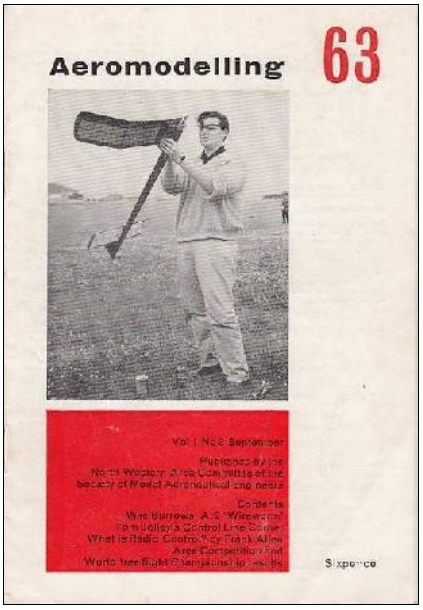
Report No. 17 Odds & ends

Keil Kraft Handbooks

Back in Report No. 12 I asked for information on the Keil Kraft Handbooks and had a very prompt reply directing me to the Keil Kraft Handbook Reference Guide by Ian Mills and Steve Betnev. Put "Keil Kraft Handbook Reference Guide" into Google and you will find the website with a list of all the KK Handbooks and in each case a picture of the cover. So now we know which copies we have and which we do not have. There are thirty handbooks on the list of which we have

ten only. The ones which we have are 1955, 1961, 1963, 1965, 1968a, 1969, 1971a, 1972, 1975 and 1979. Please have a look at the website and contact me if you can help to fill in the gaps in the library collection.



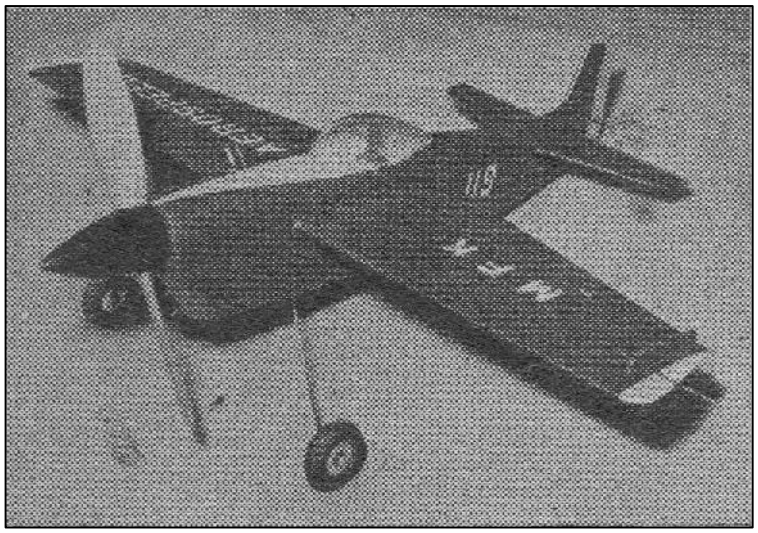


Aeromodelling 63.64

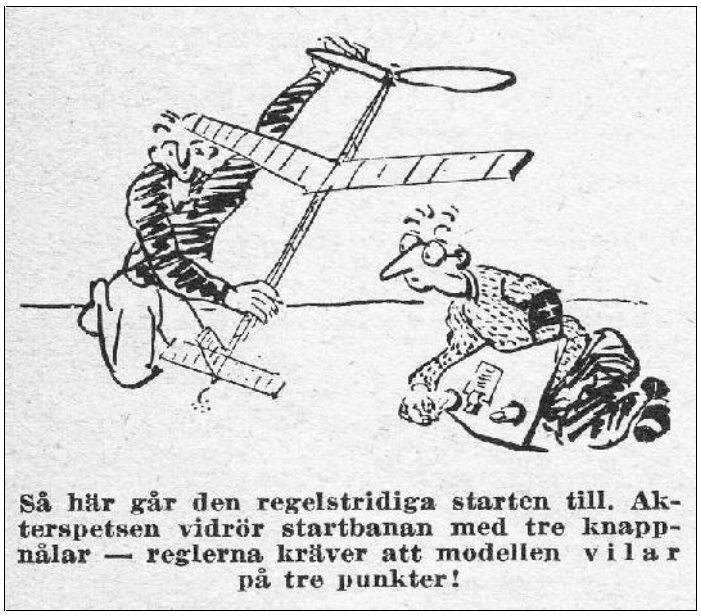
I am still sorting David Baker's collection and have now got to Aeromodelling 63 which was published by the North Western Area Committee of the S.M.A.E, starting in July 1963. We have Vol 1 No. 1 through to Vol 1 No. 5, then Aeromodelling 64 Vol 1 No. 7 and then an undated Aeromodelling 64. It seemed obvious that we needed Vol 1 No. 6 but what else? A telephone conversation with John O'Donnell gave the answer. We are missing just two issues, Vol 1 No. 6 which is titled "Aeromodelling 63/64" and one titled "Aeromodelling 64 Souvenir Programme". Again if you can help to complete the collection please get in touch.

TEKNIK for ALLA (SWEDEN)

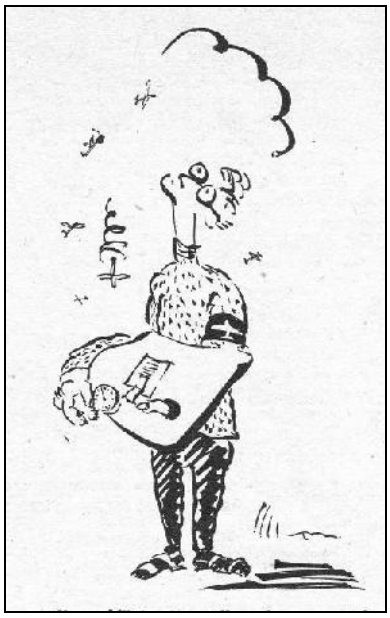
We have just one bound volume of these magazines covering January to December 1954. They have only a small amount of aeromodelling content, some Jetex designs which have all appeared in SAM35 Speaks, a control-line trainer, a couple of team racers and a Wright Flyer from Model Aircraft with Swedish text and metric dimensions.

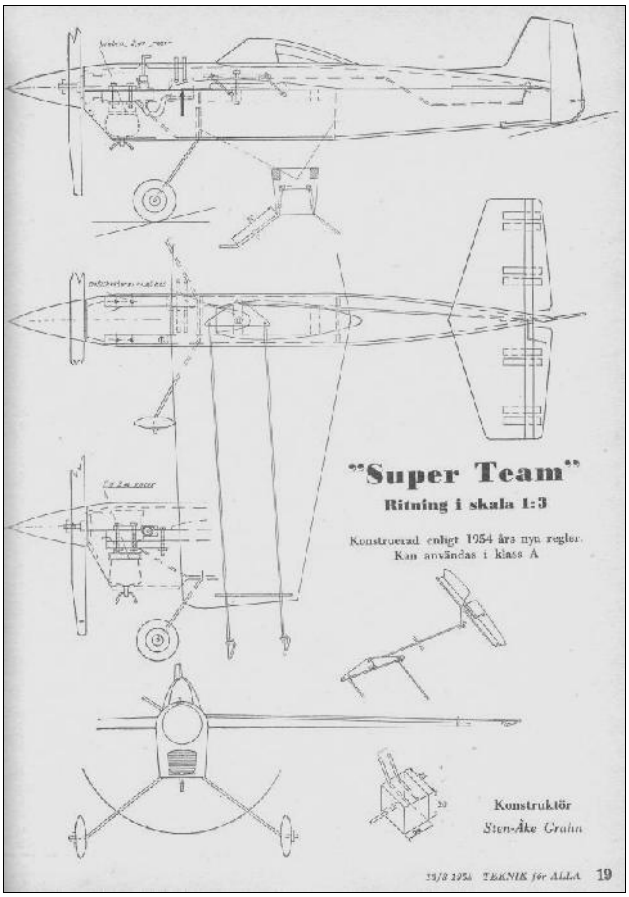


There are a few cartoons. I can only guess at the meaning of the caption, perhaps you can suggest a caption
(I will publish any received next time) or give a translation.



Så här går den regelstridiga starten till. Akterspetsen vidrör startbanan med tre knappnålar — reglerna kräver att modellen v i l a r på tre punkter!





WANTED, as above.
please contact.
Roy Tiller Tel. No. 01202 511309
e-mail roy.tiller@ntlworld.com

Middle Wallop Meeting 18th March

The program for our day in March was deliberately left clear in case of bad weather for the Crookham Gala necessitated some rescheduling.
However, as reported elsewhere, the weather for the Gala turned out to be very good, so we can now use the March date for a few more impromptu comps.

Having discussed possibilities with our Chairman, we've decided to put on

Open HLG/CLG event
(someone has to beat Bruce!),
Combined Glider event,
Combined Power event
(same rules as for Crookham Gala for these two comps) &
Lightweight Rubber event
to SAM 35 rules (a la BMAS comp from previous years).

Of course, there is the usual sports fun flying as well. Some of these feature on Easter Saturday – the Lightweight Rubber event being added by kind permission of Ken Taylor who is CD for the Glider Day, so you can use the March meeting to get tuned up for Easter – weather permitting! We will also be running a traditional A-Frame mass launch on Easter Sunday, courtesy of John Huntley.
The SAM1066 website will shortly have updated details of these changes.

DBHL Plan Service: IMPORTANT:
The rules for obtaining plans have changed.

If you want a copy of any plan from our library, please read the following:

As from 31st July 2011 only digital files of plans from the DBHL will be available. It is up to the recipient of such files to get them printed, as my local Copy Shop has closed & at present there is no alternative source for me to get plans printed at an economic rate.

The process for obtaining a digital file of a plan is:

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

If the plan has already been digitised, the requester will receive an email with an attachment of the plan in a digital format that can be printed at a local Copy Shop. The easiest ways to do this is either to download the plan from your PC to a memory stick & take the memory stick to your copy shop (but check with them first that they can handle digital files!), or – if your copy shop accepts emails, send them an email with the attachment, asking them to print the attachment. Scaling is automatic.

If the plan has not yet been digitised, a scan of the paper plan has to be done but this could take up to two weeks, sometimes longer if a clean-up is necessary. Once I have received the digitised file back, the requester will receive an email with an attachment of the plan.
This service is provided at no charge.

You are reminded that many more plans are available through our cooperative venture with partners in the USA, New Zealand & Slovakia. The combined list of these plans can be accessed via www.co-op-plans.com. Any plans requested via the Coop incur a small charge – see the web site for details. Exactly the same principle applies in that only digital files of plans are available.

Flying North is a 163 page book covering the model flying career of Jack North, and including 23 previously un-published plans of his aircraft. Access to Jack's drawings and notes dating back to 1938 means that there are a number of designs in the book likely to be tempting to the nostalgia-minded.

Contact: Martin Dilly on 020 8777 5533
or write to 20, Links Road, West Wickham, Kent BR4 0QW
or e-mail: martindilly@compuserve.com.

The price in the UK is £18; airmail to Europe £20 or to anywhere else £22. Cheques should be payable to BMFA F/F Team Support Fund, in pounds sterling only, and drawn on a bank with a branch in the UK; you may also order by credit card. All proceeds help to fund the expenses of those representing Great Britain at World and European FF Championships.

ITC Indoor Events Planned for 2012

15th Jan and 12th Feb at Werrington Sports Centre, Peterborough. Lightweight Indoor Duration day.
Contact mark.benns@ntlworld.com

John Shaw organises monthly Lightweight Indoor Duration days
at Bartholomew Sports Centre, Eynsham near Oxford.
21st Jan is the first date in 2012. Contact johnshaw@alvere.wanadoo.co.uk

18th Feb Manchester Velodrome, NW Area FF Gala, L/wt radio, Scale, FF classes.

25th Feb Manchester Velodrome. Normal Indoor Fly In with 30 min slots for Light and Heavy classes.

11th Mar Impington Village College, Cambridge. Contact chris.strachan@btinternet.com

25th Mar Manchester Velodrome, Normal Indoor Fly In with 30 min slots for Light and Heavy classes.

Your Velodrome contact is Dave Whitehouse at dave.whitehouse@aone.uk.com

Mid Jun (Date to be finalised) Boulby, Cleveland, Indoor Nationals Lightweight Duration. Details will be published in the BMFA magazine. Contact Allan Weighell at littleal28@btinternet.com

Early Aug (Date to be announced) Belgrade, Serbia, DORCOL Cup events.
Contact Tony Hebb for further information. Followed by F1D World Championships.

Mid Sep (Date to be finalised) Boulby. Events for Heavier classes of duration models. Details to be published later.

Indoor Flying with the South Birmingham MAC

Free Flight Only

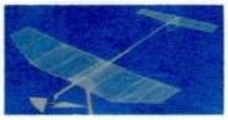
Thorns Leisure Centre. Stockwell Ave.

Off Thorns Road - Quarry Bank - West Midlands - DY5 2NU

Saturdays 1pm until 4pm

2011 dates

May 7th



Sep 17th; Oct 15th; Nov 12th; Dec 10th

2012 dates

Jan 7th; Feb 4th; Mar 3rd.

Admission - Flyers £5.50 - Spectators £2.00
For further information phone Colin Shepherd 0121 5506132
or e-mail colin@colinwilliam.wanadoo.co.uk

Brownhills Indoor Flying – Free Flight

Brownhills Community Association,
Deakin Ave. Brownhills WS8 7QG
Just off the A5
Saturdays 1-15pm until 4-15pm - £6

2011 dates:
May 14th; June 11th
Sep 10th; Oct 8th; Nov 5th; Dec 3rd.

2012 dates
Jan 14th; Feb 11th; Mar 10th;
Apl 7th; May 12th; Jun 9th.

Contact:- Tony Eadon-Mills
Tel: 01952 240451 - e-mail: tonyeadonmills@gmail.com

Waltham Chase Aeromodellers

2011-12 INDOOR FREE-FLIGHT MEETINGs

Ken and Bev Brown, with Waltham Chase Aeromodellers, are pleased to announce a new series of Indoor Free-Flight Meetings at
Wickham Community Centre, Mill Lane, Wickham, Hants PO17 5AL.

DATES are

September 29th	18:30 – 22:00	
October 27th	18:30 – 22:00	
November 24th	18:30 – 22:00	
December 29th	10:00 – 16:00	XMAS Daytime Special
January 26th	18:30 – 22:00	
February 23th	18:30 – 22:00	
March 29st	18:30 – 22:00	
April 26th	18:30 – 22:00	
May 31st	18:30 – 22:00	
June 28th	18:30 – 22:00	

The Main Hall at Wickham Community Centre is particularly suitable for indoor free flight models of all types, with a ceiling free of obstructions. Tables and chairs will be available in the hall. Please note that NO remote-control models may be flown at these meetings.

Admission to the meetings will be £4 for adult fliers and £1 for junior fliers and spectators, whilst accompanied junior spectators will be admitted free.

Fliers MUST be insured and may be required to show proof of insurance by the organisers.

Flitehook, who carry a large stock of indoor models and accessories, will attend many of the meetings. There is also now a drinks machine on site

For further details please contact:

Ken Brown (Tel. 023 8057 8866) or Alan Wallington (Tel. 01489 895157)

or see our web site: www.wcaero.co.uk

BMAS

BOURNEMOUTH MODEL AIRCRAFT SOCIETY

INDOOR FLYING

TUESDAY 27TH MARCH 2012

COMMENCING AGAIN

TUESDAY 25TH SEPTEMBER 2012

7pm to 10pm

ALLENDALE CENTRE

HANHAM RD. WIMBORNE BH21 1AS

FREE CAR PARKING IN PUBLIC CAR PARK IN ALLENDALE RD

FREE FLIGHT ONLY

COMPETITIONS incl GYMINNIE CRICKET LEAGUE

ALL FLYERS MUST HAVE BMFA INSURANCE

FLITEHOOK NORMALLY IN ATTENDANCE

Adult Flyers £4 Accompanied Juniors & Spectators £1.50

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

VINTAGE RADIO & CONTROL LINE

at MIDDLE WALLOP, 2012

Courtesy of the Army Air Corp Centre, MAC

SUNDAY APRIL 8TH SAM 35 Gala
Control Line [no combat wings] Mini Speed & Spitfire Scramble.
Tomboy 3 & Tomboy Senior Competitions
R/C Vintage Power Duration Competitions including George Fuller designs RC class

SUNDAY MAY 6TH SAM 1066 Wakefield Day
Control Line [no combat wings] Mini Speed & Spitfire Scramble.
Tomboy 3 & Tomboy Senior Competitions
R/C Vintage Power Duration Competitions including George Fuller designs RC class

SUNDAY AUGUST 26TH SAM1066 Eurochamps
Control Line [no combat wings] Mini Speed & Spitfire Scramble.
Tomboy 3 & Tomboy Senior Competitions
R/C Vintage Power Duration Competitions including George Fuller designs RC class

SUNDAY SEPT 23rd SAM1066 Fun Fly + Trimming Day
Control Line [no combat wings] Mini Speed & Spitfire Scramble.
Tomboy 3 & Tomboy Senior Competitions
R/C Vintage Power Duration Competitions including George Fuller RC designs RC class

***NB....ALL R/C MODELS, No Ailerons please!!**
Vintage Radio to December 1969

ALL FLIERS MUST BE COVERED BY BMFA INSURANCE, this is the only acceptable insurance at the venue and must be produced when signing on

For further information contact:
[C/L & George Fuller RC comp] James Parry, 01202625825, email.JamesIParry@talktalk.net
[R/C] Tony Tomlin, 02086413505, email. pjt2.alt2@btinternet.com
[VPD] Bill Longley, 01258488833, email. tasuma@btconnect.com
More details of mini speed, Spitfire Scramble and George Fuller RC class see http://www.wessexaml.co.uk/

The above events take place at the far side of the airfield, follow peri track to control

SAM Euro R/C champs
17th to 22nd June 2012
Slovakia

Dear antique modeller friends,

The SAM Euro Committee
(International Committee of SAM Aeromodeller Clubs in Europe)
on the 22nd June meeting held in San Marino has appointed the Club of Friends of Antique Modelers and Engines SAM 119 Slovakia, under the leadership of President Mr. Alojz Pajdlhauser, to organize the 10th SAM RC European Championship Jubilee.

The Championship will be held from on the airfield of the Dubnica nad Vahom Aeroclub, near Slavnica village.

The Rules applied will be those approved by the SAM Euro Committee including the latest additions.

If you wish to see the airfield go to Google "maps" and search Slovakia, you will see it 2 kms South-East from the Slavnica village.

More information on the airfield facilities may easily be found on internet: http://www.sam119.sk.

We would be happy to welcome all SAM members at this event.

Best regards: Domenico (Nick) Bruschi
SAM Euro Committee chairman

Salisbury Plain Trimming 2012

Changes in use for free-flight trimming on Salisbury Plain for 2012

For 2012 almost every weekend will again be available for free-flight trimming and training by BMFA members on Area 8 on Salisbury Plain, subject to the usual call to Peter Tribe on 01225-862748 on the Friday before you plan to fly to check that there is no Army activity.

However, a small number of non-season ticket holders have been using the site without paying the single day fee. Therefore in future Area 8 will be available ONLY to those holding a valid pass for the year. The good news is that a 2012 pass will cost only £15. Send an SAE and your cheque, payable to BMFA, to Bernard Aslett, 25, Honeyhill, Wooton Bassett, Swindon, Wilts, SN4 7DX; in return you will receive a sketch map showing where we fly on Training Area 8, and a 2012 pass to display on your windscreen. If you come as a passenger, bring your pass anyway. Your name will be included on the Army security list (unless you're already on it). Please send Peter Tribe (petertribe46@talktalk.net) your e-mail address in case of any short-notice changes.

Those flying any free-flight classes will be welcome, as well as those practicing for FAI FF contests. This is one of the best free-flight venues in Britain, and the aim is to improve overall free-flight standards in the UK. The following dates have been agreed, but because of the current military situation short-notice changes are more likely, so don't forget to check your e-mail every Friday or call Peter Tribe on 01225-862748.

Dates

January	7th/8th	14th/15th	21st/22nd	28th/29th	
February	4th/5th	11th/12th	18th/19th	25th/26th	
March	3rd/4th	10th/11th	17th/18th	24th/25th	31st
April	1st	7th/8th	14th/15th	21st/22nd	28th/29th
May	5th/6th	12th/13th	19th/20th	26th/27th	
June	2nd/3rd	9th/10th	16th/17th	23rd/24th	30th
July	1st	7th/8th	14th/15th	21st/22nd	28th/29th
August	4th/5th	11th/12th	18th/19th	25th/26th	
September	1st/2nd	8th/9th	15th/16th	22nd/23rd	29th/30th
October	6th/7th	13th/14th	20th/21st	27th/28th	
November	3rd/4th	10th/11th	17th/18th	24th/25th	
December	1st/2nd	8th/9th	15th/16th	22nd/23rd	

R/C Tomboys all set for 2012

The Tomboy events in 2011 were well supported, although three out of the nine planned events were lost to the weather. There was a new venue for the sixth round of the competition at the North Berks Club, Vintage Event in July, that went very well and following this we have been invited back in 2012. In total there are 10 events planned with certificates and small prizes for the winners at each meeting and a league award for both the Tomboy 3 [36"] and the Tomboy Senior [48"] class.

The League will as before be based on a competitors best 5 results.

Meeting Dates and Venues:

08.04.2012 Middle Wallop, 06.05.2012 Middle Wallop,
13.05.2012 Cashmore Dorset, 02.06.2012 St Albans,[a Saturday].
17.06.2012 Cocklebarrow Farm Nr Aldsworth Glos.
08.07.2012 North Berks Radio MAC A338N of Wantage,
12.08.2012 Cocklebarrow Farm, 26.08.2012 Middle Wallop,
23.09.2012 Middle Wallop, 07.10.2012 Cocklebarrow Farm.

For Further details: Please contact Tony Tomlin. Tel: 02086413505
Email pjt2.alt2@btinternet.com.

The 3rd Old Warden Swapmeet

Sunday 12th February 2012

180 table swapmeet.

To be held in the Russell Hall complex of the Agricultural College.
The Swapmeet will accommodate all modelling disciplines:-
Aircraft, Boats, Cars, Vintage and Modern
Engines, Kits, Radios and accessories.

Additionally there will be a small trade presence.
Doors open at 8.30am for table holders and 10.00am for the public.

The Russell hall complex has a bar and restaurant.
Visitors are reminded that the world famous Shuttleworth Collection of full size vintage Aircraft and Motor Vehicles is based at Old Warden.

Costs will be as follows;-
Table £10 + £6 per head (Max 2 people per table).

Public £5

No Early Bird Tickets
Bookings will commence 1st November 2011
Bookings:- Richard Dalby 020 7607 6820
Email:- owswapmeet2012@hotmail.co.uk or
Peter Dirs:- pd_eng@yahoo.co.uk

Provisional Events Calendar 2012

With competitions for Vintage and/or Classic models

January 29th	Sunday	BMFA 1st Area Competitions
February 12th	Sunday	Middle Wallop – Crookham Gala
February 19th	Sunday	BMFA 2nd Area Competitions
March 4th	Sunday	BMFA 3rd Area Competitions
March 18th	Sunday	Middle Wallop - TBD
March 25th	Sunday	BMFA 4th Area Competitions
April 6th	Good Friday	BMFA Northern Gala – Church Fenton
April 7th	Easter Saturday	Middle Wallop – Glider Day; Club Classic
April 8th	Easter Sunday	Middle Wallop - SAM35 Gala
April 9th	Easter Monday	Middle Wallop – SAM35 Gala
April 28th/29th	Sunday/Monday	BMFA London Gala - Salisbury Plain
May 6th	Sunday	Middle Wallop–Croydon Wakefield day
Jun 2nd	Saturday	BMFA Free-flight Nationals
Jun 3rd	Sunday	BMFA Free-flight Nationals
Jun 4th	Monday	BMFA Free-flight Nationals
June 24th	Sunday	BMFA 5th Area Competitions
July 21st/22nd	Saturday/Sunday	BMFA East Anglian Gala - Sculthorpe
August 5th	Sunday	BMFA 6th Area Competitions
August 25th	Saturday	Middle Wallop – SAM 1066 Euro Champs
August 26th	Sunday	Middle Wallop – SAM 1066 Euro Champs
August 27th	Monday	Middle Wallop – SAM 1066 Euro Champs
September 1st	Saturday	BMFA Southern Gala –
September 16th	Sunday	BMFA 7th Area Competitions
September 23rd	Sunday	Middle Wallop – Crookham Coupe Day
October 14th	Sunday	BMFA 8th Area Competitions
October 21st	Sunday	BMFA Midland Gala – N Luffenham
October 27th	Saturday	Middle Wallop – TBD
October 28th	Sunday	Middle Wallop – Trimming & A.G.M.
November	Sunday	BMFA 28th Free Flight Forum - Hinckley
December 2nd	Sunday	Middle Wallop – Coupe Europa

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

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

For up-to-date details of all BMFA Free Flight events check the websites www.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.com
Flitehook, John & Pauline - www.flitehook.net
Mike Woodhouse - www.freeflightsupplies.co.uk
GAD - www.greenairdesigns.com
BMFA Free Flight Technical Committee - www.freeflightUK.org
BMFA - www.BMFA.org
BMFA Southern Area - www.southerarea.hamshire.org.uk
SAM 35 - www.sam35.org
MSP Plans - www.martyn.pressnell.btinternet.co.uk
X-List Plans - www.xlistplans.demon.co.uk
National Free Flight Society (USA) - www.freeflight.org
Ray Alban - www.vintagemodelairplane.com
David Lloyd-Jones - www.magazinesandbooks.co.uk
Belair Kits - www.belairkits.com
John Andrews - www.freewebs.com/johnandrewsaeromodeller
Wessex Aeromodellers - www.wessexaml.co.uk
US SAM website - www.antiquemodeler.org
Peterborough MFC - www.peterboroughmfc.co.uk/index-old.htm

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).

That's all folks! *John Andrews*