

## Sticks and Tissue No 53 – April 2011

I'd like to thank all the contributors, without whom this newsletter would not be possible.

If you can contribute any articles, wish to make your point of view known etc please send to or phone 01202 625825 [JamesIParry@talktalk.net](mailto:JamesIParry@talktalk.net)

Thanks to Mark Venter back issues are available for download from <http://www.cmac.net.nz/>

Writings and opinions expressed are the opinion of the writer but not necessarily the compiler/publisher of Sticks and Tissue. The content does not follow any logical order or set out, it's "as I receive and put in".

Engine photos from Derick Scott, George Stringwell, Bill Wells, Bob Angel and Brian Cox.



Colin Hutchinson's Merlin powered RC assist Dakota at Middle Wallop 24.4.2011

## More sad news

I imagine most have heard that Laurie Barr passed away a few weeks ago. No doubt there will be obituaries in SAM Speaks etc. Regrettably I never met him, knowingly, so can't really put any words together or photo.

## From Karl Gies

Hi James and thanks for running pictures of my models recently. I think the model world needs a good, radial mount .020 diesel engine and am passing this on to you.

Bob Langelius who previously brought us the KB Infant .020 replicas and also McCoy .049 replicas is trying to get this off the ground. I can personally attest that both of the previously mentioned engines are high quality. I have wanted a radial mount .020 diesel for years. If you are interested let Bob Langelius know, e-mail: [bobbylang@earthlink.net](mailto:bobbylang@earthlink.net)

I think this would rejuvenate the Pee Wee 30 and .020 replica events. I am now sort of reducing the size of models that I build and this would work on many small sport models and rubber model conversions.

Bobby Lang's latest venture. The PAL Model Products Imp .020 cu. in. diesel prototype has proven to be exceptionally easy to handle for an engine of this size. It will swing a wide range of props from 4.2X2 right on up to 7X4. It features easy radial mounting ( 2 screws ) and an integral fuel tank which will be available in different capacities and also clear. An R/C carburetor is also planned. Stay tuned.



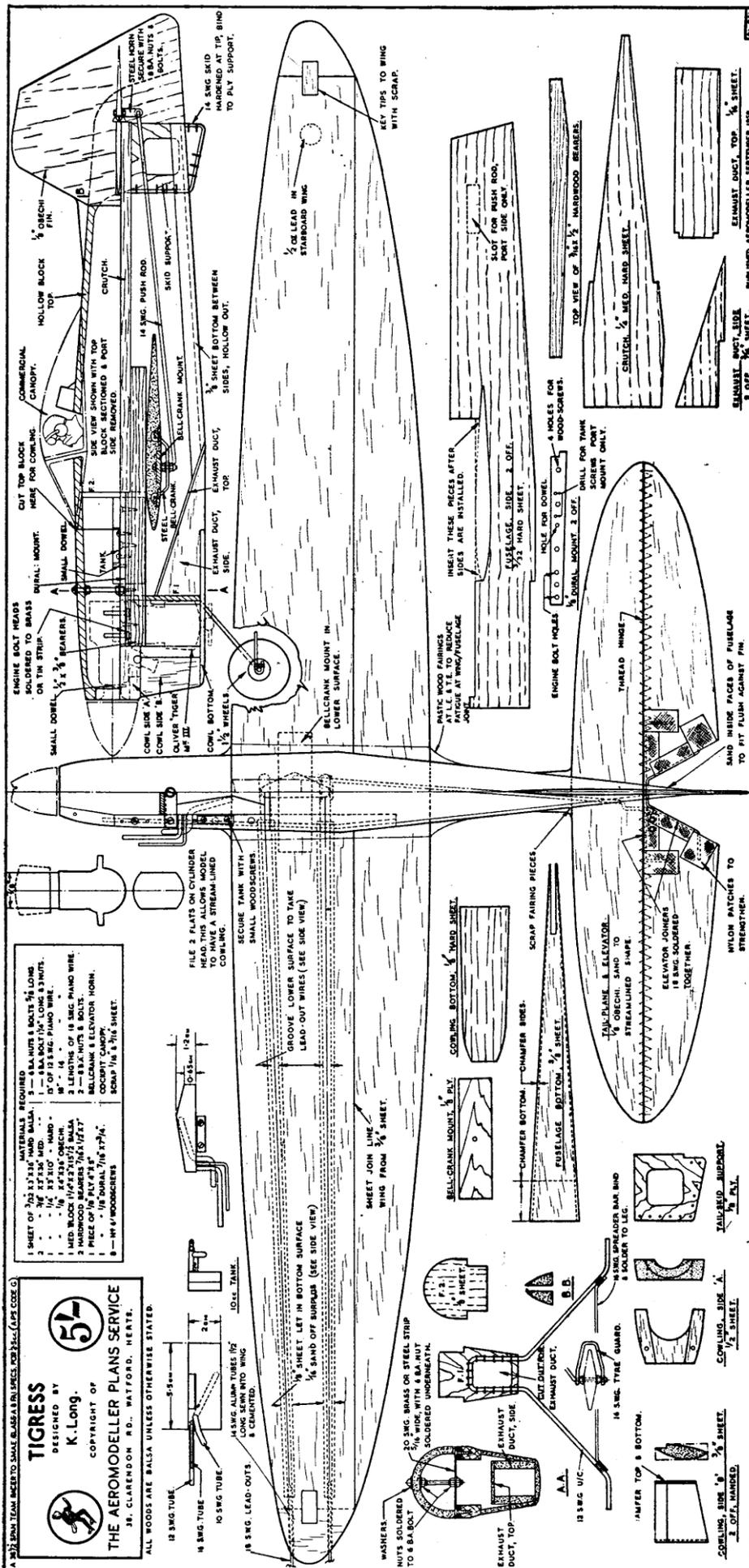
## From Ted Horne

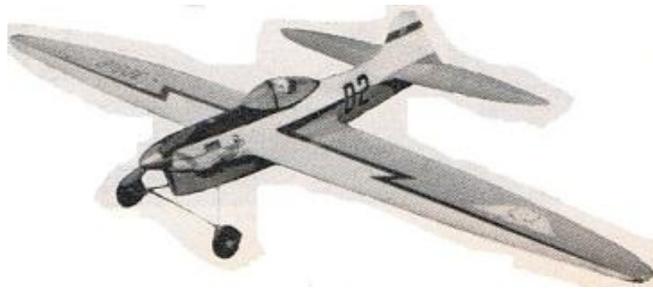
Here are several photos of my half size Coplands Stream Liner, at 24 inch span. As yet unflown, I am still deciding how much rubber to put in it. I shall probably start off with 3 loops of 1/8 inch 13 inches long. Use the photos as you will.



# Tigress team racer by Ken Long from September 1959 Aeromodeller

For the experienced modeller Tigress construction being of solid balsa is fairly elementary, but there will be a number of modellers wanting to break into this side of the competition and for them a few explanations may be thought necessary. The model is built around a 4-in. ply former to which is bound the undercarriage and the engine bearers, the 3/16 in. crutch is glued between the rear end of the bearers with the motor bolted in front on top of the alloy plates which reinforce the bearers. Wings are held to this assembly with Araldite having already been sectioned and grooved to take the controls which are fitted prior to building up the fuselage. Fuselage sides are fitted, followed by the remainder of the fuselage and tail construction, noting that obechi is preferred to balsa for the tail surfaces. In order to fit the Oliver Tiger engine satisfactorily one must flatten the fins at the sides, and a desirable asset is glass fibre assembly cowling. Streamlining in the form of plastic wood fillets on the wing and tail root fittings, sharp trailing edge sections, and well filled woodgrain and balsa surfaces are all rewarded with high airspeed, whilst for practical operation the undercarriage spreader bar and tyre retaining guards are essential for flying in hot competition. The seven Tigresses already made by Wharfedale modellers have collected 9 high placings in rallies to date, and one of them will be representing the country at Brussels this year.





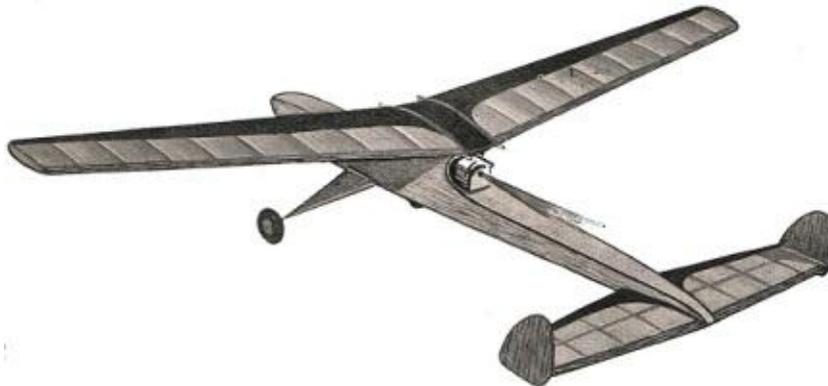
## **From Ted Horne**

Many thanks for the Sticks & Tissue. I notice that on page 11? the plan for SCYLLA. Several years ago I built one as I had already built a Dactyl, which flew well, so I thought let's build a Scylla as I liked the look of it. What a dreadful mistake that was. There are only 2 models that I have ever built which both had the same characteristics of uncontrollability, i.e. spinning off the top of the line, left or right without any warning.

The 2 models in question are the Celestial Horseman and the Scylla. Whatever I did to the Scylla, more wash out, park bench ailerons, forward /backward c.g. forward/backward fin, made no difference.

Eventually Alan Jupp had it and he couldn't make sense of it either. He either gave it away or burnt it. I have never seen or heard of either of the models since I got rid of them some years ago. Maybe the people who had them think the same about them as I do.

Perhaps James you might to advise your Sticks & Tissue reader circulation list, of my thoughts on the models, so as to perhaps make any potential builders aware of the problems I encountered



## **FOLLOW UP TO BRYAN PASSEY MEMORIES FROM BILL LONGLEY**

Your mention of seeing a pulse jet aerobatic model at Waterbeach 1955, this must have been Brian Hopkins from South Bristol MAC.

Did he not fall over backwards when the engine cut?

I did not meet Brian until I moved to Bristol in 1957 from God's own county ( Yorkshire ).

Brian was the first person in UK to own a Dynajet, in 1951. He lived with his parents , right in the middle of Bristol at Lawrence Hill, His father owned a wholesale sweets company and lived in a 5 story warehouse ( now long gone and a big shopping centre )

Brian had the top story as his model room, was about 5 metre square.

When he received the pulse jet, having no idea whatsoever of the 'pleasant' notes emitted, he started it up with the tailpipe pointing out of the one little eves window, I am told that there were about 6 or 7 other club members all crowding around.....

BOOM... Hoppy said he blinked, in which time the other 7 guys had gone...down the stairs expecting an explosion.....the motor was on a wooden block and moving towards him across the table, he nervously reached out and pinched the petrol line

Just imagine 108 db in the middle of Bristol , late one evening with no warning !!!!!

I travelled to many comps with Hoppy during '57 – '59, including the Nats in '59, that year at Scampton. We went out late on the Sunday evening and managed to get one dynajet flight in before the MP's were out forbidding us to carry on.....

The flight procedure with Hoppy required 4 guys. Hoppy at the handle in the middle, one guy held the model firmly by the wings with it settled on the dolly, tailpipe pointing through his legs !!!, next guy at the front operating the stirrup pump, action as I remember being a full stroke, then a half stroke, repeatedly to blow air in the front. No. 4 guy, usually me, wound the magneto to get the spark, made up with bicycle chainwheel and rear cog to get the speed up. (Neil Webb used a trembler coil )

At instant of start (NB a pulse jet is either going or its stopped , there is nothing in – between ) the 3 guys immediately released everything and very quickly sought refuge elsewhere. Oh the frivolity of youth.

Now for Neil Webb.....

I moved to work at Harwell Atomic Energy in late '59, and in '60 through '62 flew models with Neil, as a member of the Abingdon club.

We flew his pulse jet first at Harwell, the spot that is now the location of the new particle accelerator called DIAMOND.

Also at Grove airfield near Wantage, that is now the site of the WILLIAMS Formula 1 factory, Williams used to be in DIDCOT, although they were not the first racing car manufacturer in Didcot , Dulon Cars (my company ) were there several years previously.

I was totally involved in motor racing through to '72, then returned to aeromodelling and as chosen discipline was thermal soaring, met up again with Neil and travelled together to many international F3B competitions He was a tireless competitor and made the 1979 British Team , F3B Thermal Task world champs, held at Amay in Belgium, He was flying a VIKING Models FACCTOR design, using the new VIKING /RCME 35 mhz kit radio ( wonder who Mr Viking was.....)

Neil always came out with diverse design interpretations, including canard gliders and especially his big ' PLANK ' This was a large, 16 foot span parallel chord flying wing, hopefully James can show you some old black and white pictures that I took so many years ago.

He did actually, as mentioned die out in France in 1995. He had been competing in an international F3J meeting, which he won outright, but feeling tired after the event, decided to rest in his tent, had a bad athsma attack which brought on a fatal heart attack, I attended his funeral, north of Oxford, and shared a pew with non other than Ronnie Moulton.

Great credit was given to Neil by the International F3J Trophy being named in his memory. Quite understandable as he formulated the thermal soaring percentage slot scoring system back in 1974, these rules are still used in their entirety today with only very minor changes

*Apart from the one noted all other photos taken in June 1975 at the French F3B International at St. Andre De L'Eure 40 miles SW of Paris*



1977 Dortmund F3B competition





Here are some update pics of the new model

- a) SUPER CREEP.....original Egglestone @ + 25% c/w PAW 19 CT3
- b) STARDUSTER 600...now fitted with K & B Torp 19

The Torp is giving extra 1 - 1,500 revs on same prop, against the PAW, on a good nitro brew  
 Flying the Starduster with the PAW last week... 15 second motor run was giving fairly consistent 4min 30  
 secs, without any problem , or lift 20 secs should equate to 600 foot climb and 6 minutes  
 But can I do it in competition.



Starduster with K&B 19



Starduster with Torp 19



Super Creep



### Another follow up this time from George Stringwell

In the March issue Bryan Passey, in his entertaining piece on pulse jets asked if anyone knew Neil Webb. Well, for fifteen years from the mid seventies Neil was a colleague of mine on the BARCS (British Association of Radio Control Soarers) committee, and we also met many, many times in BARCS League and national thermal soaring contests. It seems strange that Neil went from the noisiest of model disciplines - pulse jets - to the quietest, thermal soaring, but he was very good at it. Neil had an off-beat approach to model design, I particularly recall his big tailless "plank" and his subsequent, much more sophisticated tailless, the "Elbow" (Experimental Lifting BODY Wing) which, on occasion, beat many a more conventional model. With his FACCT (Oxford) club mates John Shaw and Chris Tompkins Neil formed a formidable contest team, and they had many successes. Above all, though, Neil was a "character", renowned for his sense of humour and good nature. We had a lot of fun in BARCS in the seventies and eighties, and as a Fellow and Past President of the association I am proud to have been part of it and to have known people like Neil. Bryan was right in saying that Neil passed away suddenly after a contest on the continent, but it was not a free-flight event, it was a European Tour F3J (international class thermal soaring) event, which, in fact, Neil had just won. It is appropriate then that the trophy for the FAI F3J World Championships, subscribed for and presented by BARCS, is named "The Neil Webb Trophy" in memory of a great aeromodeller, competitor and person.

Of no interest whatsoever but fills a gap that does not exist is a photo of 39 Parkway, Camden, the place where Ripmax started I happened to be working around the corner and thought I'll take a photo of that. Another sad thing for me to do!



## From Allen Teal

Attached are photos (sorry about size) of my recently completed vintage model the Heron Gas Buggy. This 1939 vintage model was designed by Frank Gagne. The 48 inch wing span has an area of 345sq in. It was available in kit form from Airsail NZ but is no longer produced.

For me this build came about through the purchase of a second hand Mills 1.3cc MkI diesel engine which is in keeping with the vintage period and a good match for the model. When I went to collect it, the model was thrown in free along with 2 mini servos! Although the basic skeleton framework was there, there has been some work in getting it to the covering stage. The fuselage had been tissue covered but was full of holes and the wings had been covered in blue solar film. All this had to be stripped off, as well as some further structural work done. Covering is a mix of Airspan and litespan.

As you can see from the photos, it is almost ready for test flying. Static balance has come out spot on so will see how things go once in the air. Unfortunately work takes me out of town so no flights until at least May.



## From Tamas Krasso

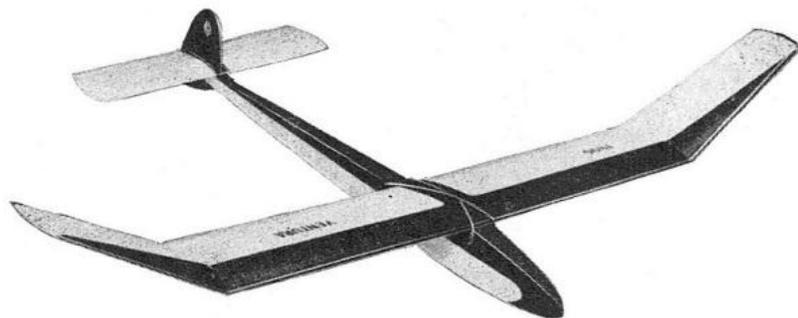
"George Berko new TEXACTO engines models, preparation for the European Championship in San Marino"





Till now I got photos of Paul Mig (89-year-old modeler) to set up new machinery Uncle Paul has successfully participated in the 1944 national championships in Hungary!





The last sent email Paul Mig is now in the photo in the 1944 national championship & quot" Swan " model name , a very modern model!





Two-hour flights—even unofficial ones—are not frequently encountered, especially with rubber models, and more especially with a midget rubber job. “Junior Miss” turned in one such flight, however, and the designer is still pinching himself! The official time for this particular flight was a modest 6 mins. 17 secs.o.o.s., but the model was followed for twice this time before disappearing immediately overhead in a clear blue sky. A conservative estimate based on maximum possible drift speed and distance covered indicates that the actual time-in-air must have been a minimum of two hours. Unfortunately the finder had a four-year-old child, and a few scraps of balsa and a bit of well-chewed rubber was all that remained for ultimate collection.

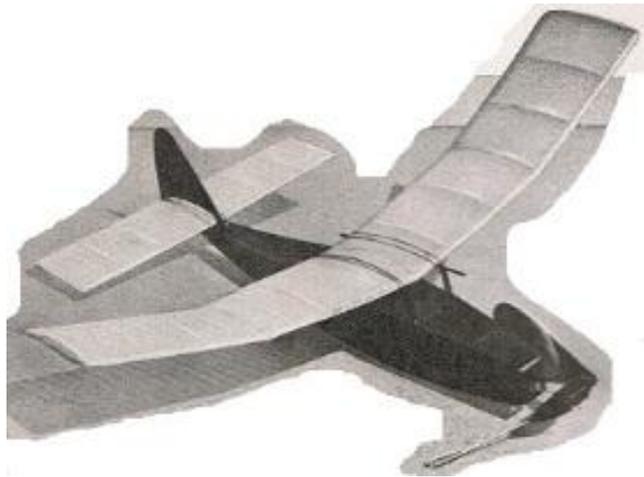
The normal flight time which can be expected from a well-trimmed “Miss “ is about 90 secs, plus, on full turns, but the model has a very flat glide and is susceptible to very small patches of lift, so that a dethermaliser (pop-off wing -or 6 in. parachute) is a worthwhile investment.

Most of the construction can be made up with the scraps found on most modellers’ work-benches, but even if all materials are purchased the total cost of the model, ready to fly, can hardly exceed 3/6. The time spent in building is about the minimum possible for a rubber job, and despite its small size, performance is good enough to intrigue the hardened rubber man. Transportation is hardly a problem—” Junior Miss “ will tuck

away in almost any odd corner of the box.

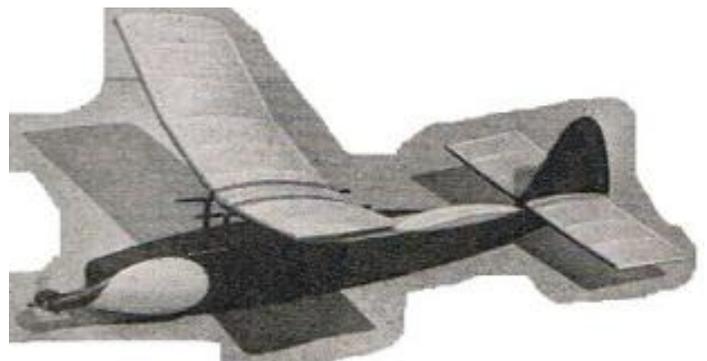
#### Construction

Follows conventional lightweight lines and is perfectly straightforward. Note that the wing and tailplane are double surfaced, being covered top and bottom with “Swedish” or “Jap” tissue, not Modelspan. The covering should be steam-shrunk and treated with one coat only of



50—50 clear dope and thinners to which has been added a drop or two of castor oil. Water or neat dope will twist the surfaces beyond use. New in this country is the “safety-pin” counter-balance on the prop, originated by Frank Zaic. Use the thinnest type of cored solder (about 1/16 in. o.d.) for the balance, and coil it round the shank of the pin. The solder is not secured to the wire in any way, and it is a simple matter to add or remove a turn to balance the prop exactly. The undercarriage, if R.O.G. is required, is merely a length of 1/16 in. x 3/16 in. balsa held to the fuselage side by means of a rubber band looped round the fuselage. This is renewable each flight if necessary.

Power is supplied by four strands of 1/4 in. x 1/24 in. rubber, max. turns 725 approximately. Weight with motor should be about 1 1/2 ozs. Put a few turns on the motor and allow to run until the tensioner stop engages, then, with prop folded, move the wing until the model balances at mid-chord. Check the glide and when satisfied mark the wing position clearly on the runners. Wind on about 100 turns and launch. The model should be too busy getting upstairs to worry about turning; no



downthrust should be required, but in the event of a sharp left turn a sliver of right-thrust may be advisable. The climb to aim for is straight up from the hand, when after about 30—40 ft. the model will suddenly half-roll and face the other way with no noticeable check in the vertical speed. The final part of the climb will then smooth off into widening left circles, “Miss “ rolling easily into a right glide circle when the prop folds, due to the weight and drag of the counter-balance. Any peculiar glide characteristics may normally be traced to the prop-blade folding incorrectly—it should lie flat, parallel with the fuselage side. Minor adjustments may be made by warping the flying surfaces slightly, or if necessary by cutting and hinging a trim tab in the 1/16 in. sheet fin. These measures will not be needed if the model is truly and accurately built.

*(Having prepared the above well in advance I see there is a clash with February SAM 35 Speaks where the same plan was used. Unfortunately such clashes are bound to happen JP)*

## **From Walter Snowdon.**

When Ray Malmstrom died his club and friends published a wonderful tribute book to his memory which I find magnificent. I wonder - could not SAM 35 and 1066 along with his friends publish a similar book as a lasting memorial to the late great VIC SMEED?. there must be enough of his recorded work and reminiscences to fill several large volumes.

In the past I contacted the editors of Aeromodeler and Model boats to reprint copies of all his plans and articles in a book from their publications (while Vic was still about to help) but it fell on deaf ears. I got feeble excuses which amounted to "not interested too much work". Now it is getting a bit late. I have been building from Vics plans (aircraft and boats) since the early 50s and appreciate the sheer scale of his output.

All the vintage activities take place in the south and up here, only myself and 2 friends (all in our 70s) are crying in the wilderness due to the cost and long distances attending flyins and meetings so we are a bit envious of all the activities you publish!!

Please, if you are in the position to cajole Vic's club and friends to perpetuate his memory in print I hope you do so Regards,

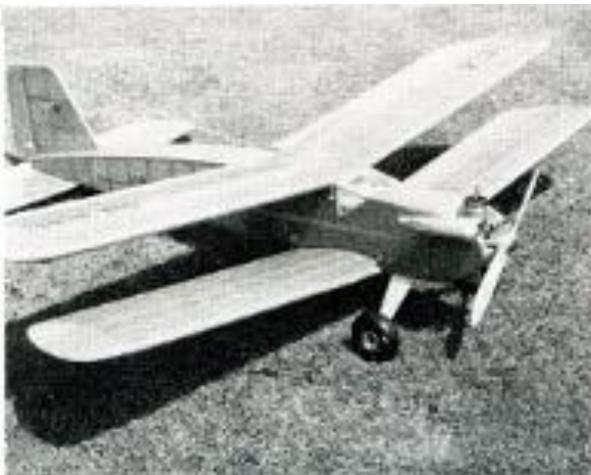
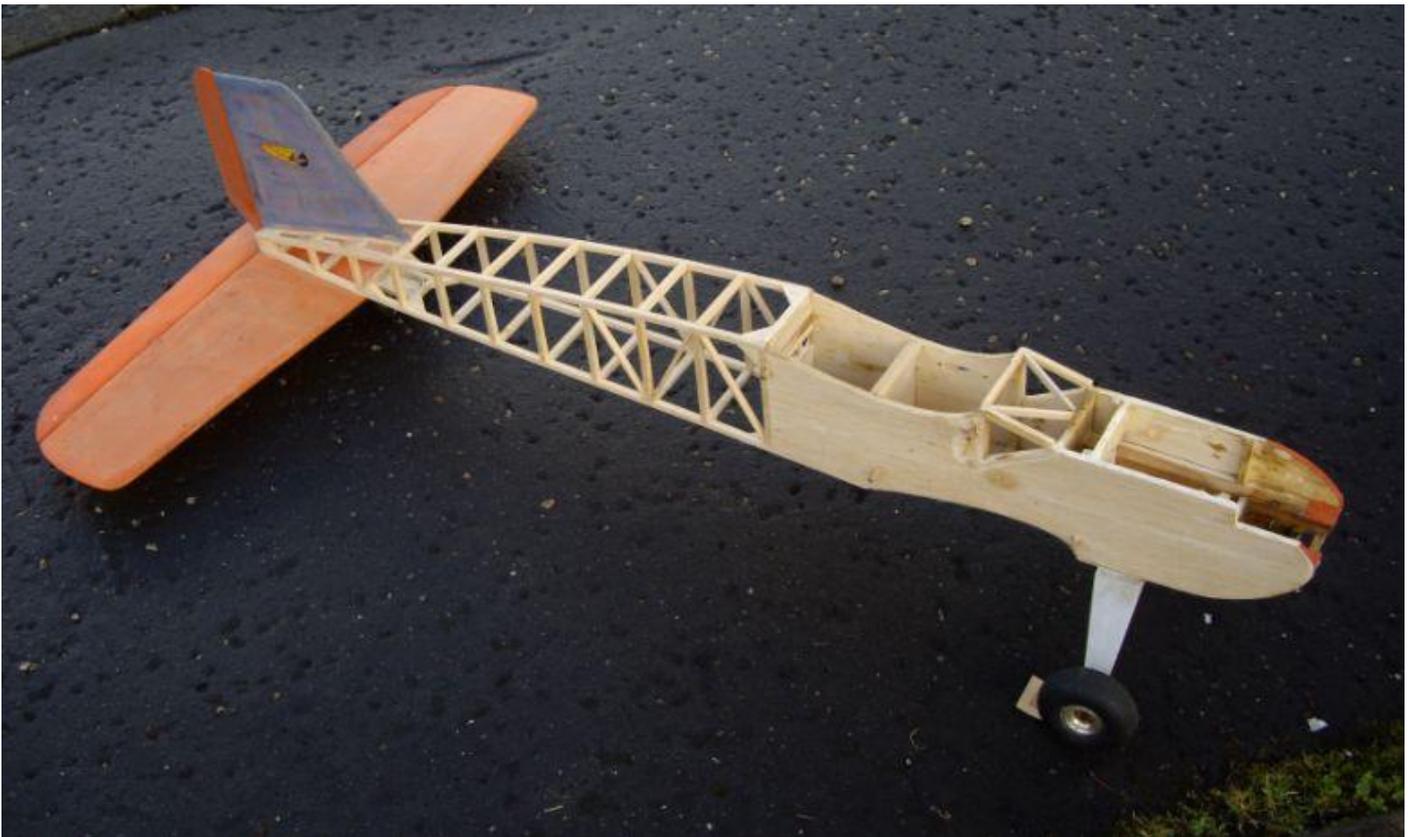
## **From Bill Wells**

In the last two issues of Sticks and Tissue you published pictures of my Sun Bird originally designed and built by Peter Fisher (AKA Performance Kits). When I decided to rebuild it I was completely unaware of the construction techniques that were originally used. By modern day standards some aspects are odd. For a start the wings were built rather like that of a small rubber powered model. There is no main spar or leading edge box structure! A wing is made of two panels left and right and a short mid section. The centre section outer ribs are angled and the inner ribs of each panel glued to them. The wing panels are made of very deep symmetrical ribs with three ¼ inch square sticks top and three underneath let into the ribs. The remaining top wing was broken at the rib joint which did not inspire confidence in the structure. The wing panels are very strong for their weight but all the model weight goes through four sets of ribs glued together. An extremely tight turn or pull up would put a lot of leverage on all the joining ribs. So after rejoining the wings I carefully cut a narrow slot and reinforced the centre with deep plywood dihedral brace or short main spar. I made a lower wing by copying the upper wing and also included a dihedral brace. The top wing has ailerons the bottom wing does not. The wings do not have inter-plane struts or bracing and are held top and bottom of the fuselage by rubber bands. Someone commented on this biplane for its thick wing section, 'Thought the idea of a biplane was external bracing that enabled thin efficient wing sections!' The wings are close together and the stagger is backwards. The lower wing is in front of the upper wing. The tail plane was covered with nylon and then glued to the underside of the fuselage. Nylon covering glued to the under side of the fuselage!!! The tail plane was held above the ground by a very rigid (and seized) tail wheel attached to the lower fuselage panel just in front of the tailplane. There were scrapes on the tailplane tips consistent with flights from a hard surface. The tail wheel is now sprung and gives slightly more ground clearance for the tailplane. By the way the old Nylon covering was still in very good condition considering its age. It was all replaced with Solartex after re-gluing all of the structure.

I powered the model with a spare OS LA 46 which is remarkably quiet in this model. Being wood mounted I think a lot of the noise is absorbed by wooden structure. For its first flight I decided that I would need the full length of the strip then if things were not going well I could just land ahead. I was a bit surprised by the short take off, started throttling back then thought no go for it and flew a couple of circuits before landing. It is very strange in the air rather like a big Dragonfly. When down wind the side on view of the long fuselage makes the model look big. When head on or going away the double orange wings with a small gap makes the model look smaller. Landings are easy and stalling speed is very low. One problem I didn't bargain with is when rolling the lower wing rocked upwards towards the down going upper wing!!! This has been overcome by putting thick rubber bands from front to rear rather than diagonally to hold the lower wing on. Exhaust started to creep between the fuselage and upper wing. This has been considerably reduced

with a plastic exhaust extension angled above the upper wing. Another problem was the fuel tank air inlet which turned inside the tank letting air bubbles into the fuel pipe. If the model is flown very slowly with just a little power it will slowly drift off to the right, the use of the correcting aileron makes the situation worse. Left rudder is needed to correct the situation and power to climb away if low.







**From Gary Hinze San Jose, California**

I hope you will find some interest in the following.

The 1911 Wakefield Gold Challenge Cup began one of the most prestigious international aeromodelling competitions. The first event was announced in *Flight* on April 1, 1911 and held on July 5, 1911 at the Crystal Palace in England. The results were announced in *Flight* on July 15, 1911. There were contests in 1912, 1913 and 1914. The First World War intervened and there was no contest again until 1928. The original Trophy had been lost. Lord Wakefield donated an even grander Silver Cup for the new series, which has continued to today, making it the longest running aeromodelling event. This year is the Centennial of the first event. This is an opportunity for a historical reenactment of the 1911 Wakefield Gold Challenge Cup event, using model designs, materials and technologies of that time.

I propose an international postal contest to:

1. Memorialize the 1911 Wakefield Gold Challenge Cup competition.
2. Stimulate an interest in and study of model aviation history.
3. To publicize free flight model airplanes.
4. To have a fun international event.
5. To possibly find the lost original 1911-1914 Wakefield Gold Challenge Cup.

I have set up an Internet page on EndlessLift to serve as a hub for communications.

<http://www.endlesslift.com/2011/04/wakefield-challenge-cup-competition-centennial/>

This page will contain postal contest rules, rules interpretations, Wakefield history, notes on 1911 aeromodelling technology, reference materials and lists of sources for plans, kits and materials of interest to contestants. EndlessLift is also set up as a blog, so interested parties may post questions, comments and carry out a discussion of this contest and aeromodelling history. If you are a provider of relevant plans or kits, please post to our blog. If you are a sponsor of a contest or event and want to include a related activity, please let us know.

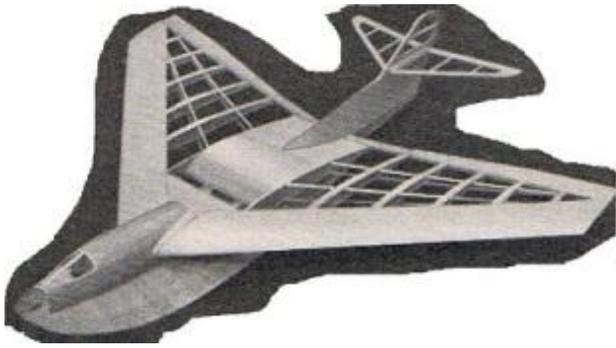
Feel free to pass this notice on to anyone who may be interested or to publish it in your newsletters, Internet sites and wherever else it may come to the attention of interested parties.



## Sea King by Laurie Ellis from Aero Modeller March 1958.

A super 45-inch Delta Flying Boat for 1.5 cc engines.

SEA KING IS the perfect “follow-on” for all who have built and enjoyed Laurie Ellis’s VULTAN and JAVELAN Deltas available in Aeromodeller Plans Service. Anyone who has made a power model should not have any difficulty with the construction and will be rewarded by a model which will give hours of flying pleasure. The machine may be flown over ground but it will not take off from ground, the strengthened hull being particularly robust, it is not in the least fussy where it lands! Its water stability is excellent but, because of its low free-board, it should be flown from calm water. Its stability in the air is perfect—it has excellent stall recovery but it is imperative that the G.G. is not aft of the position shown and the tailplane MUST be at  $2\ 1/2^\circ$  incidence.



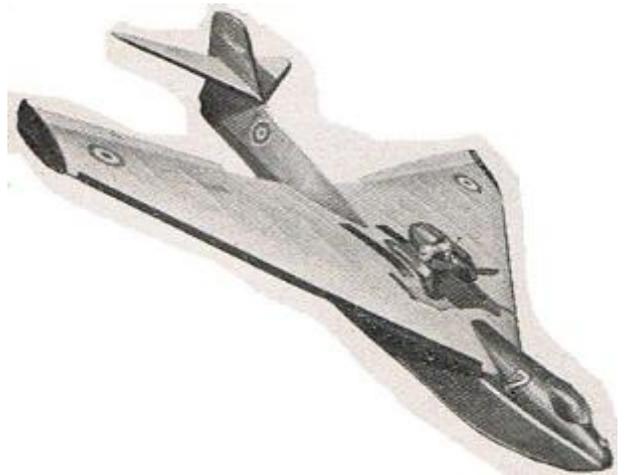
Sea King has been flown as a free flight sport model only. The hull is spacious enough for radio gear and the area of the wing is such that the additional weight can be carried with ease. The wing tip floats are not entirely necessary as Sea King has not been in the habit of digging a wing in except on the odd occasion on landing. The aerodynamic qualities of the “droop-snoot” section are also open to debate but we use it on this type of wing because of the tremendous strength given to the wing.

### Delta Trimming Technique

Now a word about the trim. Ensure that the model balances where indicated. The original weighs 26 ounces, with  $2\ 1/2$  ounces lead ballast in the nose. Screw the elevons to about  $10^\circ$  UP with the rudder trim tab neutral. Hold the model overhead, run into whatever wind there is and push into a glide in a slightly nose down attitude. If the model glides too steeply, the elevons should be raised slightly, if it dives, they should be lowered. Proceed with- caution at this stage and remember that this is a big model with a fairly fast glide.

Continue adjusting until you get a long flat glide in a straight line. In a delta remember that the model will turn toward the higher elevon. When you have adjusted for a long straight flat glide, raise the LEFT elevon just a shade and lower the RIGHT elevon the same amount. About one-third turn on the vernier screw is enough.

Glide the model to see if it shows a tendency to turn to the left. As soon as a left turn is indicated, set the rudder trim tab  $1/8$  in. to the RIGHT and glide again. The model will now glide straight or show slight turn to the right. It is now ready for powered flights. Perhaps an explanation of this trim might not be amiss. Having built numerous deltas we have found that a delta can be dangerous under power in a RIGHT turn and equally dangerous in a LEFT glide. So, initially, we want to avoid these. After you get used to your delta boat you will know what liberties you can take with it. Thus we have adjusted the model so that torque, assisted by elevons, will turn the model to the left but the trim tab is trying to turn the model to the right. Under the higher speed of powered flight the torque and elevons win out and the model goes into a left turn with the trim tab holding the nose up thus preventing a spiral dive to the left. When the engine stops and the model slows down, the trim tab takes over to turn the model to the right in a turn but now



the higher left elevon prevents the model from dropping into a right spiral dive. That is just a brief outline of what happens and it will give you something to work on for the first flight.

The take off run is dependent on conditions. On flat calm water it will need almost full power from a 1.5 c.c. and a run of about 100 feet. With a very slight breeze and small ripples it will unstick in about 40 feet.

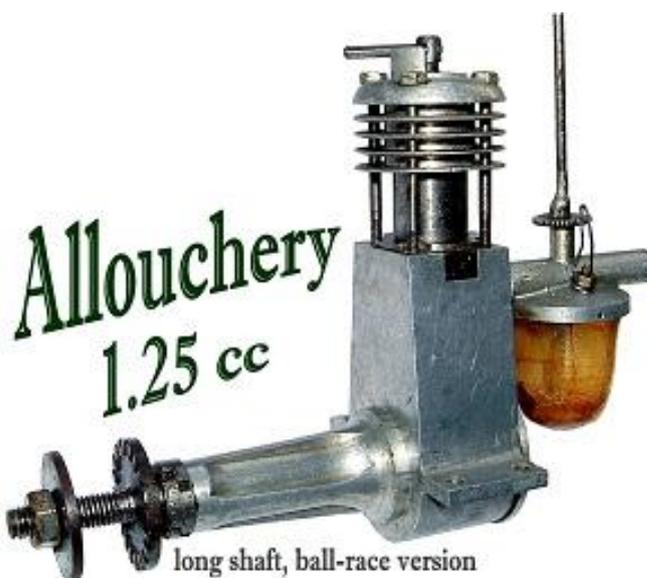
For those who build this model we will predict hours of fun and also quite a stir of interest wherever you appear with it.

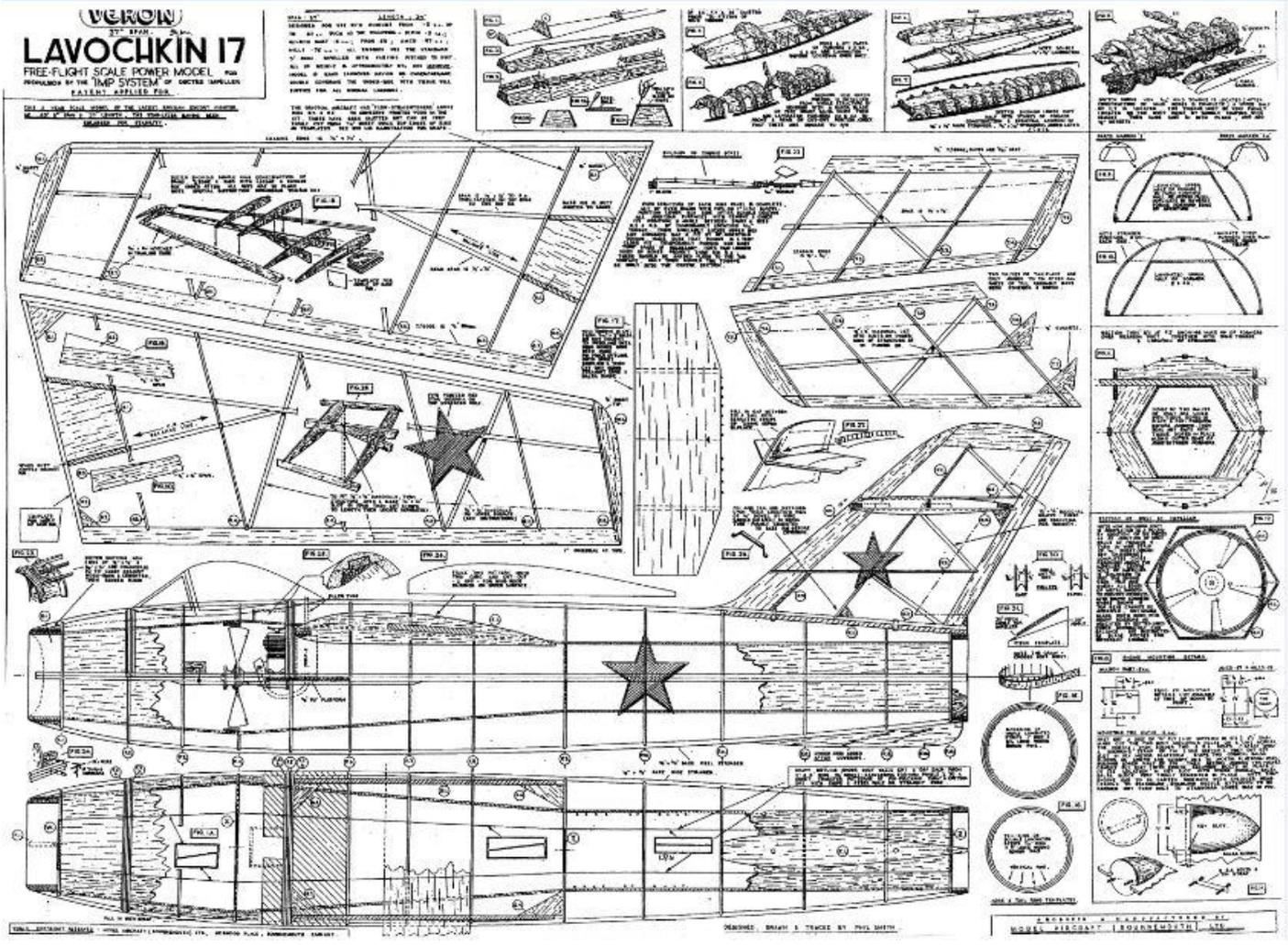
### From Bernard Dereudre, St Denis, France

I just discovered Sticks and Tissue, wonderful for a 60 years modelling modeller. I am French but, leaving in Calais I was always looking across the Channel via Aeromodeller. When I was 18 I built a La 17 from a Veron kit, with an Albon Dart. I think she was the first FF jetplane in the world, She was design by our master Phil Smith. The last plan I received from him is the Cardinal, and I will call Colin to order the Stentorian.

Some years ago I was lucky to received from Phil a copy of the Veron plan, and find in internet some photos of the La 17 with Phil. I hope you will enjoy.

I flew the La 17 but not a long time. I put the tank you see on the plan, not the original one. It was nearly impossible to start the Dart. Unless there was nearly no fuel in the tank. I understood, a lot of years later, that the fuel was in presion, to high the fuel column. But for some seconds she was very lovely flying out of my hand. I don't remember where is my La 17, half a century later, I went to the army and some years later I bought a radio set, forgotten FF. The photos are from a screen capture of a video I saw in internet.







## Mandy by Mike Green a 45 in span for 1 – 1.5 cc. From June 1964 Aero Modeller

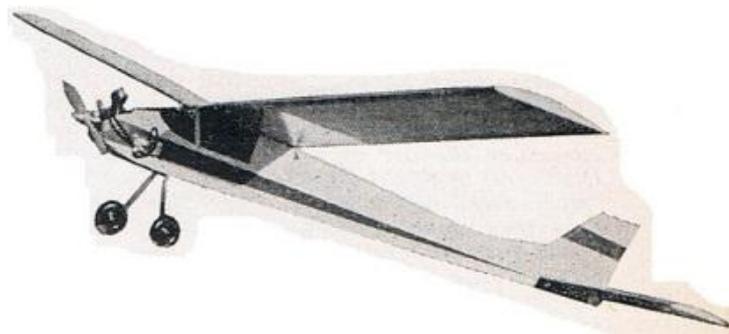
This MODEL HAS been designed with the younger sports flyer in mind. It has not been the intention to break any records, but rather to provide an aero plane of reasonable appearance, easy construction, which will give dependable performance over a long period.

For the newcomer to the sport it must be stressed that patience in building and trimming pays off and can make the difference between failure and possession of a model which has its life measured in years.

With this in mind let's run through the construction.

For the most part balsa is used, the vast bulk of which is "medium" grade. Some tolerance is permissible but care is advised when choosing the wood.

Fuselage. We suggest tackling the bearers first. Either cut them from ply, or use adequate sized square section hardwood—see the plan. Wrap tissue round the exhaust and air intake and bolt the motor to the bearers. The whole assembly can then be fixed to the fuselage properly later, in the knowledge that the motor fits, and is lined up. This may seem obvious; but many people drill bearers when the whole model is practically complete, and when mistakes are less easily rectified.



Cut the fuselage sides from 1/16 in. sheet, cement in longerons and spacers—3/16 in. sq. Cement in the reinforcement at nose and tail — do not overlook the space for the tail or the gussets for the dowels. The width of the front end will depend on the motor, so therefore the top view is a guide and may not be exactly the right size for certain motors. Accordingly, when cutting the fuselage formers make sure they are the right size.

However, the difference will not be great, 3/16 – 1/4 in. at most, and it should be within one's capacity to make the necessary modification!

When the parts have been cut, assemble "dry" to make sure parts fit — and include the bearers. If correct, go ahead and cement in the formers first, checking for trueness as you proceed. There is not undue difficulty in actual fact! The engine bearers are best fixed with Araldite, but otherwise ample cement will suffice.

Caution — if using Araldite do not make the motor a permanent fixture! When the front is held, complete by adding rear spacers. Shape the u/c wire and cement to former — either well embedded in balsa, or bound on, the former then being of ply, not balsa. Make holes for dowels but do not cement in yet. Sheet top and bottom and cut slots on top to take fin. Cut fin from 1/8 in. sheet balsa, and insert stiffener. Cement dorsal fairing and fin to fuselage, taking particular care that they are on the centre line and also vertical. When the whole lot has set, clean up with fine sandpaper. Now cement in dowels and solder washers to secure wheels and axles.

Wings. Make an accurate template for the wing ribs from 1/16 in. ply. Cut the ribs from 1/16 in. medium sheet balsa. Notch the trailing edge to take ribs. Pin leading and trailing edges on to board. Lay mainspar in correct position, securing with pins either side—i.e., do not pin rigidly. Cement in ribs ensuring a snug, but not overtight fit with the spar fitting right into notch, not protruding. Cement in top spars. Add tips from soft 3/16 in. When both sides are set, cement together at correct dihedral angle. Do not omit dihedral braces at centre. When set shape L.E. and T.E. as necessary and sand smooth. Sand tips, and carefully sand off any rough projections. Cement bandage to L.E. and T.E. at centre for toughness.

The Tail is basically similar to wing. Covering. Lightweight tissue is adequate for most surfaces, but heavyweight is acceptable for the wing. Fix the tissue to the L.E. and T.E. of the wings and tail with tissue paste, making the tissue smooth rather than excessively tight. I use cement at the centre section as paste is inadequate on ribs and the tissue may pull away. More experienced modellers may prefer to use old (thick) dope, but paste is better for the slower beginner who can then take adequate time over the job. Use lightweight tissue for the fuselage using dope, smoothing out wrinkles as work proceeds.

Either steam or water shrink the tissue on wings or tail. Give the wing two or three coats of dope (ordinary strength) and the tail two. Pin down these items on the board between each coat of dope for 24 hours. Check

carefully for warps and steam any undesirable ones out. A little “washout” on each tip ( 3/16 in.) is acceptable ; but it must be the same each side.

Use colour dope sparingly, if at all, and in any case only on the fuselage or for trim on the wings. The windows can be simulated by painting in black dope or carefully applying black tissue. If you are using a glow motor do not forget to fuel proof the fuselage, 6-8 in. inboard each side of the wings and very lightly on the tail. Proof the engine area liberally. Put on your name and address now, not later when you may forget!

Flying. Assemble the model and check that everything sits firmly and squarely. Correct unwanted tilts by shimming where necessary with 1/32 in. sheet. Use enough elastic bands of the correct size to hold the model together rigidly by the way. This sounds obvious but I have seen numerous models “floppily” assembled and as a consequence not flying properly.

The model should balance about 3 1/2 in. back from the leading edge, though there is some tolerance. If the C.G. is way out, ballast will have to be added either to the nose or tail, but at this stage this is unlikely to be necessary.

Wait for a calm day for the first tests and do find a wide open area away from houses, people, etc. Hand glide to obtain an approximate idea of the trim and cure any diving or stalling tendencies by packing the tail—i.e., pack up the LE. of the tail to eliminate stalling and pack up the TE. to cure diving. Use 1/16 in. hard sheet balsa (or 1/16 in. ply preferably) for coarse adjustments and 1/32 in. for fine.

The turn direction is not critical for moderate power. If at the hand glide stage turn is excessive cure this using the fin tab. Make the initial powered flights under low power and shortish runs—5-8 secs. It is necessary to have some idea of how long the motor will run on so much fuel, if using a “visible” fuel system. A timer will be needed for an enclosed fuel tank — though the majority of sports fliers will be employing the former. Ideally the model will climb smoothly in a fairly wide turn and make a good transition into a stable glide. If this is so work up to normal revs in easy stages and if all goes well then increase the motor run to a safe time for the conditions.

Most likely, however, some adjustments will be needed. In the event of too right a turn, make fin tab adjustments in the opposite direction — say 1/32 in. at a time not more. If the model stalls in the glide, pack up the LE. of the tail 1/32 in. at a time. A dive into the ground straight ahead is unlikely, but if it happens, cure by packing the T.E. of tail up!

In the event of power being correct, but glide too steep, a little ballast in the rear fuselage will help. The main thing is to carry out one adjustment at a time and only when the pattern appears satisfactory, increase revs or motor run. Provided reasonable care is exercised the model is unlikely to come to grief and in any case is quite sturdy so should withstand a modicum of mishandling.

Good flying!



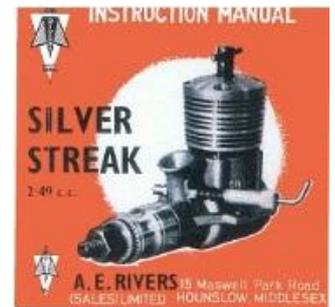
## David Kinsella's column

### Get Ready For Ron

Turn up with one of Ron Moulton's several models (see Brian Lever's list in December's Speaks) or turn up with another — or just turn up anyway. May 7 at Old Warden is our day to salute RGM and over glorious green grass fly models just as he did there for so many years. And don't forget that world class collection of truly exceptional full size aeroplanes: Comet, Bristol Fighter, Pup, Gladiator, Hurricane and many more.

### A Rarity

Probably not so now, but long ago the last thing we thought of was to keep papers, guarantee cards and even the boxes that came with our motors. Bad show! Turning again, to Rivers Silver Streaks and Silver Arrows, the Hounslow firm gave us a 14in x 3 1/2in strip printed on both sides which folded into a handy Instruction Manual. Opening with the assurance that the rollers were rated to 30,000rpm, fuel and starting, trouble shooting and performance figures, parts of the engine illustrated and a full spares list with prices (crankcase 13/8, shaft assembly 47/6) put us in the picture. Seen here is the Mk I Streak with its short and flared intake. A boxed Mk II sold for £275 in 2009.



### Always Give In

Chatting with Ian Russell at the MEE, we agreed that the big and revered hairies from the USA — McCoy, Dooling, Hornet, Hassad, Sky Devil and so many more — have massive appeal. Cost a few bob but so what? As one who knows, the pain — and strain — of departing cash always fades, rapidly even in the severest cases as we fondle the new addition to our collection. Tempted by a Howler, Bungay or Bluestreak, even a Ball or Anderson Spitfire, we should heed Wilde's words on the matter of temptation...

### Barons Castles

Reap The Wild Wind (1942) with its giant squid made me want to see Key West, but as I journeyed up the fat finger of Florida it was Giant (1956) with its oil industry and cattle ranches that caused me to turn west for Texas. In the old days the big spreads were expressed in fractions or multiples of Rhode Island (1214 sq miles), vast areas of land with beef on the hoof soon trailed to railheads for shipment to the packing plants of Chicago. The Cattle Barons with their famous brands, cowboy boots and hats had mighty palaces to match such as this magnificent pile in Santa Gertrudis. And, of course, I visited the Alamo in San Antonio, in many respects the USA's Rorke's Drift.

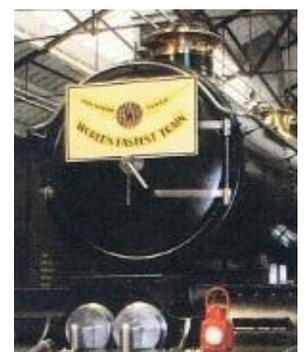


### Kite Flyer

Wearing tasseled loafers from his Ivy League days (Princeton) Jimmy Stewart left the USAF a Brigadier General with hours on bombers and in the years that followed starred in Winchester 73, The Glen Miller Story, How The West Was Won and dozens more for the big screen. Famous for his soft drawl and easy charm, Jimmy hoisted an Oscar for The Philadelphia Story, which his father kept dust-free under the lid of a cheese dish. Never without his lucky rabbit's foot and red and blue check tie, he flew big kites and built model aeroplanes with Henry Fonda. Born in 1908 Jimmy starred in It's a Wonderful Life, and many would say he had just that.

### Speedy Castles

Hauled by selected engines able to run at 100mph, the Great Western Railway's Cheltenham Flyer was famous for its pace and distinctive headboard. Regularly rostered were 4-cylinder Castles Rhuddlan and Tregenna and re-named Earl of Mount Edgcumbe, famous drivers such as Quality Street administering off-duty tweaks for extra speed. Luckily a number of Castles are in preservation, friend Mike Higson restoring Pendennis Castle at Swindon works and writing a book about it. A



Castle jigsaw puzzle by Chad Valley is rare and collectable as is W G Chapman's book, which sold 60,000 copies in eight weeks.

### Racing Rivers

Kind of Martin Radcliffe to write on his Rivers engines. On Raynes Park's stand at the MEE they cropped up once or twice, topics ranging from the roller races to works tuning. On careful removal of the backplate, metal taken from said item and the end of the shaft confirm that work was done. Lightening and shortening of the piston possibly, and I've seen a conversion to an open jet system (no full width spraybar). I believe Rivers was centered on the bearing business and turned away from model engines following the big loss on an export order. Very keen before this happened, photos confirm that members of the Rivers board regularly attended Class A events. For several years there was a control line circle in the Hayes area. Good of Brian Cox and Bill Longley to give Rivers info in February. Perfect stuff !

### It's 531!

In the age of satchels and saddlebags, when BBC swing was limited to Ted Heath at the weekend, the number we all looked for was....531! If your bike sported the magic triangle of Reynolds, one of the Brum-based TI companies, you pushed pedals with the giants of cycling, even the Yellow Jersey was possible with a spot of training. Not seen so much now, your BSA or James Arrow Ace (what a handle!) went better, lasted longer with that green 531 on the seat tube and forks. I had several treaders, a Phillips track bike in yellow giving me a few rides with the Southend Eagles.



### Just Testing Officer

After a glass or three in a Fleet Street wine bar a fellow let slip that a relation's car had clocked 185mph on MI. The broadsheets ran the story, one showing Cobra coupe BPH 4B resting with others in a lorry park. No speed limit applied and Le Mans hopefuls took to MI like ducks to water, the MIRA track not fast enough. Driver Jack dressed for the occasion just in case there was police interest on the day, but nothing happened — apart from further coverage and questions in the House — until a motorway speed limit was introduced by spoilsports.

### Dick's OK

A dozen years ago Arne Hende launched his replica Series 20 McCoy 60. In the tradition of all beefy lumps it looked great and was a joy to hold and pop in the display case (did anyone fly them?). Our Dick Roberts tested it, the big red head improving once nitro had been increased to 35% and a shim pulled to raise compression. John Goodall received 13, selling them quickly at £325 with several sheets of info and a certificate signed by Dick McCoy himself. In some areas looked down on, replicas — cars, aeroplanes, yachts and model aero engines — are part of life these days, and personally I'd rather have a crisp replica than a beaten up old wheezer with a lug missing. Dooling 61s had preceded the McCoy and sold quickly from Barton Model Products (01283 713715). Cost soon forgotten, fondle facility remains...



### Tappers

Typewriter enthusiasts discovering a rarity in need of restoration should contact S Simons (0208 204 3914) for a full restoration or service. Several writers use them and Shire Publications published a natty book for first time collectors. There's one or two hardbacks on the subject, the big boys producing guns and other things as well as QWERTY devices. In time huge factories making these things moved into other areas as the famed Typing Pool shrank and then vanished from the scene (“It's in typing” was a well-used excuse for stuff not actually done!)

### Side By Side

A big talk on publishing boiled down to the agreement that electronic stuff will exist alongside the traditional product of mashed-up trees. Handy to hold facts and figures, to my mind the slate with a window in it will never challenge the heavyweights from New Cavendish and others that offer big areas of print and stunning artwork- and then there's the vast domain of collectable books and first editions. Not long ago an 007 Bond jacket (no book inside) sold for a staggering £13,225 (Casino Royale). Signed by Ian Fleming to Raymond Chandler, Moonraker (1955) sold for £64,000 seven years ago. On Fleming's death his own collection and scripts of the Bond series went to the USA

### Tasty Italian

Not like the big hairies I much prefer, this rare 4.2cc Elia of 1946 looks neat and tidy. Made in tiny numbers in Italy, chances of finding one now are slim. Its broad blade prop is also of the period.



### Ben's Den

Not too late to start a model for flying later in the year, Ben Buckle Kits (01793 764017) offer almost forty Vintage joys. Big stuff for men includes 96in Double Diamond, 82in Radio Queen, 96in Falcon and 88in Playboy Senior. With one of these you stand with giants of the hobby.

### Watch Magic

Sad but true, most shops are just outfits selling stuff. Knowledge of these things is sparse. Luckily Tom at Motor Books directed me to Alsal Watches opposite the Law Courts in the Strand. Here they do and knew everything about quality watches - and do it right there (no sending away for weeks on end). Don't listen to excuses, get it done. None better

### Solid Mahogany

A model Typhoon, Sea Hornet, Me 2.2 or FW 190 of 18in span, perfect for the desk or den and painted with 35 glossy coats is something special. Some are signed by Basil 'Stap Me' Stapleton, Eric 'Winkle' Brown and German aces. Try the above number but supplies are limited.

### Picture Power

Before the days of wide rubber, here we have Arthur Baron at speed in one of his Bugattis. Note twin filler caps and cast front wheels which include the drums. Of Chesham Street SW1, Louis Klemantaski took the shot. With his red stamp on the back it's worth £120 or so. More expensive are his action pictures taken alongside Peter Collins in the Mille Miglia, Collins just visible on the right as the red Ferrari V12 charges on.



### Buck & Ryan

Founded in 1824 and these days in Holborn (0207 430 9898) Buck & Ryan hold large stocks of quality hand tools. Good stuff is not easy to find these days, rubber spanners not unknown, but Buck & Ryan usually have just what you need to finish the job. Just north of the Tube station.

### Pilots Boat

Motor yacht Carin II approaches a decorated landing stage. Seen here the stern of the 100ft craft was designed for entertaining whatever the weather. Elsewhere were lavish saloons, a library and the finest woodwork. Thousands were known to line canals and rivers as she passed by, Hermann. Goering waving from the rail. Carin was his first wife.



### The Printed Word

Simon Watson runs The Aviation Bookshop (01982 539284) in Tunbridge Wells. Old and new, magazines too, signed volumes by the score and plenty of room to hide away and browse for hours. Minutes from the station.

### Getting Around

Seen so far in RC Model Flyer and The Times newspaper, the picture of Ron Moulton holding his signed Sir Sirling Moss biography and my Class C (Dooling 61) similarly named was admired at Bushey last year and hangs in the club room at Raynes Park MAC. Ron enjoyed his birthday book and loved the green and gold VTR, Alan Walker's workmanship producing a splendid model.

### Gone With Steam

When we had a coast-to-coast rail network run by the Big Four, uplifting and thrilling artwork was part of the service. Pictures in carriages along with proper carpets and dining aboard, Terry Cuneo and his chums delivered big stuff for hoardings and station walls. Not Terry's but packing a punch all the same, here the London Midland Scottish urged its passengers to go south to London's racing circuit where the Crystal Palace once stood.



### Trust Me, He Said

Stock values zoomed nine and ten times during the early days of the South Sea and other companies (1720), one firm inviting investors in a project so secret they could not be told. In the 1960s investments centred on oil held in vast tanks, linked by hidden pipes unknown to those who came to see how things were doing. Recently an airline for internal flights was set up, jets and offices and staff existing only on paper save for a few who left good jobs to join up. Plausible reasons were given for lack of office space and board meetings in burger bars. That old saying 'the needy and the greedy' springs to mind.

### By Wire

The appeal of the tethered car continues and inspires replicas. Here's a fine one at 17in, much of it in diecast aluminium. Usually employing a big McCoy, Dooling or Hornet, this example sold for £700 without engine.



### Summer 1940

"Don't you shout at me, Mr Warwick!" says WRAF officer Susannah York as she sorts out the SWO when Duxford is attacked in Battle of Britain (1969 131 min Christopher Plumper drives green TC FYY 922 complete with blackout stripes and is an ace along with Robert Shaw (Sailor Malan?), Michael Caine and Trevor Howard as Keith Park. Kenneth More, too mature for Bader, is the Group Captain, gongs and top button undone of course! Pilots of the war can be spotted, and Bader, Townsend and Stanford Tuck advised along with Galland and chums from the other side. Long before CGI Hamilton, Saltman and Fisz delivered a movie that's grown in stature and sweeps along thanks to Goodwin and Walton, the latter miffed that his music was reduced in the edit. Cutting room floors are often knee deep, Sir William happier when so advised.

### Mr Robinson

Top quality wheels, spinners, circular bell cranks, cut-outs and valves are offered by Stuart Robinson. All the top VTRs use them when only the best will do. No need to advertise, word-of-mouth keeps the orders rolling in. I fit Stuart's stuff and it looks great.

### Old Warden Morning

Ron Moulton took this shot of me with a Class C (OPS 60) and other models by Roger Gedge. In the afternoon we had a raffle, Roger hoisting a Rivers and Alan Jupp winning a Dick Barton display now with him in Crete. Barton recordings discovered overseas, the BBC will release a selection this year. The Dick Barton movies are still available, Don Stannard with his Allard chasing spivs and delivering resounding socks to the jaw.



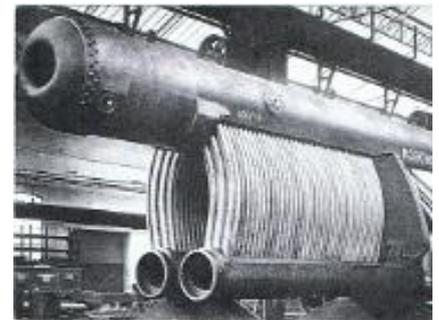
### Traditional Material

I've always sailed wooden boats, blazing varnish and paint worth the graft in the chilly yards of winter. Classic Boat and other magazines have boosted plank-on-frame stuff since the 1970s and great characters like bearded Peter Freebody (sunflower on his boater) restored Edwardian launches seen these days at Henley. Some were tenders to the great J Class racers campaigned by Lipton and Sopwith, millions spent in quest of the America's Cup. Others ran on batteries and were perfect for leafy upper reaches while sturdier devices steamed east past the Commons and beyond to salt water, some as far as Dunkirk. These days, ready and waiting, are hulls and steam plants, brass fittings and striped awnings to put you on the water with the best model for miles- and the freezing boat yard is avoided!



### Bang!

Here's the innards of Gresley's great engine (February S&T). The LMS had a go at it too, their Fury loco running a tri-boiler system with pressure up to 1800lbs. Ending with a mighty explosion and death, the engine was rebuilt as standard running at some 225lbs.



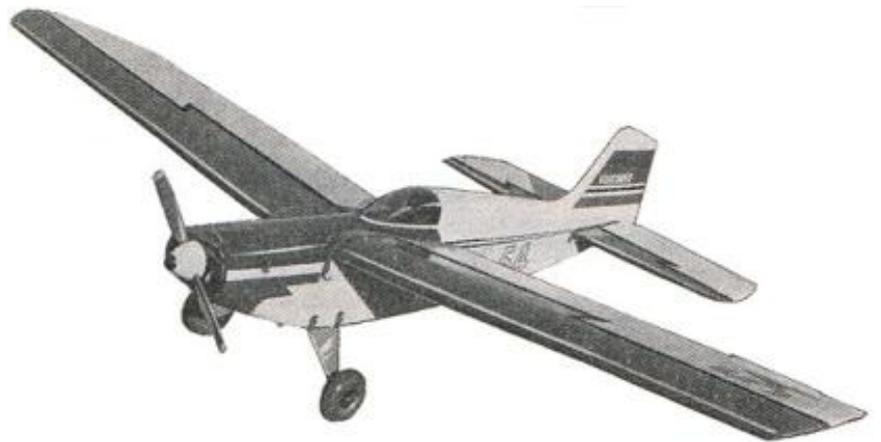
## **EVENTS**

Middle Wallop Sunday 8 May there will be FF, RC and CL.

Wimborne MAC – Cashmoor site  
22 May Sunday RC vintage

Cockelabarrow RC vintage 19 June  
Sunday

Wimborne MAC – Cashmoor 3 July Sunday Control line



**DOGS ARE NOT ALLOWED AT MIDDLE WALLOP  
UNDER ANY CIRCUMSTANCES. THIS IS A MOD  
REQUIREMENT**

**16<sup>th</sup> Peterborough Flying Aces Nationals, Sunday 4<sup>th</sup> Sept 2011**  
**at Ferry Meadows, Nene Park, Peterborough, PE2 5UU .**

**Open Rubber Scale**

Scale competition flown to Masefield rules

**Open CO2/Electric Scale**

“Stand off” scale against plan, plus flight profile of launch/flight/landing. Any CO2 motor/tank permitted.

**Kit Scale**

ANY kit model, rubber powered, span 30” or less. Model judged against kit plan only.

**Jetex/Rapier Authentic Scale**

**Jetex/Rapier Profile Scale**

**P-20.** 20” span and length. Maximum 8” plastic prop, 6 gram motors ( may be external)

**“Junior Miss”** Rubber Duration comp. for Vic Smeed’s classic design. 6 gram motor. Folding prop not essential. Note! If fitted with 8” plastic prop model can also be flown in P20 event. If you cannot find a copy of the plan contact Brian Waterland on 01778 343722.

**Open Rubber Rise Off Water** Rubber Duration event for floatplanes and flying boats on our 100 sq ft pond

**Cloud Tramp**

**Jetex/Rapier Duration**

**Frog Senior Rubber Power Duration** For plan send A4 sae with 1<sup>st</sup> class stamp to Marc Ashby, Thatched Cottage, Church Road, Leverington, Wisbech PE13 5DE

**Catapult Glider**

**Duration Rubber Ratio** Any rubber powered model with wing span between 16”-25” span (wing tip to wing tip). Flight score is total time in seconds (from three flights) divided by wing span (tip to tip ) in inches.

**Table Top Precision**

Precision flight time event. Model must Rise Off Table of 1 metre diameter.

**Electric Precision** Precision flight time contest for any electric powered model

**Silent Ebenezer** Cartoon profile models of semi-scale appearance. Flat plate wing section. Power to be electric, CO2 or rubber.

**Flying Swarm**

A mass launch for any non electric model entered into any event during the day. Last model down is the winner.

**Concours**

**Young Flying Aces**

Any flyer who is less than 16 years old on 5th September 2010 will be awarded a 25% handicap advantage in all events.

**Awards** - Wine for 1<sup>st</sup> place with scrolls for 2<sup>nd</sup> and 3<sup>rd</sup> **Exclusions** - No I/C or radio flying of any type.

**Proof of Insurance required for all flyers**

**Parking free before 10.00 am. Grass flying site. Toilets, café and Park Visitors Centre.**

Revel in the special atmosphere created at the biggest outdoor small scale F/F meeting in Europe.

**For more details of events visit the Peterborough MFC Website at <http://Peterboroughmfc.org>**

OR contact Marc Ashby 01945 461392 or Brian Waterland 01778 343722



## Middle Wallop Sunday 24 April 2011

Although a three day free flight event there was RC vintage and Control line on the Sunday.

A good turn out of RC flyers I recall about 33 signed on and a handful of CL modellers. Shame not more turn up for CL as space is limitless however numbers are gradually growing.

Several events were run those being the "National" Tomboy, Bill Longley and his Power Duration and also the Wessex League mini speed for CL.

Weather for once was good and the Tomboys were getting high I flew Derek Foxwell's Tomboy 48 and in the qualifying rounds really struggled to see the model and in last flight did something I hate doing and that is putting in down elevator while the engine was still running. The model stood up to it no problem but with the build up of speed etc etc bringing out of the fast but shallow dive was to say the least worrying. The previous Sunday I did the same, without power on, with my 600 glider and the wing quickly came to the decision that it should rid itself of earthly constraints and by pulling out the nylon bolt left the fuselage to make it's own way down whilst it fluttered off, in bits!

Mind you several Tomboys were lost, one at least was found not sure about the others.

One thing I did fly, for about 2 minutes, was the Derek's RC Lola and with added downthrust and 10cc tank the MP Jet ran for about 10 minutes and the model performed beautifully, it can loop and roll with the best of them.

Here's the few photos.



Tomboy 48, Lola, Ballerina



Bill Longley's collection





John Hoyle's Bowden models which incorporate bits from Bowden's actual models





Mike Phillips also had a Dakota



Nick Skyrme's Laser powered Falcon



Chris Hague's OSMAF Peacemaker



Ken Taylor's Frog 150 Mini Speed



Chris Hague's Zoot Suit



## ADVERTS

### Belair

Icarus CL Stunter by Coasby - Parts Set  
All the shaped parts required to complete the classic CL Stunter. Parts include fuselage components, formers, wing ribs, bellcrank mounts, tail and fin shapes, plus smaller items. Just add stripwood and covering. Parts only suit the original AM plan - CL422  
£58.00



<http://www.belairkits.com/Productdetail.asp?Id=820>

### From Dens Models

<http://www.densmodelsupplies.co.uk>

AC 1900 **Tethered Trainer** £55.00

The Tethered Trainer was Designed by Earl Clayton and appeared in Air Trails magazine in 1943. The plane was kitted by Scientific Models after WW2 and was called The Cyclone. The BHM version of this great aircraft represents the culmination of a two year labor of love. Boasting a classic look with a covered former and stringer construction, this Old Time Legal plane is sure to be a hit at your next competition or week-end flying session!

WING SPAN: 36 inch ENGINE: Glow .10 to .15, Ignition .19 to .23

SKILL LEVEL: Medium

Kit includes:

Laser cut parts

Full size plans  
Hardware package  
Tissue  
Instruction book with intro written by Earl Clayton



AC 600 **Giant Stunt Master** £52.50

This giant Walt Musciano model is a big brother of his famous 1/2 A Stunt Master and will fly rings around all other stunt models in it's class. You will draw crowds whenever you fly the Giant Stunt Master.

WING SPAN: 40 inches  
WING AREA: 450 Square Inches  
ENGINE: .29 to .40  
Kit includes:  
Laser Cut and pre-fabricated parts  
Built-up wing  
Optional landing gear  
All modern hardware included



DMS XB  
**Babe Bee**  
£27.50

Cox .049 Babe Bee engine  
Aluminium 5cc tank

Brand new Original Cox item



**Nomad** - Perfect for the Cox Sure Start  
£29.95

Featured in Air Trails Magazine, December 1950 issue, the Nomad was first produced by Joy Products (now Balsa USA). This kit features a profile fuselage, built-up wing, and pre-cut parts. Here is the contest performance and easy construction that Black Hawk Models is known for. The NOMAD climbs like a rocket, has sensational glide and perfect stability. The NOMAD may be powered by any 1/4A or 1/2A engine and is perfect for the Cox Sure Start. Now, thanks to the assistance of Balsa USA, Black Hawk Models is able to bring this exciting, fun model back to you.

- WING SPAN: 31 inches
- LENGTH: 18 inches
- SKILL LEVEL: Easy
- Kit includes:
  - Laser cut ribs
  - Eyedropper FF Tank
  - Profile fuselage
  - Built-up wing
  - Landing gear and wheels
  - Silk span



**Cox 049 Sure Start**  
£14.00

Cox 049 Sure Start .....Cox quality budget engine that is great value for money

