

ADS



Short Finals

*** EVENTS CALENDAR UPDATED - Aboyne Fly-in, Scot Soaring Nats, etc ***

Mike's magnificent Lanc Pt. 2
Hazlehead Park 2004
The Easy Star
Bumper photo issue



Something had gone terribly, terribly wrong! What had ADS done to deserve this? It was totally unexpected and the expressions on faces of those present reflected disbelief. However, without a murmur of discontent everyone quietly got on with making the best of the situation two days of ear to ear smiles and hassle free flying! Yup, for the first time in god knows how many years our June event at Hazlehead was blessed with two days of glorious, warm weather. A light sprinkling of rain delayed the start of Sunday's competition, but flying got under way around about 12:00. Smashing! A full report and photos to follow.

By way of a complete contrast, have a look at the photo below. This was a Saturday afternoon at Calder, back in March. A fine



sunny day, when two hours into the session we were suddenly hit by a heavy hail storm. No time for an orderly de-rig, whole models and all the gear were hurriedly shoehorned into the cars, with Brian Allen's electric "foamie" taking quite a pounding before being tossed into his boot. (the finish on upper surface of his wings is now uncannily similar to that of Hammerite paint!). Toys safely stashed away and out of options, we mortals could do little else other than spend

the next 15 minutes getting soaked. When the sun came out again, I swear I had shrunk by 3 inches!

Since the start of the "flying season", the Tuesday night sessions have been a bit hit or miss because of variable wind conditions, but the bonus is that quite a number of us have spent heaps of time out on the slopes not necessarily the same slope though! I must admit that slope flying is still my preferred option, so I ain't complaining. Over the last 4 or 5 months, keen beans Terry Shields and Ian Manson have put in lots of stick time on Brimmond and are competent enough to fly solo as well as land within walking distance definitely the easiest way for newcomers to gain experience quickly.

Whilst rabbiting on about slope soaring, I

came across a "belter" of a site during a weekend trip to the west coast at the beginning of April (the main purpose of the trip was to indulge in an orgy of over-eating and drunkenness with a group of close friends!). Being between hangovers, the missus and I were doing a bit of sightseeing on the single track road just north of Gairloch when we stumbled

upon a stretch of west facing coastline that was smack into the wind a very steep 80 foot drop from the roadside to the sea! Fortunately I just happened to have slung my "Mustang" into the boot and even more fortuitously, the wife just happened to

Cover Pic:

Returning from a successful mission on the electric U-boat pens, Mike Pirie's magnificent electric Lancaster circles Calder Park before committing to a landing.

have brought her book along too! Facing the open sea and with only the Outer Hebrides twixt me and America, the 12 mph breeze produced outstanding lift for dog-fighting passing gulls. Landing wasn't a problem either nice soft heather with only the occasional boulder to dodge!

Five and a bit chapters later (that's an hour and a quarter in real time for those of us who can't speed read!) we packed up and headed back for another session of over indulgence. This is one of the most beautiful areas I've ever sobered up in! Anyone holidaying in this area who would

like to fly from this site, should contact me for specific instructions.

Anybody spot the deliberate mistake on the cover of the last issue? several of you did actually! The aircraft featured was not a Galaxy transport as stated, but was in fact a Globemaster. Humble apologies from the Ed!

Contributions for this issue of the newsletter include a first article from Neil Davidson on his "foam fetish", the concluding piece on Mike Pirie's electric Lancaster and a competition report from John McConville. Heads down for a full house happy flying ye all!



Winter flying off Brimmond Hill sees the Ed shake a fist at yet another approaching snow shower, which played havoc with his recently fitted "Elvis" toupee. (photo Iain Manson)

Hazlehead Park 2004

Derek Robertson/John McConville

From 08:30 on the Saturday morning through to 17:00, the sun shone continuously. Short sleeved shirts and open-necked trousers were the order of the day. Sorry, that should read open necked shirts and shorts were the order of the day! Well, who would have believed it? So much for my prediction that we'd be rained off as usual!

Not only was the weather playing ball, but there was not a footballer in sight. Secretary Ruxton had done a wonderful harrassment job on the Arts & Leisure dept, so apart from a few goal posts at the bottom corner of the park, we had the whole place to ourselves. The club tent was erected and would serve as Tx control for both days activities. The promised stakes and rope for marking off a pit area had failed to materialise, but the local "parkie" managed to lay his hands on enough of the said items for us to get by.

With everything set up, the flying commenced around 09:30. And a very relaxed, unhurried affair it was too. Conditions were extremely smooth in the light breeze, resulting in some very silky piloting throughout the day. I did notice both Jim Ruxton and John McConville's winch launched Revello and Eraser soarers wheeling around at some considerable height, obviously riding a passing thermal, while John Barnes flew the light-weight 'Topaz' 100" soarer (last issue's pull-out) for the first time. The rest of us stuck with electric, with Bill Stark being the sole representative on IC power. Unfortunately engine starting problems ensured that his plane was kept firmly grounded! Tx control was manned at all times by an informal rota of guys taking a break from the flying and diving into their sandwiches.

Despite the wall to wall sunshine, the turnout was modest. Only 15 members or so present if I remember correctly. A pity really, because the fine weather had attracted quite a



The pit area. Just shows what a mess we can make if we really try! Neil Davidson preparing the Multiplex 'Easy Star' for another flight. Absolutely brilliant aircraft for newcomers to R/C flying.



George Thomson's twin-engined electric Aerovan slips effortlessly into the calm air. Nae bad for a free plan!

steady stream of spectators eager to see some action. The spectacular vertical performance of Barnsie's Highlight 1.8 soarer never failed to please, as did the sight of three Twin Jets and a lone Pico Jet indulging in a spot of pylon racing a number of times throughout the afternoon. John McConville's Pico Jet was surprisingly agile and quick enough to hold its own against the twin-engined TJ's a barrel of laughs which produced several near misses, and very exciting to participate in! Meanwhile, two of the clubs biggest "gas bags", John Barnes and Neil Davidson, slotted into PR mode, providing information and answering questions posed mainly by the

younger elements in the crowd. You know the sort of thing, "how much does it cost?", "how fast does it fly?" and one lad who wondered if we'd "..... like to buy some filthy pictures!" Naturally, Neil was appalled! (especially when he discovered he'd left his wallet at home!) Seriously though, hats off to these guys for spending some considerable time chatting to the public and generally promoting the hobby.

The relaxed flying continued all afternoon in the blazing sunshine with sunburn and sagging plastic coverings being the only hazards to contend with. Neil D. went above and beyond the call of duty when he passed his tranny to Dominic Schweizer for his first ever flight with a radio controlled aircraft. The youngster acquitted himself well, proving that the Easy Star is a very stable platform, even in the hands of a complete novice. Well done young and old-timers!

It's a shame that Mike Pirie didn't take his 100" Lancaster along to the fly-in, but with that in the back of his car there would have been little room for anything else would have been a show stopper though! By 16:30



Neil supports Dominic in guidance of the 'Easy Star' on Dom's intro to R/C flying. It's moments like this which make the club's annual public outing at Hazlehead so worthwhile.



A Twin Jet fest! Graham, Derek & Mike about to indulge in a little close quarters racing. (photos Neil D.)





Neck & neck after the first circuit! (photo Neil D.)



JB watches the bungee launched EDF F16 Falcon, mounted on a simple 'dolly', ready to take to the air as soon as the photographer moves his ass! An awesome performance, marred only by the fact that Graham Donaldson never once managed to land it back onto the dolly! [An awesome performance from the photographer too, the F16 accelerating from 0-100mph in a nano second care of the high tension bungee, and Graham's foot resting on the release latch. Well done, Derek! JB]



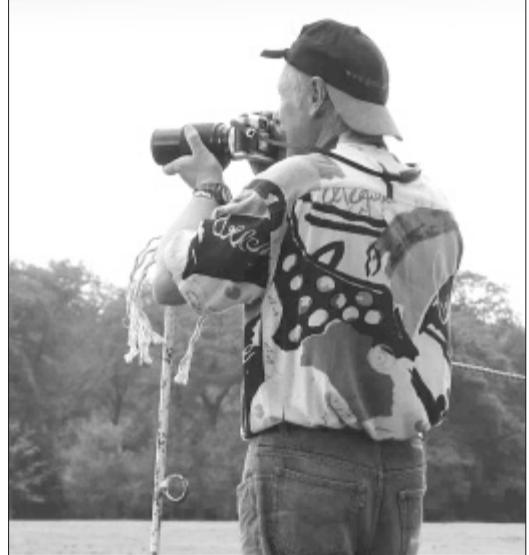
The F16 looks the part during one of the many low, high-speed passes. An impressive crowd-pleaser.



mmm... Jabba the Hutt, perhaps.

...so, ever since going onto Li-Poly cells, the lads in the club treat me like some sort of film star

Neil D. answering queries from dawn to sunset. What a thankless task the PR job can be when the Ed gets to putting together the stuff for the mag after a few glasses of vino collapses!



Your trend-setting Editor sports the latest fashion in shirts well it was back in the 1986 'Freemans Club' catalogue! (payback photo by Neil Davidson!)

everyone had had their fill of juice, snacks, sunshine and flying. As the gear was being packed away, we all had time to reflect on a wonderful day of camaraderie and ponder over some of the more important issues like, how many cups of tea Jim Ruxton had consumed between flights and estimating the number of insults traded between messers Allen and Davidson? The forecast for Sunday was good so the drive home was in anticipation of another full day's activities to come!

And now for something completely different! Actually a report from John McConville, who, with Brian Ord, organised and ran the Sunday competition. This is John's perspective on the weekend.

Saturday Fly for Fun

A beautiful day for the fly-for-fun with a good turn out, and thankfully no footballers. Electric machines seemed to be the most popular, with some fine flights from the scale machines. These included Derek's Dash 7, Mike's Blenheim and Graham's F16.

On the glider side, JB had a very lightweight 100 inch machine (the 'Topaz'), which is one of the latest offering from Soarhigh Models. The fuselage is very light carbon and the composite wings are built up, with carbon trailing edges. The top surface on the centre section of the 3 piece wing contains a very effective 2" wide airbrake which is the full width of the panel. It flew very well, floating around like a free-fighter in the calm conditions.

There were also a few sorties from our very own formation flying team, The Lame Ducks. Using 3 Twin Jets, they chased each other around and it looked a lot of fun. On the last

sortie they were joined by Lame Duck 4 (my Pico Jet), and it had to pedal hard to keep up. Great fun.

It was a very successful day and thanks to superb weather everyone had an enjoyable day.

Sunday Competition

The weather was smiling on us again with only a light shower at the start. This year there were no visitors from down south, so with six keen entrants it was decided to run a Taylor Trophy format competition. The primary aim of this competition format is a pain-free, humour-filled intro to competition flying for those wishing to dip a toe in the waters of task flying a soarer. ADS flyers enjoyed some great times throughout the '70s and '80s when Tommy and Marjorie Taylor ran the event every September, and at its peak it attracted a big entry list from far and wide. A laugh a minute. Thanks, Tommy.

The rules (for this year) are briefly:

3 Rounds of 8 minute Slots.

Total flight time target of 15 minutes.

30 secs bonus for landing in the circle.



Just prior to the first round of the comp, Norrie Kerr's test glide ends with a perfect landing right on the "sweet spot"! In the foreground, Brian Ord wonders if his built-up wing will survive JB's F3B comp winch. It did!



Religious fanatic John McConville always ensures that he's facing Mecca before blowing his nose and putting the 'Eraser' together! Seriously, searching for small parts which magically become invisible in grass is all part of the fun...

Penalties.

30 secs penalty for overflying the slot 60 secs penalty for overflying 15 mins

Note that in days of yore Tommy used much more severe penalty times. Hero to zero was very easy to achieve! Note also that the total target time is adjusted to suit whatever the conditions look like on the day, the time varying between 15 to 20+ minutes originally. On this Sunday the calm air didn't appear too lively. How true that turned out to be!

The rules are simple and with six people flying the competition proceeded smoothly in 3 man slots.

After 2 rounds the times stood at:

N Kerr	6.29
J Ruxton	5.14
B Ord	6.47
J Barnes	12.55
J McConville	11.28
D Robertson	5.23

The leaden air was taking its toll. 15 minutes from 3 flights had seemed so deceptively easy to achieve at the start. The larger span soarers of JB (Eliminator 134) and JM (Eraser) had an edge in such conditions, although Derek was doing very well with a small aerobatic slope machine which appeared only marginally larger than the the tail on the 134!

This left The Two Johnnie's with 2 to 3 minute flights and the rest with a bit more to do. Surely the air would improve for the 3rd Round? In anticipation of the reverse happening, the Two J's blitzed off on the buzzer for full-height launches! But it just stayed leaden, so while the others scratched as best they could, the two bigger soarers simply dived gently (ignoring the landings...) back to terra firma.

At the end of Round 3 and the final results. JB put in a superb 2.04 flight for a total of 14.59 to be the 2004 Taylor Trophy winner.



A successful conclusion to the competition as overall winner John Barnes is presented with the "Taylor Trophy" by Brian Ord. Participants, time-keepers and winchmen wait in vain for the free beers that any victor should feel obliged to provide! (photo Bill Stark)

At the winning post:

J Barnes	14.59
J McConville	14.57
B Ord	11.05
N Kerr	10.37
D Robertson	8.10
J Ruxton	7.18

Well done JB, and not easy to be only 1 second out.

The feedback from this competition has been very positive, with quite a few of the helpers and spectators promising to bring gliders next year. Thanks to everyone for supporting the two days and making it an enjoyable, and safe event. See you there next year. **JM**

Thanks to Brian and John (the latter was nursing what looked suspiciously like a hangover, but was in fact flu) for organising a superb, well run competition. Also, a special thanks to the rest of the guys present who acted as time-keepers, winch men and retrievers, and without whom it would not have been possible for the comp to run. Judging by the very positive comments from all involved, we could have a bigger entry next time around.

The remainder of the afternoon comprised of general sport flying, but was kicked off with George Whelan's suggestion of an electric 'all up last down' (AULD) fun comp. Any electric ship could participate, unlimited motor run, just stay in the air as long possible. Simple!

This promised to be a real giggle in the calm conditions. Seven pilots and their aircraft lined up for the mass launch. How's this for a mixed bag? A Whiffler, a Pico Cub, an Arriba, a Highlight 1.8m, an Easy Star, a Nebula and a Dash 7. On the starters signal off they all went, criss-crossing until a little height had been gained. Wow, that was a blast, but no collisions! Everyone went for height (the Highlight 1.8 for the moon) and hung in there for as long as possible, but with little in the way of thermal activity to help, the Pico Cub and Dash 7 were back on the ground around the 15 min mark. No timing was involved, but I estimate that most of the rest of the field were back down after about 25 to 30 minutes.

Only two aircraft remained aloft, with the nicad-packed Highlight 1.8 finally giving up the ghost after close on 40 minutes air time. No prizes for guessing the winner! Neil

Davidson's Li-poly powered Easy Star took the honours, landing eventually out of sheer boredom on the pilot's part I think, after a total of 45+ minutes flying time. Remind me never to speak to that guy again!

Leisurely flying and nattering continued in the sunshine until 16:30, when thoughts of the Sunday roast and neglected wives began to tug at the heart strings. By 17:00 all trace of ADS had been removed from the field.

Certainly the best and most complete weekend event at Hazlehead I've attended since joining the club. Can't wait until next year! **DR**

[Post the Hazlehead event, Dominic's father, Peter, contacted me to advise that Dominic has ordered an Easy Star combo (includes radio gear, etc). Well done, Neil. All that remains is for me to persuade Dominic that joining ADS is the best investment he'll ever make! JB]

My Multiplex 'Easy Star'

Neil Davidson

It has now been a few years since Multiplex started its range of foam models. These include the Easy Jet, Twin star, Twinjet, Micro Jet, Lupo, Easy Star, Pico Baby, Pico Cub, Stuntman, Sky Cat, Sonic Liner, Cargo and the Easy Star. Since the introduction of the Easy Star, Multiplex has now released the Magistar which is the same size as a traditional 40 size trainer. The foam used to make these models has changed over the years, with the later models, including the Easy Star, moulded in Elapor. Models made of Elapor use cyanoacrylate adhesive ($C_5H_5NO_2$ for you chemistry buffs) *[super glue to us country boys! JB]*.

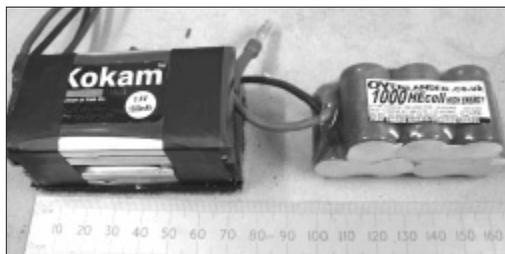
Previous models, which used other types of foam, required the use of epoxy resin as the superglue would have attacked the foam. I now have four models out of the range of Multiplex foamies.

Taking a step back in time, my Pico Cub had used a 7 cell 500AR pack but that eventually stopped holding its charge. I then decided to move from the Nicad to NiMHs. The 1100

Hecells packs from Overlander were the same size and weight as the 500 AR NiCads. Unfortunately this was not a success as I could not get the Hecells properly charged. The cells were returned to Overlander, who subsequently told me that one of the packs had vented whilst one was OK. They also explained that the Super Nova charger had a reputation for not handling NiMH cells very well. When I tried my Super Nova on a 7x3300 pack for the Twin Star, it also would not charge properly either.

I had previously spent some time researching Lithium Ion and Lithium Poly cells as I felt that this would be the future in electric flight. What had put me off was the cost of the Lithium Poly cells and the cost of the battery charger. As I now felt that it would be necessary to buy another charger, I might as well get one that could handle all cells including Lithiums. The new charger had to be German of course, and as I had previously found Schulze equipment to be first class, the Schulze Chameleon was purchased.

My research into the various cells revealed that the 7x500AR Nicads, the 7x1000 NiMH and 2 x 1500 (3000) Lithium Poly packs weighed about the same, around the 160 gms mark. (Using only one Lithium Poly pack would have required the addition of a fair amount of lead to balance the model - bit of a waste really.) So a cheque for £60 was sent to Aurora and the two cells arrived by return.



Nimh pack (R) & preferred Li-poly's, which are only marginally bigger, weigh the same and have 3 times the capacity!

By this time the Pico Cub was well past its best and needed to be replaced. The Easy Star had been released and a kit was sitting in GTI Models in Aberdeen pining for me. Five minutes after this discovery the model was chucked into my car!

Building the EasyStar was – easy! There are very few parts to the model and the bulk of the time was spent fitting the small fiddly bits such as the unusual hatch locking device pins and the servos that are simply pushed into the side of the model. The model was duly balanced in accordance with the instructions, the transmitter set up (Multiplex of course), the new cells charged and I was ready for the maiden flight.

Nobody at Calder Park – good! At least if I make an mess of the flight Derek Robertson won't pop out of the bushes, take a photograph and put it in the club magazine!



Hah, hah, wrong again!



During a brief lull between insults at Hazlehead, Brian Allen shares the pilots box with Neil, who guides Dominic through his first brush with RC flight.

The launch was – easy. The model flew straight, climbing slightly with no extra trim required. One odd characteristic is that when full power is applied, the model wants to dive initially. I think that this is due to the fact that the motor points slightly down and is high up compared to the centre of the fuselage and the wing.

The model is very stable and if set up properly will turn gently on rudder only without needing the elevator to keep the height. It will also loop and fly inverted. The model has surprised me with its ability to fly in strong winds, when it can actually be made to

hover in a stationary position. The only downside that I have discovered with this model is that due to the small control surfaces, it does require a bit of a wind to ensure full control [*speed it up a bit when it's calm, Neil. JB*]. I normally fly in all wind conditions with the rates off, with only down elevator seeming a little oversensitive.

The best example that I can give of the model's flying characteristics was on the Saturday at Hazlehead when John Barnes had asked me to demonstrate model flying to one of his guests. Within 5 minutes young Dominic

Schweizer was flying it himself without any input from me. OK, they were simple manoeuvres but I am sure that this type of model would excel as a trainer for a new flier. Seeing how "easy" this model handles may encourage new members to go down this road.

Speaking of Hazlehead, on the Sunday an AULD fun competition was held and the East Star stayed up longest (*nothing like rubbing it in Neil! ...Ed*). When I recharged the battery, I discovered that I had only used 2/3 of the total capacity!

I have avoided going into depth on Lithium Poly batteries in this article as I would like to submit a brief article on my findings at a later date.

The vital statistics of the Easy Star are:

Wingspan	54"
Length	34"
Weight	20 ozs
Functions	Rudder/Elevator/Motor
Motor	Permax 400 (Speed 400).

I am not sure of the profile of the wing but it has distinct camber and upswept wingtips.

If anyone is keen to try this model, I'm sure that a test flight could be arranged. **ND**



Mike Pirie's jammy chance shot of a Mustang fly past occurred whilst framing up a portrait of Terry Sheilds enjoying a post flight "fag" on a cold wintry day up Barmekin Hill.



Yet another scale multi-engine electric success story! A 53" wingspan Partanavia P68, powered by 2 x Sp 400 6v motors, running off a 7 cell pack of Sanyo 4/5 sub C's. Originally designed for rudder/elev, Sandy Tough reduced the dihedral and fitted ailerons flight times of 7 mins despite an AUV of 1.8 kilos. (photo Sandy T.)



Nice flyer this "Bluebird". Manufactured somewhere in the far east and distributed by JR Perkins, it's a 100 inch ARTF electric soarer with cute winglets. George Whelan looks cute too, doesn't he?



A delightfully natural shot of Alan Stewart with his Ben Buckle Southerner, having fun out at Kerloch. (photo Mike Pirie)

Lancaster B1 Special

(Ivan's Lanc) Part 2

Mike Pirie

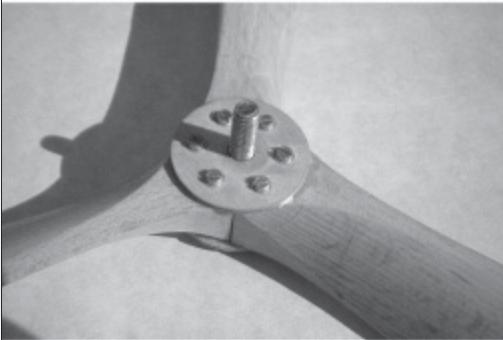
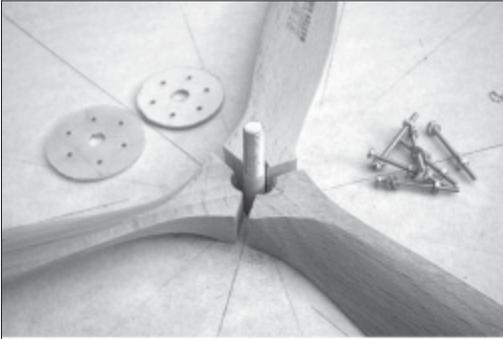
The Propellers

Six no. 'Master Airscrew 13 x 10 woods' were purchased from John Swain (Fanfare), then cut into twelve individual blades. Because of varying wood densities, the blades were then accurately weighed and grouped



This is 'Part 2' of the story behind the planning, building and flying of a 1:12 scale Lancaster B1 Special (the version that carried the 'grand slam' bomb). The model was designed by Ivan Pettigrew, a New Zealander now living in British Columbia, who specialises in the design and building of large-scale electric models, many of which are multi-motored. His models are traditionally built, featuring lots of open framework, DIY lightweight retracts and inexpensive propulsion systems, the resulting models boasting low wing loadings, scale-like speeds and long flight times. You can find details of Ivan's models and a list of his plans at his web-site - www.geocities.com/ivansplans. In 'Part 2', I will describe the construction of the propellers, the 'grand slam' bomb, the covering and painting and finally the flying.

together into four groups of three. This ensured that the final prop assemblies would require only the minimum of balancing. My first attempt resulted in a highly out-of-balance prop which required chunks of lead near the hub to balance it - not a pretty sight! The next step was to construct a jig to facilitate the accurate assembly of the blades. The jig comprised a flat board with a bolt inserted through a hole in the middle round which the blades would be assembled, and a sheet on which the 120° lines were drawn. Five minute epoxy was used for initial assembly. Then one hour epoxy for attaching the 1.5mm ply discs front and back. Holes were then accurately drilled for the M2 nuts and bolts which act as a further restraint to the propeller flying apart (highly unlikely at the low rpm involved). All my props run very smoothly with not a hint of a wobble.



The Bomb

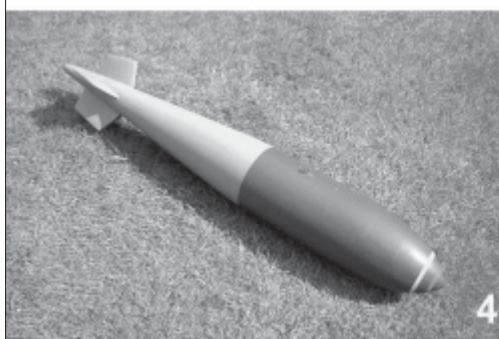
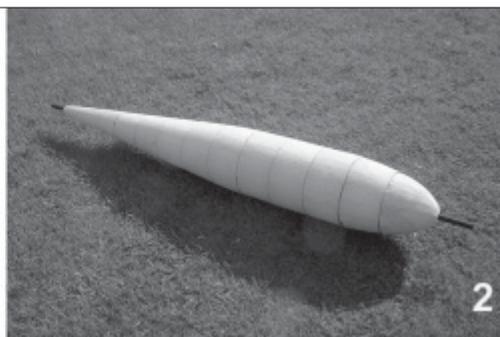
The bomb was made up using circular sections cut from 50mm thick blue foam. The pieces were then threaded on to a dowel and sanded to shape. With the dowel removed, each section was then hollowed out leaving a skin thickness of approximately 8mm. The foam pieces were then glued together, and a balsa nose added. After final shaping, half-ounce glass cloth was attached, followed by the application of three or four coats of resin with the appropriate amount of rubbing down between each coat to leave a smooth paintable finish. The fins, which had been prepared separately, were then dowelled and glued in place, set at an angle 5° as per full size (this imparted a spin in the falling bomb). The support ring was inserted at the appropriate place and the bomb balanced by inserting lead into the balsa nose. The finished bomb weighs 130g and hangs on the centre of gravity of the model, so that no trim change is necessary after release. After several bomb drops, it is showing no signs of damage, although I'm told a few holes are appearing in our flying field!

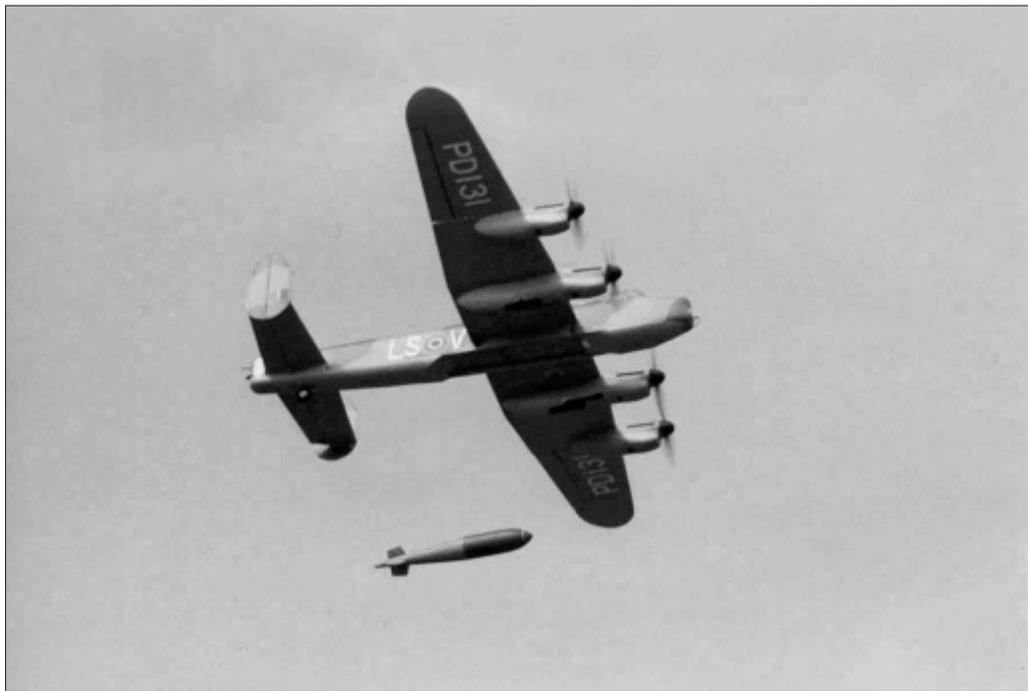
Preparation

After a final sanding, the entire framework was given a coat of 'Balsarite', an almost weightless treatment which not only conditions the balsa, but also improves the adhesion of the covering (available from Mike Woodhouse of Free Flight Supplies). My choice of covering was transparent 'Prolite'. This was chosen in preference to solarfilm on the belief that it was the lighter of the two materials. In fact, according to my calculations, it's about the same weight. I had considered Sig Koverall, but came to the conclusion that the process of filling the weave with dope in preparation for the painting was not only time consuming but would add a lot of extra weight to the model. On completion of the covering, my yellow 'see-through' Lancaster was now given a coat of 'Prymol' to prepare the surface for painting.

Covering and painting

As the colour scheme was taken from the 1:72 'Airfix' version, the task of finding the correct colours and markings was made easy. The scheme is the 'daylight scheme' used by





No.15 Squadron when it was involved in trials conducted against the reinforced German U-boat pens at Brest just after the war. Humbrol 86 (matt light olive) and Humbrol 93 (matt desert yellow) were used on the upper surfaces, while Humbrol 165 (satin medium sea grey) was used on the under-surfaces. My mini spray gun was used throughout to apply the paint. It was found that a primer coat was not necessary, and that two coats of each colour was sufficient to give a good coverage. A final two coats of satin varnish brought the colours to life. The covering added 179 grams to the weight of the model, the paint and varnish adding another 136g. This works out at 57g/m² for the covering and 43g/m² for the paint and varnish, giving a total of 100g/m² (or 3.1 oz/ft² - about the same as that for coloured Solartex.

Flying

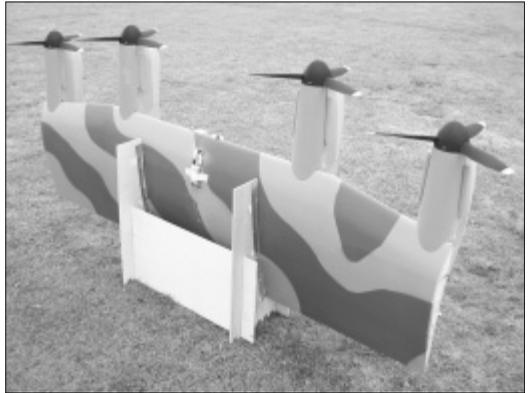
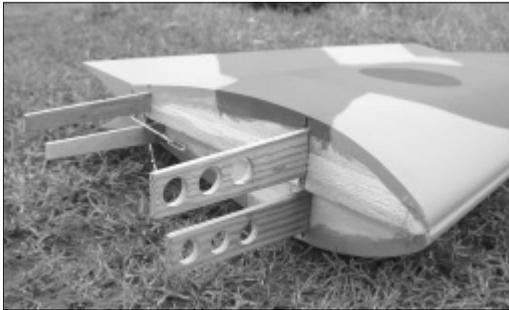
The first thing I discovered about this model is that there is power in abundance. Take off into a reasonable breeze, and it's off the ground before you know it! So for realism, take-offs are best done at part throttle. Flying

it is a dream and although only nine flights under my belt, no vices have come to light. A little rudder coupled with the ailerons helps with the turns. It cruises around happily at about 50% throttle and at full throttle, climbs quite rapidly. The bomb drop is spectacular too.

Having said that, it's not all good news. My first two landings resulted in collapsed retracts and, unfortunately, broken propellers! My weight saving efforts had been a little over-enthusiastic. A weakness in the retract support work (my design, not Ivan's) proved to be the problem. So strengthening work involving more spruce strip and 1.5mm ply was carried out in this area. Also, due to the mounting tally of broken propellers, I opted to fit 2-bladed props in place of the three-bladed ones until I got the hang of things. The 14 x 10 APC-E' two-bladed replacement props proved to be very efficient with no noticeable difference in performance (with the possible exception of rate of climb) and a distinct reduction in battery duration.



Now, with the retract problems hopefully sorted out and my landing technique slightly improved, I'm back with the three-bladers – looks nicer too! A weakness does however, remain in the wire legs, which tend to bend back quite easily if there is any suggestion of a bumpy landing – all the more reason to perfect my landings. As the ailerons are set up as flaperons, there yet remains the possibility of using some flap effect on the landings, but as the landing speeds are in any case very low, there is no immediate urgency to try this, but in an effort to avoid further bumpy landings, some experimenting might be in order.



Conclusion

To sum up, this is an impressive model with tremendous presence in the air and which has very pleasing flying characteristics. The vulnerability of the retracts remains a problem, but with the weight not an issue, I'm sure consideration could be given to the fitting of commercial retracts. I am looking forward to many more happy flights with this brilliant model. *MP*

Model Information

scale	1:12	
wingspan	2.6m	103 ins
wing area	84 dm ²	1300 in ²
wing section	Eppler 197 incorporating NACA droop	
a.u.w. (including bomb)	5520g	12.2 lbs
wing loading	66g/dm ²	21.5oz/ft ²
wt. of power train as % a.u.w.	42%	
motors	Magnetic Mayhem 'reverse rotation'	
gearboxes	MEC superbox 5:1	
propellers	MA 13 x 10 wood (made-up 3-blade)	
energy	18 no. GP 3300 Nimh selected cells	
watts/lb	55 watts/lb on take off.	
in ² /cell	72 in ² per cell	
flight time	7 minutes	
average current	25A	



Yes, we do get the odd fine day at Calder Park! Sizeable turnout makes the most of the calm conditions on a Sunday afternoon in May.



Opposite ends of the electric spectrum in the shape of Brian Allen's "Cessna-like" foamie 'Cardinal' trainer and John Masson's huge Li-poly powered 3D aero-bat. (photo Iain Manson)



The large dihedral and generous wing area on Brian Allen's Robbe Cardinal ensures stress-free flights. Foam construction and prop saver means it can bounce a bit too!

Most of us aren't big fans of ARTF [is that why you fly so many? :-)] JB], but there's no doubt that these types of trainers are proving the best way into the hobby for newcomers, with the likes of Iain Manson enjoying a great deal of success with this Montana.



The delightful Midlands Mafia team at RadioGlide this year, where they decided to dress up to their name! From left to right they are:

*Pete (The Enforcer) Hubbard
Steve (Hit Man) Holmes - of the
Torquay Riviera branch - and....
John (The Don) Meredith*

Brilliant transmitter cases! Great show, chaps.

Cautionary Tales!

Anonymous contributor

I had returned to aeromodelling after a brief dabble with C/L and single channel way back in my teens, joined ADS, and within a short space of time had purchased a well used and well cared for set of Futaba Gold radio gear from a clubmate who was upgrading. What follows is a quick account of two basic mistakes that boil down to inexperience.

Incident 1. Turn the clocks back youks well around 1995'ish, for an early solo outing with my "new set" down at the Cairn 'O' Mount, where I'd enjoyed around 30 mins of relaxed flying in the gentle lift when another modeller turned up at the site. He approached me to check which frequency I was on. Well, I'd done my homework, had even copied the number off the crystal and taped it to the back of the Tx, so that I wouldn't forget. I was on 60 (appearing as 35.060 on my crystal), and he on 66. Satisfied that there no problem with a frequency clash, he then opted to fly from a point 50 yards to my left.

You may well be ahead of me here, but as soon as he had launched, my aircraft started to gyrate wildly all over the sky. His model was no doubt doing the same as I feverishly stirred the sticks in an attempt to regain control, but initially I wasn't aware of that because of the distance between us. The end result was that his aircraft was severely damaged in the inevitable crash, whilst I escaped altogether, thanks to a height advantage.

I'm ashamed to admit that I'd shot a fellow modeller down, and in the post mortem that followed, my justifiably irate colleague pointed out my error once the said crystal had been removed from my Tx for examination. Right enough 35.060, but turning it over and emblazoned in huge lettering was **Tx 66** why can't they make these things idiot proof?

Incident 2. Four years on, same Tx (which had been absolutely 100% reliable), several additional Rx's purchased and a healthy collection of aircraft, mainly gliders, with a couple of electric models thrown in for good measure.

Because of the occasional frequency clashes that occurred at our regular club fly-ins, I developed a cunning plan to overcome the problem. I would fit a crystal of a different frequency in each of my four receivers so that I

could fly immediately with the aircraft/Rx combination that was free at the time (swapping the transmitter crystal only took a matter of seconds). The upshot of this was that over the next 2 seasons, the RF module on the back of the Tx was removed 2 or 3 times each session to facilitate the crystal change. Yes, I too cringe when I think about it now but be honest, how many of you have guessed the likely outcome?

A fellow club member prepares to hand-launch my well-tried and tested 4 engined electric model. Control surface movements checked, stop watch activated, engines on full power, a nod of the head and off it goes. Perfect launch! Five seconds into the flight and the engines cut during climb out, and with control surfaces inoperative the aircraft spins in from 30 feet up.

I was at a complete loss! After I'd picked up all the bits, the answer to the problem was quickly traced. The battery indicator/RF output meter on the Tx was reading zero! At first I thought that a catastrophic Tx battery failure had occurred, but by applying light pressure to the RF module on the back, both power and signal were restored. Once back home, the module was removed and the contacts thoroughly cleaned. The Tx seemed to function OK again, but as a precaution was sent to Ripmax for inspection, and, given a clean bill of health, has performed faultlessly since.

Although done for the best of reasons, I have no doubt that the above "loss of signal" occurred as a direct result of bad practice on my part. All my equipment now runs on the same frequency, with only the odd change of crystal now being called for.

I should point out that neither of the above incidents caused any damage (apart from the not inconsiderable amount to the models themselves, and of course, my pride!), nor any personal injury to those involved or members of the general public. I hope that by mentioning these very "basic mistakes" they can be avoided by others, and if you do need to make frequent crystal changes, clean the contact areas with proper electrical fluid from time to time. Unfortunately older but no less wiser. Happy and safe flying!

[A Very Well Known tranny popular with thermal comp pilots has had a contact problem with the removable r/f module which has resulted in the destruction of more than a few aircraft (Brian Sharp had his big Calypso soarer dive vertically into Hazlehead car park from c.1000'). The popular (i.e. for those in the 'know') remedy has been to hard-wire the r/f module onto the main circuit board. It's been many years now and I don't know if this is still a wise precaution with this top-of-the-range set. Reader's update? JBJ]



Two old hands at the flying field one waits patiently whilst Bill Stark downs a cup of coffee!



30 yards of bungee-assist sees Mike Pirie's electric FW 190 successfully launched into the blue yonder (or the distant fence!). The 190 has just cleared the launch ramp.



Allan Stewart's handsome Newport biplane, converted from IC to electric just prior to falling foul of Calder Park's uncut grass, resulting in a nose over which broke the top wing spar!



What JB will be flying in the AULD competition at Hazlehead Park next year. Model is solid Kevlar with a depleted uranium spinner and wing leading edge. The plan is simply to fly through anything using Li-Poly cells! No worries, Neil, the way JB's eyesight is going these days he'll be doing well to find Hazlehead.

ADS 2004 Events Calendar

Jul 17 th /18 th	Aboyne Fly-In (Deeside Gliding Club)	BBQ, bring a model and show the big boys how to fly!
Jul 24 th /25 th	Knock Hill (Between Huntly and Banff)	Slope Outing
Jul 31st/Aug 2nd	Stirling (West Drip Farm)	Scottish Soaring Nats
Aug 6th-15th	York - The Knavemire	2004 F5B/F5D World Electric Championships
Aug 15 th	Calder Park	Club BBQ/Fun-Fly
Sep 18 th	Kerloch (Banchory Club)	Club Outing
Nov 20 th /21 st	Aberdeen Exhibition Centre	Model Railway Exhibition
TBA		AGM



Derek: "JB, what on earth is it you find so fascinating about competition thermal soarers"?

JB: "Oh, technical matters, wing sections, camber variability, Reynold's numbers, epoxy setting times, that sort of thing..."

(This delightful model one of the latest creations from South Africa. Wing design by Craig Goodrum and the fuz by Chris Adrian. Not sure if the SA team will be using it for the F3J World Champs in Canada this year. No further details of either model available at the time of going to press. My thanks to SA F3J Team Manager Joe Coetzer and Dave "bless his heart" Greer for all the photos. JB)

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