Newsletter of Aberdeen & District Soarers *December 2010*

ADS Short Finals

No 103

ABERDEEN & DISTRICT SOARERS
www.fly-ads.co.uk

Welcome to the 103rd edition of *Short Finals*, the 'Readers Digest' of ADS, offering a wealth of advice, interesting articles, a recipe, outright humour and downright lies! The other pieces of ever present advice that feature in the RD can be covered now :-

Gardening - If you can cut the grass then it's flying weather – the grass can wait.
Health - You're better off outside enjoying the fresh air
Finance - every model is affordable if you really want it
Relationships - if you want one of these then forget the last line
Sex - nothing beats a maiden flight !

That aside, within these sheets you will find

The future of Calder Park hangs in the balance as football developments cast a dark shadow over our continued use of the ground. In 2011 we must take a serious look at obtaining an alternative venue whether that be Council owned or private ground as sooner, perhaps more than later, we will become homeless.

In competition, we have re-established further titles to fly for in the shape of the DDMT, BOC Nowsco Trophies and Winter League to go along with the Club Winch and Club Trainer comps. These involve a minimum of once a month flying and with no complicated rules to worry about and all members are encouraged to take part.

Thanks to all below who have contributed to *Short Finals 2010* and all that remains is to wish members and readers alike a Happy Christmas and a safe and prosperous New Year. *The Committee*

Cover Photo – Soaring The Knock earlier this year taken by Derek Robertson
Articles - George Whelan, Sandy Tough, Alan Stewart, Stepehn Davies, Derek & Rhona Robertson, Roy Garden

Year Past, Year Ahead

On the whole 2010 was not bad for flying, particularly if you were lucky enough not to be restricted to the weekends. Terry boasted to being on the sticks at least 120 times! Not a bad effort.

Where the weather did intervene it was generally on a day of a planned event which was frustrating to say the least.

Without running over the entire year we had a good mix of social events through the winter and the usual range of flying in the warmer weather.

Competitively, George Whelan proved to be top pilot winning all the trophies bar one which went to Derek Robertson.

The AGM was held in November with little change and subs were kept at existing rates of £12 (£6 juniors). Chancellor Mitchell says they are due NOW !!!

The Club splashed out to upgrade the trainer kit and purchased a Seagull 2200 electric glider fitted out with a brushless / lipo power train and controlled by Spektrum 2.4 GHz radio. It is available for use by members.

2011 event wise, is laid out in a similar format as previous years and hopefully something different can be included over the summer. Any suggestions for an away day(s) or other event then shout out.

Indoor Flying Dates all at 7.00pm

Tuesday 16 November
Tuesday 14 December
Tuesday 18 January
Tuesday 15 February
Tuesday 22 March

Social Nights

Tuesday 11 January (11111) - Curry Night
Tuesday 8 February - Bowling Night

Flying Events

Saturday 9 April - Spring Slope Day
Sunday 15 May - XC Comp
Sunday 22 May - Visit to Kerloch (TBC)
Sunday 19 June - Club Winch Glider Comp
Saturday 9 July - Knock Trip
Sunday 31 July - Barbecue
Sunday 14 August - Club Fly In
Saturday 20 August - XC Comp
Saturday 3 September - Club Trainer Comp
Sunday 2 October - Autumn Slope Day

Annual General Meeting

Tuesday 8 November 2011

Aviation Cocktail

2 ounces gin
1/2 ounce freshly squeezed lemon juice
2 teaspoons maraschino liqueur, preferably Luxardo
1/4 ounce Crème de Violette
Lemon twist, for garnish.

Combine the first three ingredients in a cocktail shaker filled with ice. Shake to chill well, then strain into a cocktail glass. Drizzle the Crème de Violette into the glass and garnish with a lemon twist.

(That's the recipe bit)

A Kerloch Tale

Sandy Tough

The day started with a phone call from 'HIM' who shall be obeyed (Roger). He thought it was about time we cut the grass again and as it was an excellent day for such an activity was I available. Now one does not want to upset the leader and so a time was set for around noon. As it was such a great day we decided to take a model with us so that we could do some flying after the mowing.

As usual at Kerloch, by the time the mowing was finished, a bit of a wind had got up and according to Roger's Wind Machine (no, not his behind, but one of those sophisticated things which is held up into wind and by magic it gives you the speed) it was reaching 13 MPH.

Roger being one of those proper leaders of men (RAF trained officer) decided to fly, but as I had only the Mulitplex Easy-Pro with me I chickened out. However the wind seemed to drop a bit and still wanting to keep the Boss in a good humour, I decided to fly.

With the model duly assembled and all checks carried out, the model was launched into a south easterly. I had been flying for a few minutes when I suddenly hit a 'boomer' and the model just kept going up. I shouted to Roger and he looked up and shouted back, I'm on my way'. The model just kept on rising and I was getting a bit worried, because the old eyes are not what they once were. I fed in some down, but it was still going up and I was now very worried, so I tried the well-established way of getting a soarer down, an induced spin, but to no avail. I waggled the sticks and could see that the model was responding, but the lift was still carrying the model upwards. Just then Roger shouted 'Where are you'? I shouted back that **I was still on the ground, but I had no idea where the model had gone.**

I kept the sticks in motion and started looking down wind, but to no avail, I had absolutely no idea where the model had gone. Finally I switched off the transmitter and thought I'd seen the last of the Easy-Pro.

Three days later I got a phone call from our farmer friend, to say that another farmer who lived about three miles away to the **East** had found the model lying in some bushes near his farm.

I went to pick up the model and expected to see a bit of a mess, but only the tail plane was broken which was easily replaced. The model had been out in two nights of heavy rain, but the airframe and the electrics, including the motor were still in excellent condition. The battery (lipo) however was like a balloon and I decided that it should be dumped.

So there you have it, BOOMERS DO EXSIST AT KERLOCH.

That leads us nicely onto our the ADS visit to Kerloch in May when we experienced first hand for ourselves the powerful lift of the area. Numerous models were specking out in the conditions, but alas nobody had a clock on to get a BOC Nowsco time in.

A sure sign of thermic conditions occasionally seen at Kerloch

'Die Beule'

Willie Findlay

This has been a quiet year on the acquisition front, having purchased only two models over the term. On the plus side it must mean I am crashing less! (or getting better at repairs!!)

I thought I was about ready for a bit classier glider so early in January I went online to Puffin and after a few clicks had a Filip 600 Thermal on its way to Cove.

Suffice to say the Filip was a good buy and did a decent job over the summer, but is not what I'll review here.

I always fancied a warbird and there are more than few out there to choose from, however I really wanted something that was a bit different from the crowd. I do actually have a Mosquito which I built in 2008, but it has never got beyond its unsuccessful test flight in July of that year. That's the 'before' picture left.

I surmised, after two launch attempts, it was underpowered and ended up breaking the nacelles. The rest of the model is okay and as I have the bits to get it repaired really must get round to doing so with bigger motors. That can be this winter's project (again).

Anyway, back to the here and now, and my quest for a warbird. As luck would have it Ripmax brought out a Messerschmitt Bf109 during the summer to go along with their fairly popular Spitfire and Mustang. I did like that they were of wood construction rather than foam so that would be the one for me. I also hadn't seen one been flown up our way so that was another attraction.

(Info) The Bf109 was the stock fighter of the Luftwaffe during WWII with over 31,000 built. It also recorded more air to air victories than any other fighter of the time.

Improvements saw later variations use the Daimler-Benz DB 605 engine and along with fitment of larger 13mm guns in the nose, saw bulges appearing on the cowling leading to its nickname 'Die Beule' or The Bulge. (Info end)

So once again on tinternet and browsed until I dropped - a far more pleasurable experience than following someone around Union Square, Trinity Centre, Bon-Accord Centre, Trinity Centre, back to Bon-Accord then Union Square again. Even if there are pseudo model shops there now. 'Gan doon ih toon' is and always should be a pastime for the other halves.

Moor Models came out on top of the price checks and my Pal who Pays (I wish) did the rest.

I was a bit miffed when the box arrived to find that hangar rash was pre-applied when I always thought that was my privilege. Somebody had even gone to the bother of touching up the scratches with a Gem marker (other permanent markers are available). At the end of the day it was £15 quid cheaper than everywhere else and by the time I had got it together there would be a whole new set of scratches on it so what the hell.

The woodwork inside the fuz was a wee bit ropey with ply delaminating etc etc, so epoxy and aliphatic were liberally applied all round to all joints and structural points.

I must plug Poundland's cyano here at 5 bottles for a quid: it's very thin and great at penetrating wood and reasonably strong to boot. Ideal for this belt and braces purpose.

Here's another fact about cyano you may not know – it's what we in the 'trade' use for developing fingerprints on plastic surfaces and

the like. Pour some into a receptacle and place it in a sealed environment along with the item and in a wee while, hey presto a nice set of daubs appear. It sticks to and hardens the otherwise invisible fatty deposit left when you touch something. You may have seen this if you have left the cap off in your kit box and is why you don't use cyano for fitting canopies.

I digress, so back to the model. The suggested high - you can never have enough - powertrain is a 2820/05 outrunner, 40 amp ESC and a 4S lipo. I had earlier found a damn good supplier who runs an Ebay shop selling Turnigy kit (look up Nilesinstall). The quality is great and the prices fantastic.

I obtained a Turnigy 3542C 1100kv, which is the Axi 2820 equivalent motor, along with a 45 amp ESC and a pack of 4 MG90S servos to kit out the inside of the 109.

Installing all of that was a fairly straightforward process with no major issues. I did mess up the spinner which is a plastic cup you have to cut and glue onto a ply plate. Not great if you need to remove it and given it's so thin it breaks easily. A conventional SLEC replacement does job though. The way I laid everything out left me a bit short on wire between ESC and battery so I made a detachable extension to keep things comfortable. More of that anon, so no more ado than wait for a fine day to take her up to the park.

Now what I haven't mentioned thus far, is that not long after the kit arrived from MM, I was all chuffed and excited and just happened to be flying with Terry up at Calder Park.

As we all seem to do at the end of a session, hanging about the cars and chewing the fat, I mentioned I had just taken delivery of a Ripmax 109. "Derek got one the other week" says Terlach. "Dastardly and Muttley" says I, so not unique after all. Anyway, as it so happens, that turned out to be a blessing.

I'm sure he won't mind me relating his experiences here and tough if he does anyway, but he was flight ready ahead of me and in our conversations that occurred he explained the following.

Derek went for a fixed rudder saving a servo and when launched, the plane climbed away twisting over sharply to the left and nosing into the ground before recovery could be made. Even taking it up Brimmond the model had the same tendency although he did get it away.

Research on YouTube saw other owners have had the same fate, Wally2uk demonstrating a particularly fine example.

Derek felt the motor mount was not well fitted with enough relevant offset and put in some of his own on repairing, alas to little effect.

To cut a long story short he deduced the rudder was required and full right necessary for a clean get away. Thanks Derek - saved me a lot of pain!

He also advised that the finger holes needed strengthening as the wood just collapsed when launching. Some thin ply did the job here.

My first flight was a real bicycle clip job, probably because of Del's Tales, but more because I just didn't fancy going home with it in bits. Well, bugger me I managed to get away first time with Derek's assistance in the launch. It flew alright even allowing for me being a bit heavy with the controls forcing some very unscale like turns. If the full size did the same Spitfires would have had no chance!

Just when I thought all was well and I had just about stopped shaking, the thing flicked damn near inverted, but I was high enough to recover, cut the throttle and land safely.

Next flight had the same problem it was glitching everywhere. I suspected the extension I had fitted between ESC and battery as causing spikes and duly removed same, but bench testing still had the servos bouncing.

Next the Rx was changed for a dual conversion with no change. Lastly the ESC was swapped and that has calmed things down although it is still prone to the odd glitch, it is now comfortably flyable. I still need to test the removed ESC in another model to confirm if it's faulty or just not happy with my setup.

To conclude I'm more than happy with my 109. I'm only using 3S lipos, but the performance is good and keeps it to scale speed.

With two 109s now in the ADS fleet Generalfeldmarschall Davidson will be keen to get Geschwader Calder Park in the air !!

As the airliner pushed back from the gate, the flight attendant gave the passengers the usual information regarding seat belts, etc.

Finally, she said, "Now sit back and enjoy your trip while your pilot, Judith Campbell, and crew take you safely to your destination."

Ed sitting in the eighth row thought to himself, Did I hear her right? Is the pilot a woman?

When the attendants came by with the drink cart, he said "Did I understand you right? Is the pilot a woman?"

"Yes", said the attendant, "In fact, this entire crew is female."

"My God," said Ed, "I'd better have two scotch and sodas. I don't know what to think of all those women up there in the cockpit."

"That's another thing sir," said the attendant, "We no longer call it the cock pit. Now it's the Box office."

ADS on Facebook

Facebook is a so called Social Networking (SN) site which is now used as the ADS website discussion forum. It is far more flexible than the previous board and allows direct message, photo, video and link posting. SN sites, Facebook in particular, are treated with possibly an unfair degree of scepticism by the mature generations. Fears range from opening a virtual door into your soul to handing over the PINS to your bank accounts, all of which are without foundation. Yes you do need to create an account, but you don't give away your life secrets and you can provide as much or as little info about you as you like and you sees it. You can even make up a new you – now isn't that tempting. You can even have 'friends' !! So why not log on and join the ADS social revolution. As a club, having a presence on the likes of Facebook will make us more accessible to potential new members and will certainly reach younger followers. Everything helps

A Ducted Fan Fan

Stephen Davies

Having only just taken delivery of an EDF airframe - the Top Gun Park Flight Mirage 2000, I thought I would have a go at my first kit review. I have read so many of them now in those glossy magazines, how hard can it be?

In the Beginning…

So where did it all start for me. As a child my dad was always playing with kites and catapult launch gliders, taking me to air shows and parking outside RAF stations with our sandwiches watching the Vulcans, Harriers and Jaguars. I then discovered Airfix kits and spent many happy hours with, glue and paint however there was usually more on me than on the planes much to my mother's dismay. Decorating my ceiling with them and dreaming they would come to life. Then in my mid-twenties, I purchased my first glider kit. A Precedent Hi-Fly 2 channel glider and a 27 MHz radio. After a lot of trial and error and a household iron it was finished and very proud I was too. I learnt hard and fast with my first flight taking place over a cliff near Lossiemouth. At the time I was working at RAF Lossiemouth as a civilian with an all areas pass and this just fuelled my passion for flight. I can still remember the nerves of that first flight, on my own with the elevator the wrong way up on the sticks. Well you can imagine the fun I had that day. The repairs were endless needless to say and it was not until I bumped into a work colleague in a model shop that things really took off for me.

He gave me the help, support, patience, advice and lots of sticky tape I needed to conquer the hobby. The trips to the bottom of the hill were endless to pick up the bits! My eyes were opened to all the possibilities and I just could not get enough. In time, I purchased my first 35 MHz computer radio which allowed me to progress to more complicated and exciting aircraft.

EDF comes to town

At this time NiCads and NiMh were our power packs, with their brushed motors and excessive weight, they were just too heavy. My first EDF was a Kyosho F16. I was totally in awe when they first came out and I just had to have one. So with hard earned cash in hand I picked one up and ran all the way home and started building it immediately. When finished it just looked amazing to me. No propeller, smooth, sleek and made of polystyrene. Well I just had to fly it. After clockwatching at work the whole next day, I rushed to a local field, set up, and with full throttle launched it into the air. Well, after about all of 6 feet it went nose first into the dirt. The nose snapped clean off behind the cockpit and I was devastated. I picked up the bits with thorough disappointment. That plane never flew properly. I tried in on the flat; I tried it on the slope. I rebuilt it, repainted it and the best I ever got was a tail heavy painful couple of

circuits. All in all it was too heavy and just did not have enough power. Eventually it went on Ebay and I used the money to purchase a Wattage Mirage pusher. These little planes were brilliant and it is such a shame you can't get them anymore, especially with the advent of brushless motors and Lipo batteries.

Le Mirage

So enough of my rambling, lets talk about the kit. I have always liked the Mirage with its simple and forgiving delta wing, and with the advances now made in EDF and my Kyosho (yes I tried them again) Tornado swing wing jet flight tested and given the thumbs up on a stock set up, I thought it was time for another one. The only question was what to choose? Well Ebay came to the rescue again. I managed to find an airframe only (but with fan) Mirage for the princely sum of £45 plus postage. Needless to say I was delighted at my find. The model arrived just three days later in a brightly coloured

box. All the parts were bagged and secured. The only disappointment was that the postal service had not handled my latest pride and joy with the kid gloves I would have preferred.

The polystyrene base of the box had a hole in it (no damage to the plane thank goodness) but one of the wing servo horns had been pushed down into the soft aileron but fortunately no major damage. The plane is made of the now typical polystyrene and is fully painted. The colour scheme is that from the movie *Les Chevaliers du Ciel* (Sky Knights or Knights of the Sky or Sky Fighters if you have telly with subtitles and translation being dependant on where you east Asian TV was made). It's a bit of a French Top Gun type flick.

There are very few parts in the kit which consists of the following:

- Fuselage with pre fitted rudder, rudder and nose wheel push rod and canopy

- Nose cone

- Two wing halves
- A 65mm fan
- Plastic fins for the tail and behind the canopy
- Rear wheels
- Servo extension leads
- Glue and lots of screws

The vital statistics are

- Length 970mm
- Span 632mm
- Weight 520g
- For 3s 1300 Lipo

The plane has a much larger presence than I expected and is well finished. The first thing I noticed is that the instructions are written for the ARTF model and does not give much information at all regarding where all the bits go. So I spent the next couple of days studying pictures on the box to figure it all out. The model is generally well thought out and there are no obstructions in the intakes or efflux tube other than the fan and motor as all the wires are in a channel on the belly of the airframe. It all looks very smooth in there and certainly seems promising. Originally my plan was to remove the wheels for flying at Calder Park, but this is not so easy as the nose wheel is pre-installed and can not be readily removed without taking out the battery compartment and damaging the plane. The wheels and fixing look to be fairly sturdy and the YouTube videos I have seen show you can land the plane very slowly and drop it on the ground. You can also hand launch this model so with a bit of luck and care I am hopeful to be able to fly the plane with the wheels on at Calder Park. If the landings prove to be troublesome then I will be carrying out surgery to remove that nose wheel. The rudder and nose steering are all controlled by one servo which fits in a neat hole under a hatch on top of the fuselage. The cable then drops down between the intakes to the underside where the receiver will go. So having figured what goes where it was out with the glue. The first thing was to remove the sticky tape from the edges of the wings themselves and on the fuselage roots. The tape unfortunately did not come off in one go and took about half an hour to remove all the bits. Gluing is a simple and straightforward job, but the glue supplied with the kit is not very good at all, I ended up using epoxy. Next, I slit the polystyrene on the tail and behind the canopy and glued in the plastic stabiliser fins. Once the wings were set I fitted the rear undercarriage and glued on the nose cone. Here we now have the finished plane minus the electrics. She certainly does look

impressive! The servos are all of the mini variety and simply fit in the slots provided. One in each wing and one in the fuselage for the rudder / nose wheel steering. I secured the servos with double sided servos pads, tested they were going the right way and connected up to the provided clevises and pushrods…bingo, job done. The servo wires in the wings fit into the provided grooves and get covered with black tape. The wires lead to a central channel in the bottom of the fuselage at the base of the fan where there is a larger cut out section for the speed controller. The channel carries the servo leads and power cables to the front of the plane where there are two openings for the receiver and battery. Finally the channel has a plastic cover over it with vent holes for speed controller cooling. What I have not mentioned yet is the fan and motor. The fan itself has 5 blades and fits very snugly into the body. This is where I came across some difficult decisions. What kind of motor do I put in, and is

the supplied fan up to the job. The motor needed is a 400 size brushless inrunner. I searched hard and long to find the spec for the stock motor but even with the part number I could find nothing online. I did consider the Hoffman Mighty Mite EDF motor but at £65 this is a lot of motor and I felt that there would be other cheaper alternatives that would suit. Also the Hoffman motor would need a new fan as the securing collar provided would be too small for a Hoffman spindle. So back on the net I found a new 6 blade 64mm fan with 5200kv brushless giving 670g of thrust off a 3s. I emailed the seller in Hong Kong and they confirm it does what it says on the box and for the crazy price of £17.90 with free postage. That's 5200 revolutions per volt!! The fan probably needs balancing but I ordered one anyway and I am waiting delivery at the moment. All I can say is I am really looking forward to test flying the Mirage. The elevons are a good size but the rudder is rather small and probably will have little effect at low speed. But then I won't be going slowly very often. More turn and burn, bank and yank for me!!!

Test Flight

Well as time is not on my side I just won't get a test flight complete in time for going to print. So alas, I will have to wait until the model is completed and the weather is getting better. Knowing me I will wait for the almost perfect day for the maiden in the New Year and the plane will make a few trips to the field before I decide to commit to the heavens. So I will be looking for a launcher.....so see you down the field. I will be the one with the Top Gun T shirt and aviator glasses.

The problems of fly-by-wire

Bored Royal Air Force pilots stationed on the Falkland Islands devised what they consider a marvellous new game. Noting that the local penguins are fascinated by airplanes, the pilots search out a beach where the birds are gathered and fly slowly along it at the water's edge.

Perhaps ten thousand penguins turn their heads in unison watching the planes go by, and when the pilots turn around and fly back, the birds turn their heads in the opposite direction, like spectators at a slow-motion tennis match.

Then, the paper reports, the pilots fly out to sea and directly to the penguin colony and over fly it. Heads go up, up, up, and ten thousand penguins fall over gently onto their backs.

Open Air Dooking at Stoney

Roy Garden

One fine day I hatched a cunning plan to slope bash by Stoney (forecast due to go NNE). When I got there – almost nae wind.

No worries, ever reliable E-Blaster to the rescue, plan being to lob it off and see what the lift is like.

A couple of passes and sinking all the time. Engaged front mounted fan and took it up 50' or so and made another couple of passes.

Still sinking.

Gaar, engage fan again . . . . . b****r, stick full forward, no upness :(

Popped flaps, and for the life of me couldn't judge how far below me the model was or how high above the beach it was - then, spladoosh . . . .

Hmmm, that'll be a bit short of the beach then.

Left darling daughter up top and set off to rescue the Blaster.

Got there just after a kind man had taken it out of the water and was contemplating feeding it to his dug.

Said dug was deterred by the smoke was starting to escape from some internal gubbins.

I don't know much about lectronics but I do know they need to keep the smoke inside

Once the smoke gets out, things tend not to work!

It was full of sand, and I'm not kidding, I mean full.

Pulled the battery as the fus was hot and figured that removing power was probably the first smart move of the flight.

Took it back to the hanger and hosed it down, got loads of sand out of it and out of the wings. And now have a nice castle int garden.

Pulled the servo covers and flushed the wings more.

There is obviously still sand inside the motor so I'm guessing that's gubbed.

The wing servo's work (there is some damage to the aileron wipers but nothing significant and the wing has no dings. Result !

The rudder servo works and the elevator servo works . . shock horror.

Damage control reported a broken elevator, damage to rudder hinge (looks like a tape fix). The ESC/BEC is useless having run out of smoke and the motor would probably grind itself to death if started and the Rx is listening no more.

Despite the many scratches to boom from being battered off the stones, overall, I'm very happy with how little damage it sustained given

it was sat in the surf getting battered for a good 5 minutes before I could get to it.

I'm surprised and expected that it should have been absolutely trashed by the waves and the rocks and the sand.

I have a gut feeling that it was a dodgy battery, think I heard the ESC re-arming after I'd given it throttle (the RX won't shut down as it's powered straight from the 3S battery via the BEC) had full aerodynamic control but just lost motor.

I'm no expert with BEC/ESC, will it shut down and re-arm if the voltage drops hard? Must have been supplying power to the servo's the Rx will take any DC voltage from 3.5 to 35 V so it won't have been affected if there was a voltage drop.

Bit confuddled. hey ho.

I should have flown it straight into the foliage at the base of the cliff, would have minimised / avoided damage, pilot error . . . .

<u>The Committee</u>
At the recent AGM your committee remained unchanged and is

<u>Chairman</u>
Neil Davidson
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<u>Secretary / Treasuer</u>
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A Glider pilot bold was he -
a maiden unsuspecting she.

He landed one day near her home,
demanding tea and telephone.

The field was very very small,
the trees were very very tall.

Steep turns at 5 and 20 ft.
her dainty heart it missed a beat.

But there he was quite safe and sound -
a debonair I'll be bound.

They dallied there for many hours,
among the birds and bees and flowers.

And when at last the trailer came,
alas she'd lost her maiden name.

Now after many moons had passed,
there came a letter headed with the name -

of Swindle, Swindle, Son and Sin,
Solicitors of Lincoln's Inn.

The moral of this story is - model flying is very cheap.

(Submitted by A Stewart)

ADS Christmas Quiz

Rhona Robertson

1. In what year was Aberdeen and District Soarers formed?
2. What was the government position of Lord Thomson, who died in the R101 Airship disaster in 1930?
3. What form of transport did the Montgolfier brothers invent?
4. What colour are aircraft black boxes?
5. Who most famously recorded the hit single "Leaving on a Jet Plane" in 1969?
6. At which airport did Charles Lindbergh complete his trans-Atlantic flight?
7. On which aircraft carrier did the Duke of York serve during the Falklands War?
8. What was Uhuru's job on the Starship Enterprise?
9. Which London airport saw its first jet land in July 1988?
10. What number was given to Boeing's first commercial jet airliner?
11. What is the wingspan of a Mark 1 Spitfire?
12. Which plane, piloted by James Stewart, crash landed in the Sahara Desert in the movie "The Flight of the Phoenix"?
13. Name Canada's busiest international airport
14. Name the aircraft that was being flown by WW1 ace, Captain Albert Ball, when he was killed in 1917.
15. Who, in mythology, flew too near the sun?
16. Which company produces the "Flying V" guitar, which was a favourite of Marc Bolan from glam rock band T- Rex?
17. Which motorway do planes cross just before they touch down at East Midlands airport?
18. Who was the first British test pilot to fly the Concorde in 1969?
19. Who designed and built the Spruce Goose?
20. Which two of Santa's flying reindeer share their names with British aircraft?

Pelikan Pike

George Whelan

Over the years Norrie and I have flown in various electro-slot comps at the Nationals and the Scottish Nats, it seems that at every comp the rules change with respect to models or power train depending whether the comp was run as a BARCS or BMFA comp. Initially anything went and it became a launching comp especially with the advent of light weight brushless motors and high power Lipo's, then rules were introduced to restrict the power train and the model spec. Last year the rules were changed again to the current 200Watts/kg spec; this means you weigh the model, multiply the weight in kilos by 200 to give you the watts output of the drive train up to a maximum of 400 watts. This has been a very popular class over the past year but has now been superseded by the introduction of altimeter switches which turn off the motor at a predetermined altitude or time limit. At this years Nats the models ranged from 2 meters to nearly 4 meters, all acquitted themselves well.

I have had a couple of models from John Emms at Puffin Models and found them to be excellent quality, the Big Swift, slightly too small, Ellipsoid, for me slightly too fragile, Pike, just right. I think a 2.5 meter model is about right, small enough to be agile when near the ground looking for the spot landing, big enough to give a decent glide performance. So imagine my surprise when Christmas dawned and under the tree was a large parcel that revealed itself as a Pelikan Pike from She Who Must Be Obeyed.

The Pike comes in 2 variants, V tail and cruciform, my version is V tail, at the time I didn't know they made a cruciform or I would have gone for that version. It has a 2.5 meter 3 piece built up wing with ailerons and flaps, the wing has a carbon reinforced spar and a proper D box LE and moulded go faster wing tips. The fuselage is a lightweight glass job, excellent moulding and requires no further work. When you open the box you are faced with an almost complete model

with very little work left to get it in the air.

First decision pure glider or electro, I intended to install an Axi 2820/10 motor and 4 off A123 LiFePo4 cells from Puffin, this will give me more than enough thrust for a days leisure flying and prop it down for 200W flying, so off came the nose, cutting around the marked line with a razor saw. Next came the installation of the supplied fibre glass motor mount using 1 hour epoxy, I prefer this over the 5 minute variety for critical installations.

Next job was to cut the wing covering around the servo bays and run in the servo extension cables. I am using HS125MG servos' in the Pike, these are designed for wing mounting and have lugs at 90 degrees to the servo body, I mounted them on rails rather than my usual method of double sided servo tape. The pushrods are M2 wire with a z bend at one end, cut to length and threaded with the Fudmacker M2 threading tool.

As the wing has 4 servos' you need to decide whether to use a multiplug connection between the wing and the fuz. You also need to decide how you are going to configure the wing, a) separate flaps and ailerons or b) fully programmable mission adaptive wing. I have gone in between separate ailerons and flaps but with a 3 position switch on flaps and full flap on the landing gear switch, with motor on the throttle stick this puts all the flight variables on the left hand and the primary flight controls on the right hand stick.

Before installing the wing servo's I connected them to the transmitter and set them for normal operation, remembering the flap servos should be set at the end point for flaps up. I installed the servos and then using a square line for the aileron and flap horns, these are fitted into slots and epoxied in place. Once the epoxy has set the push rods can be cut to length and fitted. I usually leave the servo covers off until after initial flights to make sure I can carry out any adjustments, the servo covers are then cut to size and held on with double-sided tape.

Back to the fuz, the decision here is whether to use the V tail as rudder / elevator or just elevator as per design, having seen this model perform with the best I went for elevator only. Here I deviated from design and used a carbon push rod to connect the elevator to the servo instead of the snake supplied. Using the parts supplied I pre-bent the wire fork, bound with fuse wire and soldered; this was then epoxied into the carbon tube. The connection to the elevator is by bent wire horns and ball links; this makes for a good slop free installation. At the front end the elevator servo is installed onto a ply tray which is epoxied into the fuz. At this stage I hooked everything up to the receiver and tested the free movement of all the control surfaces and programmed my Spektrum for the control required, this only left the drive train to install.

I installed my Axi 2820/10 out runner motor, I have used this motor over the last 2 years and know it will pull anything I build into the air at a rate of knots, this was hooked up to an Overlander programmable controller and 4 off A123 cells. I have been using these cells for about 18 months, they are lighter than Nicads and Nihms, almost as light as Lipos but are bullet proof, they will stand up to a lot of abuse and will deliver 70 amps continuously and 120 amps in bursts. The battery pack was secured with Velcro.

The pike is assembled and the geometry checked out and the CoG checked against the instructions, usually the indicated CoG is a safe start, usually too far forward. The test flight was at Kerloch and a pre flight check carried out. Check all the control connections and attachments to make sure nothing has come adrift during transport, connect the servos and check for control orientation, do the usual range check, all OK. No excuse for delaying any longer so tighten the bicycle clips, switch on the motor and give it a heave. From past experience I know you can get into some huge brick lifters at Kerloch and low and behold it happened again. You have to be careful and not get hypnotised as the model rapidly gains height, when it was just a spec common sense kicked in and I extended the flaps and put the nose down. As it descended it was quite far away and I got out of shape, however letting go of the sticks the model stabilised itself in time to cruise back to the landing zone. However I can testify that the wing and the joiner can stand anything I feel comfortable with. I wish I had my altimeter in on that occasion as I have never been so high ever.

Subsequent flying proved quite relaxing and over the next few weeks I fine tuned the controls and now have a well behaved model, indeed during the summer on one flight I set the model into a circle and was able to put the TX onto the deck.

I flew the Pike in the open electric comp at the Nats in a howling gale and it acquitted itself as good as any of the other models. I would recommend the Pike to anybody looking to fly a good performing, stable, sailplane.

Sign of the Times

Anyone been to Calder Park lately ??

Can you see the runway now Captian ??

Playing with the Big Stuff

Roy Garden

The UKMSC (2009) started exceptionally badly for me. It had been preceded by a week which also started badly, consisting of re-soloing, in Glider 3D purely as it was at the front of the hanger and not being used. I approached Mike the examiner, doffed my cap in my best deferential manner and asked if he'd be so kind as to check me out prior to me going solo. He gave me one of those sideways looks he does so well that either mean you are interrupting something much more important or he's brewing some wind again, I'm never sure how to interpret that look. Consent was given and I scuttled off to get 3D on the line and make sure that my instructor was inconvenienced as little as possible.

First flight in absolutely donkeys, I was sitting at the end of the runway slightly red faced at the performance I'd just given. Running through all the good points in my head, I didn't break the towline, I hadn't crashed it and no one was actually hurt, Mike was sucking air through his teeth behind me very much like a mechanic does just before he tells you just how much is wrong with your car at MOT time. Ho hum, best put a brave face on that and hope he didn't notice too much wrong. I mean, c'mon I'm a Silver C pilot flying my own (shared) glider, how bad can it be?

I got out of the glider and put on best bright and shiny expression to hide the embarrassment, cracked my best cheesy jokes, passed comment about "wind shear" and generally prattled rubbish for a minute or two, Mike is doing that sideways look again. I'm thinking I've either properly upset him with that or it was a particularly good vindaloo last night. He does another suck at the teeth and utters those words we all dread to hear. "Let's have another go at that, shall we?"

Glider back to the end and another go was duly had, mike gets out looking much happier; given that I hadn't actually been gassed during the flight I figured it probably hadn't been wind after all and was kind of hoping he might be happy with that one. Joy of Joy he was ! "off you go then, don't think you'll kill anyone today" high praise indeed.

Spent the rest of the week getting as many flights in as having had no time off in the preceding year reasonably allowed, spoke to the short people in my house (I'm reliably informed they are my children) heaped praise on Mrs G for the fine job she does while I'm not there and went on a "brownie point melee" aiming to get suitable passes for the odd evening at the GC during the comp.

Was unable to get to DGC for the Friday before the comp for reasons that escape me just now, but pitched up bright and shiny for day 1 of UKMSC 2009. I was almost totally unprepared. I didn't know where the logger for HXH was, I didn't know how it worked, The Lnav system has been a constant source of bewilderment for me since I started flying gliders, I hadn't sat in HXH since it had last been flown by blogs unknown and had to figure out the seat adjustment on the fly. For the life of me I couldn't find the O2 mask, the Water ballast system was a thing of great wonder too, I spent all week wondering how that worked.

HXH was blocked in the hanger by lots of expensive plastic, the grid was forming up, I was running late, suffering terminal confusion with just about everything, the second battery in HXH was refusing point blank to play, there was a pilot briefing to attend, glider to be gridded. Oh ma heed, what have I let myself in for? I gave myself a mental slap, think positive, think what you do know, not what you don't, erm, erm, push stick forward, houses get bigger, pull back,

houses get smaller, keep stick back and houses start to spin wildly! On that positive note Jarrod and I (my neighbour whom I had bullied into giving me a hand for the week) finally got space to maneouvre HXH out of the hanger, at about this time it became painfully obvious that taking someone up to act as crew really should have involved some training of said crew beforehand. Jarrod had never seen a glider up close before and now I was under time pressure to get gridded, get to the briefing and explaining that if you use the accelerator on the truck I HAVE TO RUN TO KEEP UP! Managed to run foul of the Comp Director en route to the grid by being obviously late and received a pointed reminder on etiquette, timekeeping and the dire consequences of delaying launch of the grid.

Pilot Briefing day 1 of the comp, I skulked as far back in the room as I could get to get a better view of the "competition" . I should point out that as one of the ex-hang glider pilots in the club, we have a slightly skewed view of pure sailplane pilots. We are wont to go off to one side and swap stories of the latest rollickings we've been given for misdemeanors unspecified. As an ex-hangie I *knew* I would do OK at the comp, in fact I was absolutely sure I'd show these boys and girls a thing or two . . .

Standing at the back actively trying not to be noticed or get in the way the bewilderment of the day just carried on ramping up. The pilot briefings were superb, but I'd never been to one before so heaped on top of the mornings hassle was complete information overload at the pilot briefing.

Came out of it head absolutely spinning, meandered off to the grid clutching the task sheets like my life depended on them.

On the way down to the Grid with Jarrod pointed out Richards glider in front of the trailer for HXH, gave him a rough description of Richard (only person at the club who looks like he got dressed with the lights in the room on) and asked him to have a chat with Richard about moving his glider, made a mental note to not land out due to the trailer being inaccessible.

Got to the glider, stared sullenly at the Lnav which just disdainfully stared back almost willing me to try to program the days task into it, sack that, more chance of winning the lottery than getting any meaningful data into the Lnav (and given that I don't buy lottery tickets, that's a very slim chance indeed) marked up my map (you know, that thing that sits in the pocket and gets in the way of your drinks and mars bars on a normal flight) and stuck my phone to the canopy. Primary nav - map / task sheet, secondary nav - phone, tertiary nav - Lnav with DGC as a "goto" constantly.

Strapped the glider on feeling like an absolute prat, I mean I don't get "in" the glider 'till I've pushed on. Here I am gridded up and sitting in the glider like Lord Muck, hmm, check everything again, yup Lnav still baffles me, bugger I've forgotten any food or drinks . . . look at the water system in wonder again, water, water bugger I need to go . . . look around, looks like I have time, scuttle off do what has to be done, scuttle back to see that I need to get IN THE GLIDER NOW, still doing straps up as the tow rope is coming back to me. Scoring Mike pops his head in and asks how things are going, ...hahahaha, probably best if I don't repeat that conversation.

Absolute relief as the rope goes tight and we are off! I was one of the later launchers on day 1 and conditions had changed somewhat during the grid being launched, those off early were getting into wave, those off later were getting into rotor (look, I've had months to come up with excuses). I tried and tried and tried to get into the wave behind Morven and failed and failed and failed. Having taken a pounding in the rotor for a bit over two hours and been unable to make TP1, I turned and ran for the GC, tail firmly between the legs as I could hear people

calling starts and finishes and here I was stuck behind Morven too much of a wuss to even go for TP1. Had a relight, during which I heard about Charlie having found some exceptionally rough air and having been back to check the glider, stooged, tried and failed again.

Back at the clubhouse, watching people coming in calling "comp finish?" on the radio and muttering darkly to myself about maybe I had bitten off a bit more than I could chew here and that, possibly, maybe, Al Eddie had been right about these boys n girls being "quite good actually" and arriving with their own thermals!!

Put HXH to bed, trying very hard to be last into the hangar so as to avoid the kerfuffle of this morning, failed. Fran was running the hangar packing and she beams "plenty of room at the back for a single seater" all bright and happy, gaaaar betrayed by a fellow hangie. Rightho! Muttering dark things about life the universe and how unfair it all was as HXH was pushed right to the back of the hangar, again. Slouched off to the clubhouse to see if I could get a sheet for tomorrow's grid, horror, I was to be in the second launch, awwwwww. A plan was hatched with Jarrod to be up bright and early the following day to avoid any repetition of this morning's "pointed reminder on etiquette, timekeeping and the dire consequences of delaying launch of the grid".

Saw scoring Mike and gave him the logger for HXH, hoping that when he found it to be empty, he would take the time to explain how the darn thing actually worked. Wonder of wonders, it had data! The 2 min idiot's guide he had given in the morning had patently sunk in sufficiently to allow data retrieval. As this was pretty much the *only* happy event of the day it actually cheered me up considerably. A fairly cheery drive back to Stonehaven ensued whereupon household chores were engaged in to continue the "brownie point melee"

Had a superb night's sleep, aided considerably by some golden low flyers and dreamed happy dreams . Woke up at oh' stupid o'clock the next day full of the absolute certainty that If I didn't up my game several thousand percent from yesterday's shambles of a start I was going to come in precisely last and be a source of constant embarrassment to all the other ex-hangies in the club, who, no doubt would gather in huddles, point at me and laugh . . . .

Picked up Jarrod, drove to the GC, got gridded in decent time, Richards glider still in front of the trailer, mental note not to land out balanced with actually getting round something! Put snacks in the glider and some drinks, charged batteries all round, managed to fix bat2 on HXH and managed to get some TP's on the days task – got some points! I'd moved from 15th equal to 14th - out of 15. But, it was a start. The flying had been great fun too, leaving Morven in thermal lift giving myself a reasonable 50/50 of getting lift between Morven and the TP failed. Got to the TP and got a scrappy thermal that would have been a challenge in a hang glider which seemed to be going up at 45 deg such was the drift on it. Challenging fun flying all the time thinking "I must go UP, can't get to the trailer for Richards glider" big happy smile after day 2. Getting (slowly) to the realization that the rest of the field are none too shabby actually, local knowledge may not give me the leg up I first thought here.

The rest of the week passed in a blur of absolutely epic flights, I mean absolutely epic. Stunningly good. The task setting and organization was breathtakingly good. The briefings as I started to get used to the format, really got me going for the day. I don't know how but I was leaving Pilot Brief in the mornings in absolute certainty that I was going round, walking down to the grid every morning with Jarrod and noticing Richards glider still in the same place, explaining to Jarrod that "Richard,

you must have seen him, casual but smart, quite debonair, only man on the airfield with a comb . .?"

Think it was flight 4 of the week involved the most spectacular wave flying I've ever done. Around Braemar and Glenshee the wave systems were constantly changing but excellently marked, not being particularly "into" (excuse the pun) cloud flying I was skirting round the lennies , the combination of making TP's the conditions, the glider, the scenery, there just is nothing that comes close to that feeling, nothing. Scooting back from the last TP on flight 4 over solid cloud cover between Braemar and Aboyne towards one solitary hole in the cloud which I figured was between me and Aboyne was surreal.

It's a race, so flying fast (and correcting for alt) going for this gap which is probably 15 miles from me and watching it get smaller as I get closer, switching on gyro's in good time, getting closer, gap getting smaller, gyro's humming away nicely gentle roll of the glider and the Horizon is working as is the Turn n Slip, closer, gap getting smaller. Almost no deviation in course took me clean through the gap which seemed to promptly close once I was through followed by a rapid reduction in velocity as I found the rotor under the clouds. I'll still be grinning about that one when I'm old and dottled next year.

I'd now made it to the dizzy heights of 13th and the final day loomed.

Pilot brief in the morning and it was a difficult one for Pete to call, WX was indicating good wave but there was hardly a breath of wind on the field, looked like the WX info was pants, ach well, I'd had a fantastic week up to that point and was quite happy. I didn't like the idea of finishing 13th but could live with the memories of the flights to date.

Richards glider had moved! Woo! Sadly Jarrod had had to go and Mrs G was standing in as "retrieve crew" along with Eilidh (one of the small people in the house) so any land out would be followed by a beating from Mrs G for making her drive with a trailer. So, yet another day of "must not land out".

It actually looked like the day would be called as it was blue and windless at ground level, that coupled with the fantastic flying we had already that week had meant that most pilots were nonplussed about what the day would bring.

Pete had managed to wangle a go in Dave's Spitfire. Mrs G, Eilidh, Murray (mutt) and I went for a walk round the perimeter to exercise Murray and watch the airshow. Pete was showing the Spit as a wonderful graceful machine that sounded fantastic. We had made it as far as the long grass on the south side of the field, Pete had done a nice pass and the Spit was climbing out over Deeside, cutting a very impressive sight. Mr Williams had been towed and dumped behind Morven as "sniffer" (Hangies call 'em "wind dummies") and pretty much forgotten about, Mr Williams tends to strap on a glider in the morning and reappear 15 hours later saying "it was ok, I suppose".

Murray was showing intense interest in a long tuft of grass and all was well with the world as we strolled in the sunshine. I turned to Mrs G and remarked that Murray had obviously found a "squeaky toy" in the grass, she looked at me with one of those looks that says "you recon?" at which point I thought about the probability of a squeaky toy surviving the grass cutting, hmm, not good. What else would make that noise? At which point Murray leaps out of the grass a look of wild excitement in his eyes as he shook the remaining life out of what had been "A BUNNY WABBIT!" shouted Eilidh "MAKE HIM STOP!" as she points at the dog who had never looked happier with himself. I should explain that Eilidh is 12 and a Veggie and a girl and the prospects of a calm, peaceful conclusion to the walk round the field were getting slimmer

than the chances that bunny had of seeing easter.

I'm now trying to catch the dawg who is having a whale of a time, Mrs G is trying to placate veggie daughter who is distraught and mildly hysterical at actually seeing something killed in front of her for the first time ever, I'm trying to stay between her and the dawg so she can't see the blood, And Mr Williams comes over the radio on my belt, 6 knots, smooth, 8 thousand feet behind Morven.

A flying rugby tackle finally brings the dawg down (I really should work on obedience training with him) and he is separated from the remains of the wabbit, I try to congratulate the dwag in a manner that shows I'm pleased with him and in such a way as my daughter thinks he's being told not to do it again (correct, that didn't work, on either count) round up the tribe, get across the airfield, strap on the glider and go fly!

Mrs G is dispatched to the clubhouse to get me "some eats" and I actually go over the days tasks. Mrs G comes back with a Snickers bar and a carton of Orange, I do my best "grateful" look and lob them in the glider. Mrs G remarks that Roy and Lynne FD are getting sandwiches made especially by the "crew". Hmm, maybe next year I muse (quietly, to myself)

And we are off ! last day UKMSC 2009, I'm on an early tow and still slightly phased by death and destruction, hysterical daughters and suffering mild envy of people who get "real" food from the crew, net result is a screw up and I ping off into sink behind Morven. The air in the glider turns a deep shade of extended blue as every expletive I have picked up over the last 40 odd years gets vented at full volume at my complete stupidity. I'm flying towards Morven and looking over my shoulder at how long I think I can do this for before I have to turn and run for the club and a re-light. Not long is the short answer.

(Pic Mr Williams high above the Lochs - but not as high as me ☺)

It smoothed out and stopped sinking, I stopped swearing, beep beep beep beeeeeeep BEEEEEEEP went the vario strapped to my leg (glider varios are like Lnavs, excessively complicated things that are best ignored) the strongest sustained lift I have been in in years made the ground look like I was falling away from it. I saw 17 up on my averager and it's a 30 second average I run.

Phenomenal! And the vis! It was crystal clear right to the horizon. Stooged about in the lift in the lee of Morven waiting for the rest of the fleet to be launched, quietly hoping for payback from day 1 and see at least half launched into rotor (unsporting? Moi?) nope, everyone was dropped and climbed. Never seen so many gliders so high, in such clear air, so close. Magical absolutely magical. About 5 mins before the start gate opens and spoilers are being deployed left right and center as pilots elect to get down to a sensible start height. Having listened to and read, just about every competition theory going,

mine is, and will probably remain "get high, stay high" it's a level of complexity that works for me and seems to cover most eventualities. Sadly starting today's task at 12k feet probably isn't sensible so I tag along and deploy spoilers. 1 min to the gate opening and I'm down at 9k planning on starting at 6k. The gate is called "open" on the radio and not much later I'm at 6k "fast" and heading in the right direction. Back to morven for the "get high, stay high" worked my way back to the top of the lift and went for a cruise round Scotland. What a flight! Pete's task planning had us following lines of energy in the, mostly, blue wave. I think I turned about 3 times between Morven and TP1, at which point I decided the view was lovely and I'll just carry on and enjoy the scenery. Overshot the TP sector by 15 or 20K and turned back south, where it just wasn't looking as good. From almost Buckie I could see the smoke from the Red Arrows performing somewhere round about Leuchars?

Buckie! Here we come !! (nothing wrong with Buckie)

Made it round all the TP's Morven, Lochnagar, , the Lecht, flew over the mountains, flew up to Buckie came back from the Lecht at "fast" in silky smooth air, didn't go far enough on the last sector and came back about 15 mins early which hurt the scoring but I really didn't care, it had been yet another fantastic flight.

Charlie came howling in almost bang on time spraying water all over the peanut gallery and managed to fly through his own ballast! Good finish fella!

What a week! I have trouble recalling ever having had so much fun for such an extended period of time. Steve and his team facilitated what is, without a doubt, one of the best weeks of my life thus far.

Would I do it again? Absolutely! Currently asking the committee for HXH again, Should you do it? Absolutely! What a blast! Well organized, friendly, fun. I would recommend a bit more prep than I did, well any prep is a bit more than I did. Find someone to make decent grub, sandwich envy is a terrible thing.

I learned so much in such a short space of time. Mainly that I'm not as good as I thought but not entirely awful either. The visitors who come up for the comp, are none too shabby either.

I can't adequately express how grateful I am to all who did so much to make the 2009 UKMSC happen. Thank you.

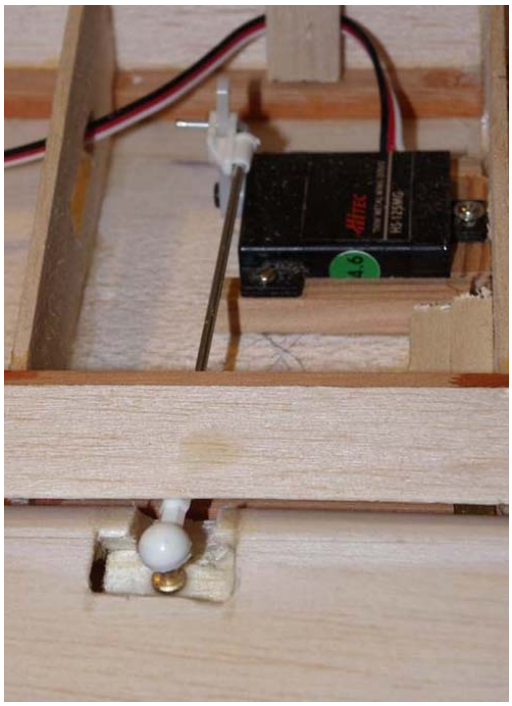
Roll on this year's UKMSC! (I'll be the one at the back of the pilot briefing who looks like he got dressed in the dark and patently don't have a comb to my name!)

TwinPin Update 3

Sandy Tough

My long running project of the Scottish Twin Pioneer is slowly nearing completion. However, it's the little bits that take the longest and I've been working on perfecting the control surfaces, particularly the flaps to get them spot on.

The pictures show you the detail

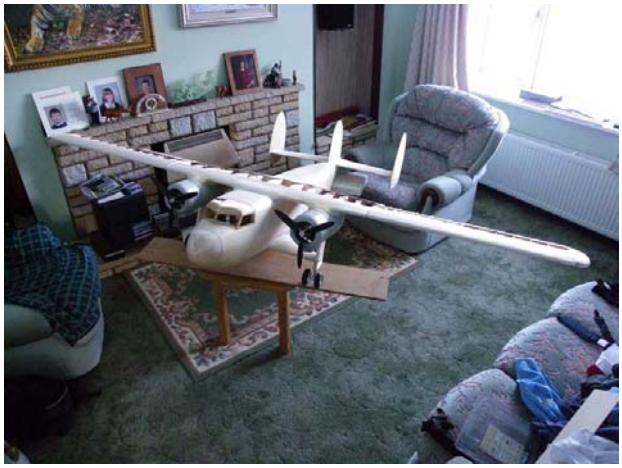


The ailerons are of the Freise type, and I have managed to hide the control rods as can be seen. Once the final adjustments have been made a scale panel will be fitted over the ball joint.

The flap mechanism at 'closed'. Two flaps per wing

The flaps in the open position

A side view of a wing showing both flaps deployed



Here she goes all complete and now ready for her 'claes'

That's all folks, hopefully the final chapter next year will be the flying bit. Cheers the noo, Sandy.

Whirlybirds Are Go

George Whelan

The unlikely highlight of last Christmas was the receipt of a Micro Twister indoor helicopter, this diminutive 'toy' heli is guaranteed to make you smile. The Twister uses concentric twin main rotors and an electric tail rotor. After getting to grips with the 2 basic controls I was able to hover and move the Twister in approximately the right direction.

BRC Hobbies and various gadget shops in Aberdeen. The Twister has a metal chassis and comes with spare rotor blades, BRC sell all the spare breakable bits. I'me not sure if the Twister works by radio or IR, the package has a transmitter with lots of blinky lights on and a choice of A, B or C frequency, WARNING, if there are a number of Twisters to fly speak to the other pilots to decide who is on what frequency,

they might be toys but the law of physics still applies. For such a small heli it is surprising how rock steady it is. The twister can be charged from the transmitter or from a USB cable.

Over the months I became adept at landing it on and off the coffee table, walking it from room to room and even going upstairs. This is a fun way to keep your thumb in on the non flying days we occasionally get in Aberdeen. The Micro twister is available from After the inaugural indoor meet at the Police Gym in November I decided I wanted something a bit bigger. Coming up to Christmas the shops around Aberdeen were full of helicopters from the sublime to the ridiculous. I had a good look at most of these, some I dismissed as they were mostly plastic and I wanted something more robust, the Discovery has a metal chassis, one I dismissed as it was on 27mHz, I finally settled on the Discovery from the Discovery Store. Again the Discovery has concentric twin main rotors and electric tail rotor. I was impressed by the demo given by a small boy, the model was rock solid to fly, although slightly dearer than similar models it has a built in gyro which irons out the twitchy thumb. I must admit I also had an ulterior motive for buying this model, it looks

big enough for conversion to 2.4 GHz some time over the Winter. Subsequent surgery revealed of course that this type of heli doesn't use servo's but an integrated radio and motor drive board.

The down side is that all the models in the shop have the identical frequency so a bit of frequency control is required. The Discovery has a 1000 mah lipo and is charged from a dedicated charger, I put rechargeable Enerloop batteries in the supplied transmitter.

The third model is the Belt CP V2, I bought this because I wanted a bind & fly helicopter on 2.4 GHz, you know the way it is, you start looking around and for a few pound more you get a bit more and a few pound more, more again and before you know it you have the Rolls Royce version. While I didn't go that far the Belt is a single rotor variable pitch helicopter, i.e. the real deal. I looked hard at the Belt and the Blade SR, both bind & fly, i.e. I could use my Spektrum transmitter.

The reason I eventually settled on the Belt was the tale boom is tubular metal, the SR uses a carbon rod, the other reason is the SR has a brushed main drive motor, the Belt has a brushless motor. One of the reasons the Belt has a tubular tail boom is it contains a tail rotor drive belt, the SR has the usual electric drive tail rotor. I have not yet flown this model, it has been wrapped up by my wife as a surprise Christmas present for me, but there are plenty of demo's on YouTube. I think initially I will go with the supplied transmitter as it is set up for the heli, until I understand about swash plates and teeter heads and gyroscopic precession before I attempt to change over to the Spektrum, watch this space. The Belt has a 1200 mah battery and again Enerloops in the dedicated TX. This is a heli for next year starting in the middle of the biggest field available. Probably the Blade SR would have been more appropriate. Watch this space.

Right now, there are as few as 30 ADS Modellers left in the wild and that number is falling. Modeller habitat is being lost at an alarming rate as football developments displace the Modeller from the wide open spaces. Flight Sim poaching has surged over recent years and many young Modellers are being taken into captivity of ante-rooms filled with computers.

Thankfully, there's still hope. Given protection, space to roam and sufficient sustenance, Modeller numbers can increase rapidly. They can claw their way back from the brink. But, we need your help.

Look closely, there will be a Modeller hiding near you. For only a small donation of a sandwich you can tempt him back to the field and help numbers rise once more. In return we will send you an A3 poster of this Modeller feeding in his natural habitat.

Another White Elephant

Derek Robertson

Life is full of mystery don't you think? Maybe it's just the stage I'm at, but now that retirement is here, I find I'm looking for answers to very trivial questions the likes of ..... why do "paper boys" not blow away when it's windy? ..... where can you get hold of floral gums these days? ..... how come Neil Davidson doesn't spend 45mins buggering around with his tranny before he flies anymore? ..... or when will we get a decent sunny day with a 20mph wind blowing from the NW????? Bet you didn't realise I was such a deep thinker!

My PSS Learjet has been on the go for a couple of years now, but in order to finish the partial "kit" that fell into my hands, I had to fashion some sizeable components from blue foam to complete the model. So pleased was I with the end result that I thought I would share it with you, as this might be an easy way to scratch build any fuselage shape for a future PSS project. I know that Norrie and George have been successfully making glass fibre fuz moulds off foam plugs, and of course there's the widely used "lost foam" method where acetone dissolves the foam core, but I didn't fancy any of these messy chemical concoctions. So what you're about to read can be done in the comfort of your own home, provided your wife or butler doesn't mind an inch of blue "stew" settling on the bookshelves.

As I mentioned earlier the model arrived several parts short and required a set of tail feathers, engine nacelles and wingtip tanks. Fortunately it was supplied with a full-size plan (span 69", fuz length 72", so a big bit of paper) which is essential for the making accurate templates.

The first step is was to trace out a side view of the nacelles and tip-tanks, which was then transferred onto and cut out of 1/8th balsa, this forming the central spine profile onto which foam blocks are glued on either side. But before reaching for the foam I also attached balsa discs to the front and rear of the engine nacelle profiles, to match the intake and exhaust diameters. The tip-tanks were slightly different in so far as a couple of half round balsa formers were stuck on either side of the spine to help preserve "roundness". This should, hopefully, be more obvious from the photograph. The one other very important thing I did was to run a thick black felt-tip marker over all the edges of the spines, formers and discs. A glass of wine or bottle of beer is also another important component during all this faffing around!

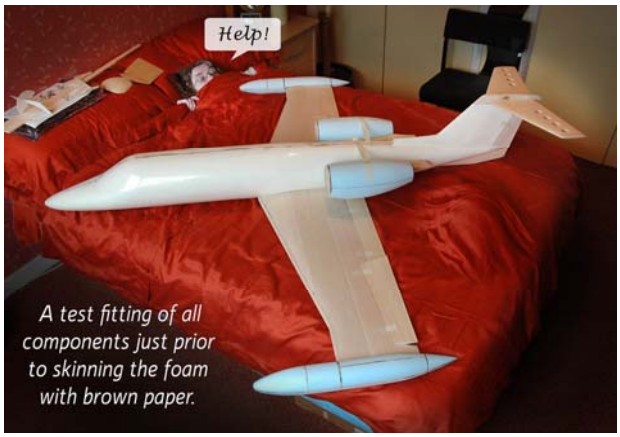
Now for the blue foam. The stuff I had was thick enough, but I could have doubled it up to get the correct width if necessary. I now just roughly cut the foam into blocks which would fit between balsa discs on the nacelles and fore, between and aft of the formers on the tip-tanks. I could of course have hollowed them out to save a little weight, but didn't bother. Once glued in place any slight gaps were packed with lightweight filler and I then used a long craft knife to pare the foam down to within a whisker of the balsa, ready for sanding.

right side: tip-tank with very rough blocks glued in place; centre: more closely trimmed foam (but still pretty rough) with black lines on former edges clearly visible: left: engine nacelle sanded and ready for brown paper/varnishing.

Provided you're not too severe, the blue stuff sands to a nice finish. I used a 12" long sanding block to avoid ending up with any

localised hollows. To keep the little lady happy, this part of the operation was conducted outdoors ..... I'm not into making my own tea or impromptu lectures!

Final sanding had to be done carefully though, and as soon as I got down to the balsa, as indicated when the black lines on the edges of the formers and spines started to disappear, I knew the shape would be correct. Of course for a more complicated fuz shape with double curvatures, more formers would need to be added to the central spine!



mmm .... didn't realise the wifey was still in bed when I took this shot! With hindsight it might have been a good idea to apply brown paper to her mouth as well?

Next stage was to add a hard skin. The bits were now given a coat of odourless Ronseal acrylic varnish, which has no detrimental effect whatsoever on the foam, followed by a covering of brown parcel paper which was also applied and liberally coated with the same varnish. You could of course use watered down white glue to achieve the same result, but using the varnish straight out of the tin is less messy and ultimately cheaper. Think I used 4 coats, sanding down between each, and achieved a reasonably good rock-hard finish. A reasonably good finish from 2 feet away I should add ..... and that was it, ready to paint! Except for the wings and tailplane, everything else was sprayed using cans of "Hycote Double Acrylic" car paint ..... a caker to use, even for a duffer like me.

The completed model is awfa bonnie, but alas, after all this work and effort I've only managed to get the Learjet into the air 3 times over the last 2 years. Jings, crivens, help ma boab, it looks like it could be another white elephant in my hanger, destined to join the Howard Metcaffe F15 Eagle which has only had a couple of outings in 7 years? The Lear's big, it's heavy, but actually flies quite well given the right conditions ..... a steep slope and 20mph wind ..... which is why I'm waiting for the weather gods to smile favourably on Brimmond. Some day maybe!

one of it's few outings - Mike Pirie took this shot with the landing flaps deployed during an approach on top of the Knock

Bill Stark (left) on duty with the Club Trainer at our visit to Deeside Gliding Club in June. Steve Davis (below) at the same venue blagged a flight in a 1973 Avions Pierre Robin CEA DR400/180R

HoneyBee

George Whelan

After the inaugural indoor meeting I decided I wanted to upgrade from my Twister concentric helicopter to a 'real' helicopter of the fixed pitch variety, this being not quite a full blown collective pitch machine. My significant other (wife) jumped the gun and ordered a Belt CP for a surprise Christmas present, this being a collective pitch machine; I decided not to risk the belt and to see if I could get a cheap fixed pitch machine on the internet. I scoured various sites and came across the Honey Bee on E-Bay; I put in my best bid and subsequently was rewarded with a successful bid.

The Honey Bee comes in a number of guises from the standard fixed pitch model as depicted here to an extreme 3D machine. Spare parts and upgrades are widely available, you need to be careful or you could upgrade at greater expense than just buying the next model up. The Honey Bee is a good size machine for indoors, not the living room though, or in the park in calm weather.

The Honey Bee has an integrated controller consisting of a receiver, main and tail rotor mixer, the tail rotor is directly driven by a small motor, and speed controller, there is also 2 servos to drive the rotor head. The battery as supplied is an 8.4 volt Nimh which I found marginal, I replaced this with a 2s LiPo for now, while a lower terminal voltage the lighter weight gave a better lift. Using the LiPo needs you mean to relocate it further forward to retain the C of G, I relocated it under the controller with some Velcro tape.

My Honey came with the trainer kit consisting of 4 rods with a ping pong ball on the end, the idea being to give the heli a very wide base and stop the rotor blades catching the floor during the inevitable wild gyrations that occurs during the early days. To date I have only skittered the Honey Bee around the back kitchen floor, the garden being under a foot of snow. Watch this space.


ADS
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Welcome to ADS

Info for new and prospective pilots

Keen on aviation and always fancied being a pilot? Have you been to Modelzone and bought an expensive model with little or guidance given – well your answer may well be here. Please read on.

Aberdeen & District Soarers is a friendly well established model flying club formed in 1978 by a group of modellers with an interest in radio controlled gliding. Historically the main interests have been thermal and slope soaring, but this has also grown to include the flying of a variety of electric powered models.

Weather permitting, ADS meet at Calder Park, Redmoss Road (behind Makro) at weekends all year round and on Tuesday evenings through the summer and are always keen to gain new members from beginners to those with a wee bit of previous experience.

As well as flat field electric and winch flying at Calder Park, members also use slopes such as Cairn O'Mount, Bay of Nigg and Brimmond Hill to fly gliders and purpose built slope soarers using the up draught of air off the slope.

Club membership currently costs £12 for adults and £6 for juniors with obligatory third party insurance at £27 per annum via the Scottish Aeromodellers' Association (SAA).

ADS also hold a number of fun and competitive events and outings through the year with the emphasis always on enjoyment for all.

If this has whet your appetite for flying models, then pop along to Calder Park for a chat and further advice on how to get started. Information is also contained within the Club website which can be found at www.fly-ads.co.uk.

An application form is on the reverse of this page if you are ready to take the plunge.

Quiz Answers

1. 1978
2. Secretary of State for Air
3. Hot air balloon
4. Orange or Red with reflective stripes
5. Peter, Paul and Mary
6. Le Bourget Charbonne, Paris
7. HMS Invincible
8. Communications officer
9. London City airport
10. 707
11. 39 ft 10 ins (11.22 metres)
12. Fairchild C82 Packet cargo plane
13. Trevor Pearce International
14. SEEA
15. Icarus
16. Gibson
17. M1
18. Brian Tuckshaw
19. Howard Hughes
20. Comet and Vixen

Aberdeen & District Soarers

MEMBERSHIP APPLICATION FORM

Return with Fee to
Gerry Mitchell,
49 Countesswells Crescent
Aberdeen
AB15 8LN

Surname	
Forenames	
Preferred Name	
Date of Birth	
Address	
Postcode	
Telephone Number	
Mobile Number	
Email Address	
SAA Number	
Safety Awards **(SAA, BMFA, Other)**	
Flying Disciplines **(Electric, Gliding, etc)**	
Other Information	

Please note that ADS is a gliding or electric flight Club.