Newsletter

No8 2020 August

Activity at the Field – July 2nd 2020

Douglas Gilmour who has recently joined the club flew his OS 35 powered Esquire which he has recently completed after being in storage since the 80's. See his profile and pictures of the Esquire elsewhere in the Newsletter.

Bert had a good flight with his Arising Star. He was unable to fly his Riot as he noticed that there was a split in the rear of the fuselage and nobody at the field had any glue or tape.

Alan managed to crash two planes in quick succession shortly after arriving at the field. Luckily he had 4 planes so 50 percent of them remained in once piece.

Neil Flew his Tutor 2 twice but is still having trouble getting it to take off in a straight line. Poor landings but no damage apart from a bent nose wheel. Practised inverted flight with his Apprentice. 3 flights no damage.

Mike couldn't get his Aviomordelli Gem 80 engine running correctly for a maiden. He flew his Ruckus and other IC model.

Activity at the Field – Wednesday July 8th 2020

Jim assisted Douglas with getting his engine running correctly. It turned out it was running too rich as the engine note was changing when the glow plug battery was removed.

Douglas was test running his engine by taxiing round the field but misjudged his speed and took off by mistake. Repairs needed to the elevator.

Alan flew his repaired Beaver successfully. It was hard to tell it has been repaired apart from the stitching pattern on the repaired wing.

Dave's plane came down short, west of the runway on approach. Assistance given to find it in the rough. No damage.

Mike flew his Aviomordelli Gem 80 but it came down west of the runway in the cornfield. It disappeared completely. The ladder was used and 2 pairs of binoculars but it was very difficult to find. Luckily after an hour of searching it was discovered. Unfortunately no one had a drone. No damage at all.

Neil had 2 successful flights with his Apprentice and his Tutor 2. It was difficult to land the Apprentice due to wind. It bounced a couple of times before coming to a stop. Tutor 2 landed both times with the engine running. Nose wheel bends each time but bends back – suspect new wire is required.

Activity at the Field – Thursday July 9th 2020

Neil at the field about 10am. No one else there. Flew the Apprentice twice practising flying inverted. Flew Tutor 2 for 10 minutes. Landing was fast and tipped over which stopped the engine and bent the nose wheel leg (again!). Second flight landed safely with engine still running. Took off and landed again. Took off a third time on the same fuel, did a circuit then aborted landing so increased throttle to 3 quarters and engine cut. Dead stick landing east of the runway in the long grass and weeds, no damage. Ran engine on the bench and engine threatened to cut each time it got to 75 percent. Eased back to quarter and it picked up again. Opened needle valve half a turn and engine running fine. Suspect the needle valve had moved closed due to vibration?

Activity at the Field – Friday July 10th 2020

Douglas there on his own. He realised he can get a lot more flying done if no one else is there and he doesn't need to engage in conversation! 10 flights done and he had to go home as he had no charged batteries.

Activity at the Field – Sunday 12th July 2020

Alan was at the field with his grandson who was happy flying his Apprentice. Unfortunately, Alan crashed his Kingfisher with radio failure but thought there was no damage so attempted a second flight with a loose undercarriage which collapsed on landing much to the delight of his grandson.

Billy Dunn put on a good display with his petrol engine plane and Tom entertained Alan's grandson with an acrobatic display on the runway with his helicopter.

Sunday 12th July until Sunday 19th July

There were two large campervans at the field with trailers from Sunday 12th July until Sunday 19th July as Brian and Dave were visiting for the week.

Brian is quite local from Glenrothes Aeromodelling club and he attends nearly every RC event in Scotland. Dave lives in the highlands. Both are regular visitors to KRMFC. They are both expert pilots, and Dave specialises in vintage kits and technology. He is well known for hand launching just about any model no matter what size. They both pull large box trailers behind their vans stuffed full of planes, and some in the campers on occasions. It is amazing the kit they carry. This week they were celebrating Dave's 69 birthday. It was quite a difficult week for them both as it was quite breezy but a lot of flying (and talking) was done.

Activity at the Field - Wednesday 15th July 2020

Good turnout, with George returning after lockdown to successfully fly his Magnatella which has been plagued with engine problems for ages. It performed well this time despite a great deal of wind. Bert had some good flights, but cartwheeled his Arising Star on landing by coming in to land without power in high wind, superficial damage luckily. Mike was having engine trouble again on his helicopter. Douglas Gilmore with bigger wheels and modified undercarriage was beset with gremlins and his engine pulled the firewall out before he could take off. Douglas Fulton and John Carson visited in the afternoon.

Activity at the Field – Thursday 16th July 2020

Only Alan down the field today. Very windy so only the Kingfisher flying. Several good flights, great in the air but when landing a foamie you don't expect it to take the full runway, especially when it is only 2 metres high over the threshold. Unable to fly the Beaver as it was too windy to put it together. The battery had to be fitted into the Kingfisher on the ground as it would have blown off the bench.

Activity at the Field – Tuesday 21st July 2020

Just Douglas down the field initially but soon joined by Neil. Light winds and good flying conditions. Alan appeared later in the day but no one recognised him as he was without his trademark hat. Charles came down briefly and flew one of his autogyros.

Activity at the Field - Friday 24th July

Wind was steady from the west, though stronger than forecast. Douglas Fulton was first there and ploughing through the batteries as if it was the last flying day before Christmas. Bert made steady progress with his Arising Star, and filled in the time between battery charges with his Riot. One particularly good landing showed he is not a complete novice anymore. Alan V turned up at the late time of after 9am but had hiccups with the Beavers IC engine so joined the rest of the group

thrashing the electrics for the rest of the morning. Flying was good and for most of the morning there were 3 planes in the sky at once. Loads of butterflies on the thistles at lunchtime, so took the only photo of the day. In the afternoon Douglas Gilmour and Charles Malcolm turned up. Douglas had 4 flights with his 80s style trainer and returned home with no repairs to do. Charles flew his Atom XL autogyro. A good days flying and chatter had by all present.

Activity at the Field – Friday 31st July 2020

The weather forecast was for light winds, 26C and sunny. The forecast was almost right but it didn't mention thick fog at Kelty or that the morning would be cool and cloudy with strengthening wind.

Neil was first at the field at 08:30 followed by Douglas 30 minutes later. Goods flights achieved with our electric planes.

Bert was the next to arrive with his Riot and Arising Star. Trouble with his ESC on his Riot meant he could only fly his Arising Star. Good practice acquired on a number of flights. We did think we might have to go and find his plane in the farmers crops but he managed to recover at the last minute.

Billy H appeared later in the day to spectate and say hello.

Alan came for a brief visit with his wife and 2 grandsons who both had good flights with an Apprentice.

Neil flew his Tutor 2 which was captured on video by Alan's grandson. This will be added to WhatsApp shortly.

Repair Required *by Alan Veitch*

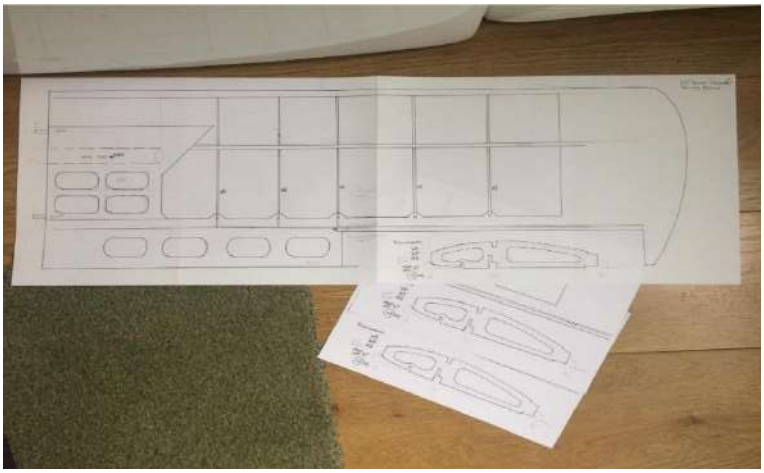
Oh No!!! What happened here? Pilot error, botched take off, just too late on the rudder and bang, pilot box claimed my new plane.

Don't worry you can buy spare wings for ARTFs . Billy our secretary sourced me one, the only one in the country, good job it's not the left wing, as there's no left ones in the country. BUT it's all yellow.

Dave Kelly said "that's not too bad, why not just repair it?" And this from someone who knows I have been building a Chilli Wind model for the last 18 months.

I had insisted that I find all the tiny bits that had showered the field. Now time for the jigsaw puzzle. Stripped off all of the covering and this is what I was left with. However, thanks to Neil and Billy helping me gather all the bits, I was able to put these bits together.

One of the problems with ARTF models is that you don't know how they are constructed and you don't have detailed plans or templates. Hence just stick the bits

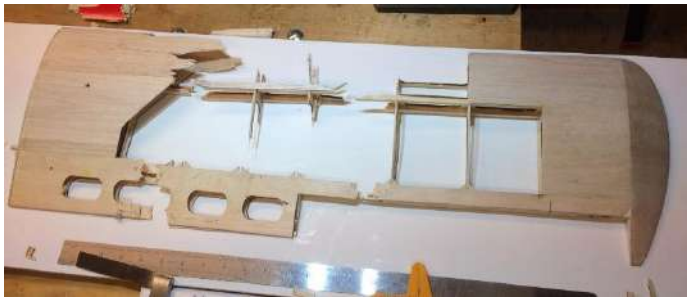


together to see how it's made, then make a working drawing. Sounds technical but it just means drawing around the bits.

Then it's back to my trusty plywood from my old wardrobe and saw out all the new bits. Make sure you do a dry run to make sure they all fit okay. If they don't fit, and you start gluing them in you will be smashing the wing even more trying to correct your mistakes. I know I've done it before. I really worry about what happens when I run out of that lot of old wardrobe ply. I suppose I will need to buy some lite ply that costs a fortune for a postage stamp sized piece, or scour the auctions for some old brown furniture.

Then glue it in place. For repairs I always use white wood glue as it takes 24hrs to dry, which gives me plenty of time to fiddle it into place before clamping it firmly. I have tried using cyno glues but have ended up with twists in the plane as you are turning it over all the time to get the bits in.

Once it is dry, sheet it up with balsa ready for covering and fitting. What's that dear? Oh my yellow right wing has just been delivered by DHL. And do you know it doesn't look bad at all, even though it's a completely different



colour when slotted onto the plane. Ah well at least I'll have a spare when I next crash it, of course knowing me I'll smash the left wing next time.

I'm going to use my drawing of the wing to plan the cutting of the Solarfilm to get a similar pattern to the original. I know that it will not make it look like new due to the ARTF covering being printed with rivet lines and hatches, which I cannot match. Also the white isn't even near to the white on the original, it amazes me how many shades of white there are in plane coverings.

I sand it down, put some filler onto it and cover it completely in white film. This is necessary as the only covering I have that is anything near to the colours needed is the sticky back plastic I got from Trevor. Here's a warning to all you others that got boat loads of it also from him, it doesn't stick to balsa, and the glue isn't heat activated. So when you heat it to mould it around a surface it actually loses its stickiness. It has its limitations but has saved and decorated several of my planes, but just like my wardrobe plywood I am now running out of the large amount I was originally given by him. The covering isn't perfect, and the wingtips Douglas Fulton will be pleased to know are covered in wrinkles. It hasn't got the rivet details of the original wing, but when it's in the air you won't notice the faults, and that's where this plane should be.

The last thing to do before flying and re-trimming the plane is to double check the rest of the plane for crash damage, and most importantly rebalance the plane both C of G and laterally, as due to the different construction materials and glue it WILL have changed. To do this I hang the plane from the roof, by a screw fitted in the centre of the fuselage where the firewall is, and stand the tail on the bench.

You can see the square of lead on the underside wing tip that is to be screwed on for balance. I don't have any of the handy self-adhesive ones that you can buy.

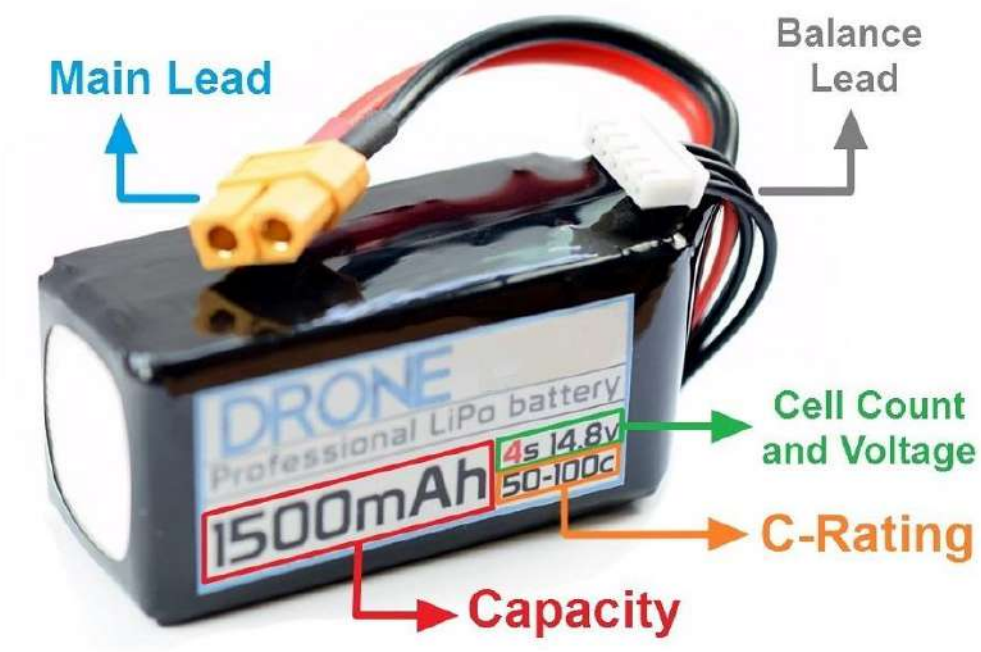
A final word of warning, when trying to take off look out for fast moving pilot boxes, that are intent on cutting your plane in half.

The finished plane repaired. I've included my spare yellow wing in the photo in case there are any doubters who think I just re-covered the new wing.

A Guide to LiPo Batteries *by Neil Grayson*

LiPo (**Lithium Polymer**) batteries have become the industry standard in radio control over the last 17 years or so. Electric planes now all use LiPo batteries as they are light and produce a lot of power. Understanding basic LiPo care and practices are important for every RC enthusiast. Understanding LiPo battery specs are something that many people find confusing, What is "C" rating, what does 3S mean, what happens if I increase my capacity or voltage are all very common questions. Well, have no fear, here is an explanation of what all those terms mean and what to look out for when you purchase your next LiPo.

Image from www.modelflight.com.au



Capacity is expressed on the battery in the form of milliamp hours (mAh). The higher the mAh the longer your electric aeroplane can stay in the air before you have to land and recharge. Of course the larger the capacity the heavier and bigger the battery so ensure that you check the centre of gravity hasn't shifted if you get a bigger battery.

Voltage is expressed in volts. If a LiPo battery has 2 cells then it has a voltage of 7.4 volts and will give you 7,400 rpm from an electric motor. The more cells the higher the voltage and the higher the RPM. If you have a 1000KV motor this means that the motor will give 1000 RPM per volt. Read the manual for the motor and ensure that you don't exceed the maximum voltage for the motor and ESC.

Voltage and cell setup is also important and this is indicated with an 'S' number such as 2S, 3S or 4S. This means the number of cells in series. Each cell has a nominal voltage of 3.7 volts so a 2S LiPo would have 2 cells giving you 7.4 volts (3.7V x 2). A word of caution though

as the nominal voltage is a ‘mid’ point in the voltage range. Each cell will charge to a maximum of 4.2 volts and when it is ‘flat’ it will be around 3 volts.

C Rating. This is the discharge rating and refers to how fast the battery can be discharged without being damaged. There are two numbers that are referred to with the C rating: the Burst C rating and the Continuous C rating. The Burst C rating gives the maximum discharge rate for a 10 second window. The Continuous C rating is the power the battery can sustain over a longer period of time. To calculate this use the formula C Rating x battery capacity in Amps. (1000mAh = 1 Amp). So if the cell has a C rating of 30 and a capacity of 3200mAh (3.2 Amps), then the sum would be 30C x 3.2AH = 96 Amps. This would indicate that you would need an ESC around 80 Amps to give you some spare capacity.

As you can see it is very important to understand the battery specifications and getting the right battery for the right application. This will save you money and time and ensure that the battery doesn’t overheat or have a limited life span. Remember treat your LiPo batteries with respect and care and they will provide years of service.

Researching this article helped me greatly to understand LiPo batteries and their specifications. If any granny believes that I have been teaching them to ‘suck eggs’ then I apologise.

Full Circle *by Douglas Gilmour*

As a brand new member of KRMFC, I have been asked to write something about myself and my “flying” activities for the newsletter.

As long as I can remember, I have been fascinated by flying and anything that flies. I built my first model aircraft at the age of 8, a rubber powered balsa and tissue paper high wing monoplane which managed to fly about 10 yards before taking a nose dive to an early grave. Undaunted, I progressed to building a diesel powered control line model when I was 10 (it had “DG 10” painted on the wing) which never actually flew more than a few yards as I was unable to persuade the engine to run properly when it was installed in the model.

One of my Grandfather’s favourite sayings was “If at first you don’t succeed etc” and obviously I took this to heart as, throughout my teenage years, I built and flew successfully several diesel powered control line models which also introduced me to the world of aerobatics.

When I went up to University I was astonished to discover that the University Air Squadron was prepared to teach me to fly the real thing, including aerobatics, formation flying etc. and even pay me for the privilege! (The annual bonus was £35 if you had fulfilled all your commitments!). After 3 years in the Squadron and almost 200 hours on DH Chipmunks I continued to fly privately for a few years until, in my late twenties, career and family meant that I had neither the time nor the cash to keep up my licence.

In order to cope with my insatiable appetite for flying I went back to building models. By this time radio control systems for models were already quite sophisticated, and having joined the Glasgow Barnstormers Model Aero Club, I became quite proficient at aerobatic flying and took part in a number of public displays.

When my family expanded to the extent that my workshop had to be converted to a bedroom, reluctantly I had to give up the hobby and for a number of years sailing became my substitute for flying. I went back to full sized flying in my early 50’s when some of the children were off my hands financially, and I had 20 wonderful years, 12 as an instructor (including aerobatics), before finally quitting last year.

At the time I gave up building models in the mid-80’s, I had mothballed 2 aircraft which were both about 3/4 built and fortunately I insisted in transporting them to Perthshire when we moved here on my retirement from the NHS in 2007. (Not an inconsiderable task especially for the larger one!). The first was a small training machine, but my pride and joy was a 1/7th scale model of a twin-engine Britten Norman Islander (7-foot wingspan).

Thanks to lockdown and to my new workshop in the garage, I have completed the small training model, an “Esquire powered by an OS 35, and flown it a couple of times with mixed success. Work has now started on the Islander which I hope to complete later this year.

The Islander is scratch built from a plan and has differential throttle control and working flaps and will be powered by 2 x OS 46 glow plug engines. Although I have been flying a Mavic Pro Drone for the last few years (video photography is another hobby), my RC fixed wing pilot skills are extremely rusty and I will have to put in a lot of practice before I risk flying the Islander! Any help experienced members can give me will be much appreciated.

Phoenix Flight Simulator, Crashed and Burned *by Alan Veitch*

Just had a quick reminder that things move on, and not only do we sometimes get left behind but worse still, we get shafted by those that seek to raid our wallets. Many years ago, I bought the latest Phoenix flight SIM for my computer (rev 2.5), to help my son keep flying when he moved away from home. It cost me the wondrous sum of £85 from Heliguys. He never used it but I kept updating it when new revisions came out, and installed it on several computers as they became defunct and never a problem. But since they sold out to Horizon Hobbies all that changed. It was okay for me until my computer broke. I tried to install it on an old laptop that has a broken screen, but is patched into an external monitor. When I installed it on the laptop, I got a message saying 'there is a problem with the sound' and it wouldn't work at all. It suggested that my drivers and direct X needed updating which I spent ages doing but it made no difference at all.

My grandsons were really desperate for me to put it right, so I went out and bought a desktop computer running Windows 10, as that seemed to be able to cope with most things. I took the Phoenix disk and loaded it into the drive, but it was very reluctant to load. After several attempts I thought I had finally managed to load it on the drive. Of course it was originally designed for Windows XP, so it froze on the first attempt to load it, and after several attempts finally started to load, but the screen then started to fill with error boxes. The only reason I had bought this computer was to run the flight SIM. I tried to see if I could buy another SIM but wasn't prepared to pay £150 for one. That's even more than I had paid for the computer (you didn't think I'd bought it from Curry's, did you?). I tried some of the free apps but they were full of advertising.

Then I came across an RC helicopter gent in Finland who came to my rescue. And here is the point of this article, his blog site was great! He has on it all the things that Phoenix used to supply. Within an hour I had downloaded Phoenix 5.5, upgraded it to Version 6, and downloaded and added 160 extra planes. All without a hitch. I haven't needed to update any drivers; I have stereo sound and fantastic graphics. It loads and runs without any stuttering. My grandsons are delighted, and so am I. No adverts, no rubbish just pure fun. He even has step by step guides on what to do with pictures which is great for us older, going blind members. If you're after a flight simulator that works and don't fancy paying a fortune try him.

www.rc-thoughts.com he does sell things, but mainly RC switches that he makes by hand himself, and sells at a reasonable price if you fancy one.

Happy SIM flying

A Blast from the Past

Weekend 14th & 15th March 2015

Just before the weekend began there had been some work carried out at the club field that needs reporting. Friday and Saturday saw a new fence installed. This runs where the old fence was, from the transmitter hut and down the length of the car park. The fence that was there has withstood many a year of bad weather. This sadly had taken its toll and the fence posts were rotten and it was looking shabby in general.

The new fence is 6 feet or so in height and all the wood has been treated at the factory to help it withstand the elements. The posts have also been set with postcrete, again this will help the section of it that is buried withstand wet weather. There are two gaps in the fence, one at the Transmitter hut and one just over half way down, both are large enough to accommodate the largest of models to pass through them.

Saturday saw the newly painted white posts put back in the ground from the entrance to the car park, new red rope has been strung through to make the entry to the site look fresher.

Saturday was cold and only a handful of club members ventured out, none the less some good flying took place and a good time was had by all.

Sunday saw an excellent turn out with the carpark lined down one side with vehicles. Malcom Baxter arrived early to get a good few hours flying time in, most of that few hours were spent with his hands in his pocket as he forgot his transmitter.

The club Chairman is sporting a cut on his nose, he claims that he was wrestling 4 armed robbers at his house, however later he admitted that he dropped a Heli on it at home when putting it back on the shelf.

It was good to see Jock back again after a bit of an absence. Jock managed the perfect landing, in the wrong field but a great landing.

The Heli benches were pretty full, no damage to report from the Jedi boys.

Alistair and Steven Nicol paid the club a visit today. Steven treated us all to a nice display with one of his planes after which he received a lifetime ban for flying so good……how dare he!!!

One of the highlights on Sunday was Jim 'Styk' Kane and his Turbine retro Jet. Styk has had some trouble over the past few visits with the nose wheel coming off every time he landed. This time the nose wheel had been well secured along with a couple of Jim's very own modifications.

The first landing was more of an arrival. On the second flight Jim decided the time was right to test and apply the flaps. On setting the flaps to half, the plane hardly ballooned, now it was a perfect opportunity to try a landing with them on. With the flaps still set at half, the Retro Jet had one of its best landings to date, this filled Jim with a ton of confidence and I know everyone was glad to see him carry out the whole routine from start to finish on his own……well done sir.

Ally Grant made his first appearance of the year, sober and with no black eyes. Ally's Beaver was given an engine run (CRRC 26) before giving it a good flight.

Over the next week (perhaps two) we hope that the weather gods look down on us with some good weather, this will get the runway dried out so we can get a cut on it and start getting it up to the standard that it should be.

Good health to you all

KEEP WELL The Committee