Newsletter

No.38: June 2024

Welcome to your Newsletter

In this edition: entertaining and informative articles from members, a larger than usual update from the flying field for May and events coming up for 2024.

Please let me know of anything you would like to see included in forthcoming newsletters. All feedback and contributions are welcomed. Remember to play your part and if anything, interesting (or even better, funny) happens whilst you are visiting the flying field then drop me an email (with pictures) for the Activities at the Field section.

Members are particularly interested in how you got into the hobby, what planes you have owned, technical expertise etc...

Send any newsletter related matters and articles to me at: neilgrayson@sky.com

Maintenance Days

Many thanks to everyone who turned up at the field to help with the maintenance days 11th and 12th May. Both days were well attended with some members helping out both days and some only able to attend for one of the two days. The weather was warm and sunny on the Saturday with the Sunday starting off a bit cool but improving as the day went on. Richard Blanski turned up in shorts which helped the sun appear later in the day. There was a bit of a problem getting the generator going to supply the power tools and the soup kettle but repairs are now ongoing to get it serviceable again. I hope that everyone who stayed around for the soup enjoyed it.

Most jobs were completed with just the back of the maintenance container to scrape and paint at a later date. The right side of the pilot box is now fully repaired with the left hand section being replaced completely and now there is even a shelf where you can rest your transmitter or coffee.

Mike Hill is now in the process of constructing new helicopter pilot boxes and he has completed one already.

Open Days

The provisional Open Days on 10th & 11th August won't be going ahead this year due to lack of interest. Timing may not have been ideal as The Big Scottish Fly-in is being held the week before at Glenrothes and Balbedie have a summer fly-in on 10th August so an Open Day at our club may not have attracted many attendees anyway. I intend helping out at Glenrothes so I may pick up tips on how to organise an event for next year. As the dates are freed up, I will now be going to Elvington instead.

The Big Scottish Fly-in

I attended a Zoom meeting on the evening of Wednesday 22nd May to get some information about The Big Scottish Fly-in at Glenrothes.

The BMFA and SAA are coming together to hold a Fly-In at Glenrothes over the weekend of 3rd - 5th August.

Highlights include:

- Demonstration flights (jets and Aerobatics)
- FPV Drone competition on both Saturday and Sunday
- Bring & Buy tables

It is not a BMFA meet or an SAA meet, it's an aeromodeller meeting. Both organisations are working together (yes really) to make this a success and hopefully a yearly thing. It is all about being a social event, planes in the air, and all of us having a bit of a laugh. Brian Barclay (Chairman of Glenrothes) emailed to say that helicopters are most welcome and he hoped that some KRMFC members would turn up to demonstrate helicopter flying.

Paul Furze (BMFA Scotland Events Co-ordinator) is running the organisation and logistics and is looking for volunteers to help with the event.

Volunteers are required for the following:

- Setup at 18:00 on Friday 2nd August
- Pack away at 17:15 on Monday 5th August
- Flight Line directors
- Traffic Stewards
- Barbeque Operators
- Misc jobs

The following equipment is also required and it is hoped that clubs could loan the equipment for the weekend:

- Folding Tables
- Folding Chairs
- Marquee
- Hi-vis jackets
- Plastic fencing
- Re-bars (fence posts)
- Misc items

Can KRMFC supply any of this equipment? We do have stuff we use at the Waterplanes event at Loch Leven.

If anyone wants to volunteer for this event either email me or contact Paul Furze directly at paul.furze@angusmodelflying.com. Further information will be provided closer to the date.

Training

If members want to request any type of training or to work towards their Bronze/A awards then contact the committee so that this can be organised to suit individual needs.

Clubs WhatsApp Group

If you want to be added to the clubs WhatsApp group please email me your mobile telephone number and I will get the Administrator, Douglas Fulton to add you to the group. It is used for general chat, advice and to coordinate visits to the flying field.

Upcoming Events in Scotland

2024 Waterplane Event Dates - Updated 23/05/2024

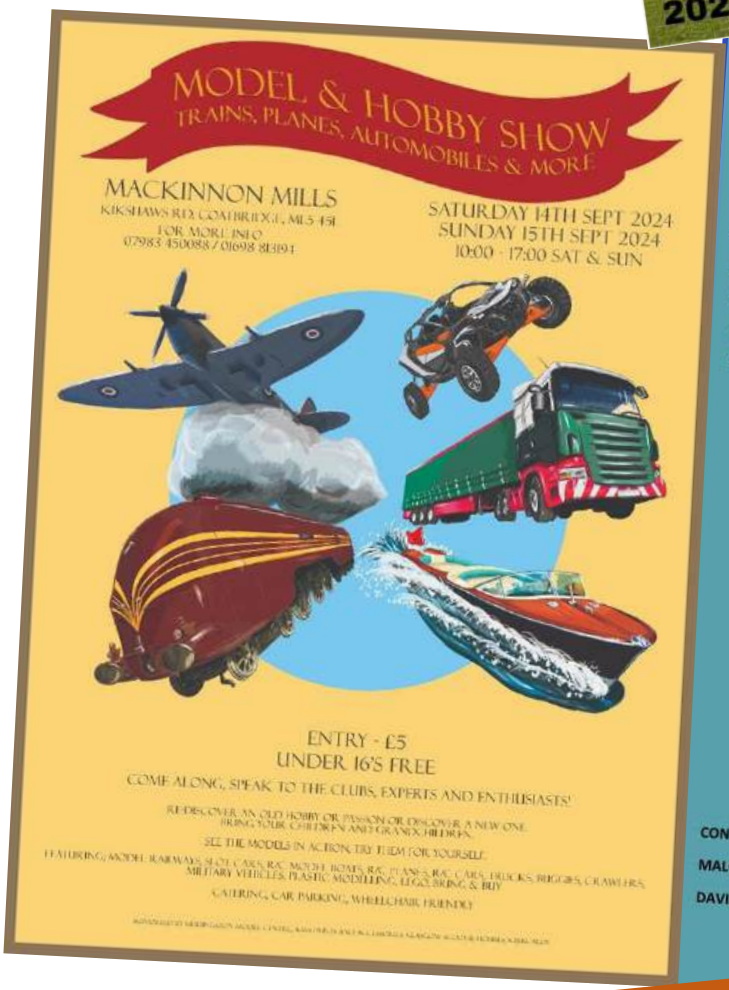
Mill Dam
1st September

Kilbirnie
28th & 29th September

Loch Earn
23th & 24th June
17th & 18th August
19th & 20th October

Loch Leven
24th & 25th August

Loch Insh
14th & 15th September



The Big Scottish Fly-in - Glenrothes
A joint event by the BMFA and SAA

3rd – 5th August 2024 (see above).

Girocopter - *by Ian McLuckie.*

My learned 'better half 'said that my spelling of 'Giro' was wrong. I said *"no it's no', it's Spanish, it was a Spaniard who invented it in 1923, giving us the forerunner to the helicopter……."*.

It took a 'special' kind of engineer to go down this path. It is difficult to see what he was thinking. He must have had some strange light bulb moment when everyone else's light bulb was out. Our young modern generation might say –'what was he on?' Apparently, he wanted to fly slowly when everybody else was trying to fly faster, and he wanted to land without a runway when everybody else wanted to build runways. Even the guys (Icarus and his father) with their wings made of feathers flying near the sun melting the wax, had more raw logic…but maybe not.

Essentially, he took a standard aeroplane, removed the wing (it's the biplane that has two wings, - granny suck eggs again), strapped a small plate underneath the centre and bolted it back onto the aeroplane on top of a short stick. He then birled* the wing round and charged down the runway.

Did it fly? No, of course not. It would be kind to say that his expectations exceed the laws of physics by an infinite margin. However, had he split the wing into two equal parts with one leading edge facing forward and the other to the rear (another thinking out of the box moment) and birled it round, it might have lifted off the ground, a bit.

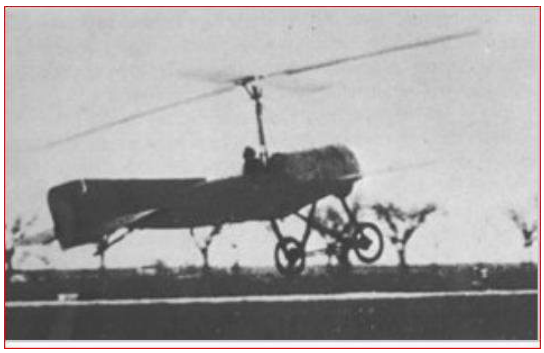


Figure 1 de la Cierva's successful flight

Juan de la Cierva y Codorníu, was a self-taught aeronautical engineer from Madrid. His famous accomplishment was the invention in 1920 of a rotorcraft called Autogiro, a single-rotor type of aircraft that came to be known as an Autogyro or Gyrocopter. In 1923, after years of experimentation, De la Cierva developed the articulated rotor, which resulted in the world's first successful flight of a stable rotary-wing aircraft. He made an outrageous idea work.

Unfortunately, he lost his life in 1936 in an unrelated aeroplane crash. He provided a great service, he was an aeronautical genius, his invention being the foundation of the helicopter. When our Club Members fly their remarkable model helicopters, and crash, De la Cierva was there before them - a hundred years ago, so they should not feel too bad.

But, how does it work or rather why does it work? It is difficult to understand. From what I gather nature was there before us, using the sycamore seed to autogiro to the ground. Then Leonardo da Vinci had a go, according to his drawings, but didn't make the grade because he did not understand the aerofoil shape and lacked a muscle 4 stroke piston engine. However, our predecessors in the dark Middle Ages had noticed that their windmills with canvas sails, if tilted a bit, tended to lift off the ground, so they had to 'nail' their machines down. They should have mentioned it to Leonardo!

Figure 2 modern Gyrocopter

It all seems to be down to the shape of the blade or aerofoil. They say that if you take a full-size glider and hold it in still air then drop it, it will not fall vertically, it will eventually move forward because of the wing shape. So, as the air passes from below up over the aerofoil it provides forward movement even with a flat-bottomed wing. A gyrocopter blade is flat- bottomed so it too will move forward, but it is fixed at one end so it can only move in a circle. As it turns out, being an aerofoil, it will create lift because that's what aerofoils do. Apparently, this also applies to the 'retreating blade(s)', i.e. a two bladed machine has one blade advancing and one retreating.

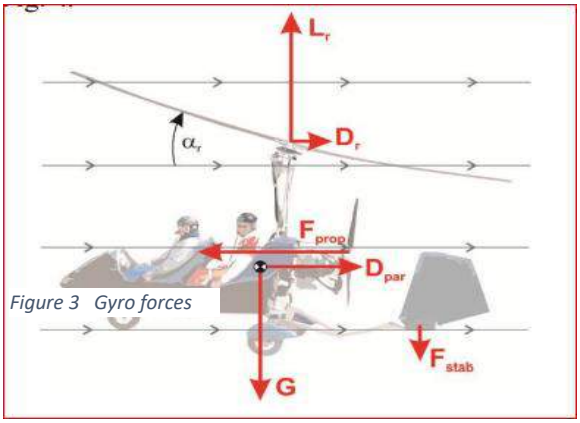


Figure 3 Gyro forces

That is a bit simplistic, the reality is hard to grasp and complex (see Fig 3); we will just have to run with it for now.

In practice they say that the required lifting force is only available when the blade speed exceeds the forward speed of the machine. To work that out you need lots of vector calculations keeping in mind that the speed of the air over the blade varies along the length of the blade. The idea that the centre of gravity **might** be in mid-air also exercises the mind.

Note variable angle 'α' which is critical for flight control. There is also a thing called the '*hang angle* - not 'α'. It only came into fashion in the 1990s: it's another can of worms. It involves suspending the whole craft by the top of the mast from a hook and seeing how much the nose hangs down; they use this to test for balance and C of G. It seems to work; they look for a few degrees up to maybe 10 degrees depending on the design. Yes, the pilot needs to sit in the cockpit…hoping the rope does not break!!

To study this further you will need to take time out and attend Cranfield College of Aeronautics for 3 years and study vector analysis. I just don't have time… and Neil needs an article for his newsletter by the end of the month, so that's the best we can do.

If the motor on the gyrocopter fails then the plane will slowly fall to the ground with an element of forward movement. I see that a helicopter does the same on engine failure. It struck me that if a helicopter had a small reserve engine with a folding propellor sticking out the back then, in an emergency, with autorotation and a pushing prop, that would make it a gyrocopter. You heard it here first. All commercial helicopters should have a small standby engine and prop at the rear of the fuselage so that on total main engine failure, controlled descent would be more manageable just like a gyrocopter. That is either brilliant or rubbish, you choose, because I know nothing about helicopters except that they have the flying characteristics of a brick, and need great skill to fly. Just a bit fun.

In 1936 the Gyrodyne was invented, a type of VTOL aircraft with a helicopter rotor-like system that was driven by its engine for take-off and landing only, and includes one or more conventional propellers to provide forward thrust during cruising flight. During forward flight the rotor is unpowered and free-spinning just like an Autogyro. Lift is provided by a combination of the rotor and conventional wings.

Many other 'gyro types' were invented but have since disappeared.


Fairey FB-1 Gyrodyne

I was inspired by Chas M's (Charles) superb demonstrations of his home-built model Gyrocopters which he flies from time to time at the Club. So, I built one with 3 blades each of 500mm. Charles did the honours with a successful maiden flight. It's my turn next, I'll let you know how I get on… is a rebuild in the offing?

***** for 'birled' read 'rotated'.

A message from Stuart Houston...

"It is a hobby of mine to collect and restore old engines. If anyone is looking to buy or sell engines or to have engines overhauled (bearings changed etc) then I am happy to discuss the work required. I am also prepared to make them offers for buying or selling old unwanted engines." Stuart's Email Address is: flightsoffancy356@gmail.com

Building a Foam Board Plane – *by Kevin Scott*

Introduction

When I was a teenager in the 70s, I always liked the idea of being a hippy (even though I was a little late to the scene!) I think it was partly driven by the music that was associated with it at the time (people like Jimi Hendrix and Creedence Clearwater Revival) and the movies like Woodstock. These were the main drivers, considerations like free love didn't feature in my thoughts at all, honest. As time passed however, my aspirations changed and my hippie thoughts were banished to the past.

You can imagine my surprise therefore when I came across the early Experimental Airlines videos on YouTube. Here was a man (Ed) who named his planes things like the Ansley Peace Drone, named after his daughter and because he wants peace in the world. I thought here is a man who embodies my dormant counterculture itch, and I decided I needed to build one of his planes.

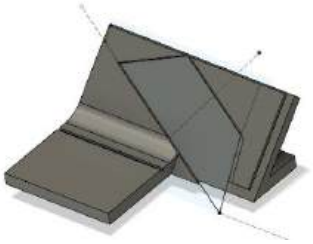
His planes are based on foam board, covered with coloured packing tape. In the rest of this article, I will describe in more detail how my transcendental journey progressed!

Initial Work

The foamboard that Experimental Airlines (EA) use is from Dollar Tree. This is a US company, the foamboard is still available to this day and comes in 20 x 30-inch sheets (50.8cm x 76.2cm). Needless to say, it isn't available in the UK so I went with A1 size (59.4cm x 84.1cm) foamboard from Hobbycraft.

While you might think that one paper covered foam board is like any other (or maybe you already know better than I did!), that turned out not to be the case. The EA approach involved a lot of bending of foamboard, and to allow that to happen you are meant to tear the paper off the inside of the corner you are going to fold.

As you might have guessed by now, Hobbycraft had other ideas. Their paper stuck to the foam more than Tim Knowles sticks to the runway and couldn't be budged. The main suggestion on online forums was to use a heat gun – that worked but distorted the foam underneath – no good!



So, bending wasn't going to be an option. The approach I decided to take was to leave all of the paper on and cut a mitre at the back of the foam board where I wanted to make a bend. I even 3D printed a tool to do it. This worked great and actually allowed for a more precise corner than the EA method, happy days were here again and my karma was on the rise!

How Big?

The next question was how big to make the plane. My inner hippie voice said trust the cosmos but instead I decided on the ISO 216 international paper standard. Given that the foam board was A1 sheet size, I let it determine the fuselage length (A1 length – 84cm) and the length of each wing (A1 width – 59cm, total wingspan 1.2 metres).

That still left some questions, how big to make the chord, and how large should the tail section parts be. Given that I had an Arising Star trainer (next project!) in my garage, and it had a 1.6 metre wingspan, I took

all of the dimensions off that and reduced them by 75%, to match the 1.2 metre wingspan I was planning for.

Given that this was meant to be a trainer, I was also looking for a wing cube loading of around 7 or 8. I created a spreadsheet and entered the expected mass of each of the components and it did end up around 7.7 so we were good to go. If you want to see the spreadsheet or modify it for your own purposes you can get it at https://bit.ly/wcl-calcs .

Putting It Together

Adding the coloured tape

The attached picture shows how the coloured packing tape was added to the foam board. The board was fixed down to a flat surface then the tape was drawn across it, using an old credit card to flatten it out.


Covering With The Tape

At this stage we are just trying to lay down an overall colour, we will cut it out later. In deference to Ed and hippies everywhere, the colours were chosen to be as psychedelic as possible, but within the limitations of the world of packing tape colours!

Fuselage

The fuselage had the mitre corners added on the back and then was folded up and formers added as necessary.

Note it does not have an underside at this point. I wanted to have the top surface as flat as possible to allow the best alignment between the wing and tail section. As a result, I wanted all access to be from the underside.


Flat Form

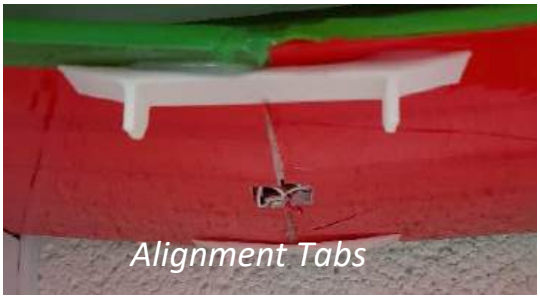

Formed Into Shape

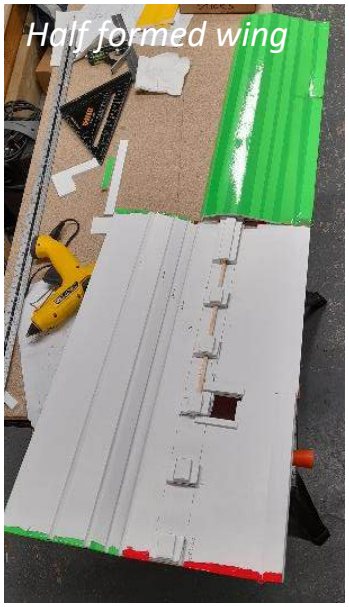

Internal Threaded Inserts

In the tail section of the fuselage, I added a 3D printed bracket inside the fuselage. This has brass inserts inside it which will allow the tailplane to be mounted from the outside, and also ensure a good alignment to the longitudinal line.

Wing

Here we see a partially constructed wing. The top of the picture shows the starboard wing which has been folded over, the bottom of the picture shows the internals of the port wing, with the top of the aerofoil still to be folded over. There is a plywood bracer in the middle part of the wing to introduce strength and also to create the dihedral angle.


Alignment Tabs

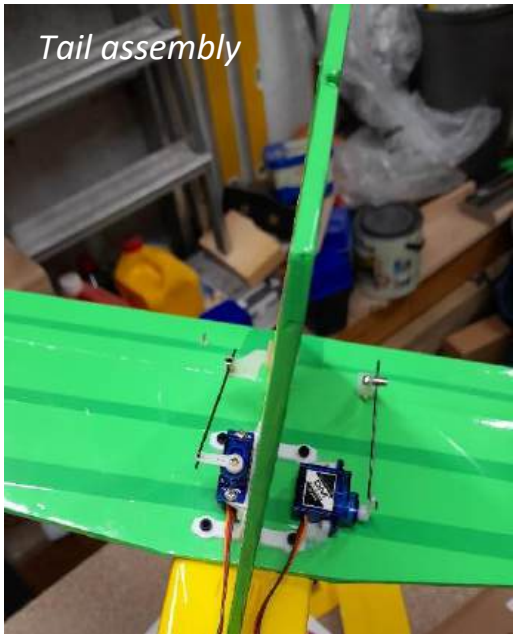

Half formed wing

The aileron was cut out in the wing after it was assembled. Pictures of the Apprentice were used to get an idea on what a reasonable aileron size is. The Arising Star that I had been using as my reference up to this point let me down here as its aileron extended over the whole trailing edge and there was no way the foam board was going to be up for that!

The underside of the wing had 3D printed brackets added. This was done for a couple of reasons. The first of those was to flatten out the dihedral angle so that it would align correctly on the fuselage tube. The second was to allow a breakable element should the wing be in an accident. The top of the wing was to be secured using rubber bands.

Tail Section

Tail section was created from a horizontal and vertical part with 3D printed brackets ensuring everything is in alignment. The bolts through the horizontal section go into the brass inserts mentioned previously in the fuselage section.


Tail assembly

Note that the rudder and elevator are not separate parts but are formed from a mitre cut in the same piece of foam board.

The servos were mounted onto their own 3D printed parts, rather than gluing them directly onto the tail section. This allows them to be easily changed should something go wrong in the future.

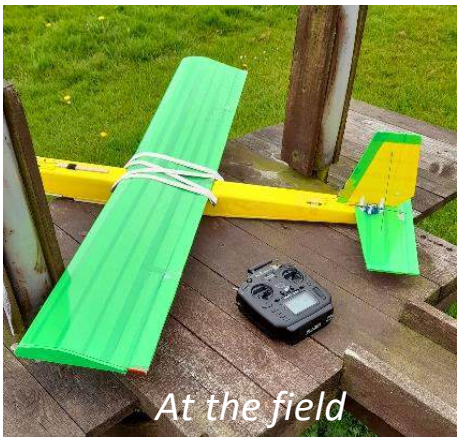
Flight Readiness

I used the ecalc C of G calculator to work out where the C of G should be. It pretty well worked out at the usual rule of thumb – a third of the way back from the leading edge. If you want to see the calculations in more detail, have a look at https://bit.ly/CoG-calcs .

I also used the ecalc motor calculator to check the prop size and motor I was using were up to the job. It said it would draw around 18 Amps maximum and my wattmeter said it was around 17.5 Amps so I would say that was pretty close. Again, if you want to see the calculations have a look at https://bit.ly/prop-calcs .

Maiden Flight

Richard Blanski took the plane up for its initial flight on Sunday 5th May and all went well. He suggested bringing the C of G forward a bit and we added 60 grams of weight to the front for the second flight which was equally successful.


At the field

I look forward to flying it myself once we have a buddy system established, by the time you read this that should be sorted.

I also plan to add an undercarriage to avoid any further hand launching, all that walking doesn't give me a positive vibe, man.

Final Thoughts

This was an easy way to make a plane once I knew what I was doing, it took around 10 hours to put it together and I could definitely build another one in a bit less time than that. It is far from sophisticated (a bit like myself!) but should serve my purposes well as a low cost and durable trainer.

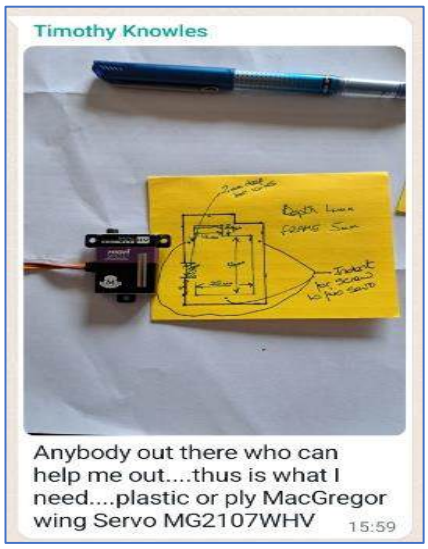
The cost of the foam board used was around £6 and the cost of the coloured tape another £2. The 3D printed parts were around another £1 in terms of plastic and brass inserts. The control surface horns and connections another £2.

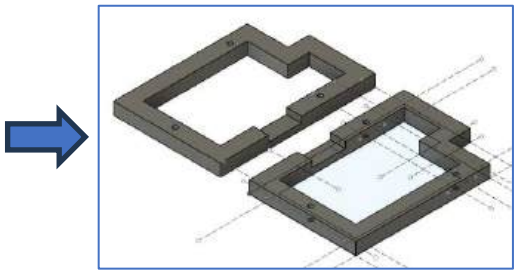
Servos, ESC, motor and receiver were all donated from a previous plane and can be used again on any future planes, nothing was permanently glued in.

Installing New Servos into an Enigma Glider *by Tim Knowles*

I put out a request on the WhatsApp group asking for help to mount these thin MacGregor MG2107WHV servos. Kevin Scott responded and offered to 3D print it. He copied the design into Fusion 360 (now incidentally known as just Fusion) – not to be confused with the Ford Fusion however, if you are old enough to remember that!

The design was easily translated from drawing to sketch to printed part.

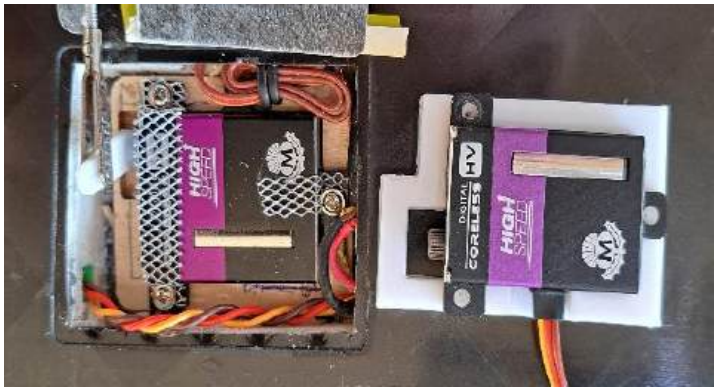


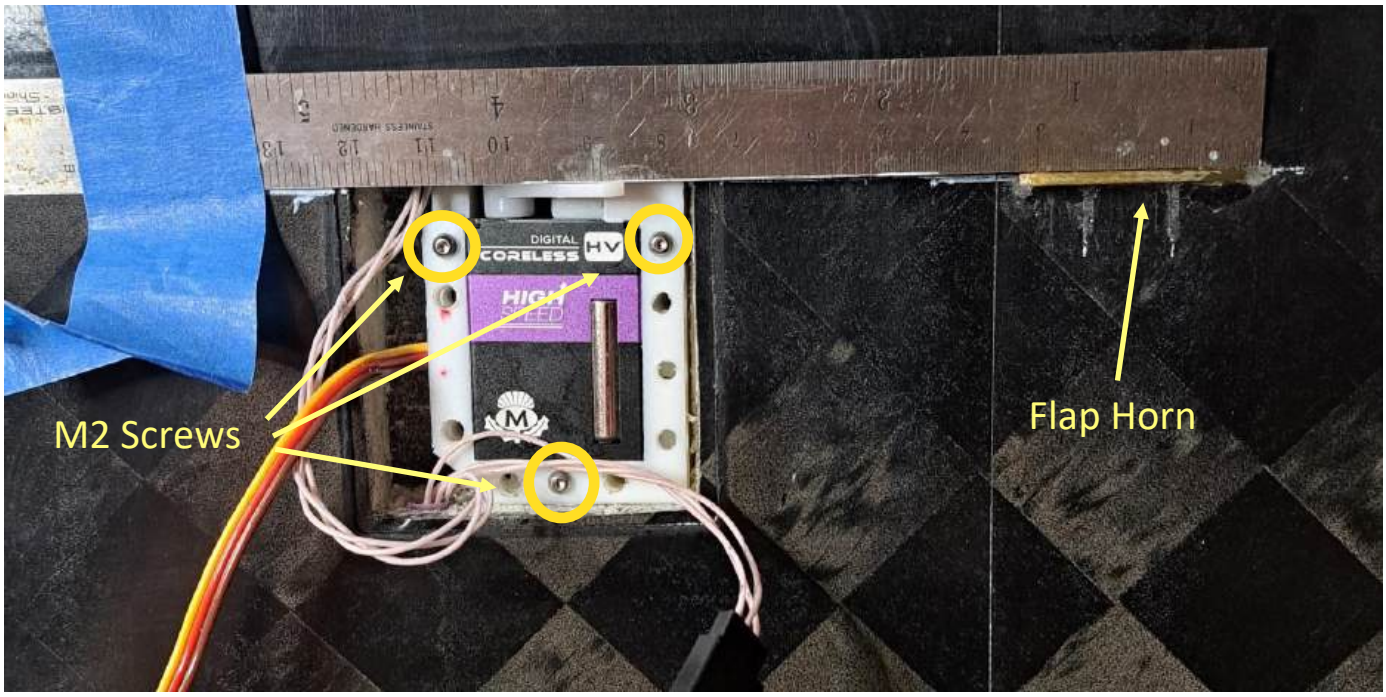


I then fitted them to my new glider which has very severe requirements on the fit. Some examples of that are:

- The flap trailing edge, which over only a 5mm movement changes the wing profile from least drag i.e. highest speed, to the highest drag and highest lift position for working thermals. There is also a sweet spot between the two for cruising.
- My glider has over 6 flying modes and the flaps are set, and move in all of them.

Needless to say, given the above requirements, a precise fit is very important. The photographs below show the original plywood fit and the new 3D printed part in place. I can confirm it is working well!





Above is the servo screwed into the new mount which aligns the movement of the servo arm with the flap horn.

Kevin's design has enclosed M2 nuts in the lower half of the servo mount and a previous check on the length of the screw that locks the top half of the servo mount over the servo's mounting lugs prevents perforation of the wing surface.

The holes in the mount were drilled to lighten the mount and to allow a greater surface area of the lower servo mount to be super glued to the wing surface.

You can see the servo and flap in operation at https://youtu.be/fj0VDpzPY2Y

Introduction to Express LRS – *by Kevin Scott (Part 1)*

If you are looking to buy a Radiomaster or Jumper transmitter, one of the options that you will come across is Express LRS (ELRS for short).

Radiomaster TX16S

These radios also come with a graphical interface that uses EdgeTx (previously called OpenTx), but the two are separate; a transmitter can use EdgeTX but not use the ELRS protocol for example.

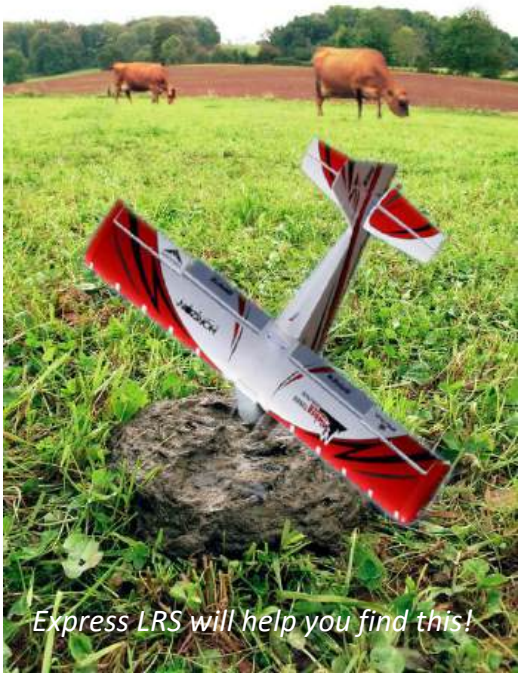
In this series of articles, I will start by covering what Express LRS is, its benefits and drawbacks and then go on to cover EdgeTx in future issues. I will conclude with a review of some of the equipment I own that uses this tech.

The Technology

Looking Chirpy Today...

Before discussing ELRS, we should start with LoRa (from "Long Range") which it is based on. LoRa was patented by a French company in 2014 and they were then acquired by another company called SemTech (we will come back to this in the second article!). Without going into too many details, LoRa uses a chirp (think budgie!) waveform which is a frequency that increases over time. It also uses spread spectrum but there is nothing new with that, all RC manufacturers like Spektrum already use that.

Because of this particular encoding scheme, Lora can use low power and work over very long distances and as a result is widely used in the Internet of Things which can be thought of as Wi-Fi, but operating over tens of kilometres. It is used to track cattle with GPS ear tags, talk to smart parking meters, or to talk to sensors on fields to see if crops are sufficiently watered. These applications all use frequencies in the range of 900Mhz.


Express LRS will help you find this!

Some of you might be thinking, well if it can track cows and where they are, can it track where my plane has come down? The answer is yes, as long as you have a cheap GPS module (£12) on your plane as well, more on that later.

ELRS is just a defined set of messages that run on top of the LoRa radio signals, and it also uses the 2.4GHz frequency that we are all familiar with.

Range

You might ask what sort of range are we talking about. The maximum range that has been achieved with a fixed wing model running ELRS is just over 40km, with the Tx power set to 25mW, which is a good bit below the EU limit of 100mW. This would have been under best case conditions however, but it can be seen that very long range is possible.

By way of comparison, Spektrum state for their land based DSMR tech that it can achieve 915 metres under ideal conditions, but it isn't clear whether this is with the EU 100mW limitation in place or not. They don't state a range for the air based DSMX. RadioLink (admittedly a more budget radio) state up to 800 metres for their air-based system.

I did a small ground-based experiment with my ELRS setup at the flying field and walked up the drive and over the A977 and partially down the road opposite which was approximately 350 metres. The Tx was using 10mW power (it dynamically increases it as needed) and the signal strength at the Rx was -83dBm.

TX12 Telemetry


Well that's my 10,000 steps for the day!

Without going into all of the maths (because nobody other than me really cares, right!) that means the ground-based range could be up to 8km.

All of this is maybe interesting from a geek's (e.g. my) point of view, but for the flying we do it is to a large extent irrelevant as all flying is line of site, so is only required to operate up to say 400 metres away but it is nice to know that additional range can be available if needed.

Latency

One thing the drone flyers get very excited about is latency, which is the time it takes for information to be transferred from one place to another (come to think of it, they all talk fast as well!). They don't want any delay between starting to move a control stick and their drone reacting to it. With that in mind ELRS offers update rates all the way up to 1000 times a second. You can also trade off update rates for greater range (it's a LoRa thing!) and can reduce the update rates all the way down to 50 times a second.

For our type of flying, these faster update rates are really not required. The typical person has a reaction time of 200ms, so if you are landing your plane and it suddenly catches a gust and veers to one side, by the time you react and the servo moves you are easily going to be looking at a quarter of a second at least.

Channels

All ELRS receivers and transmitters are 16 channel capable. Receivers can be bought in the traditional servo output-based configuration or with a serial output. The Radiomaster ER8G for gliders is shown below (8 channels and comes with or without a vario, cost £39.99 for the vario version) along with the Happymodel EPW6 (cost £11.85, but you need to get the soldering iron out and solder on some connectors yourself!) and finally with the Matek R24-V 7 channel Rx (some soldering also required, cost is £20.30).

ERG8

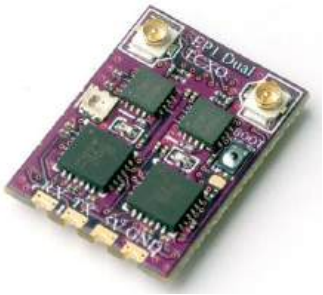

EPW6


R24-V

Note that receivers are available from a number of manufacturers, there is no lock-in forcing you to buy a receiver from the supplier you got your transmitter from (Spektrum – I am looking at you!).

However, these receivers can also be bought with no servo outputs but instead they come with a transmit (Tx) and receive (Rx) pin. These are traditionally for connection to a flight controller and they output messages in a format called Crossfire (or CRSF for short) but they can also be connected to expansion boards that provide the servo outputs again. These therefore give expansion opportunities, you can fly without a flight controller but then add one later if you wish.

Some examples are shown below. Happymodel EP1 Dual TCXO (£18.40) and Happymodel EP2 TCXO (£11.90) with a ceramic antenna (good to 2km apparently, but don't blame me if it isn't!). The third item is a CRSF to PWM convertor Matek CRSF-PWM-10 which has a vario on it as well, cost £8.45)



EP1 Dual TCXO

EP2 TCXO

CRSF-PWM-10

The prices shown here are from HobbyRC a UK company specialising in FPV drones, but they quite frequently sell out. They are available from other companies as well, including Banggood and AliExpress but expect to pay maybe 30% more than the prices I have listed earlier.

In part 2 of this article, we will cover crossfire in more details along with why you might be interested in a flight controller or connecting a GPS module. We will also cover what open source is and what GitHub is - note that is not a social gathering venue for grumpy old people! We will also cover how you bind a Tx and Rx (not the way you are used to, get ready to take your mobile phone out!) and how the firmware is updated (not as scary as it sounds!).

Activity at the Field – April

Saturday 20th April

It was the best weather so far this year with light winds and occasionally sunny. There were some cross winds at times but it kept picking up and then dying down.

Neil Grayson, Billy Hatley, Charles Malcolm, Ian McLuckie, Tom & Euan Ellis and Douglas Fulton were at the fields so it was relatively busy. Kevin Scott called down briefly with his foam board plane. Due to the Velcro pulling out from the battery harness he didn't fly and decided to err on the side of caution.

Euan had brought his FMS Maule. Neil flew it but had difficulty to controlling it in the air as the ailerons didn't seem to have much authority. He landed on the wrong side of the fence with little damage but the rudder servo seemed to be slipping. Euan flew Neil's Eflite Apprentice with no problems but handed it back for landing.

Neil's SLEC Funfly had a flat receiver battery which wouldn't charge even with Billy's battery and charger so he took it home unflown and will change the battery.

Billy had two new planes, which he brought down for the first time since last year. The one he flew, a large high winger with a 33cc petrol engine in Billy's *words "All went well, power was amazing, lifted off on quarter throttle, a little twitchy on elevator but once trimmed it was fine, didn't take it over half throttle due to its speed, will need to get engine tick over speed down a bit as I had to cut the engine at end of the runway. I didn't fly it again due to a breeze from the north"*

Ian didn't fly his gyrocopter as couldn't get the buddy system working with Charles. Ian flew his Timber but had a bad crash with the front end coming off. Easily repairable.

Tuesday 23rd April

The Scottish Rocketry Challenge event took place today with excellent weather and a great turnout. The goal of the competition was to see how high a rocket could be launched and then have gentle enough landing to not break the raw egg which is used as cargo. Three schools took place in the event with the winning team attending the UK National Final at Buckminster on 27th June.

A few members of the club appeared to see how the rocketry was progressing and chat to the participants. Neil Grayson turned up with two planes totally forgetting that it was the rocketry day so he got on with some maintenance instead!

Activity at the Field – May

Saturday 11th May

It was the first day of the maintenance weekend and a lot of members turned up to make the most of the warm and sunny weather. For some reason Tim Knowles was wearing a toga, not realising perhaps that the fancy dress event is later in the year.

Tim in full toga mode

The maintenance container was sanded down and 3 sides painted but it was felt that the rear of the container need washing down and cleaning more as it is covered in moss and growth. Also, the paint ran out. Neil Grayson and Ian McLuckie started painting the starting benches with Ian McLuckie completing all of them by the end of the day. Paul Wasik dismantled the left-hand main pilot box and strengthened the right-hand box which was in quite good condition.

Kevin Scott took home 6 posts and fitted rebars to them for securing the posts in the ground. He was forced to do it at home as the generator didn't seem to want to work and a grinder was required. Mike Hill did get the generator working at the end of the day after finding an issue with a blockage in the carburettor.

Sunday 12th May

It was the second day of the maintenance weekend. Once again there was a good turnout. Richard Blanski turned up in his shorts and instantly regretted it as it was overcast and quite cool compared to Saturday's weather. He needn't have worried however, because by mid-morning the sun appeared and it turned very warm.

Richard Blanski, Bob Lemm, Paul Wasik and Neil Grayson set to building the replacement pilot box. Much sawing, hammering and screwing of screws took place with Richard ensuring that wood was sawn straight and that the correct screwdriver size was used. Kevin Scott's rebars inserted into the posts worked extremely well but won't be easy to lift out, however with the wood sitting above ground it should help stop any rotting of the posts.

Pilot box being constructed

Neil Gourlay put together the signs to alert the dog walkers of our flight operations over the track leading to the dog park. Unfortunately, one of them ended upside down as while he was doing the job he had three members supervising. The signs are now in position (both the right way up!).

Neil and his signs

The remaining members were kept busy painting the helicopter bench, the transmitter hut and tidying up the overgrown grass.

Painting in progress

Neil Grayson attempted to start the generator to heat the soup up for a lunchtime break but on the first pull of the cord it came off in his hand. It was eventually started after advice from Billy Wilkie who will attempt to get the parts to repair it.

There was also some flying taking place today with Anna taking a break from painting to have a quick flight with her electric foam model. Tom flew his Cambrian Akrostar but it came down in a few bits after a heavy landing in a distant field.

Tom with his crashed Akrostar

Billy Wilkie also had a couple of successful flights with his large electric aerobatic biplane but he is still a little nervous of trying to complete any advanced manoeuvres.

Wednesday 15th May

Another warm sunny day with Neil Grayson and Paul Wasik completing the main pilot box by fitting the top shelving and giving it a final paint. Tim was also there getting tips and advice on glider flying from guest Ron Russell who is a qualified SAA examiner. Tim was also flying his foamie Timber Evolution as he wants to take his powered bronze award soon.

Friday 17th May

Mike completed the first of three helicopter pilot boxes. These are designed to be free standing so that they can be moved for grass cutting.

Saturday 18th May

Another warm sunny day with light winds. Mike Hill, Billy Hatley, Billy Wilkie, Neil Grayson and Kevin Scott.

Mike Hill was at the field to maiden his PB Models Skydancer which featured in April's newsletter. After a couple of aborted take-off runs due to its tendency to nose over, it finally got airborne. He completed a couple of circuits but it seemed very twitchy in the air. Eventually it came down in a puff of dust some distance away in the east field and everyone feared the worse! After a long walk it was discovered sitting on its undercarriage relatively undamaged.

Billy Hatley had some great flights with his Pilot trainer which is surprisingly aerobatic considering its size. The 33cc petrol engine gives it more than enough power. He had fitted pipes to the exhaust to see if he could reduce the noise of the engine and it did seem change the sound to a deeper bass. Billy Wilkie was also flying his large aerobatic biplane again.

After an improvement in the weather, Neil attempted to fly his ASW-28 glider (originally belonging to George Robertson), but after a smooth take-off he couldn't gain enough height to alter the trim as it just circled to the right. Eventually it came down in the rough by the west stile with just a broken clip on the canopy. Some adjustment is required before the next flight.

Kevin and Bill had a buddy flight with Bill's Tundra which unfortunately didn't go as planned as Bill failed to take back control quickly enough after Kevin lost control and it came down in the west field rather heavily. Kevin was not very happy but Bill shrugged and said 'these things happen'. The Tundra is now ready to go again. It is amazing what you can do with some hot glue.

Sunday 19th May

Another decent flying day, cloudy with no sun and almost no wind. Neil Gourlay, Tom Roberts, Charles Malcolm, Ian McLuckie, Douglas Fulton, Rowan and his grandfather, Anna and her dad John, Billy Wilkie and potential new member Mark and dad Brian were all in attendance at different stages of the day so a very good turnout.

Charles was first at the field with Ian arriving shortly after. Ian and Chales flew his gyro successfully on a buddy system and Ian's gyro flew again but crashed due to an electric motor failure.

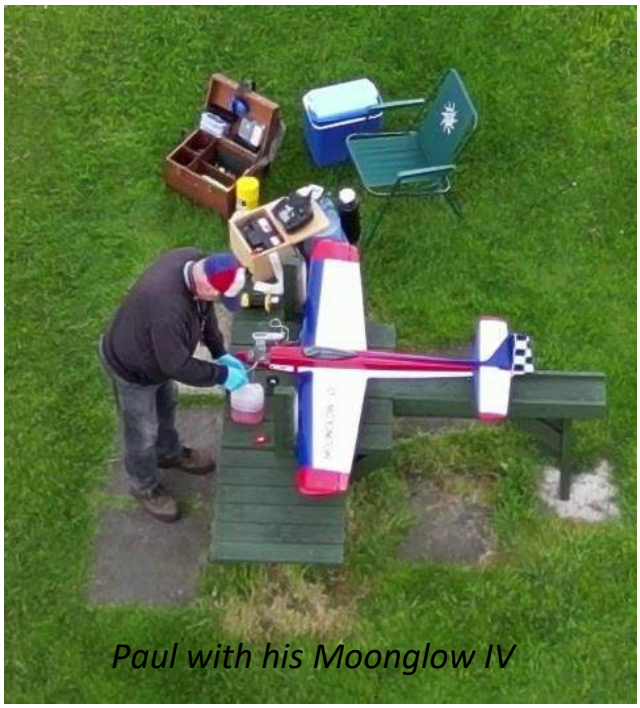
Mike returned Tom's Cambrian Akrostar to him after repairing it after the previous Sunday's crash then after setting it up he flew it successfully later in the day. Anna did a good aerobatic display with her electric foam plane.

Two or three visitors arrived showing an interest in joining the club. Douglas flew a good number of times successfully. Ian also flew his Bixler until he got a servo failure with stripped gear wheels. Several helicopters were also flown successfully.

Tuesday 21st May

Overcast but warm day with light winds with just a few members of the club present. Tim and Kevin flew Tim's small foamie glider a couple of times using a buddy system. Paul Wasik had a lot of flights with his Moonglow IV designed by Mike Birch in the late 1960s. He has completely rebuilt the fuselage from scratch due to a disastrous crash last year but was able to use the original tailplane. On his final landing he discovered that there were two servo screws rattling about in the fuselage! On investigation it turned out that they had worked loose from the aileron servo so he will have to find another way of fixing the servos to the tray.

Tim and Kevin in flying pose



Paul with his Moonglow IV

Neil Grayson was flying his electric Ruckus and had three flights and then ran out of batteries so, as he didn't have his charger with him, he flew his IC Fun Fly instead and had a couple of flights with his drone. A great day's flying and no bin bags required as everything went home in one piece.

Saturday 25th May

Tom Roberts was down the field early today and had four successful flights of his foamy Cambrian Akrostar which had been repaired by Mike Hill. Many thanks to Mike as it flies great now. Tom left just before 11am and just missed Paul.

Paul Wasik turned up at the field about 11am with no one else around and had 6 flights with his repaired Moonglow. Two minutes into the second flight the engine cut but he managed to get it back to the field and thought it had landed in the long grass near the helicopter boxes. When he went to retrieve it however, he discovered it had actually landed in the long grass on the other side of the drainage ditch, about 12 inches above the level of the water, so a lucky landing. There was no damage but the pressure tube had detached itself from the silencer. After fitting a spring fuel pipe clip that he found in his box he had a further four successful flights and had a great time. The wind increased around 2pm and he left just before 5pm missing Neil Grayson by a few minutes who had come down to cut the grass on the runway, around the pilot boxes and the benches.

Wednesday 29th May

The weather was very flyable and pleasant with light winds and sunny skies up to about 13:30ish then it all clouded over and the rain started. Tim Knowles, Charles Malcolm, Jim Walsh, Bill McDiarmid and Douglas Fulton at the field. Tom Roberts was the first to arrive around 9:30 with 3 flights of his helicopter flown adventurously to a dog park spectator crowd.

Web Links and Shops

Some useful links below. If you can suggest any other shops or websites, please send me the details.

Al's Hobbies - https://alshobbies.co.uk/ Located in Milton Keynes. Often appears at model shows

Elite Models - www.elitemodelsonline.co.uk Located in Sittingbourne, Kent. 30 years' experience.

TJD Models - www.tjdmodels.com – Located in Dartford, Kent. Largest model shop in the South East.

Model Shop Leeds - www.modelshopleeds.co.uk/

Wheelspin Models - wheelspinmodels.co.uk. Free postage for orders over £100

Sussex Model Centre - www.sussex-model-centre.co.uk

The Vintage Model Company - www.vintagemodelcompany.com

Kings Lynn Model Shop - www.kingslynnmodelshop.co.uk

Scoonies - www.scoonie-hobbies.co.uk. Don't bother with the website. Visit the shop in Kirkcaldy.
87 St Clair St, Kirkcaldy KY1 2NW. Tel No: 01592 651792

Dens Model Supplies - www.densmodelsupplies.co.uk. Excellent for spares for vintage Cox engines.

WestonUK – www.westonuk.co.uk Good value fuel in large quantities. Over 20 Litres (4 Gallons) gives you free postage.

ACCU – www.accu.co.uk. Excellent for bolts, screws and washers. Will take requests for bespoke items.

RCM&E - RCM&E Home Page. The website of the best aeromodelling magazine. If you have a question the forum is bound to have an answer.

RC Thoughts - https://www.rc-thoughts.com/ Finnish website of Tero Salminen. Phoenix Simulator Downloads and updates.

RC World - www.rcworld.co.uk. Located in South Wales between Cardiff and Newport. Stock values on each product are displayed which reflect what are physically in stock, not held at a supplier's warehouse. Derek Grater has used and recommends.

Carbon Copy - Carbon Copy (carboncopyuk.com). Located in Stevenage. A wide selection of Carbon and Fibreglass parts. Ideal for undercarriages, cowlings and canopies.

Just Engines - https://www.justengines.co.uk/. Located in Shaftesbury, Dorset. A wide range of engines and spares. If you can't find what you want on the website send them an email or call.

SLEC Manufacturing (Sun Lane Engineer Company) - SLEC UK Ltd. A good range of accessories but also a large range of balsa and hardwoods. Also available is a laser cutting and CNC milling service.

Component Shop - Home page (componentshop.co.uk). Based in North Wales. A great range of batteries, leads and electronics.

Flight Plan Models - Flight Plan Models Online UK. Based in Tamworth. Bespoke RC Plane Accessories. I find them a little overpriced but they have interesting stuff.

4-Max – 4-Max Home. The Fixed Wing Electric Flight Specialists. They will advise you what electric motor to use when converting from IC to electric.

Here's a link to the glider field weather station data at Portmoak gliding club which is just a few miles east of our field. It gives a lot of information. ***Portmoak Weather Station***

Who's Who

KRMFC current committee members are:

Tom Wilson – Chairman

Neil Gourlay – Deputy Chairman

Neil Grayson – Secretary

Mike Hill – Treasurer

Bill McDiarmid – Committee Member

Jim Walsh – Committee Member

Bob Gadd – Honorary Committee Member

Currently the membership of KRMFC is 45

If you intend rejoining KRMFC this coming year then membership fees are now overdue. BMFA/SAA membership also needs renewing.

A membership application form can be found here.

Contacting the Committee

An email address has been created for members to contact the Committee about Club matters. If you have any questions, suggestions or general comments, then please send them to the following email address:

KRMFCcommittee@gmail.com