Kapiti Aeromodellers' Club Update

August 2017

Photo sent by John Von...not sure of the original source.

Kapiti airport

Royal Visit of 1953-54 ... (Excerpt from the Queen's itinerary)

Wellington to Christchurch (16-22 January 1954)

Saturday 16 January

A.M. By car Wellington to Paraparaumu airport. By plane to RNZAF Station, Woodbourne, and car to Blenheim - public welcome.

P.M. By car to Woodbourne and plane to Nelson - civic reception.

I'm sure some of you will recall... let me know if you can spot your car !

From the Prez

Another month another newsletter it seems.
As they say, where did the time go?
The best thing about this month and the cold snap we have experienced, is that it brings us closer to 'hopefully' warmer and better flying conditions.
There have been a few great days interspersed amongst the lousy days. Sadly, not as many as we would like. It never fails to amaze me that you can get a brilliant flying day and have low turnout and another day not so good and the strip is packed.
The club is in good heart and we seem to be getting a few out we haven't seen for a while.

Club night July was fantastic and Andrew Farrow will talk about his Tempest build for the August club night.

Don and I have been through the new wings badge stuff on the MFNZ website. The navigation on the MFNZ website for the wings badge is great and we will not be downloading things separately. It's best to go onto their website and get what you need.
However, the Instructors and Pupils manuals are not there at this time and should be sourced from our website.
These plus the questions needing to be asked are under review as we speak. (There is quite a lot of local content needed there).

As a matter of interest, Don flew the new Advanced Power wings badge test with yours truly as examiner. We weren't test flying it, but flew as we would test any member going for this test.
I'm pleased to say that Don passed with flying colours.
So if you have the basic power wings badge, practice the advanced test and we can put you through it.

That's me for another month.
See you at the strip.

Steve

The BBQ that nearly never was!... by Steve

The Silver Fox Squadron BBQ is held on the Thursday of the club night week. Yeah, I know it's meant to be the 3rd Thursday, but sometimes that will be the week before the club night. So easier to stick with what works.
Anyway, heading to this month's BBQ, things were getting a bit difficult.
Firstly, Peter Kettle advised me he would be away so wouldn't be there. So 1 cook down. John Von was in bed with flu, so 2 cooks down.
Warner had gone off to Oz to join Helen and visit family. "Will miss club night" he said, " but coming back Wednesday lunchtime so will do the BBQ. No sweat" He had also been heard to say he didn't want to spend more than a week in Oz as that was too long. So, 18th July, day of the club night, txt received from Warner. "Just to let you know I won't be back this week. Be here for another week or so. Shocking weather, 24deg"
So now we were down 2 cooks and the organiser.

I myself had family commitments, so down the substitute organiser. We'll be right I thought. Alastair has said he will cook, I'll get Ron to take up the mantle of organiser for the day. So at club night asked the question. "Unavailable" says Ron.
So, down 2 cooks, organiser, substitute organiser 1 and substitute organiser 2.
Postponed until the following Wednesday.

I was just so organised. John Von was still crook. Alastair said he would cook. We had Bob McGrath and Peter Randerson coming out from the Wellington club, so I catered for 18. We've been getting about 15 of late, had still a couple down, so with the extras coming 18 should be about right. – wrong.
20 or so turned up. Jim arrived a bit late and managed salad and the last 2 meat patties.
Colin arrived later, nothing left bit a bit of salad and 1 piece of bread. "Oh well", I thought, "best to run out than have lots left over.".

Got home and we went and did grocery shopping. Putting said shopping away the wife says " What are these hash browns in the freezer for?"

Bugger!

Found at the Field.

On the hill behind the car park, I espied some colour in amongst the grass and was suitably curious to go have a look.

This is what I found.

No... it's not from a crashed model and lost (shouldn't be crashing there anyway).
Somebody has discarded it.
The terminals have all been cut off and I suggest the battery thrown over the fence.

Unacceptable behaviour and I'm not impressed. You take your own rubbish home.

If it's a failed battery, that's your responsibility. Not mine or the Farmers!

Steve

The Flexible Trainer

Steve Hutchison

In recent times we have talked about how we best use the clubs trainer. Tradition has it just being used to 'give people a go', but should perhaps have a wider use. There will be those who could be trained on the trainer to a level where they are confident in carrying on and getting their own gear. Perhaps we have fallen down in insisting prospective members get their own gear before we get serious about teaching them to fly.

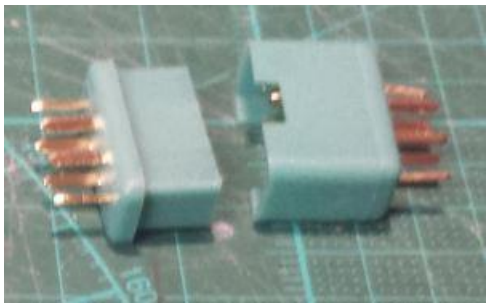
So all of these thoughts have been kicking around and I thought I would dust the cobwebs off to make sure all was well. The transmitter for the trainer is Mode 2 and is a Futaba 6J, which uses the s-fhss receiver. So any Futaba s-fhss transmitter can be bound to it. As I'm mode 1, have that transmitter, I bound to mine and spent some time in the sky tuning the thing up. The servos were pretty old and full of play. Don had some spares, so that was all renewed. Things were looking positive.

About this time I was researching, for other purposes, means of installing pluggable circuits and came across things called MPX plugs. I had never heard of them, but no doubt others of you have and probably use them. I ordered a packet of 10 from Hobby King.

A day or so later, John M got hold of me to discuss the use of the Trainer. John loves to teach, is Mode 1, and has his own buddy box setup using Turnigy gear. He wanted to be able to use the club trainer to 'give people a go' as he often does, as well as teach if needed.

So the question here was, how do we do that when we are all setup on Futaba gear, Mode 2.

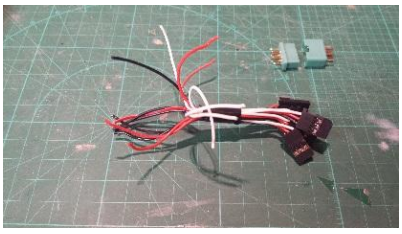
The answer: MPX plugs.



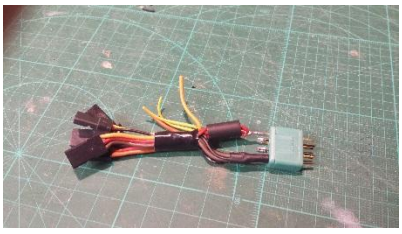
MPX plugs have 6 pins. The 2 outer pins are labelled + and -. The idea was to use MPX plugs to create a harness for 2 different receivers. The Futaba we had and the Turnigy from John. Then each receiver would be independent from the other. Simply unplug from one and plug into the other, depending on which receiver was to be in use.

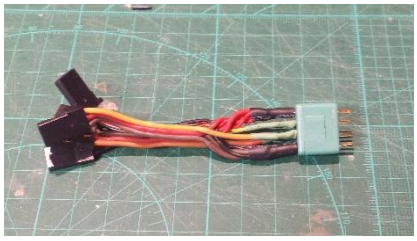
As we know, the positive and negative wires for a servo are common, only the signal wire is channel specific. With 4 central pins available, we are then able to build a harness for 4 channels.

The method was to separate the 3 wires to signal, positive and negative and add in a further lead for battery power.



Here we see the positive and negative wires separated and soldered to the positive and negative posts. I used a fine tipped 23w iron. The plugs are plastic and too much heat will melt them. Each joint was covered with heat shrink.

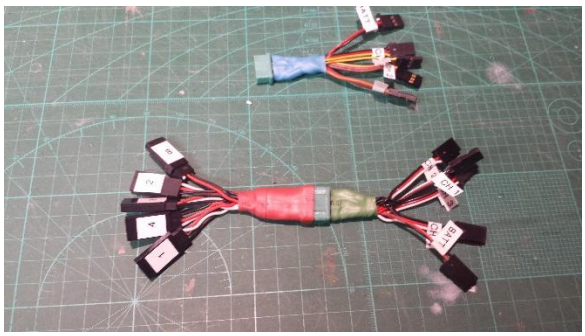




Here we see the 4 signal wires soldered and covered with heat shrink.

At this time I didn't worry about which signal wire was for which channel.
So we end up building 3 harnesses. One for each receiver, complete with power supply wires and one harness for the servos and battery supply.
My concern then was making it strong enough to plug and unplug without damaging the wiring. There are several options. One would be to use bog, but getting that into the small gaps would be a bit of a problem. Using epoxy glue would be good, but again making sure it got into the gaps was an issue and clearing up any over flow could be a challenge.
In the end I used some large size heat shrink which shrunk down tight on the plug but not the wires, creating a 'bucket' or 'mold'.
I then used Urethane glue, warmed up in hot water, which makes it very runny. Urethane glue expands to fill gaps and any over flow is easily trimmed up.

Here we see the 3 harnesses with their 'bucket molds' hanging to let the glue dry.
When the glue was dry, the heat shrink was peeled off, any overflow trimmed away and high spots filed flat. Then new heat shrink is used to cover the lot.



Here we see the 3 harnesses. This wasn't the final look, as it was after I got this far that I decided on the glue treatment, so this heat shrink came off.
As you can see, each lead is labelled. To work out which channel was which, I simply plugged the male/female harnesses together and used a multi meter to find which signal wires joined up with which. I then labelled both ends, running thru channels 1-4 and a battery lead. For the 2nd harness, the same method was used, but numbered it from the other end.
Next a new receiver tray was built and installed with both receivers mounted, and the harnesses plugged into both receivers. The servo feed harness was connect to the servo leads and switch feed. Hey presto, it worked and has been flying. So a simple matter then to changed radio systems.

Here we see the final installation

Get that Sim working!

Steve Hutchison

When I returned to modelling back in 2011, the first thing I was told was to get a Simulator and that Phoenix was the most popular. This before I had any flying lessons. I duly found a Phoenix on Trademe for $120, got it up and running and quickly discovered I was hopeless. Took me weeks to be able to land a high wing trainer with any sort of success. (I compare that to my 9 year old granddaughter who mastered it in one session). When they started to teach me to fly, it was quickly obvious that the hours spent on the Sim at that time had paid dividends. I think I only had some 5-6 lessons before I was solo.

Since those days, I don't use the Sim that often, but when I do I have been frustrated with a seeming malfunction. This becomes a real issue when said granddaughter arrives and demands to have a go.

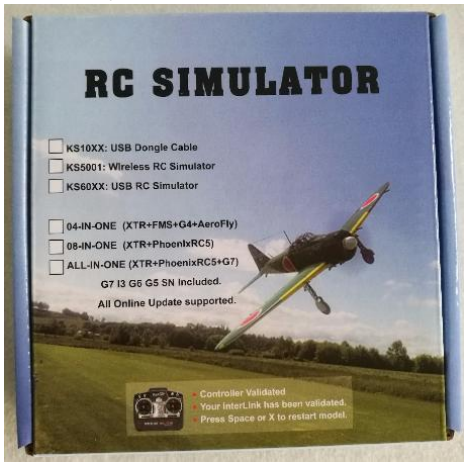
Firstly, it was the cable that went from the Futaba transmitter to the sim cable. That parted company. John V had one kicking around and that was OK. Then I had intermittent connections. Be in the middle of flying and transmitter would disconnect. It's been going on for ages, but if you coiled the cable right, poked your tongue the right way, you might get away with it. For a bit. The other week afore said granddaughter was coming to visit and I knew I would be in trouble, so borrowed John V's. This would serve a purpose. If it worked, it was my simulator. If it didn't, could maybe the transmitter connection. In the end it worked mostly and I got the feeling the problem was again the Futaba cable from the main simulator cable to the transmitter.

I looked at buying a new Sim. $249 to $269 in NZ depending on where. What about just the Futaba cable? $17 to $22 depending on where. $4.22 US from Hobby King. So, could I get a new setup cheaper?

Ali express was the answer.

Here there are all sorts of simulator packages.

22 into 1, 8 into 1. Have no idea what the difference might be, but settled on this.



Has 4 different simulators, a USB stick with 4 different positions (one for each simulator) necessary cables, free shipping to NZ and the princely sum of $8.52 US. So I argued that if only the cable worked, I was further ahead. The package has now arrived. Instructions are – interesting- but the first thing I did was select Phoenix on the USB, connect the cables to my transmitter, and hey – it worked. So problem #1 solved. A new setup for no cost.

The CD that comes with it has autorun or manual install for each of the 4 simulators. I didn't want to risk Phoenix, as software was already in place, so connected as mentioned and all worked. Of the other 3 simulators, the only one I knew was RealFlight.

So ran through the install for that. That becomes tricky because there are a lot of serial numbers to enter before it would run, and as instructions are less rather than more, took a while to sort out (all the serial numbers are provided with the pack) RealFlight then goes off and registers the software. The fact that it registers, then downloaded updates OK, and works, indicates that the software is legit. The only issue with RealFlight was getting my transmitter working, but did so after a couple of goes.

So.. if you don't have a simulator and think you should, this way is pretty cost effective.

July Club Night. by Steve...

Photos by Allan and the team

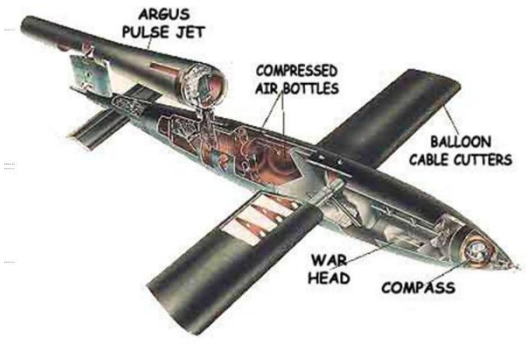
Development of the 80% scale V1 Bomb for Omaka airshow.

Our July club night was one of the better presentations we have had in recent times, with Allan Knox from WMAC giving a presentation on the development of the model V1 bomb he was involved with.
The story goes that the guys who run the Omaka airshow every 2 years, like to do something a bit different, and for the 2015 show, they wanted to build a flying model of the V1.
The inspiration behind the project was a guy named Allan Baker. Allan was also the project manager. Much of the clever engineering including the launch ramp, was done by a guy named Greg Trought.

Sound like a challenge?
Allan took us through the calculations required to come out with something that could be made to work. Scaling down the original using original materials would end up with something too heavy. Starting off with a smaller scale (60" wing span) design using modern light weight materials and then scaling up was the way to go.
The heaviest you can build a model is 225 pounds.
The estimated weight would be 192 pounds.

	Weight LBs	Area Sq In	Span Inches	Thrust Pounds
Real V1 less warhead	2790	9422	225	660
Real V1 Scaled to 80%	1526	6301	184	361
Our V1 Model	192	6052	184	60
Our V1 model scaled to 60 inches.	7	644	60	2

The wings were foam core with the foam donated and cut by Expol in Blenheim. Safe Air who Allan worked for at the time, did a lot of the fabrication. All time etc. donated. Unlike the real beast which was on a one way trip, this model needed to be able to return in one piece, so ailerons and flaps were installed.



Original V1.
Without a warhead to supply ballast, some changes needed to be made. So the wings are slightly larger than 80%, fuse slightly shorter and engine jet unit moved forward.
There wasn't the time and money to look at powering this with a real pulse jet, and ducted fans were used. You wouldn't know looking from the right angles.

The fuse was crafted by cutting ply bulkheads with cut out centres. These were spaced with longerons top, bottom and sides and then infilled with foam, hollowed in the centre and then cut and sanded to shape on the outside. The lot was then glassed.

Power unit for the model

The radio design was more than a little redundant. A Taranis transmitter was used with both internal and external modules – so basically 2 transmitters.
45kg Hobby King servos were used. Each servo was fitted with its own receiver and battery pack.
Receivers were alternated with the transmitter modules.
A HUGE tray of Lipo's added ballast at the front.

Certification of such a model is a little different to our inspections.
The certification covered where it could fly and who could fly it.
Allan was the test pilot.

The finished beast.

To get the model in the air provided it's own challenges, if originality was to be preserved. Test flights were initially done with a bolt on undercarriage (on a pretty rough piece of ground I thought – needed John Vons attention), but of course the original was launched off a ramp.
Such a ramp was built using an old crane gantry. A bungy system was designed, cranked up with a Land Rover winch. Needless to say, the system worked perfectly.

For the show in 2015, there were some special effects such as using a smoke bomb to simulate the gases released when launching the original, but it was all pretty basic
For the show in 2017, the launch ramp was dressed up a bit. A German half-track setting the scene and sound effects were added to the model. Hard to hear, but there anyway.

The following clips are worth looking at.

2015:
https://www.youtube.com/watch?v=zy03UVxfxqg

2017
https://www.youtube.com/watch?v=95yaa98NO9k&t=36s

Allan also took us through the history of the V1and mentioned the use of Hawker Tempests in shooting down of the same.

So…
Next month Andrew will talk about the build of his Tempest. A large scale monster and the engine is something to drool over. See you there.

Club Clothing – 2017... by Alastair Rivers

In response to requests about purchasing "Club" clothing, your committee has researched what is currently available and is now able to offer a complete range of these high quality items at very competitive rates!
Orders will be taken over the next 5 weeks and those items obtained, embroidered with club logos as requested and the delivery should be before the end of that month.
At present, it will be on a **once – a – year** option, so if you'd like items, - **ACT NOW!**
In addition to getting very useable clothing:-

- by wearing these items in public, you are raising the image of the club
- showing you are proud of our club
- identifying club members when attending model rallies around the country
- A 'win – win' situation!

Details and order forms will be available in Club House and at Club Night meeting.

- Only firm orders will be taken
- We cannot hold stock (cost to club & variety of sizes and colours)
- 50% deposit when ordered
- Full payment on receipt of garments
- Some items require a minimum number to obtain commercial rates

Available in different sizes:-

- ✓ Long sleeved, lined Jacket (IDJ)
- ✓ Men's "Legacy" Vest (LV)
- ✓ Nylon Ottoman Vest (NV)
- ✓ Lined Polar Fleece Vest (LPV)
- ✓ "Jacquard" Ottoman Polo (JO)
- ✓ JB's Long sleeved Polo (210XL)
- ✓ Crew neck Fleecy Top (SW303)
- ✓ Deflector Perfect Hat (4008a)
- ✓ Vortech Bucket Hat (4015

Embroidered Logos available onto garments – front (small) back (large) at cost
Sizing information available with order form.

For further information contact ...

Alastair Rivers
04 905-4100
021 149-3778

Sign changes on the Track.

You will recall that earlier in the year we discussed with Wayne Boness at GWRC the effectiveness of signs on the cycle/walking track.
Wayne agreed to have them changed. The new signs were installed a couple of months back and recently the marking on the track has been changed.

So I big thanks to Wayne and the team at GWRC.

Steve

The Club Captains communique.

Not a lot from me this month, so just as well Steve was on a roll, when I saw all the stuff coming in from him , I must admit I took the foot off the accelerator , pushed into neutral and took it easy.

The Club Simulator.
Thanks to Steve for letting me know that the simulator was in the Club house. I had looked (a man look , I'm told) where I expected it to be in the cupboard, but it was on one of the shelves. It is pretty old now ,and was designed to run on Windows XP which most people don't have anymore. I tried running it on Windows 7 and 10 and could not get it to work. However reading Steve's article there are lot of other options out there .

So this one might have to be retired from service in the near future.

And just to wrap it up , another one from Steve.

Planting in the Park.

A big thanks to those that turned out to help the ‘spade aid’ day at QEP. GWRC run a number of public planting days throughout the planting season, but ‘spade aid’ is their biggest, with the aim to plant 5000 trees in the day. Due to the amount of rain recently, the actual planting site was moved, and there were two plots alongside the track north of the field, across the stream. There were plenty of members of the public giving a hand on a glorious day. Many families come out for this occasion.
Sausage sizzle was going well and live music provided a very relaxing background.
We had about a dozen members turn up and there were a number of apologies. John Ellison brought his own assistant in the form of Janine who took the plants from the bags whilst John dug holes.
A number came prepared and moved to the strip afterwards for a fly.

I am, however, unsure about how successful the 2nd of the 2 planting sites will be, as the plants were planted in amongst a lot of small sprouting blackberry. I don’t know how good a ‘nursery’ plant blackberry is!

Some of our members hard at work. Others were scattered about the sites.

Quick Link from Wayne Elley.

http://www.modelairplanenews.com/lance-campbells-amazing-sr-71-blackbird-inside-workshop/

And that's it for another month. Grateful thanks to Steve who did 99% of it , Alastair who did the article on the clothing and sent me some stuff which I'll use next month . Oh! and the editor ...what did he do ??? copy, paste, format. mmmmh.

Anyway , contributions always gratefully received .

Trust you all have a good month ahead.

Until then... Fly hard , land soft...

Cheers

Don
Editor