

*The monthly newsletter of the
Kapiti Aeromodellers Club*

From the Scribe:

July club night was a cracker.

One never knows when putting something together, how it will work out. Although I had arranged for some of the items brought along, I was pleasantly surprised at what was produced and the accompanying presentations. Thanks to all. It was a great night.

Speaking of club nights, it's always a challenge to come up with speakers, ideas etc., so please, if you have something in mind that might work, please let me know.



Roger Balfour's article on electric power last month was extremely informative. It is followed up by part 2 this month. It's an area in which I must profess quite some ignorance. It's the type of article that should be filed away for future reference.

*We had no comment, good bad or indifferent, to our newsletter name.
So it stays for now.*

Enjoy the month.
Steve

And it's goodbye from him...

Sadly, for the club, Warner and Helen have decided to return to the land of Ockers and snakes. Warner has been a larger than life figure in the club since he has been here, served on the committee and as Club Captain for some years. Try as he might, he was never able to get some of the simple competitions going that he had in mind. In recent years he has strayed more to the Vintage end of the hobby and has been a regular competitor up at Levin and competed in Vintage competitions at the Nationals.

He has continuously modelled throughout his life and has been a deep well of knowledge for all of us.

He will perhaps be best remembered for his prodigious building. Any visit to his workshop would turn up a vast array of new builds in the process, being planned or just completed.

So, thanks Warner, for your input and comradery.

(As yet, Warners leaving date is still not firm, but is planned for some time in August).

Steve



Photos from Sohail

Steve's Smith Mini Plane leading
Phil's Stearman and Phil's heli.



July Weather Woes - The Van Report



HOLFUY

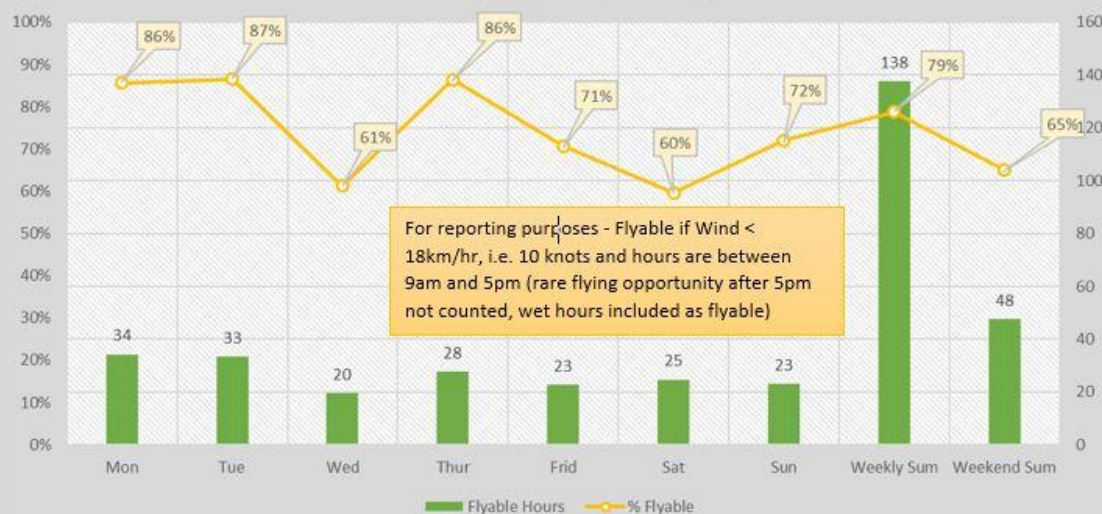


Should I have flown this month!

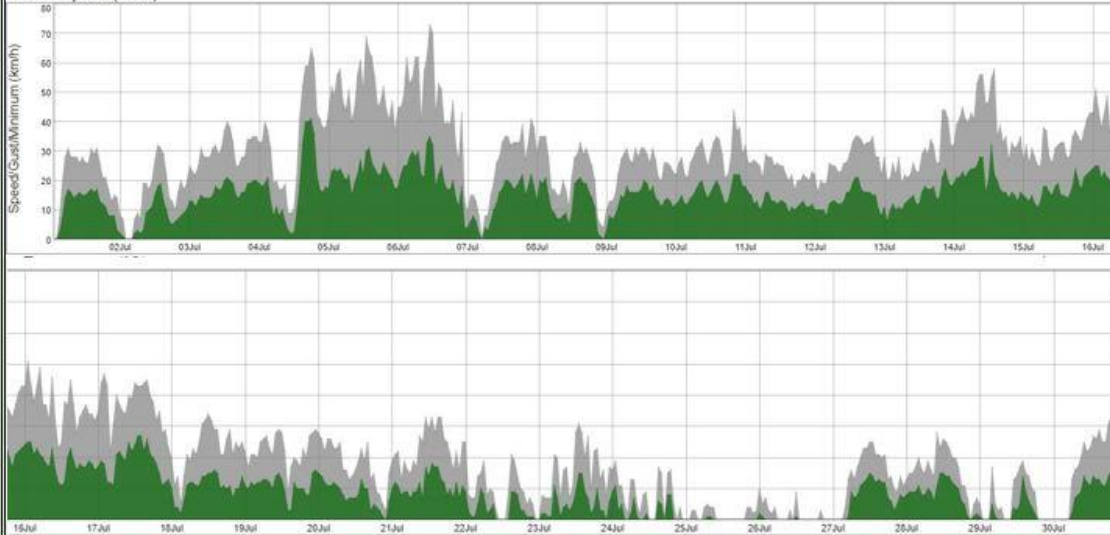
Our weather watcher stats show conditions were exceptional for 2nd to last week of the month. A draw for best weekday but Tuesday marginally ahead at flyable 87% of available hours, Sunday weekend by comparison flyable 72%. Seems the weather was even good enough to draw out some of our lazy boy couch simulator flyers to test fly a few new models completed over the last few months.

A quote from one of our intrepid test pilots who needs a bit of tuning before flying again: "It flew perfectly...all the way to the scene of the crash."

Monthly Summary All Days



- Wind speed (km/h)



Vintage news

Terry has submitted the following.

It's a worthwhile idea, and I hope he gets the support he is looking for.

My proposal is to create a Vintage Flyers interest Group, which will include Tomboys and all pre 1950 Vintage & post 1950 Classic models,

Warner has been working to get a vintage group together and flying events monthly using the easy to fly Precision Rules, while I have been working with Tomboy monthly flying on the last Tuesday of each month.

So now with Warner's departure to Aussie, I propose we amalgamate all the vintage activities into an interest group and promote regular flying activity and enjoy this fascinating discipline of our hobby.



Currently I have 14 club members names who have been involved from time to time. In promoting this idea, I am looking for other members to come onboard and join with me to make the vintage group a successful and well run pleasurable flying activity.

I believe the flying of Vintage Models will become more popular in the future as members see the beauty of flying these models on the wing.

I have suggested we have two flying opportunities a month:
Vintage Precision on the second Thursday each month,
and Tomboys on the last Tuesday each month.

I am looking for feedback from club members on this proposal.

Please contact

Terry Beaumont: 0274434803
tcbeaumont726@gmail.com

How Do I choose the right electric power system for my model?

Part II

From Roger Balfour

Perhaps you wondered if there is an even easier way to get a range of power system options for that new plane you are building or buying? What about using one of the "Calculator" programs that are available? In this part of the article I will be using eCalc program and in particular seeing if their setup Finder tool provides the same result as we achieved using the manual method.

(eCalc is not a free program but is reasonably priced- pay US\$2.50 for month to use it for a new project or about US\$7.00 for a year)

Choose your Calculator



a

In our previous example we had a sports plane weighing 5 lbs (2.3Kg) requiring about 750 Watts of power.

If we use setupFinder we will need to know details about our plane such as overall weight, wingspan and wing area.

We will also need to choose the number of cells for our battery and the typical flight time we would like to achieve.

In our previous example we also limited the prop diameter to 11 inches to give ample ground clearance.

Some fields in the input screen can have a low value if you want the program to provide a larger number of options.

Here is what I entered for our example.

setupFinder - Quick Drive Finder Language: english

Airplane

Wing Type: Monoplane All-Up-Weight: 2268 g 80 oz Wingspan: 1750 mm 68.9 inch Wing Area: 60 dm² 930 in² Lift Coefficient (Cl): 1 Vs: 29km/h - 18mph Cooling: good

desired Performance

Flight Mission: Sport Speed: 100 km/h 62 mph Thrust: 2700 g 95.2 oz Flight Time: 8 min
Factors: S x2.75, T x1.5, P x0.5
81km/h - 50mph 3402g - 120oz

Battery Cell Configuration: 4 S Voltage: LIPo - 3.7V

General Air Temperature: 25 °C 77 °F Field Elevation: 500 m.ASL 1640 ft.ASL

Motor # of Motors: 1 Gear Ratio: 1 : 1 max. Weight: 15 % AUW = 340g - 12oz

Propeller max. Diameter: 11 inch 12.4...20.5inch Pitch: auto inch 4...8inch # Blades: 2

The burning question then is our previous choice of motor and prop combination amongst the many options that the program suggested from its database?

We chose a Cobra C3520/10 980Kv motor with a 11x 7 APC e prop.

Here are the Cobra offerings from the program

Propeller inch	Motor	KV rpm/V	ESC A+	Battery	Current A	Speed km/h mph	Thrust g oz	Drive Weight g oz
11x6.0	Cobra C-3520/10	980	60	4400mAh - 15C (4s1p)	47	99 61	2432 85.8	823 29.4
11x7.0	Cobra C-3520/10	980	65	4600mAh - 15C (4s1p)	51	112 70	2689 94.9	854 30.1
11x7.0	Cobra C-4120/12	850	55	4000mAh - 15C (4s1p)	43	109 68	2540 89.6	862 30.4

Having selected the combination suggested it is now just a case of double-clicking the selection and the program will enter all the data into propCalc where you can fiddle with many of the parameters to your hearts content.

Here is a selection of the performance data available.



The dials give a quick overview and if you have chosen values outside the manufacturers published data you will be indicating in the red areas.

(Load indicated above relates to battery C rating)

In conclusion, whatever method you use to choose your new power system the proof that you have made good choices will be at the flying field.

However before your first flight remember to check the current and watts at 100% throttle with your trusty power meter before you head for the sky.



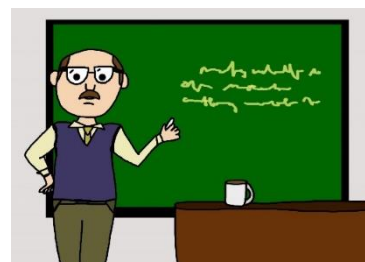
August Club night:

This will be the Neil Upton's show, and all being equal, could be quite special.

September Club night:

Will be Quiz night, led by the well known quiz master, Alistair Haussmann.

Last year's quiz night was a great success. Alistair has tuned the format for this year, so should be another cracker.



Rally 2020.

This Rally will kick off our 25th year celebrations.

It will be held the weekend of 7/8 March 2020.

There have been a few the last couple of years who 'forgot' and went away that weekend. I don't want to hear that excuse again! Put the date in your diaries now!



It's also time to change things up for the rally. Do a few different things. Get more club members to fly. Have a look at the structure. This is the big event of the year where we can show off who we are. It's your club and therefore your rally. I'm looking for ideas, any ideas, that we can use to improve it. So have a think, and let me know asap.

Cheers,
Steve



QEP - Spade Aid.

Something we have supported for some years now. Would be good to get a few there again this year. I believe site preparations are much better which will assist in the planting and in the survival rates..

Meet at 10 at the organisation sign in booth.

11 August - Spade Aid is our biggest planting event of the season so we need your help to make it happen! Join in anytime between

10am to 2pm. If the day is wet, then Spade Aid will be postponed for the 18 August.

For all events we will provide warm drinks and light snacks.

Please bring a rain jacket, warm clothes and sturdy shoes.

If you have them, we would also love it if you brought along gardening gloves and a spade.

Park notices Q&A:

If you want to know whats happenening at the Park, new entrances etc. Updates are here:
<http://www.gw.govt.nz/QEP/>

Workshop Tours.

Ian and Alastair's June visit to Phil Paterson.

Phil and his wife have a nice two-story home in Whitby and Phil occupies one bedroom for modelling, photo 1 and another for model storage until it is needed for extra guests, photo 2. He has a fully equipped garage and spoke of



many hide-y holes throughout the house used for storing models and gear and some were brought out for our photo shoot. As the photos



show, and as most of us know, Phil's skills and attention to detail are of the highest order. Alastair and I have encountered

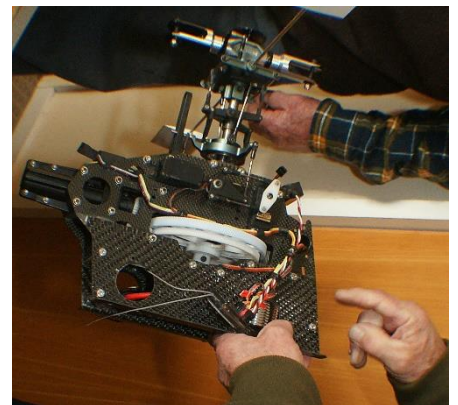
some real clever buggers when visiting club members' workshops and have taken away lots of tricks and ideas.

Phil is a retired automotive engineer but has always been interested in aircraft as long as he can remember and as a young lad started building Airsail kits and learning how to build and fly them to perfection. He purchased his first radio when he started work in 1970, which was a basic proportional type. The flying field then was at a farm in the Reikorangi Valley and he was taught and guided by Stuart Attwell.

Phil has had to repair his yellow Bell helicopter after it recently threw a wobbly and partially destroyed itself. Problem found and rectified, and extensive repairs completed on the mechanics and ready to be reassembled back into the chopper, see photo 3, [I wouldn't know where to start]. Repairs also to the port side of the body completed and you wouldn't know it had been damaged, see photo 4.



Photo 5 is two beautiful Stuart steam engines he built which would have required delicate machining that's for sure. The Corsair in photo 1 is yet to fly



and will be something worth seeing and also the hydroplane in photo 2 is yet to get wet. Other planes on display were a Tiger Moth, a Catalina, a Spitfire, a couple of Extras, a pattern ship and an Aermacchi slope sorer.

There was an SE5 on display in the hall and his favourite, the Stearman, was in his car. Phil commented that camouflaged

Notice: Peg Board.

No longer required and never used.
They are no longer used at the Nationals either. It will be removed from the club house.

aircraft like his Tiger Moth are sometimes hard to see, especially with a hill behind as at the South end approach to our strip, whereas his yellow and blue Stearman is far easier to see. A good point everyone.



For Sale

Warner has a couple of Vintage models he will let go to members at the right price.
They are ideal if any member is intent on following the vintage path.
They just need an electric motor.
Interested? Give Warner a ring on: 0224796714



A few years ago, the club was donated an electric powered, 40 size trainer.
Whilst setup to go, it has never been used and really is wasted sitting around in the club house.
All it needs is a receiver and 4S battery, probably about 5000 Mah.
It's in pretty good nick.



A donation to club funds will secure it for you.
1st in best dressed.
Get in touch with me.

Steve

Spitfire.

Terry has been asked to list this for the vendor. Model is in Hawkes Bay.

M11A Spitfire built from Brian Taylor 70" plan to 84" span.
Weight 19 pounds all up. Motor OS BGX 35cc, with air up / down retracts.

Balsa ply with home-built scale mouldings. Lacquer paint finish. Authentic markings of 616 squadron during WW2.

All enquiries to Bob Whitburn 06 8784135. \$1200 ONO



Glider and bungee.

Donated by a local resident.

Can be yours with a donation to club funds. (Obviously will split).

Glider bungee cord & large reel with stakes - 35m x 6.5mm rubber with 65m 100lb trace.



RC Glider - Airtronics "Sagitta 900" first produced in 1979, designed for AMA Thermal Duration & F3B competitions. Wingspan is approx. 2.52m, wing is two-part, joined by a heavy steel rod on the main spar with a thick wire section aft. Spoilers in each wing, activated by a pull cord from a centrally located standard Futaba servo. Horizontal stabiliser is fully flying, held together with interference-fit wire rods. Fuselage is all ply, sleek & solid. She's had a few knocks but overall in not bad condition. Lots of lead nose weight currently so together with the



1970s materials (solid steel wing rod) she's a bit heavy. Needs someone to convert her to 2.4GHz, lighten her a bit & she'll likely be a nicely performing thermal glider. Comes with full-size plan plus manual as well as a large hinged wooden case that fits all.

Let me know if interested.

Steve

Bücker Jungmeister



This is the seagull ARF. Andrew has made a number of modifications, especially the cowl and wing struts, to make it more scale like. Powered by a 35cc RA gas engine, it was recently maidenied. Seen the other day, James put it thru its paces. A heavy landing unfortunately broke the flying wires.



Any easy way to decorate your flight box, pretend sponsorship or hide a blemish in your covering.

There are a good number of Klotz stickers in the club house. Feel free to take a few.



Surrounded by winter weather and little flying, members had no doubt been busy in their respective hangars, beavering over builds, new ideas, repairs and problems to solve. The idea of the 'Show 'n' Tell' night was to find what a few were up to, what was piquing their interest and what plots were being plotted.



Steve introduced us to 'Herbert'. Growing tired of the gybes for the Smith Mini Plane not having a pilot, it was time for the problem to be resolved. This pilot figure was originally begun a couple of years ago, before the Smith was finished. It was made following a pattern and instructions in Flyers World some years ago, written up by David Richardson. It was also published in the RCM&E mag at the time and also reprinted by the Hawkes Bay club. Getting the head was a challenge, going thru 2 others that turned out to be unsuitable as well as a 3D printed one that didn't cut the mustard. The project stalled for about a year with hands being a challenge until Allan Knox showed a pilot at club night in May. Down to spotlight to



buy the necessary craft stuff and hey presto. Colin donated the shoes from a pilot he had to amputate the legs from, Kath knitted the Beanie and the headphones are hollowed balsa block to go over the original moulded earpieces. The jacket is hand sewn (by Steve) from an old denim jacket of Kath's and she machine stitched the hem and front piece using pieces cut off the aforesaid jacket.



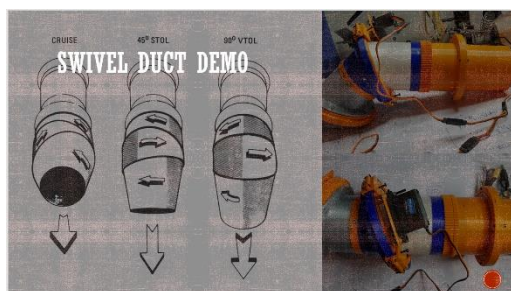
Pete Brown turned up with his ginormous helicopter. This is a 1/6 scale Westland Wessex and sports a rotor span of 2.2m and tips the scales at 17kg. It truly is a piece of art. Powered by an Align 400kv electric motor which chews through 2 x 10,000 Mah, 6 cell Lipos, this is a toy to be behold. I have no doubt the house lights dim when they are on charge.

Even just sitting in the room, it has that presence that a truly well-made and scale piece of kit has. Pete gave us a good run down of the history of the model and the real machine it is modelled from.



Don took us through the never-ending challenges he is facing building his Mick Reeves Hurricane. Nothing fits, scale in some instances is incorrect, things like the dihedral even is incorrect. But Don being Don, he has 3 views in Solidworks to check scale and models things like engine mountings inside the cowling. Don brought along the wing centre section piece and showed us the work done on the retracts there. He had these working using a servo tester. A formidable job and indicative of Dons fastidious work.

Don has also been playing with his landing lights. Modelling these up in Solidworks, he has had them 3D printed by Alistair H. Shown is version one. I believe version 3 is on the way as various LED lights are experimented with.



Using Power Point, Alistair Haussmann gave us a run down on his fascination of VTOL aircraft and specifically the F35. His fascination goes back more than 20 years and at various times has toyed with the idea of building a flying model. With Alistair, to perceive is to act. He has done all sorts of calculations on weight and thrust and things and has built a working model of the

swivel duct that would be required. This he has printed on his 3D printer, including the gears to make it work and using 180 deg servos. He demonstrated by hooking up a battery. It is certainly food for thought on what can be achieved using a 3D printer. It is a very clever and ingenious piece of kit and if anybody could make this work, Alistair can.





Andrew Farrow gave us the low down on what brought his Tempest to an untimely end. Suffice it to say, that no matter how good you build and test, something can go wrong. This was a model that took some years to build, was fastidious in its scale detailing and lasted a mere 6 flights. This model had been built to survive very heavy landings, with the wing strong enough for Andrew to be able to sit on it without it breaking. The wings were totalled but 2/3rds of the fuse and the tail feathers

survived, so it will be rebuilt. The model was powered by a Valach 120 in-line twin. The force of the impact basically broke everything except the cylinders. The heavy aluminium spinner being flattened and moulded around the crankshaft. With the decision made to rebuild, Andrew approached Vallach for parts to rebuild the engine. They wouldn't supply, but if he returned what he had, they would have a look. Part of that conversation covered the fact that Andrew would also like radial, the twin was repaired, and a Radial purchased all at the right prices.

The radial is a 250cc monster and Andrew has no idea what it might end up in.

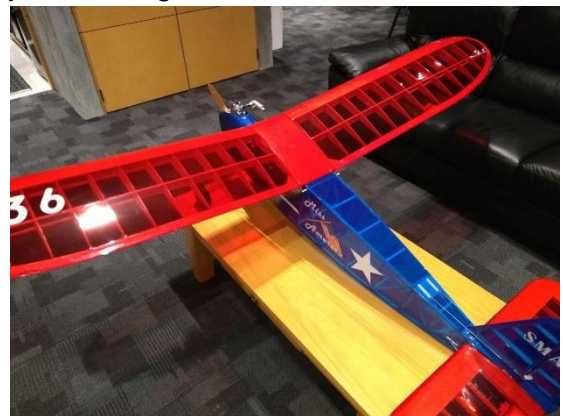


Life member and octogenarian enthusiast Ron Nichol brought along a set of plans he's come across and determined to build. Great to see Ron every club night, every BBQ. His enthusiasm for the club knows no bounds.



A number of members in recent years have purchased 'short kits' from Peter Leaver at Hangar One. Many of these are of Vintage models and 2 were on display on club night. John von Hartitzsch brought along his newly completed Buzzard Bombshell. Nicely finished, John took a fair amount of

ribbing as he is running a 2 stroke. Another of our members has one of these and it flies very well.



Wayne Elley brought along another completed short kit. That of Miss America. He felt it was an apt name for his model as his wife is American. Beautifully finished, Wayne took us through the steps to try and put some cost-effective decals on it. Having little luck, he in the end resorted to printing on ordinary paper, carefully cutting out and gluing to the covering. Followed by fuel proofing. Looks sharp and you wouldn't know unless told. Wayne had never experienced a short kit before and wondered what the term meant. 'Found out when it arrived', he said. 'Was short of a few bits!'

Ian Crosland brought along his just completed Druine Turbulent D31.

The model is extremely light, coming in just under a kilo in weight. As with all of Ian's builds, it is beautifully crafted. It's powered by an OS15. The dummy cylinder on the opposite side has been carved from wood, with a strip of litho plate wrapped around the top of the cylinder head. With an old glow plug in place, it could easily be mistaken from a few paces away.

