Model Flying Hawkes Bay

PROPWASH

Club Newsletter #150 July 2023

August	Activity Calendar
Sun 6th	AWATOTO FIELD
Sun 13	AWATOTO FIELD
Fri 18 ---	NI AEROTOW Aorangi Rd
---Sun20	NI AEROTOW Aorangi Rd
Sun 20	AWATOTO FIELD
Sun 27	AWATOTO FIELD
Weekday	Flying as usual, Awatoto Field open

NDC AUGUST VINTAGE & SOARING

Aug/23	143	VINT	RC Vintage IC Duration
Aug/23	144	VINT	RC Vintage E Texaco
Aug/23	145	VINT	RC Classical E Duration
Aug/23	146	VINT	RC Vintage Precision

Aug/23	426	SOAR	Class R, eRES 2M
Aug/23	427	SOAR	X5J Unlimited Class O
Aug/23	428	SOAR	NZ F5K CLASS Q, 4 Rd
Aug/23	429	SOAR	Thermal D (F500)

In this issue .....

Contributors to this issue; *Brett Robinson / Barrie Russell / Marty Hughes / Bernard Scott / Ash / Clive Baker / Kevin Botherway / Phil Sharp / John Sutherland / Barry Lennox / Anthony Hales / Gavin Shute / Peter Hammond /Barry Kerr / E & OE.....*

Welcome back to Awatoto Field on a cool wintery day.

HOW GREAT TO BE BACK ON AWATOTO FIELD

From the Editor's Desk;

Greeting's All,

I did wonder if we would have an issue this month with not a lot of activity, but at last we're back. Now the days are getting longer and Spring is only a month away the future looks a little rosier. A bit of an eclectic collection this month, yes I've had to dig deep and my thanks to the few of you who have responded.

I do wonder about the future of Propwash, a lot of work and I sometimes wonder if enjoyed by only a few with minimal feedback from the club. It would be a pity to lose the contact, but an editor's time could well be spent in other worthwhile directions. This is **your** newsletter about **your** club, please use it members and make the publication worth while. As they say, use it or lose it.

I hope you enjoy the read.

Barrie the editor mfhb July 2023.

Prez Sez.

We are OPEN.

It took 5 months and two Days but at 9am July 16 we opened Awatoto for business.

Its was a cold windy Sunday and probably more suited for staying in bed but judging from the number of Burgers I cooked, we had over 30 members on site. Although flying conditions were less than perfect, it was great to see everyone.

About 6 Pilots braved the conditions before retiring to the pits for a hot Burger. The strip is in fantastic shape thanks to all concerned getting it there. The access rd is usable but the car park is still needing a lot of attention. Lance has the new tractor put to work straight away.

Can I ask that until the ground hardens up a little that we keep vehicles off the field. We just need a couple of weeks of sunshine.

Happy Flying , The field is available seven days a week so make the most of it.

Marty Hughes President MFHB

PS. In recognition of the incredible amount of work put in by our Field Officer Lance, I decided to buy him a present which he can wear whilst driving his new toy, the shiny red tractor;

Secretary Reports

MEETING NOTES 12 JULY 2023

There hasn't been too much to report or discuss apart from the on-going Insurance Claims and dealing with the aftermath of Cyclone Gabrielle.

Of note, is that there has been a successful working bee or two to clean the Club shed, remove the tractor and mower, and have the shed assessed for repairs. The tractor has been written off, and members are aware a new tractor with bucket has been purchased and has already been put to use. Galbraiths have placed a number of truckloads of metal on the access road although. Because the car park is unable to drain, access to the field remains limited.

MFNZ is considering supporting us with a cash grant, yet to be determined.

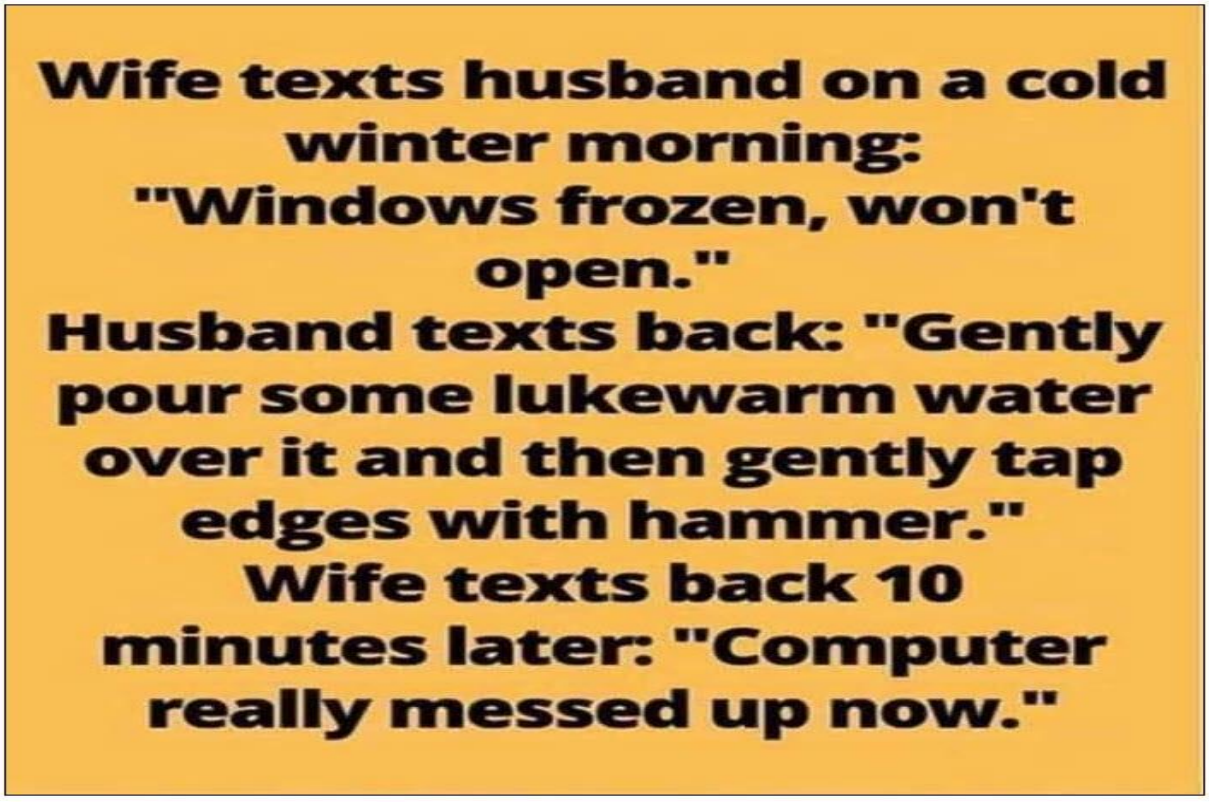
Equipment removed from the shed has been dumped where necessary (3 trailer loads) and the rest has been washed and stored.

A Discussion Paper containing suggestions as to the footprint of the field was considered. It was determined that no change would be made at this time as there are other priorities. It is yet to be considered what impact pushing the field toward the river would have on stock movement. Fencing is still to be undertaken so stock can return to the area.

Finances are not strong at the moment and judicious use of the limited funds we have is required. While there needs to be thought given to facilities at the field, we are mindful that any future flood events could impact on that. To date, it has been too wet to undertake repairs of the Deans Shelter, which could be shortened by one bay.

Next meeting will be 8 August.

Barry Kerr, Secretary MFHB

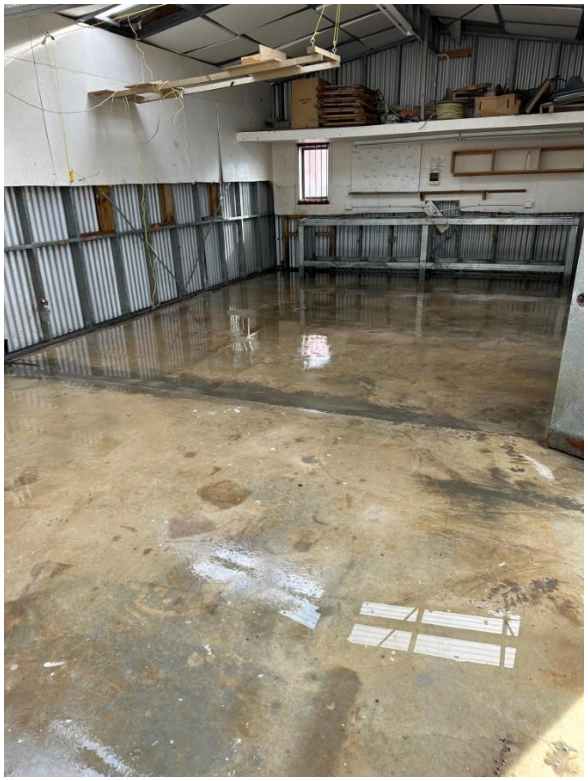


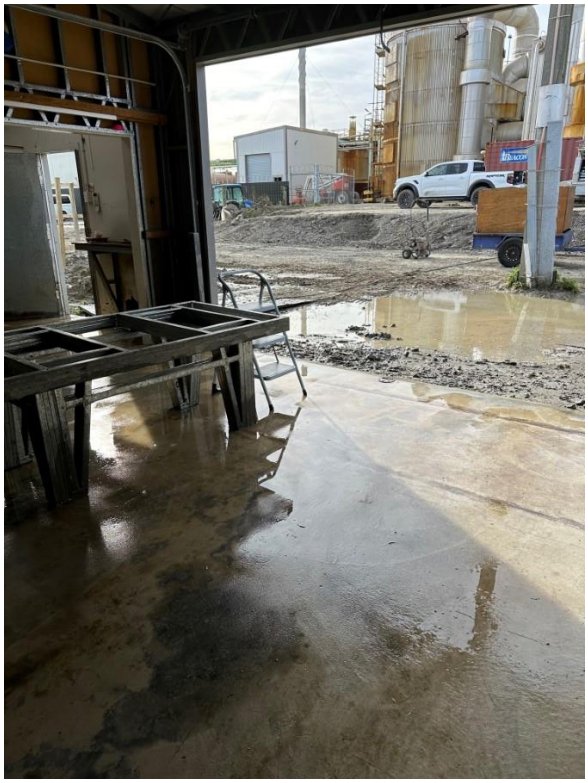
CLUB ACTIVITY July 2023

Sunday 2nd June. Marty, Andrew, Russ and Lance did a huge job waterblasting the club shed, getting it all ready for it's re-furbishment now that the Insurance Co has organised a builder to do the work. It needs the southern wall replaced, new sectional door, relined and facilities replaced.
Took a drive down to the field, access a bit muddy in parts but I got there and Lance was picking up driftwood etc in the new tractor bucket. Should be a huge assett in the days to come. The rest of our assetts there, toilet shed, shade and Deans shelters, fencing and seating are a sorry sight, but one day we will be better than ever with hopefully an improved field layout.
A few pictures captured from the morning;

Top Left Clkws; Sad blue tractor / Russ on squeegee after waterblasting / Deans Shelter / Shelter again / Ravensdown are re-refencing outside shed / Our silted up toilet shed ready a major dig out and suck out ?

Beside our shed on the previously fenced and grassed area, Ravensdown have built this new settling pond for processing their waste water. Mmmmm float planes ??
At the end of the morning's work water blasting the shed, this was the result; what a great effort by **Andrew, Marty and Russ**. A huge thanks guys.





Sunday 16th July. We're back on Awatoto Field. Whew !!

Five months on, and on a fairly windy Sunday we had a good morning turnout for the reopening of our flying field. Lance and his team had done a great job preparing the field and strip and giving us access,

albeit still a bit soft and muddy. As was evidenced by the need to water blast my car and then my driveway on returning home and living with the "Swampy" smell in the garage ! But it was worth it just to see the club in action again and enjoying each other's company and President Marty's fine barbecue. Thanks Marty, that was very generous and the hamburgers delicious.

The building Nor'wester limited the flying but that didn't deter Andrew with his Ducted fan jets and at least four of our Club Building Night Deltas (Phil, Mark, Stan and Danny) very successfully took the air.

Myles haad his ME109 on ~~heat~~ Charge !

Ryan Cadwallader Paid a visit and flew his electric Cessna bravely in the cross wind ! The model being dressed in Napier Aeroclub's colours which he spent many of his student pilot hours in.

The "New" car parking pits areain use, the ground is still soft so care is needed and judgement s to where and when to drive and park.

The cranes are busy in use rebuilding the Rail bridge. Once that work is finished, hopefully our access past the Acid plant will be cleaned up and restored making life easier and cleaner !

Sunday 30th July. Awatoto Field closed again due to the regional Council rebuilding the access way over the stopbank, One Day !! So the operation was moved to Roys Hill Reserve and a well attended club day was enjoyed by a good number of members. Picture perfect conditions, warmed up nicely and no wind. Marty did the usual catering service, great hamburgers with all the trimmings were enjoyed by many. Marty's swansong as he's off to Tailand for a couple of weeks of well earned R&R.

The Delta's had a field day ! Electric flying was the order of the day. Excellent turnout.

Brett too was busy with his camera and captured these shots below;

Clockwise from Top Left;

Barrie's FB Delta on fly past / **Barrie's** Vintage Hi Fly / **Rod** with FPV / Pits and Hi Fly / Pits car park / Super Cub landing / **Stu's** enduring Clubba / **John C's** Twin Otter under **Marty's** control.

Marty's "Members' Workshops"#11 July

What has Marty got for you this month ? Marty writes;

So this month is a bit of a sneaky one. July's victim is **Rod Hughes**…. Yes my Father.
Did I ask him if he wants to be this months candidate? **No I didn't.**
Does he have any idea he is being interviewed? **No he doesn't.**
Will he be mad when he reads this? **Guess we will find out.**

So here we go….

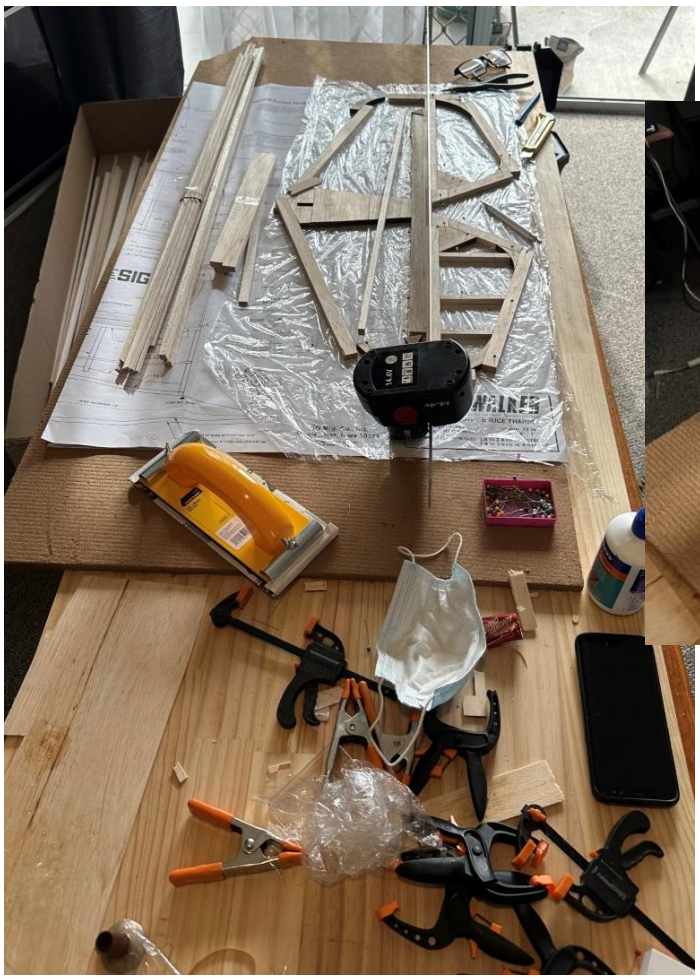
Me : What the hell have you gone and bought now dad?
Rod : I couldn't resist, Adam from Hobby City had it on the shelf, I couldn't believe it when I saw it.

Me : Haha…. You're out of control again !! Tell me about it.
Rod : Well it's a Sig kit, Not an ARF but more of a builders kit. It's a Third scale Sky Walker.

Me : Wait what?? Third scale?? Your building a third scale model in your Quarter scale lounge??? How does that work?
Rod : Very carefully.

Me : I don't mean to throw the cat amongst the pigeons but it's not going to fit in your car?
At this point **Rod** looked at me with a slight grin. It was a **Father Son moment**, He knew that I knew that I was going to be transporting in my truck… **haha.**

Me: So what going to pull it.
Rod: I'm thinking that the DLE 40 Twin would have more than enough power for scale flight and would look great with the pots sticking out each side of the cowl.



Me: Nice work Pops, can't wait to see it in the air.

Pops; Aaaarghh !

Marty.

AROUND the BUILDING BOARDS July'23

John Sutherland *updates us on progress with his* ***FW190 Dora*** *reaching the painting stage after all these years of hard work, reseasrch and building, he writes;*

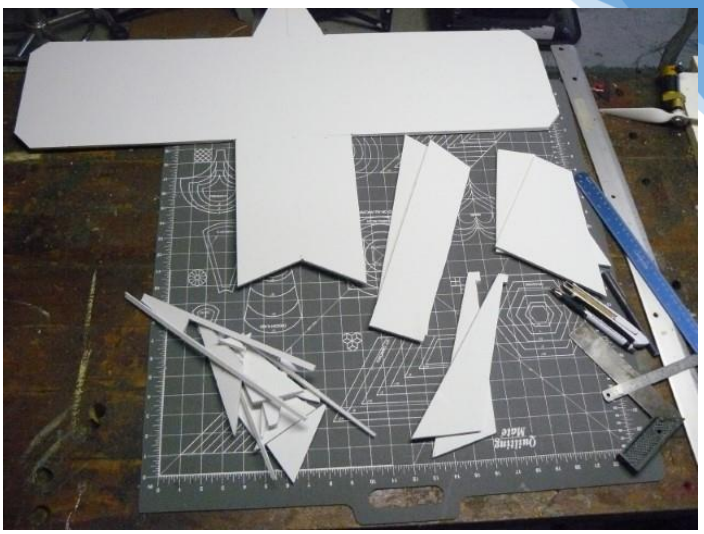
Hi Barrie the latest on progress. Undercoating nearing completion and panel lines about to start.

You will see a new Robart air pumping system for the retracts this has come available in recent times and is something I have been wishing to have for some years now it will pump up and maintain air pressure while in flight. It has its own battery and pressure systems.

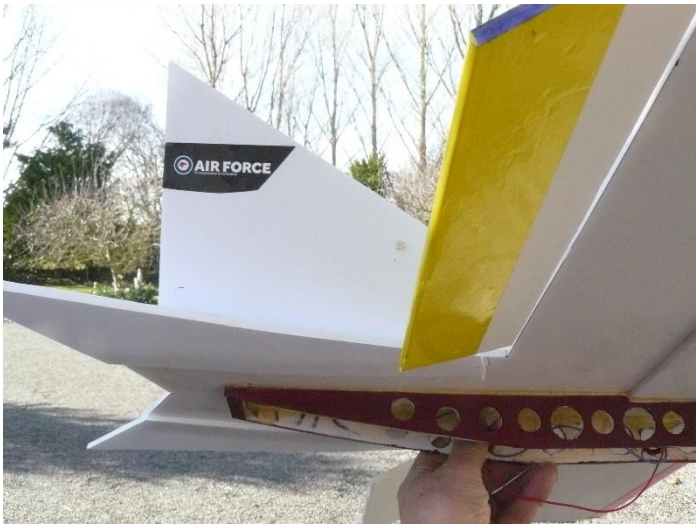
Cheers John.

Another of our “interested readers” from the mid-south, PP Barryyyy Lennox has responded to Norris’s “Arrow” article in last month’s newsletter and sends this update on his building project, he writes;

So, this afternoon I started with a "blank canvas". 20 mins later I had these bits and some scrap. Trouble is I now need another large $2 sheet for the wing doubler. Oh; The cost of these things!!!

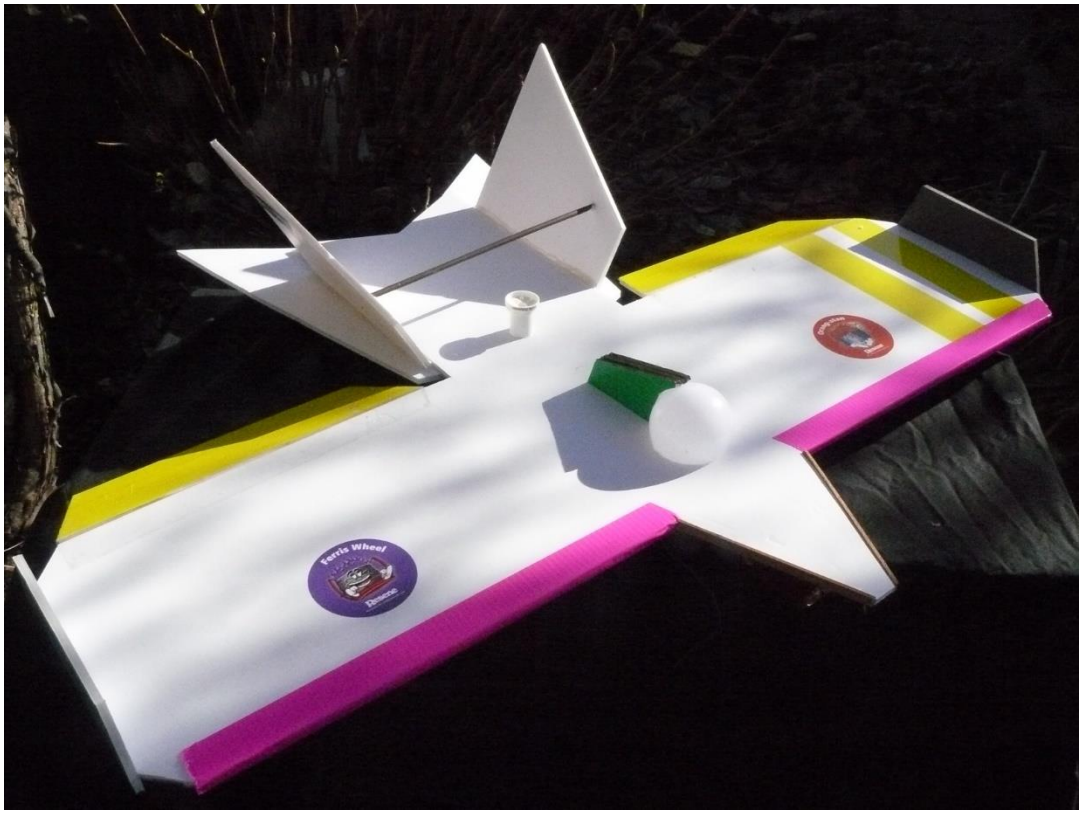


Which developed into this……..

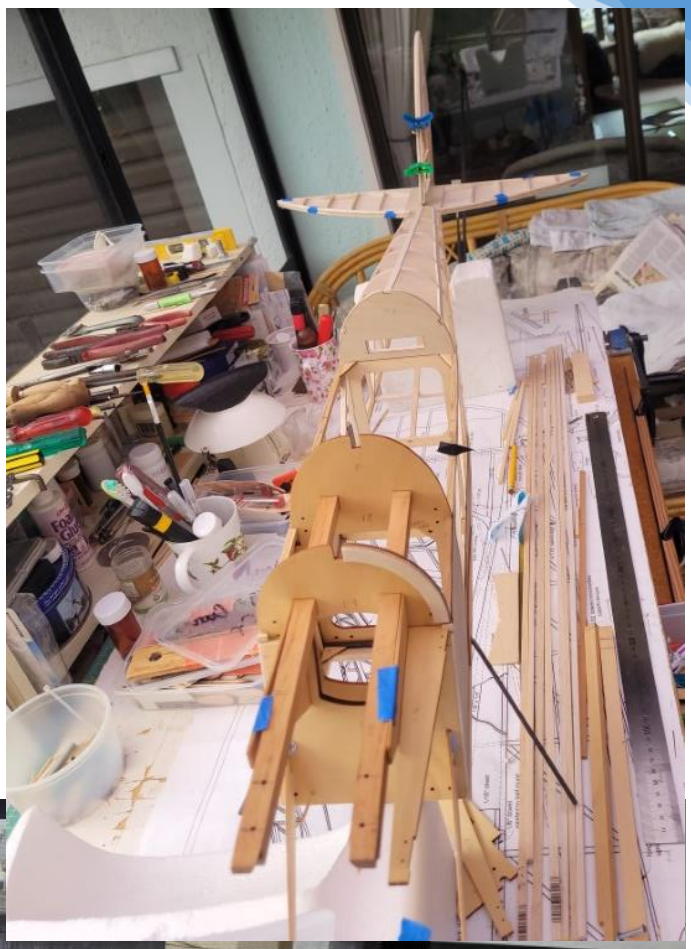


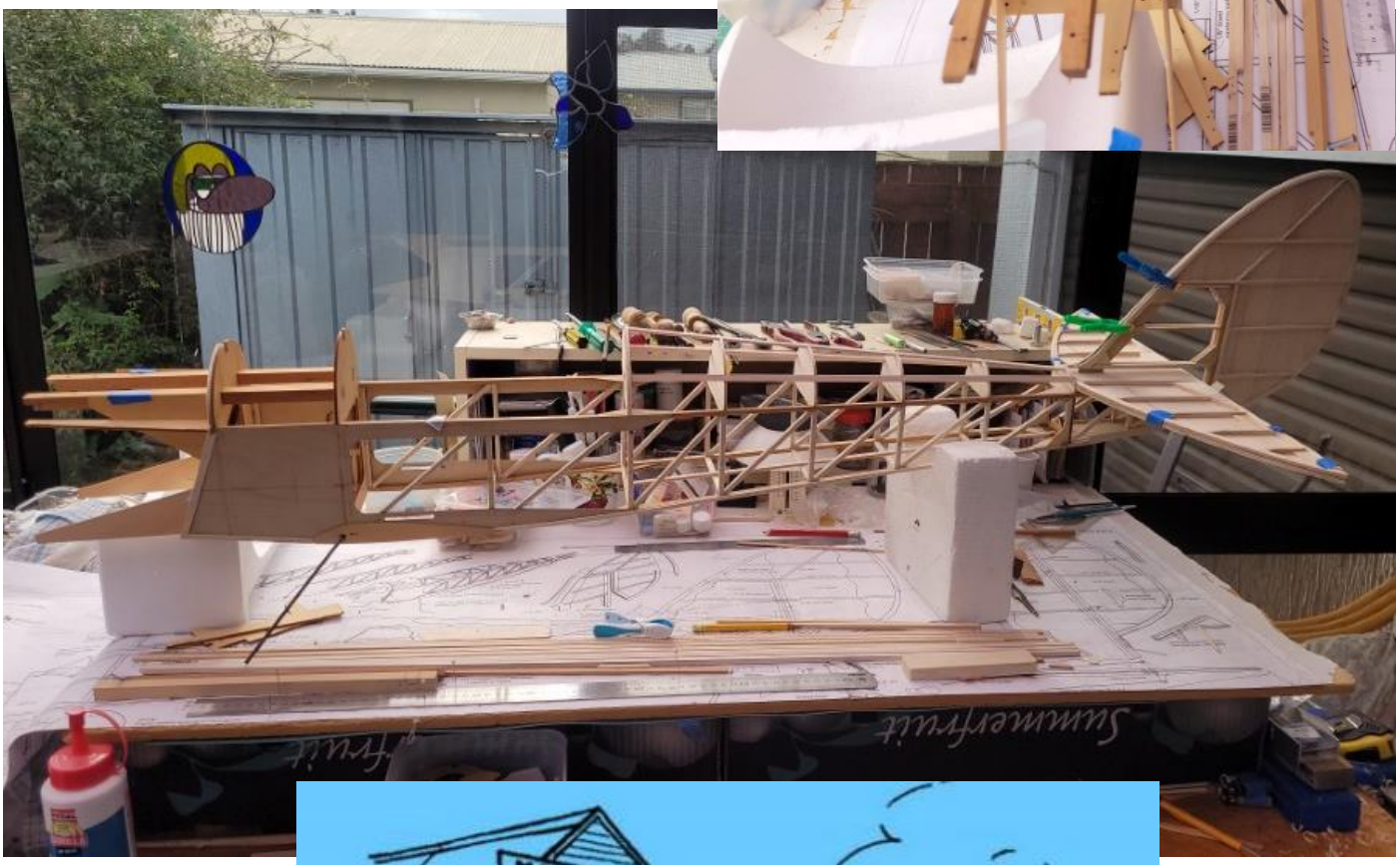
More to follow as "I have a cunning plan" (Yes. Baldrick, as cunning as solving your Mother-In-Law's low roof by cutting her head off!)

Yes, here is the finished article, just awaiting it's test flight. Ed.

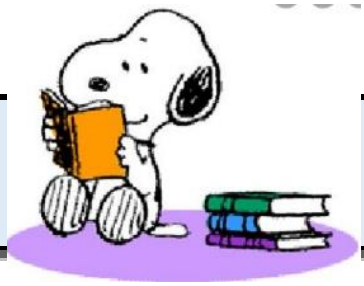


Peter Hammond sent me these photos of his latest project, a 1/5th scale Tigre Moth being built from a kitset. This is the largest model Peter has built, I'm going to call in and have a look at it next week so will have more information next time. A nice place for a workshop project in his sunny conservatory.





Info and Things July 2023



Received this stunning picture from **Past President Alex** taken from his **"Workshop"** at 30 plus thousand feet somewhere over the Pacific Ocean viewing the morning sunrise. A great picture of the HUD (Heads up display) aboard his 787 aircraft. *Mmmm, my workshop doesn't look anything like that ! Ed.*

OH, RAT's A*.**

I went to show Danny my old 3m Cirrus and Challenger I have stored in a box together in the garage and was horrified to find this carnage. I had a rat in the garage once before, that one liked my car wring as a nice treat and have therefore been placing poison around ever since and have kept my eye on it to ensure if any was taken it got replaced.

This damage has only happened in the last 6 weeks as I took the Cirrus fuselage down to fit a receiver and there was no damage then. I have noticed lately the bait pellets being taken and have replenished them constantly but it seems the rat liked to supplement it poison diet with a little balsa and plastic film salad. No accounting for taste. There has to be a moral to this I guess.

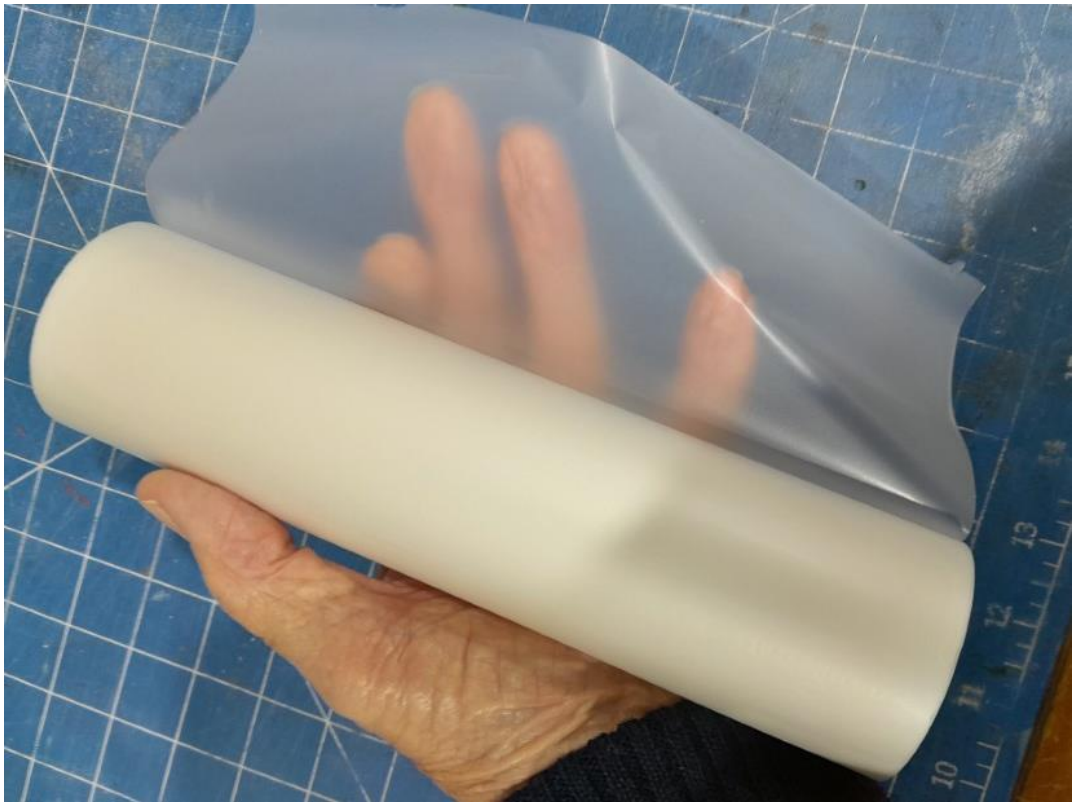
Cheers, **Anthony Hales.** _____

Here is a really interesting contribution from Anthony Hales on the use of laminating film.

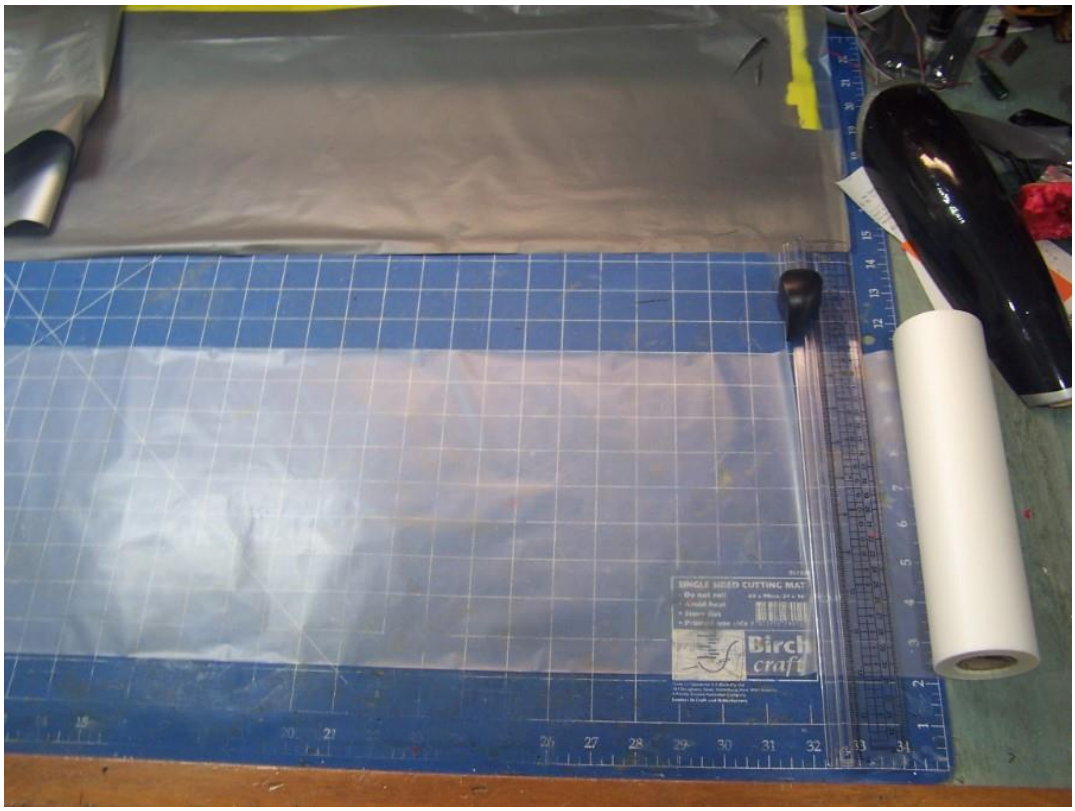
Laminating film covering.

I was never happy with using packaging tape to cover my foam board planes.
I've made a few foam board planes in the past and had problems with not getting the tape straight, darker stripes where it overlaps and I think it is a contributing factor in the paper coming away from the foam board and thought there's got to be a better way. So I decided to try an experiment with the Delta. I had no intention of building one but enjoyed the club night and thought this plane could be the one for my experiment. I built the plane the same as we did on the club night. When I had the basic plane built I rounded all the edges and coated them with a good coat of yellow PVA. Once dry I gave the edges a light sanding to remove any nibs.

This is where things started to get different, I used some laminating film I had bought a while back, a roll of 220mm x 100M of 1mil Matt film from AliExpress cost me $25.40 delivered and only took a couple of weeks to arrive. I cut some strips 28mm wide from the end of the roll and used my covering iron to attach the strips over the rounded edges. I wasn't sure if this was going to work but to my surprise it was very easy to use and the adhesive has stuck well onto the paper.



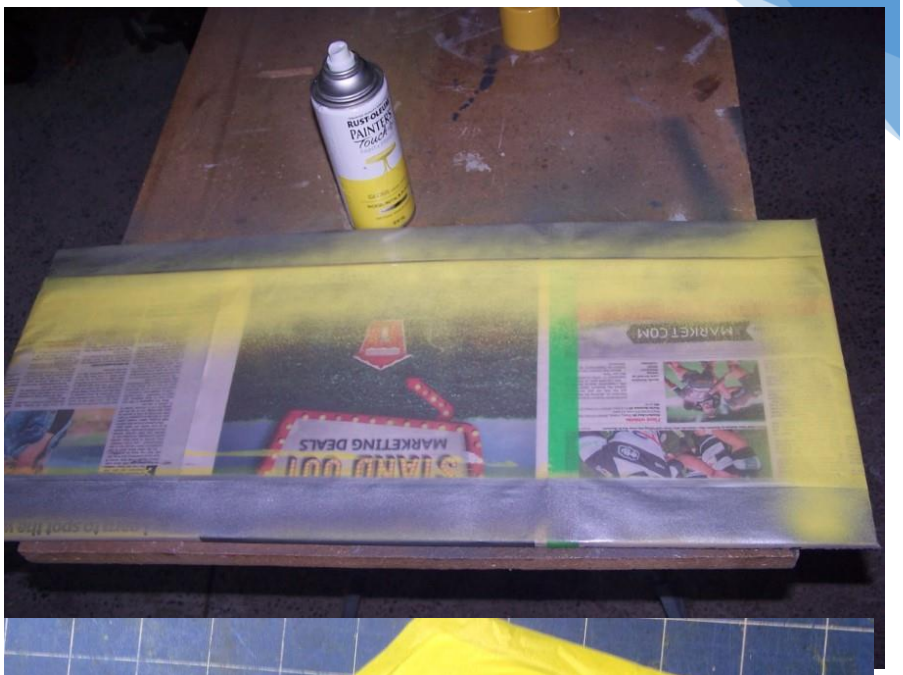
At this point I would have got the packaging tape out but decided to try of something I saw on YouTube a while back. The guy (I think it was Julian Pandana) gave no information on what to do or use but in the clip he taped a piece of film onto a board and sprayed it. I tried painting the film with test pot paint but when it was dry a few days later, I scraped it off with my finger nail with ease. That's not going to work. I tried again with a spray can, Rust-Olium, the same thing happened. I then thought I'd try the spray paint on the glue side, what harm can It do. It worked a treat I had to spray light coats but it dries quickly, I did get a

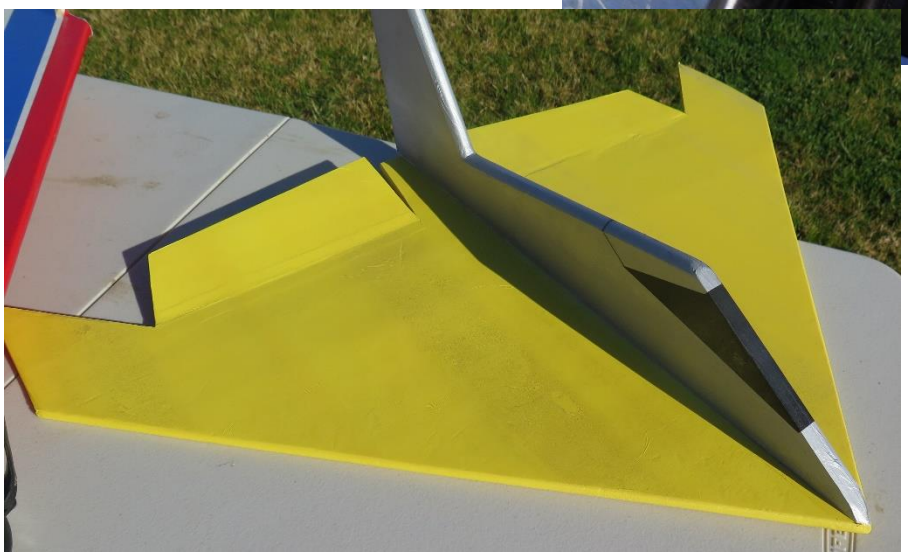


couple of bubbles under the paint where the adhesive came away from the film but these flattened when I pricked them. When it was dry I applied some to a scrap of foam board and was amazed how easy it was to use and the adhesive works well and the bubbles disappeared without any damage to the paint, it's easy to wrap around edges but the down side is that care needs to be taken cutting it as it will tear fairly easily, I use scissors where possible as it was hard to cut with a knife without damaging it, however I've since found a rotary trimmer or really sharp new blade works fine.

I need to try it on frame type construction, then it would be good for vintage or gliders as it is very light weight but I suspect it may puncture easily, that's not so much of a problem on foam board. I'm very pleased with the results. The sample piece in the photo has white spots showing in the centre, that's due to some twit trying to apply it with the glue side up !

Anthony.





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Here is his latest Delta covered with the painted laminating film. It makes a great iron on lightweight waterproof covering. Ed

Back in 2016, Rob Lockyer wrote this excellent article on LIHV batteries. With the ever growing interesting in electric flight, I thought it worth while re-printing . Read on;

High **Voltage** Lithium Polymer Batteries LiHV

I recently purchased some of these batteries to try out and indeed their performance appeared to be superior to the normal LiPo batteries that I have been using, increased power with similar endurance. I decided to do some tests and here is what I found.

The 4 batteries I tested are shown on the left.

The test. Each battery was fully charged at 1C, with the appropriate battery type settings selected, and then allowed to rest for 1 hour. One of my chargers has the ability to measure internal resistance of each cell and the total pack resistance. This was recordered. For the load test my "CLUBBER" was used along with a RC-Electronics Watt Meter and Power Analyser. www.rc-electronics-usa.com The power, voltage and current readings were taken after a 10 second run at full power. These readings where taken by taking a photo of the power meter, thus capturing all the values at the same time - the results are shown below. These new lithium types are advertised as being a high voltage lithium battery. They don't appear to be much higher than a normal type. LiPol cell voltage 3.7v LiHV 3.8V. Charge cut-off, LiPo 4.2v LiHV 4.3v.

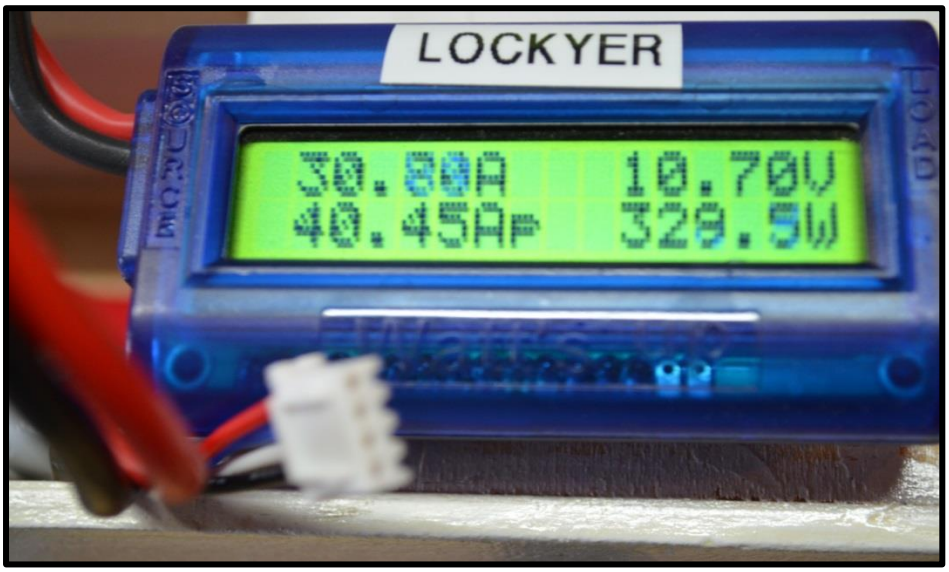
In my opinion the increased performance is due to the higher discharge rate, which is not necessarily because of the higher voltage.

** The point to note here is that the power produced with the Turnigy 30-40C, 2450mAh battery is about the same as the BOLT LiHV.

Battery	Internal Resistance	10 Second Current	10 Second Voltage	10 Second Watts
Zippy Compact 35C 2200 mAh	65 mR	27.2	9.9	268.1
Zippy Compact 35C 2450 mAh	50 mR	27.8	10.0	279.4
Turnigy 30-40C 2450 mAh	18 mR	30.5	10.4	320.0 **
Turnigy BOLT 65-130C 2450 mAh	15 mR	30.0	10.5	319.3

Another test I did was after discharging the BOLT LiHV, I recharged it using standard LiPo charger setting, then repeated the above test. The result was almost identical. I then recharged again using the LiPo setting, waited for an hour after this charge was complete then charged it with the correct setting, LiHV. This top-up charge measured 339 mAh or about 14% of the battery rated capacity.

Photo of test setup



One of the photos of the power meter, showing; 30.8 amps, 10.7 volts and 329.5 watts (the maths adds up, 30.8 X 10.7 = 329.56). Note the Amps peak is 40.45 amps so watch the ESC maximum current. I had one (30 Amp) ESC shut down when using a fully charger BOLT battery. The same setup giving no trouble with a ZIPPY COMPACT type batteries.

This is what the manufactures say:

Turnigy Bolt series high voltage lithium polymer batteries are here, ready to bring out the next level of power to your high performance model. Turnigy Bolt batteries are built to the absolute highest of standards to provide competition level performance. With features such as gold plated balance leads, silver plated discharge wires and a reformulated matrix to allow you to safely charge them up to 4.35 volts per cell! These batteries are simply unmatched by any other in performance and build quality!

In addition to the higher nominal and max voltage, they are engineered to take high C rate discharge up to 65C continuous. Basically what this means is that these batteries will provide more power in your machine especially during high current draw maneuvers, and they will provide a longer cycle life due to the lower operating temperatures of the pack.

More than just a fancy name. TURNIGY Bolt series lithium polymer batteries are built with a LiCo nano-technology substrate complex and an all new CNT (carbon nano tube) additive greatly improving power transfer making the oxidation/reduction reaction more efficient, this helps electrons pass more freely from anode to cathode with less internal impedance. In short; less voltage sag and a higher discharge rate than a similar density lithium polymer (non nano-tech) battery.

Features:

- *Higher charge voltage than standard lipos*
- *Higher capacity than comparable size packs*
- *Super high 65C discharge rate*
- *Heavy duty silicone wire discharge leads*
- *Perfect for high performance models*

Robert L , Feb 2016

For those of us that like to watch aircraft landing, here is a neat video of the early arrivals at this **year's EAA Air Venture** airshow at Oshkosh USA.

Wouldn't it be nice to be there !!

Just click below to watch the show. (anon)

[Early Oshkosh Arrivals - Saturday Part 2 - EAA AirVenture Oshkosh 2023 - YouTube]

This comment from **Anthony Hales**; Thought you may like this, perhaps another use for the Delta. **Anthony.**
https://youtu.be/DXdPas-FkkM

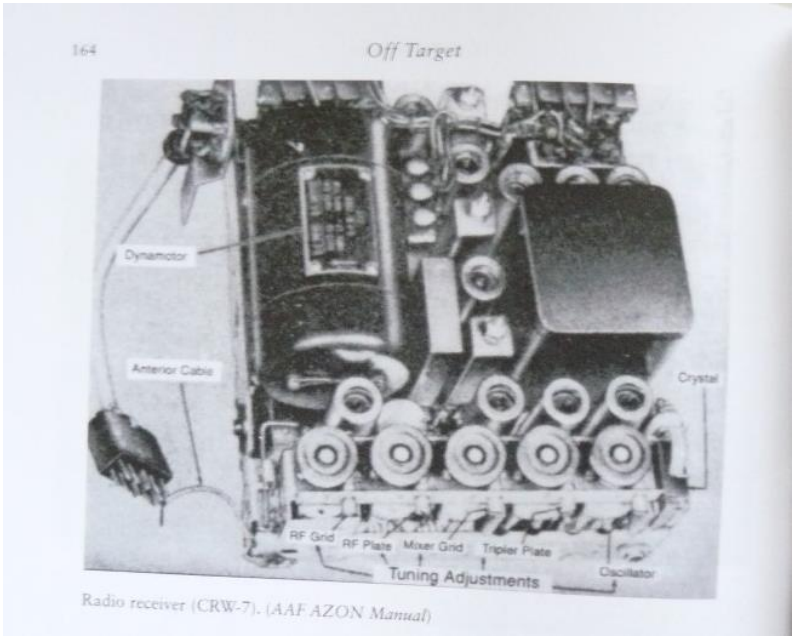
Maybe some FB Delta flyers without the ply fuselage box and large flight battery might be the way to go. **Ed.**

****

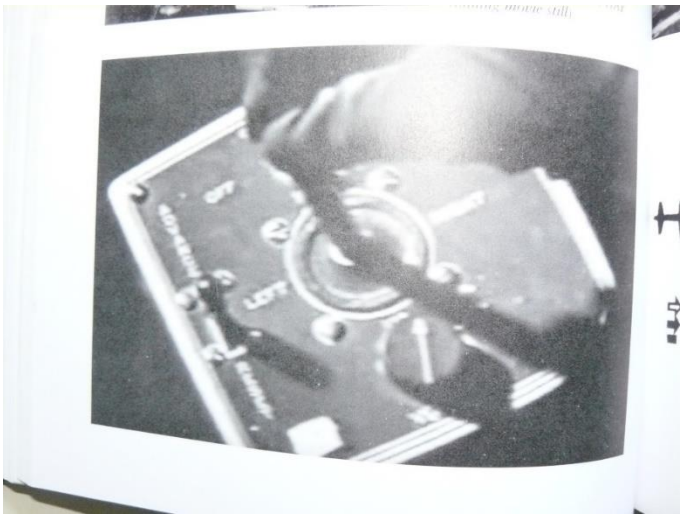
And a follow up comment from **Barry Lennox** who I "leaked" some of the drone info to;

Yes, the old "Galloping Ghost" bit was interesting, All this Galloping Ghost stuff was copied from an early German guided bomb from about 1943, then a bit later the US developed the "AZON" guided bomb widely used in the later stages of WW2.

I've attached a couple of pics, one of the AZON receiver that went in the bomb, and another of the bomb-aimers control panel and joystick. Sorry about the pic quality. Barry Lennox. CHch.



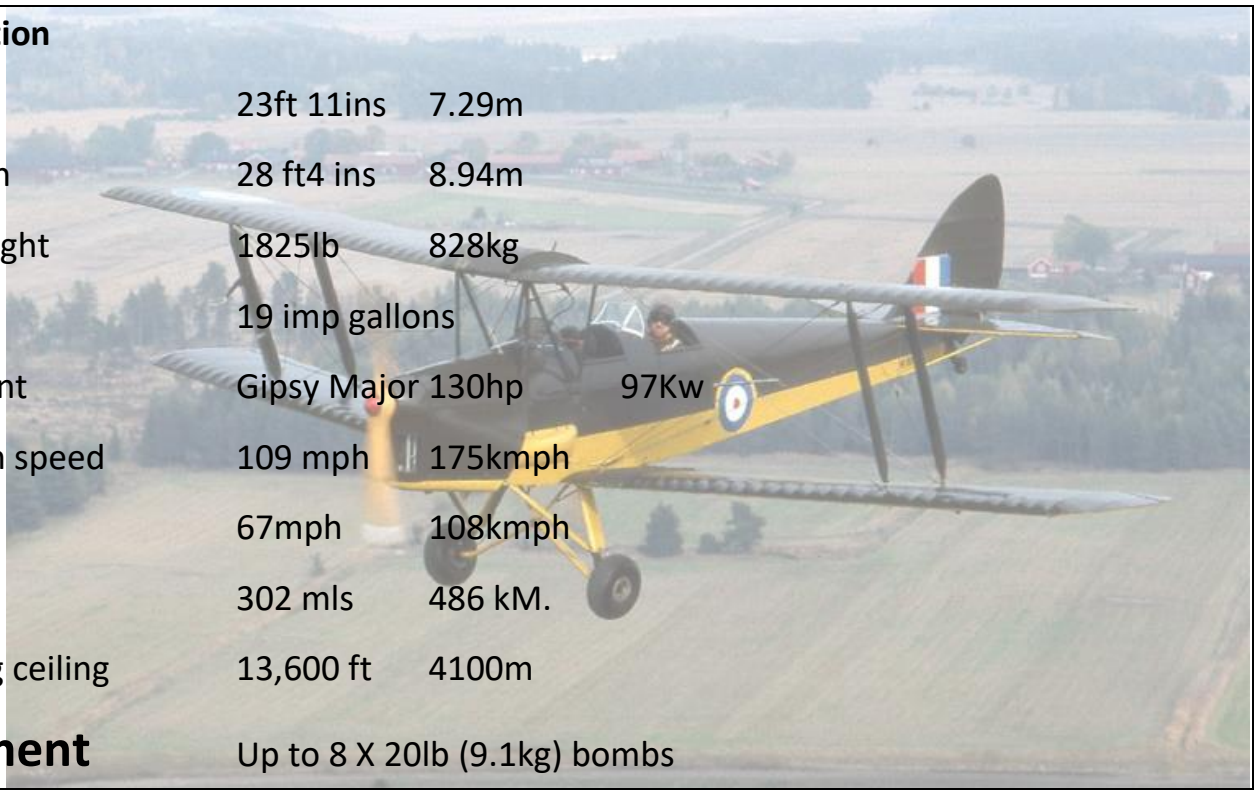
Radio receiver (CRW-7). (AAF AZON Manual)



CLIVE'S CORNER. #11 July 2023

Another month goes by and Clive continues his series of aircraft, both full sized and those modelled by club members;

The DH 82 Tiger Moth.



Specification		
Length	23ft 11ins	7.29m
Wing span	28 ft4 ins	8.94m
Gross weight	1825lb	828kg
Fuel	19 imp gallons	
Powerplant	Gipsy Major 130hp	97Kw
Maximum speed	109 mph	175kmph
Cruise	67mph	108kmph
Range	302 mls	486 kM.
Operating ceiling	13,600 ft	4100m
Armament	Up to 8 X 20lb (9.1kg) bombs	

In the beginning there was a Tiger Moth.

Actually, that isn't true because there was a Tiger Moth (DH71) before the Tiger Moth (DH82). DH71 was a single seat monoplane with a wing span of only 19 feet that first flew on 24 June 1927. There were only two built and one of them set a speed record for a light plane of 166 mph and that was on engine of only 130 hp. It wa faster than most fighters of the day.

But anyway it seems that de Havilland had a limited role for this Tiger Moth. They wanted to try out a new engine known as a Gipsy Major to replace the Cirrus engine they had been using in their light aeroplanes up to this stage. They flew them a few times in Kings Cup races and then sold one to an Australian who crashed it. The other one sat outside the de Havilland factory at Hatfield until it was destroyed by enemy action on 3 Oct 1940.

Looking at the photographs of the DH 71 it is an attractive streamlined shape. I wondered why we don't see one at the flying field so I looked at Outerzone. Yes it is there, but with comments like "I was lucky to get it back" and "adding a big lump of lead in the nose." Sarik Hobbies in the UK supply a kit for electric power. Let it be a challenge to you.

De Havilland must have decided that they had not got a fair return of the name Tiger Moth so when their biplane trainer came along they re-assigned it to the new aircraft. This first flew on 26 Oct. 1931. With the possibility of war hanging over them the RAF purchased the Tiger Moth as their *ab initio* trainer. Orders from 25 other countries followed and de Havilland struggled to meet the demand. Additional factories in

Canada and New Zealand were started up and a total of 8868 Tigers were built. New Zealand's contribution was 345 and a factory that could be converted into a terminal building when an airport was built for Wellington in the 1950s. (Note that Australia got to build Mosquitoes.)

In addition to the training function the RAF had need of the Tiger Moth as a stop gap for England's defensive role . Bomb racks were added which would enable the Tiger Moths to be used against the German barges in the event been made to land an invasion force. Which justifies the spot for the Tiger Moth at the Warbirds at Awatoto fly in. One with bombs on would be cool.

And interestingly enough a version of the Tiger Moth known as the Queen Bee was built for gunnery training. This had the wings and tailplane of a Tiger but a simple wooden fuselage. The aft cockpit was closed in and contained the radio equipment while the front cockpit was retained for a pilot if a cross country flight was required. A little bit of work and one of our club Tiger Moths could be converted to a radio control version of a radio control version of a Tiger Moth.

De Havilland had built a series of Moths before the Tiger Moth. They used their experience in the later plane. To make it easier to quit the front cockpit in an emergency the fuel tank was moved forward and the wings given significant sweep back. The operation of the ailerons was made asymmetric so that the up aileron moved more than the down one. This gave positive yaw which enhanced the turn.

Canadian Tiger Moths had enclosed cockpits to cope with the climate and there was a glider tug at Wigram with a similar arrangement. Five squadrons of Tiger Moths were in operation in NZ throughout the war but were supplanted by Havards at the conclusion. The surplus Tiger Moths were sold to aeroclubs and to private pilots and a number are still in flying condition.

In NZ at this time there was considerable interest in improving the productivity of our agriculture sector. The RNZAF was asked to carry out trials using a variety of aircraft for top dressing. Proposals were drawn up for using DC3s but it was thought that these would be prone to corrosion, and anyway they were more suited to carrying passengers. Early trials were carried with Avengers, a hulking great ship-born torpedo bomber with three man crew.

The air force then set up tests at the Hood aerodrome in the Wairarapa using a converted Bristol Freighter equipped with three large hoppers. This was watched with interest at SAFE headquarters in Blenheim where it was reported that it was difficult to keep the load balanced and the hopper operators were prone to airsickness.

At the same time development of practical aerial top dressing was taking place amongst the out of work pilots using the aircraft they trained on, the Tiger Moth. While the load they could carry was limited to around 100kgs the flight times were short, operating from rough strips built on the target farms. It was realised that the lack of brakes on a Tiger Moth could be overcome by placing these strips at a top of a rise.

My introduction to the Tiger Moth was at Omaka aerodrome, home to the Marlborough Flying Club and the Marlborough Airworks. It also had a number of young pilots flying as co-pilots with SAFE. There wasn't much for them to do in Blenheim at the weekends. There was no wine industry there in the 1950s, the young pilots gravitated to the flying club.

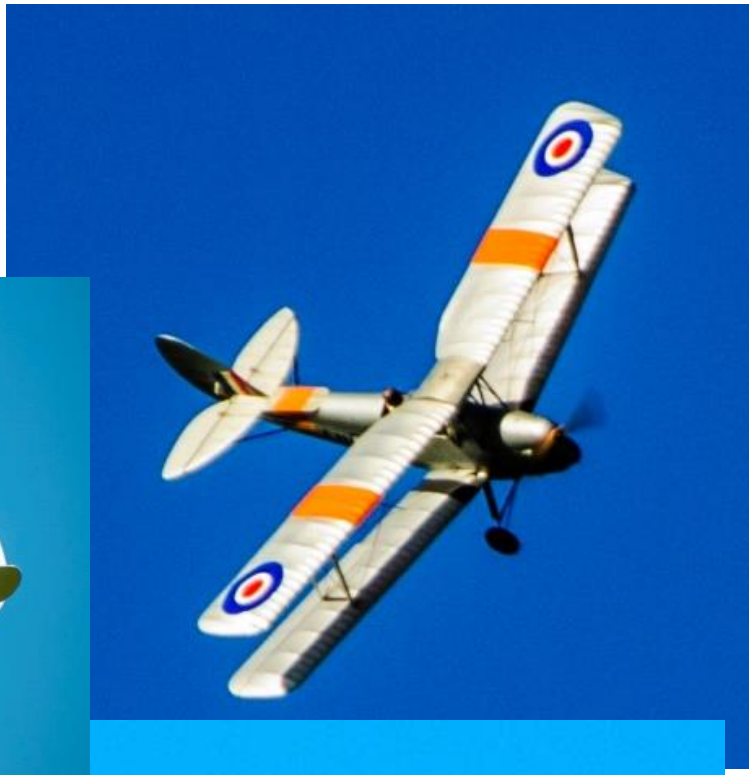
I used to bike up to Omaka and watch them. They flew aerobatics but with little finesse. Tiger Moth had a VNE (velocity never exceed) of 130mph. Speed in a Tiger Moth was indicated by a flat plate on a spring backed by a quadrant, mounted on an interplane strut. One hundred and thirty was marked with a big black mark. To do a loop it was necessary to accelerate to near 130 mph by diving and then pulling up. There was just enough momentum to keep moving over the top. The manoeuvre was completed with an overall loss in height.

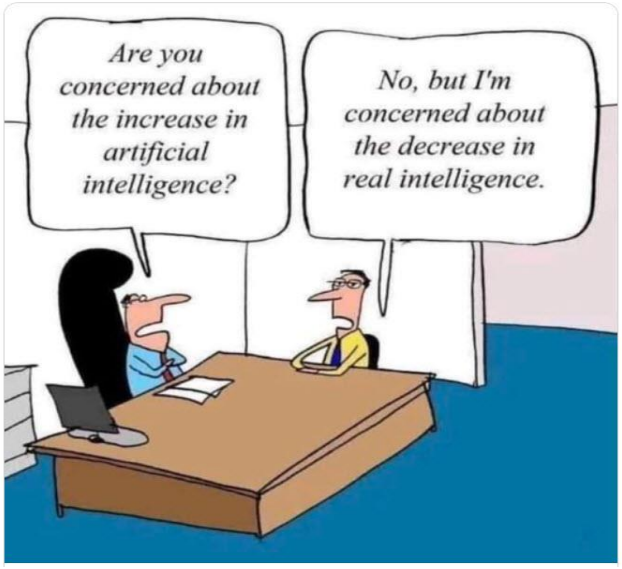
Rolls were also a simple way to lose height. With an engine rated at 130 hp it wasn't possible to stop the nose from dropping. Spins were very flat and I found out that the strakes on the later Tigers each side of the aft fuselage were not anti-spin but actually to enable them to be spun both ways.

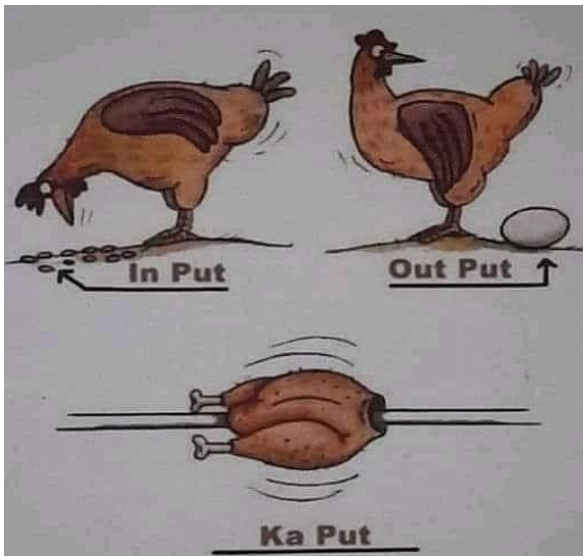
A New Zealand Tiger Moth Club aimed at encouraging the growth of interest in vintage aircraft was founded in 1969.

Clive Baker June 2023.

Members' models…….

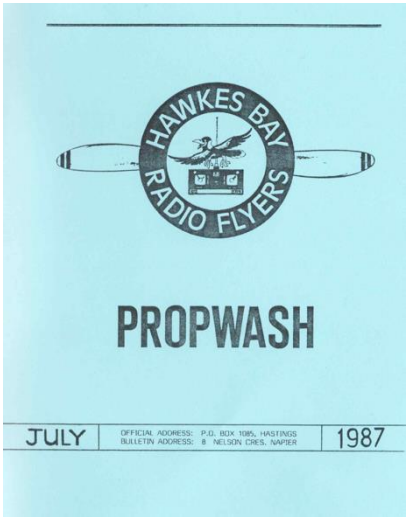






From the OLD PROPWASH ARCHIVES. Pt 3

This is the third in a series of a history of the club back in the eighties drawn from old Propwash Bulletins when ***Bernard Scott*** *was both Secretary and Bulletin Editor.* ***Bernard*** *continues to make the past available and keep it alive.* ***Ed.***



PROPWASH : July 1987

Highlights and comment; ***Click on the Propwash cover for the full bulletin.***

Monthly Club Meetings at the Pakowhai Hall were cold events in winter as the hall heating was minimal. Entertainment for the July meeting was a documentary "History of the Spitfire" played through, by today's standards, a tiny TV.

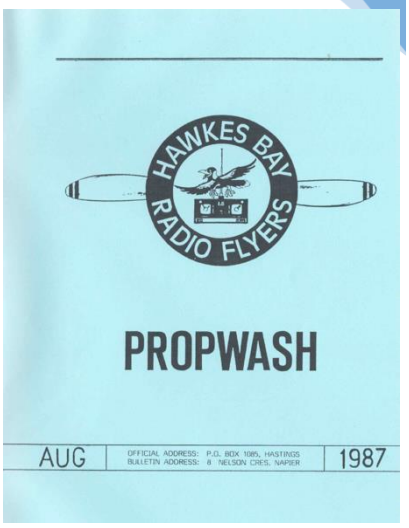
The need to check coverage of aeromodelling gear by household insurance was explained as some policies had a clause exempting "aircraft or any special device and their accessories and spare parts". No cover for anything aeromodelling with that clause. I phoned my insurance company who were puzzled that I would want to insure toy airplanes. I explained that although the models were indeed toys of a sort, they were "big boys' toys" and therefore of some value. I was able to add a list of models and motors to my policy as "special items" - for an extra premium, of course.

A regular column in the pre-Propwash bulletins was devoted to strange, humorous, and sometimes destructive flying incidents at the strip, written by Pit Spy. After being missing for several months, a plea was made for the return of the column. Is Pit Spy still out there - who were you?

John Clarke gave instructions on constructing a workbench and the centrefold presented an RC trimming guide that would still be useful today. Yes, the aim of Propwash was not only to inform and entertain but also to educate!

On the Club betterment front, the President made available a large Piper Cub for the training of new pilots, and the unseen work towards the clubhouse continued.

PROPWASH : August 1987



Highlights and comment; ***Click on the Propwash cover for the full bulletin.***

Building a new model today usually means setting it up with its own set of RC gear. However many, probably most, radio fliers in 1987 had one set of gear that had come with up to four servos. And as even back then most had more than one model, servos had to be moved from one model to the other. One modeller's card system was drawn for the bulletin, recording how each servo was mounted in the model, its function and connection to its pushrod - right down to which hole in the servo output arm.

Doug Duggan reported on the Solstice Scale Shindid at Whangarei. The Whangarei strip of the time was described as superb, with facilities to lust over, so we now knew what we should be aiming for at HBRF. The report mentions many of the "old names" including Ron Wadman, Colin Grange, Jim Clague, Gwyn Avenell, Colin Austin. Geoff Locke. For Doug, the icing on his cake was the running of Stu Wallace's Sirius 5-cylinder radial engine, bolted to Doug's Camel trailer.

A full size plan for the Indoor Glider competition took up just half a page. It was a tiny version of the Sweepette, a popular design that is still seen today, enlarged for discus launch.

Club Aerobatics had not been without complication.

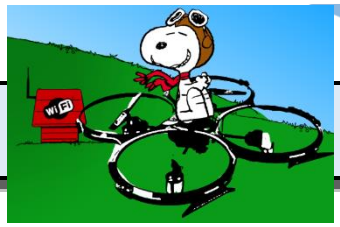
> The start was delayed by competitors who were not prompt in attending the briefing and by a protracted, but unresolved, discussion of the requirements of the double stall turn manoeuvre (see below for what you should have done).

John Sutherland sorted it out with a diagram of the manoeuvre, a visual aid for those confused and disoriented by the double stall turn. The top two models were Cavaliers and the only "real" aerobatic design in the competition was Harvey's Tipporare.

The next meeting was to be a bring-and-buy, a sure sign that the Committee was running low on ideas for meeting topics.

Bernard Scott HMAC July 2023.

Target Drones. *Phil Sharp*



Following the Delta Flyer clubnite build, when Phil told me he had painted his delta in the colours of the target drones he built, my ears pricked up. Needless to say when he explained and offered to do an article I was overjoyed and here it is. Are there no ends to this man's talents ? read on;

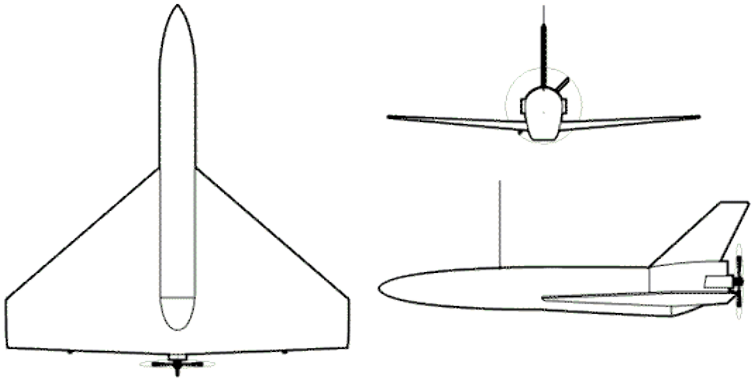
The Meggitt BANSHEE.

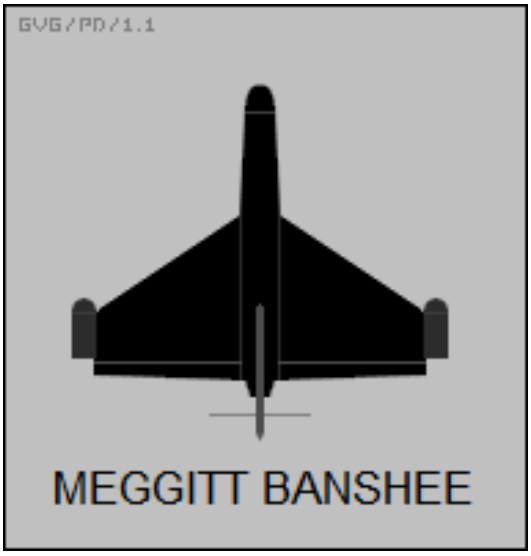
Having built and flown the foam board Delta it took me back to 2000 or so when I had the Composites Company in the UK. I started my business, DPS Composites in 1987 after being involved in the early days of carbon fibre while at McLarens as chief mechanic. McLarens produced the first carbon chassis in 1981 for the MP4/1 which had it's race debut in Argentina on April 12th, (funny enough my birthday!) The chassis was actually produced by Hercules Corp in the USA to McLarens design. From then on more and more parts were produced in carbon. The current F1 cars are about 90% composites, chassis, body, suspension, gearbox, etc, etc.

DPS Composites primary focus was motor racing, and eventually grew to about 65 staff operating 24 hours a day 7 days a week during the season, about 9 months of the year. It was very intense, and we produced parts for most of the F1 teams, as well as sports cars, Indycars and saloon cars, among other things.

The way motor racing is there is always a quiet time, generally Sept to Dec, so it was a problem to keep everyone busy, and the income flowing. I was always looking for some steady work and this is how I got involved with Meggitt Defence and their Banshee Target Drone. **BANSHEE Click Here **

We had started an aerospace division in Wales and this was an ideal project for a production based company, rather than the highly specialised motor racing type of work. The Banshee was first produced by Target Technology in 1983 by Rob Davies, who was a keen aeromodeller. It was regular wet lay-up fiberglass, and large numbers were made and flown by many countries around the world.





I was approached by Rob in the late 90's to produce the Banshee using modern materials and techniques. The three requirements were, lighter (easy), stronger (easy), cheaper!! (not possible), however we were awarded the contract, and produced all new patterns and moulds that would take the temperature and pressure for autoclave cured components. The material used was E-Glass epoxy prepreg, which we had especially made with red and yellow pigment, to avoid having to paint the finished components. Red and yellow are standard military target drone colours.

The fuse was a few layers of glass with a plywood engine mount at the rear built in. The wing was made in two halves, one ply of glass either side of Herex foam. Two wooden spars were bonded in and the two halves bonded together in a jig. It is just a large model! Various versions have been produced, the latest one are jet powered (Jet Cat I think), but most of the ones I was involved in had a 3W flat four two stroke of about 50 HP. It had four stubby exhausts and was incredibly noisy! It was launched from land or sea by a bungee catapult, which fired it off at about 25g!

Some of the construction detail is revealed here in this “Used” model recovered after target practice in India.

I will digress here, there was a club in the UK called the dangerous sports club, and one of their members convinced Rob that he would like to be fired off the catapult! Needless to say that it didn't end well, although I am not sure of the injuries.

The Banshee could be flown manually, or with a pre-set altitude control, or more commonly by GPS on a preprogramed course. Most of the time the Banshee was use for target practice and was fitted with various sensors to measure how close the ammunition was getting. Another version had a stainless steel nose cone that was heated by a gas burner to increase the thermal image. We even made one with the exhaust pipes running the length of the leading edge of the wing, for the same reason.

Of course a lot were shot down (good for business!) but they could deploy a parachute for a relatively safe landing. Normally they would be launched from land or ship, and fly a preprogramed course, and then approach a ship or shore based guns, with the operators tracking the target, and then trying to shoot it down. Over 8000 Banshee's have been produced in various forms and power plants, 3W Twin, 3W Flat Four, Wankel, Single Jet and Twin Jet, and they are in use around the world. It was a very interesting program for me, and a welcome change from all the motor racing work.

It also led to a much bigger project which was the **Voodoo** program.

The voodoo was a larger drone designed to simulate a cruise missile, and was powered by a three cylinder engine based on a Triumph motorbike engine and developed by Ilmor Engineering, who built the Mercedes F1 engine, among a lot of other things. It produced 145 HP and swung a prop of

48inch diameter and 84 inch pitch, and yes I did get those numbers around the right way!! We did all the design, tooling, and prototype production for this program. Our in house engineers did all the detail work, with the aerodynamics contracted out, and the whole airframe was designed solely using CFD (Computational Fluid Dynamics) which was pretty new at the time (2002). From memory we had about six months from initial design to first flight, so it was a very tight timeline.

All up weight was 200kg with a top speed in excess of 300knt, which meant it had a fairly small and thin wing to reduce drag. It would not fly below 100knt so was launched on a pneumatic catapult.(picture) It had similar avionics to the Banshee, and also a large parachute for landing. It was all carbon fibre and honeycomb with the only metal being the engine mounts and the wing spars. The wings were produced in matched aluminium tooling, and each side was laminated and cured in the autoclave in one piece.

The whole airframe was tested to 6G, and I think the wing deflection at that load was about 100mm at the tip. I was at the first flight which was conducted at the Military firing range on the Kent coast, which happened to be right next

to one of the UK's larger nuclear power stations!! It was very nerve wracking watching it sitting on the catapult. With the engine screaming at full throttle, and wondering if it would fly. Fortunately it did, and after a short flight the parachute was deployed, and it came back with minor damage. Meggitts were supposed to have fitted an air bag to soften the landing, but had decided not to, so the landing impact was way above our design spec. All the rest of the testing was in the Mohave Desert (USA) and was very successful.

I could go on and on! But that is probably enough, I have attached a few pics from the net, I don't really have any of my own as at the time all the work was strictly confidential. It probably still is!!!

Regards, **Phil Sharp.** MFHB.

Subsequent to receiving the article, I asked Phil three questions; **His answers ; -----**

1. Did you do the whole package; installation of motor and electronics etc ? We produced complete airframes, Meggitt installed the engine and electronics.
2. What was the electronic gear- Rx, Tx and servos and radio system ? The electronics were Meggitts own, but with a variety of servos, Multiplex Jumbo being one of them. (I still have one if you need a big servo!!!!)
3. When are you going to build one ? Maybe half scale, a good shed project when we are up and running again!

As an after thought Phil had a rummage through his archives and came up with this picture, he wrote ……

“ I was trawling through a bit of stuff that I had about the Voodoo and came across this. It was taken at one of the tests in Mohave, the result of Meggitts wiring the Gyro back to front!!

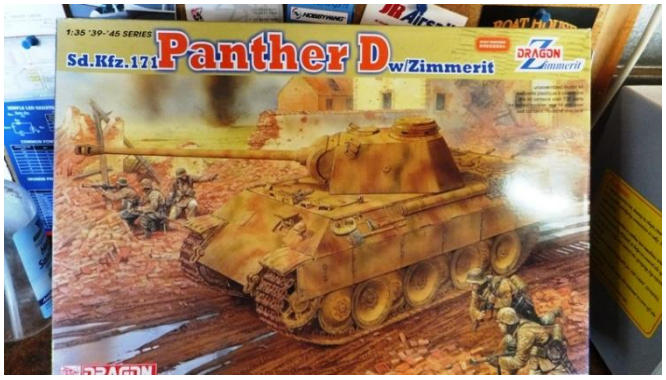
We have all been there!”

A Military Diorama

Just something a bit different from our resident plastic model maker Brett.Robinson who writes;

Having acquired a number of model items taken from the hobby room of the late Peter Fraser, I looked at what I had and, as I hadn't done much in the way of plastic model military modeling of late, my eyes fell on a Dragon 1/35 Panther tank model.

The model was still in its box and Peter had actually made a start on assembly, but a good deal still needed to be done to complete the model.



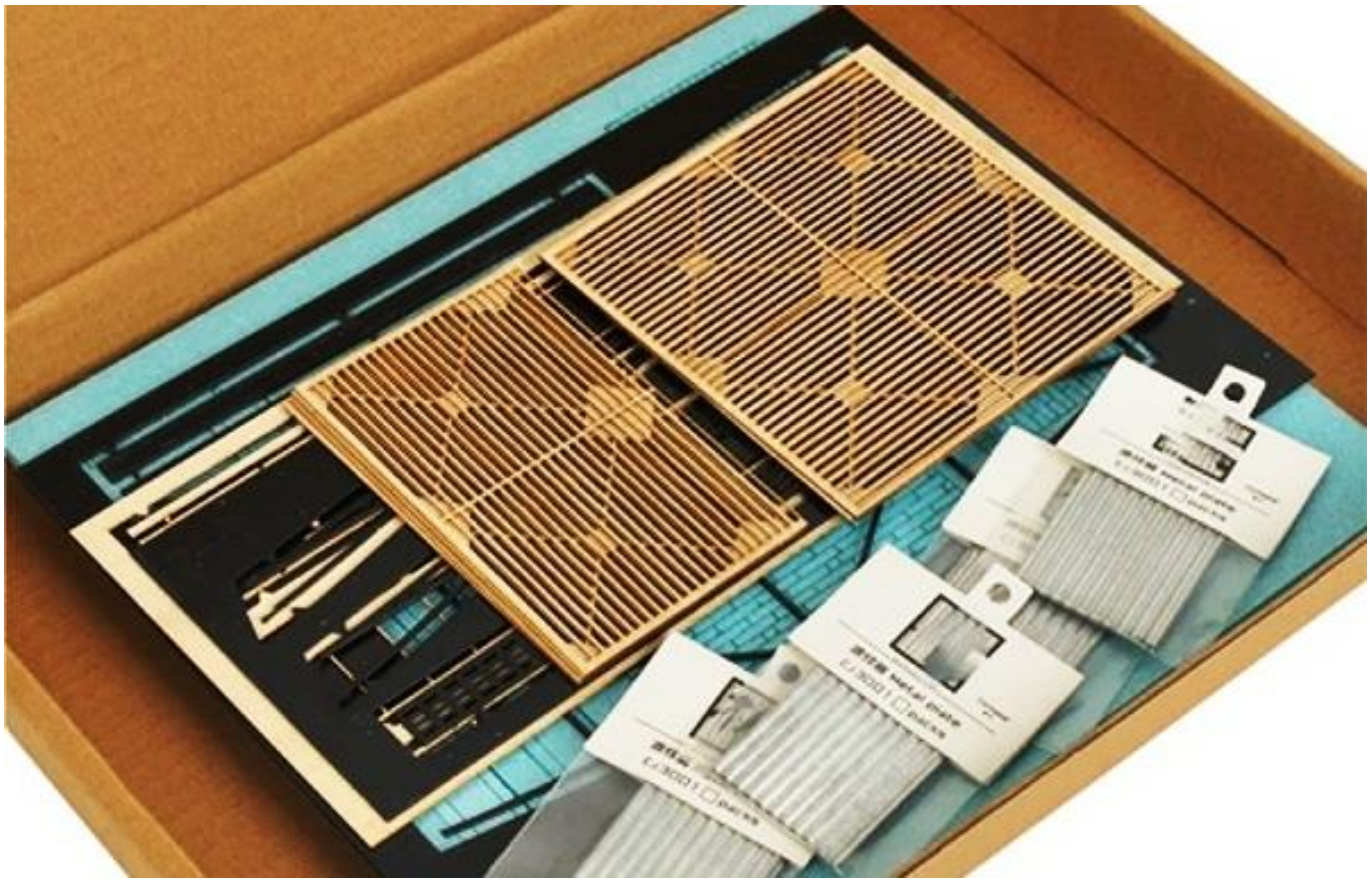
Okay, so a start was made, the basic tank hull was all pretty well done, just needed wheels, tracks and a camouflage paint job, although the hull had been painted in desert yellow. Unfortunately, Peter had already taken the wheels off the sprues and while he had labeled them all on the instructions sheet, they didn't then match with the labels he'd put on the backs of the wheels themselves! Caused a bit of work and a lot of frustration, also some bits were missing and had to be sourced from the 'spares box', but we got it all done in the end.
The camouflage (striping) was done using RLM Grey and Red Brown – both sprayed with my Iwata airbrush. The whole tank was then 'weathered using dark brown and black ground pastels, put on with a hard brush. A bit of silver was also dry-brushed on to the model to show scraping and slight damage.

So… the model is now complete…. it now needs a realistic diorama to set it off.

Okay, so we need to create a diorama.
I usually make mine to a standard size and the base is usually white or sometimes blue foam.
In this case, part of the diorama (the building road frontage was to be a cobbled road.

I had some plastic cobbles and they got glued to the base. I wanted the road frontage view to be a pristine one and not be showing too much damage.
The other side, however, I want to show a severely damaged structure, so in that case, I laid down some white cardboard tiles to simulate concrete and marked and weathered them a bit with a black pencil.

Next came the construction of the building itself… this is a kit sourced via AliExpress
Parts came in blue foam (walls) or laser cut thin wood,



The building could be constructed either in pristine condition, or as I did, in a damaged state.
The actual instructions for the assembly of said building can be viewed from **HERE** (PDF format)
The blue foam actually had brickwork impressed into it and that required painting, which was a process in itself….
Firstly, you paint the blue foam matt black, then, using a pin; rescore all the brickwork grout lines (this helps when you add the 'rapid filler grout' later on.)
Paint the whole walls 'brick' red and after that's done, it's time to paint the bricks. You can either paint them individually (in a mixture of yellow, brown or orange) or, as I do, use a mall foam pad the size of a brick soaked with paint. (In 1/35 scale, yes, that Is Small)
The last part of the process is adding the white 'grout', this is done using rapid filler scraped hard over the bricks until it fills the grout lines, that were enlarged at the start of the process. Sure, it's time consuming, but the end result justifies the work required.

The walls were then glued to the base and the roof constructed. The (paper) corrugated roof sheets were sprayed silver and glued to the roof, suitably 'damaging' a good number of them in the process.
Having done that, a bit of plaster of Paris was mixed up an added to the base to form rubble piles. A bit of resin sand was 'dusted' onto the base and sprayed with water to set it. Odd bits of damaged tiles, metal, iron, bricks etc. were added to the rubble piles and around the base.
I also painted up ten German tank crew figures in various poses and posed them in, on and around the tank itself and the job was done!

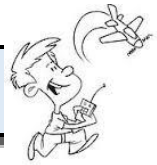
The completed diorama is as below:

Just something way different from aeromodelling and I enjoy the vastly different skills required in not only making the model but also making a realistic ‘setting’ for it to be displayed in. Also, plastic model making is Not weather dependant, the models don’t crash, it can take days/month/years to complete some models and the cost of most kitset models is way cheaper than most R/C Models!

Besides, I’ve actually been making plastic kits way longer than model aircraft as well too!
Anyway, hope this all is of interest?

Brett
July 2023

Soaring Report; July 2023



An update from Soaring Hawkes Bay. Kev "Rowdy" Botherway reports;

Attached is the new Soaring calendar for the rest of 2023.

August		NDC	Event #426, Class R, eRES 2M
August		NDC	Event #427, X5J Unlimited Class O
August		NDC	Event #428, NZ F5K CLASS Q, 4 Rounds, Tasks A, B, C & E (Total Raw Scores)
August		NDC	Event #429, Thermal D (F500)
August	18th <> 20th	NI Aerotow	Hawkes Bay, Aorangi Road
September		NDC	Event #430, ALES 200 Class M (Scoring per 3.13.7)
September		NDC	Event #431, ALES Radian Class P
September		NDC	Event #432, Thermal J (2,4,6,8,10)
September	2nd & 3rd #	NI Electric	FAI F5J - Black Bridge, Hawkes Bay
September	15th <> 17th	NI Aerotow	Hawkes Bay, Aorangi Road.
September	16th & 17th #	NI F3B	F3B Round 4 NI Series - Black Bridge, Hawkes Bay
October		NDC	Event #433, ALES 123 Class N
October		NDC	Event #434, ALES Radian Class P
October		NDC	Event #435, F3K Tasks B,D,G,H only (total raw scores)
October		NDC	Event #436, FAI F5J, 4 Rounds (Total Raw Scores)
October	13th <> 15th	NI Aerotow	Hawkes Bay, Aorangi Road
~~October~~	~~28th & 29th #~~	~~Soar SIG / NI F3K~~	~~Southern Fling F3K & Round 3 NI series - CANCELLED~~
November		NDC	Event #437, F3K Tasks B,D,G,H only (total raw scores)
November		NDC	Event #438, ALES 200 Class M (Scoring per 3.13.7)
November		NDC	Event #439, Thermal H (2 Metre Glider)
November		NDC	Event #440, Class R, eRES 2M
November	2nd #	Soar SIG	Soarchamps - F3B - Black Bridge, Hawkes Bay
November	3rd #	Soar SIG	SoarChamps - F3J - Black Bridge, Hawkes Bay
November	3rd ##	Soar SIG	Soarchamps - ALES Radian & 2M eRES - Black Bridge, Hawkes Bay ##
November	4th #	Soar SIG	SoarChamps - F5J - Black Bridge, Hawkes Bay
November	5th #	Soar SIG	SoarChamps - F3K & F5K - Black Bridge, Hawkes Bay
November	24th <> 26th	NI Aerotow	Matamata
December	1st <> 3rd	SI Electric	Open FAI F5J, Christchurch.
December	8th <> 10th	NI Aerotow	Hawkes Bay, Aorangi Road

We do have a large competition here later in the year – **Soarchamps November 2nd to the 5th** which we expect significant entries for soaring this will include our new CLASS R: E-RES 2M (Electric Rudder Elevator Spoiler 2M Glider) .

With the recent weather there hasn't been too much happening and unfortunately had to call off our F3B competition due to the latest weather forecast with a full weekend of rain in it.

The NZ F5J team is about to head to Bulgaria for the F5J World championships

This is the first all MFHB team **Andrew Hiscock, Joe Wurts and Kevin Botherway.**

We will also have **Jonathan Shorer** as team manager. **Jane Hiscock and Dave Pratley** as helpers. We leave on the 6th of august and have planned two days practice then we fly the pre-worlds competition and after the World champs begin for a full week.

F5J is an electric motor launch version, the maximum wing span is 4 metres which allows many types of models.

Each model has a device installed that records the launch motor run time and height. The maximum motor run is 30 seconds. The motor can only be run once during the working time. There is a launch height penalty in place. Each metre of the recorded Start Height results in a deduction of half (0.5) a point up to 200m and three (3) points above it.

There is a 10 minute working time from the moment the model leaves the hand to the time it touches the ground or any object in contact with the ground. A landing bonus of 50 points is available.

The aim is to use the minimum launch height possible to achieve the maximum flight time within the 10 minute working time. With launch height penalties in place the best flights are a judgement on pilot skills and risks using short motor runs and low launches.

We have been supported by the NZ soaring SIG and Model Flying NZ. The website link: F5J Bulgaria Cup 2023

CLASS R: E-RES 2M (Electric Rudder Elevator Spoiler 2M Glider)

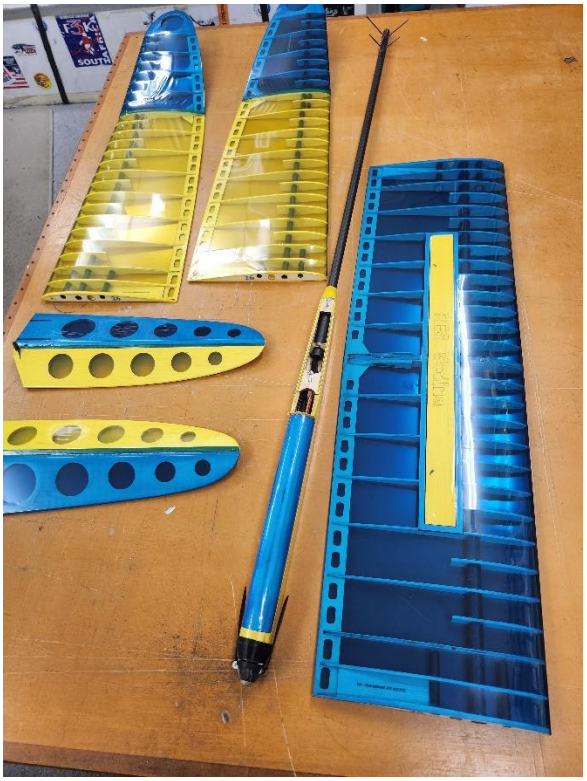
The release of a new class for electric soaring for entry level has been needed for some time and the soaring SIG spent considerable time looking at various rules from around the world that are coming through. At this stage the provisional rules do allow for radian style models to be flown and used within the rules.

This is a new class which is a built up 2 metre model which does allow for a few modern benefits such as a carbon boom. A model must be predominately wood construction. Model aircraft consisting of Wings, Fuselage and Tail Surfaces. The tail surfaces can either comprise of separate Fin and Tailplane in cruciform configuration, T-tail or combined as a 'Vee' tail with mixed rudder and elevator functions. Ailerons and flaps are not permitted.

The basics are a 5-minute flight which includes a 100m launch or a 30 second motor run then a precision landing to finish. We have flown this event already in Australia under their rules (which are slightly different) and the soaring SIG have scheduled it into the NDC calendar plus will be flown at Soar champs and Nationals.

There are quite a few ARF models available and many that can be built from plans. The Medina from Armsoar (via Aussie) is one of the most popular ones available as pre-built. Joe Wurts imports a few kits in ARF form.

E-Medina – 2m Almost Ready to Fly e-RES Electric Glider – PERFORMANCE MODELS



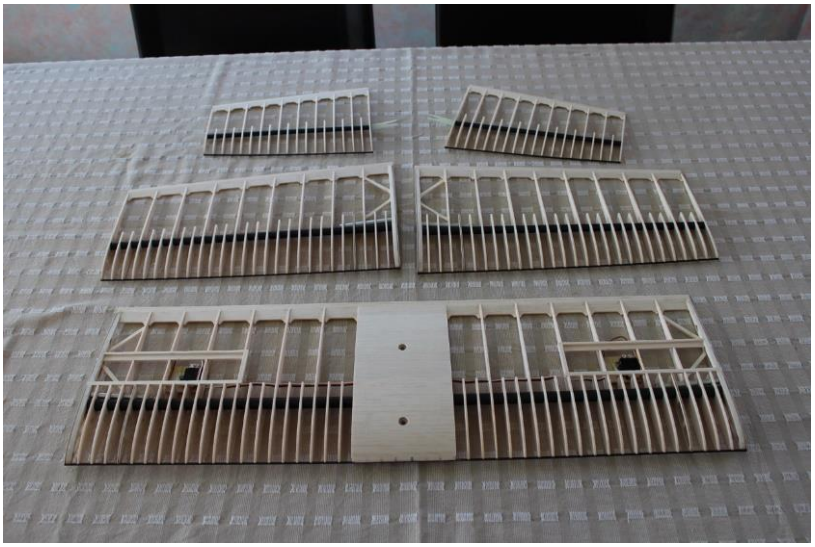
Purito 2m - RC Models - F3-RES Thermal Gliders (hyperflight.co.uk)

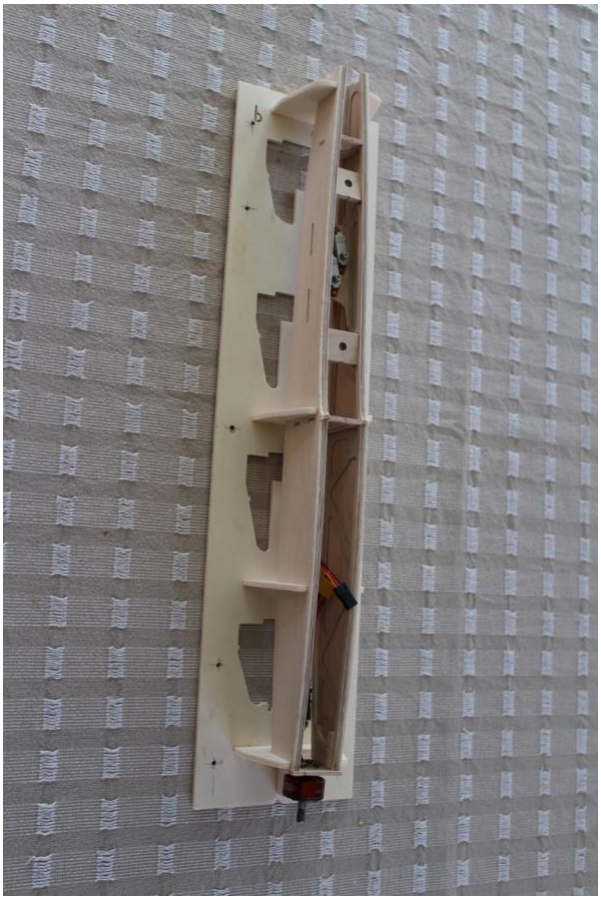
Rex Ashwell is currently building an E-Purito, purchased a couple of months ago from Hyperflight in the UK. The kit was manufactured using a CNC router which I prefer to laser cutting as there is no residue from laser burning and the edges are dead square. Everything is cut very precisely from good quality, very light balsa and all the additional parts supplied are extremely well made. Construction would best be described as intricate but straightforward, with a degree of care required as some parts are quite delicate. The system of jigs used is remarkable and it would be hard to build anything but a straight model, at least up until the covering stage. Unusually, no plan is provided with the kit and it's not really needed as the on-line instructions are clear with plenty of detailed photos as well as several short videos.

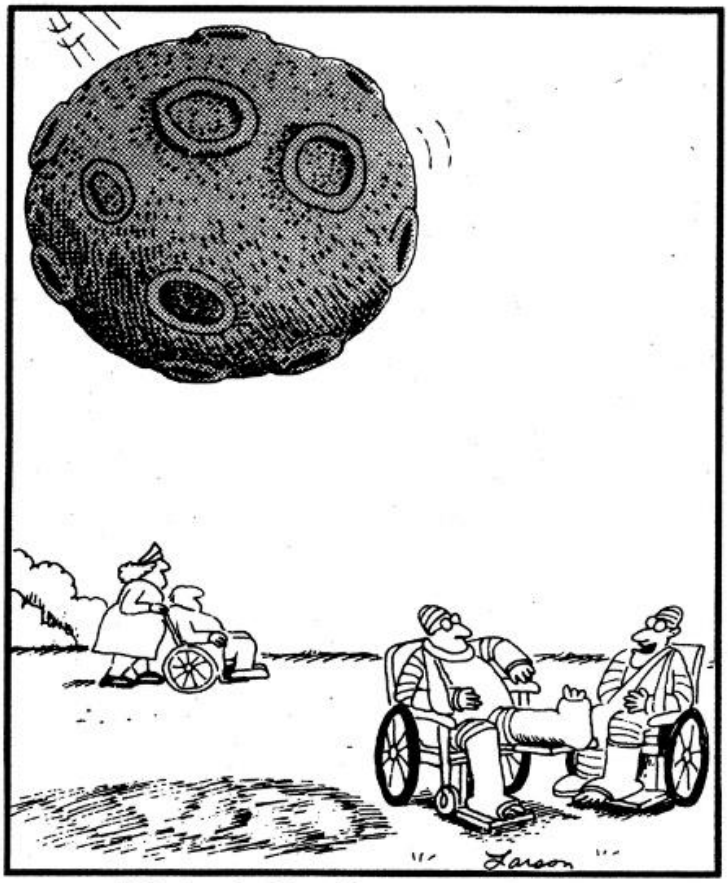
New provisional rules are on the MFNZ soaring website :

ClassR-ERES_Prov_Rules.pdf (modelflyingnz.org)

See ya all in a thermal soon! Kind regards, Kev





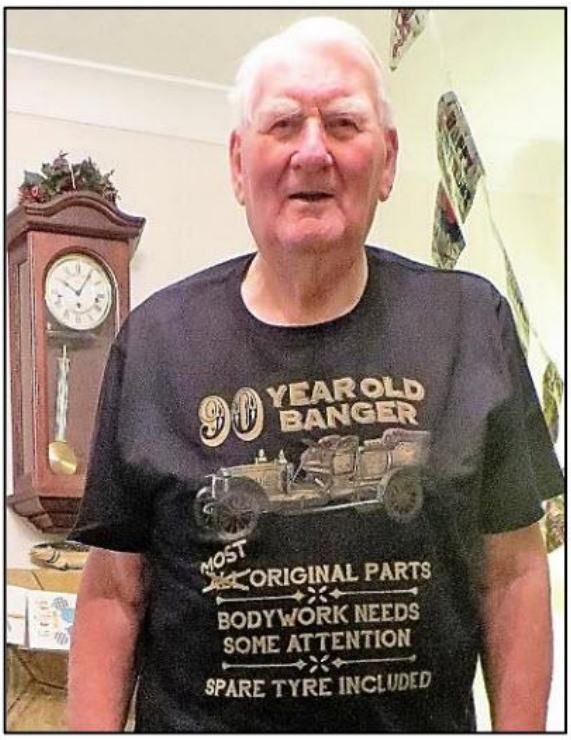


"You're kidding! I was struck twice by lightning too!"

Hi members, Keep an eye on the MFNZ website https://www.modelflyingnz.org/ and the various SIG's page https://www.modelflyingnz.org/sigs.html .

I understand the Association website is undergoing a major rework and the Vintage SIG site will be upgraded. Lots of good information is included in these pages across all aspects of our hobby and worth keeping abreast of. Read and download the Vintage /contest/RULES. Similarly, all the NDC (National Decentralised Competition) information and results updates etc.

Each month I download a copy of the UK online newsletter "New Clarion" New Clarion (sam1066.org) an excellent publication from editor John Andrews seen here celebrating his 90th Birthday in an appropriate t-shirt !



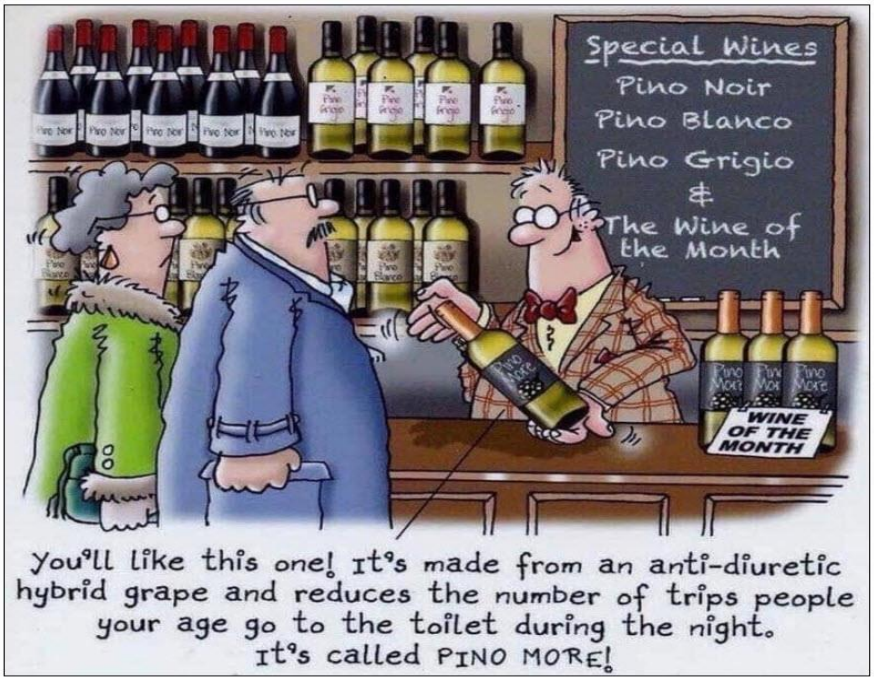
Congratulations John on attaining your 90th in such good fettle and for the marvellous work you do with the New Clarion.

May there be many good years left in the "Old Banger"

All the Very Best Wishes,

Barrie the editor and readers.

STOP PRESS. Vintage news release; Whew … Relief in sight !



VINTAGE REPORT July 2023

Tuesday 25th July at Black Bridge Soaring site. What a day, one of Hawkes Bay's best, no wind, warm and some buoyant air. **Brett and I** made the call to fly some NDC competitions for this month, Classic Precision, Sports Cabin Texaco and Vintage E Rubber for the month of July. **Anthony, Danny, Mark and Barry K, (Stanley was absent, swanning about overseas !)** joined us for some sport flying and timing and a very enjoyable day was had by all.

Mark, Danny and Anthony had some good air time with their various sport machines, and **Barry K** did his usual helpful stint of timing both **Brett and my** NDC flights.

The air was quite buoyant though we didn't find a lot o0f thermal activity, even the hawkes were flying low !
We started off with Classical Precision with our Night Trains which ended up a dead heat, we both need to be that one second sharper !

CLASSICAL PRECISION

			ROUND											
			1				2				3			GRAND
NAME	MODEL		FLIGHT	LAND	TOTAL		FLIGHT	LAND	TOTAL		FLIGHT	LAND	TOTAL		TOTAL
BARRIE RUSSELL	NIGHT TRAIN		179	20	199		180	20	200		178	20	198		597
BRETT ROBINSON	NIGHT TRAIN		179	20	199		179	20	199		179	20	199		597

We then graduated to the Sport Cabin E Texaco with our aging Tomboys and more to the point our aging 2S 180mah lipo batteries as the scores evidence. At least we got a couple of scores on the board. The difference here being that I had a superior set of batteries and without thermals it was just a slow drag around the sky !

Lastly we flew the E Rubber Texaco comp, Brett used my Flying minutes from 1939 (11 bonus points) and I flew my Voodoo (1949 1 bonus point) . Not much thermalling activity but Brett's superior soaring skills showed through

E-RUBBER

			ROUND									
			1 AGE					2 AGE				GRAND
NAME	MODEL		FLIGHT	LAND	BONUS	TOTAL		FLIGHT	LAND	BONUS	TOTAL		TOTAL
BRETT ROBINSON	FLYING MINUTES		1485	20	11	1516		1193	11	20	1224		2740
BARRIE RUSSELL	VOODOO		1256	20	1	1277		1067	1	20	1088		2365

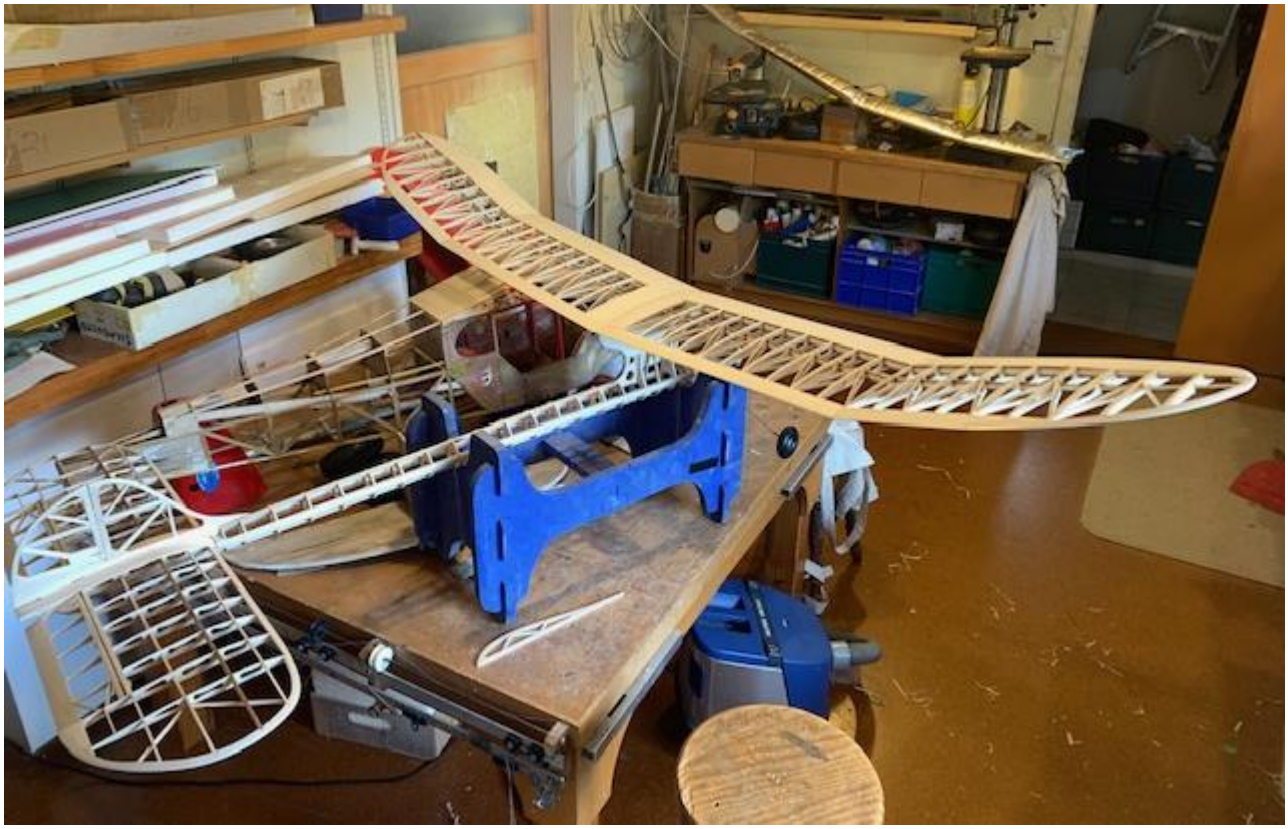
All in all, a thoroughly enjoyable day in the country and idyllic conditions. Apart from the mud that had to be water blasted from the car on returning home !! A small price to pay for such a fun experience .

No more news from around the vintage building boards.

I'm making progress with the Flying Pencil, construction is largely finished and now it's covering time. Overall weight and CG placement are my main concern so before deciding how much of the fuselage to sheet and how much to film over open structure depends on some early assembly to determine both factors. I'm building the model specifically for the **Vintage E Texaco** class which is a duration competition and the battery size if using a 2s lipo is determined from the formula "Dry weight in ounces x 17" hence I'm aiming for 33 ounces which

will allow me to use a 550mah 2S lipo battery. At that weight with an 80 inch wingspan the wing loading will be 5.5 oz sq ft.

To date I've been using my Stardust for the E Tex comp and the picture above shows the comparative size of both wings. The wing loading of the Stardust is around 8.5 oz sq ft, so if I can achieve 5.5 oz the FP should have a significantly improved light air performance.



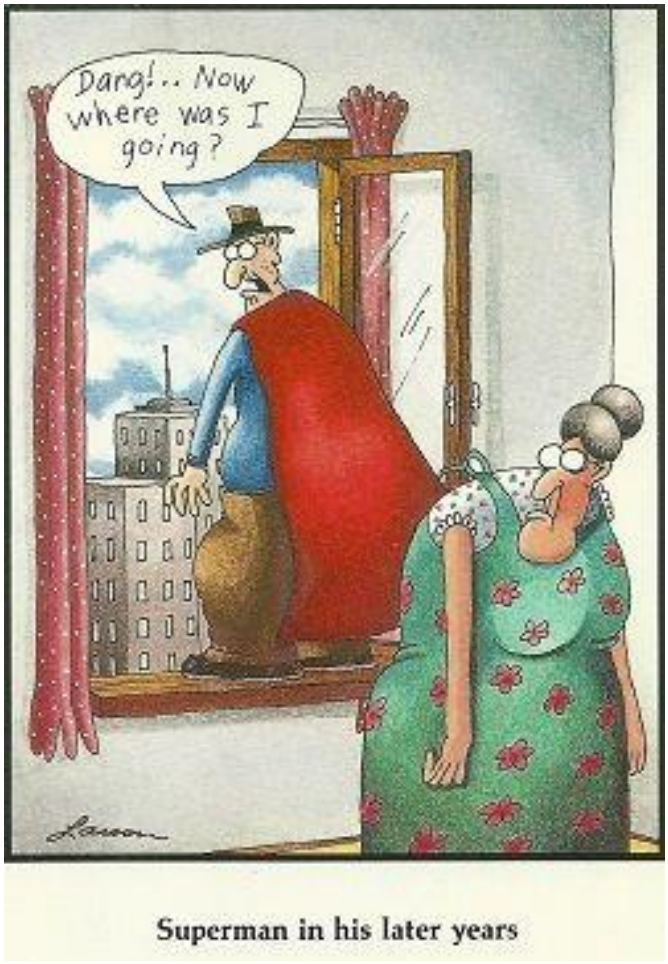
That's the Club Cub languishing under the wing, stripped of all covering and gear and cleaned out of silt and one day will grace the air again. A lot of work needed and a total replacement of all the gear. **Ed.**

FOR SALE June '23

For Sale ----- Foam Board Delta. One left;

It is offered For Sale at $50.00 that's cost of materials only (2 sheets Foamboard $12, liteply, glue sticks and tape $8.00, and 2 x 12gram 2kg servos $30)
Total $50.00 Building NO CHARGE !! *** Phone Barrie 06 8353896. ***

A CLOSING SMILE. July '23



Well there ya go, every picture tells a story !

Super, see you next month hopefully,

Barrie the editor mfhb.

Ps, and it's goodnight from them……

Two wise men (JC & Rod) solving the problems of the world.

The end.