

# ***Aerobat***

**The Official Magazine  
of the  
Hibiscus Coast Radio Fliers Club**



***August/September 2020***

**Issue Number 2 - Volume 20**

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## **CoverPhoto**

Dayle Montgomery's  
Airsail Ascender.

Vintage 1949 rubber  
power contest free  
flight model.

Wingspan 864mm

*Photo by Peter Denison*

# H.C.R.F. Calendar 2020

Our fixed flying times are every  
Wednesday, Saturday and Sunday morning

Please note these events may change due to COVID 19.

Date	Day	Event	Where/When
1 Aug	Sat	Winch Gliding	Wainui 8.30 am - noon
1 Aug	Sat	Club Meeting	Club meeting 10 am – 11 am
5 Sep	Sat	Winch Gliding	Wainui 8.30 am - noon
5 Sep	Sat	Club Meeting	Club meeting 10 am – 11 am
3 Oct	Sat	Winch Gliding	Wainui 8.30 am - noon
3 Oct	Sat	Club Meeting	Club meeting 10 am – 11 am



## **From the Editor's Desk**



Here we go again, how time flies when you're enjoying yourself.

I didn't see any more nominations for Newsletter Editor at the last AGM, so it looks as though "I've bought the farm" as they say. This is a bit of a pity as I really have run out of things to say. I bet you never thought I would ever hear me say that.

The AGM has come and gone with fewer changes than a political party manifesto would produce.

As you know the Mid-Year Christmas Lunch was cancelled this year due to the pandemic. Last thing we need is our members being sick so keep safe out there.

I see from the internet that there has been a lot of flying which is good to see. There must be a whole flock of new planes that were made during lockdown. I also note there is a rash of planes for sale on the auction sites. I guess there is a lot of cleaning out during lockdown too.

I'm happy to receive copy and pictures from members about their latest project, feature articles on any modelling or aviation related topics of their choice, letters to the editor, helpful hints, Nostalgia whilst you can still find or remember it, questions and criticism etc etc. This is your newsletter, I'm only the catalyst,

I DO NEED YOUR HELP.  
THANK YOU.

Ross McDonnell  
Editor

# From the President's Desk

## **Greetings all,**

Well here we are coming into August already and from our club's point of view things are going really well thank you very much, especially when I look at what's happening overseas.

So our AGM held in our clubroom was well attended, quite unexpected from my point of view, but so pleasing - all the committee staying on for another year.

Kieran Smith-Pilling got the most improved flyer award it really is a pleasure to watch him fly.



Jim Hall received the services to the club award for all the Work he continues to do for us, so well deserved Jim thank you.

Our club - well I think it's in good shape and our membership is as good and stable as ever. We have no negative issues that I'm aware of. Trainings is going well. Our finances are looking good, due to a number of things - donating models and gear to the club that were sold off to members, extra donations while paying club fees and income from storing your models for 12 months, plus let's not forget you lads who helped with building new stuff, maintaining what we have etc. .

All this enabled us to keep our club fees down to between \$45 to \$50 per year that is what I call value for money but all due to you members looking after our club.

A big thank you to Carmel and Henny Remkes, for all their hard work through the year. This is mostly done behind the scenes but so important.

Plus let's not forget Ross McDonnell putting out the Aerobat every couple of months. He does a wonderful job but we can't expect him to do all the work by himself so please help by sending him information or we risk losing it - unfortunately then we would realise how important the Aerobat was. Thanks for all your work Ross!

That is all from me, so let's get flying, and make the most of what we have as we deserve it don't we?

Happy Landings,

Pete Denison

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## **What does HCRF mean in Medical?**

I went on the interweb thingy to look for the HCRF Calendar and came across "www.allacronyms.com" 8 meanings of HCRF abbreviation related to Medical: (I know they only listed 5. Go figure. Ed.)

HCRF	Hidden Conditional Random Field
HCRF	Hemispherical-Conical Reflectance Factor
HCRF	Hierarchical Conditional Random Field
HCRF	Human Corticotropin-Releasing Factor
HCRF	Hypercapnic Respiratory Failure

I think we should adopt number one in the list as our motto, or maybe number two occasionally.

***England has no kidney bank, but it does have a Liverpool.***



## NIGEL'S SHED

Here are some photos of a couple of projects I have been working on over lockdown.



You will most probably recognize Ross McD's old Deacon. I reused the wing and tail plane but made a new fuselage to fit a Mills 1.3 diesel one of Bryan Leeves old engines. When I first ran this engine it ran rich with the needle valve fully closed so had to machine up a new jet .Now runs fine and had its maiden flight last Saturday.



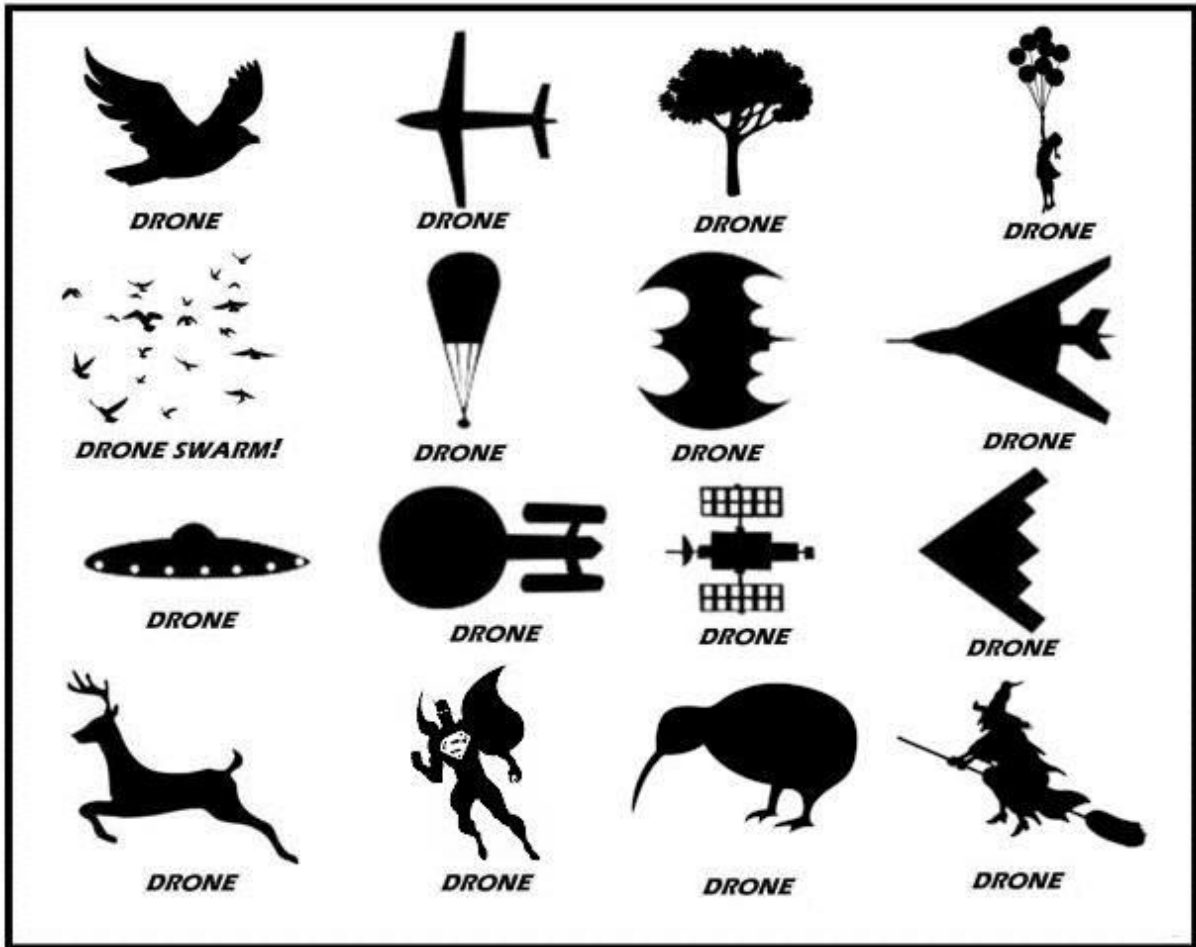
Third photo is a Fun 51 a few other members have already made these, although mine is bigger at 1350mm wing span to suit an OS60 and has detachable wings. Could have had this finished but ran out paint and covering.



*When you get a bladder infection, urine trouble.*

# THINGS ALL PILOTS NEED TO KNOW!

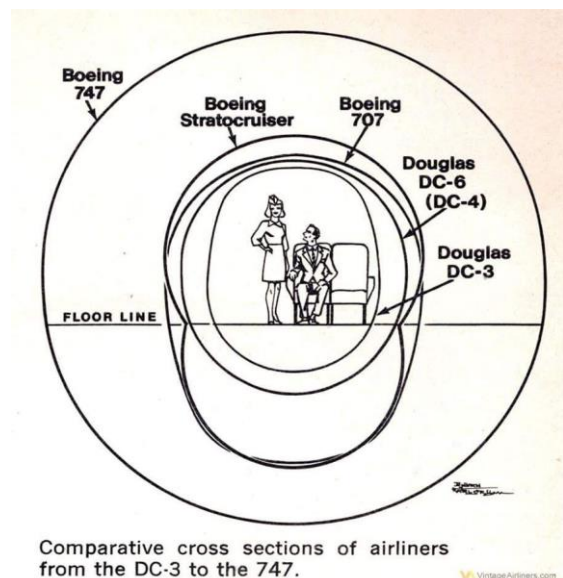
## AIRCRAFT IDENTIFICATION GUIDE FOR AIRLINE PILOTS



Why is development in airplane engineering so slow?  
Everyone is afraid to make a ground-breaking design



Ever wondered how big the aircraft you are flying in is compared to what your parents flew in?



*When you get a bladder infection, urine trouble.*



# A.G.M.

We had 25 members in attendance, pretty good on a winter's day :-)  
All the various reports were read out and carried.

## Election of Officers:

President:	Peter Denison	Unanimous
Secretary/Treasurer:	Henny Remkes	Unanimous
Captain:	Nigel Grace,	Unanimous
Editor:	Ross McDonnell	Unanimous
Frequency/Safety Officer:	Jim Hall	Unanimous
Event's Organiser:	Carmel Remkes	Unanimous



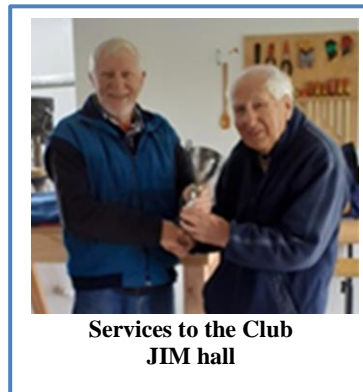
Pete and myself, with Jim Hall's agreement have decided to change his title to Safety Officer.  
Because 99.9 per cent of us are on 2.4GHz :-)

## Cup Presentations:

Services to the Club - Jim Hall  
Most improved flyer - Kieran Smith-Pilling

Henny Remkes  
Secretary/Treasurer

Photos Carmel Remkes



## Downed Model Tracker

Is this the answer to finding downed models?

The Tile system works on Bluetooth so can be detected by your mobile phone. The manufacturer claims a range of 30m for 'Slim' (Bluetooth class 3), 'Mate' - 45m (class 2). And 'Pro' - 90m (class 1). It does not rely on GPS or mobile phone coverage.

See [www.tile.com](http://www.tile.com) or ask Auntie Google for equivalent products.

Plagerized from TMAC



*I hate people who use big words just to make themselves look perspicacious.*

*Photos From Hamish Foley*



*I hate people who use big words just to make themselves look perspicacious.*

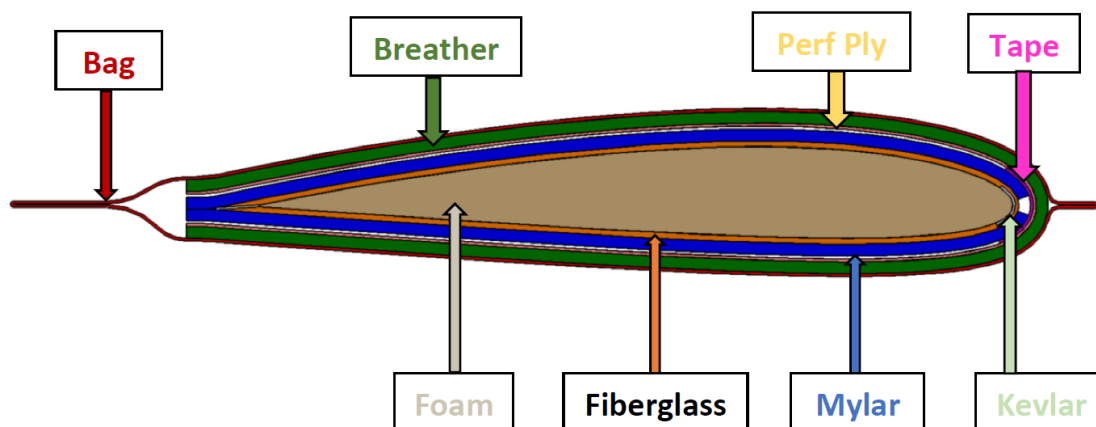


# Vacuum Bagging Wings

Vacuum bagged wings are quick to build, light weight, and have excellent aerodynamic and structural performance. The method described, sometimes called the “glass slipper”, produces wings with a smooth surface requiring only a slight clean-up of the leading and trailing edge.

The steps in the process are:

1. Cut the foam core out As usual. (Blue foam is best.)
2. Cut out the Mylar, fiberglass, Kevlar strips, breather and vacuum bag tube.
3. Tape the Mylar together with 1/2 inch gap, (For thin wings,) at the leading edge and release wax the Mylar
4. Glue Kevlar strips to the leading edge and aileron hinges with light coat of 3M 77 spray adhesive
5. Lay the fiberglass on the Mylar. Pour resin on near the middle and squeegee out the resin
6. Wrap the Mylar/fiberglass around the foam core. Tape trailing edge and tips to keep the foam core in place.
7. Add the release film, breather and insert in bagging tube. Attach the vacuum connector and the end clips
8. Turn on the vacuum pump and smooth the bag over the wing as the pressure drops. Check for and seal any vacuum leaks.
9. Allow resin to set. Remove wing, sand leading edge and trim trailing edge.



Cross Section of layup materials

## BASIC VACUUM BAGGING SYSTEM SETUP

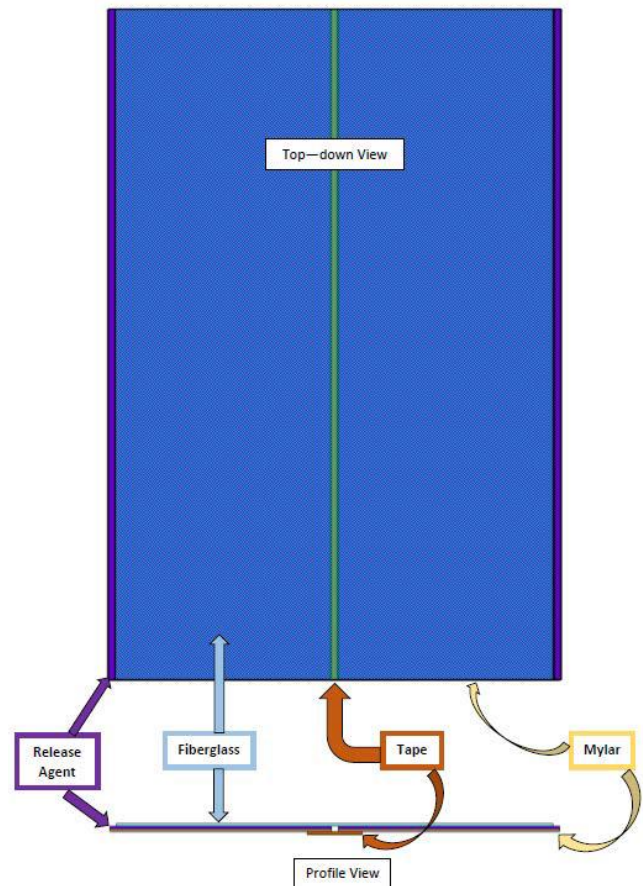
Vacuum bagging composite parts is a simple process that is used to compress composite layups while they cure. Here we will describe the basic assembly of our vacuum bagging system. One common use for vacuum bagging is foam core wing and tail surfaces for models. We will cover how to set up the bag and use the system to vacuum bag a foam core wing with fiberglass. Here are the materials that should be prepared.

Vacuum bagging materials:	Other materials:
<ul style="list-style-type: none"> <li>● Fiberglass/carbon fibre (just enough to cover wing area.)</li> <li>● Kevlar strip.</li> <li>● Epoxy resin and hardener (thinner optional but recommended.)</li> <li>● Bagging tube (at least half a size wider than the chord of your wing).</li> <li>● Mylar sheet.</li> <li>● Release wax.</li> <li>● Release film.</li> <li>● Packing tape.</li> <li>● Bag clips.</li> <li>● Breather strip (4 sheets of paper towel is good.)</li> <li>● Vacuum pump (See Ross McD for home built one.)</li> </ul>	<ul style="list-style-type: none"> <li>● Gloves.</li> <li>● Clean plastic mixing cups.</li> <li>● Clean mixing sticks.</li> <li>● Clean plastic squeegee.</li> <li>● Roller.</li> </ul>

*I recently bought 51% of a vampire hunting company...I'm now their main stake holder!!...*



1. Vacuum bag can be reused many times. Cut the vacuum bag tube at least a foot longer than the longest part of the wing that is to be bagged. Bag clips are used to seal the ends of the bag at desired lengths. Throughout this entire process, the Nylon bag should be handled careful to prevent having holes on it.
2. For thin wings Mylar film should be cut to two piece that cover almost the exact area of top and bottom of the wing, about ½ in from the leading edge. Try not to scratch or put any gauges on the Mylar because any of the defects will be transferred to the wing later on. Tape the trailing edges of the Mylar together to make a folding layer. Clean the inside surface of the Mylar and with paper towels, apply release wax all over the surface. Rub some of the wax along the outer edge of the other surface as well. This prevents the excess resin from sticking and allows the Mylar to be reused.
3. Cut breather strip about a foot longer than the foam core wing that you are using.
4. Cut the release film to almost the size of the wing area, top and bottom.
5. Cut the fiberglass cloth to match the surface of the taped Mylar combined.



6. Epoxy and resin hardener mix (usually West System 105 Epoxy Resin and 205 Hardener) should be prepared the last due to its curing time that allows limited working time. The fast hardener should allow a working time of about 30 minutes in room temperature. Higher ambient temperature makes the epoxy cure faster.

7. Place the fiberglass cloth on the inner surface of the waxed Mylar film. Wet out the cloth on the Mylar with mixed epoxy resin and spread the resin all over with plastic squeegee, making sure there are no dry spots (cloth should be transparent). Now the surface should look nearly dry. If there are any wet areas repeat the roller and towel process on those areas.



8. Place the foam core on one side of the Mylar and fold over, making sure that the foam is lined and wrapped up properly with the outer Mylar layer. Tape TE of Mylar closed.

9. Place wing, breather strip, vacuum tube in bag, seal and vacuum while keeping bag as wrinkle free as possible. Wait 24 hours remove and trim

# AROUND THE CLUB



Baz Corbett's new Kyosho Kawasaki that he got it off James who started the kit. The model has a 1.3 meter wing span and sports retracts and flaps  
Motor is a 61 K&B

*Photos by Henny Remkes*



Dayle Montgomery's 1938 J.E. Leadbetter designed Dragonfly. 28" top wing and a 20" lower wing. It was previously rubber powered but now sports 2s electric and a linear servo for rudder only control.

*Photo by Peter Denison*



Dayle Montgomery's 72" E-Max powered Soloist, a glider, weight 21.6 oz (613 grams). FC 28-05 2840 Kv outrunner, 18 amp esc, 6 x 4 prop, 1000 mAh 2s Li-po giving about 410 grams of thrust, wing loading of 6.17 oz/square foot. T