

# Aerobat



June - July 2015

Issue Number 1 Volume 15

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**Cover Picture**

John Crawford's

GWS Gold Angel

A Pleasure to see fly.

# Aerobat

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## From The Editors Desk



I still have not been overwhelmed by offers to edit the Aerobat. I have not exactly been overwhelmed by articles for the Aerobat. I have received only two acknowledgements that members have even read anything in the last Aerobat.

One wonders if it is still required, well in this format anyway. I still cannot get over the number of members who do not know what is going on even though the calendar is always printed on the last page.

When the Aerobat was sent out as a paper copy by snail mail it would sit on the coffee table and be read, not only by members, but by members wives and children as well. (Usually during the TV adverts.) This meant that all the family would know what was going on and could plan around it.

Now that it goes our mostly by Email it goes to only one member

of the family who hopefully, reads it. This means that we have effectively halved our readers.

There was very little extra cost involved because printing is cheaper per page for bulk and most were delivered by hand at the field or at the monthly meeting so additional postage was minimal too.

As members could still download an Email copy if they wanted to, should we be going back to the paper copy format for all members?

Good to see so many members making the effort and going on the Springhill trip. Nice to see the jets and big planes close up.

Ross McDonnell  
Editor (Temporary.)



# FROM THE PRESIDENTIAL SUITE

Here we go again for another year folks, the A G M meeting is over the committee remains the same though on saying that Ross M.C. is still the temporary editor of the Aerobat who is gallantly standing in while we wait for someone with an editorial flair to take over, so give it some thought people please we need someone to put their hand up.

The most enjoyable part of the meeting was of course giving out the awards  
Services to the Club went to Jim Hall  
Most improved Flier to Leigh Gordon  
Craftsman's cup, to Ian Mc Ewan for his Fokker Triplane.  
Best Crash to Baz Corbett A most spectacular crash if I may say so when the left hand wing on his Corsair decided to part company and fly away all by itself.



Baz has just had a triple bypass op. and will be out of circulation for a while, so on behalf of all the club members wish him a speedy recovery looking forward to having him back flying with us again.

Well I haven't had any complaints about the summer our four evening twilights and the open day!! The weather was perfect wasn't it we have great pictures of the open day if you haven't seen them yet just go onto <https://drive.google.com/open?id=0B8iUWZ6zErgjF2cW84dUt3UllYUk0wR1EtMzA4czg1cNwSVZjMTNXV29XTW9feG1PcGs&authuser=0>

Great job by George Brock our photographer of the day.

Plus we had our Mid winter and Christmas lunches thanks to Ngairé happy memories.

April 26th our club had an invite from Spring Hill flying club to have a day flying with them. Quite a few of us made it up there the weather gods were reasonably kind to us, the sun was shining but the wind was quite brisk. A lovely flying site and we were made to feel welcome with good company and a BBQ. Colin Austin along with Ross and Scott Purdy both gave great displays with their Jets. Well worth the trip just to see them in action. A few of us flew in the windy conditions with no mishaps so it was a great day ou .

So it's time for winter projects while it's raining and blowing outside , my Tony Nijhuis 62" wing span Typhoon kit has been waiting around for 12 months for me to have a look at so finally a couple of weeks ago took the plunge.

This last 3 years I have been a diehard electric man preaching electric forever, but really just hiding the fact that as a relatively newcomer after 50 years away from flying, finding the vertical learning curve of electric motors etc. a little overwhelming , really didn't want to go back to my ancient past and re visit IC motors again. but never say never my four stroke OS 72 has arrived and must say looks beautiful sitting on our shelf in our living room though she who shall be obeyed is giving me the occasional strange looks , so it's going into my Typhoon great! I seem to vaguely remember my throbbing fingers and my mum grumbling about my fuel soaked smelly clothes stinking the house out. So probably I will end up climbing into bed with the dogs in the living room but what the heck I think it's going to be worth it.

Things to think about, those of you who are in our training program use the winter to practise and aim to get your wings for the summer. Our indoor flying is back, on the third Monday of the month until October when Daylight saving starts.

Nigel's had another great idea to use up the sausages left over from our open day "a winter Sunday BBQ dinner with flying, he's away hunting Polar Bears in Alaska "his words" at the moment (from a Cruise ship don't think so) so will remind him on his return.

That's about it from me folks, have to get my gear organised and into the car ready for tomorrow's Wednesday morning flying, jeepers this retirement's hard work.

Happy landings  
Pete



# How to land on an aircraft carrier

Carrier operations are a mind-numbingly complex arrangement of technologies and procedures. It took most of a century to go from Eugene Ely, sliding off the bow of the USS Birmingham in 1910, to the violent ballet we have now. Likewise, a college grad isn't going to strap in to a Hornet, diploma still warm, and start buzzing around the Nimitz. Naval aviators spend years learning to fly, learning to employ an aircraft as a weapon, then learning to wield that weapon from a heaving piece of floating steel hundreds of miles from land. The lessons are written in blood. They are studied with reverence.

You catch sight of the carrier about 20 miles out through the haze. Even after several years, it still stirs an emotional response. The thing is so *big*. And so *small*. It's big when you have to clean it or paint it, but small when you have a rumour or need to land on it. You're about 10 minutes prior to your Charlie time (when your hook should be crossing the ramp) and you've checked in with the group's air defence ship. You're coming down to your marshalling altitude before you pop the 10 nautical mile bubble around the ship. That will minimize your chances of swapping paint with someone. Your wingman is now in tight formation, so he's not helping you look around to clear the airspace. You're essentially flying both planes, so your head is on a swivel. If you see another aircraft at the last second, you can certainly jerk away to avoid it, but you're just



going to send your wing man to his death, so "vigilance" isn't just a noun.

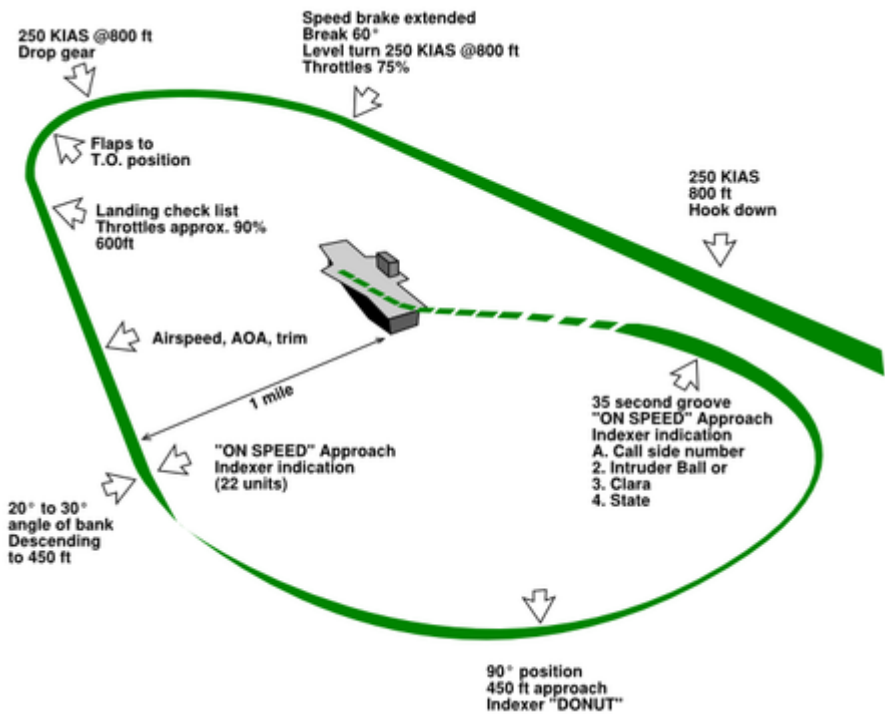
As you come in, you marvel at what a beautiful day it is; light winds, calm seas, and few clouds: a perfect day around the boat. Once the weather kicks in or the sea state starts the deck pitching, things get, well, interesting.

You're stacked up overhead with the rest of the recovering aircraft, an average of 6-12 of you. There are

two squadrons assigned at 2000' and another two 1000' feet higher until you run out of squadrons (topping off usually at 5 or 6000' for the E-2, depending on the air wing). You're at the bottom of the stack and your wingman is hanging on tight. A section (2 jets) from your sister-squadron is across the circle from you. You're hawking the deck to see when the last guy goes off the waist catapult so they can wrap it and start the recovery (the advantage of the angled deck is in being able to shoot off the bow and recover simultaneously). They launch aircraft before recovering the previously launched bunch to clear up space, which is good, because you're going to need it. You need to trap, get out of the wires, and taxi clear of the landing area in time for the guy 45 seconds behind you to land and do the same thing.

You keep an eye shifting from the jets across the circle to the jets on the waist cat, continually updating if you're going to be in a better position to break the deck (land first). They're taxiing the last two guys up to the waist cats and it looks like you're in a better position than the guys across from you, so you drop your hook to tell your wingman that you're starting down. You hear the radio check from the ship, calling out the winds. This is a good clue you've started down at the right time. You note the winds and check the sea state and ship's wake. You tighten the turn a little to improve your positioning and ease the power higher—slowly, so your wingman can keep up with you. Its mid-cruise and you're feeling sparky, so maybe it's time to up your game. You're grabbing a bag of knots and are going to break as early as your nerves will let you. You're thinking about the stern (or round-down as it's called), but no later than the island. You roll out a couple miles behind the boat, your wingman tucked in nice and tight as you continue accelerating. You're down at 800', pushing 400+ knots, and approaching the stern, a hundred feet or so starboard of the ship. If you were above your max trap weight, you'd have been dumping fuel, turning the dumps off just about now, but your fuel is fine. You've been monitoring it the whole time, always aware of how much you have, how much you want to recover with, and how much is required if you have to go to the divert field (bingo fuel) or, if you're blue water with no divert field in range, how much you need in order to meet up and grab some gas off the recovery tanker.





You check your wingman one more time as you reach the stern. You kiss him off (a hand motion with that actual name that lets him know not to follow), throw the stick over, stand on the left wing, and pull *hard*, thumbing out the speed brake and yanking the throttle to idle at the same time. The humid air and low pressure makes a little humpback cloud on the top of your jet, trailing back a little bit as you pull around. You're aiming to be at the magic spot abeam the LSO platform (Landing Signal Officer or Loser Standing Outside, with their cool sunglasses, working on a nice hand and face tan,) a mile out with your gear down and close to on-speed (the speed for the rest of the approach and landing, usually around 140-ish knots).

The way you're coming in, on-speed will happen about the time you slide into groove (hopefully).

The LSOs (or "paddles"), along with the Air Boss in the tower (and his helper and eventual successor, the Mini-Boss), are tasked with the safe and expeditious recovery of aircraft. The LSO's are the experts in landing aboard the ship. They are also pilots and they're ready on the radio to advise you if you're not in landing parameters. As an added bonus, they grade every landing and the grades are posted in each ready room for all eyes to see.

In the daytime, little is said on the radios, so unless there's some safety of flight issue or the pilot is not correcting a gross error, you don't talk to them, and they don't talk to you. A group of them will later shamle through the ready rooms and give you your grade. You smile (or grimace), say "Thanks, paddles", wonder how they saw all that stuff you didn't, then secretly question if they molest small animals and whether their parents knew each other.



Nobody gets a "Good" unless they're on fire, so let's not talk about that. If you make a couple minor errors, it's "OK", larger errors earns you a "Fair", gross errors a "No Grade", and dangerous stuff a "Cut Pass". That's if you stop. If you're so far out of parameters that they have to send you around, a "Wave Off" is the same grade as a "Cut Pass". If you sail over the wires, a "Bolter" is in between "fair" and "no grade". You're always working for the OK-3 (catching the third of the four wires). You can have a glorious flight, but if you goon up the landing, it ruins your day. It sucks, but unless you're in combat, it's all about looking good around the boat. Buy it out in the middle of the

ocean, everyone laments your loss. Buy it at the ship, people will be watching it on tape for the next 50 years. It's not entertainment—it's "don't do what this guy did".

So, you're a beam, 600', and below 250 knots, that break-turn having bled-off a lot of speed. You dropped the gear once you saw that magic number come up, helping you to slow further to your on-speed mark. Now for a little descent in the turn so you can be at the 90° at 450'. You can't float the turn or you'll be too far behind the ship, or "long in the groove." That can mess up the interval of your wingman. They'll wave *you* off so it doesn't screw him up. If you're too close behind the ship, the LSOs won't have enough time to gauge your approach and they'll send you around to unscrew your program. You may also be too tight on the guy in front of you, if there is one. You're Goldie Locks, looking for everything to be just right.

You're jockeying the throttles the whole time, first getting to speed (idle), catching on-speed (power up), then to compensate for the turn (more power), increase your descent (less power), then rolling wings level in the groove (less power). There's a sweet spot of the throttles, but it's never stationary, so you're pumping the throttles, bracketing it. If you stop moving the throttles, it means you're about to go high or low. As you come around into the groove—the last 3/4 mile behind the ship when your wings are level—you start to pick up the "ball". OK, OK, so you started peeking at the 45, but everyone's always said it's not aligned for good information at that angle. Still, a peek is worth a thousand scans.



The Fresnel Lens Optical Landing System is going to show you—when everything is aligned—how high you are compared to the ideal. The green reference lights show where the ball should be and it rises and falls based on your distance from the optimum glide path. Way out at 3/4 of a mile, each of the five cells is about 30' high, so you'd have to go 30' higher to show one cell of motion up. Once you cross the ramp, you only have to go up or down 2.4' to show a whole cell of motion. When you touch down, to put the hook in between the 2- and 3-wire, your eyes are going to be in an 18" high window. If the ball is at the top, you're going to sail over the wires. If it's at the bottom, it turns red and means you're dangerously close to striking the ramp and potential catastrophe.

Hopefully you've come around the corner about a half-ball high and are now just milking it down, pumping the throttle back just a hair, then pump, pump, pump. Your stick is rock solid. You go fast or slow with the stick and up or down with the motors. Now that you're in the groove, the ball is showing you good information, so you really want to just stare at it. Oh, god, you so long to lock your eyes on it and never look away. So pretty...but, the landing area is angled 90° to the left of the rest of the ship and the ship is undoubtedly moving. That means that the runway is sidling away to the right the whole time you're coming down. It's also highly unlikely that the wind is coming right down the angle, so you're working a bit of a crosswind, likely from the right as well. So you keep putting little right wing dips in there to keep you on centre line. And all this wing-wagging is screwing with that sweet spot on the throttle quadrant, so don't forget to keep pumping the juice.

You have to constantly scan across the green datum lights to the landing area and back. This is going to help you fix your line-up problem as well as show ball motion more quickly than if you're staring at it. Stop staring!

Now is about the time you hit the burble. I sure hope you were thinking about it prior to it happening, because if the ship is making most of its own wind, that dude's going to drop you a whole ball low while you work to recover. That big island on the right side of the ship is nicely situated to disrupt the airflow once you're about 1/2 to 1/4 mile behind. It can be a little hiccup or it can be a black hole. Your experience and the LSO's calls are going to be the best cues. You're checking the ship's wake, the white caps, and the LSO's lone wind call before the recovery, what it was like when you were walking to the jet earlier, everything. Once you're out of the burble, you have to pull off more power. Not only is the burble gone, but the air rising over the deck is pumping more lift into the wings. You're going high if you don't correct.



In a modern jet, the neatest gizmo is the heads-up display (HUD). The velocity vector is telling you where you're going at the moment and all you have to do is keep it in the landing zone. That's going to work until you're in-close (about 1/4 of a mile). The ball really gets sensitive by then, so your scan shifts more heavily to the ball again.



The rest is focus and concentration, while always keeping your eyes moving. Keep covering the sweet spot by pumping the throttles, keep on centre line, and make sure you're not jerking the nose around. If you start going high and push down the nose, all you're doing is raising the tail. The hook will sail over the wires and you're going around to the sing-song call "Bolter, bolter!"

You've been working so hard that it's natural to just give up once you're over steel, but you still have a lot of flying to do. Keep working and hitting the deck should be a surprise. Once you touch down, your thumb retracts the speed brake and those throttles go to full

military power, staying there until you come to a complete, resolute, unmistakable stop. That jerk, going from 140 knots to nothing in 300 feet, is pretty significant—everything about you wants to keep going forward. That wire stopping you is pretty insistent, though, as is your five-point harness. Of course, all the squishy bits still press forward. It takes a couple seconds for their disappointment to resolve and send them back to their appointed locations. It's even more exciting if you forgot to lock your harness. That usually only happens once, though, as the forward throw of your upper body for all to see is both uncomfortable and embarrassing. When you see a guy almost disappear below the canopy rail, bent forward, head just about hitting the instrument panel, you can't help but chuckle (nervously).

Once you're stopped, throttles to idle with one hand and throw a thumbs up to the maintenance chief with the other. He's waiting to see the aircraft state so he knows if it needs to be side lined (meaning a different taxi route). Then wait for the wire to tug you back a few feet so the wire falls off the hook and you can retract it. Your yellow-shirt (the deck crewman who directs aircraft on the flight deck) is giving you the power-up signal and frantically waving you to get out of the landing area. You juice the throttles and crank in some right rudder pedal to start moving in that direction. Some more fine motion taxiing and you're chocked and chained, cleared to shut down, unstrap, and climb out. Watch for all the other stuff around you as you clear the flight deck, though; it can be one of the most dangerous places on Earth and after what you just went through, getting Ginsu'ed by a turning prop would be pretty embarrassing.

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## Aren't you glad you don't fly at Tauranga Airport



Plane flips at Tauranga Airport (*Photo NZ Newswire*)

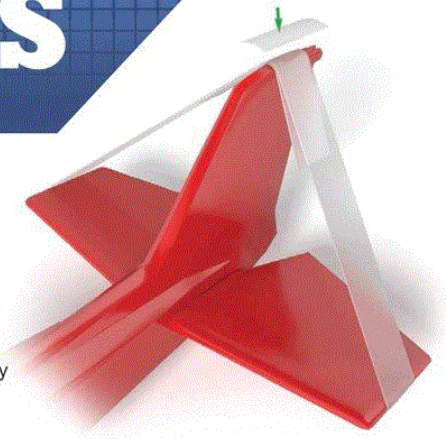
# TIPS & TRICKS

Useful hints from modelers



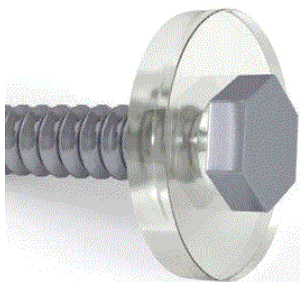
## KEEP THAT VERTICAL STABILIZER SQUARE

This is a sure-fire way to keep the vertical stabilizer "vertical" during your next building project. Tear off a length of 3/4-inch masking tape to span the horizontal and vertical stabilizer tips plus a little extra. Put a two- or three-inch piece of tape face-to-face in the center of the first length of tape. Mix up the epoxy and mount the stab as per the instructions. Use the tape to secure it as near square as you can. Now use your modeling square to finish the job. The stab tip will slide easily under the face-to-face tape area. Once you're sure it's square, put another piece of tape lengthways over the tape and the tip of the stab. Now there are no pinholes and no chance of the stab being knocked out-of-square before the epoxy sets.



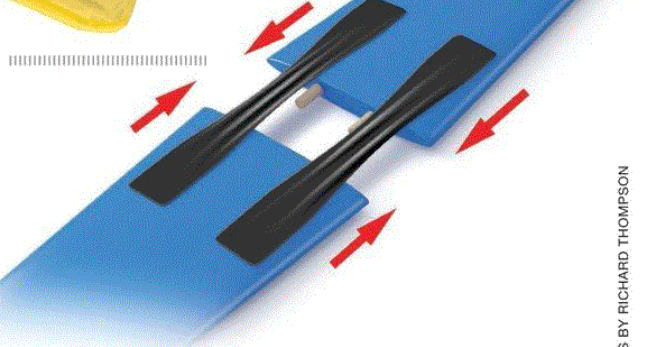
## CLEAN GRIMY FOAM MODELS

Eventually, your expanded foam model will no longer look new and bright. This is especially true if it's mostly white. You can make your model look like new again with a light cleaning using a Mr. Clean Magic Eraser. Just wet one end of the sponge and lightly wipe the model in one direction. Don't rub too hard or you could take off the outer foam film or some paint.



## SIMPLE CRUSH PLATE

Purchase Lucite at the hardware store and pick up a 1/4-inch hole cutter. Use the hold cutter to cut out some Lucite 1/4-inch disks. Then use a drill press to cut out a 1/4-inch hole in the center of the disk. This large Lucite disk can be used with the wing retention bolt and it will not crush the trailing edge of the wing. Because the disk is transparent, it will be hardly visible when installed.



## TAPING UP A SOLID WING JOINT

When joining two wing halves with epoxy, try using electrical tape to hold the two wings together for a solid joint. This tape had great elastic properties, which means its great to use for clamping. Start by attaching the tape to one side of the wing and then apply your choice of glue. Push the wings together and then pull the tape tight so that it stretches a little before attaching it to the other side. This will keep tension on the wing halves so they stay together while the glue sets. Before it dries, clean off the glue along the join line.

ILLUSTRATIONS BY RICHARD THOMPSON

Does this 1 week after receiving the cup for most improved flier mean he has to give it back? (Ed)





**AucklandSoar**  
Radio Control Soaring Club

present

# **THERMAL THAW**

## **2015**

### **7th June 2015**

- Thermal A (Open Class)
- Sportsman Class
- Fly what you have:  
2 metre gliders  
Electric Soarers  
Vintage models
- Everyone Welcome

**Ambury Farm - Mangere Bridge**  
**No Entry Fee**  
**11:00 a.m. Start**

# .C.R.F. Calendar 2015 - 2016

Pony Club Yellow highlight will not be confirmed by the pony club until Aug/Sept 2015

Pony Club Rally days are every Tuesday afternoon at the field starting September 2015.

NB ones with Pony in the day (and in yellow for those in colour,) are Pony Club. **THEY MAY NOT AFFECT US.**

As usual our fixed flying times are every Wednesday, Saturday and Sunday morning.

Date	Day	Event	Where/When
1 June 2015	Mon	Club Night	Whangaparaoa Guide Hall 7-30 pm
7 June 2015	Sun	Gliding Thermal Thaw	Ambury Park 11 am
15 June 2015	Mon	Indoor Flying	H.B.C. Youth Centre 7.30 - 9.30 pm
21 June 2015	Sun	Christmas Lunch	Valentines Wairau Road 12 Noon
6 July 2015	Mon	Club Night	Whangaparaoa Guide Hall 7-30 pm
20 July 2015	Mon	Indoor Flying	H.B.C. Youth Centre 7.30 - 9.30 pm
3 August 2015	Mon	Club Night	Whangaparaoa Guide Hall 7-30 pm
17 August 2015	Mon	Indoor Flying	H.B.C. Youth Centre 7.30 - 9.30 pm

IT'S THAT TIME OF YEAR AGAIN

## OUR MID YEAR CHRISTMAS LUNCHEON

VALINTINES WAIRAU ROAD  
SUNDAY 21<sup>ST</sup> JUNE AT NOON

I will be ringing you in the next couple of weeks to see if you and your families will be attending  
So please check this date.

Seniors (with gold card)	\$24.90
Adults	\$26.90
Children 11 years to 13 years	\$18.90
7 years to 10 years	\$15.90
4 years to 6 years	\$9.90



Regards Ngaire Ladd  
Social Secretary (Weather Witch)

