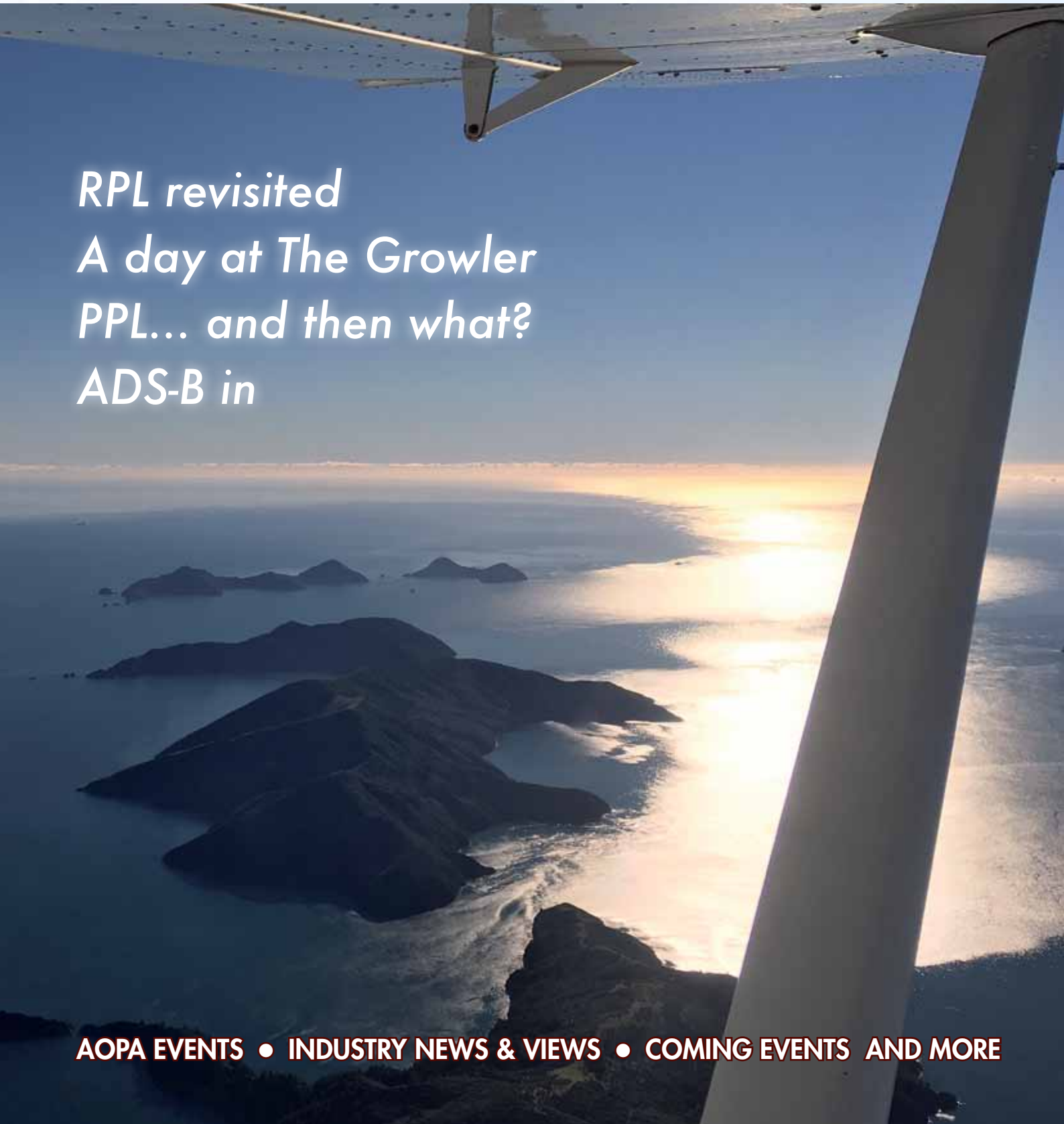
Approach

THE NEW ZEALAND AIRCRAFT OWNERS AND PILOTS MAGAZINE
SPRING 2018



RPL revisited
A day at The Growler
PPL... and then what?
ADS-B in

AOPA EVENTS • INDUSTRY NEWS & VIEWS • COMING EVENTS AND MORE

AOPA Approach

***ISSUE**: Spring 2018*

ISSN 2422-8230 / 2538-1083 (*Online*)

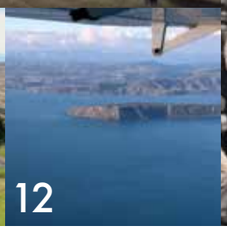
Coming events

- *Canterbury Aero Club 90th Anniversary, 7–8 September*
- *Darfield Fly-in, Charlie Draper's, 21–23 September*
- *Back to Basics Fly-in, southern North Island summer 2019, tba*
- *Christine Taylor Biennial Nth v Sth Golf Tournament Rangiora, 15 March 2019*
- *AOPA 2019 AGM Rangiora, 16 March 2019*
- *ANZAC Fly-in Hanmer Springs, Easter 2019, tba*

For more information visit www.aopa.co.nz

Cover Photo: Marlborough Sounds at mid-winter (*see story, page 12*)

(Photo credit: Caroline Goodwin)



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Regular Columns

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Editor: Anna Mackenzie ph 027 3345466; amack@airnet.net.nz
Advertising enquiries: Don Ryder ph 04 479 1367 / 027 442 0016 / don.ryder@aopa.co.nz
Administration: Mary Bruce ph 0272 940819 / admin@aopa.co.nz
Postal address: AOPA NZ Inc, c/- The Secretary, PO Box 659, Wanaka 9343

Deadline for ads, articles and photos for the next (Summer) issue: **20 October 2018**.

President's Report

I am struggling to write this Spring column in midwinter, but such are the vagaries, with people heading off overseas causing the deadline to be brought back.

I hope you got some good winter flying. I have been thwarted each time I planned to go out above the snow – so far. As I write, the winter fly-in has been postponed until better weather. here's hoping it comes right.

I am going to comment on some of my thoughts on safe flying. I am still a bit of a novice really and have a lot to learn, and I think that is a good perspective to have. I am happy to learn from anyone so long as the advice rings true in my mind.

My thoughts were stimulated by an article I recently read in *AOPA Pilot*, AOPA USA's magazine, regarding engine failure after take-off; my thanks to John Carroll for this.

John suggests that the straight extended runway departure lines we admire and aspire to, are not the safest.

We have been taught as students that if the propeller stops not to 'ever' turn back to the runway; good advice for students, but we know from incident statistics that many pilots do turn back. So in the past I have been out there (at good altitude) looking at how tightly I can turn and how much altitude I lose. Remembering you have to turn through about 270 degrees not just 180.

John's idea is that you should allow the aircraft to drift, with the cross wind, to about 100m away from the centre line. If there is no wind you should drift further. Then in the event of an engine failure, so long as you have at least 300ft (I would allow 500ft) you can turn into wind and at the end of a 180+ degree turn you will be aligned with the runway. The turn into wind conserves distance from the runway and on your finals the tailwind will allow more ground to be covered in the glide.

My previous experimentation showed me that I would need 800ft in my 182 to have a comfortable chance of gaining the runway if I was in my typical straight out departure. I have not decided what sort of departures I am going to do in future, but don't be surprised if you see JPN being blown 'off course'.

Do not take this as gospel, but it is an interesting talking point and certainly a situation which you can go away and look at in your aircraft – great excuse to go flying on a windy day, and a discussion point for your BFR instructor.

Here's hoping we have a great spring and summer of flying. Fly safe.

Steve Brown, President

AOPA News

Get clicking

Dust off the cameras: the AOPA photo calendar is kicking off!

Your Executive is taking on a bold new initiative: we would like to produce an AOPA members' calendar, featuring pictures by our members that showcase aviation activities in New Zealand.

Please look out your best photos (preferably taken this year or relatively recently) of planes, people or places. They'll need to be high resolution and top quality. Final selection will be made by a committee of the Executive.

Images should be emailed before 30 September 2018 to murray.paterson@aopa.co.nz

This project relies on your input. CAA has a good calendar but it would be fantastic to have our own – and even better if it becomes a collector's item.

A warm welcome to new members:

Tom Elworthy, Christchurch; Dan Gaddum, Tauranga, Cessna 185; Shane Mclean, Auckland; Alastair Millar, Rangiora, ICP Savannah; Neil Morris & Helen Little, Porirua, Piper 38-112; Brendan Morrison, Mosgiel; David Sarginson, Wanaka, Cessna 185.

New Member benefit

On the back cover of your new AOPA members Directory, you may have noticed a new advertisement for Rembrandt.

Show your AOPA membership card at any of the exclusively branded Rembrandt stores throughout NZ (and Columbus & Ware in Christchurch) and you will qualify for the special AOPA 10% discount. Suits, casual jackets, jeans, casual trousers, shirts, knitwear, footwear, hire wear and accessories. Why not check out the Rembrandt store nearest you or visit rembrandt.co.nz.

Meet the Exec in Wellington

Following the Executive meeting in Wellington on 17 November, lower North Island members are invited to a 'Meet and Greet' with your Executive committee.

The Executive invites you to join them at 5pm at 'Mac's Bar' in Cable Street. A cash bar will operate and AOPA will provide finger food, with the option to have a follow-on meal, either on the premises or at any of the many restaurants nearby. Please do come along and say hello.

MetService products for VFR pilots

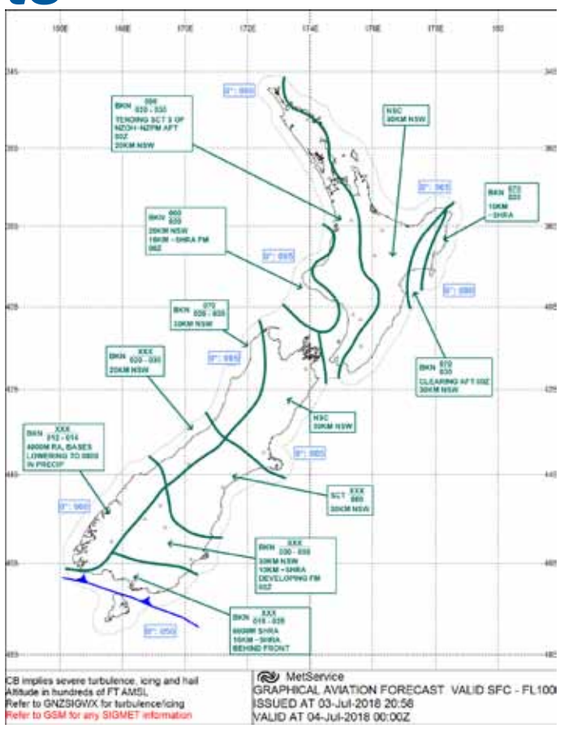
A few months ago, MetService introduced another of their graphical Met representations.

The first is a Low Level Graphical Aviation Forecast (GRAFOR) which aims to 'deliver information in a more intuitive way' by using charts rather than written words. Especially for those of us who may not fly all that regularly, the visual presentation can be much easier to interpret and understand than having to decipher the codes.

The 'new look' GRAFOR is illustrated here, and the full explanation (including the meaning of symbols etc) can be found on the CAA website: www.caa.govt.nz – click on the 'Aviation info' drop down box – scroll down to 'Meteorology' – scroll down the page to the subhead 'Reference Information and Guides' – click on the last line 'Low Level graphic Aviation'.

The second new service is called Aviation Area Winds (AWW) and this replaces the previous ARFORS (also explained in detail on the web link).

These graphics are the way forecasters are moving these days, so we can expect to see more of them in future.



From theVice-President

Bouquets instead of brickbats

We spend a great deal of time grizzling and moaning about our regulators. We usually think we are fully justified. Maybe we are, but I believe that, although we have a long way to go, we are making progress.

CAA work within a very strict set of regulations, arguably outdated in some areas, but it's important to keep in mind the progress made on things like recreational licenses, medical reforms and, hopefully, the adoption of fit for purpose technology.

The issue was reinfoced for me during a recent involvement with the building industry. I have flirted with building off and on over the years, and have built a few houses along the way. Ten years after building a certified building, I find myself struggling to credit how building industry regulations have ballooned.

Knee-jerk reactions to some very unfortunate events (Cave Creek, Pike River and the Christshurch earthquake) have allowed a variety of people to hamstring the industry, both logistically and financially. A prime example is Leaking House Syndrome – there is no such thing, just bad building!

Health and Safety: you can't work off a ladder! Where is training? Where is common sense regarding how you use a ladder and what you do and don't do?

New powers have been awarded to what were previously purely advisory bodies. BRANZ has become God. If a product is approved for use, it somehow becomes mandatory to use it.

Call me a cynic, but it seems to me that there are a lot of people getting rich through being in on the scene – and meanwhile, builders are leaving the industry. One told me this week that he is sick of relearning the rules every time he starts a new job.

I don't believe any of these changes have made new houses demonstratably better or safer. Good builders always built well; cowboys were always best avoided. What the burgeoning regulations have done is make houses both more expensive and more time-consuming to construct. Good luck to this Government on achieving their housing target.

So, after that little rant, I'm back to our CAA. We do struggle on some matters but, with care, hopefully we do not get new regulations just for the sake of it. There are enough rules already. What we require is sensible, logical interpretation of existing rules.

It is important that any new technology adopted is good for us and the likes of Airways, and that the use of IF can become more obtainable for GA. I believe that the relationship we have with our regulators will, with persistence and patience, keep us in the air.

Graeme Donald, Vice-President

Under the Catalina flight path

Our vice-president's mention of safety and ladders brought to mind an incident back in March in Wanaka. Surely it's safe to climb a ladder to carry out second story window frame repairs (and isn't that what everyone does during their holidays?).

Bit of sanding, bit of bog, bit of paint, lovely weather; always been fine with heights and balance. No problem.

What hadn't been anticipated was the impact to the nervous system of a rather hefty *Warbirds Over Wanaka* escapee making a beeline for the lake directly over the top of said ladder.

Suffice to say, the next run was enjoyed from the ground with camera rather than paintbrush in hand. They didn't subsequently manage to get their run-up quite so perfectly aligned over the house. And the painting got finished when things were a little quieter a few days on. — *Ed*

Recreational Pilots Licence revisited

By Steve Brown

Logic has broken out in Wellington. The RPL has matured. Thanks to significant work from Des Lines, the RPL has now gained its rightful place as a 'step-down' licence in the line of ATPL/CPL/PPL/RPL.

If you have ever had a valid lifetime PPL or CPL or ATPL you do not need to apply for an RPL. You do not need the bit of plastic with RPL on it. You do not need to spend the $230, you do not need another 'Fit and Proper Person' form, you do not need a Police check, you do not need to prove your colour vision competence.

For ATPL, CPL and PPL holders, if for any reason you do not have a current Class 2 aviation medical you can now still fly under RPL rules; so long as you have a valid and current DL9 with P endorsement, plus your BFR is current. This is great news. Your DL9 is current for five years if you are under 40 years old and two years if over 40.

For student pilots wanting an RPL or PPL with the plastic licence, the $230 still stands, as does the Police check, FPP and colour vison check. However the DL9 P endorsement is normally a lot cheaper and more convenient to get than a Class 2 aviation medical. Remember to keep the original DL9 with your licence as proof of currency.

Just to reiterate, the RPL allows you to fly an aircraft less than 2000kg, or a helicopter (single engine less than 1500kg) with one passenger, not over built-up areas except for approach and departure from an airfield, not pressurised, not at night and not IFR.

You need to keep the original DL9 with your licence, just as you would keep your Class 2 aviation medical handy to prove your currency. You do need to send a copy of the current DL9 to CAA Licencing. Any conditions attached to the DL9 need to be adhered to.

Note, there is no step down to the Microlight Certificate.

The RPL is not a valid ICAO pilot licence and cannot be used overseas. However, this maturing of the licence gives us an opportunity to advocate for wider privileges (you know that is a word I dislike; I would prefer 'competencies' but 'privileges' is the word which the law uses). We will be assessing which extensions to this licence we will advocate for next – four passengers would be nice, pressurised is logical. Night flying? IFR? ... Plenty of work still to do.

Annual AOPA Awards

JEM Aviation gets the thumbs up

AOPA Maintenance Shop of the Year was this year awarded to JEM Aviation, Omaka, run by Jay McIntyre.

From left: Ryan Southam, Kyle Sinclair, Jay McIntyre and Marty Nicoll

Exceptionally obliging service made JEM a clear winner, the Awards committee noted. “Members commented on the lengths to which JEM Aviation will go, sometimes out of hours, to assist with breakdowns both simple and complex, which can be very inconvenient when en route.”

JEM Aviation carry out GA general maintenance, plus both GA and warbird restorations and rebuilds.

Geoff van Asch, who presented the award on behalf of AOPA, describes the company as always prepared to go the extra mile.

“For those who follow the Reno Air Races, JEM are the guys who in 2017 changed a Yak–3 Allison motor overnight (18 hours) at Reno so that ‘Full Noise’ could front the start line. And in a more personal example, back in February Jay worked his magic through to midnight the night before ‘The Healthy Bastards’ to ensure that Scott Madsen and I could fly in the competition.”

Congratulations to JEM Aviation, and many thanks from AOPA members for being prepared to go that extra (aviation) mile.

2018 Top Tower – Dunedin

Most Helpful Control Tower award went to Dunedin Control Tower.

From left: Chief Controller Glenn Russell, controllers Dave Hoyer and Shaddon Waldie, Southern Towers Manager Mark Stretch and AOPA Life Member Murray Paterson

A group of local aviators joined forces in early June to make the presentation, which took place between shifts and proved perfectly timed, with the South Island Supervisor also on hand.

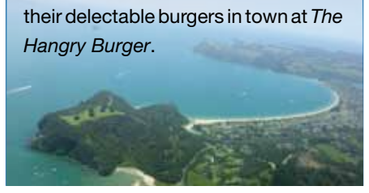
The pilots present reinforced that staff at Dunedin Tower were consistently helpful and have a good working relationship with all different forms of aviation in and around Dunedin. One excellent initiative cited is the User meeting held every six months to share ideas that will make the flow of traffic better for all concerned.

Other tributes leading to the award centred around the way Dunedin controllers care for first solo cross-country students, showing great consideration and patience to pilots who are often nervous and apprehensive, and to the support they give to IFR pilots, who specifically commented on the trouble the Tower staff take to assist with the most convenient routings.

Farewell to top watering hole

The Best Aviation Watering Hole award this year went to *The Departure Lounge* at Whitianga.

Sadly, this café has now closed, though the owners are still serving their delectable burgers in town at *The Hangry Burger*.



Double value

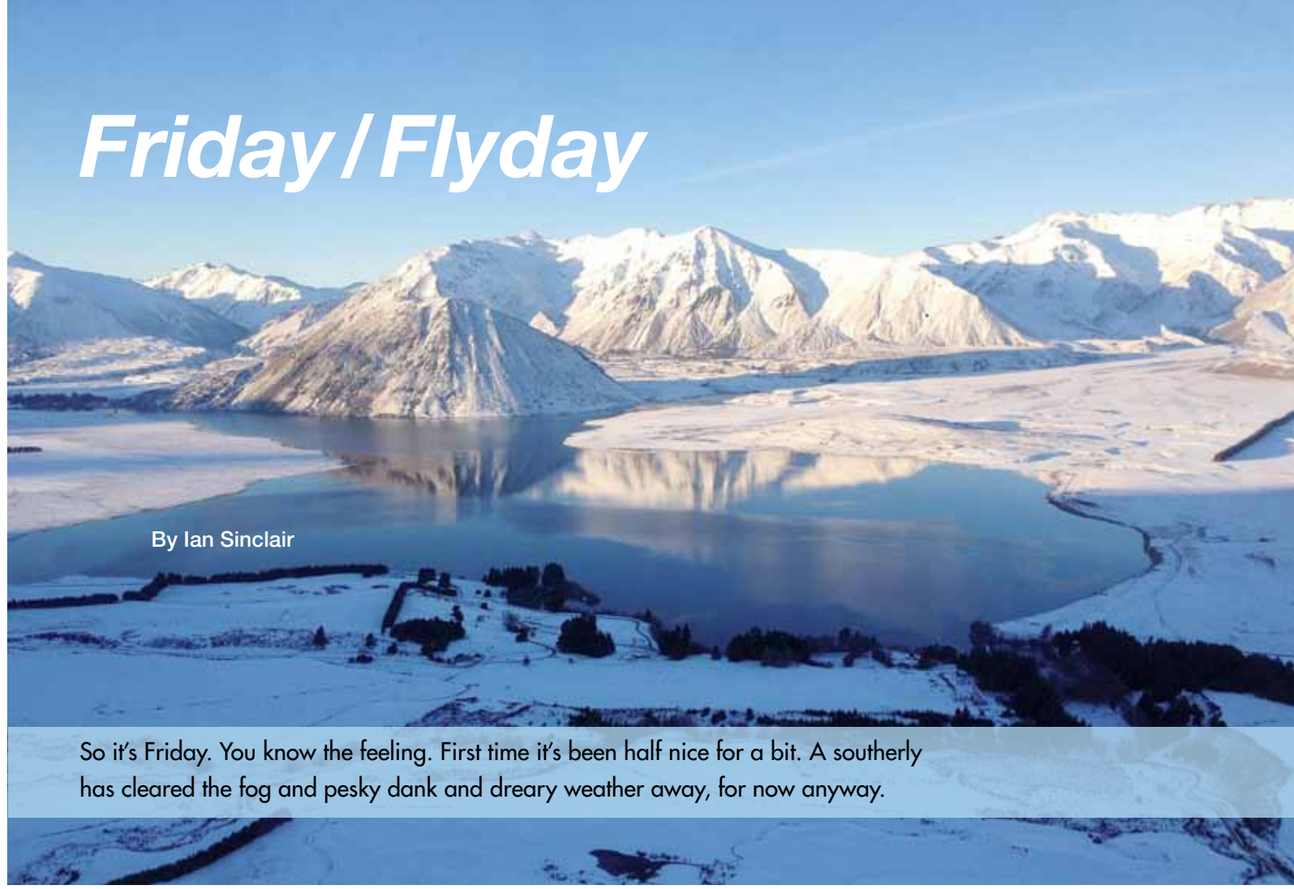
In response to a veritable slew of nominations, Graeme and Marie Donald, AOPA event organisers extraordinaire, were jointly presented the 2018 AOPA GA Champion award.

Marie and Graeme accept the GA Champion Award from past president Hamish Ross.

For decades Graeme and Marie have played a highly active role in facilitating the important social side of AOPA, organising fly-ins and fly-aways, including three of the last four AGMs, Feilding, Wanganui and Gisborne. And it has been very much a team effort.

In addition, Graeme has served on the Executive for many years, and was this year elected Vice President. For more on Graeme, see page 26.

Friday / Flyday



By Ian Sinclair

So it’s Friday. You know the feeling. First time it’s been half nice for a bit. A southerly has cleared the fog and pesky dank and dreary weather away, for now anyway.

Time for some reward time. Quick text to Pecker and he is convinced rewards are in order. We talk time and place.

I crank up and get to Timaru airport early and pound the circuit. You can not beat some tight low level circuits to sharpen the mind. Very rewarding.

Pecker turns up and after he happily severs the work phone from his earlobe, he attaches to the left seat and we are out of there. No plan, just an hour and a bit before dark and enough fuel to fly until a little after dark.

02 falls away and I grunt indistinctly towards the Rangitata Gorge. On the inland side there is a fresh but light dusting of snow. We head to lakes Emma, Camp and Clearwater. It looks cold and beautiful. Pecker makes the mistake of wanting to take a photo. I pounce on the controls, sucker.

A little up and over to Heron then low level through to the top of the Rakaia and upstream. Rather than backtrack we climb upstream, turn across a couple of faces and flop over Butler saddle.

As we cross the Lawrence River I feel a bit guilty and relinquish control and Pecker tracks for Ben McLeod, Orari Gorge and back to Timaru.

A quick stop at the pump, eject Pecker and home by about dark. Jeeze, we live in a cracking place.

I wonder what everyone else was doing on flyday? No, wait ... who cares?

LatLong

Where the hell are we, Brian?!

By Ian Sinclair

I received some airstrip co-ordinates the other day and, after having a play with them, I think there is great potential for confusion when sharing Lats and Longs in the modern GPS age.

It may be that our recording and notation of co-ordinates are a bit lazy and prone to misinterpretation. When we enter locations into our apps, we expect them to be precise and point exactly to the object of interest. Getting a list of co-ordinates that use two different systems but are presented in the same notation is challenging. If we are expecting a particular format we build up mind set. Mind you, it could just be me.

There are many ways to describe a point on the earth. Historically, in aviation we dealt with degrees and minutes and seconds to describe a point on the map; we can read it directly on or off the lat/long lines marked on the map. In the aviation GPS age we seem to deal with two main formats that relate back to this basic method. Most of us have also run across the favoured Google maps format.

On a 1:250K VNC, a line that runs north/south is graduated in latitude. Reading down that line, the latitude number gets bigger as we move south from the equator. Conveniently, the distance between where this line crosses the lines running east/west converts to nautical miles. The distance between 44 degrees and 15 minutes and 44 degrees and 30 minutes is 15 nautical miles. The map line is marked with each minute, and that is a nautical mile.

So my airstrip is located at 44 10 25 S and 171 08 34 E. The format I have used is Degrees Minutes Seconds (dd mm ss) and you can read this location right onto the map. This is fairly accurate. The resolution is down to 1/60th of a Nautical Mile for the Lat and way less for the Long, because of where we live, halfway down the bottom half of the planet where the lines are getting closer together. A Lat Second is 1/60th of a Nautical Mile so our precision is 1852/60 = 30.87meters. On a 250K VNC a pen line is wider than a Lat second.

This is where it starts to get confused. Your GPS is capable of being more accurate than 30.87m, especially if the signal is corrected with WAAS (SBAS), so GPS systems used for tasks like precision approaches need to have co-ordinates expressed a bit more precisely than dd mm ss. One way of doing that is to put some decimal places into the Second. 44 10 25.20S 171 08 34.20E is in dd mm ss.ss. This would get us down to a resolution of 1852/ (60*100) = 0.309m or 309 mm. Pretty accurate Nigel!

But wait, there's more. Let's forget the seconds and just go for a system where we use degrees and minutes and decimal fractions of minutes. So 44 10.41667S 171 08.56667E in dd mm.mmmmm, which gets you down to a resolution of 1852/100000 = 0.01852m or 1.9mm. God knows I can't fly that accurately, so we can simplify this to 44 10.417S 171 08.567E dd mm.mmm 1852/1000 = 1.852m, which is still pretty awesome. Commonly for tasks like locating airstrips this is truncated to make the last digit of the mm.mmm type a 0 so effectively we are down to a resolution of 1852/100 = 18.52m, but it is still should written as dd mm.mmm.

So this is the heart of the confusion: dd mm ss verses dd mm.mmm

If I write 44:10.25S 171:08.34E, what does that mean? Because there is a decimal place you might expect it to be dd mm.mmm. You can also convince yourself that it is dd mm ss as the last two digits are less than 60 so they could be seconds.

For a Lat, the potential error by confusing dd mm ss vs dd mm.mmm for 44:10.59 is 1852 /60*59 = 1821m vs 1852 /100*59 = 1093m or 728m.

The key is to use a structured notation when we share gps coordinates. We really should include the correct symbols for degrees, minutes and seconds so there would be no confusion, but we often don't. We can also state which system is being used by including a notation like dd mm ss or dd mm.mmm in a header or with a coordinate.

These notations using the symbols and dd labels are unambiguous:

S 44.17361° E 171.14277° for dd.ddddd
S 44°10.417' E 171°08.567' for dd mm.mmm
S 44°10'25" E 171°08'34" for dd mm ss

The symbols are hard to write and easy to misread, so some shorthand formats that work for dd mm ss, dd mm.mm and dd.ddddd are:

S 44 10 25 E 171 08 34
44 10 25S 171 08 34E
S 44 10.417 E 171 08.567
44 10.417S 171 08.567E
44.17361S 171.14277E

- Spaces between types Degrees Minutes Seconds;
- Decimal points imply this is the last type and it is decimalised;
- Leading or trailing S and E, with or without a separating space.

Our published charts seem consistent.

The VFG uses dd mm ss for airports and reporting points.

The ERC charts use dd mm ss for waypoints.

Looking at a few apps on my phone there is variation. There are examples of applications that invent their own notations.

Air Nav Pro
DD:MM:SS for dd mm ss
DD:MM.mm for dd mm.mmm
Decimal for dd.dddd

Oz Runways
dd mm.mmm format is used and uses the correct symbols.

OziExplorer uses the correct symbols for each of
dd.dddd
dd mm.mmm
dd mm ss
+ another 19 mapping standards.

Naviator only uses
dd mm.mmm and uses the correct symbols.

There are many more apps out there but dd mm.mmm seems to be the most common.

A useful tip is that Google maps will accept the following formats directly in its search bar and mark that spot on the map. Using the satellite image view option will verify where the co-ordinates are and help describe the strip to you.

S 44 10 25 E 171 08 34
44 10 25S 171 08 34E
S 44 10.417 E 171 08.567
44 10.417S 171 08.567E
44.17361S 171.14277E

For an example of positional confusion try 44 10.25 S 171 08.34 E. You will probably still find my strip but the co-ordinate is pointing you at the neighbour's house (see images above).

So why does this matter?

For the same reason that reporting 6 miles west when you are 12 miles south is important. It is about being accurate and understanding the system you are using. VFR pilots do not need a co-ordinate system with high accuracy, but an IFR precision approach does. When you are looking at a destination airstrip or location and describing it using the tools we have available today, you do not want to be convincing yourself the strip is on the other side of the river or road. Consistent notation of co-ordinates removes ambiguity and error.

Anyway, I hope you lat for a long time.

The Growler

By Steve Brown

What a great name for a creek and a backcountry hut plus its associated airstrip. I have only landed here once but it was a memorable trip, and I will be back.

The experience started with a grilling from an A Cat instructor who knows me pretty well. His role was to minimise the chance of me getting it wrong and bending my much loved Cessna 182.

Yes, I have the big wheels and yes, I was going in 'light', but it was sobering to hear the statistics regarding how frequently pilots bend aircraft when flying into unimproved strips with a reasonable degree of difficulty.

"Don't do circuits, just do one landing and be thankful."

"Pilots should anticipate having an incident about one in one or two hundred strip landings."

This was a good day, no wind, and I landed uphill and was content.

The Recreational Backcountry Pilots Association (RBPA) is a group of pilots who either frequent our unimproved back country strips, or aspire to do so in the future. Established several years ago by the 180/185 group with support from AOPA, RBPA's purpose was to obtain a long term concession from DoC that would allow suitable aircraft and pilots to use historic and new strips on the DoC estate. (See *Winter 2018* issue for more.)

New Zealand has a rich aviation history, including the use of aircraft to access the backcountry. Many of the early airstrips have become overgrown and dangerous, though a good number survive in useable condition. In addition to obtaining permission for its members to use many of these strips, RBPA is now applying for permission to restore some of the disused strips to usable condition. RBPA and AOPA members are also working with DoC to eliminate noxious weeds.

There is no published list of strips for members or the public. Use of the strips under the RBPA consent is limited to Association members who are known to have appropriate skill and experience to land and take off safely, thus members are required to talk to one of the regional committee members to get an appropriate briefing. Sounds complex but it works; members just need to get on the phone.

Anyway, back to The Growler (for which we are not publishing co-ordinates). The strip is uphill to the east and often presents that gnarly dilemma of tailwind downhill or into wind uphill. I was warned that on some afternoons, with the easterly coming up the valley, take-off might not be possible and a delay until the wind died should be planned for.

Luckily, I was light and my old rule of 75% of short field rotation airspeed by halfway along the runway has worked for me so far. At the halfway point I seemed to have pathetic airspeed so I slowed to the bottom and took off with no difficulty uphill, remembering to turn into the quartering cross wind (thanks Nathan).

For the scientifically minded, I am working on an article which analyses exactly which way you should take off in this difficult situation – the maths is not for the fainthearted and I am still reviving rusty neurones to get my head around the equation…. Watch this space.

This outing provided a great interlude in the high country, made possible by aviation and the RBPA DoC consession, with an excellent walk along the pristine clear river – no fish to be seen but I bet they were there. I'm also pleased to report not one bit of rubbish or any sign of the degradation we are often warned about.

Cross-country practice

By Caroline Goodwin

Eight months after gaining my PPL it felt like time to branch out, keeping current while having some fun. I'd done quite a bit of local flying and taken friends for short rides from my local aerodrome, Bridge Pa, but my cross-country skills needed practice.

Flying to my hometown, Blenheim to visit family was also one of the reasons I learnt to fly in the first place. Back then, I thought it would be great to save the four hour car trip followed by ferry queues and journey – of course I was yet to discover just how weather dependent VFR flying in a LSA is in New Zealand.

A few weeks previously I'd flown halfway, to Paraparaumu, so the next step was a Cook Strait crossing. I asked my friend, flying instructor and fellow South Islander Hamish to come along. When I first came to Hawke's Bay, twenty-eight years ago, we did a similar trip in his plane, and it was he who inspired me to "do something about" learning to fly. I'm so glad he did.

Being a yachtie and having children sail dinghies competitively, I have always had an interest in weather. Preparing for a cross-country flight felt very like preparing for a sailing contest, with plenty of research into the area and expected conditions completed in advance. I found Jacob Halliburton's article in the January/Feburary 2017 Vector very interesting and helpful. I also like the new MetService GRAFOR, with its NZ SigWX chart and Aviation Area Winds, for picturing the conditions ahead.

Caroline Goodwin (right) with the best of reasons for crossing the Strait.

Easy to see, during flight planning, that we would need a good day. The Cook Strait venturi effect, combined with high peaks between the waterways in the Sounds, make for potentially very turbulent air. Down at sea level Cook Strait is like a giant washing machine as the tides flood and ebb. It has a reputation for being the roughest piece of water in the world, and I didn't want to test its reputation, in some weathers, of matching those conditions in the air.

However, on a good day, this rugged and wild coastline offers magical sights and fabulous fishing. And so it was for our flight: calm, sunny, snow-capped mountains and glistening water. I chose to fly over the outer Sounds to give Hamish a stunning view of the islands and bays out that way, and to check out Beatrix Bay, where I spent my childhood. We also saw one or two very challenging looking strips.

I find it satisfying when the planned smoothly turns into reality, and when the landmarks and reporting points come into view as they should. We picked up the Waihopi Domes from miles away. I also appreciate easy to hear, understand and read back Control instructions, as they were from Woodburn when we received our instructions into Omaka.

No wind, a chocolate fish for a go-around, and we arrived, our reception party waiting. As an ex PPL, Dad was pretty keen on having a ride. He'd given up flying a few years before he used to thrill us kids by opening the throttle of the little Fergie tractor in high ratio as we travelled home down the airstrip at Beatrix Bay. This was our first real flight together. So after coffee and a catch up we were up and out to the Awatere Valley. I could see flying was all coming back for him, just like riding a bike. I look forward to doing lots more together. Mum also climbed in for a White Bluffs circuit; after a lifetime including sea voyages through the Pacific she's come to love adventuring.

I'm a beginner flyer, but if you aim high and work hard you can sometimes land amongst the stars, and at Omaka I got a private airshow from a Yak pilot practising his manoeuvres and having a ball making it look easy to fly this high performance plane.

After a lunch in the sun at the Aviation Heritage Museum, admiring the large array of toys around us, it was time to set for home. Back across a still calm Strait, Mana Island, windmills, bright greens and yellows, rolling hills, rivers and Anaroa hills to home. The southerly was like the last downwind leg of a yacht race, followed by a final mark rounding and tricky beat to wind, correcting for the gusts and shifts to finish at the correct end of the finish line.

Thoughts on safety *from Paul Hood*

New Zealand's weather can offer the GA pilot a lot of stress and many challenges. Being situated in the roaring fourties and surrounded by water ensures us unique weather with significant variability within a relatively short distance.

That makes it a little surprising that fewer than ten percent of GA pilots have an IFR rating. By contrast, 43% of GA pilots in the US hold an IFR rating.

It is very easy, with our modern glass navigators and aviation apps, to get airborne in perfectly appropriate weather conditions, then to end at our destination above the cloud at relatively modest altitude, or forced to below a safe or even legal altitude for a time to enable one to find an appropriate strip to put our aircraft down. With our changeable conditions, the weather can close in behind us, reducing our options even further.

While our forecasting is very good and we have a lot of choice when it comes to evaluating the weather en route and at our destination, it is not an exact science. It can change, and quite often does. While best intentions are not to get in such situations, it does not always play out that way.

If you do find yourself in such a situation, your best defence can quite often be to have a broader skillset at your disposal – and this may be where an IFR rating could make your flying both safer and less stressful. It may not be for everyone, but for those who use flying in private business, IFR is certainly an option that will add another level of safety.

It is still important to have a good understanding of weather and forecasts with instrument flying, because cruising levels have safe minimum heights which can put the aircraft into an ice environment. There is also landing minima, which change from airport to airport, bringing alternates into the equation. There is quite a bit involved, but the change in avionics will make IFR easier to fly.

Our challenge is to get the authorities to move with the times and modify the syllabus so it is more competence-based and less focused on theory that has little relevance to local flying. This is one area your Executive will be working on with the authorities over the coming years.

In the meantime, VFR means Visual Flight Rules and that requires the pilot to have eyes outside the cockpit and fly by visual references. Have a plan B and be prepared to use it.

Whether you are VFR or IFR, currency is important, so get that aircraft out of the hangar and into the air at every chance, and remember to stay within your comfort zone.

Happy and safe flying.

AOPA NZ webcams

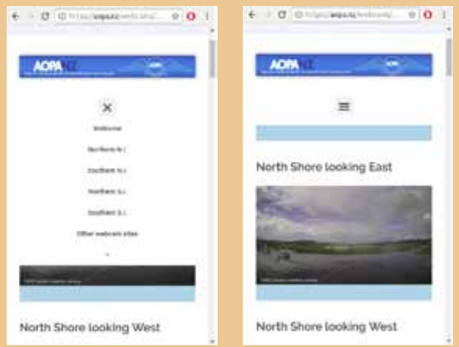
The AOPA NZ webcam site has had a make-over. Check it out...

All the same cameras are still available; now organised in five separate pages: a welcome page then a page each for the north and south of the North Island and the north and south of the South Island, with each page sorted into a useful order.

The format has been changed so that the images are always full browser width no matter what device you are using. You can make any of the four pages your home page for the site by navigating to that page and saving it as a favourite or as a short cut.

To view the new site go to https://aopa.nz and choose the 'AOPA NZ Webcams'. If you are on a wide browser you will see words for the menu choices to navigate to the pages.

If you are on a smaller screen format, choose the square icon with the horizontal lines in the centre of the screen at the top or bottom of the page to see the menu choices.



If you know of date- and time-stamped webcams that clearly show the sky which we could potentially add to our site, please use the email address on the site and let us know about them. It only takes a few minutes to add a new webcam and then everyone gets the benefit.

Crossing the Tasman

It is no coincidence that the year marking the 90th anniversaries of New Zealand's oldest Aero Clubs also marks the inaugural trans-Tasman flight made by Charles Kingsford Smith and Charles Ulm. Their achievement engaged the public imagination and the duo were feted as heros – but the real winner was aviation.

Kingsford Smith learnt to fly with the RAF during WWI, serving with No.23 Squadron in France from July 1917. The aviation flame was lit, and after the war he piloted joy-flights in England and was briefly a stunt flier in a flying circus in the USA where he was endeavouring, unsuccessfully, to find sponsors for a trans-Pacific flight. By 1921 he was back in Australia, working as a pilot for Western Australian Airways Ltd.

In 1927 he, Keith Anderson and Charles Ulm formed Interstate Flying Services with two Bristol Tourers. The new company's tender for an Adelaide-Perth mail service was unsuccessful, and the men set out to prove the point with a demonstration round-Australia flight. In June 1927, with minimal navigational aids, Kingsford Smith and Ulm completed the circuit in 10 days, 5 hours.

The feat brought them the attention and backing they needed. With a £9000 grant from the New South Wales government as well as backing from Sidney Myer and Californian oil magnate G. Allan Hancock, Kingsford Smith, Ulm and two American crewmen, Harry Lyon and Jim Warner, set their sights on a trans-Pacific crossing. On 31 May 1928 they left Oakland California in a Fokker VII trimotor monoplane, *Southern Cross*, modified by the Boeing factory to carry extra fuel. The 11,585km flight, via Hawaii and Suva to Brisbane, took a total flying time of 83 hours, 38 minutes.

On arrival the men became instant celebrities, received honorary commissions in the RAAF, and found funding for future flights far easier to come by.

In August that year, together with Harold Litchfield as wireless operator and New Zealander Tom McWilliams as navigator, they flew *Southern Cross* non-stop from Point Cook, Victoria, to Perth. The Tasman Ocean was their next goal.

Bad weather delayed their departure, but at 5.34pm on 10 September 1928 the men took off from Richmond Aerodrome, Sydney. They struck thunderstorms throughout the night, the radio equipment failed shortly after take-off, the plane was struck by lightning, and Kingsford Smith was forced to fly blind due to heavy rain and ice coating the windshield. Ulm relieved Kingsford Smith at around 3.30am, shortly after which the weather began to improve.

Approximately 240km from the New Zealand coast the men dropped a wreath in memory of George Hood and John Moncrieff, the two New Zealanders who had disappeared during their attempt to cross the Tasman earlier that year. Arriving ahead of schedule, they circled over Wellington at a height of 300m before following the east coast of the South Island to Wigram Aerodrome, Christchurch. They landed at 9.22am NZ time, having covered 2670km in 14 hours, 25 minutes.

The welcome in Christchurch was tremendous. Schools were closed, public servants given a half-day holiday, and around 30,000 enthusiasts gathered at Wigram, yet more lining beaches and waving from rooftops. The men were exhausted but were allowed little respite over the following days of celebration. The *Southern Cross* returned safely to Richmond Aerodrome from Blenheim on 8 October.

Having demonstrated the feasibility of regular passenger and mail services across the Tasman Sea, Kingsford Smith and Ulm went on to further aviation adventures. But, like the New Zealanders they had honoured during their Tasman crossing, both men eventually disappeared while flying: Ulm en route to Hawaii in December 1934 and Kingsford Smith over Burma the following year.

Left: Charles Ulm (left) and Charles Kingsford Smith, 1928.

Below: Southern Cross arrives at HB&EC Aero Club, 1933.

Tech Talk with Peter Glaister

Continuing an exploration of IFR for the GA pilot

A flexible, practical and competency-based future

The sensible solution to scud-running

In the last issue I addressed advancements in technology that have seen us move from the steam gauges of the past to glass that is turning the modern cockpit into a virtual reality screen. In the past it has appeared easier to become a top gun pilot than an IFR rated GA pilot, with those steam gauges, IFR exams and training combining to make it a big hurdle.

Today, technology is taking care of situational awareness in the cockpit. What if the training could be reduced to a competency-based rating similar to getting a multi engine rating?

There is a notice of proposed amendment (NPA) by EASA (European Aviation Safety Agency) for 'Easier access for GA pilots to IFR flying'. For the GA pilot, this proposed amendment is a quantum leap forward towards making IFR accessible for non-commercial licences, and one we would expect ICAO and our own CAA to adopt.

The NPA proposes the introduction of a 'Basic Instrument Rating (BIR)', which is a qualification to fly in Instrument Flight Rules (IFR), but based on more proportionate requirements when compared to the traditional instrument rating, and tailored to the needs of GA pilots. This is one of the key initiatives for meeting EASA's road map and the GA community's objectives.

As an innovation, the key principles for the BIR are as follows:

Training that is entirely competency-based. There will be no minimum hours requirement set for the BIR. All the required competencies that a GA pilot needs for an IFR flight are analysed and grouped into three modules of training. Candidates will progress to the next module or skill test when ready to do so.

Training that is flexible. The core module of instrument flying skills must always be completed first, after which the candidate may choose which module to tackle next, within a timescale that suits them. This takes into account that GA pilots may often not have the time or financial resources to commit to a more conventional full course of training towards the IR.

Focus on the practical needs of GA pilots. Holders of the BIR should feel confident to use it to the full extent of its privileges. While IFR flight has many safety advantages, what is central to its philosophy is the assessment of the risks of a particular flight in a more systematic way. To this end, the training will be focussed on the real-world instrument flying needs of GA pilots, with particular emphasis on practical application of threat and error management. This will ensure that the full safety and utility benefits of IFR flight are reaped.

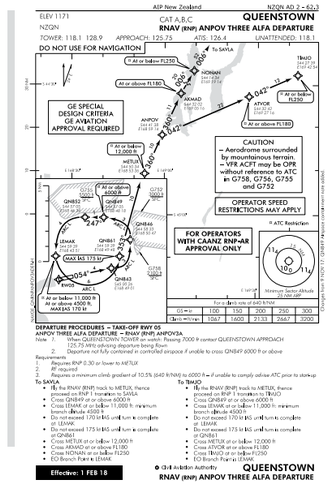
High standards of training and testing. Despite the focus on GA needs, practical training and testing standards will be similar to those of the current (EASA) Part-FCL (flight crew licensing) instrument ratings, particularly with regard to interaction with other airspace users. It is very important that GA pilots flying under IFR have the required competencies for this.

Real world situations

This competency-based proposal is a far cry from where we are now, and from where we need to be. Current examinations focus largely on the mechanics of so many aviation functions. We need that part of the syllabus put into practical flying and decision-making skills. New Zealand has some very good IFR instructors, but in my opinion the syllabus could cover more real-world experience. When I did my IFR training, if there was a Cb-forecast day and we were to fly IMC, it was a no-fly day. Fair enough, I thought, but how do we learn about ice, fronts, turbulence, etc, in IMC? We learn stalls, spins and never expect to cause or be in a stall.

Ten years ago, when I was getting a rating in a twin in USA, at the end of the three-day rating course my instructor flew over to ten to fifteen thunderstorms, all lined up on a sunny mid-west day. The instructor went along the edge in and out getting turbulence, ice and generally causing terror. No more terror than a stall or dropped wing does to the new pilot. Not a syllabus item, but a valuable lesson in real world flying, staying safe and making good decisions.

With glass cockpit technology and, in the future, competency based IFR training, the new generation GA pilot will fly the IMC skies with a similar confidence that a driver has on our roads today – from clear VFR day to rain, sleet, snow, fog and night driving conditions.



Stratux ADS-B IN

By Ian Sinclair

ADS-B IN is not compulsory, but if you choose to install it in your aircraft there are a few different ways to do it. Some ADS-B OUT units have ADS-B IN installed, or have it available as an option. There are several dedicated ADS-B IN receivers that are shipped ready to go. Some are installed and others are portable.

This article describes a Stratux portable receiver and one app that will work with it. See http://stratux.me for information on the project. There are also several YouTube videos that show assembly and use. The Stratus ADS-B IN solution, which looks similar to the Stratux, is based on this project but with a different AHRS board.

In New Zealand an ADS-B IN receiver will only pick up signals from ADS-B OUT equipped aircraft. The unit has provision for 1090 ES and 978 UAT reception. In the USA 978 provides information on non ADS-B OUT equipped traffic and weather information via ground stations. I have configured my unit without the unneeded aerial but with the 978 SDR installed, and have installed the optional AHRS and GPS.

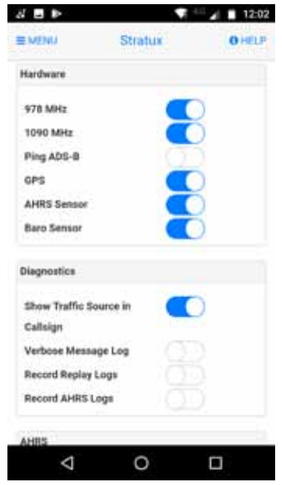
Hardware

The Stratux receiver unit is comprised of:

- A case designed to fit everything and a suction mount to attach it;
- Raspberry PI 3 (a credit card sized computer);
- An SD card with the Stratus software preloaded;
- Two SDR (Software Defined Radio) USB receivers with matched aerials;
- A USB remote mount GPS;
- An AHRS sensor board, includes a pressure sensor;
- A power source; a dual USB car charger and USB cable.

You can purchase all of these bits pre-build or as components from ebay or Amazon. Search for Stratux. If you are not inclined to enjoy assembling this type of project, get pre-built.

Several sellers promote a battery that will run the Stratux so it can act as an electrically independent AHRS source. I chose to use a 12v car charger for my installation.



Initial setup and configuration

Turn the unit on, by connecting the USB micro connector; after about 30 seconds a wireless access point called 'stratux' will appear.

Connect to the network from your phone or tablet.

Open a web browser and browse to 192.168.10.1

This page has options that let you configure the unit and review the output of the ADS-B IN, GPS and AHRS.

Using with apps

I run on an Android device and have chosen Navigator to display the traffic information. It also has a PFD to show the AHRS information. I have not tried all of the available Android apps or any iOS apps. There is a full list of compatible iOS and Android apps available on the stratux.me website. Some Android apps seem to be blocked for NZ use.

How it works

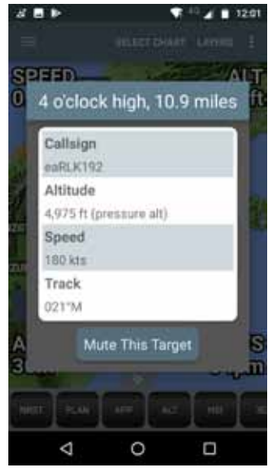
The Stratux reads the 1090 ES transmissions, captures the information from the USB GPS and reads the AHRS board and makes that information available to any wifi clients.

The Navigator app understands the Stratux output data format, connects to the Stratux via wifi and uses the data to show traffic. Navigator has a configuration option to use an external source for data including GPS that is compatible with the Stratux output. It also has a useful option where it speaks to you about possible traffic conflicts.

Caution

If your device uses real time internet access it may be affected by connecting to the Stratux access point, which has no internet available in the out-of-the-box configuration. This type of unit is portable, so its serviceability is negatively affected by low quality installation.

The AHRS information should be used with caution. It is not a certified solution, just a backup/last chance solution when used with a battery. Remember: only ADS-B OUT equipped targets can be detected and displayed. There are not that many yet.



Jumping out of a perfectly good plane

For his 60th birthday Peter Glaister was given a one way ticket out of a plane from 12,000ft. D-Day arrived in February.

Approaching Wanaka nerves kicked in, but there was no backing out. I counted twenty-one people on board the Cessna caravan with a Texas conversion – big power boost 1000hp, so the climb to 12,000ft was pretty quick. Boris from Serbia was on my back. To calm my nerves I joked on the way up about how experienced Boris was, and the number of clients he had lost. His answers, in front of the plane full of straight-faced Asians saying nothing, were horrendous.

On the promo video I'd see jumpmasters do somersaults out of the plane, and made it clear that was a definite no-no for me. The door opened, plenty of nerves (I don't like heights) then Boris did two somersaults. Next came a flat spin at what I think was close to 40rpm. Luckily Boris stopped before I got too dizzy, next getting me to move my hands like ailerons and fly whilst face planted towards earth.

Boris pulled the cord at 5000ft, which pulled a few Gs, then undid the two bottom hooks, which felt like you had just slipped out of the suit. Undoing the hooks gives movement to make manoeuvres and landing easier. Boris got me flying it on the strings, then did a few massively steep turns as payback for being cheeky. Up till then I was relieved I had survived this far; those steep turns made me certain it was all going to be over at 300ft. After which, he did a perfect landing.

Horrendous and awesome all in one.

The Savvy Aviator on

Is your equipment list up-to-date?

By Mike Busch, pilot, CFI, A&P, IA
(With thanks to Mike Busch and AOPA USA)

A funny thing happened as I was finishing up the annual inspection on my 1979 Cessna T310R back in March of 2000. The inspection was complete, and my IA didn't find much wrong with the plane. Any discrepancies had been resolved and the plane was finally back together. The AD research was done. All that was left was the paperwork.

One of the few discrepancies had been an ELT that flunked its annual FAR 91.207(d) test – it wouldn't go off no matter how hard I whacked it – so I'd yanked it out and installed a shiny new TSO-C91A unit, complete with a panel-mounted switch/annunciator module. I asked my IA whether or not a weight-and-balance revision would be necessary. It turned out that the new ELT weighed almost precisely the same as the old one, and the panel module weighed next to nothing, so the IA determined the W&B change would be negligible. "But be sure to update the equipment list," he said.

"What equipment list?"

I instantly sensed from the IA's expression that this was not the answer he wanted to hear. "Your POH or W&B Report is required to include an up-to-date equipment list," he said, giving me his best do-I-have-to-explain-everything scowl. "That list must be revised whenever equipment is added or removed."

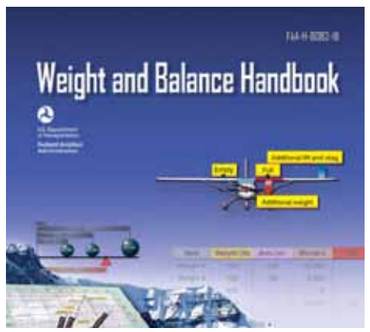
I retrieved the POH from the plane and flipped to the back of the W&B chapter. Sure enough, there was an equipment list. I showed it to my IA. He shook his head.

"No, that's a comprehensive equipment list – a list of everything that Cessna might possibly have installed in a 1979 T310R. It could serve as an aircraft-specific equipment list if those items that are actually installed in your aircraft were checked off in the comprehensive list. But they're not."

Sure enough, the equipment list in the POH had a column titled 'Mark If Installed', but that column was completely blank. There was no indication of what equipment was actually installed in my plane.

I returned to the airplane and rummaged through my W&B documentation, finally coming up with what I was looking for. It was a yellowed and somewhat dog-eared computer printout on sprocket-fed fan-fold paper – the kind that was used back in 1979 – that listed the equipment installed in my particular aircraft when it left the Cessna factory, complete with the weight and arm of each item. The only problem was that this printout hadn't been revised since the day Cessna generated it in 1979, despite the fact that by now almost all the original factory-installed avionics had been replaced with newer stuff. Sigh.

"That list has to be kept updated to reflect what's actually installed in the aircraft," my IA said. "How on earth did you go all these years without someone catching this?"



A little research convinced me that the IA was correct. The best reference is the FAA's *Aircraft Weight and Balance Handbook* (FAA-H-8083-1B), published in 2016. Quoting from this handbook:

An equipment list is furnished with the aircraft which specifies all the required equipment, and all equipment approved for installation in the aircraft. The weight and arm of each item is included on the list, and all equipment installed when the aircraft left the factory is checked.

When an Aircraft Maintenance Technician adds or removes any item on the equipment list, s/he must change the weight and balance record to indicate the new empty weight and empty-weight CG, and the equipment list is revised to show which equipment is actually installed.

Bringing it up-to-date

"What now?" I asked. "Do you want me to mark up Cessna's printout, crossing off the equipment that has been removed, and adding in the new equipment?"

"You could, but it might be better to make up a new equipment list on your PC and print out a clean, up-to-date list."

That idea appealed to me. It would be straightforward to enter all the equipment into an Excel spreadsheet. In fact, it quickly occurred to me that if the spreadsheet included weight and arm for each item (as Cessna's original did), it would be easy to have the spreadsheet calculate the aircraft empty weight and CG. Then, when equipment was added or removed in the future, simply entering that information into the equipment list spreadsheet would automatically produce an updated W&B. The more I thought about it, the more I became convinced this was the way to go.

That evening, I sat down at my computer and proceeded to enter all the equipment from the Cessna printout into a spreadsheet. There were about 125 items and it took about an hour. My spreadsheet was structured in two sections, just like Cessna's: Section A contained 'required equipment' and Section B contained 'standard and optional equipment'.

Then I went through each W&B amendment in sequence, removing and adding spreadsheet lines to correspond with the equipment that had been removed from and added to the aircraft over the years. To provide traceability, I did not delete any items from the spreadsheet, but simply set the 'quantity' field of each item of removed equipment to zero, then added a new line for the new equipment that replaced it. All revised lines were identified with 'DELETED <date>' or 'ADDED <date>' entries in the remarks column.

Finally, I added a third section to the spreadsheet – Section C – in which I entered the necessary formulas to add up the weights and moments for each item in Section B, add it to the standard empty aircraft weight (the weight of a fictitious aircraft with only required equipment), and calculate the actual empty weight and CG of my aircraft.

The whole project took about two hours, and the result was a very nice-looking and up-to-date equipment list.

A few (pleasant) surprises

In making the spreadsheet I discovered some interesting things. The first was that a few of the items of equipment that Cessna listed on its computer printout had never (so far as I could tell) actually been installed in the aircraft. One such was 'Handset & Boom Mic, Combination' (0.4 lbs); another was 'Approach Plate Holders' (0.2 lbs). No big deal.

Of somewhat greater significance, I found that certain items on the original Cessna equipment list had been removed from the aircraft but apparently the removals were never recorded in W&B amendments. For example, when the original Cessna 400 transponder was removed and replaced with a King KT-76A, the old transponder was backed out of the W&B, but its mounting tray (0.6 lbs.) was forgotten. The bottom line is that when the dust settled, I'd picked up a few extra pounds of empty weight for my trouble.

Legal again

After double-checking everything carefully to make sure I'd made no errors, I presented my handiwork to the IA, who triple-checked it and then affixed his signature and A&P/IA certificate number, thereby making it an official part of my Airplane Flight Manual and Weight & Balance Report in the eyes of the FAA.

I'm glad I went through this exercise, although I'm embarrassed that it took me more than a decade to discover that 'my papers were not in order'. Perhaps I was the only aircraft owner out there blissfully flying around without an up-to-date equipment list, but somehow I doubt it.

Since that time, I became an IA and have made quite a few equipment changes to the aircraft. Having the computerized equipment list and automatic W&B calculation has repaid that two-hour effort many times over.

Next time you're pre-flighting your airplane, you might just want to grab your POH and W&B papers and eyeball the equipment list to make sure it has been kept up to date. If it hasn't, you might want to do something about it before the next annual… or ramp check.

PBN to drones

Thoughts from a past president

By Ian Andrews

I was recently asked to recap on PBN. Performance Based Navigation (PBN) is Area Navigation (RNAV) and Required Navigation Performance (RNP). So, PBN = RNAV or RNP. Simple, eh!

Both use Global Navigation Satellite System (GNSS) (which in NZ means the USA GPS system) as the navigation aid, which is space based and not ground based. This means that we can track from any point in space to any other point in a straight line, provided we are above any rocks in the area. Again, simple eh!

In reality, many of us have been doing this for over 20 years now, so we are getting good at following the magenta line. It is much easier than following an NDB needle, which can sway all over the place and does not allow for wind or drift. So IFR today is much easier than it was in the 1990s when I did my rating. That is why AOPA NZ is encouraging members to consider getting (and enjoying!) an IFR rating. It is all flying, which is what we like to do, but it does add the skill of flying precisely and on promulgated tracks that have been designed to miss the rocks.

It is now five years since I started the campaign to get Satellite Based Augmentation System (SBAS) into New Zealand and Australia. We need to do this as a joint venture to get the best out of the system as well as the benefits of sharing some of the infrastructure costs. I was a bit gutted when Australia announced in their budget that they were going to develop a SBAS for Australia within the next four years and have allocated nearly AU$200 million to do so. Yes, we will be able to tack on to it, but my desire was to see a joint venture announcement made. You know the sort of thing, handshakes and smiles all round in a world of mutual co-operation. It will happen but now we will have to ask the Aussies if we can play with their ball (I hope it has not been tampered with).

All that aside we will eventually get the benefits of SBAS because Intelligent Transport Systems will need it, precision agriculture will need it, Unmanned Aerial Vehicles (UAV) will need it, and it will make our daily tasks easier. It will give us accuracy down to 50cm and finer where needed.

Speaking of UAV, I recently watched *Seven Sharp* when they interviewed the Uber flying taxi guru on the coming Uber ride share drones. The guts of it was that they'll be operating in 2023 in Auckland and will pick you up at the airport then take you wherever you want in a fraction of the time it would take in a taxi; also at a fraction of the cost. The two presenters were excited about the whole deal and said they couldn't wait.

Time for the Tui advert. Yeah, right!

Let's look at it sensibly. You can do that now with a helicopter. Probably $2000 per hour, but it will only take 15 mins to get there. Whoops, we have to get the chopper back, so add another 15 minutes, now that makes $1000, which is not exactly cheap. My last trip into Auckland from the airport was about $60 and took 40 minutes. Uber say it is ride share and they do not own their taxis so someone has to buy the air-taxi and maintain it. Frankly I think it is dreaming to think this will be operating in 2023.

There is a good side to it though. Some of that new technology is making its way into our current flying, with more automation and cheaper avionics. We are learning heaps and getting benefits. There is another group trialling a vehicle in Christchurch called CORA which is also an autonomous flying machine and funded by Google's Larry Page. This is already flying and will be a fascinating project. They are testing here because they like New Zealand and the CAA is being very obliging. MBIE have bent over backwards also, so this is quite a popular project. They told me that they see it being used on a fixed route where a client can walk up, put money in a slot, get in and be taken on a fixed route around some scenic feature. Time for another 'Tui' I think.

So how does this affect what we do at the AOPA NZ Executive? UAVs are a hot topic at every meeting we attend, and we want to work with the regulator to integrate them into the airspace we will share. There are two rules for UAVs: Part 101 and Part 102, where 101 is the recreational user and 102 is the commercial user. Part 101 includes Model Aircraft, of which there are currently over 40,000 in NZ that operate very well within the rules and cause no issues. In fact, it tends to be the GA pilot who has does not read the NOTAMs and flies through a perfectly legal restricted area with no regard for the model operators doing everything correctly that causes issues. Read the article in the last Vector magazine.

Part 102 are the commercial guys who also follow the rules. They have to present a safety case to CAA for approval and file NOTAMs, so it is important that you check these for the route you are flying, not just the airfield. We will see more of these commercial drones flying over forests and power lines, so be aware of the possibility.

Problems arise when, for example, tourists pull a drone out of their backpack and fly without knowing the rules. Last week I watched a guy on the Gold Coast do just that, from a viewing spot for whales. He sent it out of sight – I'd guess at least a mile – at about 300ft high through an area in which light aircraft fly up the coast at 500–1000ft. I lost sight of it at about 400m off the coast, so there is no way I would see it from an airplane. We need to educate these people, but we also need to remember that we are in the same air space and to be very vigilant.

Back to PBN. At the moment I am challenging some ideas that CAA have on what a full PBN environment is. We are going to protect our freedom to fly, which is the AOPA USA slogan. International AOPA provides us with contacts and information through which we can form an argument to counter some of the proposals that come to the fore. We need to protect the access to airspace for GA, and not wind up with the major airlines having all the say in the design and use of that airspace. We do have to be realistic and not expect to enter controlled airspace without some delays, but with good planning we can work in with all the other airspace users.

There will always be GA aircraft where pilots fly for the sheer pleasure of flying. Not all of us will want to be flown in a pilotless drone.

Focus on...
Graeme Donald

Long-serving Executive committee member and stalwart of many organising committees for safaris and other flying events, Graeme Donald was this year's recipient of the AOPA GA Champion Award. We asked him to tell us about himself. His answers were typically brief!

What got you started in aviation?

A friend took me for a trial flight in Dannevirke. It was New Year's Day in the late seventies.

What are your most memorable moments?

Three leap out. First, the realisation that I was on my own downwind on my first solo. Second, taking off on the maiden flight of an aircraft I had built. And third, the first oceanic flight in that same aircraft.

What is the best piece of advice you were ever given?

Always keep flying the aircraft!

Has there been a significant event you learned from?

I like to think I continue to take something onboard every time I don't get it right. Means I have to take on quite a bit!

Is there a stand-out aeroplane, in your experience?

I flew co-pilot in a demo at an air show near Seattle in an Oshkosh grand champion. Even the best of today's production aircraft do not have a finish and detail like that one.

How do you see the future of GA?

The GA fleet will have a very slow modernisation programme. However the pathway to modern avionics for the legacy fleet is upon us. Far more of them will be more capable of instrument flying. I believe it will be an AOPA challenge to find a way forward for this exciting opportunity.

What's your next aviation goal?

The challenge is always to keep flying! However I toy with IFR flying, and I'm planning for an Australia trip next year.

Almost full circle

The Gibson hangar with the Lockwood building in the background – two of the three buildings Aviation Radio Ltd has occupied over the past 67 years, in a photo taken about twenty years ago.

Aviation Radio has been associated with Rongotai airport for nearly 67 years, occupying three different buildings: the Gibson Hangar, the Lockwood building, and their recent premises in Tirangi Rd.

Bernie Robertson began his avionics career in the northern side annexes of the Gibson Hangar in 1979, sharing the common areas with Peter Button and his crew. When Peter built the Lockwood to accommodate the expansion of Capital Helicopters, which later evolved into the Wellington Life Flight Trust, Aviation Radio transferred to the south side, as the new building blocked much of the light to the groundfloor workshops.

In 1996, the year Mac McAulay retired, the Airport Company announced its intention to demolish the hangar, precipitating a move to Tirangi Road. The demolition didn't happen and the building has housed various tenants over the years. Twenty-two years on, Aviation Radio is returning to the Lockwood. Situated next to the Wellington Aero Club with direct access to the Western Apron, visitors are welcome to pop in for avionic advice, says Bernie.

"Moving is an opportunity to focus and plan, but the team will continue to offer the same high quality repairs, maintenance and installation work that has seen the company thrive over the years."

New Southern Sky Roadshow

new southern sky

‘Helping you transition’

The NSS Roadshow team is planning to visit locations near you later this year and into 2019. Locations include:

North Island

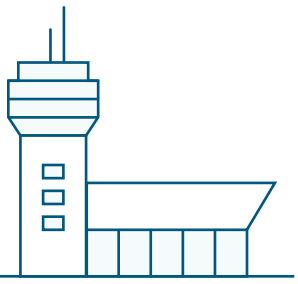
Auckland, Ardmore, Tauranga, Hawkes Bay, Whanganui, Wellington

South Island

Blenheim, Christchurch, Queenstown, Invercargill, Dunedin

The format may be different from 2017, depending on the location. We will be briefing, organising Automatic Dependent Surveillance – Broadcast and Performance Based Navigation clinics, and hosting focused discussions around equipment and Rules, to help you transition.

Details of dates, venues and registration will be on the NSS website soon. We look forward to seeing you.



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Te Mana Rererangi Tūmatanui o Aotearoa