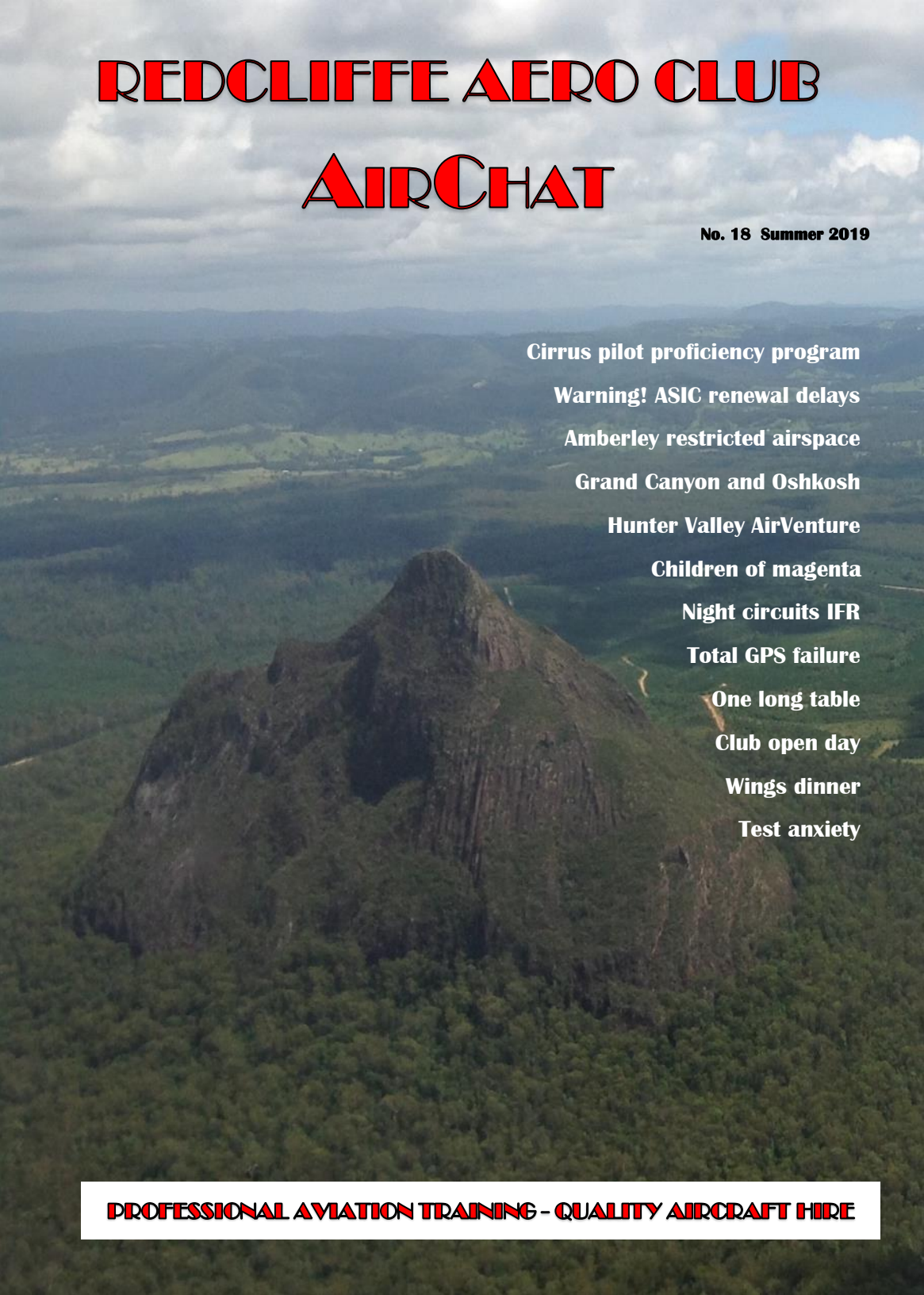
REDCLIFFE AERO CLUB

AirChat

No. 18 Summer 2019



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Front cover: Mt Tibrogargan, Glasshouse Mountains

Rear cover: Enoggera Reservoir and view to Brisbane CBD

Background: MacArthur Wind Farm, Victoria

From the club president

Hello Everyone

Another year has flashed by and it's been a big year at RAC. There's always plenty happening and this year hasn't disappointed. Several standout points this year have influenced the Club.

Early in the year our CP and HoO, Dan Smith, left us and went on to new horizons at CASA. With that, our in place alternate CP and HoO, Mal McAdam, was promoted to the top position. Mal has settled into this very demanding but challenging role of directing the Club's interests in training and compliance.

The Club appointed Lauree Skene-Gordon to a new position in compliance with our RTO and Vocational Education and Training Student Loans (VSL) status. Lauree has done an outstanding job in controlling all aspects of our VSL intake this year and moving into the future of this important programme. Well done Lauree.

All other aspects of RAC have been rolling along well, including the social programme, monthly BBQ's and Flyaways. They have been a real success and always well attended. They have been a great way to meet with fellow Club members and fellow aviators. Special thanks to Sam Keenan (Vice President) and Bryan Galvin (Board Director) who have spent considerable time in organising the Club's social activities with great success.

We are being continually challenged by compliance, regulation and associated demands. Our team at RAC are acting in a professional manner to deal with these matters while delivering a sustainable business and top quality service to you, our valued members.

At this time I wish to thank my fellow Directors for their contribution and continued support of me as President and of the Club. Thank you as we work together to make 2019 a great 50th Anniversary celebratory year for the Club.

I wish you all a Merry Christmas and a prosperous 2019, the Club's very special year.

Happy and Safe Landings

Mike Cahill
President

CEO update

Dear Members

You would have recently received our audited accounts for 2018 in preparation for the Annual General Meeting on 12 December. This year saw a small net loss of $21,961. The loss was mainly due to significantly less Vocational Education and Training (VET) students as a result of the abolition of the VET FEE HELP scheme and the introduction of the VET Student Loan (VSL) scheme. The introduction of the new VSL Act and VSL Rules required a significant investment in time and resources to write new policies and procedures to ensure compliance. This necessitated a delay in taking on new students under the VSL scheme. Whilst we have taken on new VSL students in 2018, our VET student numbers will return to 2017 levels in 2019.

Other factors affecting the profitability of the Club have been the loss of senior instructors to the regulator and airlines as previously reported in the August edition of AirChat. This is affecting the resources of all general aviation businesses. It has reduced our instructing capability and has necessitated investment in upskilling our remaining instructors.

However, turnover of $2,814,322 for 2018 was still quite strong compared to 2015 at just over $2,000,000. Also, with net profit of $618,395 for the previous two financial years and a net result of $596,434 net profit over the last three financial years, I believe the Club continues to be in a strong financial position.

Furthermore, Net Assets of the Club in 2015 were $2,141,277 compared to $3,136,033 in 2018. Cash generated by operating activities in 2015 was a mere $35,000 compared to 2018 of $240,215.

Regardless of the economic metric used, whether it be turnover, net profit, net equity or cash generated by operating activities, the Club is in a very sound financial position compared to 2015.

This turnaround is attributable to the direction set by the Board and implemented by the management and staff of your Aero Club. I would like to personally thank the Board members for their dedication in the execution of their Director's duties and the time and expertise they freely give for the benefit of the Club and its members.

The other significant change this year, which has been another initiative of the Board, has been to ramp up the social side of the Club. This is evidenced by the excellent flyaway program, monthly BBQ's held on the first Friday, seminars and the Wing's Dinner.

I'm sure 2019 will have its challenges but I look forward to working with the Board and our stakeholders to ensure the continued success of the Club.

I encourage you all to visit and make use of your Club's facilities, aircraft and simulators and to participate in the flyaway and social program. I hope you all enjoy the Christmas break with your family and friends and I look forward to seeing you around the Club in 2019.

Best regards,

Stephen White
CEO

Chief pilot report

Welcome to the final issue of AirChat for 2018. I would like to take this opportunity to wish all club members and their families the compliments of the season and a happy and safe new year.

With the ever-increasing popularity of technology in our aviation lives I feel it's a good time to remind ourselves about the rules around use of electronic flight bags (EFBs), more commonly known by their proprietary names like OzRunways or AvPlan. CASA has published **CAAP 233-1(1)** covering EFBs, and I'd like to take a look at some of the relevant sections.

First up our tablet computers fit into the Class 1 type of hardware. This means that they are portable, have no data connection to the aircraft and do not require airworthiness approval.

Next comes functionality. Functionality level 1 covers an EFB that is used as a document viewer. That means that it can display maps, charts or aeronautical databases approved for air navigation purposes. The document viewer functionality may also include a flight planning tool. These documents must not be able to be altered by the user, for any alterations would render it unsuitable for air navigation purposes. These EFBs may be hand held but must be stowed during

- take-off
- landing
- instrument approaches and
- flight at less than 1000ft above terrain

In turbulent conditions they must be mounted in an approved mount within the flight compartment or in a suitable kneeboard attachment securely attached to the pilot.

OzRunways and AvPlan on a tablet meet the above conditions. But OzRunways and AvPlan offer more advanced functionality, so we must look at

functionality level 2. Level 2 includes level 1 and expands its use to include user input applications such as weight and balance and/or performance calculations. These software applications must be validated by an authorised weight control officer to ensure the outputs from the applications comply with the limitations detailed in the aircraft's approved flight manual. Now OzRunways and AvPlan both have W&B functions, however is yours using validated data? I don't know about you, but I had to add my own W&B data to my EFB from the aircraft approved flight manual, but I'm not an authorised weight control officer, so my W&B EFB function is not validated and cannot be accepted as evidence that my aircraft is loaded correctly.

Next let's consider some airworthiness issues.

CAAP 233-1(1) says that the recommended minimum screen size is 200mm measured diagonally across the viewing area. This means that anything smaller than an IPad mini is considered too small for use as an EFB. You should also consider whether your EFB could be too big and cumbersome to be safe to use (such as a laptop computer).

With regard to mounting devices, we are advised that temporary mounts that attach to the aircraft e.g. suction mounts, Velcro pads or yoke clamp type mounts are considered Class 1 devices and must be stowed during the phases of flight identified above. These temporary mounts are not considered airworthy. Note however that EFBs attached to kneeboard holders do not need to be stowed. All mounts attached to the aircraft structure will require airworthiness approval and must not cause obstruction to:

- external vision (must not obscure any part of any window)
- physical access to aircraft displays or controls (must not obscure any switches or knobs or require you to reach around your EFB to operate controls)
- visual access to aircraft displays or control (don't place your EFB in front of any instruments or controls)

Finally, any cabling needed for EFB operation must not present a hazard. Power cables and/or antenna cabling must be out of the way so as not to create a hazard to the occupants of the aircraft.

So, the best advice I have is to not use any EFB mount that attaches to the aircraft. A kneeboard attachment is most useful. Make sure that if you use a power cable, it is well out of the way. Don't rely on EFB W&B outcomes unless the data is validated by an authorised weight control officer. Finally give all flight planning data a good once over for accuracy, and don't completely trust any electronic device with anything as important as a safe outcome of your flight.

May all your enroute winds be following.

Mal McAdam
Chief Pilot and Head of Operations

Editorial

Dear Reader

Welcome to the summer edition of AirChat.

One of the great things about being a pilot is that we are constantly learning. It may be in a structured course to gain a new qualification or as part of a regular flight review, or it may be as we put theory into practice in our everyday flying. We have a few articles in this edition that describe various types of learning experiences.

Ryan Darby learned a bit on his trip to the USA this year. He had to deal with insurance as a foreign pilot and with the fact that it may be best to fly at 6am in Arizona in the middle of summer. He wanted to fly into Oshkosh but discovered that the weather up that way is very different from Queensland and Arizona and made it somewhat more hair raising than expected. All good things to learn. Thanks to Ryan for sharing them with us.

Andrew Pearson had an interesting learning experience while flying over Lake Eyre a few months ago. The GPS on the aircraft's G1000 failed at the same time as the one on his iPad that was using Oz Runways. He discovered that the G1000 automatically reverts to dead reckoning mode if it loses the GPS signal, allowing the auto pilot to carry on operating, at least for a while. He shares that experience with us.

Mike Cahill describes a more formal learning experience in Orange NSW at the Cirrus Pilot Proficiency Program. The weekend of seminars, presentations and practical flight training is organised by the Cirrus Pilots and Owners Association. An event is held every two years in Australia and is a great way to increase knowledge about the aircraft and their systems while meeting others with a passion for aviation.

One learning opportunity many of us don't enjoy that much is the flight test. These are something we all have to go through from time to time either to obtain another rating or endorsement or as part of a flight review. Sometimes our nervousness is partly due to ignorance of what is required of us. In this edition Adam Starr demystifies the testing process so that we are better equipped to deal with tests and able to learn more in the process.

The 2018 AirVenture held at Cessnock NSW in September was another opportunity to learn about a range of topics related to GA. The venue in the Hunter Valley wine district was a great location. There were formal and not so formal presentations as well as an air show on the Saturday afternoon. We also learned how to deal with impending icing of the wings on our way down to Cessnock.

Recently I learned how to do night circuits at YRED under the Instrument Flight Rules. Having qualified with a night IFR endorsement for my PIFR but not having a night VFR I had to practise my night circuits under the IFR.

Renewal of my ASIC this year has not been a good learning experience and I share it with you in the hope that you may find a more expedient way to renew yours.

There's also a piece about flying in Amberley airspace and the reasons why we should not rely too much on automation. Plus reports on our open day, wings dinner and a flyaway to Chinchilla.

Happy reading!

Philip Arthur

Editor

Recent achievers

Congratulations to all our students who recently completed a milestone in their training at RAC. We wish you all well for your future endeavours in aviation.

Aaron Richardson

Paul Terrett

First Solo

Mark Lane

Aleksander Pozorski-Pascoe

William Read

Aaron Richardson

Rickus Rousseau

Paul Terrett

Adam Zarb

RPL

Thomas Hallett

Eugene McMahon

Ian Nye

Reece Scotchford

Brent Wilkinson

PPL

Lucas Garrett

Mark Hansen

FIR CLR MEA

Stephen White

Reece Scotchford

Rickus Rousseau

Ian Nye

Tom Hallet

Brent Wilkinson

Adam Zarb

Aleks Pozorski-Pascoe

Eugene McMahon

Mark Lane

Stephen White

Will Read

Lucas Garrett

Mark Hansen

Upcoming events

Our flyaways continue to be great fun and a great way to meet like minded aviation fanatics. We've got a whole lot more ideas for events during summer and into next year. Keep yourself informed as to what's coming up by joining our Flyaways Facebook group and tell us where you'd like to go. Click on the link below:

https://www.facebook.com/67groups/678739008989427

Meanwhile, note down these events in your diary:

12 - 13 Jan Great eastern fly-in Evans Head, NSW

3 Feb Inter club flying competition Gympie

9 Feb Burnett Flyers breakfast fly-in Murgon

26 Feb - 3 March Avalon international air show Geelong, Vic

6 - 7 April Hunter Valley air show Cessnock, NSW

4 - 5 May Wings over Illawarra air show Wollongong, NSW

22 June Moree Aero 70th anniversary fly in Moree, NSW

22 - 28 July EAA AirVenture Oshkosh, USA

7 September Airlie Beach air show Shute Harbour

And don't forget our happy hour and barbecue at the Club returns from 6pm on Friday 1 Feb 2019 and then on every first Friday of the month.

Best steaks in South East Queensland!

All members, friends and family welcome.

Check the Club website or Facebook page for details.

Key "steakholder" Bryan Galvin works his magic on the Club barbecue

Curly's corner

by Phil (Curly) Ware

A life member of the Club with a long and illustrious career in Air Traffic Control, Phil is always keen to share his knowledge and experience to demystify ATC for the rest of us.

It was 1970 something, I was working the northern outer sector at Brisbane ATC, and the morning departure "gaggle" was in full swing, with my screen full of aircraft radiating out from Brisbane, Coolangatta, Amberley and Maroochydore to their various destinations: Maryborough, Bundy, Gladstone, Rocky, Mackay, Townsville, Cairns, international destinations, and of course Mt Isa and points beyond. I was talking like an auctioneer as aircraft came on frequency and needed transferring to the next sector, accommodating level change requests, climbs and descents, radar vectors etc.

Inbound on the oceanic route was a Qantas B707, a freighter carrying a live killer whale called Ramu. It was coming from the U.S. and was inbound to Brisbane, where the animal was to be taken to Seaworld (it was called Marine Land back then) by road. While in transit Ramu was housed in a special seawater filled tank with aeration, etc.

The pilot calls up at the outer edge of my airspace and shortly after coming onto my frequency, he asks for a Flight Level below the Oceanic Control area which had a base at Flight Level 250 (25,000ft). The rules in those days were that no passenger aircraft could descend below controlled airspace without approval of the Senior Operations Officer.

Qantas captain: "Ahh... Brisbane Centre, Qantas 8 Alpha, request descent to Flight Level 210"

Me: "Qantas 8 Alpha, descent below Control Area base of Flight Level 250 not available, descend to Flight Level 260"

Qantas B707: "Centre, be advised that we have no passengers on board, and are carrying a live killer whale, and the animal is suffering some discomfort due turbulence, we require Flight Level 210"

Suddenly the airwaves were on fire!

TAA DC-9: "Never had killer whale on the menu before"

TAA B727: "I'll check with the girls and see what's down the back in our galley"

Ansett DC-9: "He must be having a whale of a time"

Air New Guinea: "Wonder where he caught a whale"

Next plane: "Probably had his trailing aerial out coming across the pacific"

Next plane: "Must have had a big hook"

Next plane: "Wonder what he was using for bait"

And so every aircraft on frequency had something funny to say ...

The Qantas captain was NOT amused at the goings on and at this point came back on the radio in a pucker angry voice:

"Drop dead you people and cease using non-standard phraseology"

A certain TAA Focker Friendship pilot who was a well known identity, piped up at that stage and said in mock agreement with the Qantas captain: "Yeah you blokes, shut up, drop dead… and report leaving each thousand on the way down!"

Of course I was the only ATC to have heard any of this. Just as quickly as it had started the banter was over. I received the permission I'd sought to let him descend below controlled airspace, I cleared him to leave CTA on descent, checked Flight Service for traffic, and then had a good laugh. I've never laughed so much in my life as at this quick wit and repartee. It was one of those special moments in ATC where only those on that frequency at that time hear the events. It was dutifully relayed to my colleagues at the Brekky Creek Hotel (the main "watering hole" back in those days) after work.

I have many good memories of ATC. If you're a young person aiming for a career in aviation the more "irons in the fire" you can have, the better off you are and the more likely you are to get something. Many would-be pilots I speak with say ... "Hmmmm ... Naahhh" and realise later, after not having achieved a career in aviation, that ATC would have been a great choice when the door was open. So always remember that the time to say "Nah, I don't want to be an ATC" is when you have a letter in your hand saying ... "Dear ... We are pleased to advise that your recent application for ATC has been successful".

To apply, just go online to the AirServices Australia website and, who knows, it may open up a whole new career direction for your life :-)

http://www.airservicesaustralia.com/careers/air-traffic-controller/the-role/

Warning! ASIC renewal delays

by Philip Arthur

CASA are currently experiencing delays in renewal of ASICs following the introduction of the new AusCheck DVS (Document Verification System) which came online on 1st October 2018. DVS is a government service that checks the validity of Australian documents. According to their website **www.dvs.gov.au** the

"Document Verification Service (DVS) is a national online system that allows organisations to compare a customer's identifying information with a government record. The DVS is a secure system that operates 24/7 and matches key details contained on Australian-issued identifying credentials, providing a 'yes' or 'no' answer within seconds."

All major Australian proof of identification documents must apparently now be electronically verified by the DVS including those used by CASA for issue of an ASIC.

Unfortunately there seem to be some teething problems where instead of the verification taking seconds it is taking weeks, leading to lengthy delays for those of us who need to renew our ASICs to enable access to security controlled airports.

My ASIC expired on 30th November 2018. It was my fourth ASIC so I had experience with the renewal process that's required every two years. CASA kindly emailed me a renewal notice on 6/10/2018 advising the following:

"*The average processing time for a renewal is 2-4 weeks but can take up to 6 weeks from receipt of COMPLETE paperwork in our office. Please factor this timeframe into the process of applying for your ASIC. Take care to follow the checklist to ensure that there are no delays in processing your application."*

I noticed a new requirement compared to previous years. Even though CASA had issued me with an ASIC in 2010, 2012, 2014 and 2016 and already have my passport details on file the new rules now require a copy of my birth certificate in addition to my passport. Given that a birth certificate is required to obtain a passport it seems unnecessarily bureaucratic to require a copy of the birth certificate to prove my citizenship when I already have a passport. Surely it should be EITHER/OR? Nevertheless, I dug out my birth certificate, obtained in Adelaide in 1987, that hadn't seen the light of day for many years, copied it and submitted my application on 23rd October.

On 4th November I sent an email to query its progress and was advised by CASA that:

"As of 1st October 2018 applicants Category A identity documents are cross checked in the DVS (document verification system). I have struck an issue with your South Australian Birth Certificate. I am currently seeking guidance regarding this from Auscheck."

After a few more email exchanges on 26th November an email from CASA advised:

"Great news. We have successfully processed your Birth Certificate through DVS this afternoon. I will contact AusCheck to let them know and hopefully we will get your application approved shortly."

However there was another hiccup and on 29th November they wrote:

"Your application is still pending your background check with AusCheck. I have requested that they expedite your process but to date have not had any feedback from them. They advise as a general rule that this can take between two to six weeks. We have had several applicants in the same situation as you, trying to work with an expired ASIC and our advice is to contact the airports that you fly in and out of as they will have a procedure for applicants who are trying to work with an expired ASIC. Please advise them that your application is currently with AusCheck pending your background check."

Following a couple more emails CASA wrote on Friday 7th December :

"You have definitely been let down by the new AusCheck/DVS system which came into play when AusCheck had a complete system replacement on 1st October 2018.

It is only recently that we have been advised that the AusCheck processing time is now quoted at up to 10 weeks. Some ASIC issuers are advising that the process is now a 3-4 month turnaround.

My suggestion to you would be to call AusCheck directly on (02) 6141 2000 and try to get some answers or to await a call from us when we receive feedback from DVS Management. You could also call AMS (Aviation & Maritime Security Division) who set the ASIC regulations that govern us: 1300 791 581. This would be the best place to lodge a formal complaint to."

So after a couple more phone calls with AusCheck and AMS I established that CASA had requested an exemption because my birth certificate could not be read by the DVS. The request has been passed on to the AusCheck legal department for approval. It is unclear how many days or weeks the approval will take. Once CASA receive approval of the exemption the background checks will commence. These will take between 2 and 6 weeks so I don't expect my new ASIC until late January. Not acceptable by anyone's standards. After being told I was writing an article about my ASIC experience for AirChat CASA followed up with a phone call on 11th December to explain some more of the background to me and provide some advice for future applicants, as follows.

The Department of Home Affairs apparently introduced more stringent identity requirements for ASIC applicants on 1st August 2017.We now need to provide at least three different categories of identity documents with our applications. Category A is a document that proves when the holder's life in Australia commenced. That could be a birth certificate for someone born in Australia, a visa entitling the person to enter Australia if they moved here later in life, or a movement record from the Immigration Department for people who don't need visas e.g. New Zealand citizens. The Category B document is one with photographic evidence attached to the identity. The best form of this is a driver's licence with the person's current address on it. A passport is also acceptable but it also requires another document (Category D) that shows the person's residential address e.g. rates notice. Category C documents are evidence of the person's use of an identity in the community. The best of these is a Medicare card. An existing ASIC ironically is not recognisable by the DVS so is not recommended. Category D documents provide evidence of the person's current residential address. It is best to submit documents that are all recognisable by the DVS. So CASA advise that the best combination is:

A) A birth certificate that is recognisable by the DVS. This is probably one that is less than 10 years old but ask the department that issued yours whether it is DVSable. If not, obtain a new one.

B) An Australian driver licence with your current address.

C) A Medicare card.

With this combination of documents you may get your ASIC within 2-6 weeks. Otherwise you should allow up to 3 months for processing.

Another point to note is that the ASIC card must now be delivered face to face. There is a representative of the CASA ASIC team at YRED so in your application nominate Redcliffe as the place you want to pick it up.

Every cloud has a silver lining of course and in this case it was my discovery that **I don't need an ASIC** as often as I thought.

While venting my frustration with the process to someone based in Archerfield he suggested I talk to the YBAF ARO and when I contacted her she told me that we don't need an ASIC to be airside at YBAF. Apparently this is because there are no RPT aircraft at that location. How many of you knew that? Apparently we don't need one at Parafield or Bankstown either.

But what about those airports with RPT you ask? When I rang AMS an officer told me of a work around at those airports where if you have an ASIC renewal in the system the airport management can issue a visitor identification card (VIC) that is valid for 28 days. The only catch is that the ARO or some other official still has to accompany while you are airside, so I'm not sure how useful that really is, unless you're really friendly with the ARO. CASA also advised me that I still can't legally land at an RPT airport without a valid ASIC even if I have a VIC. If I do, and am caught I'm up for a $550 fine and the airport management can be fined up to $22,000 for letting me land there! Sir Humphrey Appleby from Yes Prime Minister comes to mind.

So, recognising that there could potentially be significant delays while this new system is "bedding in" I suggest you follow CASA's advice above in your choice of documents and then write a complaint to the Department of Home Affairs about the flawed introduction of these new procedures that unnecessarily cost us and the government time and money with no tangible benefit to the community. Click on the link to their complaints page below.

https://www.homeaffairs.gov.au/help-and-support/departmental-forms/online-forms/complaints-compliments-and-suggestions

My grandson Jack Savage, aged 10, was with me in the hangar at the Aero Club a while back. I was busy with something and Jack was walking around looking at our fleet.

Suddenly he made the following remark: "Hey Pop – this doesn't look normal!"

I went over to RAQ, and Jack showed me the left hand tyre, which looked like it landed with the brakes ON. A section of the tyre was torn away, and the tube was protruding through the hole in the canvas, with a bubble the size of a ping pong ball.

Tyred out!

by Phil (Curly) Ware

I commended young Jack on his alertness, his response in bringing this dangerous situation to the attention of a responsible person, and that his prompt action could have prevented an aircraft accident.

Well Done Jack !!!

Pre-flight Footnote:

It's always a good idea to roll the aircraft "half a tyre" and inspect the whole tread – as a "trap" such as that described above may be hidden "where the rubber meets the road".

Happy and Safe Flying :-)

Curly

Instructor intro - Joe Martin

Joe is the most recent addition to our instructing team. He provides some information on his background, experience and what gets him up in the morning.

I first became involved in aviation in the early 80s when I was a young Army Captain serving at Holsworthy Army Base in Sydney. I had a relative in the police force who arranged flying lessons for me at the Police Aero Club. My first lessons were in a Cessna 150 at $50 per hour flying out of Hoxton Park (since closed).

I passed my PPL (A) in the USA in 2001 while I was serving as Assistant Military Attaché in Washington. I paid $90 per hour dual and my instructor looked like Britney Spears; both proving major incentives! On return to Australia in 2002 I converted my licence to an Aussie PPL. In April 2003 I took long service leave from the army in order to complete my CPL(A) and instructor rating at the Royal Queensland Aero Club at Archerfield. In March 2004 I commenced instructing at the RQAC. In subsequent years I have completed a MECIR and a multi-engine training approval.

I have worked as an instructor at RQAC, Airline Academy of Australia, Air Queensland and Basair Aviation Academy before moving to RAC.

I was attracted to the Club while completing my Multi-Engine Command Instrument Rating here in 2012. I came to know many of the staff at that time and maintained that relationship while working at Air Queensland.

Before I realised my boyhood dream of flying I had a 30-year career in the Army. That was my dream job. There is nothing better than serving with Australian soldiers. So for me flying is not a career, but more a lifestyle, which in some ways makes it more enjoyable. I instruct because I enjoy the people and the flying. I like to have fun but at the same time I want to maintain professional standards.

Most of my enjoyment now comes from seeing others achieve their goals.

One of my challenges now is growing older, which is not much fun. I started flying professionally when I was 47 years old and I'm now 62, so keeping fit both physically and mentally is a challenge. I still feel 16 on the inside, which perhaps explains why I tend to get on well with my younger co-workers. We are learning stuff from each other all the time.

I came to aviation with the expectation that I would remain in instructing. My age was always going to work against me in experiencing other aspects of professional aviation. Not that I'm disappointed. It's disappointing to me that many don't see professional instructing as a career. I know pilots who have passed through instructing on their way to other things, only to return to casual instructing because they enjoyed it more than another "day in the office" at the front end of a jet.

Which aircraft do I like to fly most and why? The Cessna 172. It is like putting on an old coat: reliable, dependable, predictable and almost idiot proof.

With more sunrises behind me than in front, I must be realistic so I don't have any firm goals in aviation. I mainly want avoid having to act my age while continuing instructing and having time to travel.

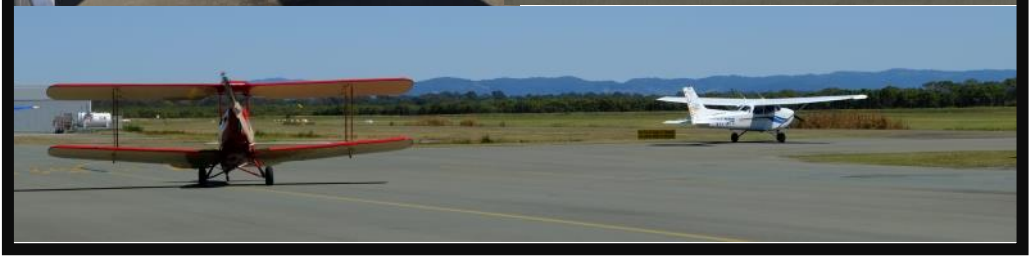
My advice to students is to have realistic expectations. It's hard work but the rewards can be very satisfying.

And for club members who want to improve their flying skills I say: "Stay plugged in". If you only start thinking about your flight as you drive down Nathan Road, then you're already behind. Preparation is the key, even if it's just a local flight. Try to fly regularly and continue to learn by gaining some additional skills or qualifications.

Challenge yourself.

Club open day

The club's annual open day was held on Sunday the 9th of September. The event was another fantastic opportunity to introduce the local community to our club and socialise with fellow aviation enthusiasts. The joy flights around the Redcliffe peninsula were a big hit as always. We're extremely grateful for all those who volunteered their time and contributed to the event, including the local businesses and organisations that provided the BBQ, ice cream truck, bouncing castle, and coffee to get us through the day.




VH-VMV
The Australian Bible Van

Total GPS failure

by Andrew Pearson

Andrew Pearson learnt a few things about GNSS systems on a recent trip to the Red Centre.

As a sailor before I became an aviator, I was always taught to distrust electronics and always plot courses on paper charts. This attitude is probably a bit old school now, but it's a hard habit to kick. I have spent a lot of time learning coastal navigation, doing astral navigation and even using sextants to plot longitude. For me personally, to not carry paper charts goes not only against everything I was ever taught about navigating, and it also goes against my own better judgement.

On planning the trip to Ayers Rock last July, this thought was in the back of my mind. I have two iPads with the charts downloaded and stored on the devices (CAR 233), so I am legal without paper charts, but nonetheless I went out and forked out $160 for all the WAC's for the trip. I also plotted the courses we would be flying before we departed, had flight plans scribed on paper and even did preliminary fuel planning assuming 20 knot headwinds.

The leg from Ayers Rock to Arkaroola took us via Coober Pedy for a fuel stop. Initially we were told that we needed to be on the ground at Arkaroola before 3pm due to shadowing from the mountain range resulting in poor visibility for landing. However after Sam consulted with the owner (also a pilot) we found this information was incorrect. With the extra few hours up our sleeve, Michael Gardner and I decided that we would be mad to come this far and not take the opportunity to fly over Lake Eyre.

After a brief delay at Coober Pedy, thanks to a REX flight hogging the refuelling area, we fired up the ROC (VH-ROC) and prepared to head to Arkaroola via Lake Eyre. The amended flight plan was programmed into the G1000, and as soon as we were established on track the auto pilot was engaged and the paper charts came out so we could plot our new course via Lake Eyre.

With our amended flight plan plotted on the charts, and all paper work taken care of, we let the autopilot take care of the flight whilst we sat back and enjoyed the scenery. During most legs of our journey to Central Australia, we had taken the opportunity to do some DR (dead reckoning), marking times on charts and doing ground speed checks, providing us with a chance to practise those skills we don't use much anymore. This leg was no different. And of course, one of the other tools I use is OzRunways, so it was nice to confirm that my paper chart, the G1000 and OzRunways all agreed on where we were.

As we approached Lake Eyre, I noticed that my iPad lost its GPS position. Not a problem, I knew where I was on the paper chart. I mentioned this to Michael and his iPad had also lost its GPS position. It was not long after this that we realised that the G1000 had also lost its GPS position. Neither of us were too concerned thanks to the fact we had our plans and positions marked on paper. However we both sat and stared at the G1000 and its programmed flight plan to see if it would turn towards Arkaroola once it reached the waypoint over Lake Eyre. To our surprise, the G1000 and GFC700 steered the plane toward Arkaroola right on cue.

As part of my preparation for an upcoming sailing journey to Antarctica, I had purchased a Garmin Inreach Explorer handheld GPS. I decided to put it to the test on this journey. When we returned home, I downloaded the GPS tracks, and interestingly it had also failed to log most positions over Lake Eyre. Looking at the map, it stopped tracking at the edge of the lake, and aside from a few single fixes over the lake, there were no more reliable positions logged until we were no longer over Lake Eyre.

During the GPS failure, the most notable warning coming from the G1000 was the constant audible "Terrain System Fail" then "Terrain System Ok" warnings.

In the air, I did spend some time looking at the G1000 cockpit reference but it's a large manual and at the end of the day it takes second place to flying the plane. I have since taken the time to do some in depth reading of the G1000 manuals to get a better idea of how it deals with GPS failures.

The following is a summary of the G1000 operations, and you should consult the approved manuals for current information. At the time of publication, the G1000 cockpit reference guide Section 12 deals with abnormal operations, and 12.6 specifically refers to Dead Reckoning.

I was interested to see how the G1000 dealt with GPS failure. The guide states:

> *If the G1000 detects an invalid GPS solution or is unable to calculate a GPS position, the system automatically reverts to Dead Reckoning (DR) Mode*

Dead reckoning mode only occurs during Enroute or Oceanics phases of flights, so you IR pilots can forget about approach and departures.

The G1000 indicates that it is using Dead Reckoning by displaying a yellow line on the CDI with DR also indicated in yellow, as well as DR on the plane symbol on the moving map on the MFD.

Any GPS derived information will also be displayed in yellow whilst the G1000 is operating in DR mode.

When the G1000 is in DR mode, the autopilot will remain coupled for up to 20 minutes. This explains why the GFC700 steered the plane toward Arkaroola after the waypoint over Lake Eyre.

CDI 'DR' Indication on PFD

Symbolic aircraft on map page

Grand Canyon and Oshkosh

Two more items ticked off the bucket list

by Ryan Darby

A long term bucket list item of mine has been to fly myself into EAA AirVenture, commonly known as Oshkosh. 2018 was the year to make this happen. I booked it all a year in advance, and then was asked to attend a conference in Las Vegas at the same time. A quick bit of replanning meant I could also achieve another bucket list item, which was to fly over the Grand Canyon.

After speaking to American pilots they advised that West Air at North Las Vegas Airport is used to transport tourists and should be able to help me. I made contact and made a booking for a plane and an instructor for a check flight.

Arranging insurance was an issue, as although I could find travel insurance at QBE that would cover me for injury to myself while flying a small aircraft, cover for the aircraft or others or property was not covered. Generally insurance companies exclude motorised vehicles, but QBE does not specifically rule it out. If you have an American address you can apparently get insurance from an American company or from AOPA, but I did not feel confident that when it came time to pay out they would accept my hotel address. You need to get your own insurance advice though as I am not an insurance professional.

At this point I decided not to do the check flight but just fly dual with an instructor. Although I have an FAA license I wanted someone to do the navigation as I was planning on being tired after a week in Las Vegas. This also saved at least an hour on the ground and an hour in the air which is what they want for the check flight. The main reason was that I was then covered by the school's insurance and didn't need my own renter's insurance.

On the day of the trip, I set out for North Las Vegas Airport at 9am. It took a while to find the hangar. Security is completely different there. They have gate codes to get in, but they emailed it to me beforehand and have not changed it in years. I walked around a lot and eventually found the right gate. Given the size of American airports it took a while. No ASIC in sight, just helpful people who directed me to where I needed to go. I then realised why they use golf carts to travel around, it saves walking in the heat and is something we should adopt in Australia!

Grand Canyon

Once there I remarked that it was likely to be bumpy, as it was going to be a 40 degree day and it was already 10am. The locals asked why I didn't book for 5am to escape the heat. I didn't know it was an option, and then was told that since I was in Vegas they expected me to be hung over so made a later booking! Lesson learned is to ask about the time I want when booking. But it did mean I could spend more time on my last night playing roulette.

Refuelling was interesting as the fuel pumps were on a big round island, so that several aircraft could fuel at the same time.

Navigation is very much see and avoid, with aircraft going from specific location to location and making calls such as "blue and white Cessna, the wall, fifty five, heading south". Altitude is not pronounced as "five thousand five hundred" but rather "fifty five" for brevity.

Air traffic control is somewhat more relaxed and makes it all feel a lot more welcoming. We didn't put in a flight plan, we just called up and asked when we were lined up waiting to enter the runway. We were vectored towards the Canyon, over an air force base. When we switched to their frequency they told us to watch out for traffic on the right, which turned out to be two F35's descending faster than I have seen anything move before. Not likely to mix with that type of traffic flying through Amberley!

The canyon is large, and much longer than expected. A two hour flight only takes you over a portion. Interestingly you have to stay on one side as the other is Indian land and you can't fly over it.

On the way back we went via the Hoover Dam. From there we requested an approach via the Strip, which they call "numbers to numbers", which took us down the left side of the Las Vegas strip. My landing was terrible and the instructor thought I hadn't flown for a couple of years, which was a little humbling.

Hoover Dam

The Strip

Climbing out of Howell into IMC

The whole trip was 2 hours in the air, with an hour of briefing on the ground, and cost about $500 Australian.

After the flight I went to have one last look at The Strip and visit the M&M store, and then I went to catch my commercial flight to Detroit. From Detroit I took a very long taxi ride out to Howell, Michigan, which was where the Oshkosh leg of my adventure would begin.

I arrived in Howell on the Friday night with the intention of going to the airport on the Saturday to meet people and do a local flight and some planning. The first lesson I learned is that once you are out of the major cities, even in America, your phone may not have coverage and you may not find an Uber, and there may not be a taxi service. I luckily found a few Lyft drivers.

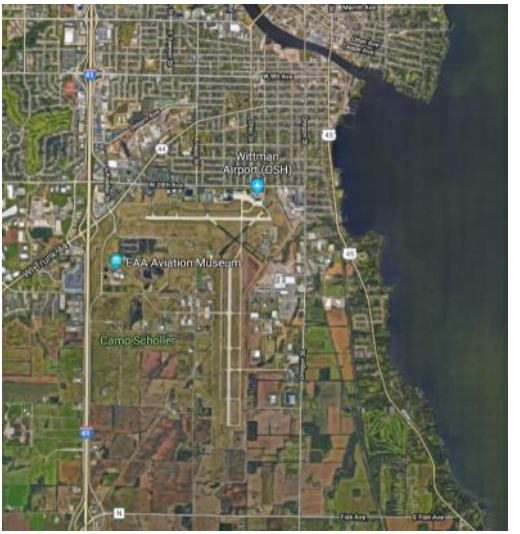
The second lesson was that the weather in the northern US is not the same as in Queensland. You need to apply local knowledge. When it says rain and cloud they mean torrential rain and fully IMC weather. There is a reason Michigan and Wisconsin are so green. It rains a lot. So I spent Saturday in the hotel planning and trying to make arrangements with the instructor I was flying with. Since the weather was bad he didn't want to go, and it was really not VMC no matter how much I wished. I was then stuck without a car or a plane a day's drive from Oshkosh. After a lot of phoning various people at the flying school I was renting from I was put in touch with a couple of pilots who were flying to Oshkosh IFR, and I was offered the back seat.

After meeting them I started to realise what people mean when they say Oshkosh is about the people you meet. These were the nicest and funniest people, and I will definitely make sure to meet them again.

Saturday I got up early and set off, after waiting for a taxi that didn't show and a Lyft that didn't show. Arriving at Howell airport I added my luggage to the large pile. I enquired about weight and balance. They made fun of me for asking. We were very tail heavy and overloaded generally. Looking back I should have insisted on discovering more about these pilots and looked at the figures. My anecdotal evidence is that weight and balance may not be as strictly taught in the USA compared to Australia.

After loading everything in, we started up, activated the flight plan and took off. We had to make a specific time slot as IFR into Oshkosh is done via a reservation system, and it books up very quickly so plan well in advance if you want to go IFR. Ceilings were low, about 800 feet, so we climbed straight into cloud. Then playing with the G1000 began. These are great systems, but you need to be familiar with them and not become fixated on them and forget to fly the aircraft. We were climbing slowly at around 70kts.

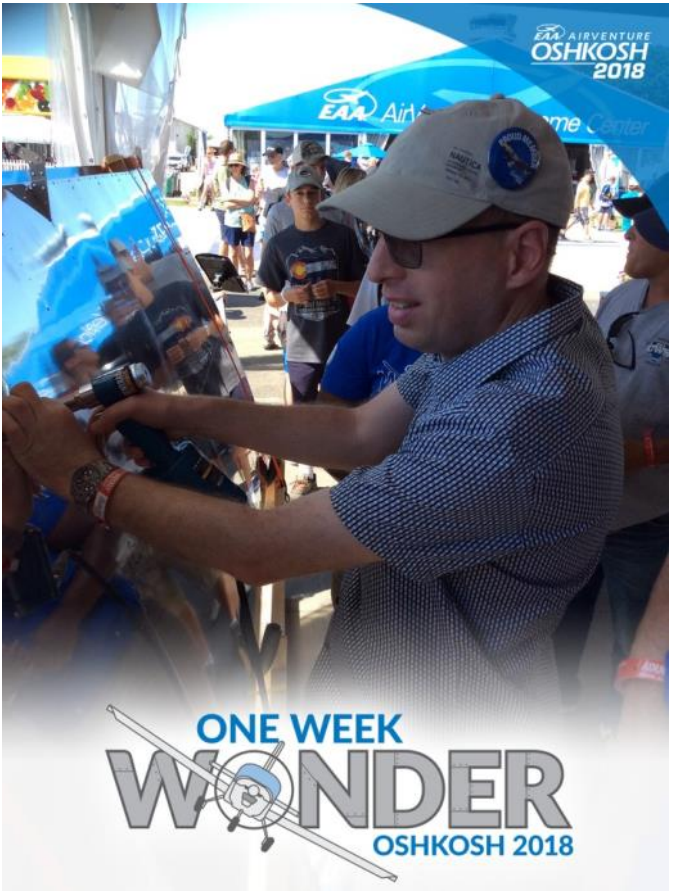
It was at this point that the stall warning went off. They didn't hear it. I reached forward and tapped the PIC on the shoulder and made pushing motions, which got their attention.



At about 8,000 feet we broke through the cloud, which was a relief. As we droned on westward, we could see glimpses of Lake Michigan, which is more like an inland sea it is so big. We then started to descend and were back in cloud. The stall warning went off a second time. We were flying an RNAV approach but holding the approach was difficult as it was very windy. IFR traffic was using runway 36 while VFR traffic was using runway 09. This meant we had a cross wind as well as the turbulence to deal with.

We broke though clouds at about 1,000 feet over a coloured dot. I finally got to see a dot on the runway at Oshkosh, but we were far too high and over to the right and had to carry out a missed approach and climb back into the clouds. It was at this point that I became worried as I was feeling that I was in the air with no way down to earth. We were radar vectored around and back onto the RNAV approach, where they made sure they were lower than the first time. Given we were over the lake this was likely safe.

Once we broke through from the clouds again we could make a reasonable visual approach and landed safely despite what was now a well over 20kt cross wind. I was very happy to be on the ground. We vacated the runway quickly and followed a marshal to a parking spot in the North 40. Once there we immediately tied the aeroplane down, and I put on as much clothing as I could, as it was significantly colder than I'd expected.



I called for an Uber, which had huge surge pricing, to Appleton where I had a hire car waiting. When I returned we all got into it and went off to Target to buy chairs and water and other essentials. Sitting near the threshold of runway 09, having a cold drink and watching the mayhem of the VFR arrivals, was one of the happiest times of my life.

I spent the week looking at aeroplanes, investigating Cessna's of all types, and attending presentations and lectures. There were a lot, and covered topics from new technology to how to maintain old Cessna's. I attended all of those as I am trying to learn as much as I can before buying one.

The One Week Wonder was on again, where an RV was being built in a week. I lined up to be taught how to put in a rivet, and then the next day lined up again to put one into the left wing. That plane will always have my rivet and signature on it. I wish the pilot/owner all the best.

A lesson I learned at Oshkosh was that some parking lots close in the afternoon, and therefore if you leave you may not be able to go back to where you liked to park. Given the size of it all and the fact that they block off roads and turn some into one ways at night to ease traffic, means navigating around to find other parking is hard. I found getting to the parking at the EAA Museum was easy, but it closed at night. This meant getting to the concerts and night air shows could be hard unless you stay there all day.

The outcome of the trip is that I returned to Australia and bought the IFR books and have started to self study with the intention of completing the training before returning to Oshkosh.

Wings dinner

by Mike Cahill

Another year has passed and we find ourselves seated in our hangar celebrating all achievers of 2018. Our numbers have increased to an amazing 93. Our backdrop of new and old was beautifully displayed. Ron Ennis displaying his amazing de Havilland Tiger Moth beside the Club's flagship Cessna C310. With the speeches tucked away, we all settled into dinner which was well done. There was plenty to choose from including some very naughty deserts that shouldn't be eaten.....by me. Excellent music to listen to or dance to, whichever floats your boat. Mal, our CP and HoO, invited the award winners and certificate recipients to be presented to CEO, Stephen White and myself to accept their individual awards. Congratulations to all recipients. With formalities over, everyone settled into a controlled period of dancing, discussion and frivolity. I think the photos tell it all. Thanks to everyone who made the night a big success.

Test anxiety

by Adam Starr

Adam is a Grade 1 Flight Instructor and Flight Examiner based at Archerfield. He is a Cirrus Standardised Instructor Pilot and IFR and glass cockpit specialist.

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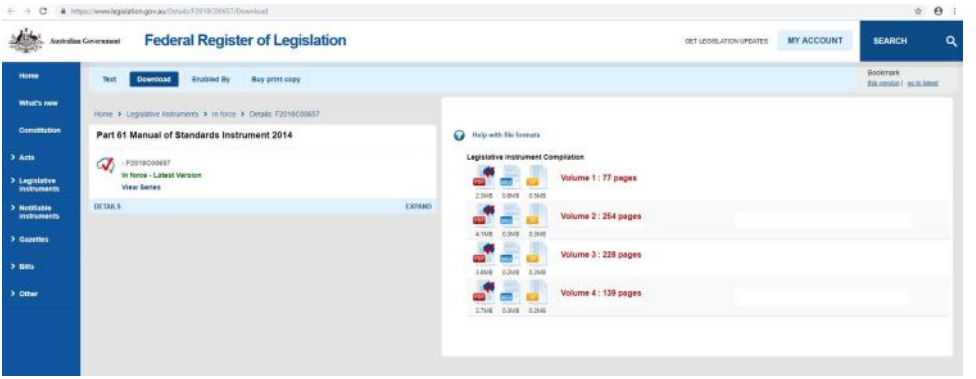
Testitis. Anxiety. Dread. Fear of Failure. This is not a gender specific complaint (regardless of however many genders there are nowadays). It occurs at test time and can be quite crippling just when you need to perform to a high standard whilst being judged. It is a complaint that affects pilots, due to the nature of their profession (if you make mistakes, people may possibly die) and can also be found in other fields with potentially catastrophic consequences such as Air Traffic Control and medicine. I have worked, trained, taught and examined in all these fields and there are definite similarities. Unlike those other fields however, pilots can't stop, handover to someone else, step back to take a breath or anything of the like (at least not for very long) as we are directly involved in the ongoing safe operation of our aircraft and the safety of those on board. Those lives also include our own which is different to the other fields where, if they stuff up it is usually someone else who may be at risk of injury or death. We are well aware that if we stuff up not only may others die but also ourselves. That just adds to the subconscious, self-induced stress of being a pilot.

Another interesting trait of the above-mentioned fields is that they attract a certain personality type. As a cohort we all want to succeed and we all want to be the best at what we do (just ask any pilot how good they are….!). This, in turn, adds even more self-induced stress to our operation. All of this happens any time we fly, before we even contemplate being tested! At test time all of the above stresses and concerns come into play as well as the added stress of flying with a stranger (often the case for a testing scenario) who is there to assess you, someone who may fail you and stop you flying, someone who will assess and make judgement about something you are so passionate/dedicated/professional about and someone who can absolutely demolish your ego and/or confidence. I have seen examiners absolutely 'carpet bomb' the confidence of applicants to the point of, literally, no return. This is not the way it should be. Examiners who are unreasonable need to be pulled into line but to do that you need evidence of them actually being unfair rather than just having a different view of your capabilities. Applicants, however, should also be better prepared for tests. The thrust of this article is to help you understand better what an examiner should be expecting from a pilot being tested, while also letting you in on the standards that examiners should abide by.

How do I know what's expected of me?

The first step to knowing what your examiner expects of you in a test is to understand the various competencies you will be tested on and how they are officially regulated. I highly recommend that you become familiar with the CASA Part 61 Manual Of Standards (MOS) for flight crew licensing. It can be accessed here:

https://www.legislation.gov.au/Details/F2018C00657/Download



It can be a little difficult to digest as one massive document so just download the four volumes and break it up into its parts/schedules.

Basically, there is an introduction and some abbreviations and then the schedules:

Schedule 1 = Directory of units

Schedule 2 = Flight competency standards

Schedule 3 = Theory knowledge standards

Schedule 4 = Theory knowledge examination standards

Schedule 5 = Flight Test standards

Schedule 6 = Proficiency Check standards

Schedule 7 = Flight Review standards

Schedule 8 = Tolerances

Know your required competencies

Before you think of booking a test, you need to find what is required of you and therefore what you will be tested on. A lot of the anxiety builds because there is not a clear picture of the requirements. Don't rely on hearsay – go to the source and know exactly what you will need to do. This holds true regardless if it's RPL, PPL, IPC, ATPL – whatever. These are all in the MOS sections above so let's break it down.

The Directory of Units will tell you exactly which units are required for each qualification. To make it easy, lets just use the example of an Instrument Rating test. First, we need to look at Schedule 1. Schedule 1 starts on page 15 of 698 in Volume 1 and defines which units we need.

We look down the table of contents and find Section M - Instrument Rating and Endorsements. Appendix M.1 is the instrument rating so we click on the hyperlink. Here we see that the Knowledge Standards needed are IREX and GNSS. Then below that (taking the example of a single engine aeroplane) we see that the Practical Flight Standards needed are NTS1, NTS2, IFF, IFL, CIR, NVR1, NVR2, and IAP2. Great – we have a list of topics to study!

Now we need to know what is included in those topics and that means using the other MOS Schedules. We will need to refer to Schedule 2 (for flight competencies), Schedule 3 (for theory knowledge), Schedule 5 (for the actual test standards) and Schedule 8 (for the tolerances we must perform within). Go to Volume 2 where Schedule 2 shows all the codes for all the topics you need (e.g. NTS1, NTS2, IFF, IFL … and so on, as seen above). If you click in the Table of Contents on "NTS1" it will take you to the list for Non-technical skills, for example. Next go to Volume 3 where in Schedule 3 you'll find the theory knowledge codes (eg Section 2.1 IREX). If you click on the hyperlink it will take you to a list of what is included in the IREX. I would suggest printing these lists out. Then read through them and tick off each item within them that you are confident with. Anything you are not confident with then just go and study, practise or grab an instructor to help you. This is basically the syllabus for your test. Once you are happy that you can answer/perform all parts of all those topics then it is time to look at the test.

Volume 4 contains Schedules 4 to 9. Schedule 5 lists the flight test standards. Section M in Schedule 5 is the instrument rating flight test. Click on the hyperlink and have a read of the parts for your test and you will see what the examiner must abide by. For a bit more detail also find the CASA test form (just Google it e.g. CASA Instrument Rating test form) and the Flight Examiner Handbook (FEH) found here:

https://www.casa.gov.au/sites/g/files/net351/f/_assets/main/manuals/regulate/fcl/flight_examiner_handbook.pdf?v=1532654477

Finally, Schedule 8 will tell you the tolerances you have to perform within.

With a combination of all this information you should know exactly what is going to happen and what your required competencies are.

Know your own competency

Objectively and realistically. Every now and then go to the MOS and see what you haven't done for a while and go and practise it. If you want to keep on top of things make a list of required competencies and tick them off after a flight. That way you can see things that you may not have done for a while. Maybe you have done RNAV approach after RNAV approach but haven't done a hold or a VOR approach in a while. Maybe you haven't done limited panel or unusual attitudes since your last IPC. Get someone else to provide an opinion (realistically and objectively). Find a friend/instructor/safety-pilot and go for a practice. Take charge of the mission – know which competencies you want to practise and go and do so.

Know your allowed tolerances

Whenever you fly, judge yourself against the tolerances of Schedule 8. Be realistic in this. If you are allowed +/- 100ft then making a pretty sine-wave while you bounce between the + and – limits may be in tolerance but may show that you are performance chasing not attitude flying. Try taking a friend/instructor to judge for you. Ask them to be harsh. Don't accept "good enough" – the vast majority of pilots I know do not fall into this category and some can be too self-critical. Find a balance where you may be able to say "that was within tolerance but maybe I could do a bit better with some more practice".

Take responsibility for your own training

As alluded to above, know what competencies you need to have achieved and revise that list periodically. If some things haven't been practised for a while, then take a list of those and go have a fun flight with an instructor. Even use the list in your own flying, add something in to your next flight instead of just flying from A to B. It may only cost you a few minutes flight time as opposed to doing a whole training flight. Remember to be safe! Don't simulate engine failures with passengers on board – take an instructor for that sort of thing. If you turn up with a list of competencies you need they will be happy they don't have to plan your lesson!

Know how the test day will progress

Have a look at the FEH. Download it from the CASA website and find the test page that applies to you. It will tell you exactly what to expect on the day. Nobody likes the unexpected…

Many people have complained about how harsh or unrealistic an examiner is. If you find you are being harshly treated and it is outside the scope of the FEH/MOS then say something. Don't just sit there with your blood pressure on a rapid rise. That won't help your performance at all. The examiner may not realise that what they see as an informal discussion they are having with you is being interpreted as pass/fail testing.

Work a 90-day cycle

Every 90 days critically evaluate what you have done, where you were to standard and where you were not. Keep on top of it every 90 days and nothing will be a surprise. Not only that, you will be able to keep competent but you will also keep current.

Relax

Seriously! What's going to happen if you fail? By test stage you should be fairly confident that you can get from take-off to landing alive. You should know what you can do well and what you may just need to snag on test day. Don't use "I have done that better" to judge yourself, use "that was still within tolerance". If you do perform out of tolerance, so what? Come back and do it again another day. No one is going to take your birthdays away from you if you can't perform a perfect steep turn.

Grab Testitis by the MOS!

Own it and know how the test will turn out before you even turn up. If you use the information above, there should be no surprises with either what is going to happen nor your level of competency. The test day should just be a demonstration of what you know you can already do with someone you may even get along with and/or learn something extra from for free.

Night circuits under the IFR

by Philip Arthur

After passing my Private Instrument Rating (PIR) about 2 years ago, I recently completed a night endorsement to complement my instrument rating. Unlike with a normal instrument rating, that includes night VFR privileges, the Night Private Instrument Endorsement (PIE) is an add on to the PIR. I had commenced night VFR training as part of my PIR but I'd put it to one side to concentrate on my enroute IFR and RNAV instrument approach components. This winter I booked some night sessions at the club and during my first dual night circuits lesson discussions arose around the slight differences between night VFR and IFR at night. I had to choose one or the other so wondered which would be better for me. I concluded that the Night PIE was the way to go as I don't have any desire to fly VFR at night. I plan to use the Night PIE either:

- to conclude a cross country flight after last light, in which case I would be flying IFR anyway, or
- to fly a scenic over Brisbane to see the lights, in which case IFR should be a safer option than VFR.

So, I did some more dual night circuits, some solo night circuits and a couple of dual cross country flights at night to Kingaroy with GNSS RNAV approaches. After that I was ready for my test. I passed and obtained the night PIE for my PIR and felt comfortable with the extra skills I'd acquired.

But wait, there is a twist to the tale!

One of the requirements to carry passengers at night is to have completed three take-offs and landings at night during the previous 90 days. The best way to deal with this requirement, and stay confident with landing at night, is to fly at least three circuits at night at least every 90 days. So, recently I booked IVW and went out to the club late in the day. I pre-flighted the plane and did two daytime circuits so I felt comfortable with everything then went back to the clubhouse to wait for last light. While there I had an interesting dialogue with Mal that went something like this:

"So are you going to be flying IFR or VFR this evening?"

Initial stunned silence, followed by:

"I'm only doing circuits so does it really matter?"

"Well you have to be flying one or the other"

"I suppose I'll fly VFR then."

"Do you have a night VFR rating?"

"Eh, no"

Further, uncomfortable silence…

"So Mal, what would you recommend?"

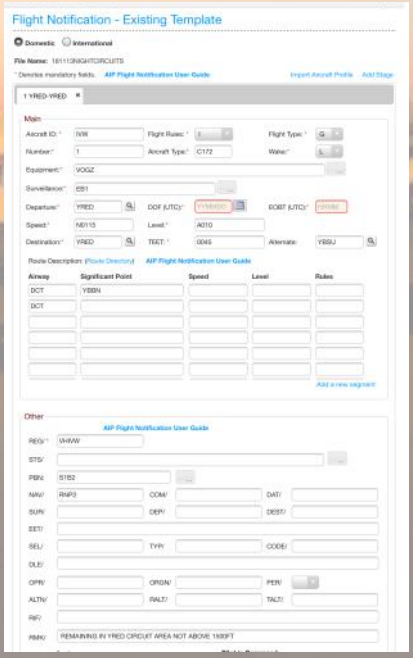
"I've just been thinking about it as we haven't had this situation before as far as I can remember. But if you don't have a night VFR rating you can't fly VFR at night."

A bit more silence.

"And will you need to nominate an alternate?"

"An alternate, for circuits? Well I suppose the lights could fail and there's no responsible person on the ground so, yes, I suppose I do!"

So, there we were. Tom, who was also there, and I, scratching our heads and wondering what I should do in order to fly those three or four circuits after last light to retain currency while remaining legal. Eventually I decided to call up Air Services and ask them. I explained the situation but the guy had no idea and suggested I call Brisbane Centre. The Brisbane Centre shift manager was much more helpful. He told me it wasn't a problem. All I had to do was to submit an IFR flight notification from YRED to YBBN to YRED and write on the remarks line that I would be remaining in the circuit area not above 1500ft. He also said I should explain my plan to Centre as part of my taxi call and they would give me an ops normal time.



So that was a relief. My faith in ATC went up further. I continue to be impressed by how helpful they are. I submitted my flight notification as last light was fast approaching. I then went out to IVW, started up, and taxied out to the RWY25 holding position (you can't use the taxiway to RWY07 at night because it is unlit). After completing the runups I called up Brisbane Centre on 125.7.

"Brisbane Centre, IVW, Cessna 172, IFR, 1POB, taxiing Redcliffe for Redcliffe, Runway 07 and remaining in the circuit not above 1500ft"

"IVW, Brisbane Centre, copy that, squawk 1234, no IFR traffic"

"No IFR traffic, 1234, IVW"

I entered and backtracked all the way along to the start of 07 turned and took off. On downwind I called up again:

"IVW departed Redcliffe, remaining in the circuit not above 1500ft"

"IVW you are identified, would you like to nominate an ops normal time?"

"Affirm, request ops normal time 0905, IVW"

"IVW, ops normal time 0905"

"Ops normal 0905, IVW"

So from that point on I was under surveillance by ATC and could happily fly my circuits knowing that if I had "difficulties" and I didn't contact them by 7:05pm they'd start looking for me. Nice to know when you're alone in the circuit over the bay at night.

I completed four circuits, surprising myself with the smooth touchdowns, and taxied to the hangar, cancelling my Sarwatch as I went.

It may have started as a confusing evening but by the end I was very thankful that Mal had raised the issue and that I'd worked out an even better way to fly night circuits at YRED when no-one else is around. I'd recommend the process to anyone who has IFR privileges and is undertaking night circuit training in future.

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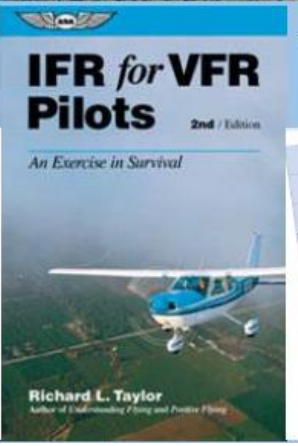

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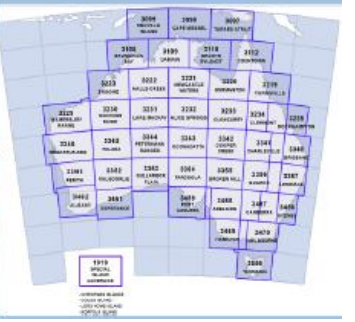

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Cirrus Pilot Proficiency Program

by Mike Cahill

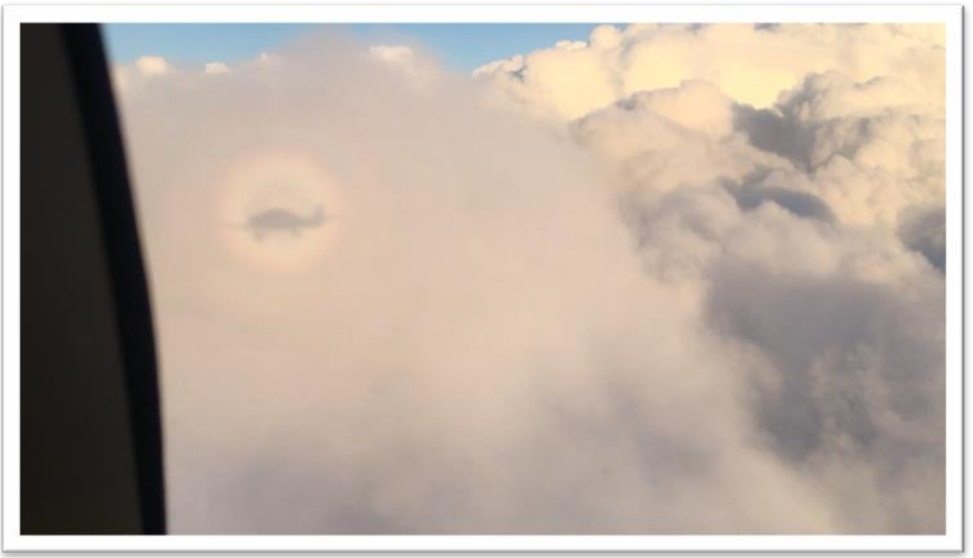
Every two years the Cirrus Owners and Pilots Association (COPA) host a fly in weekend designed to hone the skills of Cirrus pilots. Phil Arthur, Tom Hassall and I flew down to Orange, NSW, to attend the Cirrus Pilot Proficiency Program. Cirrus put a lot of emphasis on pilot training and COPA has been formed as an additional channel for training and created a virtual university to organise these programs. Very professionally run and an ideal forum to learn how to fly better, safer and even outside of your comfort zone, from highly qualified pilots, both Australia based and from the USA, in presentations/discussions and actual flying practice.

We flew down on Friday via Glen Innes, Quirindi and Mudgee, a 3 hour flight, with each of us flying about one third of the way. A one hour lunch stop at Mudgee allowed us to check out the local aero club facilities there and the Hangar House BNB. These would both be great places for a future flyaway given the proximity of many great wineries. It was a short 20 minute hop over to Orange from Mudgee. The local aero club in Orange hosted the CPPP. They have great facilities and did a superb job. There were about 45 Cirrus aircraft and about 70 course attendees. We arrived about 4pm and after refuelling and parking the plane, were taken into town to check into our accommodation, then picked up again and transported back to the aero club for a meet and greet barbecue. Saturday was an early start with presentations and discussion from 8am until 5pm. Phil had a 2 hour flight with Jason, one of the Cirrus instructors from California, who had some great ideas on how to improve his flying. On the Saturday evening there was a formal dinner at a lovely old restaurant in the centre of Orange and Sunday was another full day of presentations from 8am until 3pm. I also flew with Jason and he zoomed in on my request to be able to fly the plane slow and safe in all configurations, something we don't usually do. We also carried out several circuits, both with cross winds and straight down the runway at Parkes. We concentrated on all types of landings, normal, glide approach and my favourite, flap less landings.

Back at Orange now and sitting in on the final presentations of the day and amongst the presentations was a crowd favourite, Partners in Aviation. This is where the partners are trained to take over in case of the PIC becomes incapacitated. These simple points are important and will save lives, so if you can attend a class then you should take it.

Then it was back into MSF for the flight home, this time skipping Mudgee, Tom was PIC from Orange to Quirindi, Phil from Quirindi to Glen Innes and I flew the last leg to Redcliffe, encountering some IMC across south east Queensland. The weather was very kind to us all weekend, and the clouds on the way into Queensland provided some amazing scenery. As we planned our TOD at 9000 feet, we flew into IMC and even though a little bumpy, experienced some amazing cloud formations including the "Cloud Halo", a shadow of your plane in the cloud with a ring around it. It's all about timing.

Amberley approach cleared us down to 8000 feet then passed us onto Brisbane Approach which took forever to gives us our clearance for the descent into YRED. After several requests we received the welcome clearance and I pointed the nose down to give me the require descent into YRED, about 1200 FPM. We arrived at Redcliffe 20 minutes before last light, parked MSF and reflected on a fantastic weekend of aviation. Thanks to COPA and the Orange Aero Club for organising the CPPP. Looking forward to the next Cirrus presentation.



One long table

by Bryan Galvin

Chinchilla was the flyaway destination for September.

We had a leisurely departure from Redcliffe on Saturday morning with reasonable winds and weather. The trip was out an hour to an hour and a quarter depending on plane and route. We had seven planes and fourteen people together with a RA plane who joined us. My flight was uneventful except for brushing wings with an eagle at about 4500 feet on decent into Chinchilla!

There was a festival on over the weekend called the "One Long Table". The main street in the town was closed and stalls, food, music and entertainment was provided in booths all around a long table stretching about 200 metres for everyone to share. The idea was to select food and drink and sit at the table while enjoying the atmosphere and entertainment.

We arrived mid afternoon so after a break we headed off to the festival for an enjoyable evening with clear skies and cool weather. The event was interesting and we stayed at the Downtown Motor Inn only 100 metres from the main street.

Sunday morning was windy but fine. The Chinchilla Aero Club put on a BBQ breakfast that we all attended. The club is more a group of interested aviators with their own planes and who have a club house and get together regularly.

By mid morning, the weather was starting to deteriorate and a nasty crosswind developed. We all headed off fairly quickly after the breakfast before the weather became any worse. Luckily the wind was from the west so our trip home was faster than the outbound one, with a good tail wind allowing Mike Cahill's Cirrus to cruise at over 200 knots!

It was the first time the Club had been to Chinchilla as a group and the first time to the "One Long Table" festival. All in all everyone seemed to enjoy themselves and it was a pleasant trip with a difference!


Caramel
Maltesers
OREO
Mixed Macaroon


GARMIN
COM 123.000
125.700
VLOC 114.20
110.70
YKCY
YWSG
HPT
YRED
DTK 090
DIS 33.8
GS 203
ERR
GPS
NAV
CDI
OBS
MSG
FPL
PROC
RNG
CLR
COM/VLOC
GARMIN
COM 127.150
125.000
VLOC 113.20
112.70
YCCA → YRED
DIS 33.8
DTK 090
BRG 090
203
090
00:22
GS
TRK
ETA
GPS
NAV
CDI
OBS
MSG
FPL
PROC
RNG
CLR
COM/VLOC
S-TEC


Chinchilla
ONE
LONG
TABLE

Hunter Valley AirVenture

by Philip Arthur

AirVenture has been an annual event for some years now. It started as a gathering for sport aircraft enthusiasts but more recently has grown to include all manner of general aviation. The idea of AirVenture is to connect aviation enthusiasts with each other and also with suppliers of aircraft and associated hardware and software who showcase their products. It also includes a series of seminars and presentations about a variety of aviation related topics. The presenters are pilots, instructors, salespeople or representatives of organisations who have interests in general aviation. As a result of its success, the event outgrew its original base at Narromine near Dubbo and this year was held for the first time at Cessnock Airport in the Hunter Valley just north of Sydney.

I had no preconceptions of AirVenture but I'd wanted to fly to Cessnock for some time, and Mike Cahill was keen to attend AirVenture, so I agreed to fly down there with him in MSF, his Cirrus SR22. I managed to persuade my wife Sigi to come with us by not mentioning the fact that it was in fact an aviation event until she'd already committed to go. She thought it was just a flyaway to the Hunter to do some wine tasting!

Our plan was to fly down on the Thursday morning, attend AirVenture on Friday and Saturday and then return on Sunday. Four seminars ran in parallel all day Friday and on Saturday morning while an air show filled out Saturday afternoon. A gala dinner was held on Saturday evening.

I elected to fly down, with Mike manning the radios and Sigi acting as time keeper. Good division of labour among the crew. The trip down started well, flying IFR in blue skies. We were cleared to climb pretty well straight away and were at 9000ft over Amberley, then tracked via Armidale down the western edge of the great divide. The overall trip was just over 2 hours in the Cirrus and by the time we were about 45 minutes out of Cessnock some cloud was gathering ahead of us. The weather forecast had mentioned showers and low cloud close to Cessnock that was due to clear by 2pm. Although we'd taken our time departing it was still only midday by this time. No worries though, we're IFR. A bit of IMC (Instrument Meteorological Conditions = in cloud) practice is good. Then Mike received a text from Rebecca Penny, the Cirrus sales rep from Sunny Coast who had flown down the day before that said basically: "Are you still expecting to fly in today? Nil visibility here right now!" There is no RNAV approach into Cessnock so Mike checked the BOM radar while I checked our Plan B: head out west of the Hunter to Scone and land there to wait out the weather that was due to clear to the north east of Cessnock. Scone was CAVOK and we could see that there was no cloud out to our right hand side. All good!

We decided to continue on our flight planned track and enter IMC, checking our lowest safe against the topography before we entered cloud. With just over 30 minutes to run we entered IMC at 9000ft and pretty quickly noticed the temperature drop. Mike asked "Did you check the freezing levels". I said "Yeeeees! And then remembered that it did say 7500 ft at the southern end of our planned track. "Let's descend to 7000ft!" I suggested, knowing that LSALT was 6600ft. Mike contacted ATC who confirmed "no IFR traffic" and down we went. As we descended the temperature rose a bit but as we levelled out it started to decrease yet again.

We were still in IMC with occasional breaks in the cloud when the temperature dropped to 2°C and Mike noticed some ice forming on the right wing. Knowing we couldn't descend any further until we'd passed the Barrington Tops we debated quickly whether to head west out of the IMC as Sigi remained focussed on her knitting in the back seat. Then there were a couple of breaks in the cloud and the temperature rose again. We maintained our track and Mike advised ATC that we'd delay top of descent due to weather. Once we'd passed Brumlow Top (5204ft) and Mt Royal (3885ft) we descended to 5000ft and broke out of the cloud. We could see Singleton ahead and off to our right but low cloud to the left where we knew Cessnock had to be. Being visual we descended to 3000ft so we were below the cloud base. Passing Singleton we headed straight for Cessnock and kept a good lookout for the aerodrome. There were showers around so we dodged a couple as we approached and spotted the runway, joined downwind on RWY35, and landed, just as the weather cleared away to the north east. It had been another good IFR experience – we'd negotiated some tricky IMC but had a Plan B at all times. The lesson of the day was: Take note of freezing levels in the GAF before you fly!

We tied down the plane and headed off to the Crowne Plaza Hotel, located next to the aerodrome. It'd be home for the next 3 days. The weather cleared away and it was a wonderful fine, albeit chilly, evening.

Friday dawned with clear blue skies. We caught a shuttle bus over to the AirVenture site at 8:30 so we could take part in the first seminars at 9am. The range of seminars was impressive. I went to a different one every hour until 4pm. I didn't have time to check out any of the planes on display or the stands of the suppliers. I even managed to miss out on lunch because there was so much happening. Topics included An Introduction to Angel Flight, GAF Forecasts, What to expect from your BFR, OzRunways Q&A, ATC with confidence, AvPlan Introduction and Emergency Handling. It was a great day with a lot of things to learn. Friday evening was dinner at one of the many fine restaurants in the Cessnock area.

On Saturday the seminars commenced at 9am with an OzRunways tutorial, a Matt Hall talk on safety, one pilot's experience of the Outback Air Race, an explanation of the technology behind Dynon glass panels and some history of Spitfires over Normandy in WW2. By 1pm we were seminared out and ready for the air show. Matt Hall and his fellow aerobatics aviators didn't disappoint. It was quite a show. I managed to check out a few of the supplier stalls and some of the range of aircraft on display in between acts and even managed to get some lunch for a change. By 4pm the show was over and the displays were starting to be dismantled and we headed back to the Crowne Plaza to get ready for the gala dinner.

This was a great event with a speech by Matt Hall with excerpts from his life story and how he morphed from teenage glider pilot to sport aviator to RAAF fighter jet pilot and then to Red Bull Race champion. And many of the lessons learned along the way, including how to work in a team and get the most out of yourself and those you work with while remembering the real aim of it all is to arrive home safely to your loved ones at the end of the day. Impressive. Scholarships were presented to a couple of young aviators who admitted they would love to follow in Matt's footsteps one day. It ended up with some rather late chatter and banter in the hotel bar with new friends.

On Sunday morning it was time to up stumps and head home. The weather was picture perfect and forecast to be so all the way back to Redcliffe. We decided to take the coastal route. Mike was PIC and I was radio operator. Sigi was timer again. We said our goodbyes then taxied out and joined the small queue of aircraft waiting to leave. We had a rather slow one in front of us and as he rolled down RWY 17 and an inbound aircraft turned base, we entered and lined up. The plane in front of us climbed painfully slowly and we waited for him to turn, knowing that at the speed the Cirrus climbs we could easily catch him if he didn't turn first. The incoming aircraft turned final and we waited. And waited. For the plane ahead to turn. The incoming pilot asked whether we could vacate the runway as soon as possible. The departing aircraft turned. Mike applied full power, we rolled and rotated. We were off.

We departed to the northwest initially to avoid flying though the restricted airspace around Williamtown airbase. Mike had planned at 9000ft as we were heading north east for most of our route but ATC asked us to choose between nonstandard 8000 or 10,000ft so we chose the latter. The auto pilot turned us over our first way point and we climbed to 10,000ft, tracking via the IFR route north east to Taree, then followed the coast, tracking over Kempsey, Coffs and Ballina. Approaching Ballina a Q-Link Dash 8 was departing and we saw him climb across our path as he headed to GAMBL (the IFR waypoint overhead Casino). Then it was on towards the Gold Coast. ATC vectored us (gave us a heading to fly) out to sea to avoid traffic south of the Gold Coast and then we were vectored over the top of YBCG and on into the southern part of Moreton Bay where we reached our top of descent. ATC then vectored us on various headings so that we descended through 6000ft as we passed Brisbane CBD on our left and Brisbane International on our right. How cool was that!

Soon we were approaching the Redcliffe Peninsula but we were too high to do a normal approach so we requested one orbit over water to allow us to descend to circuit height. It was midday on Sunday, a perfect blue sky day and surprisingly no traffic in the circuit at Redcliffe! Criminal but it made life easy for us. Mike joined downwind for RWY 07 and did a great landing. A perfect end to a great trip. AirVenture is definitely one to add to your bucket list in 2019.

Children of the magenta beware!

Automation may increase your workload when you can least afford it

On the evening of May 31, 2009, 216 passengers, three pilots, and nine flight attendants boarded an Airbus 330 in Rio de Janeiro. Air France 447 was headed across the Atlantic to Paris at 35,000 feet. Everything proceeded normally for several hours. Then, with no communication to the ground or air traffic control, flight 447 suddenly disappeared. Two years later most of the wreckage was recovered. The cockpit voice recorder and the flight data recorders enabled accident investigators to learn how Flight 447 ended up in the bottom of the Atlantic. The story they told was the pilots were caught by surprise when the autopilot stopped working and in fact they were so confused that they were ultimately unable to fly their own plane.

The Airbus 330 was supposedly designed so that even the worst pilot could fly it. Sophisticated autopilot systems are coupled with an intelligent fly by wire system that can interpret what the pilot wants to do, and then execute the command smoothly and safely. But it has its limits. On flight 447 the pitot tubes iced over, so the autopilot could no longer measure the air speed, and the autopilot disengaged. The “fly-by-wire” system also switched into a mode in which it was no longer offering protections against aerodynamic stall. When the autopilot disengaged, the co-pilot in the right seat put his hand on the control stick and pulled it back, pitching the nose of the plane up. This manoeuvre made it enter a stall. Four minutes and twenty seconds after the incident began, the plane pancaked into the Atlantic, instantly killing all 228 people on board. The question is how did the pilots not realise that they were in a stall and respond accordingly by pushing the nose down and recovering air speed. One factor could be that the Airbus control sticks do not move in unison, so the pilot in the left seat would not have felt the pilot in the right seat pull back on his stick. Automation played a role in this accident, though there is some disagreement about what kind of role it played. Maybe it was a badly designed system that confused the pilots, or maybe years of depending on automation had left the pilots unable to recognise a critical situation and unprepared to take over the controls at such times. The Captain of the Air France flight had logged 346 hours of flying over the six months leading up to the accident. However, within those six months, there were only about four hours in which he was actually in control of an aeroplane - just the take-offs and landings. The rest of the time an auto-pilot was flying the plane. Could it have been this lack of recent experience that had left the pilots so ill prepared to do their jobs ?

In April 1997 Warren Van Der Burgh, a senior instructor with American Airlines, made a lecture at the AA Flight Academy on automation dependency that has become famous. It was an early warning about the dangers for pilots of becoming too dependent on automation in aircraft. He said that the American aviation industry had turned pilots into “Children of the Magenta” who are too dependent on the guiding magenta-coloured lines on their screens to be able to fly the planes manually. He noted that there are essentially three levels of automation:

1. Flying the plane manually
2. Using an autopilot to manage simple tasks like maintaining a set heading or a set altitude, or climbing or descending at a set rate
3. Using a flight computer to program the plane to fly a set course based on a series of instructions that may include climb, level out, maintain altitude, turn at waypoints, descend and follow an approach procedure.

He argued that while automation has been a great innovation there is a paradox about it that every pilot must be aware of.

> *In most situations, automation reduces workload. But in some situations, especially when time is critical,* ***automation increases workload****.*

At such times automation must be avoided or the level of automation reduced. For example, it takes much longer to correctly reprogram a flight-management computer to avoid a mid-air collision than it would to turn off the autopilot , fly manually and take evasive action on one's own.

At the time it was given the lecture was aimed at commercial airline pilots. Over the past 20 years though, many of the systems that the big jets had back then have become available in even the simplest GA aircraft. The message is now just as relevant to GA pilots. Watch the video of the lecture by following this link. It is well worth the 25 minutes to learn about when, and when not, to use automation.

https://www.youtube.com/watch?v=pN41LvuSz10

An example Van Der Burgh gives of his own experience was flying from Colorado into Dallas/Fort Worth. The first officer had programmed the flight plan into the flight computer at the start of the cruise including a procedure for the approach for landing on RWY18R as they were told to expect this runway. While they were descending toward DFW and passing 10,000 ft Van Der Burgh could see the airport about 30 miles away off to the right. ATC suddenly told them to "change to RWY13L". At that stage they were actually already on the extended centre line for 13L. It would have been easy to turn onto that heading and continue the descent before reprogramming the approach. But what did the first officer, one of Van Der Burgh's own trainees, do? He put his head straight down and started punching stuff into the computer. Van Der Burgh says he was shocked because it was clear to him that it was time for "click, click, click, click", auto pilot off, auto thrust off, fly the plane manually. The other pilot was so absorbed in using the automation he'd forgotten to fly the plane first.

So although there is nothing inherently risky about using automation, sometimes it reduces the workload by decreasing the automation. We should all keep this in mind when flying in the GA environment too. If during flight the question comes to your mind: "What is it (the plane/autopilot) doing now?", it's a sign you may have lost command of the flight. Take the controls, switch off the autopilot, or reduce the level of automation to one or even two levels lower and aviate. You can try to work out later what the autopilot was up to.

We should all be mindful of avoiding becoming too dependent on automation and one of Van Der Burgh's Children of the Magenta.

Amberley restricted airspace

How to avoid becoming an AI statistic

There continue to be regular Airspace Incursions (AI) by GA aircraft into the restricted airspace around Amberley so the RAAF is trying to make GA pilots more aware of how to avoid becoming an AI statistic. At a recent Pilot Information Evening at Brisbane Centre a representative from 452 Squadron's ATC team gave a presentation on the topic . This article summarises the presentation.

Apparently 50% of all AI in Amberley Airspace are caused by poor, or lack of, flight planning. The RAAF and Air Services expect GA pilots to understand the airspace through which we fly. First, if planning on flying VFR near Amberley although a flight plan is not required they recommend we submit one because it will reduce the delay in obtaining a clearance. The delay is caused by the requirement for ATC to put the aircraft details in the ATC system to generate a transponder code. With a flight plan in the system, they can more quickly issue the transponder code as they already have flight details (such as aircraft type, requested track and level).

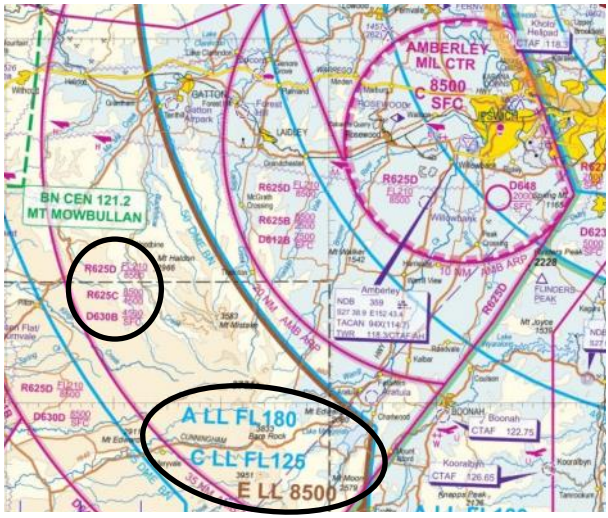
Second, we need to know where the boundaries of the restricted areas are. Restricted areas are described in ERSA and are assigned a conditional status to indicate the level of accessibility to the area:

- RA1 - pilots may flight plan through the restricted area and, under normal circumstances, expect a clearance from ATC
- RA2 - pilots must not flight plan through the restricted area unless on a route specified in ERSA GEN FPR or under agreement with Defence, however a clearance from ATC is not assured
- RA3 - pilots must not plan through the restricted area and clearances will not be available

Amberley Airspace includes AMB CTR and restricted areas R625A/B/C/D. These are all RA1 so we may plan through them. On a VNC, as shown opposite top, restricted airspace is depicted by red lines and smaller red font while Class G/E/C Airspace uses blue or brown. In the examples that are circled, R625C is from 4500ft up to 8500ft while R625D extends above 8500ft to FL210. There is an associated danger area D630B from SFC to 4500ft underlying the restricted areas. The blue and brown font shows E LL 8500ft, C LL FL125 and A LL FL180. Essentially when AMB airspace is not active we can just refer to the blue and brown CTA lines and labels. When AMB is active, we should only refer to the red lines and labels whilst inside AMB airspace.

Third, we must check the status of the restricted areas before we enter them. Whenever any of the R625 areas are active the CTR will be active as well. The best way to thoroughly check airspace activation is by referring to NOTAMs. The AMB status is found on NAIPS under 'Location Briefing' - 'YAMB'.

R625A/B/C/D (and associated danger areas) are NOTAM'ed under 'AMX' whereas the CTR is NOTAM'ed under 'YAMB'. We can also determine the current AMB airspace status by listening to the AMB ATIS (via phone 07 5361 3581 or VHF 123.3 or NDB 329). If AMB airspace is not active then the ATIS information will be 'ZULU' and will include the expected opening time of the tower. And if still unsure of the status just ask BNE CENTRE on VHF 121.2 or 125.7.

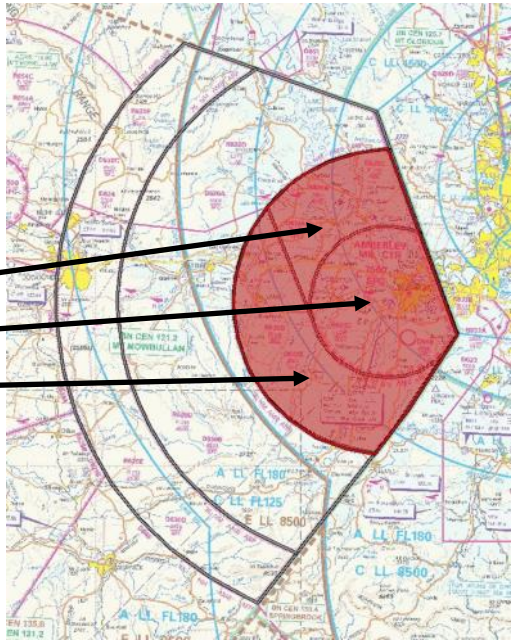


LIL AMB

A further point to be aware of is that the airspace has two modes of activation. These are called "little Amberley" and "big Amberley" (or LIL AMB and BIG AMB).

LIL AMB is the central core around the aerodrome. It includes:

- R625A - 1500ft to 8500ft
- CTR - SFC to 8500ft
- R625B - 2500ft to 8500ft



Corresponding underlying danger areas are:

D612A - SFC to 1500ft and D612B - SFC to 2500ft

The danger areas may be used by fast jets, heavy aircraft and helicopters conducting flying training.

BIG AMB includes LIL AMB but also takes in:

• R625C - 4500ft to 8500ft - the middle sector highlighted in the image upper right

• R625D - 8500ft to FL210 - the western and middle sectors additionally highlighted in the image lower right

Corresponding underlying danger areas are:

D612A - SFC to 1500ft, D612B - SFC to 2500ft, D630A/B - SFC to 4500ft and D630C/D - SFC to 8500ft

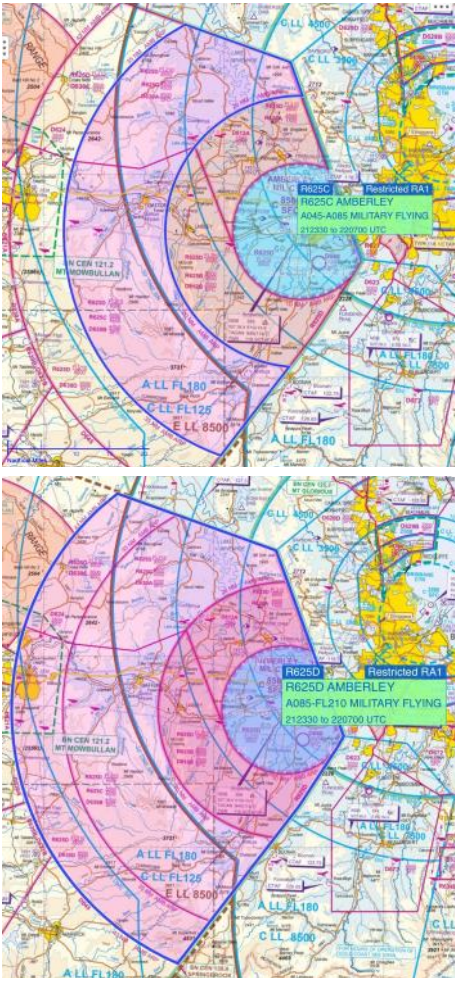
It's important to note that EFB software may not correctly display Military CTRs as active. The CTR may appear as blue instead of red, as shown in the images on the right (taken from OzRunways). It is still active however. Only a NOTAM will tell you the status of all the airspace.

A further point to be aware of is that even when the AMB CTR and restricted airspace aren't active some military aircraft may still be operating. The background to this is that ATC cannot support military moves 24/7, so sometimes they fly when airspace is deactivated – particularly on weekends.

Common AIs occur at the CTR boundaries near Lake Manchester and Spring Mountain. If tracking around the north via the Lake Manchester VFR route, it is important to track via the northern shores of Lake Manchester to avoid cutting the CTR 'corner'. Similarly, if tracking south around the CTR, track east and south of Spring Mountain, and then east and south of Flinders Peak, to avoid cutting the CTR boundary. There is a useful diagram in the AMB ERSA entry that shows the locations of these features.

Key actions to prevent an AI are:

- Undertake thorough flight planning
- Ensure your charts are current
- Navigation – know where you are
- Ensure your transponder is serviceable



BIG AMB

- Actively monitor the appropriate area frequency
- Don't rely on GNSS to avoid controlled airspace
- Ask ATC for advice
- If you need to divert, contact ATC as soon as possible
- Request a clearance well before the boundary - ATC need time to respond
- Have a contingency plan if a clearance is not available

Thanks to Flt Lt Lisa Hinton of 452 Squadron for her assistance with preparing this article

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