GREAT SOUTHERN SKIES

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GREAT SOUTHERN SKIES

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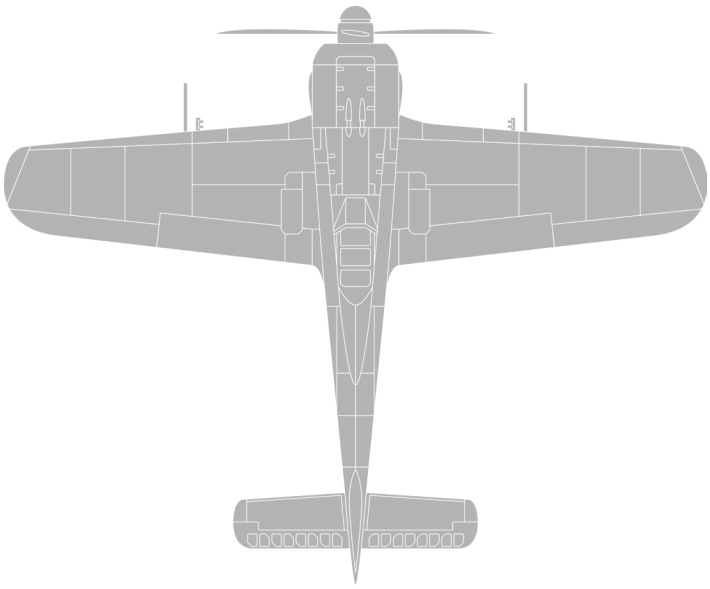


ABOUT US

Great Southern Skies is a magazine created by aviation enthusiasts and written for aviation enthusiasts. It's focus is positive local news stories, general aviation safety and, aircraft techinical knowledge.
Every word is written with integrity to inspire and encourage all of it's readers to continue to foster their passion for flight.
We welcome feedback from all our readers on the quality of content provided. Please also feel free to contact us if you have an aviation story or news to share.
We hope you enjoy reading Great Southern Skies just as must as we enjoy creating it.

CONTACT THE EDITOR

P 0439 955 657
E davepolette@live.com
W www.albanyaeroclub.com

Pilot: "Flip I'm bored"
Tower: "Would the aircraft reporting boredom please identify your self"
Pilot: "I said I was flipping bored, not flipping stupid"

A Letter From The President

Braden Smale

For those of you who don't know me, my name is Braden Smale the newly elected president for 2016. I have only been with the club a relatively short period of time, however since joining I have met plenty of great people and look forward to meeting many more. The knowledge and comradery shared between members is what makes this club unique, such a great club to be a part of; and of course having access to our beautiful RV-9A.

In the short time I have been a member, the club has had a rethink of its objectives and operations. The previous aircraft, a Cessna 172, became too expensive for the clubs means, and many members wanted to try a new direction. In order to find a niche in the market and offer something different to the members, the decision was made to sell the Cessna and purchase the RV-9A, call sign LPL.

The pilots who have flown LPL, including myself, find it an extremely fun and exciting aircraft. With performance well above that of the common Cessnas and Pipers, and with the most docile handling characteristics of the RV pedigree, even a novice pilot can pick it up in only a few hours. For any members who haven't yet flown LPL, I encourage you to get in and have a go and enjoy what this fantastic aircraft has to offer. After all, we are the only club in Australia that can offer this terrific experience. Enough can't be said about the high level of training that's being conducted by the instructors for anyone wanting that RV grin, without the upfront cost of owning your own.

The purchase of LPL has placed the club in a good financial position with options to expand into the future being explored. Initiatives implemented by committee members are ensuring the clubs foundations are set within the community. And we hope to be able to offer more to the members.

On the social side of the club the next 12 months look as equally exciting. No doubt the highlight will be the anniversary fly-in later this year as well as some non-flying events such as movie nights and quiz nights, which might suit club members and friends not so keen to take to the air. Most importantly, there will be something for everyone.

As the newly appointed president I will remain committed to preserving the longevity of the club and its great culture. Hope to see you all at the next club event.

Happy Flying.

MEET OUR 2016 COMMITTEE

PREISDENT
BRADEN SMALE

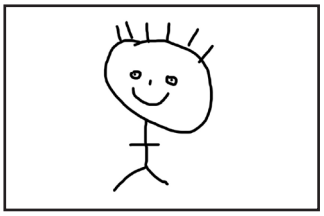
VICE PRESIDENT
ROD MOIR

SECRETARY
DAVE POLETTE

TREASURER
DAVID MAXTON

COMMITTEE

TIM LOWNDES



IAN COOMBE

GREG MCFARLANE

DRONE OPERATIONS

"Easy to transport, very agile when flying and it looks cool"

DJI Inspire - Albany Aerial Imaging

If you look up drone in the dictionary the first result will read "a low continuous noise that does not change its note". This is a good description of what you hear when a small remotely piloted aircraft hovers overhead, and lately your chances of hearing an RPA above you are high as cheap consumer drones are flooding the market. Educating pilots on the correct use of these drones has rightly been a priority for CASA. It has approached leading drone retailers asking them to include leaflets outlining all the rules for new pilots. Those rules include: only flying line of sight, away from populous areas, below 400ft and at least 5.5km away from airports and landing zones. The issue now is that these consumer drones are becoming so good that they can be used for commercial applications.

Currently, CASA doesn't differentiate between size or type of drone. If it's used for a commercial purpose the pilot needs an operators certificate. On the 29th September 2016 that is all about to change with the amendments to Part 101 allowing commercial operation for drones under 2kg without an operators certificate. Instead, pilots will need to notify CASA via an online form 5 days prior to every flight and continue to adhere to the standard operating rules. For drones over 2kg, operators will need a Remotely Piloted aircraft License (RePL) and a Remotely Piloted aircraft Operator's Certificate (ReOC). Not only will they need to know how to safely operate their drone but they will also need to understand the airspace they are flying in and the liabilities they carry.

Brad Harkup of Albany Aerial Imaging has recently turned a 20 year hobby into a high flying business. He has left retail behind to start flying RPA's commercially in a range of different applications including aerial photography, cinematography and 3d mapping. Brad has done the hard yards to complete and receive his RePL and ReOC, something only one other operator in the area has achieved. He believes the new rules won't affect his business as most drones under 2kg aren't able to perform the same duties as his fleet of 2 DJI Inspires, which weigh in at about 3kg each depending on payload. According to Brad, the Inspire was a simple choice as "it's easy to transport, very agile when flying and it looks cool". He also enjoys the flexibility of having separate operators for the drone and the on-board camera.

The modern day drone is a lot different from the remote controlled helicopter of 10 years ago. Electronics have come a long way and have enabled miniature control boards, gyros and GPS to be installed. These additional systems allow the drone to be highly automated in many phases of flight, including: Auto take-off/land, waypoint tracking, return to home and course lock. All of these smarts help to improve the situational awareness of the pilot and provide a partial safety net if things start to go wrong. So far, things haven't gone too wrong for drones in Australia. As yet, there have been no reports of any mid-air collisions and only a few minor incidents. But with these vehicles literally flying off the warehouse shelves, how much longer can they enjoy a tarnish free record? We don't know, but at least CASA and the drone manufacturers are doing everything they can to bring some separation and order in the skies.

What else is in store for drones in the future? Mail delivery, Search & Rescue, Security and Farming are all areas of expertise that these drones will begin to master, paving their way to become the worker bees of tomorrow. ✈

Sky Pictures

In this segment we ask readers to send in their best “Sky Pictures” from recent travels. Our favourite will feature in the next issue. Please email your images to davepolette@live.com

CROSSWIND HANDLING

with Ralph Burnett

Crosswind skills are a major factor in whether pilots become a statistic under the heading of RUNWAY LOSS OF CONTROL, (R-LOC), accidents. Records show that R-LOC accidents on landing are the major grouping in small aircraft accidents. We also know that crosswind skills are difficult to acquire, and easily lost by lack of use. In the many AFR/BFR's that I have done, crosswind competency is one of the weakest features. And, the reasons offered for a lack of skill are rather consistent over the years, aircraft types, and pilot levels: lack of practice being the leader. Aircraft handling is just another manipulative skill, but it requires constant practice. Most airports have 2 runways:but it requires strength of purpose and will to deliberately select the out-of-wind runway for a purely personal reason of skill practice.

Why the Focus?

Apart from losing control during a botched crosswind touchdown: the aircrafts' undercarriage can be damaged because of the forces induced when the aircraft is pushed downwind without control inputs to compensate for wind. This includes significantly increased tyre wear.

There is also the training issue with crosswinds. In some localities, and seasons – there is little wind to use for this practice. Many instructors are themselves often 'out of practice' because they do so little actual hand flying, especially from the right-hand seat. Another barrier to learning sound crosswind technique is that pilots are not taught slipping to a sufficient level of skill. Without this skill, and with a fear of flying an aircraft 'wing down' using 'crossed controls' – pilots fail to use sufficient inputs. The avoidance of wing down attitude is often driven by passenger discomfort and fear. However, pilots need to toughen up and brief their passengers as to what is going to happen. It's either accept temporary discomfort or try an accident!

Low Wing v's High Wing
Low wing types are easier to manage, and therefore safer, in crosswinds.

Tailwheel v's Tricycle
Tailwheel aircraft are much more demanding in crosswinds.

Heavy v's Light
Heavier singles and twins are more stable in crosswinds. Techniques differ from very light types.

Try this for skill: Cessna 180 wheeler landing with lots of wing down into crosswind.

Crosswind Terminology

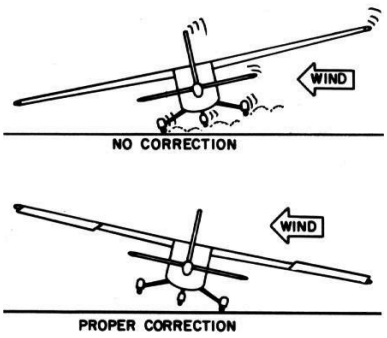
The RV-9A POH crosswind 'limit' is given as 12 kts. That is far lower than what it can be flown to: it's a pilot limitation rather than an aircrafts'. The US FAA require aircraft to be tested and found safe in a crosswind component of up to a figure of 25-30% of its' Vso. The -9A has a 45KIAS Vso, so that calculates out to between 11 and 13.5 kts of crosswind. Which is around the VANS factory number of 12 kts. All RV's should have been Phase 1 tested up to 12 kts or it shouldn't have been claimed. (I try them to the limit of the ailerons). With some Experimental aircraft this might not be done as thoroughly as it would with a professional test pilot.

Remember, what's in the POH is there for the obedience of fools but the guidance of wise men. A pilot with thousands of hours on type is going to manage more like 18 kts crosswind in a pinch.

We must remember too that we're talking cross-wind 'components' here. A 12 kt crosswind component can be the result of a 24 kt wind from 30° off the nose, but only 18 kts wind if 45° off the nose. You can play with these numbers on your Jeppeson CR3 whizwheel by setting the TAS on 60, and the trackline as your actual runway magnetic heading. (eg 137/317) There are also very handy circular crosswind calculators available for <$20 – view one on my hangar table.

Windsocks are useful. A 20 kt sock on major airports reads differently to a lightweight '15 kt' sock on private strips. If a big sock is horizontal – the wind is 20+ kts, and you'll probably note both up/down, and side-to-side swing of the sock. The stronger the wind – the greater the spread or swing in lateral and vertical planes: so you can gain other useful info besides speed and direction. Now this isn't so easy to see when you pass overhead in the circuit so it might be prudent at smaller strips to conduct a fly through in the general upwind direction. In Albany – do listen to the AWIS on your standby channel or 2nd COM.

Another term used in crosswind discussion is 'limiting control'. What this means is simple: do you run out of rudder command before aileron control: or vice versa? If you find that you have the aircraft wing down with full aileron in play – but there isn't sufficient rudder to keep the longitudinal axis aligned with the strip: you are rudder limited. However, you can improve your rudder command by increasing power, (which does not necessarily increase speed).



This illustrates why aileron input is important.

In the RV-9A, you will usually run out of aileron command, after which the aircraft will be pushed sideways - regardless of your rudder being able to hold it aligned with the runway. Yes, you could increase your approach speed to allow more wing down: but you are then inviting undercarriage stresses above what occurs in a fully stalled landing. However, this might be necessary, and certainly a better option than allowing the aircraft to be pushed sideways on a bitumen strip. (grass strips allow for more wheel slide to happen). Given that we use 60KIAS over the fence with the -9A, (which is just above 1.3 x Vso), another few kts isn't out of the question. 65KIAS is only 1.44 Vso, and if you used 67KIAS – you would have a 50% margin over stalling speed to allow for gusts.

Provided that the aircraft is landed on the upwind mainwheel, and the nosewheel kept off initially, then things are under control. However.....

Crosswind Mitigating Techniques

The RV-9A doesn't require much strip, and so we have an option of operating the aircraft diagonally across the runway or strip. It is surprising just what can be achieved by re-aligning the intended ground roll some 15-20° off centreline. The crosswind component is decreased, but importantly, the takeoff or landing roll is significantly decreased. And this is not only due to the speeds per se : it's due to not having all that drag created by crossed controls for takeoff, and the decreased risk on approach with controls less crossed.

If you really feel worried about a crosswind, the weather is deteriorating, daylight is fading,and it's too far away to a strip into wind: you have to do whatever it takes. This might mean landing along a taxiway, it might mean landing on the grass flight strip,rolling over the runway between lights,and down the other side. The stronger your wind – the shorter will be your rollout and so risk is greatly minimised.

What Works Best with the RV-9A

For takeoffs with crosswind – nil flap + full into wind aileron to start. Reduce aileron slightly if downwind wing lifts too early. Make a clean liftoff, still slightly wing down. Then when your peripheral vision tells you that you're 30-50 ft clear of ground, roll wings level. By then the aircraft has turned several degrees 'into wind' and so you are in the correct crab angle to climb away. In gusty conditions you may hear intermittent stall warning – disconcerting, but ignore this and maintain at least a 5° nose up attitude from immediately after you liftoff.

Regardless of whether it's a low wing type, a wing down approach works most reliably. Having selected full flap on baseleg, and adopting an IAS of 60-70kts with power to produce a 500 fpm rate-of-descent: you are able to turn final and then crab the aircraft down to 200ft agl. During the early final segment, you will have time to check the windsock, and also the bush or paddocks below for signs of wind speed or direction shift. At about 200ft agl, use rudder to align the nose with the centreline, and then add sufficient aileron to hold the wing down into wind. Increase power sufficiently to prevent R-O-D increasing beyond 500fpm. Watch your tracking is maintained down to the flare because of wind shifts common at low level.You may have to vary the rudder and aileron inputs several times. Flare the aircraft positively and touch the upwind mainwheel on before the aircraft stalls. Avoid float by judiciously reducing power in the flare.

Modern ultralights can handle crosswinds if wing is kept down. The aim is to keep that upwind wing from rising so aileron should not be neutralised at touchdown – keep it on, and increase it as the aircraft settles onto both wheels. Keep directional control with rudder through this, and if you have the multi-tasking skills – use your finger or thumb on the throttle hand to select flaps up. Avoid braking early in the landing roll – give the nosewheel time to drop by itself as speed decreases. It will do this early because the crosswind landing doesn't use a full stall touchdown and so the nosewheel is only going to be just off the runway at touchdown.

A common deficiency in crosswind handling is not holding enough aileron during the liftoff phase, and allowing the aileron to return to neutral at touchdown. Learn to love your ailerons, even if your passenger doesn't agree!

✈

WINTER WEATHER

UPDATE

There is no secret that during June to August the south pole tilts away from the sun bringing our southern continent into winter. Shorter days and colder temperatures are to be expected, but have we experienced colder than normal temperatures this year?

On September 1 the Bureau of Meteorology released its winter season summary confirming that WA had indeed experienced colder than normal temperatures, but only in the southwest. The remainder of WA experienced mostly above average or average temperatures. Rocky Gully recorded the coldest daytime temperature with 8.8 degrees and Eyre survived the coldest night with -4.0 degrees. At Albany Airport the temperature hit a nippy low of 1.0 degrees on July 16.
In the North, things were much warmer. Parts of the Pilbara and the Kimberley experienced the warmest winter nights on record. The hottest winter daytime temperature was awarded to Kalumburu with a scorching 38.3 degrees, and the warmest night was Troughton Island with 28.8 degrees.

Despite having some daily winter rainfall records due to a pre-frontal cloud band in July, the lower southwest was once again an anomaly receiving below average falls. In contrast, some areas in the north, centre and southeast recorded their wettest days in over 35 years. The wettest day in WA this winter was celebrated on the 16 July in Jarrahwood with 113.2mm.

The outlook for spring in the southwest and great southern is expected to be about average, with a roughly equal chance of warmer or cooler days. With a little bit of luck spring might bring with it the autumn-like flying weather the great southern missed out on earlier this year. ✈

UPCOMING EVENTS

ANGEL FLIGHT
OPEN DAY
ALBANY REGIONAL AIRPORT

SEPTEMBER 25
9.00AM TO 3.00PM

ALBANY AERO CLUB
40TH ANNIVERSARY
FLY-IN

NOVEMBER 20
9.30AM

FOR HIRE

Vans RV-9A

$175 p/h*

*Long hire rate (5 hours or more), Standard rate $195 p/h
T&C's and more information: www.albanyaeroclub.com

AVIATION STORY

Every aviator has a story to explain where their passion of flight came from. It's always followed by a confident smile suggesting there was no other option, but there is no easy way into aviation. Flying is not something that you end up doing by accident. You need to have a real passion to reach for the skies. It requires many hours of study to ensure you know how to flap your wings. It also demands a thick wallet to match the brains. The financial investment just to complete an RPL can put a lot of people off and If you decide to take it a step further then it quickly becomes apparent that you need at least 6 figures to finish up with an ATPL and no guarantee of a job. However, a dream can still be transformed into a reality if you have the absolute dedication to achieve it.

Above: Michael Landing at YDEK in a RACWA Mooney

Like most aviators, Michael Chlopek had an interest in aviation from a young age. He has memories of playing with his toy helicopter at his home in Hamlin Station. Through his youth he fostered this interest by joining the Air Force Cadets after moving with his family to Mt Barker, 50km north of Albany. Michael had a tough time in his teens due to some family tragedies, but it didn't hamper his interests. In 2002 Michael was elevated closer to his dream when he completed an EFTC (Elementary Flying Training Course) with the Air Force Cadets, awarding him with his first Solo flight and engaging his true passion for the skies. There was now only one option for Michael, make aviation a career.

Michael funded his PPL by delivering pizzas 7 nights a week

After completing school he set his sights on the city and the challenges ahead. Air Force Cadets had funded most of his GFPT but now he was on his own. Completing a PPL was the next priority and finding enough money to pay for it was going to be a challenge. In the end hard work was the only option, Michael funded his PPL by delivering pizzas 7 nights a week. He enjoyed the freedom of his new PPL but ultimately decided he wanted more. Unfortunately living in the city was taking it's tole financially and delivering pizzas wasn't enough to pay for a CPL. Michael made a tough decision to side step an aviation career and start working for an irrigation company to pay the bills. He proceeded to work his way up the ranks with the proviso that he would one day return to flight. In 2012, after selling irrigation in the day and studying CPL theory in the night Michael decided the time was right for a leap of faith. He left the comfort of a well paid 9 to 5 job to complete his CPL full time. Through advice from his colleagues and advisors he continued his training to achieve an Instructor rating in 2013. RACWA then offered him a job starting his career in aviation.

"The reactions and mixed emotions makes the hard work worth it"

Michael is still with the Royal Aero Club today. He is a Grade 1 instructor in charge of RACWA operations from their Murrayfield base near Mandurah. Murrayfield is a stress free environment situated right in a training area reducing the time on the ground and increasing the value for money. Michael treasures the privilege of teaching the art of flight to the many new wide-eyed students that walk through Murrayfield's gates. "The most exciting element for me (and there are a few) is sending a student on their first solo flight. The reactions and mixed emotions makes the hard work worth it".

On some weekends he has the luxury of taking customers on a scenic flight over the Peel region in one of RACWA's Vintage Tiger Moths.

Michael is only at the beginning of what I expect will be a long and successful flying career. At the moment Michael is enjoying supervising Murrayfield, but there is no secret he aspires to one day take the left seat in an RFDS aircraft and help save the lives of people from the many remote communities just like the one he grew up on. Based on his relentless history I have no doubt he will go on to achieve that dream too.✈

For more information about Murrayfield visit their facebook page
www.facebook.com/racwa.murrayfield

Top: Michael formation flying with RACWA Pilots
Middle: Happy Student (left)
Bottom: RACWA DeHavilland Tiger Moth

Angel Flight

OPEN DAY

ALBANY REGIONAL AIRPORT

SUNDAY SEPTEMBER 25 - 9.00AM TO 3.00PM

EVER WANTED TO FLY A PLANE?
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GOLD COIN ENTRY
STATIC AIRCRAFT DISPLAY
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