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>> A sneak preview of the new Jabiru 170 D. Photo supplied by Jabiru



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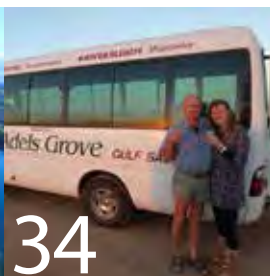
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# SPORT PILOT

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# President's Report

**STEVE RUNCIMAN**



I hope and trust you had a very worthwhile break. It went too fast as always.

I reported in my last column on the issues facing us in regards to the CASA audit findings and the resulting Safety Alert and restrictions placed upon us in regards to registrations.

Shortly after writing that column, the restriction on new aircraft registrations was lifted and the process recommenced.

I was hoping to report this time that we had caught up with the backlog but, unfortunately this is not the case.

We have made great inroads into resolving the issues and clearing the backlog, but at the time of writing a number of registration applications still remain outstanding.

Rest assured we are doing all we can to turn these applications around as quickly as possible. There have been a number of offers to help. Indeed, these offers have been accepted and a number of volunteers have been working with us.

However, it has emerged that it is technical expertise and knowledge which is required, not necessarily a large number of people. Thanks very much to those who volunteered and to those who have put in time to help out. I am aware a number of members have been contacted and asked to supply paperwork or photos missing from their files. It may be you have supplied them in the past, but I ask for your co-operation to supply any documentation/photos requested at your earliest convenience. That will, in turn, ensure your aircraft is registered

as soon as possible. The technical consultant has been reporting to CASA regularly on the progress he's made and I am pleased to say the reports are all very positive. He points to the new system being robust and workable. The team continues to work through the backlog and I am sure we will be on top of it in the near future; we will keep you informed of progress via the RA-Aus website.

Included in the December edition of Sport Pilot magazine were adverts for the positions of General Manager (replacing the CEO) and Technical Manager. We have broken with the tradition of recruiting for positions within RA-Aus and have, instead, enlisted the services of a professional recruitment agency. All the details are displayed on the RA-Aus website.

In my last communication with the agency, Face 2 Face recruitment, I was told they had received 45 applications for the GM post and nine for the Tech Manager post.

All applicants have been sent information on the recruiting procedure and specific details of the positions. The recruiting process is underway and I am sure that by the time you read this, we will be very close to conducting final interviews and appointing people to both positions.

Also included in the December magazine was a notice of the calling of a general meeting, which has been set for Saturday February 9. Thanks to the members for showing great interest in the running of their organisation and for calling for this meeting.

The board looks forward to giving an update

of everything on our plates being dealt with and outlining what has been planned for the future. By all accounts, it would appear there is going to be a large number of people at the meeting. So we have booked a venue rather than try to hold it in the RA-Aus office. The details of the location will be publicised via the RA-Aus website and can be found in the news section of this magazine. I look forward to meeting as many of you as I can.

We will, of course, report on this meeting via the magazine and the website for the benefit of those members not able to attend in person.

Some of you may have noticed an improvement in the website. The advertising of aircraft is now much easier and there is an option to include a number of photos with your advert. Bas Scheffers, the contractor, has been working on transferring the information from our current member database, which has proven more difficult than he had anticipated. Following the successful transfer of information, I am sure you will see notice the improvement, including a new member's section and the opportunity to renew your membership electronically.

Bas has also asked me to pass on that the team is continually working to fix a number of technical issues that have popped up. Many thanks Bas, keep up the good work and we all look forward to the continued improvements.

Finally for now, let's all agree to work together for a great, safe year of aviation and remember to personally commit to remaining safe while enjoying your passion for aviation. 🛩️

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# calendar of events

## Cobden Fly-In

**23-24 February**

2013 is our 21st operational year. The Roulettes will perform. A Warbird from the Old Aeroplane Company will be on display. A bus trip of the food, wine and vista's tour including 12 Apostles will be available. Bus numbers are limited. Drop by on the way to Avalon Airshow. The 12 Apostles is 10 minutes by air. For information Facebook - 'Cobden aero club inc.' email: cobdenaeroclub@gmail.com or call Paul 0427 422 478.

## Clifton Fly-In

**10 March**

The Darling Downs Sport Aircraft Assn. Inc. annual fly-In has become an iconic event in the region and is the premier attraction for all types of aviation in southern Queensland. Come late PM Saturday 9th for BBQ and drinks. Fly or drive in, see ERSA. On field camping, bring your swag. Advise for catering. Note, 2013 is the 50th anniversary of our CFI obtaining his Pilot's Licence. For more info: Trevor Bange 0429 378 370, (07)4695 8541 or trevorbange@bigpond.com.

## Loxton Aero Club Fly-in

**13 April**

At YLOX in South Australia. Hangar dinner on the night. For info and bookings phone Kerrie (08) 8584 7790.

## Natfly

**28-30 March**

Temora will come alive to the sound of recreational aviation again this Easter. Fly or drive in. Camp on the field or in town. Official dinner, seats will be limited so book early. More aircraft, displays and forums than ever before. RA-Aus has made a number of changes and improvements to NATFLY for this year so, if you haven't been for a while, come along to see for yourself. For more information [www.natfly.com.au](http://www.natfly.com.au)



## Esperance AeroClub Fly-In

**13-14 April**

Avgas is available at Esperance Airport (H24 bowser - carnet). Premium ULP is available at Myrup in limited quantities if pre-ordered. Limited billet accommodation available. First in, first served. For more information Dick Welbon (President) 0438 179 088 [rwelbon@bigpond.com](mailto:rwelbon@bigpond.com), Shane O'Neill 0419 198 438 [shane@oneillsheds.com.au](mailto:shane@oneillsheds.com.au) or David Ford 0407 036 173 [dwf177@gmail.com](mailto:dwf177@gmail.com)

## Barossa Airshow

**14 April**

The fly-in at Rowland Flat, Barossa Valley will be a full day of things to do for the aviation enthusiast. Aerobatic displays, joy rides, amusements, static displays, stalls, food and wine. If you are not familiar with the 600m strip, contact Steve Ahrens 0427 244 930.

## Barossa Birdmen Fly-in

**18-19 May**

At Truro Flats Airpark (check ERSA). Limited accommodation, dinner on Saturday night. Avgas and Mogas by prior arrangement. Pilots should be aware of restrictions regarding overflying neighbouring properties particularly to the SW of the airfield. For information phone Dennis Martin (08) 8263 0553, Roy 0408 802 667 or Email [roy@phillipsperformance.com.au](mailto:roy@phillipsperformance.com.au)

## Megafauna Flyaway

**18-25 May**

This year the destination is Bathurst. 19th Sunday - Yarrowonga to Wagga. 20th Monday - Wagga to Cowra. 21st Tuesday - Cowra to Bathurst. 22nd Wednesday - Lay day. 23rd Thursday - Bathurst to Parkes. 24th Friday - Parkes to Narrandera. 25th Saturday - Narrandera to Yarrowonga. All welcome, places are limited. Call or email Peter or Anne (03) 5744 1466 or Email [yft@yarrowongaflytraining.com.au](mailto:yft@yarrowongaflytraining.com.au).



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### More on stop and go

I have been following the Letters to the Editor, and have an interest in the discussion about 'touch and go' vs. 'stop and go'.

A valid point is made in the latest edition where the author states something to the effect that he was forced to learn two actions when carrying out the touch and go approach.

I am an inexperienced RA-Aus pilot (220 hrs.) and took up flying at an older age (I think we learn slower). I also experienced the slow learning curve when learning to land the aircraft.

I seemed to take forever to learn, and it was no fault of my terrific flying instructors' efforts either.

After reading the comments about learning two actions, I starting to realise maybe it was part of the reason behind my own slow learning. It seems to me there is an easy solution, a combination of both approaches. In the beginning, use the stop and go approach.

This would ensure the student learns the art of landing separately to the takeoff. Then, as their confidence grows and landing has somewhat been mastered, move to the touch and go approach to reinforce learning and provide more practice time. Maybe the best person to judge how best to instruct the student's learning is the flying instructor.

I frequently spend time doing touch and goes. However, if I have not flown for some time, I will always do the first circuit as a stop and go. Just cautious I guess.

**-Bruce Marshall**

### Back into the air

On behalf of my son, Tyler, I wish to say thanks to the RA-Aus board and admin staff for re-issuing him with his certificate.

He is so excited about getting legally back into the sky, as no doubt, are many other switched on kids affected by the recent RA-Aus decision.

Tyler and I hope the same privilege has been extended to other disenfranchised Junior Members.

Tyler has been booked with an RA-Aus CFI to get on with his ambition. Matt Hall told him "Tyler, realise your dreams and do it well and professionally".

Tyler's godmother, Nancy Bird-Walton, would be proudly looking down today from the clouds seeing the young bloke realising his dreams, albeit after a few procedural hiccups along the aviation path.

All the best and happy landings. Tyler for his 14th birthday did a ride in a 737 sim.

**-Halden Boyd**

### Weather it's clear

Regarding Peter Laphorne's quite helpful letter (Sport Pilot November 2012), it would do well for all to remember that the weather is actually composed in English and then translated to gibberish, not the other way around.

Heavily abbreviated weather reports are not unintelligible and people who read it in that format every day would hardly notice it is not in plain English. However, for most GA and RA-Aus pilots who typically fly only 50 hours a year, the chance of making a mistake with the cryptic version is a lot higher than if it were in its original, plain English format.

All we really need to do is to get the old schoolers off their high horses and give us the option to receive our weather in the form in which it was composed or in the heavily abbreviated format.

**-Don Ramsay**

### A weather solution

The November 2012 issue of Sport Pilot had two laments that weather reports are not provided in plain English, as well as the official version.

Champagne Flight Planning runs on Windows PCs, provides a plain English decode to the automatically downloaded TAFs, ARFORs, METARS, etc, and is also very easy to use.

Although Oz Runways and AvPlan are excellent iPad apps, they don't yet support this facility.

**-Bruce Harvey**

### Fuel on the fire

More Fuel for Thought (Sport Pilot Letters to the Editor December 2012) is a serious issue and should not be fobbed off to the Too Hard basket. CASA is the safety regulator and if an issue like this means they should talk to another government department, or fuel suppliers that should be easy to arrange.

When problems such as this are raised, we don't want excuses. Let CASA answer for themselves so we can debate and solve the issue.

All RA-Aus members should be working for better outcomes for the membership, otherwise it's everyone for themselves and we won't last long in that mode.

Not only is this a safety issue, but long term it will be an RA-Aus survival issue. As new pilots head off to travel and use their new skills, the problems they face getting fuel will turn many of them off flying because it will be too hard, so they will give up flying and buy a jet ski or sports car instead.

This will cause the sport to stagnate and die like GA. Fuel supply is fundamental to travel safety and it seems only sports aviation is silly enough to put up with this state of affairs.

Not one airfield in the country, as far as I know, has a Premium Mogas bowser available for general use by pilots, despite this being the fuel recommended for use in all Rotax engines by the largest sports aircraft engine manufacturer. I am not advocating every small private strip or airfield do it today. CASA will do to begin with.

**-Jim Crocker**



>> Tyler Boyd 737 Sim





## Petrols ain't petrols

This question seems to need answering again every couple of years; you might like to put the following in your files for that purpose.

The main issues with Mogas Vs Avgas are:

(1) The reduced octane rating. Do not lose sight of the fact that Avgas octane is MON (motor octane number) whereas Mogas is RON (research octane number); there's roughly a 10 point difference - 95 RON equates pretty much to 85 MON. So putting 95 RON fuel in an engine certificated for 100 LL avgas amounts to a reduction in fuel octane rating from 100 MON to about 85 MON. i.e. quite a large change.

(2) The vapour pressure issue. Avgas is limited to 7psi Reid vapour pressure. Mogas can be as high as 12psi RVP or possibly higher if it contains alcohol, because the partial vapour pressures of all the compounds in the fuel add up, not necessarily in proportion to their percentage of the fuel content. Not all aircraft fuel systems are highly resistant to vapour lock - especially in a low-wing aircraft. In hot weather, the available fuel will have lost most of its high-end volatiles - unfortunately, it loses some more octane rating in the process.

(3) The effect of benzene-ring (aromatic) hydrocarbons and alcohol. 100LL Mogas is largely pure iso-octane, with as much lesser-value straight-chain hydrocarbons as the fuel company can get away with at the limiting TEL content; it contains no aromatics or alcohol. The old "super" Mogas was similar, but about equivalent to 80/87 Avgas, so it did not cause any problem with aircraft fuel system components. Current Mogas is loaded with aromatics and may have some alcohol. In the Mobil fuel contamination crisis, we found problems arising from the first load of fuel after the wash-out, which was required to have 1% anhydrous iso-propyl alcohol, to remove any residual water. Unfortunately, it removed the lubricant from fuel selector valves and seriously softened some grades of integral tank sloshing compound, and we had some seized fuel selectors as a result, and a CAP 10 aircraft whose tanks had to be left to dry out for a couple of months to allow the IPA to leach back out of the sloshing compound. Issues such as elastomeric components in the fuel metering system, fuel pumps etc were sidestepped by sending them to overhaul shops; we did not learn which ones could or could not tolerate these chemicals.

This third issue is pretty intractable, because of the way the fuel companies send their products via pipelines; they may pump one product for a while, then pump another for a while - and the contaminated bit between the two batches ends up in the 91-RON Mogas tank. So 91-RON Mogas is highly variable, and may contain traces of all the products which get pumped

through the pipeline.

This is why we need cars with knock-sensing EFI these days. This is also the reason the fuel companies are so strongly against people using Mogas in aircraft. AVGAS is subject to much tighter control - I'm not sure it goes via pipeline at all - it may be shipped directly and then transferred by tanker truck (at least in Australia and America).

So whenever the question of Mogas arises nowadays, the immediate question is - what grade of Mogas and subject to what limits on its chemical content?

Petrols ain't petrols, unfortunately.

**-Dafydd Llewellyn**

## Call reminder

Thank you for publishing the two excellent articles "How to Survive a Crash" and "Mayday, Mayday, Mayday" (Sport Pilot December 2012). They were good wakeup calls, which we all need occasionally.

One idea I had was to have the RCC and Air Services numbers locked into the contacts folder in every pilot's mobile phone.

It would be a good idea for the every CFI, when patting the prospective cross-country pilot on the back to send him/her off on XC Navs, to see these numbers actually on the pilot's phone, as part of the pre-flight check (maps, route card, fuel, phone numbers and so on).

**-Ron Hoey**

## Shape up or ship out

I wait for the magazine to arrive in the mail each month, and by lunch time, I have digested the lot. It has improved a lot over the past year or two.

I would like to thank Don Ramsay and David Isaacs on their attempts to bring more transparency into RA-Aus.

But although having one General Meeting, in addition to the AGM, is a start, it is still not good enough.

A majority of associations etc. have more than one general meeting per year to keep members informed of goings-on. This should be the same for RA-Aus.

General meetings should be notified in advance to be at the bigger fly-ins and the AGM at NATFLY. Surely that would bring some attention and more members to it.

I don't care where these meetings are held, as long as we can be more in touch with members and let them belong to our association with new vision and responsibility.

The state of the accounting is shameful. There are no excuses. "It's in the pipeline" is no explanation. How long is the pipeline?

To the board members, do your job or get out. You are not there to just eat the sandwiches. Look at all your promises again.

This is a big business now and you all know it, but seem to think it will fix itself. It won't and some people on the board have had enough time to fix it. You all need to take a good look at SAC in NZ which functions so much better.

We now live in an era of IT - use it and half the staff could be better utilised.

Sell the Canberra HQ and move to an airfield we can fly into.

**-Keith Baker**

## Another weather report

As a mature age (51yo) student pilot, I probably don't adapt to new ideas as well as I did in my teens. But most things flying related are coming along fairly well.

Weather however, is a constant battle. Does "30" mean half past something, 30 degrees (true or magnetic) the 30th of the month or heaven forbid 3000ft? The Editor has outlined the reasons why abbreviations were used in the past. The marine industry has a similar history, but has moved into this century, albeit kicking and screaming at times. Degrees are always specified as true or magnetic, by T & M. Time uses the full 24hr descriptor. Distances are usually in nautical miles, and you are left in very little doubt as to what the unit is or what it means. Granted things happen slower on the water, but tolerances are often smaller. Two ships regularly pass in a channel at distances which would be too close in aviation. Communication is just as important and it is an international system, with English as the standard language.

Knowing the state of tide and weather conditions is vital, reports are usually received by radio or printout, but they are not abbreviated to the point of being a mystery to the average person. I'm not sure how the aviation weather reports are generated, but if automated, it is surely only a keystroke to include a plain English version. If they are done manually, you cannot convince me that some poor BOM tech has been raised from birth talking only aviation jargon. They must have to translate it into the abbreviated format.

If so, why not have the user friendly version available as well? Yes there are some apps which decode some area reports into human, but they don't seem to include my local TAF. Better still, why not have the option of having the abbreviated forecast followed by the plain English version? A great learning aid surely. What do we have to do to make things user friendly and sensible? Don't even get me started on the use of GPS.

**-Jenkin. J. Steed.**

## Resurrecting a Lazair

I was one of those kids who looked at every plane that went overhead. I still do. My flying started with paragliding in 2000. With the bare minimum hours, I bought an Airfer Tornado paramotor and started PPG. After 400 hours, flying mostly around Mudgee in NSW, I found two Lazairs in a shed.

A series 1 Lazair, with twin pioneer 100cc chainsaw motors, was complete. A series 3 had one wing partially assembled. It took over a year to build in my tiny shed. It has a wing span of 38ft (So there's not much room left in a 20ft shed). I spent \$4000 on new upgrades and many hours on the Internet talking to guys in Canada and the US, I learned a lot about the early days of flying and the basics of aerodynamics ( let's just agree it works ).

One of the best parts about building an older 2024 alloy D-cell and tube aircraft is that I get to meet plenty of pilots from the early days of our sport. The smiles I get when they hear I actually built my own Lazair adds another perspective to my short flying experience.

I have been the butt of some jokes and the hierarchy still asks 'when are you getting a real plane?'

But I have one already and I also have a special bond with this piece of history, now registered and flying. Only another owner/builder will know that feeling.

So now my little Lazair, which is quite an amazing aircraft in itself, is registered 95:10. It was imported in 1984 as a kit and not completed until 2010, making it the last Lazair from the ultra-flight factory in Canada, founded by Mr Dale Cramer, to be built. To my mind, it doesn't matter what you fly, as long as it gets your ass off the ground.

-Wayne Bailey



## Praise for 95.10

The article by Chris Conroy on 95.10 (Sport Pilot December 2012) was interesting reading and brought back memories especially the MK 111 Scout.

I think it belonged to one of us flyers from Brisbane. We had a group of about 10 in all. Most had the capability to convert to fly on floats with a rig time of about 15 minutes. Ces Lea was one of the pioneers in the conversion.

Bang for buck, the Scouts were by far the most fun you could have in aviation. So 95.10 is not completely dead, we still have a group in Brisbane who fly the Kestrel, another Ces Lea innovation. We have often said that 95.10 is a good solution for the younger members to get in the air without the high cost.

-Howard Dyer

## More praise for 95.10

I live at Seelands on the NSW Northern Rivers and I've been flying ultralights since the early 1980's. Prior to that, I was a pioneer hang glider pilot.

Having survived the carnage of those early years, I've developed a healthy respect for aircraft integrity and safety, however I lament the demise of early 95.10 aircraft from the Australian ultralight scene.

The reason many of us early aviators took so enthusiastically to ultralight flying was because it was NOT GA flying. We loved the exhilaration of building and flying simple low performance aircraft, the absence of oppressive regulation and the stiffening self-indulgent culture of the GA establishment.

For the past 12 months, I've been trying to find airworthy examples of American made

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FAR 103 ultralights such as the Quicksilver MX to fully restore and demonstrate at air shows. My search has not turned up anything, however I've discovered the Eipper Quicksilver MX Sprint and Sport are again in full production, serving a re-emerging interest in basic ultralights in the US.

A brand new Quicksilver MX with a Rotax 477 can be purchased for US\$13,300 (plus freight), good value as the original Quicksilver MX sold for A\$4,750 back in the early 1980's. Another interesting aircraft is the Oshkosh award winning Aerolite 103. The current retail price of this aircraft is around US\$17,000 with a Hirth or Rotax engine.

Hopefully some enterprising importer can see the need for this type of aircraft and start importing it to Oz.

-Brian Gane

## And still more praise

Recharging our Past (Sport Pilot December 2012) was one of the most enjoyable articles I have read in recent times.

While I was not involved with the AUF back in the early days (I never even knew it existed back then), when I did become involved, there were still some remnants around of the older aircraft and probably the philosophies that went with them.

Coming from GA to AUF was something of revelation, so much simpler and straightforward and the people were so much friendlier, irrespective of how much money you were spending. Over the past few years, that seems to have changed and I can only conclude it is associated with our rush to go higher, faster and heavier, moving ever closer to GA.

I also believe politics has now crept into our organisation and our relationship to CASA.

I fly because I get a buzz from being in the air and I am happy to do that alone. Most of the time, I have no intention of going anywhere and no need to get there in a hurry.

I am not about to suggest those who wish to

ferry passengers around the country at better than 130kts go to GA, but does our organisation, by necessity, have to be geared towards this class of flyer alone?

Human nature being what it is, I wonder if the current flock of plastic fantastics on offer, with matching price tags, is being driven by manufacturers chasing profit or buyers trying to out buy each other. What if we hadn't gone down this road of heavier and faster? Would those with vision and inventiveness have come up with machines we can now barely imagine?

I have no idea of the long term future of RA-Aus. Whether it be controlling all recreational aviation, some obscure group of flyers or non-existent, I would like to think that somewhere there will be room for a group of flyers who just want to fly light, low and slow just for the thrill of it.

-David Newell



*In Letters to the Editor Sport Pilot, December 2012, a website was given [www.pemet.com.au](http://www.pemet.com.au) for plain language weather forecasts. At the time of publication, the website was active, but has since gone inactive. We are searching for others.*

## Waving the card

When it became necessary a few years ago to have a security card to be able to go into RPA aerodromes, I obtained one so I could go to Narromine and airfields in between to obtain fuel etc.

After [apparently] being checked by the Federal Police and found acceptable to hold the security card, I was issued one which was valid for only two years at a cost which would seem

to be acceptable if it was just a one off cost. However, after two years I gave it in, because I felt it was unnecessary to pay the money out again every two years for something that had not changed, as far as I was concerned.

I am sure if I had been found to be a security risk, the Federal Police would have done something about it by now.

I have been issued with a passport which lasts for up to 10 years. I can't see the need for a security card to be issued every two years at the costs charged. Who makes the money?

I recently travelled to Oshkosh for the EAA fly-in and, frankly there were far fewer problems with security than a simple trip to Temora (which incidentally, I have decided is too hard to attend if I don't have the security card).

Since we fly small aircraft, I don't see why we need to have some piece of costly card to tell us we are not a security risk, which really does nothing to stop a terrorist from doing something if they want too. I suggest the RA-Aus board put it on the agenda for discussion to try to have the time period changed to something more appropriate and in line with the Federal Government passport ie 10, or at least 5 years.

-Ray Morgan



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## Something to say?

Email [editor@sportpilot.net.au](mailto:editor@sportpilot.net.au)

DON'T hold it in and give yourself a headache.  
Share it with the members and get it off your chest.

Maybe it's you and your completely reasonable opinion about the world of recreational aviation that no one else will listen to.

Email [editor@sportpilot.net.au](mailto:editor@sportpilot.net.au) and have your say. (By the way - the editor reserves the right to edit Letters to the Editor to shorten them to fit the space available or in case of libel.

We don't want your completely reasonable opinion to land you in court.)



Arthur Marcel's story 178 seconds to Live (Sport Pilot December 2012) generated a large cumulus cloud of reaction and comment from members as was intended. Here is a sample of the feedback.

## Is it a myth? Sadly no

By Michael Apps

CFI Snowy Aviation Academy

I read Mr Marcel's article with great interest, but found some of his pronouncements somewhat disturbing.

The first point to remember is that we are all recreational flyers, ie we all fly for fun and, as I keep telling my students, if you are not having fun, give it away and take up underwater basket weaving, ballet or whatever.

The second point to make is that although the minimum training required to obtain a recreational certificate is about the same as undertaking a GFPT, the total hour requirement is actually half. More significantly recreational pilots are not permitted to enter controlled airspace, do not undertake any night or instrument flying training and are legally restricted to fly in day VFR conditions only and in VFR aeroplanes.

The third and perhaps most important point is that, as a recreational pilot, you are specifically ordered to keep 1000ft vertically and 1500m clear of cloud at all times.

Aviation Research Investigation report B2005/0127 titled 'General Aviation Pilot Behaviours in the Face of Adverse Weather' specifically deals with 491 instances of VFR into IMC. In each of the scenarios, the pilot was unable or unwilling to take the necessary action to avoid the aircraft entering flight conditions which the pilot was not equipped to handle. The report goes on to state that, in many cases, the final outcome most likely depended on chance.

Possibly only seconds, or at most minutes, separated a safe outcome from an accident – safety assurance had been lost.

In plain English, if you enter cloud namely VFR into IMC, either willingly (Illegal for RA-Aus) or

by accident, you have a 75.6% chance of having an accident involving a fatality. You might also be interested in some of the pilot demographics from recent studies. The breakdown for the accident rate makes interesting reading too. Around 80% of the accidents occur most frequently to pilots between the ages of 20 to 50 years, with the following flying experience:-

- 100 to 250 hours - 34%
- 250 to 500 hours - 28%
- 500 to 1000 hours - 20%.

These figure tally with other studies and show that pilots with under 1000 hours flying have a four out of five chance of killing themselves if not qualified to fly in IMC.

I train pilots who fly around Cooma and the mountainous areas of the Snowy Mountains.

I warn them of the dangers of mountain flying and the significant problems which can be encountered by pilots stupid enough to enter the forbidden clouds.

There is a real danger they will encounter severe turbulence in mountain cloud with violent up and down draughts, which can throw light recreational aircraft about like toys and cause them to easily exceed their of +4 and -2.G limitations. If a light aircraft breaks up in cloud in mid air - you are dead..

Cloud build up can be sudden and unexpected and blows over the Snowy Mountains to form a thick layer from ground to more than 20,000ft, so out-climbing to get above is usually out of the question.

Say you are flying along at 8,500ft and see the cloud building. You might decide to fly around the edge and get through a little bit of cloud to the south and east. Alternatively, you might turn due east, or better still north east, keep clear and fly back to Polo Flat.

You might be experienced and know what is best, so you decide to continue the flight through that little whisp of cloud ahead, which should only take a couple of minutes - no problem.

The forecast said risk of severe icing in cloud from ground level at 6000ft to cloud tops of 20,000ft, but you are flying west VFR at 8,500ft and 2,000ft above ground so it didn't apply to you – again no real problem.

The cloud turns out to be thicker than you expected and within a few seconds, you realise you have made a mistake, so you try to turn round and fly back out of cloud.

Mr Marcel states 'The required manoeuvre is to hold the wings straight and level while climbing up and out of trouble, executing a gradual 180 degree turn and going back the way we came' – no problems.

But nothing about flying in cloud in the mountains (or anywhere else) ever goes according to plan. Suddenly you experience ice buildup. This can be very rapid and without de-icing things can go very bad, very quickly. In seconds your aircraft can't climb, the airspeed reduces and the aircraft starts descending.

In a short space of time, the controls get sluggish and a turn back becomes impossible – now you have very real problems. The ice buildup, severe turbulence, zero visibility and a westerly blowing at 30kts to 40kts at 8,500ft resulting in rapid up and down draughts, causes serious problems. Usually a combination of some or at worst all the above conditions experienced by a VFR pilot in IMC will result in loss of control in a few (minimum about 25) seconds and at most a few (maximum about five) minutes, so never tempt fate and remember death is final and permanent.



# reactions cont

So there are at least five good reasons to keep out of cloud. Number one - Instrument flying in cloud and particularly in bad weather as a single pilot is accepted to be the hardest and most challenging flying you will ever experience. Any pilot will tell you that instrument flying involves an enormously high work load, exacts a high level of stress and requires constant practice to stay safe.

Number two - As a recreational pilot, you do not receive any IFR training.

Number three - IFR flying is not legal.

Number four - You are a recreational pilot and authorised to fly only day VFR.

Number five - Even if you fit basic IFR instruments to your aircraft, it will not be able to cope with icing, severe turbulence and other nasties that many winter and summer clouds can throw your way. Remember, a couple of hours of IFR training won't help you either.

So to sum up, please enjoy your recreational flying for fun in good clear and cloudless weather. Don't ever be tempted and stay out of cloud to live and fly another 'perfect day'. If you reach my age, have a few hours in your log book and can claim to be warm, vertical, with a leg at each corner and still enjoy flying safely, you have probably done most things right down the years.

I gave up instrument flying many years ago and now firmly believe in that time honoured saying which goes 'Prevention has always been better than cure and dying ruins your life'.

## Pushing the envelope

By Jason Oliver.

ATPL IFR instructor.

I am concerned about the attitude to both safety and adherence to the rules expressed in this article. The article makes an assumption that VFR pilots will push the limits of the VFR - exactly what our training tells us not to do. The assumption is also contrary to my experiences and observations of other VFR pilots (both GA and RA-Aus).

I would like to expand on some of the other considerations that need to be taken into account when entering IMC.

Flight in IMC requires the pilot to factor into the equation, more than simple control. Granted it may be possible for a non rated pilot to maintain control after entering cloud, given only an attitude indicator (which is not required to be installed, certified or maintained in RA-Aus aircraft), however to continue with the author's example of entering cloud after flying up a gully;

Once in cloud you would be:

1. Below lowest safe altitude for the area, therefore have no guarantee of terrain clearance - especially if you are climbing up a gully;
2. Unable to safely become visual, with no way to do an instrument approach;
3. Potentially in icing conditions, it is common for freezing levels to be very low in some parts of Australia;
4. A danger to all the legitimate IFR aircraft operating in IMC, should you be able to safely climb above LSALT. Many RA-Aus aircraft are not equipped with transponders and non-rated aircraft and pilots may not be able to report their position in order to facilitate separation.

Before any IFR flight, an instrument rated pilot carefully studies the weather (with particular focus on freezing levels and cloud tops), NOTAMS, flight route, LSALTs, airspace, approaches and suitable alternate aerodromes. A flight into IMC is never undertaken lightly. Precautionary Search is a required lesson during training for a Pilot Certificate and is exactly the procedure which needs to be followed in the situations described in the article. The decision needs to be made early, before things become so bad the pilot runs out of options. I wonder how many of us practice this exercise after gaining our certificate? We fly recreational aircraft for fun. If there is a pressing need to be at a destination, take a scheduled flight or drive. Time to spare - go by air.

## A need for training

By Kevin Wilson

Arthur Marcel's article was interesting, especially for highlighting the absurd sample analysis done by so called researchers. Deliberately flying into cloud is foolhardy and downright dangerous for a VFR only pilot.

Having said that, there may be a freak encounter with cloud which requires just that - and having no instrument training at all means the VFR pilot is very ill equipped to deal with it.

When I trained for my PPL, there was a mandatory five hours of instrument flying plus theory briefings. This was, of course, all under-the-hood stuff with the instructor as pilot-in-command.

Basically, you had to be able to fly straight and level, complete turns, recover from unusual attitudes using instruments only and fly with a limited panel. I found this invaluable and the first rule of "believe your instruments" became indelibly stamped on my brain.

Back in the 1990s, I worked as IT manager for a company which had two factory sites about four hours' drive from one another. I would take three others in our Aero Club Archer and get there in less than an hour.

There were several options for the route depending on the weather. I did everything by the book, filed a flight plan, got the latest weather, plus called the other end before leaving to get a local weather update and made sure they were at the airfield when we landed. Sometimes we had to drive because the weather wasn't good. On one particular warm March morning the forecast was good, although there was a weak front heading up from the south expected to arrive late in the afternoon.

Everyone knew if it turned bad we would have to stay the night or hire a car to get home. Takeoff was in calm conditions at 7am with some thin high cloud cover.

After about 30 minutes cruising at 4500ft, it was still smooth but the high cloud was thickening up and a layer of scattered cloud appeared about 2500ft below.

The ground was still clearly visible, but after another seven or eight minutes, the lower layer thickened up and the base of the upper level was getting lower.

I decided to reduce altitude and fly under the lower scattered cloud. I went through a nice big hole, but I found I was in a valley with a dairy farm in the centre and the tops of all the hills in cloud.

I did a gentle 180 degree turn to head back to go up through the hole, but I couldn't find it. After two more circuits of the valley, I had discovered there were no landing possibilities and I was left with only one option.

I set my heading, applied full power and climbed with my eyes glued to the panel. The cloud layers had become one and we popped out the top at 9500ft. In hindsight (the only exact science) I should have turned back earlier.

There is a lot more to this story, but may not have been here to tell this much if I'd never had any Instrument training. Personally I think getting some instrument training is not just a good idea, it is essential for anyone who contemplates cross country flying.

I can understand why it is not part of the RA-Aus pilot certificate requirements. However many of the higher end recreational aircraft outperform most of the older single engine GA aircraft and I think some instrument training, similar to what I had for my PPL, should at least be offered as an option to RA-Aus pilots and students.



# reactions cont

## Dangerous and irresponsible

By David Elliott

I have just finished reading what is, without a doubt, the most irresponsible, dangerous and poorly thought out article I have ever encountered. Well done, Mr Marcel.

The basis of your argument seems to be that the research being 60 years old, using pilots unfamiliar with the aircraft and having the aircraft in its most difficult configuration, is an unfair way to conduct the study. Fair enough. So what do you think the results would be with pilots flying their regular aircraft lightly loaded? 327 seconds to live? Should the saying be changed for those that fly into cloud "one in five comes out alive"?

You suggest that teaching pilots how to get out of trouble, should they ever inadvertently fly into cloud, might sound a sensible thing at the first reading but how about the following problems? When you say that "the only additional (non-VFR only) instrument required is an artificial horizon, and many RA-Aus have this instrument" how about those which don't?

How do you ensure pilots stay competent with a skill they will rarely, if ever, use?

The whole subject fails on the fact that a properly planned flight, with regard to weather conditions, alternate airfields and a correct choice as to fly or stay on the ground, should never put a pilot into cloud in the first place.

I just have to point out the obvious that cloud is visible from a good long distance. If a pilot finds he has no choice but to enter cloud then use his newly acquired skill of executing a level 180 degree turn to get out, begs the question of why on earth didn't the pilot make the decision to turn around a bit sooner?

With less than 1000 hours (all recreational) under my belt, I consider myself a relatively inexperienced pilot. I'm sure we will all hear much more from those who really know their stuff.

## Getting under the hood

By John Howard.

I would encourage anyone to have some time under the hood. No one would deliberately fly into cloud (I hope) without the necessary skills, but there are also other circumstances where instrument skills could save your life. I learnt to fly in the mid 1970s in the UK and one of my instructors was a former Battle of Britain pilot. He insisted all aspects of flight be taught. Spinning then was also part of the syllabus - great fun.

When he taught us under the hood, he first put the plane in an unusual attitude, a spin, a stall or a tight turn then hand me control and say go home. So first you would have to recover from the unusual attitude then remember which direction was home and head there. Then we would do it again.

This training stood me in great stead, soon after I got my licence. A fellow pilot, his wife and I, headed for Guernsey, across the English Channel from Exeter, an hour and ten minute flight.

I flew there and he was to fly back. The visibility was good but hazy, there was no horizon; the haze would have covered about 45 degrees, there was no cloud and no wind, so the sea was flat calm, and few, if any, ships. What we used to call the goldfish bowl effect.

Soon after we left the island of Guernsey, my friend lost spatial awareness and we rapidly headed for the sea. I recovered the aircraft for him, but it happened twice more. At this stage, he was not very happy, nor was his wife and I flew the rest of the way home.

This was a very good lesson, proving the advantage of some instrument flying experience and showing you don't have to only fly into cloud to lose spatial awareness. It can also happen after last light. I know you shouldn't, but perhaps if you encounter stronger than expected head winds and take longer to get to your destination than you had planned, a little bit of instrument flying would be a great help. I quote from the article, "Rather, it is that they (pilots) should be encouraged to prepare for such hopefully avoidable situations instead of developing a paralysing fear of them."

## Myth not busted

By David Brown

Arthur Marcel's article on spatial disorientation is an interesting article, albeit one which I do not think should have been published.

Is the 178 seconds to live a myth? In short, no it is not. Far from it. Some pilots do better, some do worse, even today.

As someone who works heavily on myth busting in aviation, I am somewhat qualified to comment on the sport, and it has been my belief that in order to bust a myth, you must present hard facts backed up by empirical data. It is hard to argue with the data provided it is collected properly.

Mr Marcel's article did not present any new data. All it did was go to great lengths to explain what they did at the time, but lost the point of the original study, which was to develop a method of training for VFR pilots to execute a 180 turn out of cloud without losing control of the aeroplane.

The facts they collected showed that the average was about three minutes and the spread of results was out to a maximum of eight minutes. Just because they chose a Bonanza, which was unfamiliar, I feel is not that important. Flying a plane on instruments is a lot different to conducting an instrument approach. The Bonanza, in which I have some time, is not that difficult to operate. In fact, partial panel VOR approaches in a Beech is something I found easier during my CIR training than the ILS with full instruments, so what does that say? I think it shows very little impact on the result is attributable to the aircraft or the loading. In real IMC, which is turbulent and scary for the untrained, the aircraft type has little effect.

The bottom line is, no matter how you look at it, untrained IMC excursions are very often fatal, and unless you have the equipment, the rating and are current, you have no business being there.

For the RA-Aus community, training to avoid this deadly corner of the sky would be far better than suggesting that folk should train in a class of aircraft ill-equipped to conduct the training.

By all means go to a GA instrument flight school and do some training, but do a full Command Instrument Rating or PIFR, and this might be something you will want to do.

But do not believe that having done a couple of hours ten years ago will help you much today. Cast your memory back to the C206 which crashed north of Scone NSW a few years ago. A newly trained PPL (min two hour IFR) flew into bad weather and all died. Plenty more where that came from.

Unless we got together 20 RA-Aus members with no IFR training (no PPL) and conducted tests of our own, we certainly can't call this a busted myth. All it takes when testing an hypothesis is for one result to prove otherwise and all the other tests are shot down. My experience suggests that is highly likely and the myth would be confirmed.

**Ed-** *Very contentious to suggest a controversial topic like this should not be published, David. You may not agree with the author or the topic being discussed, but something which generates discussion like this, allows each of us to learn and to add layers to our own experience, opinion and decision making processes. Restricting debate is what leads to ignorance. I doubt any pilot reading Arthur's story would have been encouraged to go out and try to test the myth themselves. And if they did, the Darwin awards would no doubt get another nominee. Thanks to all who contributed opinions on the subject. We will try and run more as space allows.*



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**BREAKING NEWS**

# General Meeting

**Saturday 9th February 2013 Queanbeyan Bicentennial Hall commencing at 9.30am**

**RA-Aus members have been urged to attend a General Meeting to be held at the Queanbeyan Bicentennial Hall, 253 Crawford St Queanbeyan NSW.**

The meeting has come about at the request of a group of members whose goal is constitutional reform within the organisation. Their reform agenda includes reducing the number of board members, limiting the terms for board members, creating a more viable selection process for board members and implementing a system whereby more use can be made of ordinary members with special expertise.

A spokesman for the group insists that RA-Aus, as a multi-million dollar corporation, requires more professional formulation of policy and better oversight of management than has occurred in the past.

In December, President Steve Runciman reminded everyone that the meeting will be open to all financial members, not just those looking to make reforms.

If you can't be there, watch for Sport Pilot magazine in March. We will have a full report.

## REGISTRATION UPDATE

All files with registration due from November up to the present time are being individually audited. Those with errors (and there are many) are being inspected and the owners are being individually contacted by phone about the missing paperwork. When the missing paperwork is supplied the renewal is signed off by RA-Aus as complete and is given to the consultant for formal sign off for processing.

The major items missing from files are:

1. No photographic evidence of the MTOW placard.

The requirement for this can be found in the Technical Manual at section 7.4.3 Annex C which says "WARNING- This aircraft is limited to a maximum take-off weight of XXX kg." You should all know your MTOW. The consultant will accept a photo of a DYMO label on the dash in plain view of the crew.

2. No photographic evidence of the warning placard which says "This aircraft is not required to comply with the safety regulation for standard aircraft. Persons fly this aircraft at their own risk". This placard can also be found in the Technical manual at section 7.4.3.

3. No photos of the registration numbers under the wing and on both sides of the fuselage as required by the Technical Manual Section 7.4.1 para 12.

4. No weight and balance information. I know some of the

older aircraft in the 19 category did not require weight and balance at the time of registration. Here would be where you could argue the point.

5. Flying hours for the past year and the number of landings. normally you fill in these numbers at the time of renewal, but at the moment you are not getting your renewals.

So what should you do? You could wait to be contacted by the office about missing paperwork, or become proactive. My advice is to everyone with rego due in the next few months is to do all the above, and send it into the office now, even if you believe it has

already been done. Photos have been lost from the files, and I bet very few owners can comply with item number one.

This way your file will be updated and placed in the completed audit file, ready for sign off by the consultant, and formal processing. If you also include a check or credit card details the process can be completed without you being contacted for payment.

The alternative is to wait for days/weeks/months, until your name comes to the top of the pile for an individual phone call telling you what paperwork is missing. You then supply the missing paperwork and it goes into your file for checking again.

Isn't it better to just do it now?

For most people if they do all the five items above they will cover the most common missing items, and their file will progress straight to the processing stage.



# Eagle School for sale

by Rob Hibberd

Our good friend and fellow microlight instructor, Steve Ruffles, died recently. He left behind wife, Lisa, also a CFI and their two young children. I have been helping Lisa prepare their Microlight school for sale and I was hoping you could help spread the word. The school is in one of the most picturesque tourist spots in Australia, at the base of Mount Buffalo near Bright in Victoria. The area is superb for flying and enjoys very consistent teaching conditions, not to mention plenty of tourists drawn to the snowfields. The school includes the hanger at the Porepunkah airport. It's currently HGFA but can be assessed for RA-Aus as well. For more information [lisa@eagleschool.com.au](mailto:lisa@eagleschool.com.au).



**A**ustralasian distributor of the SportCruiser LSA aircraft, Aerosport Aviation, has signed a major deal to buy a similar aircraft from a company in China.

During a recent visit to the China Airshow, Aerosport's Managing Director, Anton Meier, signed up to purchase ten of the new aircraft, to be known as the SC3D, from Chinese based Triton Aeromarine Industries. According to Anton, the deal will not affect his distribution agreement with the Czech company, CSA, which manufactures the SportCruiser.

The SC3D has been designed by the same person who designed the SportCruiser, Chip Erwin. Chip is working with Triton to manufacture the new aircraft. He says that while the designs are similar, the SC3D has 57 changes from the original.

He says the changes will make it faster and able to carry a bigger load. Chip says, because it will be made in China, the SC3D will also be much cheaper to produce and sell.

First production models are due to start rolling out of the Zhuhai factory in March. Anton says he has customers lined up for most of the first ten he's ordered.

For more information [www.aerosport.co.nz](http://www.aerosport.co.nz)

>>> Aerosport Aviation Managing Director, Anton Meier's speech interpreted by Tomas Hsueh



# SportCruiser lives on

>>> SC 3D at the China airshow 2012





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# Editor's choice

Brian Bigg

## KEEPING UP WITH BRUCE

**I was preparing to head off to a fly-in over the holidays and stupidly made the offer to take a local pilot along for the ride.**

I say stupidly, because I didn't realise until we were strapped in and ready to go that I hadn't flown alongside another pilot for a long time and Bruce, I suspected, was a much better pilot than I am.

I take passengers all the time, but usually they are people for whom a flight is a rare or scary thing. I've written before how I love to show my passenger the controls and have them fly the aircraft with me. I love to see the joy they get when they feel the machine alive in their hands. But few of my flock of right seaters has ever been experienced enough to critique my technique.

Not that Bruce would either. He's a charming fellow and not the sort to burst out laughing if I made a mistake. But I could feel the pressure all the same.

And of course, events conspired to give him good reason to chuckle if he was so inclined. Just after take-off, my spare headset Bruce was using seemed to develop a fault. The microphone didn't want to switch itself off. The constant hiss made hearing radio calls much more difficult. I didn't realise it at

the time, but it had a worse impact than that. Nearing the fly-in, we were asked to orbit for 10 to fifteen minutes while an aerobatic display took place. There were five of us scattered around the sky doing orbits and waiting. When we were all cleared to come in, we each made our radio calls, got in the queue and followed each other down.

I felt my landing was pretty good despite a niggly little crosswind, but Bruce didn't say anything. I guess he would have said something if it had been really good or bad, right? So far, so good.

After I landed, the ground controller asked me why I had not made any inbound calls.

I told him I had made them all. Bruce was my witness. But it seems no one had heard a squeak from me. It meant I had a radio prob-

lem, which was going to be a bugger to fix because I was away from home and, without a radio, I had no way to get the aircraft back there. So I called my electrical genius friend, Malcolm, and explained the symptoms. He immediately identified the spare headset as the culprit.

He explained in that particular model, when the microphone gets stuck on for 30 seconds, the system recognises it has a fault and shuts it down. So I wasn't broadcasting to anyone, even though I could still hear calls. The fix was merely to unplug the spare headset. Phew! I hoped Bruce wouldn't think too badly of my professionalism because of the incident. I mean, no one can predict an electrical fault,



right?

When it was time to leave, we were hurtling down the runway when I had a senior's moment. What was the circuit direction? I had taken off from there dozens of times so I should have known, but suddenly I couldn't remember. And halfway along the runway is not the place to try and find out. Fortunately Bruce remembered and pointed. That definitely was a black mark against me, but Bruce didn't say anything. Probably because his headset was unplugged.

Arriving back in the circuit at home, the frequency was still wall-to-wall with the fly-in crowd. I couldn't get a word in edgewise, which became important when another local pilot, Wal, announced he intended to enter and backtrack on the very runway for which I was

on short final. I managed to squeeze a call in and Wal stopped short to let me land.

But the confusion had thrown out my approach. I found myself higher than I wanted to be and it took forever to float down again.

The landing, when it eventually came, was pretty smooth if you ask me. Bruce made no comment.

We taxied to the hangar, climbed out and went our separate ways, but the suspense hung over me.

I thought about the two flights and tried to critique my own skills. Had Bruce thought I was a dope or a danger to mankind? We all know people we won't ever fly with a second time because they scared us the first time. We might

not say anything to the person directly, but we know we will not go up with them at the controls. Was I like that for Bruce?

I had to know. So I rang him and told him I was going to write this article and would he please give me an honest opinion. He wouldn't insult me...promise.

No, he admitted, he had felt very safe with me and thought my flying skills were 'good'. And yes, he would fly with me again.

It was a relief. His opinion was important to me...up to that moment.

Because he then threw his credibility out with the bathwater. He said the next time we went flying together it should be in his TL2000 Carbon Sting, because he felt it flew better than my Zephyr.

What? Was he kidding?

Better than my Zephyr? Such a thing is not possible. My little baby is the perfect aviation device. It has no faults (if you don't count the dodgy brakes, the oven-like conditions under the canopy in summer or the fact that I bounce like a ping pong ball in turbulence). No faults at all.

So no way can his Sting be better. Not possible. Don't even go there.

Who cares about Bruce's opinion anyway?

Wait till I go flying with him. I'll bring a checklist with me. 🛩️

# Do you have a 'To Do' LIST?

By Geoffrey Wood



*As I approach various age milestones I tend to have a "things to do before" list.*

**T**HERE was a 'before I'm 40' list. A 'before I'm 60' list. And now a 'before I'm too old' list (Okay you younger folks, there is life after 60).

Aviation has been a large part of my recreational existence which started in 1965 in a Victa. Heeding advice from Max Johnston, I started a logbook then to count my hours. Good words of advice.

To do it on the cheap, I went through gliding which boosted my hours and led to a GA licence. Gliding is an excellent base towards experience and broadening your competence in the air.

These days, its 90% RA-Aus or LSA flying for me, again mostly due to the cost.

Two days ago, I was at Sunshine Coast airport and saw an Extra 300 doing what Extra 300s are designed for.

I tracked the aircraft to the Aero Club and came across the aircraft's owner pilot, Colin Appleton. Turns out the aircraft was available for a trial flight. As it happens, to fly an Extra was near the top of my list and so, two days later I went up for a flight. This is an opportunity not to be missed. It is rare to be able to fly one of these aircraft unless you have a good bank roll and can afford to own one.

This rocket has power, real power. It swings a large 3 blade prop and it is a taildragger, so there is a big gyroscopic effect to take into account. I found taxiing relatively easy, and because the nose blocks forward vision of the taxiway there is some zig zagging involved. Take off is also relatively easy - apply power slowly with stick right forward to raise the tail (around 60kts) then apply full power.

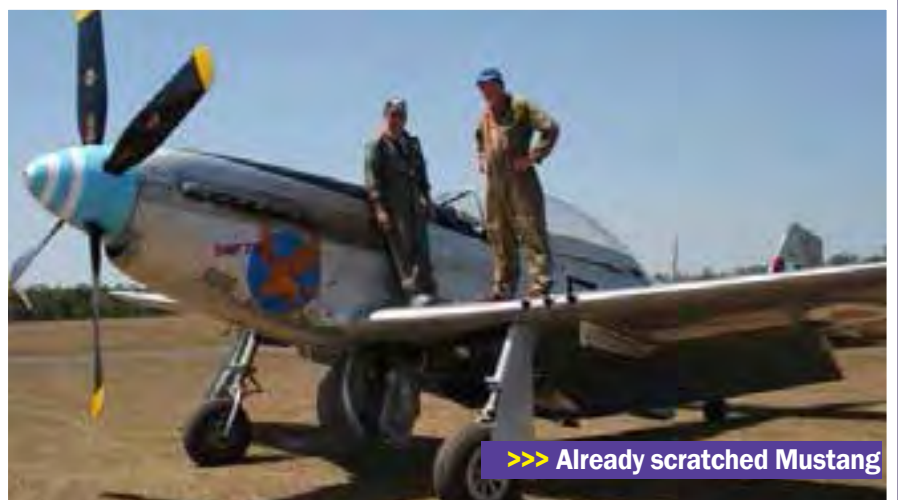




>>> Scratch off the Extra



>>> Already scratched Nanchang



>>> Already scratched Mustang

In the air, the speed rapidly reaches 160kts and the 'G' forces are noticeable. I suffer badly from airsickness, so loops and rolls were out. But it was exciting to fly. I've flown a few LSA aircraft which are more of a handful than the Extra. So, after an enjoyable morning, I was able to scratch 'fly an Extra' off my 'To Do' list. Already scratched off was a flight in the Nanchang (thanks for the birthday present family) and a flight in the Mustang at Caboolture, which took a bit of saving for. Still on my list is a flight in a FK9 at Gympie and doing some bush flying or float plane flying in a Super Cub in Alaska. By the way, my 'Things to do before' list has also become more meaningful this week. Two good friends were diagnosed with terminal illnesses. Both given only days to live. 🙏

# Story of the month

*I feel privileged and honoured to have been part of the ultralight movement from the very beginning*

Send in your stories and photos in.  
Email [editor@sportpilot.net.au](mailto:editor@sportpilot.net.au)

## The original goals

By Nev White

Having just read Chris Conroy's article, "Recharging Our Past" in the latest issue of Sport Pilot many great memories of the early days came flooding back when I saw the photo of the Bedson Reurgam Mk1. I machined all the fittings for that particular aircraft.

I feel privileged and honoured to have been part of the ultralight movement from the very beginning and have had many years of pleasurable flying in a 95.10. I would like to think I will be able to do so for a number of years more without being drawn into ever increasing regulations and costs as RA-Aus aircraft edge closer to GA in both performance and costs.

ANO 95.10 was granted by the then Australian Department of Transport in November 1976 after much work on the part of Ron Wheeler and Cec Anderson. Ron then organised a meeting on April 20, 1978 at Bankstown Aero Club, which my wife and I attended. The MAFA (Minimum Aircraft Federation of Australia) was born under the presidency of Nicholas Meyer. Maybe the time is coming for us to have another look at the aims and objectives set down that night.

- To promote minimum aircraft flying as a safe, low-cost sport that will bring enjoyment of flying back within the reach of the ordinary citizen;
- To protect the right of the private citizen to build and fly his personal aircraft within the requirements of the law;
- To safeguard the interests of minimum aircraft enthusiasts throughout Australia;
- To guide and control development of the sport in an organised and constructive manner, with safety as the prime objective;



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- To encourage the formation of minimum aircraft clubs throughout Australia and offer them guidance and assistance and seek their affiliation with the Federation;

- To act as a central communications and coordinating body for the minimum aircraft movement as a whole, to liaise with the Department of Transport and act on behalf of the members where necessary;

- To ensure that costs, paperwork, and rules and regulations are kept to a minimum commensurate with safety and do not become the inhibiting burden that they have become with conventional aviation;

- To promote friendship, courtesy, mutual assistance, and the return of a spirit of chivalry in the air.

MAFA was followed by AUF (Australian Ultralight Federation) in the 1980s and changed in 2004 to Recreational Aviation Australia Inc.

Having flown to NATFLY in my 95.10 aircraft many times, I have noticed the numbers diminishing each year and can only put it down to the fact that these little planes are now being over regulated commensurate with the heavier, faster and much more expensive recreational aircraft currently flying under the banner of ultralight.

Visitors to Natfly have suggested a fly-by of 95.10 / 95.25 would be very popular if it could be organised. I fully support Chris and urge others interested in promoting and retaining our original ultralights to keep 95.10 alive.



>> MX1 Quick Silver



# Clare Valley

## OPERATIONAL

A new aerodrome in the mid north of South Australia is ready for take-off, thanks to the hard working efforts of the Clare Valley Flying Group as well as local businesses and the community.

The Clare Valley Flying Group has worked tirelessly planning and fundraising to make the aerodrome operational. Agricultural aircraft, flight training operators and recreational aircraft are now using it.

The strip is 14kms north of Clare, on RM Williams Way (S 33 42.5 E 138 35, Elevation 1120ft).

Runway 17/35 is 1200m. A 600m grass cross strip is also available.

Clare Valley Flying Group chairman, Adrian Smith, says a terminal building was due to have been completed by December. The building includes an office, kitchen and toilet facilities.

One hanger has been built and another is about to start.

For more information

[www.clarevalleyaerodrome.com.au](http://www.clarevalleyaerodrome.com.au) or

email [clarevalleyflyinggroup@bigpond.com](mailto:clarevalleyflyinggroup@bigpond.com)



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# A VIEW *like* *no* OTHER

by Nigel Barwick







**T**hought you might like to see some of the wonderful views in my local area down here in Tassy.

Flying around on days like this over the Tamar Valley makes you want to stay up forever. This time of year we do have some wonderful days with perfect flying conditions. It might be a little cool (12 to 15 degrees), but who cares when you have scenery like this to fly over. Just add another layer and stay warm.

My flying friend, Peter took this picture of me (left) flying towards the mouth of the Tamar River. Georgetown airport, just off my right wing tip is our club S.P.A.T. Sports Pilot Association Tasmania. Eugene Reed's Freedom Flight flying school operates from here also.

The Batman Bridge (top) crosses the Tamar River about 7kms

south of Beauty Point and is an icon for photographers and tourists on the ground or in the air, George and Mez in the Pegasus Trike 32-3296 would certainly agree.

My home strip is at Sidmouth, 5kms west of the Batman Bridge. The X-Air and Pegasus and my son's Skyfox manage it without any trouble, and occasionally Mitch will drop in in his Butterfly gyro for a coffee.

It's only about 15-20 minute flight to Georgetown airport from here and about the same to my son's place at Westbury, but of course with detours, these times usually double (depending on how urgent my caffeine fix is).

So happy and picturesque flying to all from Tasmania. 🇦🇺

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# Great Eastern FLY-IN

By Brian Bigg

It felt more like Oshkosh than a small country fly-in. If you couldn't get to the Great Eastern Fly-in at Evans Head during January, you missed one of the best fly-ins

>>>Koala



>>>Mustang II





ern



Matt Hall MXR

# EVANS HEAD a real blast

The weather along the coast was perfect, but reports say a lot of pilots in Queensland were prevented from attending by rain and clouds. A few of them drove instead. Nevertheless organiser, Gai Taylor, says about 160 aircraft flew in for the weekend. That's the second highest attendance on record.

The local CTAF frequency was a wall of calls all weekend. Former RA-Aus president, John Gardon, did a tireless job on the radio keeping everyone organised on the runway and in the air. At one stage on the Saturday afternoon, there were 14 aircraft queued to take off. It took organisers a bit by surprise, and Gai says she plans to ask Airservices for a discreet frequency next year.

The number of RA-Aus aircraft at the fly-in was down on previous years. Some put it down to the weather, others blamed the threat of CASA ramp inspections (which did not happen) and some even said it was because of the number of

aircraft grounded because of the registration issue.

The air displays were the highlight on both days. Matt Hall made everyone's jaws drop with a routine in his new MCR experimental aircraft. He also made the P51 Mustang dance a merry tune. Paul Bennet showed over and over why he is one of the top aerobatic pilots in the world. And local legend, Wayne Fisher, did things in his modified Drifter that just look impossible.

The air displays brought the crowd in. Over the weekend organisers estimate up to 7000 people came through the gate, hopefully showing the local anti-aviation council that there is a great deal of interest in flying on the north coast of New South Wales and, of course, money.

If you did miss the Great Eastern Fly-in this year, you won't want to make that mistake next January. Evans Head will be the home soon for a retired F1-11 and it will be on show for the world to see. 🇦🇺



>>> Gyro



# Battle of BRITAIN

## MEMORIAL FLYBY



By Gavin Thobaven  
President Superlight Aircraft Club of WA





**T**he Super Light Aircraft Club of WA had been asked to perform a loose line astern flypast over the Bindoon Agricultural College (our landlords) during its Public Open Day.

Because we expected a large contingent of aircraft, we also decided to commemorate the Battle of Britain Day with a Dawn Patrol. Our club only flies on weekends so we could not perform the patrol on September 15, the actual Remembrance Day, but the Saturday morning saw the apron of our field crowded with 25 aircraft from our club and visitors from surrounding sport aircraft clubs.

After a detailed briefing, the aircraft were mustered either side of our 50m wide airstrip in order of take-off. The large contingent got airborne with good spacing to begin a two lap orbit over the college. The spacing and timing meant we presented to onlookers on the ground, a continuous stream of aircraft passing over at the college 500'AGL.

The return to the field was a credit to all pilots - everyone observed proper radio and flight procedures. This allowed the safe and organised completion of the landing phase of the flight, no small task with so many aircraft waiting their turn to join the circuit pattern and land.

Our clubhouse was adapted to be a Battle of Britain airfield mess with period music, the movie "Battle of Britain" projected onto a wall and club members and visitors encouraged to wear period costume. We sat down for a WW2 meal of bangers and mash.

A great time was had by all but strict controls on drink and an early bed time ensured we were all in good shape for the flight the next morning.

At first light there was already a hive of activity on the field with aircraft being checked and warmed up before moving onto the apron in preparation for the Dawn Patrol. (It was to be a symbolic Dawn Patrol because we decided to wait for good light before starting aircraft movements).

The 10 participating aircraft were mustered, then took off and flew to an assembly point north of the airfield, where we formed up. The slower aircraft at lower levels led the faster aircraft which were stepped up in 500ft increments.

The slower aircraft also set the pace with the higher performance craft weaving back and forth above as we patrolled over the towns of Gingin and Bindoon. The design of the patrol was intended to give the impression, from the ground, of a large number of aircraft in a relatively small piece of sky, while at the same time allowing for more than the minimum separation requirements for a safe flight.

Beautiful, cool, clear and smooth air made the flight an absolute joy as we passed over the fresh greens and yellows of the surrounding paddocks of wheat and canola.

At the end of the 48nm patrol, our aircraft broke away to join the circuit which put us all on the ground in good order. Once parked, the air crews gathered for one minute's silence to commemorate the sacrifices and efforts of "The Few" in those great air battles all those years ago.

We then headed off to our mess for bacon and eggs. It was satisfying to see a number of non-aviation visitors arrive at our field during breakfast to chat about and get a closer look at the aircraft which had just flown over their towns.

The weekend was universally considered to be a great success so it has been agreed our club will consider making it an annual event. Stay tuned for an even better one next year. 🍀



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# The flight of the Pelican

By Tex Battle

**W** As a consolation for staying married to me for longer than anyone else has, I booked us into Adels Grove

**R**ecently my bride of twenty plus years had a significant birthday. I won't mention which one, but believe me, it was a significant birthday.

To assure her I had not underestimated the importance of the occasion, and as a consolation for staying married to me for longer than anyone else has, I booked us into Adels Grove for a weekend.

We had spent a very short honeymoon at nearby Lawn Hill Gorge twenty plus years ago before the Resort existed.

Departure day dawned with a howling southeaster and visibility restricted to about 5kms by dust and haze. Even the birds were walking, so there was no chance of this Pelican attempting to fly.

By about 3pm, conditions had improved considerably so we loaded our luggage, did our pre-flight and chased the bustards off

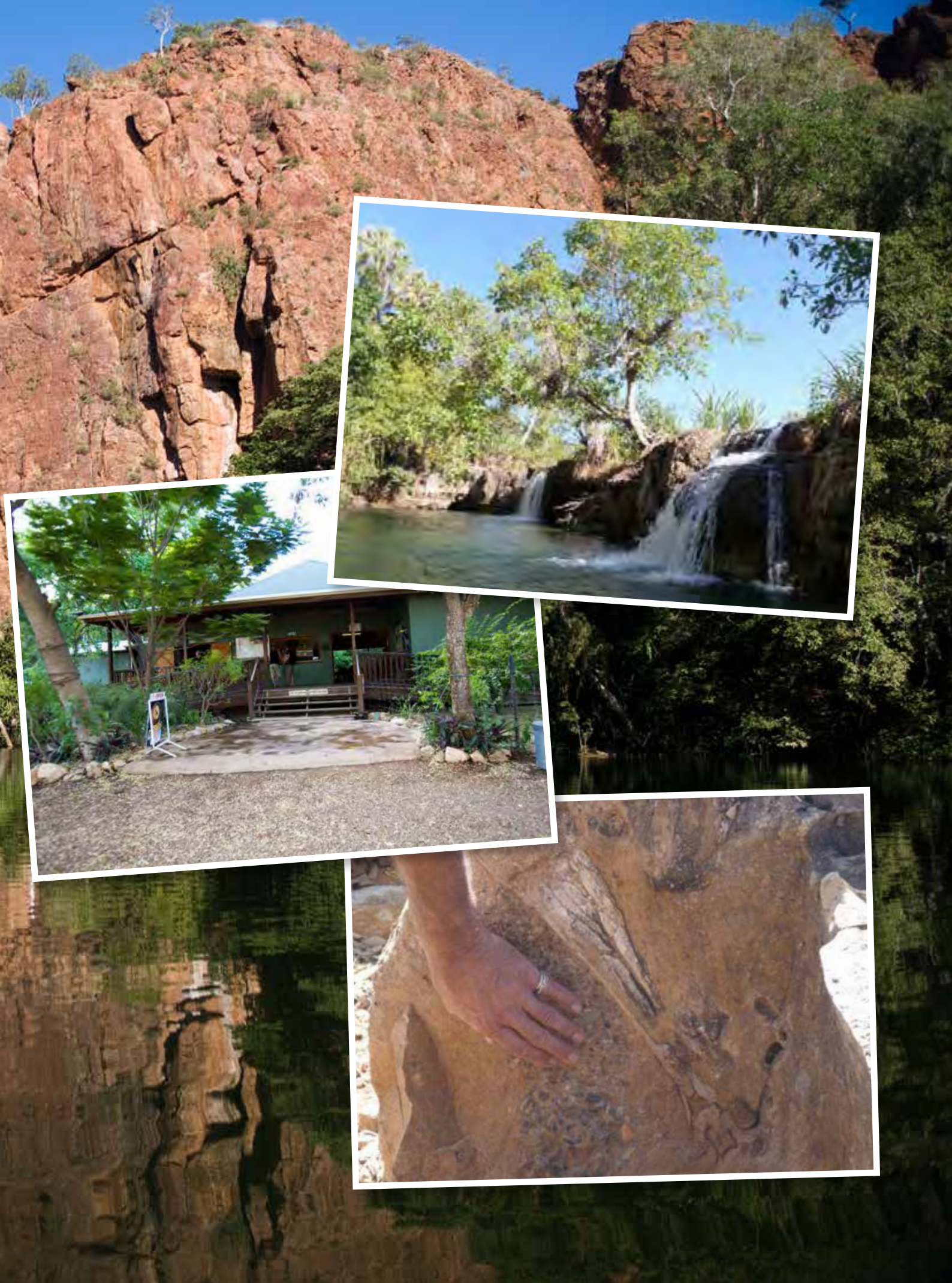
the strip (the spelling is correct, the 10kg birds are like mini-emus - Google it)

I was less concerned about hitting one of them than I was one of them trying to mate with the Pelican.

The first 20nm over water was smooth, but after we crossed the coast, we endured 90nm of turbulence. Approximately one and a quarter hours from departure we landed at Adels Grove, where we were met by Rod Low Mow who with his wife, Michelle, are the owner/operators of the resort.

Rod is a member of RA-Aus. and the proud owner of a Jabiru 230. We were offered a choice of either a cabin or a quality tent, complete with lights and a double bed (A bit of a step up from the honeymoon). We elected to take the tent beside the beautiful Lawn Hill Creek, even though I was a bit concerned that with all that running water, I might need to get up five times every night.









## Flight of the Pelican cont.

### >>>Pelican Rod

The name 'Adels' Grove (aka "The Frenchman's Garden) is an acronym for Albert De Lestang, a French botanist who, because of the rich soil, reliable water supply and the climate, established an experimental grove there in 1920, comprising about one thousand trees from all over the world.

Unfortunately, most of his work, including his house and records of years of research, were destroyed in a fire in the early 1950s. De Lestang died a broken man in a nursing home in Charters Towers in 1959, however he would have been pleased if he had known he would be commemorated by this beautiful resort.

After a magnificent breakfast the next morning, we boarded a coach driven by Savannah guide, Mick Clark, for a trip to the nearby Riversleigh Fossil Fields.

The fields are amazing.

The part we visited was a hill where every

rock contained fossils of incredible diversity. The existence of the fossils was known for a long time, but the field was not exploited until eminent palaeontologist, Dr Michael Archer, came onto the scene. Michael said that before Riversleigh, a six week expedition would be considered successful if it yielded a handful of specimens. Six weeks of work at Riversleigh can yield twenty five tonnes of fossil bearing rock. Riversleigh has rewritten the pre-history of Australia and they have still only scratched the surface.

After lunch, we were driven 10 km to the Lawn Hill Gorge where we took a canoe and paddled along the breathtakingly beautiful waterway, between striking 100m high red cliffs up to a beautiful waterfall. Normally you can carry your canoe around the waterfall and paddle through the upper gorge, but due to fires in the area, the upper gorge was closed while we were there. Lawn Hill Gorge is carved out of the escarp-

ment on the eastern edge of the Barkly Tableland and is supplied by run-off from the huge aquifer of that tableland. All year, even in the worst drought, huge quantities of beautiful clear blue water pour out of the Barkly Tableland, through Lawn Hill Creek and the nearby O'Shannassy River into the Gregory River, then into the Nicholson River and finally into the Gulf of Carpentaria.

The next morning we packed our gear into the Pelican, said goodbye to Rod and Michelle, climbed in, turned the key and were greeted by the dreaded clicking noise which signifies a flat battery. Rod saved the day with a battery and a set of jumper leads. No, I did not leave the master on. The regulator/rectifier had failed and was delivering sixteen plus volts which cooked the battery. Fortunately the radios and avionics survived.

A little later than planned, we took off and had a beautiful, uneventful flight over the Gulf savannah, across twenty miles of the Gulf and landed at Sweers Island with about four knots of crosswind.

If you are considering flying to this part of Queensland's Gulf Country, be sure to put Adels Grove/Lawn Hill Gorge on your itinerary.

I have seen nothing like it in Austral



>>>Tex and his loving bride, Lyn.





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# Flying the new



by Arthur Marcel

# JABIRU J-170

“ I knew there were a lot of exciting things happening at Jabiru





**I**n October last year, I called in on Sue Woods at Jabiru's manufacturing facility at Bundaberg Airport.

Sue is the eldest daughter of Rod Stiff and is easing herself into the CEO's position. Rod is in Northern Queensland "practising" retirement. Even though the light aircraft business is rather slow at the moment, I knew there were a lot of exciting things happening at Jabiru, and Sue had kindly offered to show me around and even take me for a ride in the very latest Jab aircraft, the J170D.

The J170 was conceived with hotter climates in mind, but, ironically, in January 2005 the first kits were shipped to Norway. Local deliveries (of the C model) commenced in April 2007. Basically, the J170 is a J160 with the longer wings of the J230 and a bigger elevator. The longer wings allow it to climb faster in hot conditions. They also provide more float on landing, a feature that is especially helpful for students. Amazingly, the two metres of extra wing span take a whole 8 knots off the stalling speed. However, even though VSO is down to 40knots, the J160's 100 knot TAS cruise speed is still easily achievable at 2850 rpm. With its very wet Jabiru wing, the J170 has over 1000nm of still air range!

The D model is a significant development on the C model. Jabiru has taken an aircraft already regarded as one of the most stable and easy to fly, and have made

it even better by using a longer engine mount to extend the nose, thereby moving the empty C of G forward, and increasing the size of the vertical fin. In a J170, the entire payload (crew, fuel and baggage) all are positioned aft of the C of G, so by moving the empty C of G forward the aircraft is, in theory, able to carry more payload without having C of G issues.

Development and testing of the new design took twelve months. Like all Jabirus, the plane underwent extensive structural analysis and flight testing. The spin recovery program alone involved at least 250 individual spins during over 40 separate flights. The plane we used for the demonstration flight was the actual test aircraft, registration 24-7289.

Bundaberg Airport is security controlled, but Jabiru are outside the airside secure area. There are massive, remotely controlled, electrically actuated security gates at the end of the light aircraft parking area on the southern side of the terminal. Anyone visiting Jabiru should take their mobile phones with them to call for the gates to be opened on arrival. We had a remote control in our aircraft so it was easy for us to enter the airport proper.

I found Sue a smooth and polished pilot. I had expected no less from the CEO of an aircraft company, but she obviously does quite a few hours in her new position. She is especially careful about noting the call signs and intentions of other traffic.



Flying the new

# JABIRU

As it turned out, there were only two other aircraft in our area that day and they were well clear. Sue told me, though, that Bundy Airport can be a very busy place at times.

Like all Jabirus, the J170 does not have differential brakes. It does, however, have a very effective steerable nose wheel, and taxiing is a simple affair. Soon we were lined up on the main sealed runway (R14) and ready to go. As the throttle opened, I was conscious that the engine was not particularly noisy, but perhaps it was because I was wearing one of the very comfortable headsets that Jabiru have especially made for their aircraft. We were quickly airborne and climbing out south of Bundaberg township heading for the coast. After some initial turbulence near the ground, it was soon very smooth and clear with the plane climbing at about 700 feet per minute. Sue handed over control, but it was hardly necessary. The J170 climbed effortlessly on course hands off. It is a very stable aircraft, but also one that responds very lightly and positively to pilot input.

At 3500ft, south of the Burnett River mouth not too far from Bagara, I tried a few clearing turns before doing some stalls. I found that aircraft sat in a turn with no tendency to steepen or flatten bank. It was an impressive demonstration of the plane's aerodynamic balance.

The flaps are electrically actuated. The indicator is on the pillar in front of the pilot and very easy to see. Firstly, I stalled the plane with half flap and then in the fully flapped landing configuration. The stall warning sounded loudly in the cockpit as the airspeed fell. There was no wing drop in either of the stalled conditions, but neither was there any nose drop. The plane just hung there and slowly started to lose altitude. Easing forward on the centre stick quickly got us flying again without losing much height.

Sue told me the new engine mount uses more engine thrust offset than the previous version. She said that this has made the aircraft quite neutral with different power settings. On takeoff, for instance, just a tiny amount of right rudder will keep the aircraft straight, while on landing (low power) a small amount of left rudder is needed. She stressed that this is a real plus in a go-around situation where the pilot needs to go from very low to full power quickly and at low speed.





# JABIRU J170 D

We headed back up river, joining left base for R14. Forward visibility is good in this aircraft. Sue sat the plane very carefully on its main wheels just past the threshold. We reported clear of the runway and, as we rolled in along the taxiways, I noticed that there were numerous Jabirus parked all over the airport. In fact, I only saw two light aircraft that were not Jabirus! Obviously, the local pilots appreciate and support the local product. And why shouldn't they?

Sue asked me if I was impressed and I had to admit that I was. She said that the new design had turned out to be a bigger job than they had expected, but she believed the end result was well worth it. She said that the J170-D is an aircraft which is significantly improved in many areas and should make an excellent trainer for years to come. I could only agree with her.

#### Footnote:

**The instrument panel in the test aircraft was not the one that will eventually go into production J170-D aircraft. The latest instrument panel design has more room at the bottom of the panel above the knee, as well as a contoured shape at the top to cater for the larger Dynon Skyview (if this up-market EFIS option is chosen). It's a neat panel.**



## Jabiru's new fibreglass propeller by Arthur Marcel

**Sue Woods says Jabiru is developing a new type of propeller for use on its aircraft.**

Previously, Jabiru propellers have been the one-piece, laminated wooden variety, constructed of strong and light Queensland hoop pine. The new propeller design is a departure from the traditional. Each of the blades is separately attached to a metal hub and made of fibreglass.

The shape of the blades has changed too. They now have swept back pointed tips. All this adds up to more efficiency. Sue says Jabiru is already getting increased performance from the test propellers. She says they expect as much as 5kts extra cruise speed. The test propellers have adjustable pitch and there is a lot of thought being put into determining the optimum pitch angle for the Jabiru flight envelope; however, once this has been worked out, the production propellers will be fixed at that pitch.

The new propeller is also being used on the J170-D prototype.

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# GLIDE AND DIVE CLASS

## LEARNING TO FLY

Dr Gerry Considine



**A**s I turned the ignition on the Subaru to get to the Pirie airfield for another day of training, three warning lights stayed on.

A quick dive into the glovebox produced the car manual. It was the second time I had consulted this reference. The first time was when I couldn't find the windscreen spray button (this from the same person learning to fly an aeroplane – scary, I know). It turned out the warning lights were indicating issues with the exhaust system, traction control and cruise functions.

Being at least 300km from the closest Subaru dealer, I decided to drive to the airport and worry about it later. It made me remember some sage advice: When a warning light pops up, simply remove the light fuse responsible and when the engine starts running rough, turn up the radio.

When I brought the Jabiru around to park on the apron next to the flying school, I realised I would not be the only one that day doing practice circuits. The tarmac next to the air-

port doubles on Saturdays as a motorcycle training centre.

It was entertaining to watch the newbies taking off too quickly or standing on the front brakes. Conversely, I'm sure they had a good chuckle at some of the bounces or float landings I'd been guilty of. My own motorbike experience was limited to sitting on the back of a Harley from Wudinna to Streaky Bay.

As a reward for my good work on the BAK exam that morning, I was able to jump in the aircraft and practice glide approaches by myself. Even though I had only been shown these the day before, my instructor, Earl, had got me to read the theory in the flight training manual overnight.

This was real flying! Not just pedestrian circuits around and around. Glide approaches brought a real sense of stick and rudder flying. After an hour of this no-power joy, it was time to return gently to solid ground for lunch. In the afternoon, I was introduced to medium level turns. Being able to reef the plane over and watch the ground spiral around the low wing was fantastic, but it took a few to get

these feeling comfortable. Earl then showed why it was important for me to keep back-pressure on.

He flicked the Jabiru into a few early spiral dives. If left unchecked, the speed could increase to a point that the airframe broke up. By reducing power immediately and bringing the wings level, I was shown how to pull out of the dive. Of course, the better way to recover from a spiral dive was not to get into one in the first place. Careful judgement of the horizon when turning could certainly achieve that.

Finally, I went out on my own to the west to practice forced landings onto the salt lakes. For a third time, I had the greatest feeling of freedom, flying off away from the airport. Even though I was limited to the training area, I felt a huge sense of independence.

Later in the evening, I caught up with some friends for coffee at the local pub. Being a country town, I even spotted a young feller who had gone for his first flight a few days earlier.

He still had that Cheshire Cat grin. 🐾



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# PILOT TALK

Zane Tully & Jill Bailey  
RA-Aus Operations team

## HP AND LP AIRCRAFT ENDORSEMENTS

**Most Pilot Certificate holders should have either a High Performance (HP) or Low Performance (LP) endorsement on their Pilot Certificate card, in addition to the other endorsements and many may have both.**

What does a HP or LP endorsement really mean and how do pilots determine to which performance category an aircraft belongs?

For answers we need to look back to the organisation's early days as the Australian Ultralight Federation (AUF), where most training was conducted in Thrusters or Drifters, which are high drag, low inertia aircraft. Later training aircraft such as the Skyfox, Gazelle and Lightning provided advances in aircraft design, but were considered to have similar handling characteristics.

In one of these aircraft, during the landing phase, which was generally after a glide approach, the pilot performed the flare and hold off, allowing for the low inertia characteristics of the aircraft. As glider pilots will know, carefully judging the remaining energy amount left in the aircraft has a significant bearing on the sort of landing achieved. If the aircraft is flared too high, the strength of the undercarriage is severely tested, as the aircraft simply ceases flying due to its high drag, low inertia characteristics. If for any reason the engine stops in flight, the pilot has to positively and swiftly respond by lowering the nose to maintain airspeed for the same reasons.

In contrast, GA aircraft such as Cessna, Piper and others, have noticeable performance differences. If a pilot in a GA aircraft flares too high, they generally have an opportunity to use the lower drag, higher inertia to wait, allowing the aircraft to settle to the preferred hold off height. While the landing may still be firm, it certainly isn't as much of an event as it was in a low performance ultralight of the day.

During the intervening years, as many readers will know, the aircraft available to RA-Aus pilots' changed rapidly in design and perfor-

mance characteristics, construction materials and speeds. Changes in the legislation in conjunction with improvements in aircraft design and quality of materials allowed for low drag, high speed aircraft to be constructed locally and from overseas. These aircraft appealed to pilots by cruising vast distances with better fuel capacity at higher cruise speeds due to sleeker designs and more powerful engines. Design features such as flaps still provided for the minimum 45kt stall speed (in landing configuration) required for the category.

If the engine failed in one of these aircraft, the pilot could simply maintain the attitude to slow the aircraft, or in some instances exchanging speed for height before allowing the aircraft to slow to the appropriate best glide speed.

During this time, the LP versus HP endorsement was introduced to provide a means for pilots who trained solely on the more slippery aircraft to achieve additional training in the event they purchased a low inertia high drag aircraft. This also provided an opportunity to convert pilots with LP experience onto higher performance models which may have included extra systems (e.g. flaps).

So how was the difference in performance defined? Due to the types of designs available at the time, the easiest means of determining the aircraft category related to the cruise speed. If the aircraft normally cruised below 80kts it was considered low performance. If it cruised above 80kts, it was high performance.

However just as advances in materials and engines have improved aircraft performance, continued design advances with wing profiles, vortex generators and a desire to make aircraft more appealing to the pilot who wants to go places, has led to a crossover of aircraft performance.

Aircraft fitted with higher performance engines such as the Foxbat, Savannah or Eurofox can now cruise above 80kts. However some of these aircraft still share the handling characteristics of a LP aircraft when landing.

Various methods of determining perfor-

mance characteristics have been attempted, including formula involving combinations of engine power, cruise speed and stall speed, along with suggestions based on wing profiles, camber, sink rate or other factors. Unfortunately, there does not appear to be one simple means of determining an aircraft's performance characteristics, apart from an assessment of the handling characteristics on landing. After all, this is where the difference shows, when landing a LP aircraft versus a HP one.

Essentially, what is proposed is a list of aircraft categorised into LP or HP for those aircraft which blur 'the line'. Importers and owners of aircraft should not feel any insult or slight if their beloved aircraft is determined to be low performance when it is clearly capable of cruising over 80kts, rather they should view this determination as an attempt to ensure pilots flying these aircraft are appropriately qualified and trained to deal with the aircraft in all phases of flight.

We have already received feedback from CFI's and pilots regarding this subject and would welcome any other comments on the matter.

By the way, if a pilot sees their Pilot Certificate card does not have HP or LP on it, or in fact is missing any endorsements including nose wheel (NW) or tail wheel (TW), when undertaking their next BFR they should ask the CFI to submit an endorsement recognition form along with copies of the relevant pages from the pilots logbook, to add missing endorsements. 🐦



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## EMT - Emergency Manoeuvre Training

**Emergency Manoeuvre Training is designed to teach a pilot how to recover from unusual attitudes and spins.**

And not just students or low time pilots either. As an instructor, a personal goal should be always be to improve your own skills and knowledge. If you should ever get the chance, take the time, make the effort and invest in some form of EMT as well.

The person you instruct relies on you to be an expert, but how many of us can honestly say we are completely comfortable when the aircraft gets into an unusual attitude because of something a student has done? From the earliest lesson, it is important you allow your student to fly the aircraft, not merely follow you through on the controls. This enables the student to become more fully engaged in the learning process. It is an opportunity for them to feel the aircraft, gain confidence and to make their own mistakes.

Just as important is your responsibility to ensure you have the skills, knowledge and ability to correctly, and in a timely manner, repair any mistakes made by the student. It is obvious that correct procedural action by you is of utmost importance if the aircraft has departed from controlled flight, be it an unusual attitude, a stall or, in an extreme case, an incipient, or fully developed, spin. This is where your EMT training will be of benefit.

LOC-I (Loss of Control - in flight) along with CFIT (Controlled Flight Into Terrain) were seen to be the two major causes of fatal, commercial accidents during the 10 years from 1998 through to 2007. It has been considered that hands-on pilot skill-development is necessary to effectively deal with this concerning situation.

Reading about the different techniques relating to EMT is valuable. There are some excellent books on the subject. One of the best is Rich Stowell's Emergency Manoeuvre Training 2001. However nothing will surpass the need for practical application of these written procedures.

It is essential that recovery techniques not to be attempted without a fully EMT qualified instructor on board. It is also important to ensure the aircraft is legally certified for spinning. Cockpit placards stating 'No acrobatic manoeuvres including spins, approved' or 'Spins Prohibited' are there for a reason. The aircraft may not be recoverable from a spin and/or may not be structurally adequate to endure the forces imposed upon it.

Stall and spin-awareness and avoidance are possibly the most critical lessons an instructor will pass onto their student. Full aerodynamic knowledge and understanding of the causes, correct recovery techniques and extensive flight envelope awareness is your responsibility as a competent flight instructor.

Emergency Manoeuvre Training is a highly specialised discipline. It is not an aerobatics course, but in some cases it is becoming a prerequisite to an aerobatics rating.

The benefits of an EMT course are many. As well as improving your own confidence, personal awareness and skill level, an extra benefit is having your own comfort zone extended. It can be a humbling experience for someone with thousands of hours.

For me, this occurred during the first few times I flew inverted. Hanging by my seat belt, trying to figure out if I needed to push or pull on the stick to maintain control, let alone straight and level flight, took me back to a time when this flying caper was all so new and foreign. (You need to push)

An Emergency Manoeuvre Training course will go a long way to ensuring you become a better flight instructor. It is a valuable approach to gaining a greater level of competency and empathy.

Its greatest benefit may be that it could save your life or that of a student who has put their life in your hands.

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Book; Emergency Manoeuvre Training : by Rich Stowell

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# FLYING CLOSER TO THE SUN

## IKARUS C42

by Brian Bigg

**H**anging around the airport the other day, as I was, I got to talking with a couple of foreign sounding blokes who had just landed ahead of me in an aircraft I hadn't seen before.

The reason I hadn't seen it before was because the aircraft is the only one of its kind in Australia, an Ikarus C42. And one of the pilots turned out to be the bloke who designed it.

Hans Gygax is a Swiss aircraft designer with 10 popular light sport aircraft designs under his belt.

He has been coming out to Australia every year for the past nine years to visit his friend,

Dieter, to escape the European winter and fly around our beautiful country.

Dieter offered to take me out for a quick circuit in the Ikarus and I was strapped in ready to go before he changed his mind.

The Ikarus might be rare in our skies, but it is reasonably common in Europe.

There are 1,708 on the register over there and the factory is still turning out 10 new ones a month, even though the design is now almost 16 years old.

It's quite a roomy little aircraft, relaxing to fly, and very popular with European schools because of its forgiving nature. It is powered by an 80hp Rotax and cruises at 85kts.

In the UK, it has been certified to tow gliders. Hans says the factory has no plans to sell the model here, but a school which had this particular aircraft online for a while reported it proved popular with pilots because of its comfort and relatively cheap operating cost.

the day had a few thermals.

Unusual for an aircraft of this size, the Ikarus has electric flaps and trim. On approach, it had a solid feel, crisp control and the landing was clean and solid. All in all, a no-nonsense, clean aircraft which was fun and easy to fly.



It's a credit to Hans. Probably no surprise, considering it was his last design before he retired from the business a few years back. Hans's first design was the Microstar, (which ended up in the US as the Flightstar) and his most popular was the AC4, designed for and licenced to a German company.

Hans says when designing, he starts out with a Rotax 912, and goes from there.

Probably the most unusual feature I discovered was the throttle between the legs - in the place where the joystick normally lives. It took a little getting used to, but Hans says pilots who try it prefer it to traditional layouts.

I found out the hard way that you can't jiggle it like you can the joystick, to see what it does. Lucky for me the brakes work well.

The Ikarus also has a ballistic parachute system installed - it's a requirement under German law - and Dieter was keen for me not to jiggle its firing trigger, to see what it did.

The aircraft accelerated quickly, took off sharply, then flew briskly and cleanly around the circuit, and wasn't too bumpy even though

His early designs began as simple aircraft and each subsequent one became more sophisticated. Each design, he says, ended up being an evolution of his previous ones. Each of his designs also focuses on engineering excellence and the Ikarus is no different. There's no point giving you an Australian price, because there are no plans to sell them here. You can get a European price off the internet. And the only Ikarus in Australia is busy taking Hans and Dieter from beautiful place to beautiful place, far from the ice and snow of his home in Switzerland. Keep an eye out for it as you travel.

It's really interesting. 🇨🇭





## 914 SERIES 115 h.p



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4-cylinder, 4-stroke liquid/air cooled engine with opposed cylinders, with turbo charger with automatic waste-gate control, dry sump forced lubrication with separate 3 litre oil tank, automatic adjustment by hydraulic valve tappet, 2 CD carburettors, electronic dual ignition, airtake system, electric starter, integrated reduction gear i=2.43. Weight 70kg including exhaust system and engine truss assembly.

**2,000 hrs.**  
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## 912 S SERIES 100 h.p



912 ULS 3 - DCDI with options

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The Limit ! "**

## 582 UL DCDI 65 h.p



582 UL - DCDI with options

2-cylinder, 2-stroke liquid cooled engine with rotary valve inlet, electronic dual ignition, integrated water pump and thermostat, exhaust system, carburettors, rewind starter. Weight 47.2kg including exhaust, gearbox with integrated electric start.

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# CIRCUIT REFERENCE POINTS

By David P. Eyre Pilot Examiner

**I** was intrigued by the CEO having his 'hackles raised' (Sport Pilot November 2012) by the article in the October Sport Pilot on the use of geographic landmarks for circuit planning.

He was referring to pilots using geographic features, such as churches, water towers, etc., as fixed features to initiate crosswind, downwind, base and final turning points. He is quite correct in suggesting that this type of circuit planning has some problems and he gives the example of flying a circuit at an airstrip surrounded by flat featureless terrain.

I quite agree with the view that such circuit planning does not teach the pilot in training the correct procedure of using the runway as the primary reference. However! -there is a definite place for using geographic landmarks as reference points.

Consider, how we teach Precautionary Search and Landing. In conditions of poor visibility, we choose geographic features as turning points so as not to lose track of where the chosen landing area is. Also, some circuit areas demand a set pattern for noise abatement and other reasons. In some countries, Germany, for example, it is common to follow a fixed pattern using landmarks. These patterns are shown on airport diagrams for every airstrip.

As the CEO stated, there are many tips on how to fly a good circuit. Most flying instructors have a belief their particular method is the best and often this belief has its genesis in the way they were taught. The problem here is that they may not have been taught correctly in the first place. I certainly have my tips on how to fly a circuit to achieve a good outcome. The procedure has been developed and refined over many years and is offered for consideration by flying instructors, pilots and pilots in training.

1. Clean up in accordance with Flight Manual procedure.
2. 400ft agl. Lookout - front, right, front, left, front. - when checking left, choose a visual reference point as a guide to turn towards and



maintain a right angle to the runway.

3. 500ft agl. (never below), gentle turn to chosen crosswind reference point and confirm compass bearing.

4. Glance back at runway to confirm at right angles and lay-off drift as necessary.

5. At Top Of Climb, level out.

6. Glance at runway to confirm distance out for the downwind leg, usually  $\frac{1}{2}$  nm but should not be more than 1nm. The upwind end of the runway should be at approx.  $45^\circ$  to the aircraft.

7. Lookout - front, right, front, left, front - When checking left, choose a visual reference point as a guide to turn towards and maintain parallel to the runway.

8. Turning downwind radio call.

9. Medium turn to chosen downwind reference point. Confirm visually parallel to runway and confirm compass bearing.

10. Check PAT - Power (setting correct for traffic separation) - Attitude for level flight - Trim OK.

11. Pre-landing checks. These should be aircraft specific and never glossed over. Maintain visual reference during the checks (head should not be buried in the cockpit).

12. Make frequent reference to runway to confirm maintaining parallel and for signs of unannounced traffic movements.

13. Approaching base position - usually at approximately  $45^\circ$  to the runway threshold - Lookout. When checking left, choose a visual reference point as a guide to maintain a right angle to the runway.

14. Turning base radio call.

15. Medium turn to chosen base reference point and confirm compass heading. Confirm visually at right angles to runway and lay-off drift as necessary.

16. Set up approach in accordance with Flight Manual procedures.

17. Approaching final position - Lookout.

This is critical part of the circuit and the lookout should include a careful check along the final approach path to the right and left of the aircraft and a careful look for aircraft which may be on a lower approach path.

18. Turning final radio call with intentions.

19. Turning final. (Turn should be completed above 500ft agl.)

20. On final, carry out final checks and use power and attitude to stabilise approach path to touchdown point.

## Notes:

Readers would have noted that geographic landmarks are used here as guide reference points and not as circuit action points. The runway is the primary reference point.

- Circuit height is in accordance with standard procedures.
- Distances and tracks may need to vary with prevailing conditions, traffic and aircraft performance.
- It is strongly recommended that pilots access and study Civil Aviation Advisory Publication 166.1(1)
- It is appreciated that compressing the diagram on to an A4 page presents some problems.

In the briefing room the use of the whiteboard makes it somewhat simpler. What the diagram does show, however, is that accurate circuit flying is complex and heaps of practise is required to achieve the standard expected of RA-Aus pilots. 🛩️

2567

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2809

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2911

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2926

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3012

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3020

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3052

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3070

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3077

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# Christine's great ATTITUDE

By Geoffrey Kent

Christine Kent is thought to be the first ever student to fly solo in a tail-dragger at Gunnedah airport. She has been a student of Billabong Aviation's Wayne Matthews, and was ecstatic at doing her first solo in the yellow vintage J3 Piper Cub after 29.9 hours.

There was quite a crowd of supporters from the Gunnedah Aero Club on hand to cheer and clap as Christine taxied in on her return. Most people who know Christine would never have thought she would ever train as a pilot. Aerobatic pilot, Paul Bennet, was an inspiration. He told her "just keep going, you can do it", and she has.

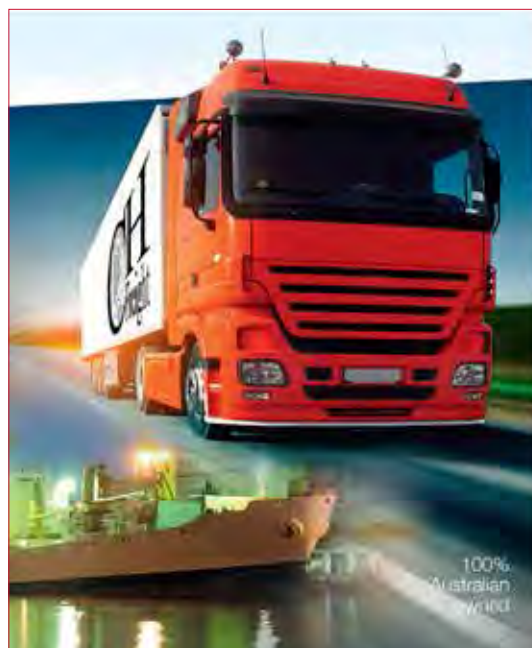
Christine has two children, Jason and Laurie, and is the proud grand-mother of five grand-children. She is committed to being an example to anyone who has an interest in learning to fly. "It's great fun", she says.

Christine is now training with Ken Flower, of Namoi Aviation at Narrabri, in the P2002 Tecnam Sierra. She says the great thing about the Sierra is that it has a key, "I no longer have to prop start".

Well done Christine.



Got an aviation moment you'd love to share? Your kids or maybe your club get together?  
Send a photo as a jpeg attachment and a short explanation to [editor@sportpilot.net.au](mailto:editor@sportpilot.net.au)



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