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CONTENTS



>> Dave Tonks sideslipping his Drifter on short final into Boonah

Regulars

- 07 President's report
- 08 Calendar of events
- 10 Letters to the editor
- 55 Pilot notes
- 66 Happy landings

Columnists

31 Brian Bigg Editor's choice

- 42 Professor Avius Instructor's forum
- 47 Dr Gerry Considine Learning to fly
- 49 Adam Finn Tech talk

News

- 15 New aircraft for Waikato
- 15 From the CEO
- 15 Carol gets award



Features

- 23 Brian Bigg Travelling AGM a hit
- 40 Arthur Marcel Yoshi's Dragonfly
- 44 Ben Dumbrell Dan's story
- 50 Geoff Hennig Fuel injecting a Jab
- 52 **Bob Emery** West to east, east to west



- 16 AUSFLY
- 17 Wings over Warwick
- 18 NORRA-AUS
- 20 WESTFLY

Reader's stories

- 24 Max Brown It's why I fly
- 25 Graeme Serjeant Appreciate the privileges
- 27 Arthur Marcel Birdsville or bust



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Cover story

33 Barry Wrenford The Super Petrel LS

- 45 Book review
- 56 Member's market



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Call RA-Aus head office in Fyshwick in Canberra. The staff can help by telling you what's required and point you in the direction of the nearest flying school or club to where you live. Or you can call one of the board members listed here, who represent different Australian regions. They can answer all your questions.

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President's Report

STEVE BUNCIMAN

I AM writing this from the middle of a field in South Australia, close to Port Augusta. It's the first time I have been down this way and although it is a lovely part of the country, I cannot imagine how the people living here cope with the ever changing weather conditions.

AGM

As you know the AGM and board meeting took place late last month and, although I was unable to attend either of them, I am told they both went extremely well. The AGM was attended by about 120 members and went on for a lot longer than expected, with many topics discussed and a large number of people taking an active part in what is going on in the organisation, which is great to see. Holding the AGM in a different location to Canberra proved to be a great success and for this reason we will continue to do it. The location of next year's AGM will be announced as soon as the details have been finalised. The reports submitted for the AGM are on the website and I have no doubt the minutes will also be finalised and displayed on the website soon. Also there, you will see a document tabled by a member and my replies to his guestions. I have told him my answers were from memory, because at the time, I was away from work and home and did not have access to documents to which I refer. I have offered to further discuss the answers with the author of the document. The same offer applies to any member of the organisation who wishes to discuss it further. Many thanks go to David Heck, the owner of Heck Field, for allowing us to descend upon his property to conduct the AGM and to Paul Brooks, the President of Gold Coast Sport Flying Club, and his committee who did an excellent job hosting the event and providing an excellent lunch.

Board Meeting

A synopsis of the board meeting which followed the AGM should be available on the website soon, if it is not already there by the time you read this. The first order of business was to elect a new Executive (President, Secretary and Treasurer). The incumbents were re-elected; Me as President, Paul Middleton as Secretary and Eugene Reid as Treasurer. I am honoured to be selected to represent RA-Aus as its President for a second year. I have received a number of emails and phone calls from members offering support to me and the members of the board. The year ahead is shaping up to be even busier than last year.

AUSFLY

Prior to the board meeting, I attended the inaugural AUSFLY at Narromine. It was an extremely well run event, attended by many and I had a great time; well done to all those involved in the organisation and the running of it. It was especially pleasing to meet members from other organisations such as the SAAA and AOPA, and talking to them about their organisations. I have made a promise to remain in contact with them and I look forward to discussing ways we can share ideas, and maybe even resources, in the future. My view is that we all have something in common, a passion for aviation, and if we are able to assist them, we should and I am not against asking for their assistance if RA-Aus needs it.

NORRA-Aus and WESTFLY

The weekend following the AGM saw two RA-Aus sponsored fly-ins; one at Monto, Queensland (NORRA-Aus) and the other at White Gum Farm, Western Australia (WESTFLY). Again, my work commitments prevented me from attending either event, but I am told they were both very successful and well attended. These events take a There are far too many people to mention individually but to all concerned, thank you and well done for two great events enjoyed by many members. These two fly-ins are set to continue. The plan is to hold WESTFLY again next year and then make each event biennial, alternating them year to year.

Letters to the editor

I always read the Letters to the Editor with interest. A number often catch my eye. Of particular interest to me as President in the October magazine were the letters entitled 'Mind boggled' by Stuart Jacobs and 'A big stick' by Andre Maertens. The subject of 'Mind boggled' was about buying an RA-Aus airfield or moving our office to an airfield accessible to our members. The idea has been approached before. It was agreed that a study should be done on this, but the board member nominated for the task left the board before the



lot of organising and many people put their hands up to volunteer. For the NORRA-Aus event, it was organised by Myles Breitkreutz and his team of volunteers. Special thanks must go to the Mayor of Monto, Cr Don Waugh, who officially opened the event. The event would also not have been possible without the continued support and assistance of John MacKelroy from Monto, Dave Holding, Dave and Lizzy See from the Callide Dawson Flying Group and many of their members, Graham Hutchinson, Stuey, Ralph and Gail and of course the many forum presenters and exhibitors.

For WESTFLY, thanks must go to the organisers, Gavin Thobaven, RA-Aus board member for WA, Gary Sargeant, the owner of the airfield and Gordon Marshall, the airfield FTF operator. Thanks as well to special guest, aerobatic pilot, Matt Hall. study could take place. This idea has not been ignored or forgotten and it may be reconsidered in the future. The subject of 'A big stick' was the location of NATFLY. This has been discussed at length and the Board feels Temora best suits the needs of RA-Aus for the time being.

However, the most interesting letter to me was the one titled 'Flying Lifesaver' in which John Harris shared his story about discovering he had prostate cancer. Thank you very much, John. I am glad all has turned out well and am sure that by sharing your story you have encouraged or reminded a number of people not to put off that trip to the doctor.

All that remains is for me to remind everyone to commit to remaining safe while enjoying your passion for aviation.

calendar of events



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the December Sport Pilot Magazine. Limited places at special rates are still available. But you will have to get your skates on because the closing date approaches.

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Back to Holbrook Fly-In and JabFest 3-4 November

Holbrook Ultralight Club will host its annual Rag & Tube fly-in and Jabiru Festival (JabFest) at Holbrook Airpark. Interesting forums on Saturday afternoon, a three course dinner among the aircraft Saturday night and a hot breakfast Sunday morning. Trophies awarded at the dinner. Underwing camping and transport to and from town for accommodation and fuel available. All aircraft welcome.

For more information: www.holbrookultralightclub.asn.au or Bryan Gabriel (02) 6036 2601.

Gathering of the Moths 23-25 November

Mt Beauty Fly-in. Flyers of all denominations are, once again, invited to fly the sheltered Kiewa Valley at the foot of the picturesque Victorian Alps. Full range of accommodation available. For more information: Mark (03) 5754 4572 or 0409 544 572 Email Imarksgardening@aanet.com.au

Gloucester Aero Club annual Fly-In and Bonfire 10-11 November

Now in its fourth year. Benefits the club and the Westpac Rescue Helicopter. Lunch and dinner Saturday. Breakfast Sunday. Model helicopter display.

Paul Bennet from MaxxG Aerobatics will perform in his Pitts. A relaxed, friendly event in a lovely part of NSW. Camping available. More information: www.gloucesteraeroclub. org.au Andy Edwards 0416 240 949 or at eddybecs@optusnet.com.au

Clifton Fly-In 10 March, 2013

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. See various types, shapes, sizes and models of recreational, ultralight and homebuilt aircraft including sport, vintage, general aviation and any other flying machine. 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 will be the 50th anniversary of our CFI obtaining his Pilot's Licence. For more information: Trevor Bange 0429 378 370, (07) 4695 8541 or trevorbange@bigpond.com.

Loxton Aero Club Fly-In 13 April, 2013

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



Great Eastern Fly-In 4-6 January 2013

The big event at Evans Head is back after two years of major site difficulties. Come and see the plans for the new aviation centre being planned for the aerodrome, including an air park, a centre for major aviation industry, a new club house, a new aviation museum, new hangars for all types of aircraft, accommodation for visiting pilots and more. The museum will have a display on the war graves of Evans Head. For more information: Gai Taylor 0427 825 202 or info@greateasternflyin.com







LETTERS TO THE EDITOR

Weather reaction

Bless you for the article on GPS and weather. (Editor's Choice October 2012) I've held a GA licence for 33 years and an RA-Aus Certificate for eight years, I've flown my little Jabiru all over Australia and I still have trouble decoding the weather forecast especially the times. I fly out of Victoria so I really only need to know when that cold front is due. I can convert to Eastern Standard Time most of the time, but put me in South Australia (Central Time) and throw in daylight saving and I have an instant migraine. When the weather's bad, the TAF's are usually large and complicated, and this is when we need to get it right.

I grow tired of being told 'its an International Standard so suck it up'. With today's modern computers we should have, at one keystroke, the choice between the Standard Abbreviated Weather format or Decoded Weather and Local Time. This is a significant safety issue which would not be difficult to solve.

Lets hope we'll see some progress in this area soon.

- Peter Sealie

Keeping the blue side up

I'm not the kind of person who writes letters to a magazine. In fact, this is the first time. After reading the article 'Weather it's clear or not' (Sport Pilot October 2012), I got to thinking. Those coded forecasts, although daunting at first, are really not hard to understand. I am currently an RA-Aus student pilot. However, I just started training as an Air Traffic Controller, and, two days after being introduced to TAFs, ARFORs, METARs etc, I can read them without difficulty.

It seems that as VFR pilots, we think we do not need to worry about the possibility of low cloud forming, or when intermittent turbulence might be present between certain levels at a certain time in a certain place. It is this belief that has led to the dreaded situation of a VFR flight in IMC. It happens too often, usually with an experienced, competent pilot at the controls of an aircraft quite capable of flying through cloud. I have heard audio of an ATC conversation in which the pilot of a Jabiru was swearing that he was upside down in cloud, when in reality he was straight and level, and holding altitude. The controller talked the pilot through, and he ended up making a safe landing. One happy ending for ten sad ones.

I realise that as recreational pilots, we are not allowed to fly on instruments, but could it hurt to know the basics? How to decode an ARFOR, for example. Or the fact that, if you do find yourself inadvertently in IMC, that you always, ALWAYS, trust your instruments?

Although this phrase is in all the books, why does it seem to be forgotten when it is needed?

It can never hurt to know a little too much, especially for those of us who rely on Mother Nature to take our side. "I'll just see how it looks a little further along" should not be the last words uttered by someone enjoying the privilege of soaring through our skies. - Nathan Quigley

Ed- Good job, Nathan. I read somewhere that a US study

showed that the average time from when a VFR piloted aircraft enters a cloud to when it hits the ground is something like only 178 seconds. Panic and spatial disorientation are the keys. It's scary enough to keep me away from the fluffy stuff.

Our side of the fence

I have just read your article 'Our side of the fence' (Sport Pilot July 2012). A bit late I know...

I agree with what you have written. I am an organiser of several airshows, including 'Wings, Wheels and Wine' at Mudgee and I have an easy solution. As aircraft ar-

Flight instru

Pre take-off

consideration

ALASIAN LINK

rive and they look like people might find them interesting, we ask the pilots if they wouldn't mind putting their aircraft on display inside the spectator area. Most are eager to do so. Of course there are conditions and they are escorted into the crowd and later escorted out. It works really well. I even usually park my Cessna 172 there too. - Gary Chapman

Ed- I have been told to put my body where my mouth is

in regard to this article. Great Eastern Fly-In organiser, Gai Taylor, has roped me in to conduct tours of the flight line for the public at the Fly-In in January. D'oh.



Two days prior to my 66th birthday, in October 2011, I had my first lesson as an RA-Aus student pilot.

Seventy days prior to my 67th birthday, I passed my Pilot Certificate flight test and my certificate was issued on August 20, 2012.

> I recently decided to re-read my copies of Sport Pilot magazine, because I thought that I may gain more benefit from a lot of the articles due to my expanded knowledge since starting off.

> The first issue I started on was October 2011 and I was intrigued by a letter to the editor from one Andrew Campbell regarding Professor Avius's article on "Touch and Goes" in the September 2011 edition.

Because landing the aircraft was the area of my training I had the most difficulty with, I found my September 2011 copy (which luckily RA-Aus staff had sent to me when I joined) and read said article.

First off, I think that the Professor has been unfairly criticised. I can relate

to everything he wrote.

I wish I could have read the Professor's article before I began circuit training.

I was being asked to land the plane and take off at the same time, instead of being

taught how to put the plane on the ground safely and come to a stop.

I was consumed with having to put the plane on the ground and immediately think about taking off again. My thoughts were never really confined to landing the aircraft, so my concentration waned

because I was trying to do two practically opposite things at once.

I am convinced that my landings would have been much better if full stops were the order of the day instead of touch-and-goes and my circuit hours would have been far fewer; quality rather than quantity any day.

I realise full stops would be difficult to practice at places like Bankstown and Jandakot, but not so much down here at Bunbury WA or other aerodromes with not much traffic.

It would be appreciated if this email could be forwarded to the Professor Avius who wrote the September 2011 article. - Ted Rees

Something to say? Email 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.

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LETTERS TO THE EDITOR

Don's view of the AGM

Staging the AGM away from Canberra was an outstanding success, going by the number of enthusiastic members who attended. Paul Brooks and the GCSFC were great hosts and, between them and the always helpful and cheery RA-Aus staff, we were all very well looked after. Let's hope the Board again takes the AGM out of Canberra to the members next year.

The meeting was ably chaired by Paul Middleton in what were, at times, difficult circumstances. An AGM which would normally be expected to be much of a formality and concluded within an hour, in fact ran for around six hours.

The President's report was not well received and there was considerable debate as to whether it should be accepted or not. The objections related, in part, to the absence of strategic vision for the medium to long term future and the lack of reporting on major issues from the past 12 months.

The Treasurer's report was particularly disappointing. The report included only raw numbers and was missing the formal "notes to the accounts" and the auditor's report, which are a vital part of the Annual Financial Report. There was no useful analysis, nor commentary provided, to explain the changes from last year. While the Treasurer excused himself on the grounds that he has not been in the job very long, it's now more than six months since he put himself up for the position.

The Treasurer's failure to present a proper Financial Report represents a clear breach of the requirement of Rule 15 (iv) of the Constitution which requires reporting to the members "... not more than 30 days after the end of financial year". At the time of despatch of this letter, that requirement has still not been met. In future we must get the full Financial Report with the Notice of Meeting for the AGM.

In my view, the response by the Board to the questions on notice from David Isaac was not far short of contemptuous. Neither the questions, nor the answers, were handed out and it was then quite difficult for everyone to follow.

The Board's response sounded like a whitewash to me. The questions were on notice and the member was entitled to a full and frank reply being provided at the AGM without being criticised for asking questions. Many questions were not answered at all and none of the answers were open to question or debate due to time restraints.

There was a presentation from Rob Viney, representing the insurance broker for RA-Aus. The picture he revealed was not one of comfort for RA-Aus. The Board declined to make virtually any comment about current litigation faced by RA-Aus. While we would not expect the Board to provide information which could weaken the strength of the RA-Aus legal position, there is much that could have been said to inform the members that would not in any way affect the litigation.

Most RA-Aus affiliated clubs have a general meeting, either monthly or quarterly. RA-Aus itself has no scheduled general meetings each year, other than the AGM. The format of the AGM is restrictive with the Agenda hard coded into the constitution. With the passing of the amendments to the constitution, RA-Aus now has just one scheduled General Meeting a year, where the agenda is open to the members. I don't think that is excessive and apparently neither does the bulk of the membership which voted overwhelmingly in favour of having a General Meeting in conjunction with NATFLY. Incidentally, guite a number of people asked me why the AGM itself isn't at NATFLY, considering that that would give the biggest number of members the opportunity to participate.

Due to the massive support given to the constitutional amendments, members now have the right to call for a General Meeting if 100 members consider matters serious and urgent enough to warrant it. The dissatisfaction with the Board's performance, and with regard to a number of issues raised in the questions from Mr Isaac, has sparked a move for a General Meeting to be held concurrently with the February 2013 board meeting. The agenda for this meeting will be established to ensure that all significant issues plaguing RA-Aus can be dealt with and the Board held to account based on its responses. Please feel free to email or ring me in regard to this development.

- Don Ramsay , dramsay47@westnet.com.au 0418 257 793

Ed-For more details about the AGM, see page 23.

Avgas vs Mogas

I would like to comment on the article "A question of fuel" (Sport Pilot October 2012).

I own a Jabiru 160 (hydraulic lifters), with 430hrs TTIS. I only use Mogas 95 or 98. Very rarely, when I really have no choice, I will put in as little Avgas as possible, just to get home with reserve.

Besides the price, I believe that 100LL Avgas causes a lot of problems in today's engines.

When my plane was new, I used Avgas, and very soon had sticky valves (around 10hrs TTIS). I then changed to Mogas, and have never again had the problem. Furthermore, I have never had any problems with vaporising while using Mogas. I have flown to Longreach (and a few other places) in very hot conditions without it happening. I also like flying as high as I am permitted to fly, and do quite a few long trips on a regular basis.

I have also recently noticed that a friend of mine with a Jabiru (around 90hrs TTIS), who only uses Avgas, has quite a few sticky valves (although he probably does not realise it), because when he starts up, the clapping noise is quite obvious. After a long warm up, it does however suddenly disappear. I firmly believe the Avgas/ Mogas saga is being blown out of proportion, and would really like to see Mogas at airports. Then all the recreational (and some GA aircraft) pilots would not have to carry empty cans to get fuel everywhere they fly.

Has anyone read lately the suggested type of fuel to use for Rotax engines? It says to use Mogas 95/98 as far as possible, and NOT to use Avgas if it can be helped. (refer to the Rotax Engine Operating Manual).

Thanks for a great mag!

- Johann Stock

Packsaddle problem

As usual, I read with interest the Story of the Month in the September issue of Sport Pilot.

I was drawn to the statement by Jim Nesbitt in his article that "Packsaddle is a unique name – you won't find another one anywhere".

In fact, there is an ALA named Packsaddle (YPAS) located in the Pilbara region of WA some 1,300nm from the Packsaddle to which Jim refers.

We wouldn't want a reader to pump "Packsaddle" into their GPS and blindly head off from Broken Hill expecting a 'short' jaunt – it could end up as the aviation equivalent of Bourke and Wills.

Love your work. The magazine is interesting reading from cover to cover.

- Ron Grenfell

Ed- I fell into that trap when I put Maryborough into the GPS. The arrow pointed to Victoria, not Queensland. Thanks for the nice words about the magazine. It is put together each month with just that goal – to make it interesting reading from cover to cover. I expect to hear from you if it isn't.

A change to the weather

Brian makes a valid point about the readability of weather briefings (Sport Pilot October 2012).

There is one important point I didn't see mentioned in his article. The format of the weather briefings is to an international standard endorsed by ICAO. Australia does not operate in a vacuum. What is provided is, in effect, an international language for weather briefings, understood by all the foreign pilots who come to Australia, and by our pilots who fly overseas.

So a change to our way of reporting the weather would require international approval from the ICAO signatory states.

Or our Bureau of Meteorology could publish a translated version for Australian GA consumption. But then the issue of who pays would arise, and we all know that our expectation in RA-Aus is that we should have all these services provided at no cost to ourselves.

- Peter Lapthorne

Ed- Good point Peter. It would a simple translation program, which shouldn't cost much to build and nothing to make available.





Important changes to flight plans come into effect internationally on 15 November 2012. These impact all airspace users who file flight plans and the ATM systems that process these flight plans.

Visit www.airservicesaustralia.com to make sure you know how these changes may impact your flight planning.

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NEWS 📕

New aircraft for Waikato

THE Waikato Aero Club has purchased two Italian manufactured Tecnam Light Sport Aircraft.

Managing Director of Tecnam Australasia, Giovanni Nustrini, presented the Hamilton based aero club with two P2008's for acceptance trials earlier this month and ZK-WHZ and ZK-WIP have now joined the fleet.

Club CEO, Richard Small, says, "the new aircraft have a large number of advantages over the more traditional aircraft.

"Manufactured from modern materials, the new planes are much more fuel efficient and much quieter. They also have full electronic flight display screens rather than the traditional knobs and dials seen on typical aircraft instrument panels and our pilots are thoroughly enjoying the upgrade."

As well as recreational flight training and club trips, Waikato Aero Club runs a student loan-funded full time flight school for budding professional pilots.

Richard says "it is really important for our future airline pilots to train with the best technology available, and these aircraft fit the bill very nicely. Our full-time students will keep the aircraft busy during the week and our club members will enjoy some delightful weekend flying".



Carol gets award

FORMER RA-Aus board member, Carol Richards, was awarded her Meritorious Service Award at the Heck Field AGM.

She was presented the award by RA-Aus Secretary, Paul Middleton and received warm applause from the large crowd.

In response, Carol says she was proud and honoured to have received it.

"In all the years I have worked for the organisation, I have encountered hundreds of members who also contribute to the organisation in a selfless, and mostly anonymous, fashion, When I secured a \$30,000 grant from CASA to conduct maintenance workshops around the country, I offered members who were running the workshops an amount of money for their time and expertise. Although this was part of the grant, it was very difficult to convince members to take the money. Most were happy to spend a day working with other members for

no remuneration, even though it meant missing out on a day's pay.

"They wanted to make a contribution to the organisation. Several donated the money to the GYFTS program. Such is generous nature of our membership. Others have convinced their local clubs to put on BBQs and fund raisers for GYFTS.

"In organising the program for Natfly, members have donated equipment, hangars, chairs, food, time and money just to ensure the event works. I am proud to be part of a membership which has a passion for flying, sharing, and caring for each other.

> "I thank the members for their acknowledgement of my efforts." And everyone

And everyon thanks you, Carol.



From the CEO

WAS delighted to read Dr. Considine's article "What goes around" (Sport Pilot October 2012).

When student pilots write articles on flying training, it can be beneficial for flying instructors to reflect on their own experiences and teaching practices in light of such comments.

The good doctor did raise my hackles by admitting visual landmarks assisted his circuit profiles but he discredited the concept by having a runway change so that "circuit landmarks were of no use to me".

In my readings over many years on how to fly a good circuit, there are more tips available than 'certainties' for a win on Melbourne cup eve!

In an earlier article I mentioned that often circuits are flown too wide and that in the event of an engine failure on downwind, you should be able to reach the runway. That will not be possible if your circuits are flown wide. How do you judge the ideal distance out on downwind? Have the instructor position the aircraft for you on downwind and observe where the runway centerline intersects (appears to be) running along the wing tip (low wing) or two thirds up the lift strut (high wing).

If you are still an advocate of flying circuits by geographic landmarks try circuits at an airfield surrounded for many miles by flat and featureless terrain.

Safe flying and call me if I can help you.

Steve Tizzard CEO RA-Aus

Note: I feel my standard sign off is being ignored as nobody bothers to call me. If you have any questions or concerns about procedural or administrative processes within RA-Aus please call me to discuss them.

>> Photographs: Will Spiers

n.au

does the RGANISERS of the first Auslfy event at Narromine in September have declared the event to be a success. The weather was cold and clear for most of the weekend which encouraged a lot of people to arrive in a wide

RA-Aus was also there in fine style and staff reported a variety of aircraft. good role up of members. Ausfly was the first attempt at a fly-

in involving all sectors of aviation in Australia. And the numbers, while reportedly not as high as they could have been because of strong winds in the region, should have given the organisers enough encouragement to

go again next year. 🐞



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WINGS OVER WARWICK

>> Photographs: Scott Richardson and were rewarded with a great event, despite the strong winds. The Warbird displays through the day drew a big crowd of

THE weather wasn't as bad as last year but it still wasn't great. The forecasts of strong winds and turbulence kept a lot of pilots at home even if the skies over Warwick were blue. But a lot of fliers from around the region did make the trip aviation lovers and a donation was made to the Royal Flying Doctor Service. 🐞



>> From top left: Stu Barrett examining the Wooden Storch by Allan Hayward; Tecnam Sierra landing; Aerial view Sunday morning; Tension Wrench Forum - Ralph Percy; North Burnett Mayor, Don Waugh, event organiser, Myles Breitkreutz and Queensland Deputy Premier, Jeff Seeney. Photos: Len Neale

by Myles Brietkreutz The full

ORRA-AUS Monto 2012 got under way in September with a thunderstorm which dropped 25ml of rain on the field. The grass was already green, but the rain freshened it up. What a pretty picture it was for our fly-in.

The Central Queensland Off-Road Club members were first to show up and helped us set up.

By Thursday, the display area was transformed into a buzzing hive of activity, of which we were very proud.

The RA-Aus tent was staffed by Sue and Janelle and CEO, Steve Tizzard assisted as required.

The tower rear window was fitted and completed on time for use by our Unicom operators. While this was going on, the finishing touches were being made to the forum program. Also the last of the aircraft exhibiter and general exhibiter sites were marked out. This made Thursday our biggest planning day.

Friday had me checking the weather constantly, hoping for the best but fearing the worst. However fears waned as Tom Abell and his Savannah aircraft took their place in number one spot. There was a steady arrival of aircraft all afternoon. By last light, forty two had arrived. At the same time the operators of the side show alley also arrived. The last general exhibiter arrived from Roma about 10.30pm.

Saturday arrived at last. The marshals and wardens were briefed, Brett, the Unicom operator, arrived and was briefed just in time for the swarm of aircraft to arrive. The forums got off to a slow start at first, but when the CASA staff had their session, interest picked up.

Business boomed especially when the Dragon and the helicopter operators arrived. The six TIF operators were also busy, especially the trikes and drifter flights.

By 3pm, there were 260 aircraft in the parking bays, ranging from heavy twins to a Corby Starlet. The team collecting the camping fees and donations through the gate counted about 1200 visitors.

Flying activities stopped at 5pm so evening festivities could begin. The fire dance troop gave a spectacular display. The catering was excellent, music played until late and everyone had fun.

On Sunday, the weather forecast didn't look good for later in the day. The forums started on time, but the weather deteriorated as predicted. However, the non-RA-Aus scenic flights ran constantly and smoothly, keeping the Unicom operator very busy.

I attended the CASA forum and am happy to say it was the highlight of the forums. The facts about ramp checks were outlined and some





Don and the Dragon by Myles BreitKreutz

THE Australian Transport Safety Bureau has begun an investigation into the cause of the crash of the famous red de Havilland Dragon in bushland in the Sunshine Coast hinterland.

Killed in the crash were pilot, Des Porter, 68, his wife Kath, 61, Les D'evlin, 75, and his wife Janice, 61, and John and Carol Dawson, both 63.

The red antique aircraft came down west of Imbil after leaving the Norra Aus RA-Aus fly-in at Monto.

I was a friend of the pilot and his family.

Des and Kath were frequent visitors to the local flying clubs in Central Queensland for many years, clubs such as the Callide Dawson Flying Group and The Old Station Flying Club.

Des would turn up each time in his beautiful red twin engine, Dragon bi-plane and offer rides for a small fee. He would donate the money to the RFDS. Des would fly his pride and joy all weekend and loved every minute.

The Dragon did have a history, and was involved in a tragic accident in 1954 which claimed his father and his brother. Des was about 10 years old and was rescued from the water.

Des dedicated his time, money and his life to this aircraft, totally restoring it to its original condition and keeping it pristine. Six weeks before the Monto fly-in, Des was worried the Dragon wouldn't be able to make it to the fly-in because a new undercarriage had to be moulded. However the work was done in time and the Dragon had a new C of A.

My memory of Des is of a softly spoken gentleman who loved flying and helping others. His crew, wife Kath, Les & Janice D'evlin, John & Carol Dawson were always supporting and helping him. Les and John would park and refuel the Dragon while the girls would be all dressed the same, helping the passengers.

The NORRA-Aus Monto Fly-in for Des and his crew was a weekend of fun, good times and fund-raising for the RFDS.

Des, Kath, Les, Janice, John, Carol and the Red Dragon will always be flying in our thoughts.

What a pretty picture it was for our fly-in



John Rasmussen

myths dispelled.

The aircraft fabric workshop and the Flying Flea workshops were very well patronised and there have been requests already for these to be repeated in 2014.

At 3pm, local Mayor, Don Waugh, officially opened the fly-in and Deputy Queensland Premier, Jeff Seeney, addressed the crowd to resounding applause.

But the weather was on everyone's minds. During the afternoon a vast number of aircraft took off as the cloud base lowered. By 6pm, it was raining. The entertainment scheduled for the night was washed out.

On Monday, there were only 40 aircraft left on the ground and most of these were waiting for the cloud base to lift. By mid-afternoon only the diehards were left cleaning up.

I would like to thank everyone for assisting and making NORRA-Aus Monto 2012 a success and encourage everyone to visit the website to see the photos uploaded by our official photographer, Len Neale. A wash up meeting is planned for November and a final report will follow.

Sadly, on behalf of all RA-Aus members, we share the deepest of feelings for the family and friends whose lives were tragically cut short returning home after the fly-in.

SPORT PILOT 19

by Gavin Thobaven Big Wes

N airborne invasion of Whitegum Farm, east of Perth, took place at the end of September for the inaugural RA-Aus Westfly Event.

Arrivals began on Friday but the main rush took place on Saturday.

We had a huge variety of fixed wing aircraft, ranging from GA style Pipers and Cessnas through to the larger sport aircraft and a representation of rag and tube Thrusters and Drifters. There were weight shift and powered parachutes, including the daredevils in the powered paragliders. Rotary wings were well represented as well with single and twin seat gyrocopters - and even a Robinson R44 doing joy rides.

We took a count at the main arrival area parking area and discovered more than 60 aircraft were parked, and that did not include aircraft in the display areas or the separate powered parachute and paraglider areas.

We were lucky to have a good selection of new aircraft on display and most pilots spent a great deal of time discovering the future direction of our sport from the companies which are developing these next steps.

Dinner on Saturday night was well attended. More than 200 people sat down for a delicious meal prepared onsite.

RA-Aus was well represented. Jill Bailey (Assistant Operations Manager) and Dean Tompkins (Assistant Tech Manager) were present throughout the event and were often challenged with questions from some of the members.

Without a doubt, the highlight was the presentation by our special guest, Matt Hall. It is incredible that someone could pack so much into their life as Matt has. It was inspirational for our members to hear a little of Matt's history and where he is at these days. It was very heartening to hear that he still holds his time flying RA-Aus aircraft as being very important in his development.

The success of Westfly this year was, without a doubt, largely due to the owners and operators of Whitegum Farm, Gary Sargeant and Gordon Marshall, who combined with me to get it all planned and running in record time. The many volunteers are all to be congratulated for their efforts. Their overwhelming enthusiasm showed there was a real need for an event of this type in WA.

The inaugural Westfly was only promoted to pilots. Considering this, the turnout was exceptional and the enthusiasm for the event was very clear from the start. A meeting of members present resulted in a decision to run Westfly again in 2013. A committee of six was formed to plan and run the event into the future.

It is clear that Westfly is well on its way.





tfly turnout



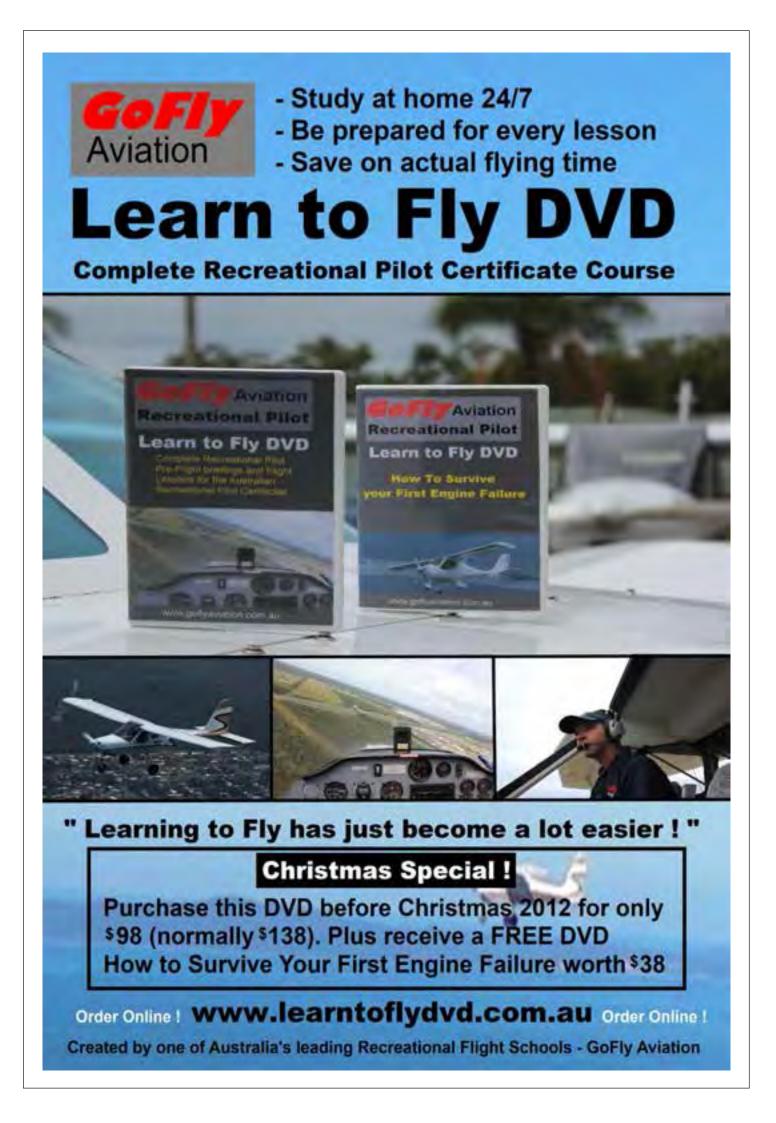




The enthusiasm for the event was very clear



FOR RECREATIONAL PILOTS . SPORT PILOT 21



TRAVELLINGA GAVI

Helensval

Pacito

Runaway Bay

Exposen

abrado

Southport

by Brian Bigg

HE board's decision to take the annual general meeting on the road proved to be a popular move with the members. Normally, when the meeting is held in Canberra, only a few people turn up. But this time almost a hundred came along to the Heck Field clubhouse of the Gold Coast Flying Club.

One person who didn't make it was outgoing President, Steve Runciman. Despite being on exercise, he had arranged to have the time off, but a last minute change prevented him from attending.

Steve's absence put Middo in the hot seat for lots of energetic questions from the members.

Former board member, Don Ramsay, succeeded in getting all his constitutional amendments through with more than the required percentages.

These included approval for a General Meeting to be held at Natfly each year and a change to the number of petitioners it would take for members to demand a special general meeting.

There was also debate about the decision just before Christmas, to ground student pilots under the age of 14. The president, in his annual report, described it as a communication mistake, which didn't go down well with some at the meeting.

In his secretary's report, acting president, Paul Middleton, cheered everyone up with the news that RA-Aus has a grand total of 13,123 members, of whom 11,616 are pilots.

Middo told the meeting about the recent crisis involving official paperwork, which has grounded quite a few planes and still runs the risk of costing the organisation a lot of money.

He said a senior person in RA-Aus was found to be issuing approvals and manufacturing permits beyond what is allowed in the charter. The issue was discovered during a CASA audit. Files were examined. Some aircraft were grounded because of a lack of paperwork. Most were back in the air when the correct paperwork was submitted.

However in some cases, where the registration was wrong, the problem could not be fixed. With CASA's blessing, some of the aircraft were back flying in the Experimental category. In some cases the rego was able to be changed from 24 to 19. But some are still stuck in limbo.



Middo said the Tech manager had reexamined every file and more anomalies had been found and are being followed up. He reported it was the first time such a thing had ever happened in RA-Aus but the immediate action by RA-Aus had been accepted by CASA as grounds to consider the organisation had competence to go forward and solve the problem.

This led to a discussion about insurance. It was revealed that Board members do not necessarily have personal insurance to cover them for potentially expensive legal issues such as the paperwork problems.

However, the RA-Aus insurance broker assured the meeting that despite earlier rumours, there had not been any time this year when the organisation itself was not covered. This risk was one of the issues which led to the resignation of two board members.

Middo also announced the new Ops Manual was done and ready to go to the board for approval. It is to be issued in hard copy again.

All in all, it was a robust and healthy AGM and all considered it to be well worth the effort of having made the trip from Canberra.



Story of the month

I just wish that all flights could give as much pleasure. It certainly makes you appreciate the joy that flying gives us

Send in your stories and photos in. Email editor@sportpilot.net.au

It's why I fly by Max Brown

N the week before our monthly club meeting, my mate, Ken, and I watched as a large high pressure area made its way slowly across the continent. And, throughout the week, it was looking good for the weekend.

We decided to travel down to Holbrook on the Saturday morning and arrive in time for the meeting, have the usual BBQ lunch and perhaps fly in the afternoon. Despite the perfect weather on Saturday, we ended up catching up with fellow club members rather than fly and made a decision that, on the following morning, we would fly the Skyranger to Corryong at the base of the Snowy Mountains.

Sunday morning proved to be another perfect day. After a quick breakfast, we checked the area forecast and NOTAMs for our route and headed out to the airfield to daily the aircraft. It wasn't long before we were in the air and heading for our first turning point, the town of Tumbarunba.

Once we were established at 3,500ft, we knew we were in for a good flight because there wasn't any movement in the air. To the east, the snow capped mountains of the main range of the Great Divide were soon in view, and off to the south we could also see snow on the Victorian Alps. It wasn't long before we picked up the smoke from the Hyne timber mill on the outskirts of Tumbarumba and we used that as our steering point. The timber mill is the largest softwood operation in Australia and the amount of timber put through the mill is amazing – 900,000 cubic metres a year of radiata sawlog. It is well worth a visit if you are in the area.

Ten miles out from the Tumba strip, we gave a call to announce our presence, but did not receive a response. Nevertheless, we kept a sharp eye out for others who may have been enjoying the day as much as we were. There was no activity at the airfield and we deviated a little to the north to check out our friends, the Crozier's, strip before tracking to the southern end of town, passing over the ordered rows of blueberry bushes at the Jolly Berry farm operated by the Croziers' son and daughter-in-law.

From Tumbarumba township, we then flew towards the lovely Maragle Valley that we, as a club group, had visited by car eight months earlier just prior to the club's Christmas party. Before we reached the valley we searched, unsuccessfully, for the Paddy's River Falls which we had also visited on this same excursion. The falls are quite interesting as the water pours over a layer of rock that appears to be supported by columns of basalt not unlike the columns that can be seen at Fingal's Cave in Scotland or the Giant's Causeway in Ireland.





At this stage we were still enjoying perfect weather as we turned down the Maragle Valley towards the village of Tooma and our goal of Corryong. On the way we passed the Southern Cloud Memorial on our right. From the memorial site, you can look across the valley and over a range of hills to the spot where the Southern Cloud met its tragic end in March, 1931.

As we passed over the Murray River, five miles south of Tooma, we gave our ten mile call, but again there was no response. It wasn't long before we were over the strip at Corryong and Ken decided he would use Runway 24. After an uneventful landing we were soon parked outside the airport terminal.

Once we had a quick visit to the loo, a couple of biscuits to keep the sugar levels up and taken some photos as a memento of our visit, we changed roles - with me in the left hand seat and Ken navigating.

Using Runway 24 again, we took off and climbed to 2,000ft skirting the western side of Mount Mitta Mitta which stands alone and rises over 2,100ft above the surrounding area. On the way into Corryong, we had flown down the eastern side of Mitta Mitta. Once we got to the village of Tintaldra, we joined the Murray River again and turned right to follow the river to Lake Hume.

A lazy, meandering flight along the Murray followed, passing over the villages of Walwa, Jingellic and Talmalmo until we reached the backwaters of the lake. We followed the northern shore past the Wymah ferry (yes, there is still a ferry there) being careful to stay under Albury's control zone. Near Bowna, we turned right and followed the new section of the Hume Highway to abeam Woomargama where we called ten miles out from Holbrook. By this time, the air had become a little bumpy but it didn't dampen our enthusiasm. It had been a most enjoyable flight. I just wish that all flights could give as much pleasure. It certainly makes you appreciate the joy that flying gives us.

We were soon in the circuit area at Holbrook and back on the ground in time for a coffee, a bite of lunch and our next flight of the day to Cootamundra and the Bethungra loop, but that's another story.

Appreciate the privileges By Graeme Serjeant

I AM a relatively new member of RA-Aus, having joined in early 2007. However I have been flying since 1964.

I suppose my interest in aeroplanes began when I saw a Tiger Moth lying damaged against a fence at Echuca airfield in about 1948.

The first time I remember seeing a light aircraft flying was at Hamilton aerodrome in 1964 while waiting to go flying with a member of the Wimmera Aero Club. Surprisingly it did not look anything like a Tiger Moth - it was a Cessna 172.

After that flight, I was bitten by the bug and began training at Hamilton that year. At \$14 an hour, you may think it sounds cheap, but at that time it probably amounted to about a couple of day's pay.

Today RA-Aus has made flying much more

affordable and accessible to many people.

After managing to complete my PPL training the next year, my next ambition was to own an aeroplane, but the choices were few. Cessnas were available, but expensive and although it was possible to construct an amateur built, the range was limited.

I decided to buy a 1946 Auster J1 high wing monoplane, with a 100hp Cirrus engine.

This aeroplane was very simple compared to the aircraft available today .

It had three seats, an 85kt cruise, fuel endurance 6hrs, no electrics, started by hand swinging the prop.

Fuel then cost approx 8 cents /litre and with a thirst of 22lts/hr, or \$2 per hour, we could afford to fly with a similar relative cost to today's ultralight at say \$25 per hour.

Maintenance was a different story.

On this simple aeroplane with no electrics, radio, cable brakes, mechanical flaps and trim, an owner pilot could do little more than change the oil and spark plugs. With the nearest LAMIE about two hours away, it could be an expensive problem if something went wrong. Servicing was also expensive, with ferry cost accommodation and specialist labour.

How different it is today with our owner pilot and L 2 maintenance privileges?

I owned three different aircraft in the 1960's, 70's and 80's. Having sold the last in 1985 because of rapidly rising costs, I did not expect to own another. That was until 2007, when I discovered RA-Aus and the privileges it has achieved.





READERS' STORIES



At that time I visited the local airport and made an interesting discovery – what was that aircraft? A baby Auster ? No it was a Skyfox and it even had a starter. I could not wait to fly one.

Now, five years later because of RA-Aus I am able to operate my own Flying Training Facility with a Tecnam Super Echo for general training, and a Skyfox for tail wheel training.

In addition to this I have completed a Knight Twister Imperial building project which is currently undergoing its test flying programme. This is an updated version of a 1930 designed biplane. A similar model with a higher speed wing held the biplane speed record at Reno until about 1985.

In the 1960's, 70's or 80's all of this would have been an impossible dream, as would have been today's wide choice of ultralights, including those with better performance than many GA aircraft.

We should all be thankful to RA-Aus and its many members and volunteers who have put in so much effort to make today's operations possible.

To those who would jeopardise these privileges with stupidity and selfishness, I say think again and value what has been achieved.

Birdsville or Bust By Arthur Marcel

FOR a while it seemed as if it really was Birdsville or bust as we battled headwinds through to Quilpie on the first day of our trip west. I found the best situation to be 500ft above the ground, although by early afternoon, it was more than a little rough down there. The country between Millmerran and Roma and west of Charleville is not at all inviting, but the treed areas are so vast it wouldn't matter at what height the engine failed. It was better to get across it as quickly as possible. The more southerly route we followed on the return journey, via Thargomindah, Cunnamulla and St George is far safer for single engine aircraft; definitely the way to go west in future.

Certainly, the worst experience of the trip was my first mouthful of Quilpie water. However, the town itself is as friendly as every other town at which we landed. I have to say the Queensland country people we encountered were all extremely hospitable, but the standout town was St George, particularly the guys (and girl) at Jones Air Services, who simply could not do enough for us. Thank you Doug, Tessa, Mick, Scott, Sev, Damo and Shane. Steve, Lesley and I were first in to Birdsville on the Thursday. From our reading of the Birdsville AIP Supplement, we had expected an event bigger than Ben-Hur, but it was not so; more light aircraft turn up on a good day at Watts Bridge. There were only a few aircraft there before us and by the end of the weekend fewer than a hundred had arrived, mostly VH registered.

That is not to say the Birdsville races were not well attended, however; because most people came by road. And they came in their thousands, even tens of thousands. From Windorah to Birdsville, we followed the highway and it was only the great plumes of dust behind every camper trailer toting four-wheel drive which prevented the traffic from being bumper to bumper. As we flew in over the racecourse on approach, we could see that Birdsville itself was one huge camping area with tents erected in all directions out to about five miles. Ken and Jim saw the same sight as they arrived the next morning, managing to fit the Nynja neatly between the Savannah and the Sapphire in the front row.

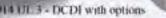
The Diamantina Shire Council had hired a company called Integrated Airport Solutions

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APPHIN.

A prodigious amount of alcohol is consumed in this town over the two days of the races





to organise airport security and parking. These guys seemed to rate private aircraft at the bottom of the priority list. They put us downwind of the twin-engine charter aircraft parking and the dust generated by these King Airs, Navajos and Cessnas was just horrendous, by far the biggest reason for never going back to Birdsville on race day. Even some of the locals had a problem with the dust. One local lady told me the only way she had been able to come to terms with Birdsville dust was to think of it as she thought of talcum powder – then it was only a matter of colour.

A prodigious amount of alcohol is consumed in this town over the two days of the races and all the empty cans end up in the street (a local tradition) from where they are scooped up by a bobcat at 4am. Extremely loud rock music and fireworks made it impossible to sleep until after two o'clock in the morning (unless, like Steve and Lesley, you have been smart enough to bring earplugs). Ken and Jim attended the rock concerts, though, and had a great time.

The races were like most Australian country race meetings; the main difference being the horses ran on dirt, not grass. Two distinct groups of people were seen on the race course - the punters, who hung around the bookmaker's ring, and the horse people who got together at the stables. Of course there was a bit of cross-over, but not as much as you would think. One thing about Birdsville race course is that there is no grandstand. Actually, there are no seats at all. You either bring your own chair or stand up all day. The highlight of the meeting for many people was the aerobatic display performed by the RAAF Roulettes flying Pilatus PC-9 aircraft.

The AIP Supplement was right about one thing and that was the mass exodus at daybreak on the Sunday. After joining the pre-dawn takeoff queue, our three aircraft headed into the south-east just as

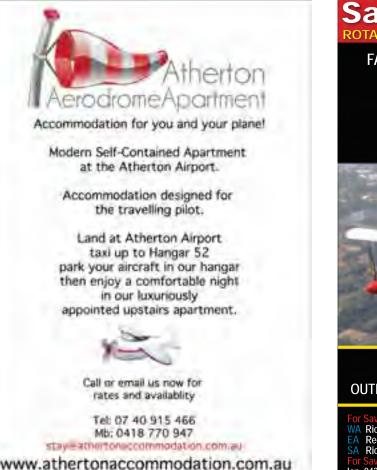


the sun was coming up. The Savannah and the Sapphire went via Innamincka (for fuel) while the two boys in the Nynja flew direct to the Dig Tree strip on Cooper Creek.

Fuel figures

0.482

The Savannah and Sapphire flew together, the former logging 24.4 hours and the latter logging an hour less (having started from further west). The Savannah used 17 litres per hour mostly running on Avgas. The Sapphire used $10\frac{1}{2}$ litres per hour (and $5\frac{1}{2}$ litres of 2S oil) mostly running on 95 Mogas. Ken's brand new Nynja (only 30 hours or so TT at the start) used 18 litres per hour on both Avgas and 95 Mogas (and about 1/10th a litre of oil). All three Rotax engines performed without missing a beat.



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Editor's choice

Brian Bigg



WNING an aeroplane is very much like being married. After the initial excitement wears off (usually about a year in both cases), if you are lucky there develops a comfortable feeling between the two of you. And as the years progress, you realise that you come to know each other pretty well. You know what makes your aeroplane perform better and you know what is going to make it get cranky (Of course I realise that these things are much more difficult to discover in a marriage). You learn each other's likes and dislikes to the point that you don't even have to think about them. My aircraft and I have come to a deep understanding over the years that I believe makes us safer in the air. There is a level of trust which is not easy to earn.

But the risk with always flying the same aircraft, just as with a marriage, is that the comfort level can slowly and quietly become a rut in which you begin to take each other for granted. Just because the Rotax up the front never burns through oil, doesn't mean I shouldn't take off the cowling and burp it once a week or so. And, I must admit, my precision in the circuit is not always textbook fashion. Especially when landing at my home airport which I know so well I can do it in my sleep (I'm not silly enough to risk the wrath of readers by giving examples of that analogy as it relates to a marriage).

But maybe there is a case to be made for occasionally stepping out with a different model - aeroplane not person. It can give you a fresh perspective and maybe make you safer.

This was brought home to me recently when, because of laziness and inattention, I found myself out of date and in urgent need of a BFR.

My instructor, Nick from Australian Pacific Aviation, could not fly to me and obviously, being out of date, I could not fly my aircraft to him. But he's my instructor – another just won't do. So I had to drive two hours to where he was and agree to fly in his aircraft, a vehicle which would prove, I had no doubt, inferior to my own angel. According to my logbook, it's a long time since I seriously flew anything other than my own angel.

The instructor's aircraft was pretty. And It could not have been more different an aircraft to my own. It had a high wing, with an almost scary panoramic view of the ground underneath. I'm a low wing man, have been since my very first hour in the seat. I like to see where I'm going in a turn. I don't care what's underneath me.



I fly, as I always have done, with my left hand on the stick and my right on the throttle. This aircraft was exactly the opposite. That felt very strange. I was convinced I would make a mistake in the middle of some emergency procedure. The speeds were all different too. The view out the front window, which is how I normally work out what is straight and level, was completely different. This aircraft sat much more nose high than I'm used to. The whole feel of the thing was alien from the time I strapped in to the time I stepped out of it.

But you know what? I thoroughly enjoyed myself. The throttle/joystick arrangement took a few moments to get used to, but I was completely comfortable with it quickly enough. Similarly, the straight and level view out the window might have been different from what I was used to, but after a couple of steep turns, I was able to cut my own wake, thereby forcing my instructor to make the coffee when we landed.

Don't tell my Zephyr, for goodness sake, but I actually think the stalls were easier to do. Heaven forbid.

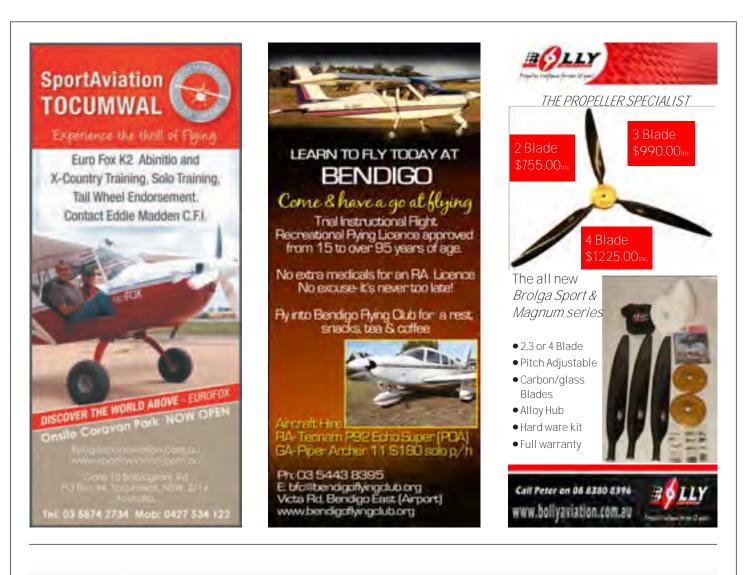
And, although the approach and landings felt different and baffling to me, I actually managed to get it down in a reasonably stiff crosswind, on the correct wheel as smooth as you could wish for. I drove home feeling pretty good about it.

A week or so later, when I took my angel into the air for the first time since doing my BFR, I realised that my awareness of what it was doing had been heightened by my experience in the other aircraft.

I was a lot crisper with the controls, and a lot more precise in keeping my speed under tight rein in the circuit. I was also more conscious of the way the aircraft reacted to my control. It was almost like I was flying it the first time all over again.

I resolved, there and then, to make it a feature of my flying - to fly a different aircraft on a regular basis to remind myself about what I like about my own aircraft. I am sure it will re-establish the discipline I need to remain a safe pilot. In a sense, taking out a different model to remind myself what is so good about my original purchase.

Now if I can just convince the missus of that same argument, I will be home and hosed. Wish me luck.





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Jhe floating world Super Petre

The second in a series of reports on four locally available floating hull seaplanes. by Barry Wrenford

Repetrel from Brisbane to the Lake Keepit Soaring Centre with its adjoining reservoir to make this report possible.

The Super Petrel LS is manufactured by Edra Aeronautica in Brazil. It is a 600kg AUW light sport seaplane, with an empty weight of 354kg, a composite hull, and a virtually fully composite internal structure with the flying surfaces fabric covered, and beautifully finished. It is as proof against salt water as any seaplane could be,

even using stainless steel fittings in vulnerable areas. Hull design is a hol-

low, fairly deep vee, which is quite different to the traditional vee hull, but which worked fine in all of our trials. Deeper vees give a better ride on rough water but have more drag, and tend not to unstick as quickly as a shallower dish shaped hull.

The hollow section in this hull is probably intended to give the best of both worlds. The wing design is also unusual, being a biplane with the larger span upper wings carrying the ailerons. The lower wings are shorter, and being close to the water level, are fully sealed. The tailplane is conventional and sited halfway up the fin, well clear of the water. The controls are push rod operated, and the internal construction is superb. The aircraft is kept as simple as possible, not having or needing flaps. The tricycle undercarriage is retracted manually by a simple lever, doing away with salt vulnerable electric motors.

The canopy sides swing forwards for entering the cockpit, and can be left open for taxying ashore or when afloat. Rohan's aircraft is a couple of years old and doesn't have the latest improvements, which needs to be taken into account here.

The 912ULS is fitted with a ground adjustable propeller, and not the optional inflight adjustable version. Performance naturally is not as nippy in his configuration. Ground steering is by differential hydraulic heel brakes, and the aircraft can be pivoted in its own length. VNE is 113kts, and cruise speeds at 75% power, range from 85kts for the fixed pitch propeller up to near 95kts with variable pitch, which I have previously flown. Crosswind limit is 20kts. Solo operation may require up to 20kg of ballast, depending upon the pilot weight. Fuel is placed in the lower wings within easy reach for filling.

The cockpit

The cockpit width is more than adequate for a couple of largish occupants. The seat back is hinged for luggage access, and adjustable by lifting up and relocating the pins at the base. As the seat back relies for its support on these lower pins, you can't use them as hand support when getting in or out of the cockpit. You step on to the seat and use the overhead cockpit frame and the cockpit side for support. Seaplanes are required to float and accordingly have high sides, requiring individual techniques for getting in and out of the cockpit. Ergonomics are good, a stick each side, throttles on the sidewalls and a big lever in the middle for the undercarriage. The instrument panel is easily reached and the view forward is exceptional, although a little reduced by a non-



standard installation of a VHF transceiver on top. The upper and lower luggage area is behind the hinged seats, able to carry 30kg. Ventilation is by two overhead air scoops in the canopy, which provide more than enough fresh air for those hot days. For the cold days, it has a cockpit heater to keep you warm.



The flight conditions

The aircraft was loaded to 560kg for the flights, 17°C, in fresh water at 1000ft ASL. The wind conditions were mostly below 5kts.

Land operations The Super Petrel is neatly balanced on the

The Super Petrel s neatly balanced on the main wheels, and can be rested on its tail or nosewheel. This makes it easy for a single person to position it in the hangar, using the nose well as a hand grip. Tie down points are below the lower wings. The tyres are fairly small, and although they are fitted with shock absorbers, rough ground does make itself felt. Steering is quite positive by the heel brakes, which are needed initially on the take-off. I prefer steerable nose wheels, but these don't give the same remarkable manoeuvrability on the ground. The initial nose attitude in the full climb at 60- 65kts is high with the direct forward view obscured, but with good visibility around the sides. Full throttle climb is 700fpm, dropping back to 400fpm at

Tyres are fairly small and rough ground does make itself felt





It is stable on the step and feels solid in the turns

reduced power, keeping in mind the propeller is not variable pitch. Approach for landing is 65kts with good forward view. Flare and landing was normal, except that the ground is much closer to one's underside than for a land plane. When slowing on the landing roll, some use of the heel brakes may be needed for directional control.

Taxying on the water

A water rudder is not fitted, and is not really needed. Its idle turning rate is quite remarkable, being nearly as good as it is on the land. In crosswinds more power is needed to get more airflow and control over the rudder, although later mods have been made to improve this. Plough taxying can be done around a wingtip and step taxying gives nice positive and fast turns if needed. You can see from the photos that the lower wingtip is almost touching the water, and that waves can wash over it. This doesn't matter, The lower wing is totally sealed, its internal structure is all corrosion free composite, and the ailerons are high up on the top wing.

Visibility is excellent in the idle and step taxy, but the forward view at the crest of the hump is briefly obscured. To get on the step from rest is standard procedure - full back to the plough position, maybe some forward stick if needed to help it over the hump, back if any oscillation, and you are away.

It is stable on the step and feels solid in the turns. Step taxying is best done at 35kts or above, which is a little more than usual. When operating through large boat wakes, it is best to shut the engine down and let the wave pass, otherwise water can be shipped green over the canopy. The Super Petrel lower wings sit quite low in the water, and when step taxying the wing tips can catch on large boat wakes, so the same procedure applies. Operating in the plough position in rough conditions, water can enter the

FEATURE







hull through the gear leg cut out, so it is normal to operate the bilge pump as part of the pretakeoff checks. This is standard practice with seaplanes.

Water takeoff and climb

Lift off is at 40-45kts, and it took 30 seconds to achieve this with the fixed pitch on the prop. I have been fortunate to fly a Super Petrel with an inflight adjustable propeller from Lake Jindabyne at 3000ft elevation, slightly less loaded. Lift off time there was 23 seconds. It would be reasonable to expect a 20 second lift off here, at our lower altitudes. The takeoff and separation from the water was quite simple. Best climb speed used was 65kts.

Cruising

The Super Petrel settles down to 85knots at 75% power with the ground adjustable propeller. With the inflight adjustable prop flown elsewhere, the cruise was nearer to 95kts. Visibility in cruise is again exceptional. Controls are reasonably harmonised, with the ailerons a little heavier than the elevators, and the rudder forces a little lighter. Hands free pitch stability is almost neutral. In the roll, the wings tend to remain banked, and with the wing weights similar on each side, a stable turn can be done hands off. Yaw stability is good, as it swings back quite smartly. Rolling in and out of turns needs some rudder in proportion to the rate of roll, but for normal banking rudder is hardly needed at all. The electric trim on the stick is quite effective.



Stalls are achieved with a very nose high attitude at around 36kts indicated. A buffet and the high nose attitude provides plenty of warning of the stall, and if not fully developed, the aircraft just tends to mush.

Approach and alighting

Åpproach speeds can be from 56 to 65kts, gear up and with a panoramic view forwards. No flaps to worry about, good control, and alighting at around 45kts with a no fuss typical run out to an idle taxy.

Getting ashore Here the exceptional manoeuvrability of the

Super Petrel helps considerably. If you muck it up, you can spin it around on the spot, and have another go. Rohan advised that when manoeuvring to get ashore with a wind blowing, lowering the undercarriage early helps with control. The gear creates drag, keeping the speed down. This allows higher power settings for more airflow over the rudder and better steering. With non-reversing propellers, you can't stop when the engine is running, so when approaching the shore the engine has to be stopped at some point, to let momentum carry you forward to arrive. Otherwise you use the paddle. The canopy sides can be swung forward at any time during taxying for a quick exit if needed. Because you need to stand on the seat to get in or out, it is best to carry a towel to absorb the water, otherwise you get wet trousers.

With castering nose wheels at boat ramps, it is not practical to allow the aircraft to run backwards into the water. The nose wheel pivots sideways, and the aircraft slews at an angle across the ramp. Best to either turn around at the top of the ramp if possible, and go forward down the ramp, or lift the nose wheel and run it backwards by hand into the water. Because of the tricycle gear and small tyres, taxying ashore can only be carried out on firm surfaces to avoid damage to the nose

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wheel. In any case, steel wheel bearings don't tend to last long in contact with salt water, so keeping wheels retracted saves with maintenance.

Engine access The Rotax 912ULS is easily accessible at a comfortable height, with removable cowlings fully exposing the engine.

Conclusions: For

The Super Petrel is designed to be a simple, efficient aircraft, at an attractive cost, with high quality construction making for minimum maintenance. I like simple well-built aircraft, and the fewer features, the less maintenance and the fewer things to go wrong. Maintaining the engine is simple with easy access from the rear. The Super Petrel is exceptionally manoeuvrable both on the ground and on the water, and is ideal for salt water operations with very little to be affected by corrosion. Its handling is fine, its performance varies somewhat with the prop type fitted, being around mid-range to other available seaplanes. Not having to use flaps simplifies take-offs and approaches, because you never have to worry about overspeeding and exceeding their limits. Good cruising speeds are available, and there is generous space for luggage. Plenty of ventilation is provided for the summer, and even a heater for the winter. The seating position gives lovely forward views of the countryside, and is very comfortable.



Against With the ground adjustable prop it would be a little slow for some, and here I would recommend ordering the inflight adjustable propeller to give significant improvements to both take-off and cruise performances. Flying solo means adjusting the nose ballast to suit your weight. The lower wings are very close to the water, so caution needs to be exercised to prevent impacting large boat wakes while taxying fast. The Super Petrel has stall/spin characteristics common to many other aircraft. The tricycle gear has its own advantages, and makes getting in and out easier, but the nose wheel and the small tyres do limit the places where one can taxy ashore.

Overall, I like it. 🚳

Barry's next two reviews in the series have been delayed until next year.





The Super Petrel is designed to be a simple, efficient aircraft



Yoshi Tanabe's Dragonfly by Arthur Marcel

N 2010, I flew down to the first Temora NATFLY via Moree where I joined the bowser queue behind two Japanese pilots, one by the name of Koji, who was in a Jabiru 200, and the other by the name of Yoshi, who was flying the strangest looking light aircraft I had ever seen.

It turned out to be a Dragonfly, and the owner/ pilot was Mr Yoshihiro Tanabe. Yoshi had come all the way from Osaka, Japan; however, he did the first leg of his trip as a passenger in a Boeing. Yoshi spends a lot of his life in Boeings. He flies them for a living. He is B747-400 captain with ANA, the second of Japan's two national carriers (the other is JAL). He was trained by the Japanese Self-Defence Force but he didn't enjoy the military system. However, he loves Australia, and manages to make it here four or five times every year. He keeps his aircraft in Peter Pretorius' hangar at Caboolture.

Dragonflies come in either Mk I, Mk II or Mk III versions. Yoshi's is a Jabiru 2200 powered Mk II version. This designation refers to the configuration of the landing gear. The original Mk I had its main wheels mounted at the tips of the carnard wing, which was very drag efficient but caused problems with narrow taxiways and also created some structural problems. The MK II had the main wheels still on the carnard, but moved inboard to about the halfway point (there is also a MK II-H arrangement with a hoop style main gear). The MK III uses a conventional tricycle arrangement.

Yoshi had just bought his Dragonfly when I met him on the way to Temora. I remember he was having some trouble starting the motor and commented on the lack of compression. Not long after Temora, Yoshi took the plane to Jabiru in Bundaberg to have the motor checked and was advised to donate the motor to a museum.

The aircraft was built in Adelaide by three partners and first registered in 2005. It was









sold soon after to a doctor in Coffs Harbour from whom Yoshi bought it in 2009. As already noted, it is quite a slippery aircraft. This is fine for cruising, but presents approach and landing challenges. Yoshi has put thought into devising an airbrake system. Due to the carnard configuration, the plane will not stall, but requires an approach speed of over 65kts to keep the airfield in sight over the nose. On gusty days, Yoshi uses 70kts, which makes for quite a long landing roll. However, he says there is excellent rudder authority, so slipping approaches might be the answer. Certainly, this works in other slippery aircraft without airbrakes (like Sapphires).

Yoshi says the usable fuel in his plane is 65 litres and his cruise fuel consumption is 13.5 litres per hour. His cruise endurance (with no reserve) is therefore 4.8 hours (65/13.5); however, he plans on 60 litres and 15 litres per hour, giving him a range of roughly 400nm. To allow for the unexpected, he never plans legs greater than 300nm. He was told by Rod Stiff (Jabiru) that the optimum altitude for the engine is 8,500ft (density altitude), so for long distance navigation, he checks both temperature and winds to determine his best altitude. Yoshi normally flies alone, so there is no problem with

>> Yoshi and his exotic looking Dragonfly at Gympie. Inset, Hiromi, who was fond of rainbows

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W Yoshi normally flies alone, so there is no problem with luggage space

luggage space. If he takes a passenger, the only available space is behind the seats and this is limited.

Yoshi is married to Kimiko and they have a 35 year old son, Yoshito. Their oldest child was a daughter named Hiromi, who tragically died from cancer seven years ago at just 30 years of age. Yoshi told me Hiromi loved Australia very much. She was particularly fond of Manly Beach on Sydney's north shore. When Hiromi died, Yoshi and Kimoko donated a memorial seat in her name to Manly City Council. The seat is set on the top of a hill overlooking the beach. Hiromi was also very fond of rainbows, so Yoshi and Kimoko spread Hiromi's ashes from the Dragonfly over the water off Rainbow Beach, Queensland.

Yoshi has a plan to fly his Dragonfly around Australia with Yoshito in the right-hand seat. He and Kimoko have a more future plan to travel around the world on a cruise ship. This was a dream of Hiromi's.

Flight instructor's forum

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DRAG: may the force be with you

CONTINUING the theme of reviewing the forces involved in flight, this month's topic is drag. We'll take a closer look at the definitions of the different types of drag and the impact of drag on the performance of the aircraft, both in terms of positive and negative aspects of the force and how drag can be minimised.

Drag is defined by NASA as "a mechanical, aerodynamic force opposing the aircraft's motion through the air".

Types of Drag:

Induced Drag is a by-product caused by the generation of lift. It is directly proportional to angle of attack - with induced drag increasing as angle of attack increases.

Form Drag is caused by air flowing over the aircraft. It is the separation of air causing turbulent pockets of low and high pressure. It is seen as the wake behind the aircraft. It is caused by wings, wing flaps, the fuselage, tail surfaces, nacelles, landing gear and engines.

Skin Friction is the reduction of the aircraft's ability to move through the air, due to smoothness/roughness of the surface of the aircraft.

Interference Drag is conflict of airflows moving around objects along the surface of the aircraft, such as points where wings and fuselage are joined, aerials and rivets.

Parasite Drag is the sum of all the drags, not directly associated with the development of lift. ie; not including Induced Drag. It includes Form Drag, Skin Friction and Interference Drag.

Impact of Drag:

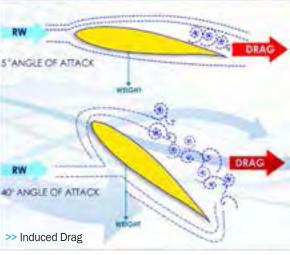
Inefficient flight: Slows an aircraft down, due to its resistance through the air.

Efficient flight: If total drag is at its minimum, (ie bottom of the drag curve), the aircraft will be at a speed which will allow its best range performance. ie able to cover the greatest distance.

Wake Turbulence: Occurs at high angle

of attacks, lower airspeeds and times of high power. Eg: take off and landings. The wake is due to turbulence which forms behind the wingtips of especially larger aircraft and helicopters. Wake turbulence is a hazard to smaller, lighter aircraft because it drifts downwards with the wind and the force can be strong enough to disrupt normal flight close to the ground or adversely affect aircraft on the ground. For example, be aware and mindful of wake turbulence if taking off or landing behind a larger aircraft or in close proximity to a helicopter.

Eddies and Spanwise flow: Vortices (tur-



bulence) which occur due to air flowing and tumbling from beneath the lower surface of the wing (area of higher pressure) towards the upper surface of the wing (area of lower pressure) and also along the wing. This can be minimised in the design of the aircraft by the use of winglets on the end of the wings and/ or low, short wing fences across the width of the wing, spaced along the wing.

Aspect Ratio: is a design feature with respect to the shape and length of the wing. It is proportional to the square of the wing span.

Short stubby wings equate to low aspect ratio. These wings enable greater manoeuvrability. They have higher induced drag (not so great at take off, but beneficial for landing – extending flaps lowers the aspect ratio). They have less drag at high speeds, so are very suited to very high speed aircraft. Many fighter aircraft have wings with a low aspect ratio. Concorde was a very low aspect ratio aircraft. In the bird world, hawks have low aspect ratio wings.

High Aspect Ratio wings are generally long, thin and tapered (elliptical). They are best suited for soaring aircraft, such as gliders and birds such as eagles. High aspect ratio aircraft have less induced drag but greater parasite drag. They have a lower roll rate and a higher amount of inertia.

> Drag is a force which is more than often looked upon negatively. But an understanding of the different types and impacts of drag and its use as a positive force cannot be overlooked. Knowledge of the speed at which drag is at its minimum can provide the best range speed for an aircraft, enabling the coverage of the greatest distance. Knowledge of the best glide speed, minimum drag without power, will enable the greatest distance being covered in the event of an engine failure.

> Use of flaps enables a lowering of the aspect ratio of the wing, thus in-

creasing induced drag and the lowering of airspeed in preparation for landing. Wing design features enable positive reduction in drag. Drag is a much maligned aspect of flight, but with skill and knowledge of it, drag may just be the force with you.

References: Wikipedia www.pilotfriend.com/training/flighttraining www.nasa.gov.au www.quest.arc.nasa.gov

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FEATURE

by Ben Dumbrell Dans Storv

HERE is a time in your life when you look back at what you could have done better or differently.

My recent reflection on the past came about after exciting news that one of my former students, Dan Edwards, a country lad from Gundagai, has recently completed a life long dream by gaining his Commercial Pilot's Licence.

When I first met Dan he was a fresh faced young lad with a smile that was infectious and almost permanent. He had just begun an electrical apprenticeship with a business in Gundagai.

I had an immediate connection with Dan because of my own background in electrical engineering. I knew, as a Senior Instructor, the strenuous, somewhat complex studies and work procedures Dan had in front of him.

All Flying Instructors know we don't have many young student pilots flow through our training schedule, who then venture onto the ultimate level of Commercial Pilot. We can relate to the financial hardships and intense personal pressure they face.

Dan's success is a story all budding junior pilots should read and try to understand what it takes to achieve your goals..

By all accounts, Dan was an average academic at school and, like most of us, did just what was necessary to get over the line. There was potential, but he just cruised along. Dan was always interested in any form of flight during his school days, but to be a professional pilot was way off the radar.

When I first gained my Instructor rating, I set up a Cadet Pilot School at the Tumut Aero Club (to get some youth into our ageing club). Assisted by fellow Instructor, Graham Smith, we approached local schools and advertised in the local paper for candidates for a Cadet Pilot Course.

We received six applications, (five male, one female) who began training. Dan was one of them. We held briefings each Saturday morning and Dan would travel up from Gundagai (a 45 minute drive from Tumut).

Dan was an easy student to teach in the briefing room. He had a keen interest in everything we said and he was even more at home in the cockpit of the Jabiru 170. To many students, the 170 can



be a bit slippery, especially in the flare. However Dan was quick to heed the advice and was ready to go solo very early in his training (although I did hold back his solo flight for a number of hours, mainly to adjust his thinking and overconfidence).

I mentioned earlier Dan's smile – it never left the dial, even when we were doing power-on stalls.

In fact, I often thought to myself "what is it going to take to get some eyeball enlargement or maybe a little gasp for breath from this bloke?" But that coolness under pressure became the style and charisma of the young man. When Dan completed his electrical apprenticeship, he moved to Queensland and began training with Wings Academy on the Gold Coast. I received a phone call from the Academy asking about Dan's training and his professional approach. They were very impressed with the RA-Aus training format and recording system we had for Dan.

They were also impressed with Dan himself.

He had only just let the ink dry on his Instrument Rating exam when, as a result of a recommendation by the Academy, he was offered a flying job fly with a company at Marree for scenic flights over Lake Eyre.

You will have to watch this space for further updates on his career. I believe he has ambitions to fly with the airlines, but he still busy building up hours in the air and gaining ratings in any flying machine he can.

To get where he is now, Dan overcame the unknown, worked under extreme financial constraints in a very difficult and intensive profession and progressed to his goal with the help of devoted parents, Peter and Kathy, and the old Gundagai never-say-die spirit.

Although we are ten thousand strong, pilots are definitely an ageing group. We need to encourage and build our foundation with young people.

I enjoyed the small part I had in Dan's success. It will give me a buzz if I can one day call him as he is crossing high overhead, or lapping the horizon, and say 'g'day mate'.

A toast to Dan - the kid from the bush, a quiet achiever from Gundagai, the student RA-Aus pilot who made Commercial Pilot – a good bloke.

BOOK REVIEU

A Lifetime in Longhaul

by Bill Anderson Griffin press www.billanderson747.com

B ILL Anderson was a Qantas Captain for many years. His career began in 1967 when he was chosen, along with 18 other young men, to take part in the Qantas Cadet Pilot Training Scheme. And what perfect timing it was too.

Their careers coincided with the introduction of the legendary Boeing 747.

The group went on to fly Jumbos all over the world for Qantas. They became Australia's top airline pilots, amassing many thousands of hours experience. But although they all worked together, they would not often get to see each other because their days were spent heading to far-flung places.

When he retired in 2007, Bill set out to record their experiences for future generations. He tracked down 12 of his training scheme buddies and convinced them to recall the challenges they faced and some of the funny stories they had come across in their careers.

Some of the stories would make young captains today go pale. Qantas left seaters were gods in those days, none of that cockpit resource management nonsense in the 70s. They made decisions and hundreds of lives were in the balance. Navaids were often dodgy, some places they flew into were even more dodgy, and often the problems they had to deal with as part of their day to day lives would turn lesser men to jelly.



Bill Anderson

Some of the stories would make young captains today go pale

Each of the former captains tells very personal tales of how they got into aviation, what it was like to be in the air more than they were on the ground and how it felt to hang up their saddles at the end of it all. You get the feeling that by the time they retired, they were heartily sick of the never-ending airports and hotels through which they passed. But none of them seemed to tire of flying the big birds and the mandatory age retirement was a mixed blessing for most of them.

Bill has not set out to write a comprehensive history of Qantas. This is a personal record of a group of men who were pivotal when the Boeing 747 turned international aviation from being a rich man's sport into something everyone could aspire to.

A Lifetime in Longhaul will be a valuable addition to the more official histories of aviation in the 20th century.



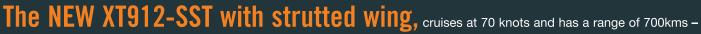
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GOMG SOLO LEARNING TO FLY Dr Gerry Considine







S I stepped out of the car for the first of another few days of flying, a lashing 15-20kt wind was blowing up. I could see the plane was quivering slightly, which may have been caused either by the growing wind into which it was facing or it knew somehow I was about to take the controls for a few landings.

It was a strange feeling doing the pre-flight on the aircraft by myself. It had become a ritual, and much like a physical examination in medicine, there was a set order so I would not overlook something. Thankfully my patients don't present with 'REMOVE BEFORE FLIGHT' tags hanging out of their every orifice.

The wind certainly made the landings trickier, but I felt that gradually my control and response when the aircraft wandered off course became more natural.

After several circuits, Earl asked me to bring the aircraft to a full stop on the next landing. I turned the plane around ready to taxi back to the parking bay when I heard that exciting and dreaded question "How do you feel about going up yourself?"

I had to think for a bit and eventually my response was "yes, if you think I'm ready".

If he was confident in my ability, then I was too. So with 10.8 hours in my logbook, my instructor climbed out of the plane while it was on a runway and I managed a feeble half wave/salute.

Not much of a Top Gun moment. As I pushed on the power, it felt strange not having someone sitting next to me. A few nerves crept in as the plane sped down the gravel. Then pure exhilaration as I lifted the nose at 55kts and climbed up and away.

Then it hit me. Damn! I have to land this thing all by myself now. Of course I had been doing that the last few hours and lessons, but there had been back-up sitting next to me. Before I knew it, the plane was lined up on final approach. Slowly but surely the ground got bigger and bigger and it seemed I was on a good glideslope to land.

I closed the throttle at windsock height and it felt like an eternity for the plane to settle and land. There was a substantial bounce on one

The first solo could be quite costly

wheel before the lift washed away and the Jabiru was firmly back on terra firma. Phew, all done. I returned to Earl who smiled and gave a big handshake. "A little bumpy", I offered, but he said it looked good from outside. All a matter of perspective I guess. I would have to remember to pull the power off a touch earlier in the future.

So my first solo effort consisted of one whole circuit before I headed in for a morning tea break. I then discovered that the first solo could be quite costly. I had to shout everyone drinks. Lucky it was still mid-morning and we would have more flying to do, so no beers at this time. Eight hours from bottle to throttle of course. With the alcoholic option off, I settled for an appropriately named soft drink.

After the break, the plan was to pop out before the wind got too strong for a few dual circuits before Earl would jump out and I would go again on my own. First, a quick trip to the toilet was in order. It was located in a little lounge/museum which had photos from World War 2 when the strip was a bombing and gunnery school for the RAAF. Unfortunately, the picture closest to the toilet door was a shot of the school's cemetery which didn't inspire confidence prior to my second lot of solo flying. Bladder empty. Check. Powered up and ready to head on to the runway. Double check. But as we completed our pre-takeoff checklist at the holding point, three aircraft called inbound for Port Pirie simultaneously.

There was a SportStar, a 172 and an R44 chopper. We decided to cut a few more laps with all of the traffic, so I could get used to making the right radio calls and looking out for aircraft in the circuit pattern.

As was usual practice for Port Pirie, the regular 3-4pm sou-westerly blew up and started making life difficult on landing. We tried a few flapless approaches, but the wind got stronger and bumpier so we decided to call it a day. It would have been good to consolidate some of the solo practice with more circuits, but the weather wouldn't have helped my confidence. So my solo hours amounted to 0.2, that's right.... just 12 minutes. I had a long way to go.

Next: emergency procedures and glide approaches or







Avalon showcase

IT'S been a long few weeks including the AGM / Board meeting, then the Monto Fly-in the following weekend. It was great to put some faces to voices at Monto, hear feedback about the event and also find out how things are travelling in the recreational aviation world at present.

I must say I missed seeing a lot of our 95-10 aeroplanes and even the usual flock of amateur built aircraft I am used to seeing at previous RA-Aus fly-ins. There could be a number of reasons for this like weather and distance. Or it could have been that people just wanted to enjoy the long weekend at the hanger getting their little aircraft ready for some summer flying. I hope everyone will soon have their aircraft ready for some incident free summer flying.

We have been invited to the Avalon Airshow, to be held during the week of February 26 to the March 3, 2013. RA-Aus will have a large display area. Our theme for the event will be Vintage aircraft and we will include aircraft ranging from our early 95-10 single seaters such as the Thruster, Tyro, Skydart, Quicksilver, J-3 Kitten, Saphire, Scout, Karaone, Lightwing, Cricket, Grasshopper and many more one-off designs including



1940-50-60's Pipers, Cessnas, Luscombes, even some Ercoupes, Corby Starlets, Jodel's, Supa Pups and more I have not yet discovered. If you have an RA-Aus registered vintage aircraft you would like to display at the airshow, email me at the office or call and I will start a list of these unique aircraft, which we propose to put on display for the world to see. I hope the Avalon theme will flow onto the Nat-fly Easter weekend at Temora next year where the same aircraft have been invited to appear for our yearly gathering. I hope to have something else happening over the Avalon weekend which will also flow into our Temora event. I will let you know more next month after some additional planning. Make it Safe to keep it up.



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FEATURE

FUEL INJEC

Project Steve Biele Article Geoff Hennig

A LMOST all petrol powered modern road, racing cars and motorcycles use an electronic engine management system. Installed on a J3300, this system has proven to be a worthwhile step forward in performance.

At the heart of the system, a device commonly called the computer manages all aspects of engine performance. Just like all computers it has inputs and outputs that manage both fuel supply and ignition timing.

The computer On the input side are sensors which detect various levels or states and pass them on to the computer via wired connections. For example, some of the input sensors detect such things as atmospheric pressure and temperature, position of the throttle, position of the crankshaft, cylinder head and exhaust gas temperatures, exhaust gas oxygen level and coolant temperature. Inputs are fed to the processor or computer which then controls the outputs.

Ignition control A major control output is working out how long before top dead centre (TDC) the spark fires. In a vehicle at high speed and low load with a warm engine, the spark fires well in advance of TDC, giving maximum economy. It is fired much closer to DTC (retarded location) when the engine is at low revs, high power and cold. All of these outputs are constantly varied by the computer according to the information received from the inputs.

Fuel control There are two major places where fuel is usually injected (sprayed). One system injects fuel through one or more injectors into a device called a throttle body which replaces the old style carburettor. The method is referred to as "throttle body injection". The throttle body has a butterfly (valve) which is used by the operator to control the flow of air forced into the engine by atmospheric pressure unless it is increased with a super charger or turbo charger. The injected fuel mist mixes with the air destined for the combustion chambers.

The other system injects fuel through injectors placed on the inlet manifolds just outside the inlet valves and is usually referred to as "multi-point injection".

There is another less-used injection system called "direct injection" employed mainly in modern diesel engines. This injects a timed amount of fuel directly into the combustion chambers at extremely high pressure. A vehicle system is also currently employed that injects liquid LP Gas.



>> Injectors are attached to the fittings welded to the inlet manifolds and connected both electrically to the computer and to the high pressure fuel pump with high pressure line. Below, a 40 amp alternator kit suppled by Camit Engineering of Bundaberg provides more than ample electrical power

The injector An electronic fuel injector is a solenoid controlled valve. From school science days you might recall that a solenoid is a device controlled by an electromagnet and a spring. For example, they are used on starter motors and irrigation control systems. In a vehicle injector, the valve is opened by an electro magnet which opens it against spring pressure which closes it when the current is cut.

The voltage applied to the electromagnet causing a current flow through the electromagnet is usually 12 Volts.

Mixture control The computer switches an electric current which controls when an injector is opened and for how long. In so doing it releases (sprays) the pressurised fuel at a predetermined time and period into the inlet manifold. It remains open for a longer period when the engine is cold, thus replacing the old choke control or when increased load on a warm engine requires it. A carby heat system to prevent icing is no longer required.

With a "multi point" system the fuel mixture remains in a "cloud" until the adjacent inlet valve opens so injection timing (as distinct from the open period) isn't crucial as the valve controls the fuel charge entry to the cylinder.



The multi-point system The system installed on the J3300 equipped Lightning employs a Haltec computer available from speed shops and used for racing engines. It is then tuned to the wishes of the operator and/or needs of the engine. The management computer is installed, out of sight, under the instrument panel and is programmed with a lap top computer attached via a cable. Once programmed satisfactorily this is disconnected.

Only the fuel injection section is employed in this installation, the ignition being left as stand-

FEATURE 🗾

TING A JAB

Jabiru 3300 Powered Arion Lightning

ard. A flexible high pressure and temperature shielded line supplies fuel to the six injectors through a fine filter and high pressure recirculating electric pump at 50 PSI. The injector only has to be electrically opened for fuel to be emitted.

Fuel mist is injected alternately into three of the six inlet manifolds through their attached injectors where it sits until the adjacent inlet valve "ingests" it and the air. Other sequences are available.

The throttle body Fitted with a cable connection to the cockpit hand control lever, the carburettor has been replaced by a Mitsubishi body with a position sensor wired to the appropriate computer input terminal.

Injectors Designed to operate on 12 volt systems, six Mitsubishi injectors, colour coded to represent their capacity are attached to the inlet manifolds. They are attached to the manifolds on mounts welded in place and angled to spray towards the inlet valve ports.

Fuel supply High pressure, high temperature, heat shielded hose is attached to all injectors with high pressure hydraulic fittings to provide a circulating high pressure feed line from the 12 volt pump. In this system there is no return line to the fuel tank.

Engine timing A sensor is fitted to the flywheel to register the position of the crank-shaft. Other required sensors are installed.

Filter Premium RON 98 fuel with Flashlube lubricant is filtered through an automotive metal cased filter. Avgas may be used as an alternative.

Mixture control Two control pots (knobs) are attached to inputs to give coarse and fine mixture control. In practice, the coarse control is set high for easy start up and the fine control could be eliminated.

Initial tuning A lap top computer with appropriate App. is plugged into the computer through a cable and parameters can be set. Basics can be achieved on the ground and with a fellow pilot on board, details adjusted in the air.

Dynon glass system The Dynon system installed can record settings via the data logging function and performance outputs can be easily monitored. Particularly useful are the constant displays of EGTs, CHTs, fuel consumption, climb, power and cruise details. These details can be recorded and examined later.



>> The Arion Lightning was fitted with a larger battery to insure against a lack of power

Problems and solutions Throttle body A body was hand made.

but the accuracy of the seal around the butterfly/ body when in the off position was insufficiently accurate, ie too leaky, to control the idle. Fitted with two alternate firing injectors, even mixture control to the cylinders could not be established in spite of many alterations to the plenum chamber internals. An English manufactured throttle body fitted with two injectors is now available and has been used very successfully by some.

The original which housed two injectors was discarded in favour of a "multipoint" installation using six injectors and a Mitsubishi throttle body. To obtain even better distribution, two injectors which delivered a little more fuel for the same timing were installed on two of the six cylinders.

The plug "soot", CHTs and EGTs proved the best method to assess even mixture distribution.

For reasons unknown, the throttle body with two injectors experienced a few seconds delay when going from idle to full power, a load of fun if a go-round is called for. Multipoint injection cured that problem.

Failsafe mode An axillary pump with a ground adjustable jet has been installed in front of the throttle body to provide fuel in the event of failure. Although it does not supply the ideal mixture at all revs, there is a spot where the pump can be switched off and fuel is still drawn.

Some builders have left the carburettor in place to not only control the air flow In place of a throttle body, but provide a fail safe alternative for the system.

Current consumption The installed Dynon "glass" instrumentation system has a programmable low voltage warning light which showed a problem was evident at times.



>>> A high pressure pump and quality fuel filter fitted very neatly on the firewall

For example, this became apparent at a delayed hold on a RWY hold point when power provided by the original J3300 alternator was too low. The problem was exacerbated if the xenon strobes, visibility lights and other auxiliary equipment were switched on. The problem was even more evident when extra current was required as the electric flaps were lowered in preparation for landing. As testament to its ability to operate at low supply voltages, the injection system never faltered. To be on the safe side, a 50% larger battery was fitted as well as a 40A alternator system available from Camit Engineering, Bundaberg. This neat unit eliminated all voltage drop problems.

Flight performance Best described as exhilarating, there is certainly a good deal more power and economy available but, as any mechanic will tell you, one is available at the expense of the other.

The very satisfying general cruise figures obtained with the 61 X 60 inch Brent Thompson (NZ) propeller at 2800 revs are 140kts at 18 litres per hour. The characteristics of the airframe, load and atmospherics naturally all have an influence on these but it sure is a great mile eater.

Steve, the builder of the kit built Lightning, is to be congratulated for his perseverance, patience and attention to detail. He has faced a steep learning curve and came up smiling with a fabulous injection system in an area where few ultralight pilots would wish become involved. He has learnt a great deal in the process. It can cost us to get involved in a learning process but it is very rewarding when a system such as this is created through personal effort.

Thanks are due to fellow RA-Aus pilots, consultants and advisors, Helmut Frensch and Wayne Johns, for their generous assistance with this project. FEATURE



FERTURE **West to east,** east to west

by Bob Emery West to east at ground level

🕇 wo years ago my wife, Dayle, and I decided we were tired of our WA jobs and that we should consider a change.

So we bought a caravan, rented out our Perth house and set off for the east, complete with Border Collie in the back of the car. Across the Nullarbor, onto Adelaide, then coastal around the Great Ocean Road and up to Oueensland. One place we loved enroute, was Lake Macquarie, just south of Newcastle. Here we found a great rental home overlooking the lake.

I made friends with many aviators and musicians (my two other loves). This led me to help complete and later buy a two seater Zenith Zodiac CH 601 XLB kit and carry it through to test and flying stages.

After two years, we moved back to Perth. My friend, Geoff Bell, flew to Sydney to join me flying my plane back to its new home in Northam (Perth).

top left: Bob and

rugged up; The border of WA, and

East to West above ground level

The night before our flight Geoff and I stayed in the Cessnock club house and slept on the lounges.

The next morning, fellow builder, Geoff Eather, saw us off.

We lodged a plan and SARTIME (using OzRunways and NAIPS) and departed at 1100 into clear skies for a lovely flight up the Hunter Valley, then down to Mudgee and on to Temora.

I fuelled up and taxied to Sam and Carol Richards' hanger/house. Temora is an air park, where the houses back onto hangers - a great concept. Carol was at Narromine for the SAAA weekend, but Sam was there. I recorded two songs in Sam's studio for his national radio show which was good fun. We had a good sleep and enjoyed Sam's company and hospitality.

The next morning we departed for Mildura for fuel (and coffee of course)

and then onto Parafield. The weather started to close in and lowering cloud brought some showers. We were given a clearance to land (I am also a GA pilot) and parked up overnight.

Monday the 17th - still low cloud but the forecast was fine to the north, so after refuelling we departed Parafield at 0830 in a light shower. We flew to the Gulf of St Vincent outbound on the VFR route to the north, maintaining 1000ft to stay under cloud. We stayed at 1000ft for about half an hour and then eventually the cloud cleared. I saw only one other aircraft which was inbound to Parafield.

By Port Pirie, we climbed to 8500ft to cross Spencers Gulf to Whyalla. It was very pretty crossing the gulf, with ships below looking like toys in a beautiful blue sea. A quick refuel, and after waiting for a Rex Air flight to depart, it was on to Streaky Bay and Ceduna. The weather clear but we had a 15 to 25kt head wind and some turbu-

lence. We flew coastal Streaky Bay to Ceduna, which was very beautiful. I encountered a crosswind on the main runway (29/11) which was very strong so we landed on a dirt runway 17.

We were picked up by Kirk and Caroline from the Big Four Tourist Park as we had previously arranged. Very good cabin accommodation. Kirk and Caroline were wonderful hosts and even drove us into town. Geoff uses walking calipers due to childhood polio so the help was greatly appreciated.

The following day, we had arranged a 6am lift but after checking the weather I decided to spend another night in Ceduna, where we had good accommodation, rather than wait on the Nullarbor in average accommodation. We enjoyed a lazy relaxing day.

The next morning was windy, but the forecast was okay further on. We departed at 0830 for Caiguna. We had a beautiful trip in the morning and did a 500ft flight along the









We fell into a hole in the sky, maybe a willy willy



head of the Great Australian Bight. We saw more than twenty whales. This section was stunning, with the cliffs in the background and beautiful blue water. Unfortunately my video camera which was mounted in the cabin, played up so I didn't record this part of the trip. We encountered very strong turbulence landing at Nullarbor.

After coffee and sandwiches (which cost \$40 for two), we took off for Caiguna. It was very bumpy under cumulus cloud which was too high to get over, however after two and a half hours of this, I'd had enough, so we landed at Madura (avoiding a willy willy on final and kangaroos on the strip), only to discover I had to walk 2km because there was no mobile or radio coverage.

The budget accommodation at \$85 a room was just that - the reading lights didn't work, the curtains fell off when touched, and the

shower filled to about 40mm deep before slowly draining. The dinner also was extremely average.

Into a hole

Fog delayed our departure the next morning, but we got away at 0830 with a one hour flight into strong headwinds (of course) to Caiguna. (Fuel was \$3 a litre. Two coffees, two soft drinks and two sangers cost \$39).

We flew over cloud at 8500ft most of the way to Kalgoorlie but had to go under cloud as the tops got higher for the last 90 minutes, but was it was not too bumpy. At Kalgoorlie, I joined cross wind for runway 29 behind a Cessna doing circuits. It was pretty bouncy, then halfway down final the sky fell in. We fell into a hole in the sky, maybe a willy willy. It was the worst turbulence I had ever felt. My mobile phone came out of my pocket and

landed on Geoff's lap and all sorts of stuff from the luggage shelf came forward. I had installed a luggage net the day before we left Cessnock which helped stop the larger items. The engine never missed a beat, but when I looked down, my Dynon EFS, my radio, transponder and GPS had all lost power - I landed and taxied to a parking area and got out to re-gather my thoughts and think it through. It occurred to me that the battery isolator switch which is on the passenger side firewall above Geoff's feet may been kicked. Sure enough, when I checked I found it off. And when turned on, all systems lit up. Phew! My good friend, Luke, from Kalgoorlie met us with water and sandwiches. Luke is 203cms tall so I got him to sit in the aircraft- he got in okay but could not close the canopy without leaning into the centre.

FEATURE

After an hour, we decided to push on for Perth and Northam. We flew on top of cloud for two hours at 8,500ft, then under as the tops approached 10.000ft.

After dodging a few showers we landed in Northam into a strong westerly wind on runway 32 and shutdown at 1715. After cancelling SAR for the last time, I rang my wife to pick us up.

I felt a real sense of achievement. It was because of thorough planning my trip ran so smoothly. I constructed a spreadsheet with every frequency change listed including locations, when to change, restricted and danger areas, weather info and contacts.

This really made a difference.

Geoff was my autopilot - he was good at holding a course and altitude. The Hackman mixture control I fitted before I left was very effective in reducing fuel burn and monitoring EGT. It made for a great trip.

The Jabaru 3300 ran beautifully the whole way.

Plannina

I planned at 19 hours nil wind, but we encountered strong headwinds on the Adelaide to Perth leg up to 35kts which resulted in a total time at 25 hours - 130 litres or \$400 extra at Nullarbor prices.

Would I do it again?

Tomorrow would be fine - after a service - and in my Zenith Zodiac CH 601 XLP any time.

For more information, contact me at bobemery51@gmail.com. 🐞



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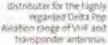
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PILOT NOTES

PILOT ADTES

Evektor SportStar

Pilot experience: 110 hrs, all on type. The pilot was turning the aircraft to backtrack after landing when it started to slide sideways on the sloping surface near the strip. The pilot was unable to stop the slide but managed to shut the engine down just before the propeller struck a small tree, damaging one blade.

EDRA Super Petrel

Pilot experience: 70 hrs, 22 on type. After a flight of approximately 1.75 hours the pilot landed the aircraft at an aerodrome with the undercarriage retracted. The surface of the strip consisted of grass and gravel and the aircraft slid along the strip on its hull, sustaining no significant damage during the incident.

Jabiru J120C

Engine: Jabiru 2200B, 437 hrs ttis.

A small amount of oil was noticed on the ground under the engine and an inspection revealed that the top rear through bolt on No 4 cylinder had sheared flush with the top face of the cylinder.

Teenie Two

Pilot experience: 198 hrs, 2.5 on type. Conditions: Light wind, nil turbulence.

After having done some repair work on the aircraft the pilot was intending to do a circuit to check it out. He took off with the knowledge that the airspeed indicator was not working properly, believing that he could "fly by feel". Eyewitnesses reported that on the downwind leg the aircraft was flying at low speed in a nose high attitude. Shortly afterwards it stalled and spun into a 30m deep ravine. The pilot suffered severe injuries and the aircraft was destroyed.

Tecnam P2004

At the completion of dual training culminating in circuits the student noticed that there was damage to the leading edge of the port stabilator inboard of the tip and in line with the port main wheel. Closer inspection revealed damage to the stabilator consistent with having struck a runway threshold light, although no impact was felt or heard.

Jabiru J230

Engine: Jabiru 3300, 150 hrs ttis.

Shortly after take-off the engine began to run roughly so an uneventful landing was carried out and an inspection was performed on the engine. During the inspection it was found that a piece of the inlet manifold gasket on No. 6 cylinder was missing. It is assumed that the missing piece of the gasket allowed air to enter the manifold, causing rough running at high power, as the engine ran perfectly after the gasket was renewed.

Sapphire Mk 1

Engine: Rotax 447, 200 hrs ttis.

After having done several circuits without trouble the engine failed on take-off. The pilot was able to land without any problem and found that the engine still developed enough power at a low throttle opening to enable the aircraft to be taxied back to the hangar. It is thought that the power loss at high settings was due to faulty seals in the fuel pump resulting in a reduced volume of fuel being delivered at these settings.

Jabiru J230D

Conditions: Light wind, nil turbulence. Pilot experience: 25 hrs, all on type.

After landing a student on first solo lost control of the aircraft and it departed the runway and struck a tree with the right wing. It then swung around and the left wing and one door were also damaged. The pilot was not injured.

Jabiru LSA 55

Conditions: Light wind, nil turbulence.

On the last landing of a series of circuits the aircraft began to veer left and right as the student sought to maintain directional control. As he was overcorrecting with control inputs the instructor took control but was unable to prevent the aircraft veering off the runway after which it entered a gentle ground loop and stopped facing 180° to its original heading. None of the crew was injured and the aircraft was not damaged.

Jabiru J160

Pilot experience: 30 hrs, 24 on type. After completing a two circuit check with an instructor the pilot took off for some solo flying. The radio started to crackle and the pilot received no response to his downwind call so he used another headset with the same result. Another combination of headset/ PTT switch was tried, still without result, so the pilot turned base and final transmitting "blind" as he did so. At this point the tower flashed a green light and the aircraft was landed and taxied back to the park, an example of good airmanship and procedures in a relatively inexperienced pilot.



members' market Selling your Aircraft?

2439 JABIRU J-170C



Airframe 1815 hrs, Engine 3370 hrs, latest mods carried out by Jabiru factory. New tyres, Dynon 10 EFIS plus analog instruments, Garmin 296 colour GPS, Transponder, external charge connector, lambswool seat covers, spats as new, adjustable rudder pedals, strobe, L2 maintained, always hangared, one owner since new. \$63,000 inc GST. Phone Bill 0429054205.

2580 TECNAM BRAVO LSA



Immaculate condition only 165 hrs TT. 100hp Rotax 912. Dynon EFIS D100. Garmin Mode C transponder. Garmin radio. AvMap large screen colour GPS. Dual fuel flow meters with electric fuel gauges. Electronic trim. Fully maintained by LAME. Always hangared. \$105,000 + GST. Phone 0411 471 273 for more details.

2645 JABIRU J200A



19-4165 Manufactured 2004, TT480, engine Jabiru 6 cyl. 120HP. Mechanical lifters Jab prop. Stalls 43kt, cruise 115-120 MTOW 600kg. Three strobes, 2 radios, 1 transponder, auto pilot, Intercom EFIS-D10 System IK2000. Flight & engine monitor, GPS MAP Garmin 296. Cabin heat, manual flaps serviced every 25hrs. Nil accidents. 138lt. Hangared L.T.V. \$75,000 Ph George 03 9707 3238

2671 JABIRU SP 500/6 19-3717



Well maintained and hangared. 449.5 hrs. 123kts @19ltrs hr. Sweetapple cruise prop, custom extractors, 10 ply mains, 85ltr tank. STD gauges + electric turn coordinator, volt meter, fuel flow meter. XCom VHF & headsets, + UHF & 2xGPS. Grim voltage regulator, Anderson jump start plug. Will deliver anywhere. \$55,000. 08 9921 8790

2750 JABIRU SP-6 19-3485



Regd to 27/6/2013, TTIS A/F 449 Hrs, Engine 14.4 Hrs (New) 3300 (120 hp) Hydraulic Lifter. Garmin 126/8 GPS, Icom A200 Radio / Intercom, ASI, ALT, RPM, EGT, Turn Co-ord, Oil Pressure and Light, VSI, CHT, Oil Temp, Volts, Elec Fuel Pump, Compass, Throttle Lock ,Wheel pants to mains, Hyd Brakes, 80 Lit Tank, Cockpit cover, Build Books, Extras. A great little craft in great condition, VNE 132, Cruise 110-120 Kts. Asking \$55,000 for quick sale, East Gippsland. Phone Ray. 03 51555181; 0411956734 (Optus), rjwheels@gmail.com

2760 JABIRU J230C



Jabiru J230C First to see will buy. Excellent condition, Flies hands off, genuine 120 knots, one owner, always hangared, serviced every 20hrs, TT445 hrs engine & airframe, Microair radio, transponder, JPI

Fuelscan computer, couples to Garmiin 296 GPS, iPad bracket, Garmin Pilot II GPS, 10 ply tyres, Low fuel light, Dual strobes, many extras, can deliver. Reduced to \$67 500 + GST. Ph 0418 930 100

2762 SUPAPUP MK IV



Excellent condition. Originally VH registered. Only 32 hours on new Jabiru 2200 & Jabiru prop. Aircraft has only 99 hours total time RA-AUS registered until July 2013. Matco hydraulic disc brakes, cargo compartment, really good panel including artificial horizon, 56 litre wing tanks, Microair radio, Hobbs metre and polyfiber covering. A larger oil cooler has been fitted. This Supapup cruises at 90kts and climbs at 1250 fpm. Burns 14 lph. Included is a custom made, Qld registered trailer. \$27,500. lan 0417 899 524

2775 PIONEER 200 XL. 24-5118



Factory custom built. Long range tanks, Lawrence GPS,SL40 Garmin radio, JPI FS fuel flow monitor, standard gauges, electric aileron trim, electric elevator trim, flaps, metallic blue paint, blue tint canopy, landing & strobe lights, cabin heat, wheel spats. Privately owned & only flown by owner. Excellent Condition. Always kept in fully enclosed hanger Nill accident. Magnificent to fly 231 Hrs. \$75,000 Ph. 0429 457 759

2765 THRUSTER T 500 25-0780



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2 seater T/T 1165 hrs, 582 Rotax 225 hrs since overhaul. UHF and ICom VHF Radio. New tubeless tailwheel. Long range fuel tank. Flies great and well maintained. \$15,000 Hangered in Helidon/ Toowoomba area. Complete spare engine and gearbox also available. For more info ph Paul 0427 622 176

2823 AIRBORNE TRIKE XT912



Save \$25000+ on trike in excellent condition with no incidents. Upgraded to topless sst wing with 65hrs, base 480hrs. Always hangared & covered. Comes with full set & camping covers, coms, helmets, garmin 296 cradle, high windscreen, engine cowl,

landing light, strobe plus. Trailer available. Great trike at give away price. Making way for new aircraft. Call Les 0419518353.

2926 JABIRU SP-6 19-3627

Jabiru 3300 engine [solid lifters] 781 hours total time. Lowrance 2000 color Gps 5". Reg till 12/12. Level 2 maintained.Microair radio/intercom, 2 Blackhawk Headsets, ASI, ALT, RPM, Electric Turn Co-ordinator, Oil Press, Oil Temp, VSI, CHT, Volts, Elec Fuel Pump, Compass, outside temp gauge, Throttle lock, Spats x 3, 851t Fuel Tank, Aircraft Covers, external power supply. A lot of hours were added to the build to make the door fit and fairings better than Jabiru, professionally painted 2 pack, Cruise 115 kts 19 lt hr. Asking \$42,500 . Ararat/ Geelong area. Ph. Doug 0352552971 or 0409084589. dpark221@gmail.com

2942 TL 2000 CARBON STING



680 hrs, always hangered, Rotax 912 uls, EFIS, transponder, full recovery system, CD, in flight adjustable prop, wing tip strobes, cruise at up to 135 kts. Too many extras to list. Full history. Thousands below replacement. \$107,000, inc GST. Phone Terry, 0427 561 562 for more details.

2971 KITFOX 111



Reg 28-4154 Rotax 912 TTIS 540 hrs. LAME built and maintained and always hangared. Instrumentation includes AH, VSI, and engine instruments. 100litres fuel. A great versatile plane, a joy to fly. Cruise 75+ kts. at 14ltrs/hr. \$38000 Ph 03 5978 8212.

2996 CARBON CUB SS



White and Silver, rego 24-8015 as seen at Temora, 180 hp, ipanel, extended baggage, 3 by 3 landing gear and more, 60 plus hours still under factory warranty, big discount from new price. Call Steve 0414 444 971

3012 JABIRU J200B 19-4103



Avelon Winner 2007, best overall recreational aircraft. Excellent condition always hangared. TT435hrs serviced every 25hrs. Microair radio, Garmin 296 and 95 GPS. Low fuel light, heater, 2 strobes, manual flaps. Nil Accidents. \$72,000 or near offer. Ph 0428 536 338. Email bevanlane@bigpond.com

3015 MAGGIE 19-7617



Single seat all metal, VW 1835 single iginition, ICOM vhf radio. Designed and built by owner. Price \$12,000.00 ONO. Tied down near Gatton SEQ. Email Don at don. mellow@optusnet.com.au or ring 0732818449

3020 XAIR 2.2



Jabiru motor. 430 hrs. Electric carby heat. Patroney prop. Wide entry doors. Aircraft has been well maintained & regularly serviced. Motor had a top end overhaul 30hrs ago.Ultralam Skins replaced 3.5yrs ago. Reliable fun plane.

Criuse at 70kts burning 14 ltr/hr. Hangared at Warnervale. \$20,000, Sheree 02 4390 0005 or 0408 680543

3022 SONEX 19-8143



Aerovee 80HP. TT 100 hrs. Garmin 196 GPS. Microair

Radio. Headset. Cover. Cruise 100kts. \$46,000 OBO Phone 0412 537 730

3027 SAVANNAH



106 hours, built 2006, always hangared, professionally maintained. Bolly prop, V.G.s fitted, standard instruments, dipstick access, Garmin SL 40 radio, Garmin 296 GPS. Brakes fitted both sides. \$48,000 negotiable. Call 08 8536 3101 or losdos@optusnet.com.au

3028 FLIGHTSTAR 11 SC



Brand new beautifull 2 seater.Protective covering seen on doors and windscreen has not yet been removed.Airframe 0 hours.Engine 0 hours.HKS 80 HP fuel injected turbo with intercooler.Aerolux 3 blade adjustable prop with spinner and individual blade covers.Hydraulic disc brakes.Carpeted interior.Easy clean Mylar flying surfaces.ASI,VSI,Tacho,Manifold pressure,Slip indicator.\$39.500 complete or if desired, \$29.500 minus engine and prop. Ph.0419439976.Email formefitness@bigpond.com

3032 KR2 - FAST & FUN



Jabiru 2200 engine, 110 Hrs TT, Sweetapple Propeller, Galaxy Ballistic Shute, XCom 720 Radio with Intercom, 110It Fuel Capacity, L2 maintained, Always hangared, 110Kt Cruise, 15It/hr, \$21,000 ono, 0419 654 048, more at http://athertonairport. com.au/atherton/forsale/kr2/

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 - Audible alarm capability
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- Email: info@horshamaviation.com.au

MEMBERS' MARKET

3035 NEEDS TLC - STURDY LITTLE



95.10 aircraft. Needs one wing recovered and engine. Has mounts for Rotax 447, large aluminium long range tank. One weeks work and you've got a flyer. \$1000.00. Phone 03 5856 2154

3054 LIGHTWING 582



582 Rotax 290hrs, Factory built, rego 25-0326 until July 2013. New brakes, fuel filter and plugs. In good condition. Always hangared near Glen Innes. Currently in Ballina. Owner has moved to Sydney, \$23,000. Call Sam Mob; 0427 929 211

3055 CHEETAH XLS BY RAINBOW AIRCRAFT



Factory built 24 – registration. Jabiru 2200, 80 Hp engine. 64 Hours total time engine and airframe. Single owner and pilot, always hangared. Easy to fly and responsive in spacious cockpit. Cruise 70kts, 110 litre tank. Built for tough conditions. Digital engine monitoring and flight instruments with analogue backup. Economical. Very easy to maintain and work on. Based at Bunbury Airport, WA. Price AUD\$ 38 500 ONO. Half share considered.

3057 12/2007 SPORTCRUISER



Always hangered about 500 hrs in very good condition, leather seats adjustable pedals toe brakes both sides. garmin 296 gps radio and transponder, dynon D100 nav & stroibe lights, wing lockers, new 3 blade prop update front gear assy cruise 115 knots priced to sell \$98.000 phone Tony on 0429 132 128

3058 TECNAM RG 2000



700Hrs in very good condition owend and maintaind by L2 & L4 friend all updates done lates heavy duty undercariage incluiding rocker boxes, Garmin AERA 500 GPS 2 x microair radios and microair transponder full panel Vac turn & bank AH & dg. Fantastic retrac plane to

fly 124 knot cruise \$100,000 phone Tony 0429 132 128

3060 5055 TECNAM P92 ECHO SUPER



As new, 2007 mdl, 68hrs. A S, well equipped with Dynon D100 EFIS & Digiflight VS II autopilot linked to Lowrance 2000C GPS, Garmin SL40 VHF Comm, Garmin GTX327 Transponder, Garmin 296 GPS, Fuel Scan FS-450, Elec. AH/Turn and Balance, Cabin heat, Strobe, L'Light, L.R Tanks, and more, Hangared, LAME Maintained, \$105,000+GST, tax invoice avail. Ph Ian 0418 311 896 or mcpherson01@live.com.au

3061 BUCCANEER ULTRALIGHT



buccaneer amphibious 2 seater with rotax 618 75hp. Dual controls, flaps, retractable undercarriage, icom a210, two bose noise cancelling headsets, alum fuel tank, epirb, great fun aircraft,excellent condition tt 150 hours , must sell \$22000 onco, email hydelotter@hotmail or call 0488791175

3065 TRIKE TRAILER



Fully Enclosed Trailer dual axle storage shelf security mesh custom designed wing box with rollers and ladder wheels jerry can holders winch your portable hanger one man operation a must to protect your trike from the weather Paid \$14000 Sell \$7000 good condition. Phone 0419610975 email martin@ lakemacquarieglass.com.au

3066 MICROLIGHT XT 912 4 STROKE



Airborne Trike as new TT 220 hours Helmets (2x) intercom radio and Headsets cruise wing engine cowl large windscreen Spat, prop and trike covers Suite. New trike buyer Colour Garmin GPS seeing is buying Price \$44000

the lot Call Martin 0419610975 Email: martin@ lakemacquarieglass.com.au

3067 JABIRU J230D SYNDICATE SHARES



Factory-built late 2009; as new, 265TT; Garmin 495GPS, transponder; extras include Punkinhead

covers. Joint owners seek one or two new partners for a three or four-person syndicate at Warnervale. Quarter share: \$21,000; third: \$28,000. Phone Jack (0407 241 783) or Thomas (02 9804 0392).

3077 AIRBORNE 912 TUNDRA



Full package. Base 538hrs Upgraded by Airbourne at 375hrs with new Streak 3 wing ,new mast , was used as Airborne Tundra demo. Purchased from Airborne May 2009 with new Lynx helmets & headsets, training bars, full set of travelling

covers & camping cover. Includes ACT registered trike trailer for pod & wing & with 4 jerry can holders. Garmin GPS111, GME PLB MT410G, additional handheld Vertex Pro V1 plus tools , spares & some parts. Bolly prop recently serviced. Hangared Canberra area . Log books. Contact Rick 02 6258 5579 Mob 0409 847 680 All for \$46,000.

3081 2006 TECNAM



P2002 Sierra. Rotax 912 with GT prop TT 1000. Dynon D100 EFIS, Garmin SL40 VHF, Garmin GTX327 Txp, JPS fuel flow, AVMAP EKP-IV GPS, strobes & nav lights, heavy duty custom made cover. Privately owned - Excellent condition. \$93,500 No gst. Ph 0402 033 347

3082 FACTORY BUILT JABIRU



Isa 2200, engine time 100 hrs, total 1380, normal dash transponder, icom radio, absolutely a pleasure to fly, E-mail dippy-dave@hotmail.com or call 0403871451, located coffs harbour NSW \$37,500

3084 JABIRU J200 19-3512



Deceased Estate, Serial no. 0001 Built by Phillip Ainsworth of Jabiru Aircraft Pty Ltd., First registered 16 March 2001. Full GA instrumentation, Garmin aera 500 GPS, Microair M760, 600hrs TSO, Hangared at Penfield Sunbury, Sold with fresh annual inspection. Many extras, please call or email for more details. \$59000, contact Russell ph 0429959446, russlee029@gmail.com

3085 JABIRU 1600CC



ITALIAN HIGH PERFORMANCE WOOD COMPOSITE PROPELLERS SINCE 1969

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MEMBERS' MARKET

Always hangared, registration 24-3075, factory built. Full instrument panel with transponder, Bendix King KT76A, Icom A200 2 channel with intercom and two headsets, 50 litre fuel tank, Iow hours since overhaul by Jabiru. Quantity of spares, Iambs wool seat covers, epirb, etc. Price AUD\$30,000 including GST. Contact Barry Roberts – 0400134129 or (08)93322735

3090 SUIT NEW BUYER



53 hours, top of the line Airborne XT 912 SST. Ex factory January 2010, SST wing, Disk Brakes, Tundra Wheels, High windscreen, SKY DAT G2X avionics, Training Bars, Log Books. Microair M760 radio dual channel monitoring, 2 x Icaro helmets, 2 x Lynx head sets, pilot/

passenger intercom, dust covers, engine cowl, wing bag. Rotax 912 engine, carby heating, electric start, Bolly prop. CASA approved and tested to 6G +ve and 3G -ve. Always hangered, checked over by Airborne, now stored at their factory. Price \$55,000. Frank 0439 496 562

3093 EVEKTOR SPORTSTAR MAX



New Dec 2009, 360 hours, Excellent Condition, always hangared, Rotax 912ULS, In flight adjustable prop, leather seats, Dynon D100, Landing Light, Garmin GPS Mount, Icom Radio, Mode C Transponder, Additional vents, toe brakes, 115Kts TAS, superb aircraft to fly. L2 maintained. Brisbane. \$118,000 offers Ph: 0421 278 580

3095 SONERAI 11L

For sale \$40,000.00 or swap for lightwing, kitfox, Gazelle or similar price ads. Phone 0400 594 886

3099 PACIFIC HAVEN AIRPARK

own a share in a 3000ft. Bitumen runway with pal

lighting @ bitumen taxiways. Near hervey bay. 3 Bedroom house with 15x14 metre hangar. On 2.5 Acres, established gardens and lawn with friut trees. 2 Dams, 2 tanks. No body corp. Fees. For enquires phone 0741290651. Or donlee@ y7mail.com

3100 ESQUAL-VM-1



Reg. 19-4744. F/glass kit, built by experienced builder to 544kg MTOW. Only 94 hrs.eng.,fuz, Rotax 912 100 hp.Cruise 115 Kt.18 Lt/hr Glass C/pit. Dynon EMS & EFIS.Const/spd or Inflt.adjust.prop. Garmin SL40 radio & 296 GPS.2 Dav/Clark H/sets. 3 strobes,2 Land/lts. Constantly hangared. Best offer over \$60,000(no GST) as other hobbies pending. Ph 0352412002---0410524129

3101 SAVANNAH SERIES 2 VG



470 hours. Always hangered. 150ltr tanks @ 17 lph. Tundra tyres, 3 bladed cool prop. Landing light. Observer doors(makes it wider). X-com radio with intercom. Extended lugguage bay. Fuel flow meter. Mounted Lowrance Gps 2000. Price \$50,000. Email

lern2fly@hotmail.com or ring 0419414031.

3102 CHOICE OF TWO



1. 19 Registered - Dynon glass cockpit and auto pilot - lowrance 2000c colour gps garmin VHF radio and garmin T/ponder. Jabiru 3300 engine. 2. LSA

Registered - GRT glass cockpit and auto pilot - garmin VHF radio and garmin T/ponder - garmin 695 colour GPS. Jabiru 3300 engine. \$120,000 (negotiable) Dennis Brorchardt 0408 813 501 Goolwa Airport SA.

3104 ROTAX 618 ENGINE

75hp complete with e type gearbox and exhaust system done 130hrs \$3000 ph paul 0427 622 176.

3108 SAVANNAH FOR SALE



Rotax 912 - 100hp, XCOM radio/intercom, 300 hours engine and airframe. Always hangered, MOGAS used 95%, regular servicing by LAME. Fuel flow meter. \$52,000 ONO, 0417 141 542

3109 X AIR



TT 135 hrs, rotax blue head 582, micro air avionics XCOM intercom, sky dart. G x 1 panel, cummins spinner, lexon doors. Spats exl-condition. \$22,000 ono, hangared wentworth. Ph 0448 001 825 Geoff.

3113 SPORTSTAR SL



Bargain low hour Sportstar SL, private use, 215 hours approx TTIS. Dynon D10A EFIS, almost new Varia 2-blade in-flight adjustable prop, Garmin GPS495 AirGizmo dock, electric t&b, Whelen LED landing light and external power socket. 600kgs MTOW. L2 maintained, RA-Aus registered. \$99,000 - no GST. Please call Mark 0414 642 340



MEMBERS' MARKET 📕

3114 X-AIR 19-4985



Latest model, TT 125hrs 582 engine and airframe , Natfly winner 2008. Excellent condition, 3 bladed Brolga prop, 80 litre fuel tank, electric start, mylar fabric for easy cleaning,doors email: waynej@ optusnet.com.au for more information. Always covered and hangar, Cruises at 55 to 60 knots. \$24000 Ph 0429659077

3115 DTA VOYAGEUR II



If you are looking for comfort from a trike, then you have found it. The DTA Voyageur II is overflowing with features to make you and you passenger as comfortable as possible whilst airborne. The 100hp Rotax 912 delivers over 6000 rpm when you need it most.

The aircraft comes with full carbon fibre faring and wheel spats, 2 XXL side carry bags and one under seat pilot bag. Full travel bag for the wing. \$53,000 including a Garmin Pilot II GPS system. Contact Tim 0417217806 or view full ad at moore-pictures.com

3116 HORNET STOL



This Hornet is possibly one of the best examples around. Aircraft fitted with rear cargo door and low stall wing tips. VHF - UHF radios. The aircraft is beautifully finished and is a pleasure to fly. This aircraft is the ideal work horse for large properties or prospecting and is perfect for rough strip applications. The aircraft is in excellent condition and ready to go. Located in Western Australia, new aircraft has arrived need hangar space. \$80,000 0.N.0. Contact Rod 0427 266 036

3117 2004 EVEKTOR SPORTSTAR



Reg 24-4399 certified for 12000 hrs TT 3300Hrs, Rotax 912ULS TT920 hrs. Three blade wood comp prop. Standard instrument pack plus Bendix radio, Transponder mode A and C, Tru track GPS and horizon. Always hangared, level 2 maintained. \$65,000. John 0412 965 407

3118 XT 912 TUNDRA



Streak 3. Only 120 hours TT, in mint condition. Extras

include, rear hydraulic disc brakes, engine cover, Micro-air radio, Lynx headsets, helmets, Aircraft high output strobes. All new Air Hogg accessories include, Belly bag and prop net, on-route dust cover for pod and engine, extension windscreen, and full wing cover. About \$75,000 worth new. Price is \$48,900 ONO. Contact Rob 0428 527 200.

3119 PART OWNERSHIP OR SYNDICATE WANTED

I live in Melbourne and looking to buy a half or third share in a new or used Texan, Sparviero or similar low wing aircraft. Also open to other aircraft options or suggestions. Hoping to locate at an airfield on the outskirts of Melbourne. Able to invest between \$20,000 and \$50,000 depending on the opportunity. Contact Andrew 0406 518 001

MEMBERS' MARKET PRICE LIST

TEXT ONLY \$15/month (50 words maximum - text will be edited when it exceeds maximum limit)

TEXT AND PHOTO \$30/month

3120 BUILDER AVIATOR WANTED



Accommodation provided and airstrip. Looking for assistance to repaint a plane and rebuild a Lazair. Interesting Country a truly great place to spend a month or two. Details call John 0413 963 438 or adshedsyd@hotmail.com for details and pics.

3121 JABIRU 230D



Factory built 2011. TT hours 157 hours and is in as NEW condition. Still under manufacturers warranty. Oil Change and Spark plug cleaned every 25 hours. Plane has always been hangared and only flown by myself. It has the latest Dynon skyview 10inch avionics installed in the new Jabiru panel. It has 6 CHT temp monitors. Accurate electronic fuel amount gauge and fuel flow meter, gps receiver, etc. Nil incidence. Please email: provoke@bigpond.com. Priced to sell at \$102,000. Well below replacement costs!

3122 DUAL AEROCHUTE FOR SALE



Aerochute Reg 32-1965 in excellent condition Approx 57 Hrs on Motor and Frame. Full history and Log books. Includes: High lift Chute with 126 hrs, Wide Headplate Steering Sticks - Very sought after Helmets, GPS, Intercom, VHF &

UHF Radios, Flying suit, Tools etc. Full Aerochute

travelling cover, Ready to fly. Asking: \$12,500 with all options Contact: Kurt - 0416 544 173 Email kurt. irene@bigpond.com

3123 VANS RV 12



RV 12 E-LSA Reg 19-5502 TT185 hours. For Specs goto http://www.vansaircraft.com/publicrv12.htm Extras include wheel spats-Flashing Landing lights-wingtip strobes- sun shade-Carbmate carb balancer-2 Lightspeed Sierra headsets-12 litres Aero Shell sport plus 4 oil- 60 litre drum pump and filter on trolley for mogas refuelling- Asking \$75,000 Contact Tony 0427477005 or tony@tonyearle.com

3124 JABIRU SP UL 19-4319



This aircraft is in immaculate condition with low hours and nil incidents, always kept in its hangar and fully serviced, would suit a new aircraft buyer. Built in 2005, paint and interior trim done professionally, asking \$52,000. Selling due to retirement from flying after many enjoyable years, please call Len on 07 32035546 or email rily54@bigpond.com for more details and photos as required

3125 BRUMBY LOW WING J600

(Experimental) Jabiru 3300 engine. TTSN 100hrs. Standard Instrumentation. Call Paul 0414 677 971 or 02 6341 1635

3126 EUROPA XS CLASSIC



Rotax 912s engine Airmaster constant speed propeller. Endurance 3 hours 2 adults and luggage. 1700 hrs to next major engine overhaul. Excellent condition only 260 hours, 130 knot cruise. Extra avionics, GPS included and custom built trailer. Offers around \$80,000. Contact David King: 0429042740 or 44212721

3127 APPROX 50 ACRE PROPERTY



30k north-east Hobart. Cross strips, two hangars, large workshop, 4 bedroom brick and tile house, double garage, separate chalet, with processing room, 1000 tree olive grove, town water plus water rights to river, dam and auto irrigation system. Ph 02 6977 4501 and Mobile 0407 407 211



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- 35 mins drive 10mins flight to Stunning Mudgee Wine Country

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Contact: Rob Loneragan Mobile: 0411 816 300 Email: rob@rylstone.com.au

MEMBERS' MARKET

3128 CORBY STARLET CJ-1



19-5254 for sale. 2008 build with 300hrs. Jabiru 2000 powered. 80HP. Solid-lifter version. No applicable service bulletins. Hydraulic toe-operated Gerdes brakes. Microair M760 VHF transceiver. 54 It main steel fuel tank. 11 It aux fuel tank in wing with electric transfer pump. 112kts cruise @13LPH. A rough example but simple, economical, very manouverable, fast and long range. \$22,000. Adelaide South area. 0437 707 750 or 0421 882 184

3129 EUROPA ES KIT



60% complete. Tricycle undercarriage conversion kit included, some instruments included - ALT, ASI Icon radio and other. Offers around \$30,000. Contact David King for details 0429 042 740 (mobile) or 02 4421 2721 (home)

3130 JABIRU SK



TT 214hrs, 2200 engine overhauled by Jabiru at 140hrs. New prop, good panel, includes VSI, DG & EGT. Icom radio, Garmin GPS III Pilot, 2 headsets, strobe, custom stripes. Wheel spats, always kept in hangar. Located Bunbury WA, \$36,000 ono. Hangar also for sale \$20,000. Ph Greg 08 9586 3964, 0408 746 391.

3131 SAPPHIRE 95-10



10-0293 Rotax 377 engine 3 blade, ivo prop. Great little aircraft, spare 447 Rotax engine, enclosed trailer all rego. Located at the Oaks Sydney \$12,000. Phone 02 9878 4877

3132 2007 FLY SYNTHESIS



2007 Fly Synthesis storch S rotax 912UL 80hp, 340hrs always hangered and serviced, 100kts cruise, stalls 35kts, electric flaps, UHF, VHF, headsets, can fly with doors off. Good allrounder, \$65,000 ph 0428 589 516

3133 CARIA SPORTS



Caravan designed to carry XT Trike/motor bike's.This fully optioned caravan is fitted out with kitchen, 95lt fridge, bathroom, 20lt hot water, dining area, cooler, solar, dual batteries, awning, gazebo, queen bed, good storage, insulation, marine carpets and much more. \$46,850.00 ONO, Mark 0466 210 442, Jamieson Victoria

3135 Y BRUMBY LSA



Jabaru 3300, L2 maintained, always hangered, TT 750 Hrs, 120 Itrs fuel, nav & landing lights, VFR instruments, DG, AH, Garman 296, Bolly prop & many extras. Just a dream to fly, \$65,000. Call mick for more info 0478 807 158

3136 FOXBAT A-22L



24-4621, Excellent condition, 660hrs, std instruments, X-com radio, transponder, Garmin 296GPS, Fuel Flow, auto pilot, BRS chute. New tyres, doors. Hangared Mittagong. \$67,400 Ph Victor 0400 505 451

3137 JABIRU SP 19-3118



3300 engine 400hrs, wing tanks, recent LAME service & updates, near Toowoomba. Price \$35,000. Ph 07 4693 0133

3138 FLIGHTSTAR IISC



Must sell brand new, never flown Flightstar IISC, put together with excellent attention to detail. Willing to part with it for cost of kit from the USA. Plane has been completed with a fully enclosed cabin, dual controls, custom carpet interior, Falcon instruments, in-flight trim, brakes and mylar coverings. Plane does not have engine but can be fitted with one of buyer's choice or sold as is. Please call for more details: 0412 506 242

3139 JABIRU 3300 6 CYL



Thin Fin engine (zero hours - never been started). \$12,000 or best offer. Prop, Spinner, Spinner Back Plate, Forward Spinner Plate etc, Prop Bolt Flange (not shown, all zero hours). \$1,500 or best offer. Phone Louie Doon 0428 472 805, email: ludoon@ westnet.com.au

3140 JABIRU SP6

Fuselage kit 75% complete. Includes carpet & instrumentation as part of package - no wings or Engine. Price \$17,000 ono, Ring Ted 0438 662 281 Located in SA.

3141 SYNDICATE SHARE



ref: #### Long running syndicate based at Caboolture has share available in our FOXBAT A22 Valour. This aircraft has yoke controls, Dynon D180 EFIS, Garmin 296 G.P.S. and Transponder, as well as standard instruments. Rotax 912S. Approx 540 Hrs. A fantastic performer and a pleasure to fly! Please call Chris Pfeiffer for details 0417621097

3142 JABIRU ST 24-3075



FACTORY BUILT This tidy little plane has TTIS932, 1600 Jabiru engine TSO46 and prop TSN8. Full panel, carefully maintained, forced sale by elderly ex-airline captain. Hangared at SABC Serpentine, WA.

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MEMBERS' MARKET

Current ACR (Aircraft Condition Report) complete and available. An excellent value entry aircraft for fun flying, \$29,950 0411 788 148

3143 TITAN TORNADO 2



2 seat, Rotax 912 UL, Tundra tires , Matco disc brakes (inc.small wheels spare legs and spats) radio, intercom,headsets ,EIS engine monitor. 296 hours \$27,000, 0428216754

3144 FACTORY BUILT TEXAN



Top class 550 LSA. 2005 Model. \$117,000. Full CTA certification. Composite construction. Immaculate condition always hangared. Nil incidents/accidents. Never used for training. LAME maintained. TT 620Hrs. TB02000 hrs. Rotax 912 ULS 100 hp. 3 blade DUC Kevlar ground adjustable prop. Avmap EKP4. ICOM A210. PTAS. autopilot. Many extras. 115 Kt cruise. 14 It/hr. John 0412472992.

3145 JABIRU-160



480hr Beautifully built, maintained regardless of costs, hangared. Dynon D10A, Lowrance 2000c GPS, transponder, EGT/CHT, fuel mizer, PCAS. Carbon fibre prop, spats plus go-fast streamline fairing (110 knts), sun visors. All AD completed including thru-bolts. Engine never missed a beat superb condition. Nothing to spend \$60k. Ph 0410479195 Vic

3146 AUST FLIGHT DRIFTER



55-1034. Late model factory built Drifter with Full Lotus amphibious floats.TT 393 hours and 10 hours on Verner 4 stroke engine. Long range wing tanks, passenger fairing, fuel flow computer, radio, intercom, 2 helmets/headsets and full instrumentation. Nothing to spend, just in time for summer fun on the water. Regretful sale, only \$25,000 for the lot. Call Bernie on 0414375795 or bernie@ alwaysairborne.com.au

3147 GATTON AIRPARK BLOCK

This airpark has matured. Quality owners, quality homes, quality lifestyle. Best available block in final stage, dresscircle location, 66 m X 38 m, high, level,

full frontage to 750m-grass strip. Power, phone and pressure town-water. Easy living with safe flying environs. \$245K negotiable Owner 07 38801623 0407 148 921

3148 JABIRU J160-C J170 AND J230



Factory Built Dynon D100 EFIS, D10 EMS, Avmap GPS, 2 x TSO Radios and Transponder, Electric Turn and Bank, Dual Control, Adjustable rudder pedals, Cabin Heater, Long Range Fuel Tanks, Seat Cushions, Carpet Floor Mats, Weather Cover, LAME Maintained, Approx 800 hours total, Latest mod status including door gutters fitted and external power support plugs installed. Contact Graeme Ph 0414 379 818 E: admin@leaseair.com.au

3149 AIRBORNE EDGE X CLASSIC 582

2000 model 230 hrs, 32-4843 yellow base wizard 2 wing, training bars,New vertex 220 radio flight com intercom and head sets. All in excellent condition \$18,500 neg.phone 0417024185

3150 FLIGHTSTAR SPYDER



95-10 single seater, Rotax 447, 51 hrs TT, 32L fuel cap, strobes, carby heat, disc brakes, ballistic chute, Good instrumentation. Always hangared, no accidents, hangar trolley. Located at Beralla VIC. \$8500 ONO. Phone Ron Cooke 03 5762 1223

3151 XT912 TRIKE



80hp 4 stroke rotax, Streak 3 wing, ballistic parachute, Lynx headset and helmets, microair indash radio, training bars, wing bag and covers, full log books and rego, just serviced new battery/stone guard/tyres TTIS 480hrs \$32,000 lpswich QLD ph 0425 000 785

3152 JABIRU J230



May 2011 Factory built Jabiru 230. Always hangared, professionally maintained and serviced every 25 hours. Nil accidents. Complete with, Booster seat, large instrument panel, Dynon EFIS D100, AvMap EKPIV, ICOM radio, transponder, Garmin GTX327A, keyed master switch, snap air vent 3 1/4 and 2 landing lights. Has done 145 hours, in excellent as new condition and still under factory warranty. For sale at \$95,000, originally purchased for \$111,000. For enquiries please contact Jeff on 0418 335 839

3153 2007 AIRBORNE XT



912 tourer, streak 3 wing. TT 635 hours, M760 Microair dual comms radio, 2 helmets, freezer suit. Excellend condition, logbook, manuals, registered to 27/09/2013. Lots of extras \$40,000. 0429 619 987

3154 JABIRU J230



3300 Rego 24-7370. Factory Built Dec 09 TT275Hrs All engine mods and AD current Factory Option 6 Panel. Dynon 180 EFIS Garmin 495, Microair Radio and Transponder Led Navigation and Strobe Lights Always Kept in Hanger Nil damage. Full window covers included. Would suit a new buyer \$88,000 ono. Contact David on 0407 008 896 or email davifg@ fnoc.com.au

3156 JABIRU J160



TT 553 Excellent Condition. Factory assist built, Reconditioned heads, barrels and new rings at 405hrs. Nil accidents. Always hangared. Garmin 296 GPS. Microair mode C transponder. 2 David Clark headsets. Xcom 760 radio & intercom. Grand Rapids Engine Management System. L2 maintained. \$57,500. 0419 654 048. For more details see: http://athertonairport.com.au/atherton/ forsale/J160

3157 ROTAX 912A-2

80HP for sale. Serial # 4410141. Approx. 1100 hrs. Purchased for project but now no longer required. \$8295 ONO, Melbourne, 0409526805

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Advertisers index

AAA Fasterway Parachutes	65
Adelaide Biplanes	6
Aerochute Industries	38
Aerosport Aviation	48
Air Warrnambool	54
Airborne	46
Airservices Australia	14
Alpine Aircraft	32
Anderson Aviation Australia	5
APCO (Whites Water Service)	14
Asia Pacific Light Flying	54
Atec Aircraft Sales - Zephyr	60
Atherton Aerodrome Apartment	30
Australian Aircraft Kits	14
Australian Commercial Credit	38
Australian Lightwing	9
Australian Powered Parachute	26
Aviational Aircraft Tie-Down Anchors	63
Bendigo Flying Club	32
Bert Flood Imports (Rotax)	28
Bolly Props	32
C & H Freight	49
Caboolture Recreational	14
CAI Insurance	67
Central West Flying	48
Coominya Flight Training	26
Corvus Aero	6
Foxbat Australia	67
Gofly Aviation	22
Gostner Aviation	30
GreenDot Financial	55
GT Propellers	59
Horsham Aviation 12	, 57
Jabiru Aircraft	59
Mendelssohn Pilot supplies 38,	68
OAMPS	43
Oasis Flight Training	54
Outback Aircraft	30
Quicksilver	40
Recreational Flying Co Gympie	26
Riverland Flight Training	38
ROTEC 24, 45,	48
Rylstone Aerodrome Airpark	62
SeaRey	43
Shell Aviation	11
Skyshop	2
Skysports Innovation	16
Skysports Training	65
Sling Aircraft Australia	66
Sport Aviation Tocumwal	32
Super Petrel	9
Tasmanian Aero Club	30
True Track Flight System	12
Ultra Aviation	26
Yarrawonga Flight Training	65
Yarrawonga Pilot Shop	65

Great birthday for Nic

by Fred Nolan CFI, FN Aviation

OREE Year 9 Student, Nicholas Gartshore, received a very different birthday present when he piloted a Jabiru J170C aircraft solo on his 15th birthday in August.

Nic took command of the Jabiru in ideal weather conditions to fly a perfect circuit and landing.

Chief Flying Instructor, Fred Nolan, reported that

Notari, reported that Nic flew an excellent approach and landing to complete his solo flight, "which at 15 years old, is a rare achievement".

Under Recreational Aviation rules, a student must be 15 to fly solo, and Nicolas has been patiently pacing himself to reach this point, since he started starting flying lessons in March, 2011.

"Nic was ready to go solo several days ago actually", reports Fred. "Even after battling very strong wind conditions and cross wind landings, I had to slow him down to reach his birthday."

Nic's parents, Bernie and Fran Gartshore, were at the Moree Aero Club hangar to greet him when he taxied in.

Ed- From everyone at RA-Aus, welcome to the club, Nic.







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



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