

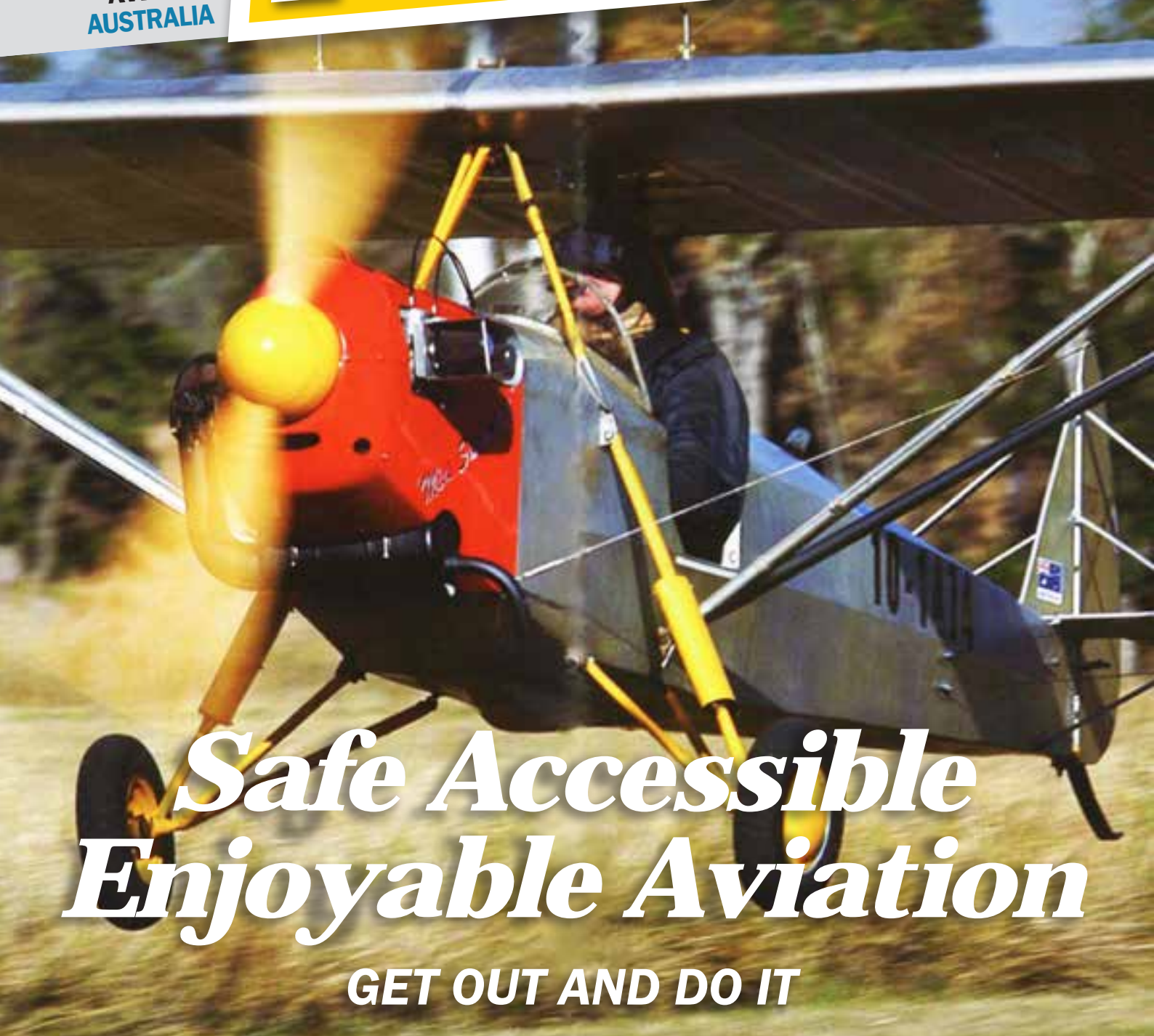
SPORT

For recreational pilots DECEMBER 2014 VOL 41 (12)



RECREATIONAL
AVIATION
AUSTRALIA

PILOT



*Safe Accessible
Enjoyable Aviation*

GET OUT AND DO IT

**NEW OPS MANUAL
RELEASED AND
AVAILABLE NOW**

**RA-AUS
CHANGES
POLICY ON
LANDING FEES**

**MORE TIPS
ON REMOTE
FLYING**

ISSN 1839-0501
RRP \$7.70 inc GST



9771839050238

AVIATION INSURANCE IS NOT CHILD'S PLAY. TALK WITH OUR TEAM



Aircraft Insurance | Hangarkeepers Liability Insurance



07 4052 1000

www.billowen.com.au | broker@billowen.com.au



>> Cover Photo: Heath Parasol
Photo: Len Neale



09



14



66

Regulars

- 07 President's report
- 09 Calendar of events
- 10 Letters to the Editor
- 53 Flying taught me this today 'Bad medicine'
- 66 Happy Landings

Columnists

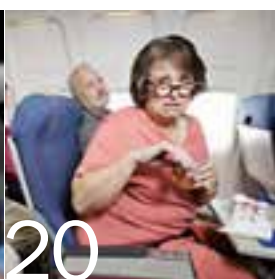
- 41 Pilot Talk
The Ops Team
- 43 Learn to Fly
Anthony Sibary
- 46 Design Notes
Dave Daniel
- 49 Instructor's Forum
Professor Avius
- 50 Home Builder
Dave Edmunds

News

- 12 Inaugural Instructor conference
- 13 RA-Aus on AICC
- 13 CASA moves against Jabiru
- 14 Sport Pilot changes
- 14 New boss for CASA
- 14 New insurance deal for RA-Aus
- 15 Frequency warning
- 15 Board ruling on landing fees
- 15 L1 Training update
- 16 Christmas office closing times
- 16 Airworthiness Notice
- 17 New Ops Manual released
- 17 Avalon advice



18



20

Fly-Ins

- 18 Jacaranda muster
Kevin Wilson



Features

- 26 Going remote Pt 2
Rick Frith
- 28 The Outback Loop
Roger Duance, Merry Canavan, Renee Finn and Ron Hoey
- 40 Genesis of a good idea
Ray Morgan, Clyde Howard and Ray Jones



Readers' stories

- 20 Fear Factor
Alan Betteridge
- 22 King Island Savannah
Arthur Marcel
- 24 Solo Sunday
Kirsten Nixon

**RA-Aus Operations Manual
Version 7 is now available**

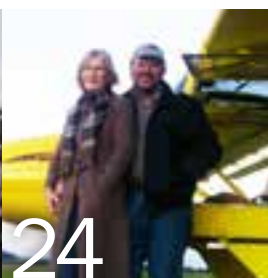


Opinion

- 32 Pilot Certificate or Licence?
Carl Nilsson
- 37 Abandon Hope
Norm Sanders



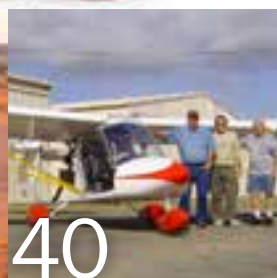
22



24



28



40

- 47 Where is CAGIT?
- 47 Statistics
- 54 Member's Market
- 63 Off the shelf

SPORT PILOT

Sport Pilot Magazine is an official publication of Recreational Aviation Australia Inc. and is published eleven times a year by Stampils Publishing.

To subscribe to Sport Pilot
Email: admin@raa.asn.au
Ph: (02) 6280 4700

STAMPILS PUBLISHING

All Enquiries Ph: 1300 838 416
7/1 Grandview St, East Ballina NSW 2478

EDITOR

Brian Bigg
editor@sportpilot.net.au

ADVERTISING SALES

admin@stampils.com.au

MAGAZINE SUBSCRIPTIONS Non-member annual subscription rates – postage included – are \$110 (Australia) and \$500 (international), being for eleven issues. Payments to be made out to Recreational Aviation Australia Inc. Po Box 1265, Fyshwick, A.C.T, 2609 Australia and related enquires to admin@raa.asn.au.

RECREATIONAL AVIATION AUSTRALIA RECOGNISES AND THANKS THE MAJOR SPONSORS OF NATFLY

ANDERSON AVIATION

Gold sponsor 2014
www.andersonaviation.com.au
Ph: 0428 355 266



JABIRU

Silver sponsor 2014
www.jabiru.net.au
Ph: (07) 4155 1778



OZ RUNWAYS

Bronze sponsor 2014
www.ozrunways.com



AVSOFT

Bronze sponsor 2014
www.avsoft.com



BOLLY AVIATION

Bronze sponsor 2014
www.bollyaviation.com.au
Ph: (08) 8380 8396



X-AIR AUSTRALIA

Bronze sponsor 2014
www.mcp.com.au
Ph: (07) 5568 7770



HEAD OFFICE

PO Box 1265 Fyshwick
ACT 2609 Australia
Unit 3, 1 Pirie Street
Fyshwick ACT 2609
international: +61 (2) 6280 4700
national: (02) 6280 4700
fax: +61 (2) 6280 4775
Email: admin@raa.asn.au
www.raa.asn.au

ENQUIRIES

Memberships:
members@raa.asn.au
Members Market:
membersmarket@raa.asn.au

ARBN 070 931 645
ABN 40 070 931 645

National Finance and Administration Manager

Maxine Milera admin@raa.asn.au

CEO

Michael Linke ceo@raa.asn.au

National Operations Manager

Jill Bailey
ops@raa.asn.au
0400 280 087

Assistant Operations Manager

Neil Schaefer
ops@raa.asn.au
0428 282 870

National Technical Manager

Darren Barnfield
techmgr@raa.asn.au
0417 942 977

Assistant Technical Manager

Jared Smith
jared.smith@raa.asn.au
0418 125 393

National Safety, Risk and Compliance Manager

Katie Jenkins
safety@raa.asn.au
0418 445 652

RA-AUS BOARD ELECTED STATE REPRESENTATIVES

TASMANIA

Eugene Reid
0428 824 700
tas1@raa.asn.au

NORTH QUEENSLAND

Ross Millard 0422 119 051
nqld@raa.asn.au

NEW SOUTH WALES

Andrew Saywell 0414 962 648
nsw1@raa.asn.au

SOUTH QUEENSLAND

Trevor Bange 0429 378 370
sqld1@raa.asn.au

Michael Apps 0412 435 198
nsw2@raa.asn.au

Mike Smith 0418 735 785
sqld@raa.asn.au

Michael Monck (President)
0419 244 794 nsw3@raa.asn.au

Tony King (Secretary)
0400 226 275 sqld2@raa.asn.au

NORTHERN TERRITORY

Mark Christie
0412 345 111
nt@raa.asn.au

VICTORIA

Rod Birrell (03) 9744 1305
vic1@raa.asn.au

SOUTH AUSTRALIA

Ed Herring
0408 787 018
sa1@raa.asn.au

Jim Tatlock (Treasurer)
0403 228 986 vic@raa.asn.au

WESTERN AUSTRALIA

Ed Smith 0409 962 050
wa1@raa.asn.au

FINDING YOUR NEAREST TRAINING FACILITY, SCHOOL OR CLUB
www.raa.asn.au/schools

TERMS AND CONDITIONS

All content in this magazine belongs to Stampils Publishing and is protected by Australian and international copyright and other intellectual property laws. You may not do anything which interferes with or breaches those laws or the intellectual property rights in the content. All rights not expressly granted under these terms of use are reserved by Stampils Publishing. Unless expressly stated otherwise, you are not permitted to copy, or republish anything you find in the magazine without the copyright or trademark owners' permission. The magazine title, as well as the associated logo of Recreational Aviation Australia Inc, are the property of RA-Aus. However, Stampils Publishing, Daniella Banco of Spank Design and Karin Leask, of Cachekat, reserve the right to be acknowledged as the magazine's designers. While every reasonable effort has been made to ensure the accuracy of the content of this magazine, no warrant is given or implied. The content is provided to you on condition that you undertake all responsibility for assessing the accuracy of the content and rely on it at your own risk. Opinions expressed are not necessarily those of people named in this magazine. Recreational Aviation Australia Inc and Stampils Publishing reserve the right to decline any article, letter or comment deemed unacceptable for whatever reason. No endorsement or responsibility is implied or accepted for any product advertised in this magazine. Advertisers and buyers are each responsible for ensuring products advertised and/or purchased via this magazine meet all appropriate Australian certification and registration requirements, especially those pertaining to CASA and RA-Aus. **NOTE:** All aircraft featured in the magazine are registered and legally permitted to fly. However, photographs of them may be altered without notice for editorial purposes.

BRM Aero Bristell.



**Integrity of design, quality of build
and proven in performance.**



Customised to suit your needs with your choice of Rotax or Jabiru power.
Well designed, quality construction and outstanding performance
from the masters of Czech aviation, BRM Aero.



NSW demonstrations are now available through Central West Flying.
Please call us for more information



andersonaviation.com.au | Brett . 0428 355 266

FK9 ELA WB

The first production LSA with diesel power

Extra room and range for touring, with payload and economy to keep you smiling.

Your ideal travelling companion, with any conventional Rotax 912, or the new Turbo Diesel power, running on Pump or Jet A diesel.

The standard FK9 is already wider than the Cessna 172, now in the WB version it easily accommodates larger and taller pilots in 3 way adjustable seating, including seat height adjust. The evergreen FK9 design with its unique integrated load bearing safety frame, is now proven for 26 years and in this 5th generation version, the FK9 ELA, has been proven for 4 years. Trigear or taildragger available.

The existing FK9 ELA standard body, can also be fitted with the latest German built FlyEco turbo diesel or turbo petrol version, in series production.

Cruise at <8 ltr/hr and fuel anywhere you fly in our vast land!



German engineering and innovation



FK9 ELA



FK12 Comet



FK14 Polaris



FK14 Le Mans



FK51 Mustang

silentwingsaviation.com

phone (02) 43 6930 43



President's Report

MICHAEL MONCK

Safe Accessible Enjoyable Aviation

Those four words summarise what RA-Aus should be.

On November 9, the board and management gathered together to take a look at what RA-Aus has become, to shape the future and define what it should be. During the day it became very apparent that over the past few years we lost our way and let things deteriorate to such a point that many of the perceptions of RA-Aus are negative. It's time to address that.

So over the next few months we will put together a strategic plan to help guide decision making in future and ensure RA-Aus is associated with these four words outlined above.

SAFE

It goes without saying. I often wax lyrical in this very column about safety. To me it underpins everything we do. Without safety, flying isn't fun. The safety message needs to come from all avenues, especially the board. We all need to have the character to recognise when something isn't safe and the courage to do something about it. Speak up if you see something unsafe. Don't go flying if your pre-flight inspection uncovers something questionable. It's always up to us.

ACCESSIBLE

We are RA-Aus, not an overly complicated government department which requires reams of paperwork and mountains of rules. We need to keep our operations simple. We want to remain the cheap alternative to the complex environment of general aviation and we want everyone to have access to our past time. We will work to make the rules simple to understand and apply and to keep our costs down.

ENJOYABLE

If we can nail down the first two points around safety and accessibility then the enjoyment will likely follow. That said, the opposite is also true. We have to tackle safety and accessibility while also keeping in mind that our

primary motivation for flying is to have fun and enjoy it. I'd argue that general aviation is safe but it isn't that accessible.

Rules and regulations constantly increase costs. Security at airports is driving pilots mad. And costs are sky rocketing. We have the opportunity to change this and in the process tick all three boxes.

AVIATION

It goes without saying that, as I type this and look out the window, I wish I was out flying. Right now the sky is blue and there is only the slightest breeze barely moving the trees. I think we would all agree that on days like this we would rather be doing something related to flying than slaving away in our daily lives.

This applies to all aviators. We seem to forget we aren't about RA-Aus, we are about aviation. It doesn't matter whether we get our kicks from building a simple rag and tube plane, purchasing a ready-to-fly factory option or fly a beautifully restored aircraft from the 1940s, registered by the government. Indeed even if you're flying a fast jet, the simple reality is this – when you push the stick forward the trees get bigger and when you pull it back they get smaller.

Aviation isn't about what we fly or where we do it. It's just about flying. We have people who are passionate about low inertia flying, those who want to go exploring in modern fast aircraft, others who are interested in building something of their own design and those who just want to make sure we maintain our aircraft properly.

The point is this. It's about aviation. And if we remember that, we're halfway there. There's no need to have anything other than a friendly rivalry, because more than that will hurt us all. It's about unity and sharing the common love of all things that fly.

To that end we have identified five main areas to focus on:

- Marketing
- Membership

- Modernisation
- Alliances
- Governance

These areas will allow us to make sure RA-Aus plays a significant role in setting the direction of aviation in Australia.

We want to promote the message we are a safe pastime and encourage new members into the world of aviation. To do this we will work to modernise our systems and help serve our members better by reliably delivering our current range of privileges and benefits and expanding them over time. We will look to work more closely with other stakeholders, ranging from other aviation bodies through to the broader community. And to do this we will build a better system of governance to ensure our members, together with the other people we interact with, always get a good deal.

In the next couple of months we will put out more information in the magazine and via our newsletter to communicate our strategy and inform you about what is happening. In the meantime we are coming into some great flying weather and the Christmas period, so I'd like to wish everyone a Merry Christmas and hope you take advantage of this time of the year to do some safe, accessible and enjoyable aviation.

Cheers. 🍷



With a 1200NM range and a plush leather interior why don't you make Sling your "Airline" of choice?



Available in **Factory Build or Kit**

pure PERFORMANCE
absolute QUALITY



Making the World a smaller place.



Global Aviation Products

Australian Distributor: Global Aviation Products | Errol van Rensburg | 0415 072 498 | evrensbu@gmail.com
www.slingaircraft.com.au | Gold Coast, Queensland



Australian Government
Civil Aviation Safety Authority

SO YOU'VE HAD A CLOSE CALL?



Often the experience is something you'll never forget and you have learned from it.

Why not share your story so that others can learn from it too?
If we publish it, we'll give you **\$500**.

Articles should be between 450 and 1000 words. If preferred, your identity will be kept confidential. Email us at fsa@casa.gov.au. Clearly mark your submission in the subject field as 'SPORTAVIATION CLOSE CALL'.

Please do not submit articles regarding events that are the subject of a current official investigation.

Submissions may be edited for clarity, length and reader focus.



Calendar of events

WHAT'S ON



7 December

Frogs Hollow

Christmas Party fly-in. BBQ lunch at the airstrip starting at 12pm. All welcome. Lat 36 46s long 149 48e.

For more information, Bob Phillips (02) 6495 9251 or bobatfrogs@gmail.com.

28 February

Cranbourn Fly-In Fun Day

Cranbourn Airfield in Launceston, Tasmania is a small airfield compared to most, but 30 pilots fly from there and the same number of planes, gyro's, etc, are hangared there. This will be the 26th anniversary of the Fly-In Fun Day. All pilots are welcome for a sausage and a chat. A wide variety of displays, vintage cars and bikes, helicopter rides, model planes and helicopters as well as a jumping castle for the kids. Food and drink supplied. For more information, Debra Stewart (03) 6326 2898 before 6pm.



>>Debra waiting to hear from you

18 April

Loxton Aero Club fly-in

As well as a great fly-in, the hangar dinner is well known as a great night out. All welcome.

For more information, Kerrie Palamountain palark@tpg.com.au or <http://loxtonaero.com/dinner.html>.

18 September

Wings over Warwick

Queensland Recreational Aircraft Assn incorporating Warwick Aero Club (www.qraa.info) invites pilots and enthusiasts to the 2015 fly-in at Warwick Aerodrome (YWCK). The strip is 1600m all bitumen with no landing fees (www.warwickaerodrome.com). All types of aircraft welcome. Includes a display of model planes. Food and drinks available from 8am to 2pm. For more information, Events Co-ordinator Graham Hawthorne 0427 377 603; President Kelvin Hutchinson 0407 733 836 or Secretary Phil Goyne 0417 761 584.



9-11 January

Great Eastern Fly-In

The Great Eastern fly-in at Evans Head has become the must-see aviation event on the flying calendar. Pilots, their families and friends, fly in from all over to enjoy a great summer holiday with a difference. This year the GEFI will celebrate 100 years of military aviation in Australia. The Aviation Heritage Museum has new displays, get up close to the F-111 and, for the first time, there will be a 737 flight simulator to try. For more information, <http://www.greasternflyin.com>.

15 March

Darling Downs Fly-In

The Clifton Airfield (Bange's) fly-in has become an iconic event in the region and is the premier attraction for all types of aviation in southern Queensland.

Come late pm Saturday 14th for BBQ, drinks.

Fly or drive in, see ERSA. On field camping, bring your swag. Advise for catering.

For more information, contact Trevor Bange 0429 378 370, (07) 4695 8541 or Email: trevorbange@bigpond.com.

12 April

Barossa Airshow

The Airshow / fly-in, now in its 11th year, is a family fun day with rides, amusements, static displays, stalls, food and wine. 10am-5pm.

Includes aerobatic displays and helicopter joy flights. All pilots are welcome to fly in for the day or stay overnight. Anyone not familiar with the 600m strip at Rowland Flat should contact Steve Ahrens for a briefing.

For more information, <http://www.barossaairshow.com.au>.

LETTERS TO THE EDITOR

Radio gaga

Regarding the information regarding radio use ('Aircraft Calling' *Sport Pilot* October 2014). The story stated it was not appropriate to use the CTAF frequency (126.7) when using an airport not listed on a map.

With at least a dozen other pilots, I fly out of Frogs Hollow airstrip, which is located about 10nm NW of Merimbula, NSW. The strip has been in existence since the 1930s and was the airfield for the Bega/ Merimbula area. We have a very active flying club. Our fly-ins often attract over 35 aircraft. All use 126.7 for inbound and circuit calls.

The article stated we should instead be using the local area frequency (120.75) which, I understand, is Melbourne Centre. After reading the article, I was concerned enough to write to Airservices Australia to ask for advice about radio use at Frogs Hollow. They referred me back to CASA.

My question to Airservices was "should we be making, as CASA seems to dictate, all radio calls using Melbourne Centre?" I cannot imagine myself calling Melbourne Centre with the information that I'm "10 miles north west at 2,000ft inbound Frogs Hollow".

I would value your comments please.

Neville Jollands

From the Ops Dept - CAAP 166-1(3) refers to the use of Melbourne Centre or area frequency if the strip is not on a WAC. Para 7.3.1 states if operating at an aerodrome not marked on a WAC, pilots should monitor and broadcast intentions on the relevant area frequency.

I have checked my WAC for the area and, because Frogs' Hollow does not appear, would agree that Melbourne Centre (120.75) is what pilots operating in that area would be monitoring.

I take your point regarding the use of multicom 126.7 as used by pilots operating at Frogs Hollow, however a simple solution would be to contact Airservices and have Frogs Hollow added to the WAC for the area, thus ensuring visiting pilots operate on the multicom. Further, you could supply information about Frogs Hollow to Airservices for inclusion in ERSA, where you could advise pilots that the multicom (126.7) would be the correct frequency for operations in the vicinity of Frogs Hollow.

In the interim, most modern radios have the ability to monitor two frequencies and I would recommend pilots operating at Frogs Hollow use the area frequency and monitor 126.7 until the strip appears on the WAC.

From the Editor - Dick Smith has also waded in on this subject. See News page 15

Mechanical thanks

I've just finished reading my October 2014 edition of *Sport Pilot* and I'd like to thank Mike Bush for his informative, well presented article ('Why mechanics make mistakes') and of course yourself also, for publishing the article. Well done!

Franco (Frank) Arri

24 Rego question

I have just received my October 2014 issue of *Sport Pilot* and would like to respond to a letter in that issue entitled '24 Rego and Rotax question'.

Mark Harris is exactly right. Many aviation parts have a TBO (Time Before Overhaul), but this is not necessarily operational hours (hours flown). It is either operational hours or calendar hours, whichever occurs first. This is also true of many things (even outside aviation) including the tyres on your car, which many people don't realise are calendar life as well as wear limited. In aviation, it also applies to other things besides the engine, of which the most obvious is the propeller.

When buying an aircraft, always check the calendar life as well as the operational hours against the engine serial number. Many advertisements in *Sport Pilot* will advertise a 10-year old aeroplane with only a few hundred hours on the engine giving the impression you still have hundreds or even thousands of hours flying time left, while not saying the engine could need overhaul or replacing in less than two years. Therefore the purchase price should reflect both the remaining operational hours AND the remaining calendar hours and this should also be taken into account when calculating the hourly cost of flying, which is not as cheap as it might initially seem!

Table 1 in this document lists operational hours and calendar life for Rotax 912 engines by serial number:- <http://www.flyrotax.com/portaldatas/5/dokus/d04787.pdf>

Philip Orr

Forward Planning

Suggestions for the Board.

Modernise the board structure as a matter of urgency to be more effective. I see indications of a member backlash if this is not treated as urgent and I have written about this elsewhere.

Form an alliance with all sport aviation branches as a 'Federation of Sport Aviation' and combine NATFLY with other sport aviation fly-ins.

At the moment, sport aviation is fragmented into RA-Aus, gliding, gyros, para and hang gliding, ballooning and even the warbirds.

We all suffer under unnecessary overregulation from CASA and are not achieving all that is needed in reforms. At present CASA deals with us individually and, while we are divided, CASA dictates to us in a way which is slowly strangling us. If we all join together in matters of common concern, 'the boot would be on the other foot and we would have the strength to be able to negotiate on equal terms and, where needed, have the full attention of the government where CASA is overstepping. So my suggestion is for the new board to initiate an approach to each of these organisations looking for common ground and to put forward the suggestion of a Federation of Sport Aviation for dealing with CASA in those matters. I have seen it work well in the past with the Royal Federation of Aero Clubs and don't see why we couldn't repeat this.

The harder CASA screws down on us with unnecessary regulations which we have to comply, so our incentive to fly legally as a sport is reduced. We have lost pilots because of this and many are going back to GA for this reason. All branches of sport aviation are suffering the same way. This is why sport aviation needs to combine.

But even our own internal system can be made more friendly if it is examined and, in many cases, CASA could even be asked to help.

One example that comes to mind is the simplification of test flying of kit built aircraft and making the requirements safer for the pilot. The other is the revision of our unique cumbersome numbering system, which includes other sport aircraft, with our 1920s sized numbers under the wings, which no other aircraft uses nowadays.

We have to make everything much more user friendly and inputs have to be solicited from members and staff for the many things that will help, so a plan can be put together.

Possibly a website for suggestions? The result is to provide more incentive to keep members and for others to join RA-Aus.

Barry Wrenford

From the CEO - Thanks Barry, your comments come at a very opportune time. The board ran a strategic planning session in November and we are currently canvassing all members via a survey and seeking input on strategically important issues.

The survey can be found at <https://www.surveymonkey.com/s/MYL2WD6>

Having a crack

I am writing in respect to the September Issue of *Sport Pilot*. I would like to thank the Editor for his efforts in bringing as much news and as many interesting stories to us as have appeared in recent times.

I only hope that RA-Aus makes the same leaps

and bounds that Sport Pilot has in the past few years. As members we should be ticking all the boxes for all the people who make regular contributions.

Having read the first dozen pages once or twice, I feel perhaps we are on the way to success, or a large improvement in things. I find the comments made by the President and the new CEO interesting. The story goes that things are improving and that the current board will not have the same power, or will not be asked to deliver as much.

Keep in mind, at the top level where we do have new blood promising things will improve dramatically, we have heard it before. Some of the board members of old who presided over those times when nothing got done, except plenty of talk, are still on board. Let's hope some see the light and find it in their hearts or brains to give new people with new ideas a crack at it.

I do have confidence in the new CEO. It sounds like he is not afraid to kick butts to ensure there is movement at the station. It sounds like the CEO and President are on the same page. From a technical point of view the Tech and Ops situations seem to be in good hands. Hallelujah.

Also, I would like a status report on where all the outstanding manuals are at this time.

Keith G. Baker

From the CEO - Thanks for the positive comments Keith. The Operations Manual has just been released (see News page 14) and the Technical Manual is still a little way off, probably mid next year. The Board also approved at its October meeting a detailed document review process. This review process will ensure critical RA-Aus documents are widely consulted on during a dedicated review period to ensure members have ample time to consider and comment on them.

Time for a change?

Is it time for a change of direction in the management of the ultralight aircraft scene?

The original idea of the AUF was to have a grass roots organisation which catered for those enthusiasts who just wanted to break the bounds of earth and potter around the sky for the pure fun and fancy of doing so. This didn't mean a lack of safety or fellow feeling for friends, neighbours or the general public. We, in general, have a large yellow streak down our backs for self-preservation and not to do harm to others. Did this mean there were no accidents or incidents? Of course not, there were those who pushed beyond their skill levels and unfortunately paid the price. But in saying that, the mortality rate was very low. Not one person I knew personally died in an

ultralight, compared with the motorbike club I was associated with in the 1960s where 12 out of the 18 members were killed and two made paraplegics.

Over the early years, several of our dear members who were true innovators lost their lives during the development of new concepts and setting records, a sad and tragic loss to the movement and their friends and families. The reasons for these tragedies are well documented as a warning for us all.

Over the years, there have been other incidents and accidents, but as a whole the sport is 22 times safer than going fishing, if you are silly enough to believe the statistics presented by CASA. CASA presents a different picture, painted for its own purposes, to achieve its own nefarious ends of control, in a striving for relevance in the so called safety management of aircraft in general.

CASA cannot prevent the General Aviation fraternity from having accidents. They never will, because by definition an accident is just that - an accident - and will happen, sooner or later to everyone who does anything.

The other point to consider is that fools are self-eliminating from the gene pool and that CASA cannot ever prevent that even with all the rules and regulations under the sun. To make all aircraft 100% safe they must be locked in the hangar with no fuel to burn and no tires or batteries to explode.

Do not get me wrong, CASA has an important role to play in public transport safety of the airlines and commuter carriers for the general public, but I must say to CASA - go and do what you are supposed to be good at and leave the ultralight movement alone.

Now all I see is that RA-Aus is becoming a clone, or if you like a 'yes sir, no sir' servant for CASA - inefficient at what it should be doing and sprouting rules and penalties for the members while not able to deal with such minor details such as getting registrations and other paperwork handled in a timely manner and not standing up for the rights of members.

Is there a place for the existing RA-Aus in the overall scheme of things? Maybe they should bow out and become part of CASA, to administer the new breed of high performance Light Sport Aircraft with above 90kts performance.

Most of us who like true ultralights believe RA-Aus has lost the plot as an ultralight movement and would like something better. Will we get it?

Bob Morgan

From the CEO - Bob, we are getting better with our paperwork - the registration delays of a couple of months ago are behind us and

aircraft are now registered in seven to 10 days. We are seeing similar success with progressing membership renewals. At our recent AGM I gave a presentation (it's on our website) where I outlined my strategy. A major component is placing our members central to everything we do. At times it's hard to be all things to all people, but I am sure over time we will get the mix right and people such as yourself, as well as those who choose to fly at 100kts, will see ongoing value in supporting RA-Aus. Feel free to drop me a line at any time to discuss it.



Got something to say?

The state of the organisation is reflected in the Letters to the Editor columns.

The more letters – the healthier the organisation. So don't just sit there – get involved. Your contributions are always welcome, even if no one else agrees with your opinion.

The Editor makes every effort to run all letters, even if the queue gets long at certain times of the year.

editor@sportpilot.net.au

(By the way – the Editor reserves the right to edit Letters to the Editor to shorten them to fit the space available, to improve the clarity of the letter or to prevent libel. The opinions and views expressed in the Letters to the Editor are those of the individual writer and neither RA-Aus or Sport Pilot magazine endorses or supports the views expressed within them).

INSTRUCTORS TOGETHER

By Michael Linke, CEO

A total of almost 100 CFIs and Senior Instructors attended the first ever RA-Aus CFI conference in November.

And from all accounts, the conference in Dubbo was a welcome addition to the RA-Aus calendar and enthusiastically received.

A wide range of topics was covered including:

- Standardisation of training – at Pilot Certificate and Instructor levels;
- Leveraging the buying power of the Flight Training Facilities to provide hull insurance for training aircraft, professional indemnity insurance and more;
- Safety Management Systems for FTFs, working together to ensure safe operations;
- Continued development of the RA-Aus Instructor Training Manual;
- Improved relationships and communications;
- Documentary compliance and the importance of good student training records;
- New Technical Manual processes to assist members, including operating engines on condition in FTFs, changes to requirements for aircraft registration markings and a new Maintenance and Repair Approval Process (MARAP) which will aid members to operate aircraft with specific aging issues or redundant equipment, such as no longer available propellers, engines or manufacturer assistance;
- CASR Part 149 implementation to provide further privileges and freedoms for self-administration by RA-Aus;
- New occurrence management processes

to be implemented to assist members to report more easily and interact with the administrative parts of the organisation.

Issues from the conference which RA-Aus will be working on in coming months include:

Transparent lines of communication between CFIs and the Ops Department, particularly with regard to accident and incident reports as well as consultation regarding creation of manuals and exams;

And a CFI forum and portal to assist communication.

Further services the organisation can provide to FTFs and CFIs include the modernisation of systems and processes in the office and work to assist FTFs to attract new members, including young people.

Plans are already being laid for another conference, with tremendous enthusiasm for a biennial event, supplemented by regional events on alternative years.

Thanks all the CFIs for making the time to attend. Thanks also to the event organiser, Ops Manager Jill Bailey. Also to our administration staff, Narelle and Jana and the other RA-Aus managers who attended and made presentations, Darren Barnfield, Katie Jenkins and Neil Schaefer.

Thanks also to the other presenters, CFI Richard Tabaka, Lee Ungermann from CASA, Dr Angela Kohler and PE David Eyre.



>> RA-Aus staff (from left) Katie Jenkins administration staff, Narelle and Jana, Neil Schaefer Michael Linke, Jill Bailey and Darren Barnfield

RA-Aus on AICC

RA-Aus President, Michael Monck, has been invited to become a founding member of the Aviation Industry Consultative Council.

The Council's role will be to provide advice directly to the Deputy Prime Minister, Warren Truss, on strategic issues facing aviation in Australia. It is intended to be the peak body representing the industry.

Michael says the formation of the Council is recognition of aviation's importance to the economy. It will allow industry to have a voice and provide advice directly to the Minister.

He says it will also give him an opportunity to liaise with the Minister and other industry participants and help form a united view on strategic and policy issues for the sector.

The first meeting of the new council was to be held on November 28.



>>Deputy Prime Minister, Warren Truss

CASA MOVES AGAINST JABIRU

By Brian Bigg

In the middle of November, seemingly out of the blue, CASA issued a national Notice of Proposal Rulemaking which set the recreational aviation fraternity on its back legs.

Its news release said, in part;

'CASA is responding to a high, and increasing, rate of engine failures among aircraft powered by engines manufactured by, or under licence to, Jabiru Aircraft Pty Ltd.

'The issues appear to be the result of several failure modes, which require separate investigations. 'CASA has formed the view that its functions under the Civil Aviation Act 1988 require it to mitigate certain risks to passengers, trainee pilots and people on the ground.

'Accordingly, while CASA works with Jabiru to identify the causes of these engine failures and to implement appropriate corrective actions, CASA proposes a set of operating limitations on Jabiru powered aircraft.'

CASA said the limitations on Jabiru aircraft would, among other things;

- 'Only permit operations by day under VFR, unless approved by CASA;
- 'Require that Jabiru powered aircraft are operated in a manner that minimises the risk of a forced landing into populous areas;
- 'Prohibit the carriage of passengers;
- 'Prohibit the use of solo operations by student pilots;
- 'Require that a notice be located in each aircraft that states the above limitations and notes that the occupants fly at their own risk.'

Immediately the news broke, RA-Aus President Michael Monck and CEO, Michael Linke, sought

an urgent meeting the CASA and Jabiru. After that meeting, RA-Aus issued the following release.

'RA-Aus met with Jabiru and CASA today (November 14) in relation to the recent proposed actions by CASA that would affect owners and operators of Jabiru aircraft and Jabiru powered aircraft.

'RA-Aus maintains its stance that the available data suggests Jabiru engines are more likely to fail than a comparable 4 stroke Rotax engine but insists our operators should be free to exercise their informed judgement and assess the risks for themselves. We also question whether the CASA proposed remedies are the best action to take given the risks posed.

'RA-Aus feels the meeting was constructive and has outlined a way for Jabiru and CASA to address the risks highlighted by CASA in a manner which will minimise the imposition on aircraft operations. Jabiru and CASA have committed to working together to arrive at a solution.

'In the meantime RA-Aus encourages all affected stakeholders to contact CASA with their views on the proposed restrictions and, if they wish to, engage with other appropriate parties to escalate their concerns.

'The relevant contacts are:

- 'The Minister for Transport, the Hon Warren Truss, W.Truss. MP@aph.gov.au
- 'Your local federal member details can be found at www.aph.gov.au with state and local details available at the relevant government website.
- 'Lee Ungermann of the SASAO office within CASA can be contacted at lee.ungermann@casa.gov.au.

'Please include admin@raa.asn.au on all correspondence to CASA and members of parliament.'

Build your aircraft with TAFE SWSi

We are offering the recreational aircraft community training and the opportunity to work on your own aircraft at our CASR Part 147 MTO facilities at Padstow College.

Our fully equipped training facilities offer:

- Hangar space for components being built and assembled
- Composites and Structures workshops
- Surface finishing and paint shop
- Mechanical and Avionics workshops
- OHS Practices in Aviation
- Requirements for CASA Instrument 33/13 for amateur built aircraft
- Flight simulator (CASA Approved)
- Human Factors

Visit swsi.tafensw.edu.au or call 02 9643 4688 and let your skills take flight!



TAFE NSW SWSi
South Western Sydney Institute

SPORT PILOT CHANGES

NO NEWSAGENTS

As announced in the November edition, as part of widespread changes planned for RA-Aus' communication strategy in 2015, *Sport Pilot* is not to be available for sale in newsagents for three months as part of a trial.

This process has been driven partly by the need to reign in the costs of RA-Aus and the need to remain relevant to the membership as communications needs change rapidly.

For the moment *Sport Pilot* will still be mailed to the letter boxes of all members – it has, by far, the biggest readership of any Australian aviation publication. More than 10,000 pilots read the magazine cover-to-cover every month.

NO CALENDAR

As part of the same changes, there is also no free calendar distributed with the December edition of the magazine this year.

NO JANUARY EDITION

Please note – As usual there will be no January 2015 edition of *Sport Pilot*. The next edition will be February 2015.

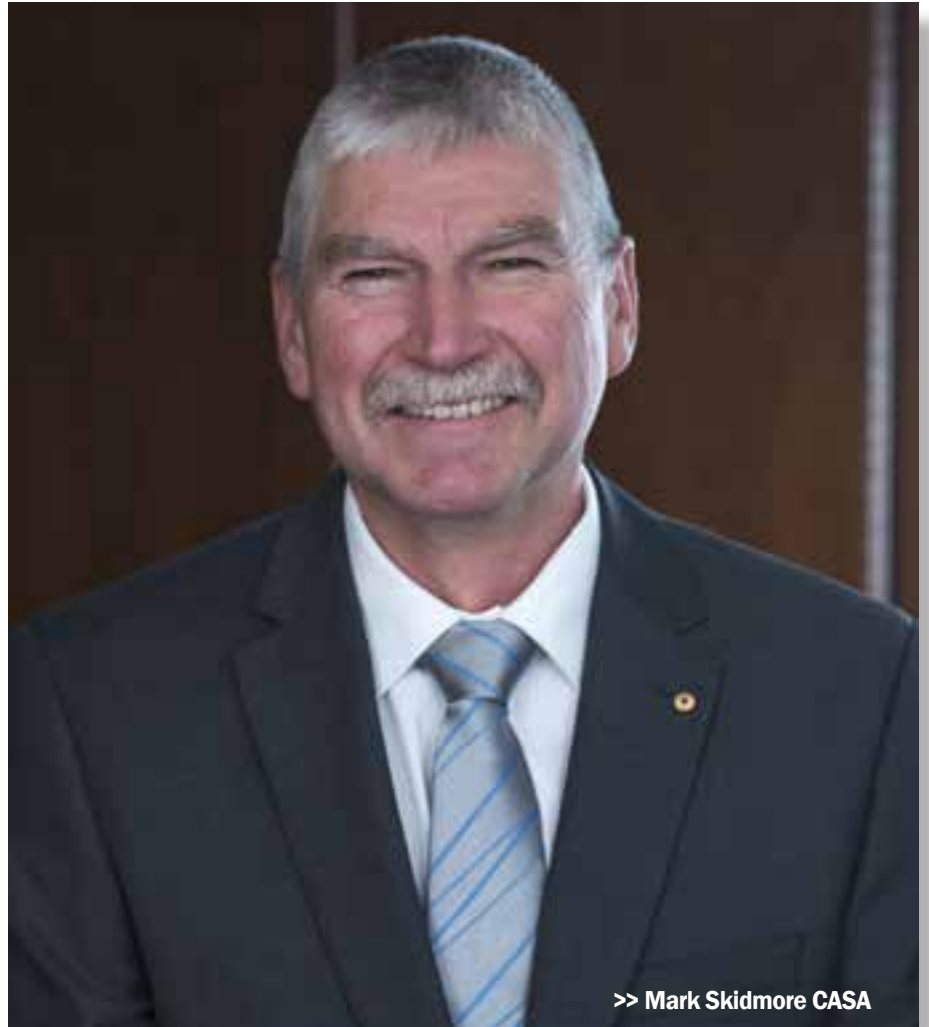
NO PILOT NOTES

Also as announced in November, now that the RA-Aus website provides a summary of all accidents and incidents, Pilot Notes will no longer be printed in *Sport Pilot*.

The website currently lists accidents, incidents and defects with a brief summary of the outcomes. Not all reports are followed up. However in some cases an outcome of the root causes of the incident is also listed.

These summaries can be found at:

<https://www.raa.asn.au/safety/accident-incident-summaries-2014/>



>> Mark Skidmore CASA

NEW BOSS FOR CASA

Mark Skidmore has been appointed as the new Director of Aviation Safety at CASA.

Mark has more than 30 years' experience in both civilian and military aviation.

He has worked as a test pilot, a business development manager and company director.

He was a pilot in the RAAF in the early 1980s. He led RAAF research and development squadrons and was promoted to Australia's Air Commander, holding oversight for Australia's air operations.

He reached the rank of Air Vice Marshal before retiring in 2012.

According to CASA's news release

announcing the new appointment, Mark is committed to working with the aviation industry and the general community to achieve the best possible safety outcomes.

He understands safety is a shared responsibility with the aviation industry and will encourage and support the industry, while ensuring the interests of the travelling public is protected. Mark also owns and flies a Globe GC-1B Swift.

RA-Aus will ask for a meeting with Mark as soon as possible to ensure he is brought up to date and informed about all the issues involving RA-Aus.

NEW INSURANCE DEAL

Some fantastic news for RA-Aus members. Over the past couple of weeks the CEO has been working to improve the insurance coverage provided to members.

"I am very pleased to announce to members that from midnight October 31 RA-Aus financial members were covered by a new member's liability coverage policy," says CEO Michael Linke.

"The best part of the new policy is that members now have additional cover beyond simply operating their aircraft, which has been the case up to now.

"The new policy now covers them even if they exit the aircraft and the aircraft rolls away or is caught by the wind and damages property.

"The new policy also covers members for

third party property damage".

Even better is that the additional cover has come at no cost to RA-Aus.

"However, a CPI increase and the rising cost of doing business will require us to explore increasing membership fees by a few dollars in the coming six months," says Michael.

For more information, visit the member's portal on the website.

FREQUENCY WARNING

By Brian Bigg

Former CASA Chairman, Dick Smith, has issued a warning to pilots to think carefully before complying with latest CASA radio call advice.

CASA announced in October ('Aircraft calling' *Sport Pilot* October 2014) that pilots making radio broadcasts at aerodromes not marked on charts should use the area frequency. It said pilots at airfields marked on charts, but which don't have a discrete frequency, should use 126.7.

Dick Smith said after the announcement he had been contacted by members of the Regional Airspace and Procedure Advisory Committees (RAPACs) querying the advice.

"While such calls may help in alerted see-and-avoid for light aircraft in the vicinity of the unmarked strips, there is a major implication for the safety of airline passengers. The calls are

likely to interfere with air traffic control instructions to airline aircraft.

"CASA seems to be obsessed with a non-existent frequency congestion issue but does not understand no country in the world allows small aircraft to give non-directed calls on frequencies used by Air Traffic Controllers to separate airline aircraft. This is for obvious safety reasons."

"There are many times when an immediate call has to be given to an airline aircraft for safety purposes, however if a taxiing aircraft at a small strip is blocking the frequency, this call may not get through to the airliner", says Dick.

"While I agree the chance of an accident is small, the result of an accident could be horrendous. That is clearly why other countries prohibit small aircraft from giving non-directed calls on Air Traffic Control separation frequencies."



>> Dick Smith

Board ruling on landing fees

By Michael Linke, CEO

At its recent meeting the RA-Aus Board considered a range of options associated with the issue of landing fees.

As members will be aware, for many years the organisation has acted as a collection agency with regard to landing fees from aircraft operated by RA-Aus members.

Landing fees are a necessary cost associated with using airport facilities and RA-Aus strongly encourages all members to pay them. However the board has decided RA-Aus will no longer act as a collection agency for airports or AVDATA.

We will write directly to airports affected by the change and advise them that, from December 1, 2014 we will no longer forward their invoices to our members.

We will explain that the service is no longer sustainable, it imposes heavy administra-

tive costs on RA-Aus and as such we will no longer provide the service.

RA-Aus believes landing an aircraft at an airport is a contract between the pilot and the airport's own administration. As such, direct communication between the airport and pilot is required. Alternatively, the pilot can register with AVDATA and the airport can arrange payment using this service.

To assist with the transition, we recommend members who use airports which charge a fee register with AVDATA. Over time, RA-Aus will also amend our privacy policy and request approval from members to share their details with AVDATA.

But under no circumstances will RA-Aus share personal member details directly with airports, unless instructed by the member concerned to do so.

L1 Training

by CEO Michael Linke

Great news for L1 maintainers.

Following a recent meeting with CASA, the long awaited L1 training package is now nearing completion.

CASA has agreed with our approach to deliver a self-guided course, followed by an online assessment. The course is designed to help you understand your responsibilities as aircraft maintainers, how and when maintenance should be completed and how to record the maintenance once completed.

The course is in the form of a study guide and a range of questions, which can be answered by referring to various publications. On completing the self-guided course you will sit an online assessment. That assessment is open-book and will provide you with your results on completion, including feedback on any areas you might need to brush up on.

It is anticipated the launch will take place this month.

We will continue to keep you updated on the development of this training and we encourage all L1s to undertake the training and assessment. Further opportunities for training, including a printed copy of the study guide and assessment using alternate means, are also being developed. Keep an eye on *Sport Pilot* and the newsletter for more news.

**Missing out on
SPORT PILOT
now its no longer in the
newsagents?**

**Why not subscribe and make sure you
get eleven copies a year delivered to
your doorstep**

Email : admin@raa.asn.au for terms and conditions

WANT TO SHARE YOUR LOVE OF AVIATION ?

Recreational Aviation Australia Instructor Rating Course

\$7,999

20 hrs
dual flight
training

40 hrs
theory

Instructor Rating Available
To PPL Holders

Allows You Build PIC Hours

Two Central Locations



Melbourne



Sydney

Call Us Today On 0395 875 020 ex 2

www.soaraviation.com.au

www.facebook.com/soaraviation



* Places are limited and candidates must meet all requirements as listed by Recreational Aviation Australia and Soar Aviation Pty Ltd

CHRISTMAS CLOSING TIMES

The RA-Aus Head Office
will be closed from
lunch time
December 24, 2014 to
January 5, 2015.

Merry Christmas

The Staff and Board of Recreational Aviation Australia would like to thank all members for their support of the organisation.

We look forward to your continued support as we map a way forward to an exciting and prosperous future.

Our members are central to everything we do. Thank you to our spon-

sors also for your support.

We value your important contribution and we are making some exciting plans to engage with you in the future.

We can't wait to have you standing side by side with us as we showcase recreational aviation.

To our volunteers, thank you for putting in all the hard hours and taking time out of your lives to help the organisation. Time is a wonderful asset to have and you volunteers have bucketloads to give.

2015 is going to be a bigger and better year, so let's all come together as one big family and make Recreational Aviation Australia the leader in the aviation community.

We wish you all a very Merry Christmas and a safe and happy New Year.



AIRWORTHINESS NOTICE AIRCRAFT REFUELLING

Darren Barnfield, Technical Manager

A recent accident while refuelling an aircraft with jerry cans has resulted in the person sustaining serious burns to arms, hands and face.

Over the past two years, RA-Aus has received reports of three refuelling flash fires involving weight shift aircraft and one report involving a 3 axis aircraft.

Action Required

During refuelling with jerry cans, the aircraft and jerry can should be commonly bonded to dissipate static electricity which can accumulate during the refuelling process.

Aircraft must be refuelled well clear of hangars and away from other aircraft. Closed hangars may create a situation where the combination of air and fuel vapours becomes explosive. Ensure a fire extinguisher is available.

Portable electronic devices should be switched off (mobile phones, radios). If a spill occurs, refuelling should be stopped immediately until it is contained.

Members are directed to CAO 20.9 for acceptable refuelling practices.

NEW OPS MANUAL

RA-Aus Operations Manual Version 7 is now available. The new manual can be downloaded as a single PDF from the RA-Aus website along with the Syllabus of Flight Training Issue 7 which also can be found there.

In addition the site includes a series of Frequently Asked Questions. There is also a transition document to assist to identify the changes in the new version.

Version 7 has been in the works for some time and the Operations Team would like to thank everyone who provided input and assistance with it.

As part of our ongoing improvement cycle, the Operations Manual will undergo six monthly re-

views and updates for minor changes to ensure it remains current. As well, major reviews are planned to happen every three years.

The Operations Manual will be the first RA-Aus manual managed as part of our new document review and management process, which was endorsed by the Board at its October 2014 meeting. This new process ensures wide consultation with members and stakeholders.

Operations Manual <https://www.raa.asn.au/wp-content/uploads/2012/02/Operations-Manual-Issue-7.pdf>

FAQ <https://www.raa.asn.au/wp-content/uploads/2012/02/FAQ.pdf>

Changes <https://www.raa.asn.au/wp-content/uploads/2012/02/Summary-of-changes-Issue-7.pdf>

Here is the link to the page with everything on it <https://www.raa.asn.au/safety/operations-manual/>



AVALON ADVICE

The Avalon International Airshow will be held between Feb 27 and March 1, 2015 and RA-Aus will once again be there.

All RA-Aus pilots who do not comply with controlled airspace requirements but who want to fly into Avalon, will need to pre-register with RA-Aus Operations. This is to ensure you receive a briefing from an approved RA-Aus Instructor on appropriate controlled airspace procedures in accordance with the yet-to-be published AIP Supplement for the event.

For all other participants, the event organiser has provided entry and exit requirements on its website.

If you are planning to fly into, or exhibit, at Avalon you should contact opsadmin@raa.asn.au as soon as possible.



>>Avalon 2009 – remember to tie them down

Seaplane Endorsement Training

The opportunity is now available for a Water Hull endorsement on the superb Seamax M22 Amphibian. The Seamax is a fast luxury travelling Seaplane with unmatched water safety. Based at the beautiful Sunshine Coast in Queensland. Have a holiday and get your endorsement.

Contact Rod Manning on 0402 958 444 for detailed information

A blooming good weekend

by Kevin Wilson, President Grafton Aero Club

The 2014 Jacaranda Muster has been and gone for another year. Thanks to all those who flew in over the weekend.

There were 24 aircraft of 21 different types. The only double ups were Jabirus and Savannahs.

The Winjeel arrived during Saturday morning and began providing warbird flights. The sound of its big 445hp Pratt and Whitney Wasp engine was something to behold.

The all-day BBQ was busy pretty much the entire weekend.

Saturday was hot (36 degrees) and, as the sun sank into the west, our band, the Broadways, set up on the verandah and launched into their repertoire of good old rock and roll music mixed with some classic Irish music. Toes were tapping and everyone sang. It was a great way to enjoy a pre-dinner drink and watch the sunset.

Club members went through organised chaos at its best as food, tables, chairs and all manner of things were organised while the

bar was manned and guests greeted for the Saturday night dinner.

The clubhouse dinner was attended by 45 people and all agreed the meal was superb. About 7:30pm there was a sudden invasion of bugs. Prior to that, everything had been fine, so the screen doors had been left open. Big mistake.

Also, just as the main course ended and preparations began for dessert, everything went dark. That began 45 minutes of scrambling around with torches. The whole town had been blacked out and, because there was no moon, it was pitch black. Cars travelling down along the nearby road were the only indication civilisation hadn't disappeared for good. Still, by the time power was restored, we'd managed to get through half the desserts.

Arthur Marcel and Tony King decided to get away at dawn on Sunday so they missed out on breakfast. But a forecast headwind meant it was probably the best time for them to leave. Other overnights left at a more civi-

lised hour after a good breakfast.

More aircraft arrived during Sunday morning. The Winjeel was flat out conducting joy flights, the BBQ was cranked up again while the Broadways regrouped and entertained everyone all morning.

About 11:30am Grafton's newly crowned Jacaranda Queen and six other princesses arrived for their complimentary flights over the city. All went well- other than a couple of the girls must have celebrated a bit hard the previous night and suffered some air sickness. Hopefully Carl has the C180 clean again by now.

By 3:30pm all the visitors had departed for home and club members began the big clean up. A welcome beer on the verandah finished a superb weekend of flying and fun and we watched as the Winjeel roared overhead on its way home.

Many thanks to all club members who helped throughout the weekend and made our visitors welcome. 🍷



>> Mark Awad (Winjeel pilot) and the Junior Jacaranda Queen



>> Jacaranda Queen, Emily Causley

FLY-INS



As the main course ended everything went dark



>> Roger & Lynny-Rose Broadway



>> The Jacaranda princesses with their chaperone

LEADING EDGE AVIATION

Why do I need a Whole Aircraft Recovery System?
 For when circumstances prevent a safe conventional landing

- Forced landings over hostile terrain, at night or over water
- Mid-air collision with another aircraft
- Structural or system failure
- Loss of control or disorientation -in turbulence, at night or poor visibility
- Pilot medical issue - non pilot passengers can land the aircraft safely.

Anyone can get an aircraft on the ground safely by simply pulling a handle. The occupants stay secure in their seats, the entire aircraft is lowered to the ground under a huge ballistically deployed parachute.

We can now supply and support BRS, GRS, Magnum, Junkers and Stratos07. Contact us for a new systems and all your repack, rocket and other parts requirements

Leading Edge Aviation Holdings Pty Ltd.
www.LEAVS.com info@LEAVS.com 02 8355 7009
ABN 52 968 235 850



Fear Factor

by Alan Betteridge

W For a pilot, having a partner who has a fear of flying is not the best thing in the world.

For those of us who fly, or have flown regularly, the fear of flying is almost unbelievable. Yet for many people it is very real and very debilitating.

When sitting in an aeroplane which is vibrating and has a rough running engine, feeling fear is pretty normal. But when everything is running smoothly and there are no apparent problems, the feeling of fear is not normal.

For a pilot, having a partner who has a fear of flying is not the best thing in the world.

My wife has such a fear. The compromise we came up with when I started flying back in the 1970s was this: she didn't force me to fly and I didn't force her to come with me.

The result?

I have nearly 1,400 hours and she has flown with me for about 45 minutes of that time, but we are both happy with the result.

I had a friend many years ago whose wife had a real phobia about flying, but because he couldn't see what all the fuss was about, he forced her to go flying with him wherever he went.

His result?

From the time he announced they would be flying somewhere, until the time they re-

turned, she was terrified.

And nothing can take the enjoyment out of a flying trip more than having a partner who would have much preferred to stay home – safely on the ground (in her mind at least).

The fear of flying can be one of the most complex of all phobias to cure because it is invariably the combination of a number of other fears such as:

- Claustrophobia (fear of enclosed spaces);
- Acrophobia (fear of heights);
- Agoraphobia (especially the type which has to do with having a panic attack in a place from which they can't escape);
- The fear of not being in control;
- The fear of hijacking or terrorism, and;
- The fear of turbulence.

A previous traumatising experience with air travel or somehow connected to flying can also trigger a fear of flying.

For example, if you already have a dislike for flying, the experience of flying to a meeting only to be told you have been fired might be traumatic enough to subsequently create an association between air travel and bad or unpleasant events.



Learning how aircraft fly can assist people with a fear of flying

What has to be remembered is that the fear of flying is a symptom, not a disease and different causes may bring it about in different individuals.

The fear of flying receives more attention than most other phobias because air travel is often difficult for people to avoid and because the fear is widespread, affecting a significant minority of the population.

A fear of flying may prevent a person from going on holidays or visiting family and friends and it can cripple the career of a businessperson by preventing them from travelling on work-related business.

You can have a fear of flying without it actually being a phobia, as such. When it becomes a phobia the level of anxiety becomes so great it can prevent a person from travelling by air or causes great distress to a person when he or she is compelled to travel by air.

The most extreme manifestations can include panic attacks or vomiting at the mere sight or mention of an aircraft or air travel.

Some suggest the media is a major factor behind the fear of flying.

They claim the media sensationalises airline crashes in comparison to the perceived scant attention given to the massive number of isolated automobile crashes.

As the total number of flights in the world rises, so do the number of crashes, even though the overall safety of air travel continues to improve.

Statistics show airplanes are far safer than other common forms of transport when it is based on kilometres travelled.

The media, of course will only report on the flights which end in crashes, not the overwhelming number which do not.

The overall impression this creates may be that air travel is becoming increasingly dangerous, which of course is untrue.

In some cases educating people with a fear of flying about the realities of air travel can considerably diminish concern about physical safety.

Learning how aircraft fly and other aspects of aviation can assist people with a fear of flying in overcoming its irrational nature.

Many people have overcome their fear by learning to fly and thus effectively removing their fear of the unknown.

Some people educate themselves; others attend courses to achieve the same result.

It is clear education plays a very important role in overcoming the fear of flying. Understanding what a certain sound is, or that an encounter with turbulence will not destroy the aircraft, is beneficial to easing the fear of the unknown.

Nevertheless, when airborne and experiencing turbulence, the person can be terrified despite having every reason to know logically that the plane is not in any danger.

In such cases therapy, as well as education, is needed.



The cute, nimble and FAST
Storch LSA
Another Italian Classic
Over 1000 delivered worldwide!



WE'RE
BACK

SERIOUSLY!

FLY'S SYNTHESIS

flysynthesis.com | ph 02 4369 3043



King Island Savannah

By Arthur Marcel

King Island is off the north-west tip of Tasmania. This island is famous for its excellent fishing, delicious seafood, amazing vegetables, beef cattle and relaxed country lifestyle. It is also home to Australia's only (or so we believe) Advanced Wing Savannah LSA.

Now, Savannahs are not renowned for their sporty appearance. Short take-offs and landings aside, neither are they so well known for their performance. However, the ADV Savannah is a different story. This plane has almost the same short field performance as the standard model but goes considerably faster (about 10 knots faster). The secret is the thinner, tapered advanced wing.

This particular aircraft belongs to RA-Aus member, Jim Benn and his partner, Sharon, who moved to King Island in 2009. Actually, they started building their King Island hideaway home in 2004, moving there permanently when they retired. Jim runs a home renova-

tion business on the island. He also drives a school bus for Tasmania Transport. Before that he used to be a school teacher (a career culminating as Principal), an employee of Education Queensland. His last teaching posting was to Toowoomba where he worked for sixteen years. Before that he taught 10 years in Clifton, where he also learnt to fly, eventually working as an instructor. He has more than 1,000 flying hours, 200 of them as instructor.

According to Jim, in the ADV Savannah, King Island is 10 hours flying (180 litres of fuel) from St George (Queensland), where his son, daughter-in-law and two grandchildren live. Jim jokes that the navigation is easy. He just points the plane north and waits for the land to come into sight after 48nm of ocean. Actually, the pair is very safety conscious. They always wear life jackets, carry an EPIRB and make scheduled radio calls to Melbourne every ten minutes while over the water. Jim and Sharon have made the crossing many times since moving to



>> Beautiful Currie Harbour



>> Cape Wickham lighthouse



>> Jim and Sharon Benn

the picturesque island and Jim says that 10 minute schedules are absolutely necessary. Thirty minutes is just too long to be floating around in freezing water in the event of a ditching.

Why King Island? Firstly, Sharon and Jim had always been keen travellers. They have seen a lot of the world. They had well developed perspectives on what kind of environment would make life interesting for them in retirement. King Island is that kind of place. Secondly, there is a family connection to King Island. Jim's great grandparents (maternal name Skerman) were shipwrecked there in 1866 on their way to a new life in Australia. Amazingly, the 500 plus passengers of the good ship Netherby all survived (not normally the case in those days). So, in a big way, King Island has happy memories for the whole Benn family.

Jim is heavily involved with island life. He is President of King Island Tourism Inc., he is also leading a group opposed to having their island home turned into a gigantic wind farm. He is president of his local church council, he is a member of the local school council, he is

a past President of the local Lions Club and a past Secretary of the King Island Aero Club. To say he is busy is an understatement. And he did say he was retired.

Jim and Sharon own a 27ha hobby farm on which Jim has cleared a 350m strip. This is ample for the ADV Savannah, which only needs about 120m for take-off and even less to land. Jim's airstrip is only 3nm from the main airport, so visitors do not need to be aces at short field landings.

There are two holiday cottages on the property, Netherby Downs and Seaview Cottage, both of which overlook the wonderful Southern Ocean. They are managed by Sharon.

Jim and Sharon can provide you with lots of local information. They also maintain a granny flat beside their strip for fly-in visitors.

So here we have a great holiday idea for any *Sport Pilot* readers looking for a holiday on one of the most beautiful islands in the world, a chance to sample all those wonderful King Island cheeses at local prices and to stretch their legs on the island's famous walking trails 🐾



>> Sea Elephant river mouth



>> Wickham golf course development

Solo Sunday

By Kirsten Nixon

On a cool Sunday morning in July I found myself in a little yellow aeroplane at the end of a grassy strip in a paddock at Jaspers Brush.

I was about to launch into the sky and soar like a bird with just me at the controls. It was my first solo and a defining moment in my life. This is the story about that amazing day and how it came to be.

It all started on a summer's day in 2012 when Greg (hubby) and I decided to turn off the highway onto a dirt road which led to Jaspers Brush Airfield. We'd driven past that road nearly every day for the past 20 years. To our delight we found a flying school. A small fleet of aeroplanes stood in a grassy paddock. The chief, Andrew Campbell, made us very welcome and suggested we go flying. Greg was instantly sold. For me, however, motion sickness, claustrophobia and fear made my flight less enjoyable. Over the next few weeks, Greg gobbled up flying lessons like a starved Pac-Man and I realised that flying was about to become all-consuming in our lives. I decided I would learn to be a calm passenger. I booked another trial instructional flight.

I still gravitated between fear and exhilaration on that flight, but I did manage to take the controls without freezing. I was flying! And by the time we'd touched down, I was hooked. I wanted to fly. And just like that, the madness began.

2012 disappeared in an aviation blur. We flew whenever we could. I still came away from each lesson drenched in sweat, but I was making progress. We both sat and passed our theory exams. Greg went solo in November – a great moment for both of us. When we weren't flying, we were talking, thinking and reading about flying. It was an exhilarating time.

Early 2013 saw me stuck in a Groundhog Day where landings, weather and aircraft just wouldn't come together. Then, to our great excitement, we bought our own aeroplane! She's a mighty steed; a Skyfox Gazelle we called Tweety Bird. Greg and Andrew flew her home from Mornington Peninsula on an adventure which took five hours over some of Australia's most spectacular scenery, from Victorian Alps to NSW coastline.

A few months later, a combination of great flying weather, skilful instruction and getting to know our awesome little aeroplane, saw me push through to solo stage. Solo Sunday started early in a foggy paddock. My instructor, Alex, and I pre-flighted the Gazelle, the fog lifted and away we went.

After several circuits, Alex suggested we make the next one a full stop.

We landed and taxied to the windsock where she asked me if I would like to go round by myself.

My heart skipped a beat and I answered with a yes. I felt a bit nervous but I was ready. Alex passed on final words of instruction and encouragement, reminding me of the difference one less person in the aircraft would make and that I could go around if necessary. She would be at the windsock with the radio. A final check, a smile and a wave and she stepped out.

And, just like that, there we were – me and a little yellow aeroplane in the middle of a paddock at Jaspers Brush on a clear Sunday morning about to launch into the sky and soar like a bird with just me at the controls.

Who would've thought it?

Tweety Bird and I taxied to the end of runway 24 and turned our faces into the wind. I said a quiet prayer and cast my gaze over the instruments and switches. All was in order. A deep breath; a rolling call for circuits; full throttle; right rudder and we were off. Wooooohoooo! She rolled out happily and rather more quickly than usual – we were at 60kts before I knew it. I turned to comment to Alex about this and realised the space next to me was empty.

What a strange feeling – I thought it best not to dwell on it.

We hit 1,000ft before the downwind turn and, as the parallel runway came into view, it was all so familiar. Downwind checks, radio call, turn onto base, establish on final, approach looking good, over the fence and a surprising little bounce on landing. I taxied off the runway to smiles and congratulations.

My first solo circuit was over so quickly. I could scarcely believe I'd done it. Learning to fly has been both the hardest and the most rewarding thing I've ever done. The journey has enriched my life immeasurably. It's taken much persistence and gentle encouragement from my family and instructors.

Our instructors Andy, Alex and Liz have taught us so much, not just about piloting but about the joy and spirit of camaraderie that comes with flying. They're awesome aviators and we have the greatest respect for them. They are totally dedicated to teaching and supporting students to become skilled, responsible and safe pilots.

Greg and I have both gone on to achieve our Pilot Certificates. We're looking forward to many flying adventures ahead.

Greg motivates me to achieve my goals and he encourages me to face my fears. His passion for flying has ignited an aviation fire in me. He's my greatest inspiration. We're having so much fun on this journey together. 🇺🇸



"Power is better, water temps are fixed."
- Lucien Baron of France, flying with his
liquid cooled Jabiru 2200.

83 Jabiru owners switch to liquid cooling. Problem solved.

When your Jabiru is liquid cooled, you don't worry about CHTs. You feel **relaxed** knowing you're operating at safe temperatures, all year round.

"At cruise, CHTs barely go beyond 100°C," explains Kai Lyche of Norway. "**They just work!**" In fact, liquid cooling is working so well for Kai, it's allowing him to turbocharge his Jabiru 2200.

"It's nice being able to fly home in the summer," says pilot Terry Ryan of rural Victoria, Australia (upgraded Jabiru 3300 engine featured below). "Before liquid cooling, the Jabiru engine had all sorts of heat related problems."

Jabiru Super Special:

It is now cheaper to replace your standard air cooled heads with liquid cooling. Prices have been reduced by **20%**. The time to buy is **NOW**, 2200 owners save **\$450**, Jabiru 3300 owners save **\$950**. There are packages to suit any Jabiru engine, hydraulic or solid lifter. But only while stocks lasts. So act fast.

Join the liquid cooled club. **Stop the risk.** Fly without a CHT worry in the world.

Inspection of Terry Ryan's cylinder heads:



Air cooled: 25 hour inspection, dangerous detonation & leaks from overheating.



Liquid Cooled: 120 hour inspection, all heat related issues are resolved. Detonation is eliminated.



Call now: +61 3 9587 9530 or email Sales@RotecAerosport.com
For more information visit: www.RotecAerosport.com

W I still gravitated between
fear and exhilaration



>>Kristen, Greg and Tweety Bird



>>Jaspers Gazelle

Going Remote

By Rick Frith

Rick is a Jabiru 160 owner who has spent the past few years touring the more remote parts of Australia. At the urging of flying colleagues, he has written out a few tips and lessons for others planning to go remote.

In *Sport Pilot* November 2014 Rick discussed the importance of route planning, particularly to avoid tiger country and to ensure position fixes. This is part two.

Remote is a relative term. I mean flying in designated remote areas described in ERSA GEN FIS 7. These include extremely rugged areas like south west Tasmania and the Kimberley plateau, and isolated areas like the Tanami or Gibson deserts, where people, airstrips and navigation features are few and far between.

Thorough preparation is the key to success; a three week trip may take months of detailed planning. Here are more tips I learned from about a dozen trips over the past few years, taking my Jabiru J160 from Sydney to Horn Island, Kakadu, the Kimberley, Ayres Rock, the Pilbara, the Canning Stock Route, south west Tasmania and most places in between.

OVERNIGHT STOPS

Some of the things to consider are:

Mobile coverage, internet access and comms

It is much easier if there is mobile phone or internet coverage where you stop at the end of each day, so you can check weather, NOTAMS and activate or cancel SARTIMES/flight notes.

When planning, you can only check for NOTAMS 10 days in advance, so as you travel, keep an eye on the next few days.

Even remote locations have non-flying days, like drag racing at Charleville and runway repairs at Bamaga.

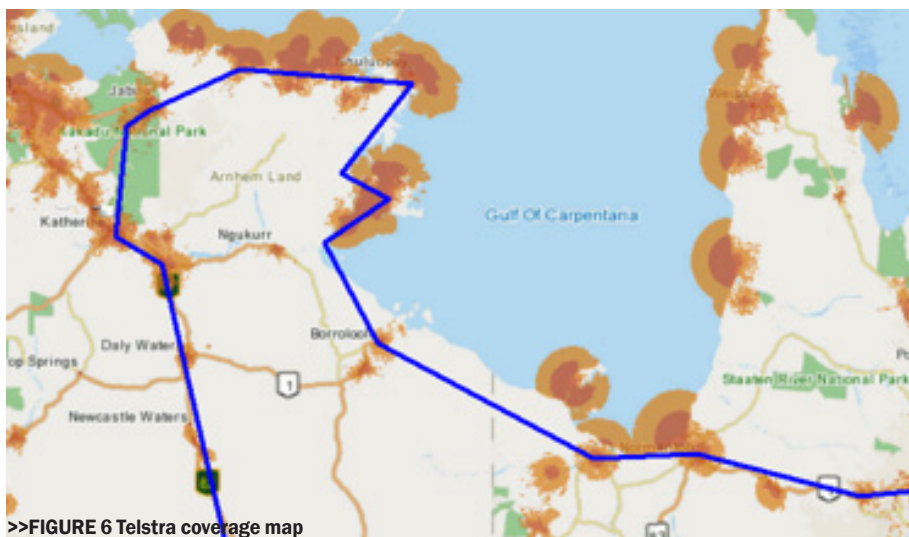
For bottleneck areas, like Tindal military airspace without a transponder, telephone the contacts in ERSA early in your planning. They can usually tell you months in advance when large military exercises are scheduled.

Next G coverage on the ground can be checked on the Telstra website. Figure 6 shows a map prepared by stitching and calibrating several screen captures from the Telstra site.

In the air at 5,000ft AGL, expect between 20 and 40nm coverage beyond the Telstra map in most places (some remote communities and mine sites have low power micro-cells which do not reach that far).

Carry a pre-paid phone card for landline calls because many remote places without mobile coverage have public phones via satellite or microwave link. You can get weather by voice on the METBRIEF service (see ERSA PF-B-1), but you need to set up an account before you leave.

Also, writing down the pre-recorded information can be a bit clumsy so practice beforehand.



>>FIGURE 6 Telstra coverage map

I carry a blank ARFOR/TAF form to assist in jotting down the details.

You can also call the briefing office by landline or satellite phone and receive weather and NOTAMS and submit flight plans verbally.

Some remote communities have private satellite internet and are usually helpful. Ask about it early in your planning. As a last resort, take off and climb to altitude. You might get an in-flight phone signal up that high, while maintaining the option to return to your departure point.

A SARTIME or flight note is essential every day in remote areas. If travelling in company with another aircraft, your companions may provide this service. However, if you are alone, it becomes critical. Even if you prepare the flight notes in advance and leave them with someone responsible, it is necessary to both activate and cancel them.

A SPOT satellite tracker can send three customised, pre-programmed messages, so with a bit of planning and the SPOT tracking service, you can send activation/cancel messages to a trusted person. But you still won't have weather and NOTAMS. Hire a satellite phone for your trip if you are likely to stop anywhere there's no communication.

WALK OR TAXI TO TOWN

Many remote communities have no taxi, or it may be expensive due to the distance to town. Always check if the taxi service still operates... the one in Strahan was off the road following an accident and the Coober Pedy and Tenant Creek services both ceased. Use Google Maps to measure the distance - a 2km walk can be welcome exercise after a day in the cockpit and often people at your accommodation will run you back to the airfield in the morning. Some even do airport pick ups. Check the AOPA Airfield Directory and the flying magazine ads.

John Giblin has an excellent website - 'Airstrips near Pub and Food'.

The best places have fuel, accommodation and food all within a short walk, such as Boorol-

oola, William Ck, Halls Ck, Thargomindah, Caigna and Kalumburu, to name a few.

A GOOD NIGHT'S SLEEP

Choose accommodation carefully. You will probably be aiming for an early start to avoid the afternoon turbulence, which means getting an early night. Some pubs and caravan parks can get pretty noisy with parties, generators and late arrivals. Be wary of mining towns on Friday and Saturday nights. Carry earplugs.

REMOTE AIRSTRIPS:

Surface, length and slope

ERSA, the AOPA National Airfield Directory, the Country Airstrip Guide and a phone call to the airport operator will give you some indication of airstrip details. For other places, use Google Earth to estimate orientation (important if prevailing winds are a concern), runway length, width, surface and runway slope and see where the windsock (if any) is located.

To measure slope, use Tools/Ruler to draw a line along the runway, from left to right across the screen. Before you save the line, note the Ground Length and Heading, which is degrees True and must be converted to Magnetic to be consistent with convention. Save the line, then

right click on it and choose 'Show Elevation Profile'. You will need the full Google Earth program for this, not the tablet app.

See Figure 7 which shows the tricky slope at Arkaroola if you land a bit long. By drawing a longer line following your departure track, you can also measure the climb out angle required for tricky or mountainous strips.

Always do precautionary passes on a remote strip. First at 500ft to check for obstacles (towers and especially wires), then lower to check for animals, washouts, ruts, sand drifts, tussocks and stones. Look carefully in the scrub on either side where kangaroos may be resting in the shade.

You can check the runway length by timing a pass along the strip and using the formula:

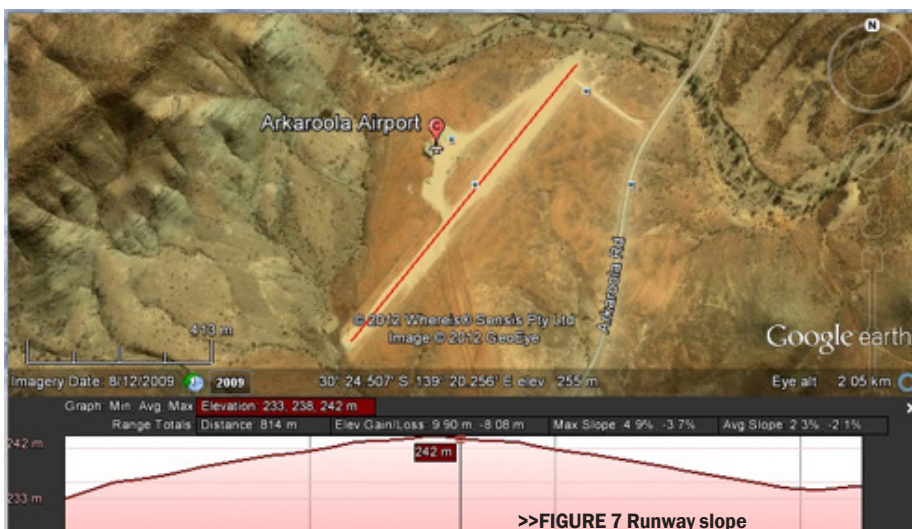
$$\text{Length in metres} = \frac{\text{Ground Speed in knots} \times \text{seconds}}{2}$$

I used this on a recent trip to confirm the usable length of a partially flooded airstrip. Two passes in opposite directions will give you the effective wind (50% of the difference in ground speeds), a technique handy in desert areas when there is no windsock, dam, smoke, dust or trees to indicate wind direction. Two passes at right angles to the strip will give you the cross wind component. These winds are not at ground level, but in my experience will provide you guidance on what to expect.

If there is any hint of abnormal drag when your wheels touch, be ready to gun the engine and abort the landing to re-assess the situation. The grass may be a lot longer than expected, the soil softer, or there may be significant sand drifts, any of which may prevent a take off. Lunch at Mount Dare Hotel was recently cancelled and re-located to Kulgera Roadhouse because of long, wet grass I detected only at touchdown.

Many bush strips are very stony. Carry spare tubes or a puncture repair kit (and a jack, if needed) and learn how to repair (glue or file) small damage to your propeller.

NEXT MONTH: Flight Management



BIRDSVILLE RAY
ENTRA

The Outback

LOOP



By Roger Duanca, Merry Canavan, Ron Hoey and Renee Finn



▼ *Outback flying can be very rewarding and a fun experience*

>>From left to right. Roger Duance, Merry Canavan, Renee Finn and Ron Hoey.

Flying recreational aircraft over remote areas of Australia can be challenging and considered risky; but two South Australian couples found that with careful planning, attention to detail and aviation common sense, a trip to Birdsville and beyond turned out to be among the highlights of their recent flying adventures (including *Victor 1*, *Sport Pilot* September 2014)

In mid August, a Foxbat A22 and a Savannah VG XL, both Rotax 912 powered, flew from a private strip in South Australia to the outback and back. Weather was a welcoming 20-26 degrees and, apart from a problem with a starter motor, there were no other issues.

Planning

A lot of time was spent discussing and organising the route, itinerary, accommodation, maps, GPS, OzRunways, coordinates, fuel availability, radio frequencies, CTAF, AWIS, mobile phone coverage, ASIC, emergency planning, first aid kits, beacons, food, water, spreadsheets for distances between stops and alternative routes.

Departure

We departed from RoMe, Roger and Merry's private strip 12nm east of Truro in South Australia and enjoyed tail winds of about 10kts most of the day.

A stop at Hawker was less enjoyable because of the very cool and windy conditions, but the track to Marree amazed us by the soil markings, landscape and flora. A pre-arranged fly over the Marree pub alerted Phil to pick us up in his mud covered ute used in the movie 'Tracks'. Phil and Maz are the new owners of the pub and offer great accommodation and meals. We chose the transportables, with ensuite @ \$140 per night.

The pub dining room offers detailed information on Tom Kruse and the Marree to Birdsville mail run during the 1930s as well as good meals. Locals in the front bar provide endless outback stories as long as you want to listen.



The Outback Loop Cont.

>> Big Red

Birdsville

The next day we departed Marree after refueling with Avgas at \$2.90 /L. We chose to follow the Birdsville track for safety reasons. We normally flew at 500ft AGL and were within gliding distance of reasonable landing spots virtually all of the time. We were surprised at the amount of road traffic, utes, 4WDs and caravans, all showing us wind direction with their dust. .

We stopped at the rocky strip at Mungerannie for a lunch break, the broad wings of the Savannah providing welcome shade as the day warmed. The road house is within walking distance of the airstrip, but we chose to picnic on the strip.

As we flew towards Birdsville, we deviated to the left side of the main track and flew via the Inner Track (only usable by vehicles when dry) between the Sturt Stony Desert and the Strzelecki Desert. We averaged 88kts with no wind and arrived at Birdsville early afternoon. Birdsville is an ASIC controlled airstrip, immediately across the road from the hotel, with a fence in between.

We remain unconvinced that Birdsville is a

security risk.

We took the Big Red 4WD tour. Big Red is a sand dune 35km west of Birdsville and, at 40m high, is the largest of more than 1,100 parallel dunes which cross the desert. We spoke with many 4WD drivers who had crossed them all.

We met two couples in Birdsville whom we had previously met at Marree. Tales of their rough ride over the Birdsville Track were met with the knowing smiles from we aviators. Their rough ride took them seven and a half hours; our smooth one took 3.3 hours. The Birdsville Hotel is part of the outback loop, a sister hotel to Innamincka. It is \$165 per night with spacious, clean rooms.

As part of our planning, we carried empty jerry cans which we used to refuel with Mogas @ \$1.85/L (Avgas was \$3.15/L) from the petrol station which is over the road from the airport.

Before leaving Birdsville, Merry, who comes from a horse racing family, was able to get a photo of herself holding the 2014 Melbourne Cup, all \$185,000 worth. The cup was there as a part of a country-wide tour before the race.



Innaminka

The flight to Innaminka was relatively short (2.1hrs) although we had a 10kt headwind. Sand, sand and more sand over the Strzelecki Desert.

We landed on the Township strip (YIMT) right on the edge of town, rather than the larger YINN, which is further out, but they can easily be confused. YIMT is in excellent condition, but the approach from the south is over a valley which can play tricks on your altitude perception on short final - beware.

We walked the 1km downhill to the hotel because there was no phone coverage and the usual flyover didn't work because Rotax engines are so quiet. The modern hotel offers excellent food and accommodation (\$160 per night) with Mogas available @ \$2.05 (the most expensive Mogas on the trip).

After a leisurely breakfast we were given a ride to the strip, refuelled and flew to the Dig Tree which a scenic 19nm flight following the Cooper Creek, which forms from the flood waters coming down from Queensland. The Dig Tree is the famed site where Burke and Wills were stranded after travelling north for four months. There is a very informative shelter there, an entry fee of \$11 per car/aircraft and good strip within walking distance of the tree.



>>Birdsville

White Cliffs

We flew over the Strzelecki Desert to Cameron Corner which is at the junction of the three states (SA, QLD, NSW) and where there is a good strip. From there we flew over horizon-to-horizon oil exploration tracks and increasingly better countryside, with more stock and wildlife to be seen as we travelled south.

While we waited for transport at the White Cliffs tarmac, an RFDS Pilatus arrived to retrieve an injured motorcyclist who had hit an emu. The nurse waiting with the patient rang Geoff at the White Cliffs Hotel Motel, who hadn't heard us fly over. Transport into town soon arrived. The motel @ \$100 per night provides basic clean accommodation and a friendly front bar. Geoff loaned us a car to go touring the town.

On start up the following morning, the Savannah decided not to play - the starter had failed. So most of the day was spent doing a temporary repair with the very helpful assistance of Barry, a local aviation enthusiast, who gave up a day working his opal mine to make sure we had every tool we needed. Fortunately we had Roger's L2 skills and Ron's experience from building the Savannah, combined with Wayne Johns' advice on the other end of the phone. We had a workable starter by late afternoon but took our anti-get-there-it-is pills, because there was some doubt we could safely make the next leg before last light and decided to leave the next morning.

The long steady flight home to RoMe via Menindee was done in one go so we didn't have to shut down the Savannah, just in case. We stayed overnight at RoMe and then the Savannah flew on to Wayne Johns' nearby property for a replacement starter.



Facts

Fuel was Mogas except from Marree where Avgas was the most expensive for the trip. Mogas surprisingly was relatively cheap at Birdsville, more expensive elsewhere.

Total flying time for the trip was 17 hours and fuel consumption was 17 litres per hour for the Foxbat and 19 litres for the Savannah.

During each leg we reported to one another via the chat channel every 10 minutes or so. We monitored the past and next CTAF frequencies and the area frequency as appropriate, giving us a good picture of what was happening around us.

Lessons learned

Prepare and plan in detail. Don't rely 100% on your GPS (we each used one as well as Oz-Runways on the iPads). Although GPS and Oz-Runways functioned perfectly for the whole trip, keep an awareness of where you are on a real map in case of GPS blackouts.

We did not have mobile phone coverage at Marree or Innaminka but we did at White Cliffs when we needed it. We found different phone plans gave different service, even two Telstra plans, where one functioned but the other did not in remote areas. Check this out before the trip.

An outback flying trip can be very rewarding and a fun experience. 🐛



>>Argyle Diamond Mine



Pilot Licence or Certificate?

By Carl Nilsson

W *In my view, one effective licence per individual should suffice.*

In the August 2014 issue of *Sport Pilot* there is a story entitled ‘Do I even need a Pilot Certificate?’ in which the president of RA-Aus warns of a possible penalty of up to two years in jail for flying an RA-Aus registered aircraft without a Pilot Certificate - even if the pilot holds an appropriate CASA licence (i.e. RPL or higher).

I do not think this is true. Let me start with a personal incident:

In 1997 I bought an AUF registered Skyfox in Queensland and flew it to Melbourne to convert it to VH registration. CASA was very helpful and, after some work on the aircraft and shuttling between offices, in just four weeks I was able to put VH stickers on the aircraft.

The day I got my prized Certificate of Airworthiness, I was asked when was I thinking of flying home to Tasmania? “Probably tomorrow”, I replied.

“Have a good flight” was the response. They did not ask, nor did it even cross my mind that I did not have a CASA Pilot’s Licence. After all, I had flown two AUF Skyfoxes from Queensland to Melbourne with my Pilot Certificate, so obviously I could fly them adequately.

A month later it was formally reported to CASA that I had flown ‘an Australian aircraft’ from Melbourne to Hobart ‘without a licence’. At the time, I was in the late stages of obtaining my PPL so I got a visit and a very stern letter, warning me in no uncertain terms that if I stepped out of line



It changed the legal landscape. The change effectively removed any argument for needing a RA-Aus/AUF Pilot Certificate if the pilot already holds an appropriate CASA Pilot's Licence.

I wrote up this view in 2007 and sent a letter into AOPA which published it in Australian Pilot magazine. Nobody refuted the arguments, although the CEO of RA-Aus at the time wrote that I was wrong and I knew my views did not sit well with either RA-Aus or CASA.

At the time, RA-Aus was pushing its version of a proposed Regulation Part 103 under CASA NPRM0603os. That version would have enshrined the need within the regulations for both a CASA Licence and an RA-Aus Pilot Certificate if a person wanted to fly a recreational aircraft in controlled airspace. I, and others more influential, were opposed to this and CASA decided not to proceed down that path. I guess this was partly instrumental in pushing CASA towards introducing the current RPL. One way or another they were going to solve the problem for pilots who did not wish to join RA-Aus. In my view, the introduction of the RPL has partly been the result of this attitude of RA-Aus. There is a significant number of licenced pilots who only fly for recreation, would like to fly light aircraft (with whatever registration) and who wish to do so using their CASA licence.

Acts, CASRs and CAOs

Here is my interpretation of the relevant parts of the Civil Aviation Act 1988, the Civil Aviation Safety Regulations and the Civil Aviation Orders.

The Act gives the law of the land, the Regulations give effect to the Act and CAOs variously give details, explanations and exemptions to CASR. It is a three-tier system with the Act on top. CAOs do not change the law. There are civil penalties for breaching CASR, but not for breaching CAOs as such.

The Act says (Sect. 20AB) that if you want to fly an Australian aeroplane, you need a licence or be authorised under the regulations. Penalty for breach: two years. Note that a RPL or PPL is a licence issued by CASA. A Pilot Certificate is a certificate issued by the RA-Aus. Certificates are not licences under the Act. They do not have the same legal standing. The Regulations (CASR) do say that CASA can delegate its functions (in an appropriate manner) and exempt certain parties from certain regulations. Many years ago CASA delegated the issuing of licences to the Gliding Federation of Australia but found itself with a bunch of unwanted liabilities, so did not follow the same path with the AUF. I understand the AUF and CASA signed a Deed of Agreement by which the AUF (now RA-Aus) issues Pilot Certificates.

When the AUF first came into existence, CASA had the problem of trying to fit all these pesky

little flying machines into its legal framework. They were deemed not to be Australian aircraft under the Act and did not and could not conform to Regulations. So CASA used its power to make exemptions for these 'certain ultralight aeroplanes' from a whole raft of regulations and spelled these out in CAOs. Note that Section 95 of CAOs is headed 'Exemptions from provisions of CASR'. They are not regulations, but the provisions of exemptions from the Regulations and the conditions under which the exemptions can be applied.

In CAO 95.55 (Instrument 2011 viewable at <http://www.comlaw.gov.au/Details/F2011L00617>), Subsections 1-3 detail respectively the aircraft to which this section applies, some definitions and a list of the regulations exempted.

Para. 3A.1 from the older 95.55 is now Para.5.1 and states:

“For section 20AB of the Act, a person is authorised to perform a duty essential to the operation of an aeroplane to which this Order applies, without holding a flight crew licence if he or she complies with the conditions set out in subsections 6 and 7.”

The essential duty in question is that of being pilot in command of an aircraft. The effect is unchanged from previous versions – you don't need a licence (i.e. a RPL or above) if you comply with subsections 6 and 7. Subsection 6 is headed General Conditions and 6.1 (b) states:

“the aeroplane must not be operated by a person as pilot in command unless the person holds a valid pilot certificate and, subject to the other conditions set out in this Order, operates the aeroplane in accordance with the privileges and limitations of that certificate.”

Out of context, that may read as a requirement to hold a Certificate, but within context it says “If you don't have a licence, you need a Certificate”. The qualifying phrase requiring compliance with 6.1 (b) is in 5.1, namely “without holding a flight crew licence”. If you have a licence, you don't need the exemption of 6.1 (b) in the first place. The conditions are irrelevant. It's plain English. You have already complied with section 20AB of the Act. There is no Regulation in CASR requiring a Pilot Certificate and an exemption does not create one. CAO 95.55 basically says “we won't prosecute you for flying without a licence if you have a Certificate – plus other conditions”. From discussions I have had, it was not the intent of the original CAO drafts to compel a pilot who had a licence to also hold a Certificate. These exemptions were brought into being to give some legal standing to the developing flying activity outside conventional civil aviation and to pilots who did not hold licences. To me that makes sense.

again 'a great weight would fall on me!'

This incident brought home to me the anomaly of apparently needing both a licence and a Pilot Certificate to fly the same aeroplane – albeit with different registration stickers.

This situation changed when, in September 2004, an amendment was added to Section 3 of the Aviation Act 1988 in the form of adding line (b) to the definition of Australian aircraft as:

“Australian aircraft” means: (a) aircraft registered in Australia, and (b) aircraft in Australian territory, other than foreign registered aircraft and state aircraft.”

Line (b) includes aircraft registered with RA-Aus – because 'registered in Australia' in line (a) may not include aircraft registered with RA-Aus.



PSB Insurance Brokers

Online Aviation Hull & Liability Insurance

Notice to All RA-AUS Registered Aircraft Owners

2013

We Promised an
Online RA-AUS Registered
Hull & Liability Insurance Offer

PROMISED

2014

We Delivered Ahead of Schedule
in November 2013

For a quick no obligation quote with
full broking and advice services go to

WWW.PSBGROUP.COM.AU

Optional Discounts Online

DELIVERED

2015

Online Monthly Payment
Option Coming Early 2015

STANDBY

www.psbgroup.com.au
Subject to acceptable underwriting criteria - AFS241402

Any queries call Geoff (08) 8267 2875
or Ben (03) 8841 3303

Protection, Insurer Security, Experience, Knowledge & Advice, All at a Great Price



Pilot Licence or Certificate? cont.

It is for this reason that, to the best of my knowledge, CASA has never taken to court any pilot for flying an RA-Aus aircraft without a Certificate if they hold a current and appropriately endorsed licence – and I don't expect they ever will.

It's not against the law, whatever the current wishes or intent of some might be. That's the reason why in 2007 RA-Aus pushed for its version of Part 103 (a Regulation) which would have made it mandatory to hold a Certificate to fly a recreational aircraft regardless if the pilot had a licence. In the face of this, CASA then proceeded towards developing the RPL, which is a licence.

In my view, one effective licence per individual should suffice. The old argument that RA-Aus has different requirements requiring specialised training and therefore its pilots need a special Certificate is not generally valid and, arguably, never has been. Of course, some aircraft do require special instruction. If a current Cessna or Jabiru pilot was to try to fly the Weedhopper (Page 52 Sport Pilot August 2014) without such instruction, he/she would probably have some difficulty. These issues can and should be covered by appropriate endorsements, just as both CASA and RA-Aus currently have endorsements for tailwheel and floatplanes. That's all that's needed. Even aircraft of the same general type (three-axis single-engine taildraggers) like my Skyfox and an RV-4 need special instruction and familiarity training – but not a separate licence.

Finally, one must consider the impact of CASA's RPL. Many pilots will chose to obtain one. The RPL will allow flight into CTA. However, there is a catch. To use an RPL, a pilot must have at least a Recreational Aviation Medical Practitioner's Certificate – commonly known as a 'fit to drive an automobile (aviation)' Certificate.

Once again, the devil is in the detail. This Medical Certificate (aviation) requires your GP to certify that you have not suffered from any of a quite large number of serious issues in the past – for example, no cancer for the past five years. The GP does not have to certify to most of these matters to simply give you a 'fit to drive' certificate under Ausdrive guidelines to maintain your auto driving licence. The latter certification is all that is required for the RA-Aus Pilot Certificate. Whether you are fit or not to drive a car is entirely up to the GP. Thus, some pilots who wish to fly RA-Aus only OCTA will continue to use that lesser certificate from their GP. That's fine. The RPL will not remove the need for Pilot Certificates. The Certificate is also the easiest and least expensive path for an ab initio student to take.

So I believe the best thing RA-Aus (and CASA) could do is to give up the notion that you have to have a Certificate as well as a licence in order to fly a recreational aircraft. This was and is a money issue, not a safety one.

RA-Aus should work with CASA towards keeping it simple. Continue to cover what is necessary regarding the differing characteristics of various aircraft with appropriate endorsements, be they to a Certificate or a licence. I predict RA-Aus membership would, in the longer term, rise as a result and Australian aviation would benefit.

Both the RPL and the RA-Aus Pilot Certificate can and should co-exist.

I worked hard to gain my Certificate in 1997 as an older student at a long-established school north of Melbourne. I do not regard GA instruction for a PPL as superior. In fact, I believe the stick and rudder instruction I received was more thorough than the average GA student receives to GFPT (now RPL) or PPL standard – particu-



larly as I learned in a taildragger. I am more than happy with the path I took - first Certificate then licence (to access CTA).

I have no qualms with RA-Aus membership being mandatory in order to register an aircraft with them. That's a different matter.

I think CASA has probably drawn a line in the sand as regards operating in CTA. You will have to have at least their Medical Certificate and, for that reason, they will not allow CTA endorsement to any RA-Aus certificate without at least the fitness-to-drive (aviation) Medical Certificate. The present RA-Aus standard is valuable to the many pilots who only fly OCTA and I hope that this lesser medical requirement is maintained. After all, an car driver falling asleep at the wheel is more likely to harm other people than an OCTA pilot who nods off.

Note: I must acknowledge the correspondence with Dafydd Llewellyn (CAR 35 engineer), Spencer Ferrier (aviation lawyer) and the late George Markey I had on this topic, which certainly added to my understanding of these issues.

RA-Aus and Sport Pilot encourage members to get involved at every level, however keep in mind the views expressed in this article are those of the author only. RA-Aus and CASA have very different interpretations of the issues outlined. Follow the author's advice at your own risk.

GYETS Scholarships

RA-Aus is now accepting applications for 2015.
Applications will close on January 31, 2015
For more information, visit the website or contact
admin@raa.asn.au



Ever wanted to fly Tailwheel?

Come to the Tailwheel specialists at Aldinga in the heart of the beautiful McLaren Vale wine region. Recreational and GA endorsements in our fantastic new Sport Cubs or the venerable Piper Super Cub. Sharpen your skills, broaden your horizons.

Fly a Classic, Fly a Cub... with Adelaide Biplanes.

www.adelaidebiplanes.com.au | Aldinga Airfield Tel 08 8556 5404

Yarrowonga Flight Training



**FLIGHT TRAINING IN THE LATEST
AIR CREATION SKYPPERS,
TANARGS & XT-912 ARROWS**

**Endorsements & Conversions
Ground School
BFR's & Aircraft Sales**

*We develop great pilots
to do extraordinary things*

Hangar 19 Yarrowonga Aerodrome
03 5744 1466
yft@yarrowongaflighttraining.com.au

www.yarrowongaflighttraining.com.au

XCitor
German built
and engineered
For sales enquiries contact
Robin Lowe
Australian Promoter
0417 237285
LoweFlight.com

Pilot Shop Yarrowonga

Consumables

Aeroshell Oils, Greases & Fluids, Tools,
Rotax parts, Airborne parts, & much more

Pilot Supplies

Garmin GPS, Headsets, Helmets, PLBs,
Aircraft Accessories, Radios, Airservices
products & much more

Aircraft Hardware

Bolts, Camloc's, Tefzel Wire, & Electrical
fittings, Aircraft Tyres, Tubes, Sparkplugs,
Oil Filters & much more

*Check the monthly special on our
website. It will be hard to beat our service
and prices.*

*We carry a wide range of quality stock, but
if we don't have it in stock we may be able
to order it in for you.*

*We have an extraordinary
range of great products*

Hangar 19 Yarrowonga Aerodrome
03 5744-1466
yft@yarrowongaflighttraining.com.au

www.yarrowongaflighttraining.com.au



By Norm Sanders

**Simple enough.
Or it was until the
bureaucrats got
busy**

According to the dictionary, an airplane is 'An aircraft which is kept aloft by the aerodynamic forces of air upon its wings'. Simple enough. Or it was until the bureaucrats got busy.

Now there are numerous sub-categories, each requiring different licences for flying and maintenance.

Consider a hypothetical proud builder completing a machine similar to a Murphy Rebel who has been trying to figure out where it fits in the scheme of things.

Already being a contented member of RA-Aus, he obviously tries here first. No way, Jose. RA-Aus aircraft must be less than 600kg Maximum Take-off Weight. The Rebel weighs in at 750kg.

That extra 150kg makes a big difference. If he could have registered his plane with RA-Aus, he would be able to fly with his RA-Aus licence and do his own maintenance.

FROM THE RA-AUS:

'Level 1: for owner operators to perform and authenticate maintenance carried out; only on their own aircraft and provided the aircraft is not used for hire-and-reward; i.e. flight training.

'Level 2: for suitable people to conduct maintenance on all aircraft or conduct and/or authenticate maintenance on aircraft used for flight training and glider towing.

'RA-Aus Level 2 Maintenance Authority holders accept a high degree of responsibility for the maintenance and serviceability of ultralight aircraft.

They are the equivalent of heavier aviation's LAME's who are required to pass significant written examinations and have at least four years' experience in the aviation industry before becoming qualified. While ultralights may be simpler than most of the aircraft on the CASA register, once airborne there is little difference to the outcome if sloppy maintenance practices are perpetrated.'

RA-Aus is obviously the best all-around option for aircraft which fit the criteria, with one exception: No aerobatics are allowed. It seems that having numbers on the side rather than letters so weakens the airframe that the regulations prohibit all aerobatic maneuvers, including spins.

RA-Aus limits aircraft such as Corby Starlets to placid meanderings. The same Starlet could turn itself inside out under CASA regulations.

>>Continue page 39



Fully Built or Kit Aircraft Available

Training, travelling or traversing territory? We've got you covered with style, safety & Australian service



WWW.LIGHTWING.COM.AU
fly@lightwing.com.au (02) 6686 8658



Pioneer 200 Hawk - 300 Hawk - 300 Kite - 400



'a delight to fly with nippy performance and stylish Italian lines'
Australian Flying, May - June 2013

'Fast, comfortable and economical, it looks great - and actually flies as nicely as it looks'
Pilot, November 2011



Alpine Aircraft Sales

www.alpineaircraft.com.au

Michael Pendergast
0418 821 534
michael@alpineaircraft.com.au

Jim Rodgers
0437 054 123
jimrodgers01@gmail.com
Western Australia

Bob Keen
0429 639 770
smokeysmall@bigpond.com
Northern NSW, Qld, NT

Abandon hope, all ye who enter here cont.

HOW ABOUT LSA?

The Light Sport Aviation category opened the door to a new type of aircraft, one which can be built simply, safely, cheaply and with minimal supervision from a national airworthiness authority. Manufacturers were granted great freedom to quickly develop and market new designs. Under LSA, pilots can buy and fly a modern, factory built aircraft for a fraction of the price of traditional certified aircraft.

Cessnas, Pipers, et. al. have undergone expensive and extensive certification programs. LSAs have not. Hence the placard: 'Does not conform to standard category airworthiness requirements'. This doesn't mean LSAs are unsafe. It indicates they haven't undergone a torturous certification regime and that pilots and passengers should be aware of the fact, similar to EXPERIMENTAL GA aircraft. In fact, LSAs are probably safer than a 30-year-old flying school C150.

An LSA aircraft may operate under either RA-Aus or under CASA. Under CASA, it is treated like a GA aircraft and requires a LAME for most maintenance and a PPL to fly.

THE REGULATIONS STATE:

'A Light Sport Aircraft is an aircraft, other than a helicopter, that has:

- A maximum take-off weight of 600kg or 650kg for an aircraft intended and configured for operation on water or 560kg for a lighter-than-air aircraft.
- A maximum stall speed in the landing configuration (Vso) of 45kts CAS.
- Maximum two people, including the pilot.
- A fixed landing gear. A glider may have retractable landing gear.'

This brings us to the Alice in Wonderland world of motorgliders. A motorglider registered under the RA-Aus would be prohibited from turning off the engine in flight, which

at first glance, might seem to defeat the purpose. Of course, only motorgliders with engines bolted to the front can be RA-Aus. If the engine pops up out of the fuselage, it has to be registered with the Gliding Federation of Australia. The pilot must then have the appropriate licence. Our motorgliders here at Byron Bay have Limbach VW conversion motors. Since they are with the GFA, I need a GFA Section 2 to maintain them. If they were RA-Aus, I would need my Level 2 authorisation to work on them. With CASA rego, God forbid, I would have to be a LAMEs. Actually, LAME's are somewhat bemused by a VW auto engine which rotates in the opposite direction to a Lycoming.

Unfortunately, our increasingly frustrated builder couldn't obtain LSA registration either. This category is limited to factory built aircraft or kit versions of same. There are no factory built Murphy Rebels, so he is out of luck. The MTOW of 750kg was way too high anyway.

Since his aircraft doesn't qualify for RA-Aus or LSA, his only option is to get VH rego with CASA. The path leads to the SAAA, the Sport Aircraft Association of Australia.

THE SAAA STATES:

'The SAAA is a group of aviation enthusiasts assisting each other to build, maintain and operate sport aircraft. We educate members to continuously improve safety outcomes.

'This is our mission statement, our aim and our objective.' 'Broadly our core business is the building of amateur built aircraft and the continuous maintenance of such aircraft in accordance with the regulations, advisory material and any other requirements including good aircraft engineering practice.'

In order to obtain the necessary rego and a maintenance release, a builder must have

the aircraft inspected and attend the two day, CASA approved, SAAA Maintenance Procedures Course which:

'Provides training that equips builders with knowledge of the regulations governing maintenance of an amateur built aircraft including Advisory Circulars, Airworthiness Directives, Airworthiness Bulletins, Service Bulletins, sources and application of approved data and other continuing airworthiness requirements. The MPC enhances the skills and knowledge gained during the building phase and ensures the builder can safely maintain the aircraft throughout its life.'

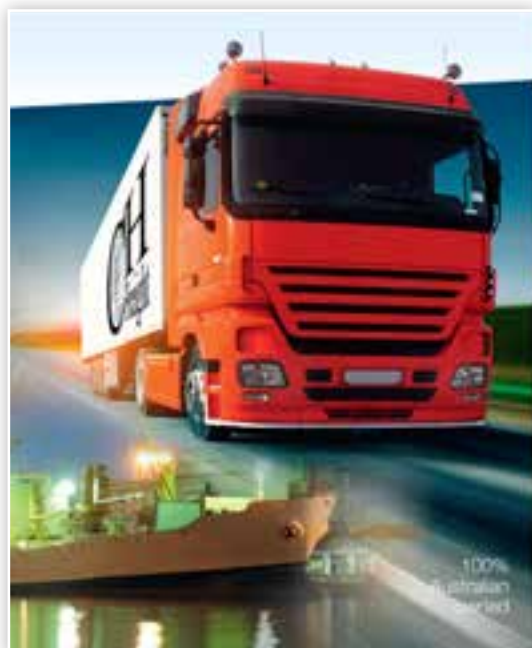
Only the builder is then qualified to do his or her own maintenance. If the plane gets sold to someone else, a LAME must do anything more challenging than inflating a tire unless the new owner has built an identical aircraft.

When the builder has satisfied all the requirements, the aircraft will get 'EXPERIMENTAL' registration. This means it cannot be used commercially and must have a prominently displayed placard with words to the effect that anybody who risks their neck in the contraption is a brick short of a full load.

Of course, once our Rebel builder gets his VH rego, his RA-Aus Pilot's Certificate will no longer suffice and he will have to get a CASA Private Pilot Licence at considerable expenditure of time and effort.

I have been hacking my way through this bureaucratic jungle for years and in the process have had to acquire a GA CPL and Instructor rating, a GFA Glider Pilot's Licence and instructor rating, an RA-Aus Pilot's Certificate, three separate log books (and matching BFR requirements) and several different maintenance qualifications. All simply to fly "an aircraft which is kept aloft by the aerodynamic forces of air upon its wings".

Does it really need to be so complicated? 🤖



Call C&H Freight First!

PAIN-FREE IMPORTING FOR HOMEBUILDERS

Almost 20 years experience freighting aircraft and aircraft parts

- Convenient door to door service (if required)
- Weekly departures for consolidated cargo & full containers
- Flexible part container and full container services
- Convenient door to door service (if required)
- Honest advice
- Competitive costing
- Personal, friendly service

For a quote email christine@chfreight.com.au or shelly@chfreight.com.au with supplier details, weights & dimensions – that's all we need.



03 9330 0800
 Unit 3, 4-8 Mareno Rd
 Tullamarine Vic 3043
 Fax: 03 9330 0811
www.chfreight.com.au

HUMMERCHUTE... Aerochute's Big Brother With 582 Rotax!



LET THE ADVENTURE BEGIN...!!!

Phone: 03 9354-2612

Web: www.aerochute.com.au

Email: info@aerochute.com.au

AEROCHUTE... The Name You Can Trust!

CFT
COOMINYA FLIGHT TRAINING

JOHN WALMSLEY CFI

COMMITTED TO GIVING YOU THE CONFIDENCE TO ACHIEVE YOUR GOALS AND PILOT AN AIRCRAFT TO A HIGHER DEGREE OF SKILL - WITHOUT THE STRESS

WE WILL ADJUST THE TRAINING TO SUIT YOUR REQUIREMENTS

FROM PILOT CERTIFICATE THROUGH TO INSTRUCTOR TRAINING

PERSONALIZED TRAINING

LIGHTWING GR 512 T
SAFEST TRACK RECORD

- ◆ TRAINING 7 DAYS
- ◆ FULL TIME OR PART TIME
- ◆ YOUR AIRCRAFT OR OURS
- ◆ NOSEWHEEL OR T/WHEEL
- ◆ ADVANCED TRAINING

WE LOVE FLYING AND SO WILL YOU

CALL OR EMAIL US FOR A

- ◆ TOUR OF CFT
- ◆ TRIAL INTRODUCTORY FLIGHT
- ◆ INFORMATION PACKAGE

ONE HOUR DRIVE WEST OF BRISBANE

Mobile: 041 345 2547

Email: cftjohn@westnet.com.au

The Recreational Flying Co Pty Ltd

The Spirit of flying

- ✓ Stick & Rudder Specialists!
- ✓ Two-Week full time certificate courses!
- ✓ Part 141 Approval RAAus, RPL, PPL, CPL
- ✓ Aerobatics, E.M.T., Instructor Training!
- ✓ Low and High Performance!
- ✓ Caring, skilled, professional staff!
- ✓ Accommodation and courtesy car available

Gympie Queensland
0407 086 152
recreationalflyingco.com

AVIATION INSURANCE

experienced aviation insurance specialists

Authorised Insurance Representative of Ambrco Insurance Brokers Pty. Ltd. AFS Licence Number 230675

Stewart & Gladys Smith would like to assist with your RA-Aus or GA aircraft insurance, or hangarkeepers public liability policy needs. The only insurance we handle is aviation, we do it well, and we are both friendly and economical to deal with!

We cover the market for you, obtaining multiple competitive quotes from all appropriate insurers, and then help you pick the best cover/price.

We welcome clients in all parts of Australia, and if you can't catch us at the office on 1300 308 700, we are often available after hours on 0433 278 700.

AIRCRAFT FINANCE

In affiliation with Linx Finance Australia Pty. Ltd

If you seek aircraft finance, we, via our affiliate Linx Finance, welcome the opportunity to seek to assist if the application is for \$40,000+ and the applicant is in a good financial position. Good bank rates, normally fixed over 5 years. Security is normally over just the plane. Ring Stewart Smith to discuss your needs, and to see if we/Linx can assist.

AUSTRALIAN COMMERCIAL CREDIT PTY LTD

Ph: (03) 9816 3264 or 1300 308 700
 Fax: (03) 9816 3270
 Website: www.insureplanes.com.au
 E: stewart.smith@insureplanes.com.au
 AH: (03) 9857 5963 or 0433 278 700

PILOT TALK

The Ops team

Weighty matters

The issue of weight, including consideration of Maximum Take-Off Weight (MTOW) and weight and balance when planning or operating RA-Aus aircraft is particularly topical at the moment for a number of reasons.

Members will be familiar with MTOW as the maximum weight to which an aircraft can be safely and legally operated. Over the course of the past 30 years of RA-Aus, MTOW has been a constantly evolving and changing reference in most peoples' minds.

Originally, AUF aircraft were limited to 300kgs and single seat operations. Revisions to existing CAOs and additional CAOs provided increases in MTOW and additional privileges, but let's explore what MTOW really means for an aircraft and where pilots can get the correct information about their aircraft's MTOW.

The current CAO 95.55 (revised September 2014) includes references to the category MTOW now being 600kgs, however this does not automatically mean all aircraft registered with RA-Aus can operate to 600kgs.

An example may assist. The Banana Bender 2000, a fictitious aircraft constructed in the late 1980s or early 1990s has an empty weight of 330kgs, and a MTOW of 520kg. Even though CAO 95.55 states RA-Aus aircraft may be operated to 600kg, the Banana Bender 2000 is therefore limited to a MTOW of 520kgs by the manufacturer.

If a pilot elects to operate the Banana Bender 2000 over the MTOW (easily done if the pilot and passenger are more than 80kgs each and with full fuel of 50 litres which weighs 36kgs), there may not appear to be any immediate repercussions or consequences. The aircraft payload has only been exceeded by about 6kgs. What is the harm in that?

Consider for a moment though, what sort of hidden stress the airframe may have endured over its lifetime. Turbulence due to strong winds or thermal activity, aerobatic or semi-aerobatic manoeuvres by untrained pilots or perhaps student pilots doing multiple heavy landings (or at the very least, firm arrivals). Add to this mix continued operations over MTOW. Finally, add to the scenario additional stress on the pilot and his or her decision-making due to weather closing in, limiting his or her options and requiring excessive manoeuvring to escape.

Suddenly, all those years of overweight operations may lead to an airframe failure. This has the potential for serious, and potentially fatal, consequences.

Regulators look at these accidents and sometimes decide an Airworthiness Directive is to be issued to strengthen the aircraft by some means. This is a response directly related to pilot and/or passenger deaths and may not, in fact, have been required if the aircraft had been operated correctly all those years. The AD is required to be completed and imposes a financial burden on owners for an aircraft which has been operated for years beyond its specified requirements.



No-one would deny the Banana Bender 2000 is a strong aircraft, which has provided years of safe and complaint operations, but the scenario above is not unimaginable and is based on real world experience.

The temptation for pilots to overload an aircraft when operating on long navigation flights is strong and has occurred since the Wright brothers first flew. *Sport Pilot* regularly features stories of pilots filling it up with full fuel, loading up with baggage and setting off for parts never visited before without there ever being a mention of weight and balance.

While the immediate consequence may seem insignificant, a little more runway used, a little more fuel burnt, etc. the reality is the potential for long term damage to an otherwise structurally sound aircraft and additional requirements for maintenance or modification.

There are many aero club or hangar stories of "it's a Cessna 172 mate. If you can close the

doors on the load, the plane will fly".


Tied in with the consideration of MTOW is weight and balance. It is apparent there may be a lack of understanding of the relevance of weight and balance among some pilots. Most RA-Aus aircraft have simple balance considerations, such as ensuring the aircraft is not operated above the MTOW and has no more than a fixed amount in the baggage area. Therefore it cannot be operated outside the weight and balance range. But some aircraft require more careful calculations. Additionally, if members wish to add an RPL to their RA-Aus Pilot Certificate, weight and balance will become a more critical area when operating aircraft up to 1,500kgs MTOW.

Following on with this weighty consideration and as a final point, Operations is aware of a number of serious accidents this year where aircraft performance was not carefully considered prior to take-off. Aircraft performance varies as a result of MTOW. Environmental factors such as ambient temperature, density altitude, surface conditions, soft field and correct take-off techniques can also make a considerable difference to performance.

This article is intended to make all pilots think about how they safely operate, regardless of whether the aircraft is hired, privately owned or borrowed from a friend. Consult the POH, make sure the information is accurate and don't be tempted to overload the aircraft. The life you save may not be yours, but someone you know and care about.

Footnote

The article regarding Low Level operations (*Sport Pilot* September 2014) appeared to create some confusion. Operations can confirm RA-Aus members can certainly operate to 500ft AGL without a Low Level endorsement, as long as it's not over a closely settled or built up area.

The intent of the article was to point out that if operating that low, an additional 50ft was not going to provide a significant margin of safety and therefore may not represent good decision-making. Specialist training and a genuine need for the operation are considerations all pilots should take into account. After all, in the GA world, pilots are not permitted to operate below 500ft AGL without specialist training. Why would RA-Aus be any different? 

CENTRAL WEST
Flying



Escape the coastal weather and heavy air traffic - fly from Bathurst, NSW

RA & GA Flight Training, Flight Reviews,
Advanced Endorsements, Conversions, and Private Hire

- Block training and accommodation available
- Modern facilities with airport 'control tower' view

Cessna 152 and 172, BRM Bristoll 3300, Jabiru 160,
170, 230 - all available for training and private hire

**Block Training
Accommodation
Courtesy Car**

Phone: 02 6337 3945
Mail: P.J Moodie Memorial Drive,
Bathurst Aerodrome 2795
Email: info@centralwestflying.com
Web: www.centralwestflying.com

THE WORLD'S LARGEST MANUFACTURER OF SPORTS AIRCRAFT

GT 500



AVAILABLE AS LSA SOON

Sport 2S

GT 500

Call Bert on:
0418 440 575
A/H Phone: (02) 4956 7211
Email: bert@quicksilveraircraft.com.au

MXL2 Sport

www.quicksilveraircraft.com.au

GT 400



FAETA

All Carbon Fibre
Factory Built LSA

ZEPHYR

Carbon Fibre Fuselage
Composite/Fabric Flying Surfaces
Factory Built LSA or Quick Build Kit



ATEC AIRCRAFT SALES

AUSTRALASIA

PO Box 30 DENMAN NSW 2328
Dexter Burkill — 0428 686 396 (Denman)
Sean Griffin — 0499 030 659 (The Oaks)
email: atecplanes@bigpond.com
www.atecplanes.com.au

STOL Performance with 120kt cruise

Powered by the ROTAX 912 range

L LEARNING TO FLY

ANTHONY SIBARY

Paper planes

Given the wretched weather we have been coping in Sydney lately, I haven't spent much time in the air. Instead I have been using the time to study for my final theory exam.

So I thought I would share some of the aviation learning materials I have been using as I work toward getting my Pilot's Certificate.

I really hope it does not sound like a commercial and I should point out I am not receiving any financial reward for mentioning any of the companies and/or products here. Put simply, these resources have helped me and hopefully they also can be of benefit to you.

Having read a number of positive reviews, I bought a book by Jim Davis titled 'PPL A Practical Book about Flying Safely' and what a great read it is. It is as if Jim is sitting right next to you. He combines text with diagrams to explain aviation theory in a way which is very easy to follow. I do not want a PPL or an Instrument Rating, but I want to fly safely and Jim's book explains how to do just that.

Another useful resource has been the RA-Aus Flight Training Manual from Delta Recreational Flying Services in WA. It is available in hard copy, CD Rom or via digital download. I chose the latter and have found it integrates really well with the RA-Aus syllabus. It is a pdf so I have been using it on my tablet which makes it a truly portable resource.

I have been using this with the awesome Dyson-Holland RA-Aus Pilot Certificate Ground

Training Manual 102. This comes packed with detailed aviation theory, clear and very detailed illustrations and plenty of practice exams. The best part for me has been the ability to work through the topics at my own pace, at a speed I am comfortable with. I can complete the practice exams and when I'm ready I can sit the actual RA-Aus ones. Another great bonus with this resource is that the practice exams are in the same format as the RA-Aus theory ones. It also comes with a CD which includes updates and the answers to the practice exams.

Luckily, as important as these theory based resources are, there are other ways you can add to your learning to fly journey. I am referring here to the GoFly Aviation DVD series. These are fantastic. There are three DVDs in the series, including the complete RA-Aus Pilot Certificate Course, How to Survive Your First Engine Failure and Navigation Made Easy. How have they helped me? By combining these with the theory (book based) resources, I have been able to add some variety to the journey. As ever, check with your own instructor if there is anything in it presented differently to what you have been told and keep in mind the aircraft in the DVDs may not be the same as you fly. I enjoy watching the DVDs because they are a nice break from the books.

Of course, the greatest resources we have access to as student pilots are our instructor and CFI. The pre/post flight briefings and the lesson itself are all opportunities to ask and



learn. At any stage of my journey if I feel I cannot get something right, I talk to my instructor about it. Remember the old saying "When there is doubt, there is no doubt".

Ask questions and seek advice if at any stage you are unsure of something.

Humans learn best by doing. Make every flying lesson count. It really is awesome when I study a topic and then get into the air and put the theory into practice.

There are literally thousands of resources out there and I have mentioned but a few of them.

As ever, see you in the pilot's lounge for cocktails and debriefing. 🍹

NEW RELEASE LAND SALE

WILMINGTON RESIDENTIAL AIRPARK PEPPERPLANES CO.



Lots Now Selling!

AIRPARK

12 LARGE FREEHOLD lots
2.5ha approx 5 acres each,
Lots from \$60K, 6 lots with
860 metre airstrip frontage.

Build your DREAM home alongside your hangar!

CENTRAL TO FLINDERS RANGERS

VISIT WEB <http://chrisxy72.wix.com/wilmington-airpark>
FOR ALL ENQUIRIES AND INFORMATION CONTACT CHRIS PHILLIPS
EMAIL: chrisxy72@bigpond.com MOBILE: 0419 537 618 WILMINGTON SA 5485



By Ray Morgan, Clyde Howard and Ray Jones



The Genesis of a



>>Ray Morgan reassembling the left wing

In July 2001 a new Genesis aircraft based at the Gold Coast Sports Flying Club at Heck Field crashed on its first take-off and was extensively damaged.

The engine was removed from the wreckage and sold. The rest of the wreckage was stored about 300km away and the owner never thought of it as being worth anything.

10 years later, we three retired pilots were looking for a project and decided to inspect the wreckage. We decided it was a project worth considering.

After discussions with the owner, we agreed he would give us the remains. In return one of us would build him a new panel for his new Hanuman aircraft.

When we went to pick up the wreckage, he warned us to be careful of the kangaroos in the area. He forgot to tell us about the wild pigs. Of course, we hit a pig on the way back.

Inspection of the aircraft parts showed that, while the basic cabin frame longerons were broken, the main frame was mostly still intact, as was the port wing. The starboard wing was a write off and the tail, despite being damaged, could be repaired.

Repairs began in late 2011. All coverings were removed and frame stripped.

The original 912 Rotax motor had been removed and sold, so it was replaced with a spare factory re-built 80hp Verner model

V133VM which Ray had replaced on his own Genesis. Because the Verner is air/oil cooled, the instrument panel needed to be redone to allow for the different engine instruments, plus a radio and new flying gauges.

New cabin main frame support tubes were fitted and the main frame assembled with the different engine. Tail support tubes, together with new starboard wing tubes, ribs, a fibreglass nose cone and belly pan were purchased from the manufacturer in the US.

Sea freight was costly because of the duty and incidental port and handling costs, which together would have made it just as easy to have ordered them by air.

The plane is a high wing pusher configuration with tricycle undercarriage. Because it is the same type as Ray's, we were able to use a pair of spare wheels and legs for the main undercarriage and we made up the front support leg assembly the same as his.

Control is by dual push/pull cables for all control surfaces. The control column is conventional centre stick, operating a bell crank to the push/pull cables for the ailerons and elevator. Dual foot operated pedals are also fitted for rudders also by push/pull cables.

Cabin is side-by-side seating with an All Up Weight of 544kgs (as per RA-Aus regulations). Factory load type testing of the wings is actually up to 630kgs. At this stage, we have



>>Clyde Howard, Ray Morgan and Ray Jones



>>Fitting and checking the right wing



a good idea



>>Clyde Howard and Ray Jones

only partly enclosed the cabin, but this may change later. It is basically the same as the Genesis Sports configuration.

While the plane was being built, we fitted a wood pusher prop to run the engine so the oil was kept in circulation. This propeller has now been replaced by a recommended three bladed 68in warp drive. Engine revs at full power on the ground with the pitch set is 5,000rpm against a max of 5,500rpm.

All flying surfaces are covered by ceconite, stretched and glued, plus riveted to the frame. The cloth was then given two coats of sealant, one of the coats with aluminium paste for UV protection. It was then painted with two-pack auto paint together with a red nose stripe to break up the white colour.

Also purchased and fitted were three wheel pants which were also painted red. Spray painting was done by Clive Ryan - GCSFC member and onsite caretaker.

The aircraft was re-inspected by an L4 inspector, as requested by the RA-Aus Tech Manager, and paperwork submitted early September 2014.

Registration was completed and the plane was ground run to check handling early on the morning of October 3.

The engine was then given full power and took to the sky for its first real flight.

We now have to fly off the required hours

and tests, but it feels good in the air.

Climb is 850ft/min at 50kts and normal cruise speed is 65-70kts at 4,500rpm. Fuel burn at 4,000rpm is about 11 Lt/hr. Stall speed with one on board is 38kts.

All these figures will need to be corrected as we fly it more. Maximum fuel is 80 litres with 40 litres in each wing tank. Rotation at take-off with one up is about 40kts and landing approach is normally at 60kts, or at least 55kts for a short field landing.

All up, the aircraft has only cost us about \$10K, taking into consideration that Ray had a spare engine which could be used. So it is really been a cheap plane for us, as well as keeping us busy doing something besides flying. The aircraft is basic rag and tube with no welding.

All surfaces are either bolted or riveted together. All bolts were replaced if they showed any sign of stress or corrosion.

Minor modifications included making an access panel to the fibreglass nose cone so we could have full access to the battery, which is mounted in the front nose cone. Our Genesis is now the fourth of its type in Australia.

Now we have another new project. We have been given a old Shuttle to have a go at rebuilding. We got the engine working after it was 12 years in storage. Nothing like an old plane to keep you young.



>>Verner motor and Warp Drive 3 blade prop



>> Left wing finished assembly

DESIGNNOTE

DAVE DANIEL

Making sure you're stable

ARE YOU UNSTABLE?

Hopefully your answer is a resounding 'No!' especially if you happen to be in an aeroplane. Positive Stability is a desirable trait for just about every aircraft design and is a certification requirement in many categories including LSAs. In smooth air it allows a plane to fly hands free for a short period, useful if you need to refold a chart or rescue a dropped pencil. In rough air it helps minimise the feeling you are wrestling with a wild animal. Too much stability, though, can also make for an uncomfortable ride because the aircraft will aggressively attempt to align its heading and angle of attack with every gust.

An aeroplane which lacks positive stability is not necessarily impossible to fly, but it will be hard work, requiring constant vigilance to prevent any small divergence from the desired flight path escalating into a complete loss of control. Reduced stability does have its uses: Planes designed for aerobatics sometimes have marginal or even neutral stability and modern fighter aircraft designs achieve their extreme agility by deliberately incorporating negative aerodynamic stability which is then tamed using fly-by-wire and computer controls to mask the lack of stability from the pilot.

WHAT IS STABILITY?

Cutting edge technology is all very nice but most of us are in the fly-by-cable rather than fly-by-wire category, so let's get back to basics.

In an aircraft context, stability is divided into two types, static and dynamic. Static stability is a bit of a misnomer. It certainly doesn't involve the aeroplane standing still and is actually the aircraft's immediate response to a disturbance.

If you pull back on the stick, raising the nose slightly and then quickly release the control again, the aircraft will nose back down all by itself. This is positive static stability at work, returning the plane to its trimmed angle of attack.

Dynamic stability, on the other hand, is what happens next, i.e. the plane's response over a longer time period. If the nose up attitude is held for a little longer allowing some airspeed to bleed off, releasing the stick will still result in the same initial nose down motion but, providing the power and trim settings remain the same, the plane will accelerate and attempt to regain its original airspeed. In most aircraft this response will actually result in an overshoot of the trimmed airspeed, causing the plane to pitch up again.

If the aircraft has positive dynamic stability, this cycle will then repeat with progressively smaller airspeed divergences until equilibrium is eventually reached back at the trimmed airspeed. Figure 1 illustrates this and the impact different types of pitch stability will have on an aircraft's behaviour following the pull up manoeuvre just described.

In addition to the two types of stability described above, aircraft stability is conventionally separated into the three planes of rotation, longitudinal (pitch), lateral (roll) and directional (yaw). This can sometimes prove confusing for the uninitiated – as rotation in the longitudinal plane occurs around a lateral axis and vice versa. On the bright side, at least directional stability is obvious.

As pilots we tend to take longitudinal stability for granted, adjusting the trim setting tens or even hundreds of times each flight and then happily leaving the plane to obediently maintain our selected angle-of-attack without sparing it so much as a second thought. But consider for a moment just what a remarkable feature the ability to trim to a selected angle-of-attack really is. After all, how many other objects when released into the atmosphere at height not only fail to immediately plummet

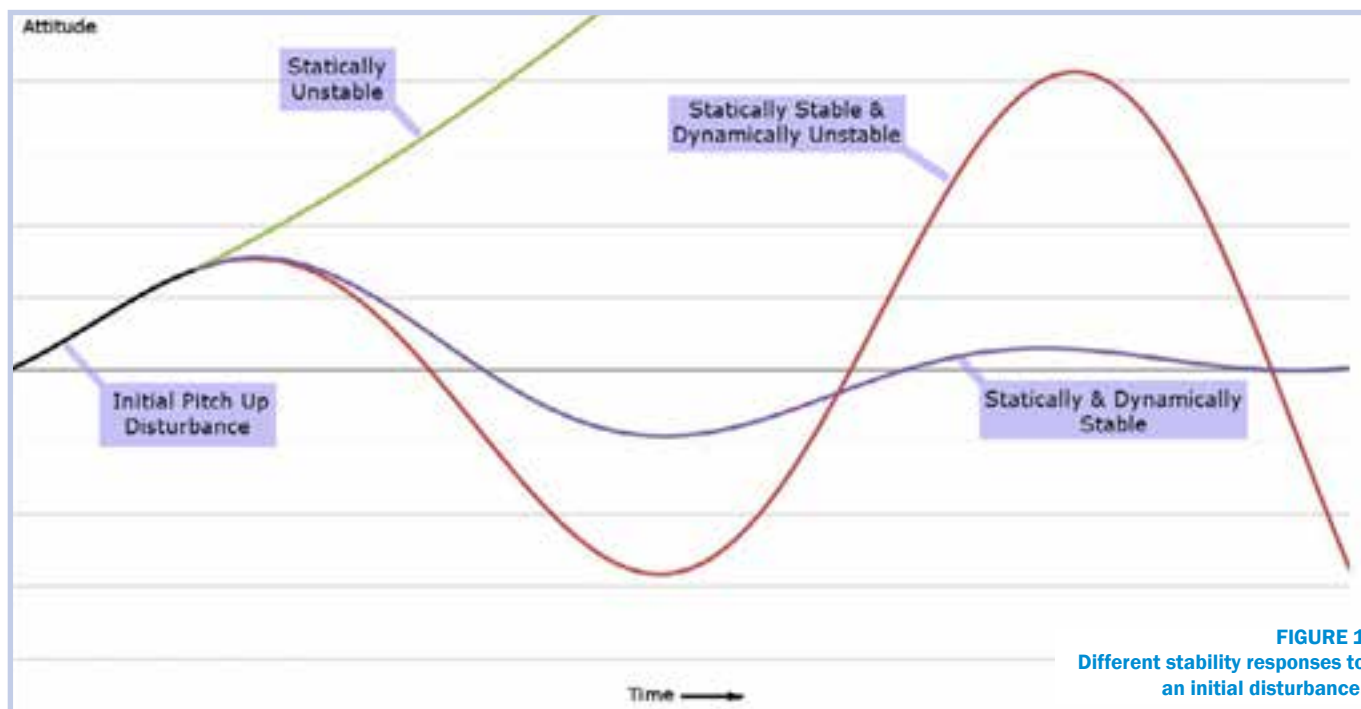


FIGURE 1
Different stability responses to
an initial disturbance.



As pilots we tend to take longitudinal stability for granted

straight down, but instead shoot off sideways at over ten times their rate of vertical descent? By anyone's standards it is quite unusual.

Compare the above to directional stability, which is a far more intuitive quality – basically amounting to pointing in the direction you are moving. You can put a tail on just about anything and it will be directionally stable - all that's required is that the centre of area be separated from the centre of gravity and the weathervane effect will naturally align the object with the prevailing wind.

Bombs and arrows are two obvious examples. It can be argued directional and longitudinal stability operate on the same principles – it's just that directional stability is inherently trimmed to give a zero angle of attack.

Lateral stability is a very different beast to the other two. For high wing aircraft, the pendulum effect from having the centre of gravity positioned below the wing naturally provides a degree of lateral stability, but for low wing aircraft aerodynamic roll stability is required.

Fortunately gravity lends a hand. Gravity causes a plane which is banked to sideslip allowing wing dihedral to create a righting moment (more on this next month).

STRIKING THE RIGHT BALANCE

Most aircraft are highly stable in pitch and fairly stable in yaw, but lateral stability is often much less pronounced. This is primarily due to the interaction between roll and yaw – catchily called 'Lateral-Directional Cross-Axial Coupling' - which forces a designer to make a stability compromise in order to get acceptable handling.

Aircraft with weak directional stability, but good lateral stability, inherently have good 'spi-

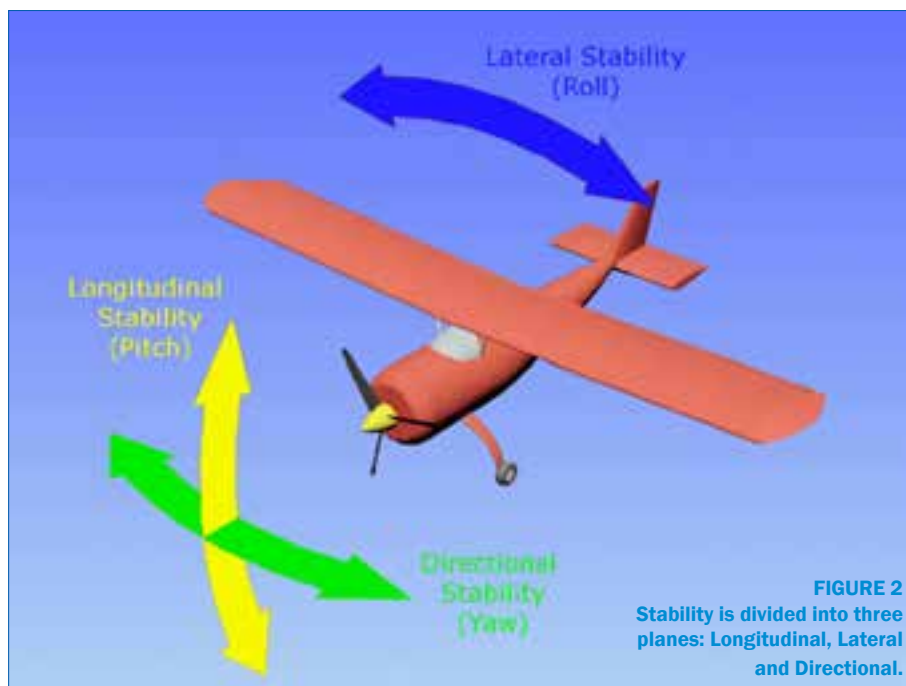


FIGURE 2
Stability is divided into three planes: Longitudinal, Lateral and Directional.

ral stability' meaning they are resistant to entering a spiral dive due to pilot inattention.

But this arrangement is prone to produce Dutch Roll (a poorly damped snaking motion where the plane continually trades yaw and roll, causing the nose to follow a path which traces a sideways figure eight).

Excessive roll stability also results in an aircraft which feels cumbersome to manoeuvre, a trait not popular with pilots.

On the other hand a plane with good directional stability but weak lateral stability will feel more agile and be resistant to Dutch Roll, but will possess mild spiral instability causing

the plane to gradually bank and fall into a spiral dive if left unattended.

Striking a balance between the two arrangements is a challenge and designers usually aim towards the latter, minimising Dutch Roll and relying on the pilot to manage the slight spiral instability (which is usually so slow acting it is dealt with subconsciously).

NEXT MONTH

I'm going to dig a little deeper and take a look at how a plane is actually designed to deliver the positive stability required, plus why weight and balance is so important.

WHERE IS CAGIT?

IT'S MOVED!

New location Geraldton, WA.
Kelmac Aviation / Mid Western
Recreational Flying Club

For more information
Geoffrey McDougall
0400 760 778



210,000

The total RA-Aus landings for 2014 (as at September 1)

Source: RA-Aus

4,056,273.3NM

The distance Santa travels every year to visit every child

Source: <http://mat.tepper.cmu.edu/blog/?p=494>

169,450.3KTS

Reindeer groundspeed so all children are visited when they are asleep

Source: <http://mat.tepper.cmu.edu/blog/?p=494>

Horsham Aviation Services

ABN 65 007 339 451

Australian Agents For EuroFox & Dynon Avionics:

EuroFox:-

Superb Workmanship
Rotax 912 Engine
(80Hp or optional 100Hp)
3 Blade Propeller
Short Take-off & Landing
Stall 36Kts, Cruise 110Kts
Quick Folding Wings
Modern Cowling & Landing Gear
(tricycle or tail wheel configuration)
Optional Glider Tow version (works very well)



Dynon Avionics:-

All NEW Dynon SkyView 7" or 10" with Terrain Awareness, Synthetic Vision, Autopilot, GPS, Backup Battery, Engine Monitoring and more...



Ph 03 5381 1727
info@horshamaviation.com.au
www.horshamaviation.com.au



Certified to tow a 750Kg glider



Aeroprakt A22LS Foxbat

www.foxbat.com.au



Incredible view out
Stall high 20's kts - cruise high 90's kts
Safe stable & predictable handling
Breathtaking short field performance
Biggest cabin and best load carrier in class
Register RA-Aus or VH-
What more do you need?



Search for Aeroprakt A22

FLIGHT INSTRUCTOR'S FORUM



Facilitated by the aviation guru **Professor Avius**

Quit Stalling!

The aim of a lesson on stalling is to enable the student to become aware of the

- Feel and behaviour of the aircraft at low airspeed/nose high attitude;
- Symptoms of an impending stall;
- Recovery technique with the minimum loss of height.

MAJOR AIM - It should be stressed that an inadvertent stall should never occur. It is a big killer of pilots.

The first time you show a student a stall the goal should be to debunk any preconceived idea they might have that the lesson is a frightening experience.

The most important thing they have to learn is that the point of the stall is the time they should begin the recovery.

But why does a stall occur?

ANSWER: 'It is the angle formed between the chord line of an aerofoil and the relative air flow.'

The chord line is like the upper jaw and the relative airflow is the lower jaw – a stall happens when those jaws are opened to an angle of about 16 degrees. This can happen regardless of where the aircraft is in the sky, which direction it is pointing or how fast it is going.

If you close the jaw by just a couple of degrees – no more stall.

What controls this bite of air or angle of attack?

ANSWER: Just one thing: the elevators. Sometimes referred to as 'stick stall position' – no matter what the attitude or airspeed, if you pull back on the stick to this critical angle, you will stall. To recover- just back off on the stick. You don't need to go into a big dive.

PRE-FLIGHT

Demonstrate airflow.

Explain and illustrate:

- how airflow around an aerofoil varies with changing angle of attack;
- that lift increases with increasing angle of attack until the critical angle is reached and then decreases as smooth air becomes turbulent;
- that the critical angle, when the co-efficient of lift is at its maximum, is known as the stalling angle.

Explain that of all factors affecting lift, the pilot can only effectively control airspeed and

angle of attack.

Emphasise that the critical angle may be reached at any airspeed and at any attitude.

Explain the movement of the centre of pressure and the relationship between critical angle and stalling speed.

Explain that for a given weight, every angle of attack including the critical angle, has its associated indicated airspeed. As the angle of attack cannot be observed (although some home built aircraft do have an angle of attack meter), reference is generally made to the aircraft's indicated airspeed.

THE STALLING SPEED

The stalling speed of an aircraft, such as referred to in an Operations Manual or Owner's Handbook, is the indicated airspeed at which the aircraft will stall from straight and level flight with power off.

The stalling speed will vary, depending on:

- a) weight;
- b) power;
- c) flaps;
- d) the manoeuvre being done;
- e) ice or damage to wings.

Explain what happens if a wing drops at the stall and why – (use of ailerons/autorotation). Refer to the lesson on Effects of Controls – how there is decreased control effectiveness at decreasing speed.

STALL WARNING

Brief the student: Point out where the stall warning horn or device is fitted if there is one. It should be pointed out to the student that they will be expected to recognise the approach and onset of a stall with or without the aid of the device.

IN FLIGHT

Before practicing stalling it is important to carry out the **HASELL** check:

HEIGHT: Sufficient to recover by 3,000ft;

AIRFRAME: not whether flaps are extended or clean;

SECURITY: no loose items/ hatches and harness secured;

ENGINE INDICATORS: all in the green;

LOCATION: appropriate – open fields.

LOOK OUT: a turn through 360 degrees to ensure its all clear around and below from aircraft, cloud and terrain. A turn of at least 90 degrees should be conducted between each stall.

Explain to the student what is about to happen: pre-stalling checks/ decrease in power / maintenance of direction and height / high nose position as angle of attack increases / stall / behavior of the aircraft at the stall / loss of height.

PHASE 1: Recovery without power is used to demonstrate loss of height. Control column is eased forward to the horizon to unstall the wings. As airspeed increases, ease out of the dive. Emphasise that if a wing drops, rudder is used to prevent yaw into the direction of the lowered wing. The wing is raised with the ailerons only when it is unstalled.

PHASE 2: Recovery with power. At the point of stall, the control column is eased forward to horizon and, at the same time, full power is applied. Compare how the use of power results in recovery being made with less height loss, compared with recovery without use of power.

PHASE 3: Effect of power and flaps (and undercarriage if appropriate). The emphasis here is on the take-off and landing configuration. This is one of the most important aspects of the stalling exercise. Recap the three steps to recovery: 1. Full Power. 2. Nose to the horizon. 3. Check yaw with opposite rudder.

Further flight exercises could be used to demonstrate stalls in climbing turns, steep turns and descending gliding turns, especially again in a take-off or landing configuration – with emphasis on noting that stall speed is generally higher – and that the control column is always beyond the stick stall position.

Stalling is one of the most important lessons, especially as the student moves towards circuit training. However, it should not be the flight which kills a students' desire to continue flight training. If the instructor demonstrates with certainty, knowledge and confidence in their own ability, this lesson should be as meaningful and enjoyable as all the others.

REFERENCES:

CASA Flight Instructor's Manual 1968 – reprinted 2000. New edition available on the CASA website.

Phil Unicomb Flight Safety Australia Magazine September- October 2000 pp 34-35.

HOME BUILDER

DAVE EDMUNDS

Handmade and homebuilt

Homebuilt aircraft have not caught up with available manufacturing and cloud technology.

Metal homebuilt aircraft have seen three definable stages in manufacturing. Firstly, builders would buy a set of plans, hopefully illustrated by a competent draftsman, which would provide both instructions and patterns that made sense. My experience is that building this way requires far more time spent acquiring bits and pieces and interpreting the plans than on actually building. It is also my experience that hand drawn plans inevitably have errors which only become apparent as you build, that is, parts don't necessarily fit. Some conscientious plan suppliers had an update service with various editions and sub-editions of the plans, which no doubt helped.

The industry evolved and some of the designers started to supply kits. The kits would often have some manufactured components, for example, the control assembly and wing spar. They would have sheet metal cut and bent more or less to shape and supply all of the nuts, bolts and widgets, saving the builder countless hours.

The next evolution took advantage of the evolving manufacturing technology. Designers moved to using CAD systems which allowed the interpolation of plans, so mistakes could be identified in the design stage and then used the CAD plans to drive numerically-controlled machines to cut and drill components. This hugely increased the accuracy of the build process and dispensed with the tiresome process of building jigs. The drilled holes allow automatic alignment of components.

THIS IS WHERE WE ARE NOW

I have been searching for the \$20,000 homebuilt for years, but even though prices have not risen with the CPI we still seem to be stuck with a price point of closer to \$40,000 for a completed plane and, even then, you have to be careful to make it.

To get to the \$20,000 price point several things have to happen for the ordinary builder, which leads to some sort of definition of what an ordinary builder might be.

The chief criteria of an ordinary builder is someone who wants to build, has a modicum of common sense, is patient, prepared to admit to mistakes, prepared to share and wants to learn.



At this price point, there is not enough spare cash in the budget to pay a commercial margin, so the design has to be open source. Open source projects of all sorts have become increasingly popular, mostly in IT related fields. Linux is probably the best known example. But open source projects rely on a community of supporters.

This is now just getting underway with aviation.

CHECK OUT THIS SITE:

<https://www.indiegogo.com/projects/makerplane-v1-0-open-source-aircraft>

It describes an evolving aircraft design which will be available at no cost and is designed to take advantage of computer-controlled manufacturing, the sort of manufacturing rapidly becoming accessible to all of us.

Note that the price point for the completed two-seat aircraft is US\$15,000 complete. Other open source designs are expected to follow this one soon.

An open source project in aviation depends

on cascading communities, something in my experience we have not done well in amateur aviation in Australia. The EAA in the US and its chapter organisation is an example of what can be done. We have our peak body, but we do not have within it the culture to leverage its potential.

I should add that whenever I have needed help, I have always found some kind person more than willing to give up their time and I hope I have sufficiently reciprocated. But this is not what I mean. People are willing but somehow we don't put it together.

We need some way to formalise our enormous skill base and take advantage of the available technology. If you check out the website above, you will find the price is held down through the use of high-tech computer-controlled machines, the sort which exist in most universities and in a lot of manufacturing companies. Some of these machines are available at very low prices, for example, 3D printers and could be afforded by a chapter - if a chapter existed. I like the idea that Australia

I would love to see discussion on a formalised chapter organisation within RA-Aus

could have chapters with varying expertise and access to equipment who could coordinate to produce bits and pieces of an open source aircraft and make them available to the wider aviation community. Its pie-in-the-sky I know, but I think it says more about our Australian laissez faire culture than the idea itself.

I don't quite know where this takes us, but I would love to see some discussion on a formalised chapter organisation within RA-Aus. I think a project centred around an open-source aircraft would be enormously attractive and could provide a starting point.

I hope to deal with various elements of such a design and its philosophy in coming editions, but by way of example would like to describe a long-term project of mine to develop a glass cockpit for \$600. The basis of this design is the use of tablet computers as the displays. Engine and flight data are acquired using a combination of an Arduino microcontroller platform (an open source project, Google it) and some custom hardware I designed.

I designed the circuit board using Eagle PCB designer, which is free and emailed the design to China to have the printed circuit

board manufactured. The major part of the cost was posting the boards back to Australia. The Arduino costs around \$30 and my hardware about the same.

My hardware does basic data conditioning of EGT and CHT and will pass other data, fuel flow, RPM, pressure and the like to the Arduino. The complete Arduino programming environment is open source and as such is free.

Sensors are very cheap, for example, fuel flow sensors are available for less than \$15. It will measure more or less whatever is asked of it. My Arduino program reads the data and pre-processes it before it connects to the tablet via Bluetooth. All of the data acquisition side works but there is a big learning curve in developing the iPad side.

I am developing the display software on an iPad, mostly because I have one to run Oz-Runways. There is a small annual fee to use the enormous Apple software development environment.

It is this area which is currently taking my time, frankly, because I don't know what I am doing and this exemplifies the problem.

I am reasonably confident with digital electronic design, but have only a tenuous grasp

of the more sophisticated programming required for the iPad. There are few of us with a complete suite of skills, hence the need for good working people networks.

There is considerable cost saving in developing for an Android tablet and the Android development environment is open source, but not as well developed as the Apple version and far more variable, which is why so many applications come out first on Apple devices.

So, a complete and comprehensive instrumentation system could consist of two panel-mounted tablets, one for engine and aircraft information, and one for navigation.

They could be set up to provide redundancy, each device being capable of running either the navigation or aircraft-system software.

My price point assumes the software is eventually developed for the less-expensive Android devices.

If I can get the system completed I will make it available - open source naturally.

NEXT MONTH: Back to engines 🇦🇺

AERO ENGINE SUPREMACY

100HP to 200HP

ULPOWER
ULPOWER
AERO ENGINES
Telephone 0419 444 546

CORVUS
CORVUS
AERO AUSTRALIA

MW FLY
Info@corvusaero.com.au
corvusaero.com.au

Asia Pacific Light Flying



iEFIS ...the Next Generation

A comprehensive flight, engine & navigation instrument designed for Experimental & LSA aircraft utilising a custom developed, pressure sensitive, sunlight readable touch screen. iEFIS combines the undeniable advantages of simplified operation of a touch screen with rich, traditional controls which are equally indispensable in the cockpit environment. The pressure sensitive touch screen operates like a tactile button preventing false activation when touching the screen in turbulent conditions. A simple and highly effective solution ... in 7", 8.5" & 10.4" displays.

Complete iEFIS system (no sensors) approx **\$6,000 delivered!**

Including all the features of its sibling Odyssey series systems the 'touch & press' screen modular iEFIS continues the MGL tradition of leading the industry in features, flexibility & innovation.



The XTreme Mini EFIS

A 4.3" colour display, multifunction EFIS with remarkable functionality at a remarkable price.

All Flight and Engine functions*; Integrated GPS & encoder; Navigation; Flight path (GPS based flight path/attitude indication); Artificial horizon.* Auto pilot* coming soon (free software upgrade); EFIS fits into std 3.5" instrument cut-out!

*Requires additional equipment.

\$1,350 delivered!



2nd Generation Odyssey

Complete Odyssey-Voyager G2 systems approx **\$6,000 delivered!**

- Extremely powerful, flexible, simple & intuitive operation in huge 10.4" and 8.4", high quality, high resolution, sunlight readable displays
- Every conceivable function: all flight; HITS; VOR, ILS, GLS, GVOR; AOA; all engine; 'black box' recording; AH/Compass; GPS (m/map); terrain (2D/3D); integrated GPS & encoder; radio/transponder, 'spoken voice' alerts, integrated autopilot & much more!



Complete range of light, accurate, multi-function, advanced instruments. Straight swap out for standard 2.25" & 3.5" instruments with brilliant one button interface & even more innovative features.

Delta VHF Antennas

Exclusive Australasian distributor for the highly regarded Delta Pop Aviation range of VHF and transponder antennas.



MGL VHF COM Radio

New advanced features & design - 2.5", large display, 230 grams. FCC approved.

\$1,255 delivered

website: www.lightflying.com.au

Asia Pacific Light Flying

phone: (02) 6259 2002 or 0419 423 286

Jabiru J120



2200 Aero Engine

FEATURES OF THE J120

- JABIRU 2200 cc engine, 80 hp
- Cruise speed 100 knots (true airspeed)
- Light and responsive controls
- Gentle and predictable stall characteristics
- Cross wind handling performance 14 kts
- Fuel economy 16-19 L/hr
- 65 litres fuel capacity
- Strong and durable - composite construction
- 2 years or 500 hrs warranty (whichever occurs first)

from **\$63,000**
Incl G.S.T. Fly Away



Jabiru Aircraft Airport Drv, Bundaberg Q 4670 Ph (07) 4155 1778 Fax (07) 4155 2669 info@jabiru.net.au www.jabiru.net.au



FLYING TAUGHT ME THIS TODAY

By Derek Dyer

Stories supplied by RA-Aus members which contain lessons for every pilot

Bad medicine

In March I attended the Tyabb Air Show in my Fisher Celebrity biplane. It was a perfect sunny day and the flight from Port Fairy was delightful. I wanted to arrive before 10am when the airfield would be closing for the show and made good time.

However on entering the circuit, my problems began. Firstly, there was a lot of traffic and I felt under pressure to get off the runway quickly. Secondly, there was a strong north wind down runway 35 at circuit height, so I turned base early to allow for a short final. But down lower I found myself too high. Later I learned it had been nearly calm at ground level.

Thirdly, and most importantly, when I was about ten feet from the ground, my brain shut down. I refused to make any more decisions, leaving me to be a passenger waiting for the crash which came (I was told by a person videoing the accident) 24 seconds later.

Another observer told me he had noticed the throttle was left partly open.

The result was inevitable. I ran off the end of a 1,100m runway, through a fence and into a concrete walkway, which removed the landing gear. I stopped in the middle of a busy road.

Luckily no cars hit me and I was not injured, but the plane was very badly damaged.

While there were obviously mistakes leading up to the accident, the situation was always capable of being rectified if I had just gone around for another go.

So why the brain fade? It appears to have been a case of bad medicine.

I had been ill for about one year, but the illness itself did not affect my flying.

What I did discover after the crash by a Neurologist I was referred to, was that the medication given to me for my illness could have had unforeseen side effects.

Specifically, he said, there could be an unpredicted conflict between two of the drugs I had been prescribed.

Also I had undergone a PET scan two days before the crash, which involved drinking a litre of radioactive fluid and this may have also caused unpredicted side effects.

Up to the actual incident, I had no indication of any problems and I suspect the slight arrival stress may have been the trigger for my brain to shut down.

Since the accident I have been through many medical checks and have had no further problems.

The result of all this was the loss of my Pilot's Certificate on medical grounds for six months,

the loss of confidence in my own flying abilities, many visits to doctors as well as nine month's work and many dollars fixing my busted plane.

So it is my sincere hope this story, although rather painful for me to write, will help prevent similar accidents in the future.



Do you have a story about a near miss or an accident which gave you grey hair but taught you something about flying? The RA-Aus Safety team wants to hear about it. Every story printed in *Sport Pilot* will earn its author a range of RA-Aus merchandise. Email editor@sportpilot.net.au and clearly label your email "Flying taught me this today".

Jabiru Engines Power Performance Price

CONFIGURED WITH ROLLER CAMS AND MANY OTHER IMPROVEMENTS

2200 Aero Engine 80hp **3300 Aero Engine 120hp**

\$13,970.00
incl G.S.T.

\$18,590.00
incl G.S.T.

JABIRU AUSTRALIAN DESIGNED & MANUFACTURED STILL PRICED LOWER THAN IN 2007

Jabiru Aircraft Airport Drv, Bundaberg Q 4670 Ph +61 (0)7 4155 1778 Fax +61 (0)7 4155 2669 info@jabiru.net.au www.jabiru.net.au

members' market

2671 JABIRU SP 500/6 19-3717



Well maintained hangared. 449.5 hrs. 123kts @19lhrs 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. Deliver anywhere. \$48,000 Phone (08) 9921 8790

3213 FOR SALE JABIRU J-230D



Airframe 800 hours, factory reconditioned engine 190 hrs. Dynon 10 EFIS analog instruments, Garmin 296 GPS Transponder, external charge connector, cold start kit light. Lambswool seat covers, adjustable rudder pedals, new wheel spats, L2 maintained, spare propeller external windscreen cover always hangared original owners. \$78,000 Bill. 0429 054 205

3487 JABIRU SPT-6 TAILDRAGGER



ABSOLUTE BARGAIN. New Jabiru SPT-6 Taildragger, TT 30 hrs, New 3.3 engine, 85 litre tank, STD Jabiru dash, Gloss white ready for your decals. One of only four Jab 6cyl taildraggers. Goes like a rocket, Solo ROC 1800/min, 125 kts @ 2700 RPM. YBNS airport. \$39000. Phone Martin 0412 617 110

3489 JABIRU SP6,



Regd 19-3845 to 27/11/14; TTIS A/F 453 hrs Engine 25 hrs (3300/120HP) Hydraulic Lifter. Garmin 126/8GPS, Icoma 200 radio/intecom, ASI, ALT, RPM, EGT, Turn Co-Ord, Oil Pressure and Light VSI, CHT, Oil Temp Elec Fuel Pump, Compass, Lock, Wheel Pants, Two Place, Build Books/ Extras VNE 132 Call Ray 0411 956 734 or 03 5155 5181 Email: rjwheels@gmail.com Asking \$35000, ono.

3490 JABIRU 170C



August 2008 factory built. 435 hours TTIS Option 1

panel plus Microair transponder, FC-10 fuel computer, garmin 196 GPS. 10ply front and mains. Always hangared. All AD's complied with. \$62000 Contact Kevin 0417 131 816

3548 JABIRU J160



Hangar ed in Adels Grove 30 hours since motor installed, has 2 x Icom radio's 1 com system Garmin transponder Efix Altimeter Airspeed VSI (vertical speed indicator) Tacho Oil pressure Oil temp CHT (cylinder head temp) Volt Cargo door call Rod 07 4748 5502 price dropped to sell \$40,000. Great buy.

3551 JABIRU 230D



Jabiru 230D, '09, Factory, TTIS 360 hrs. Reg 8/15, own hangar, immac as new, L2 LAME maint, Red leather, EFIS D100, AVMAP EKP IV GPS, 2axis AP, Microair VHF & Xponder, remote ext plug, MP3 music, full covers nose to tail, wing strobes, all updates, new prop, rotors & pads, MLG wheel bearings, many spares. \$88,000 incl GST, 0419 555 726

3552 JABIRU J230-D 24-5490



Factory built 2008, Airframe & engine 94hrs, Maintained every 25hrs, Nil accidents, Analogue instruments, Icom IC-200 radio, Garmin GTZ-320a transponder, Booster seats, Sensenich prop, Garmin 295 GPS. Always hangared & runs great. Contact Kevin: 02 4283 2671 or 0408 427 458 Email: kaybee@exemail.com.au \$85,000

3561 AUSFLIGHT DRIFTER W/B CERT



Ausflight Drifter w/b factory, 582 bluehead oil injected long range tanks radio eng 155 hrs good cond easy to fly contact Lindsay.boyd@inet.net.au . Phone: 0414 586 255 \$12,500 price reduction

3627 PRIVATE AIRFIELD



600m private airstrip, Murrumbateman area, 20 mins Canberra, highway access, 12 x 12m hangar, OCTA. House 5 bed, 3 bath, tennis court, 4 car garaging, established gardens. 40ac income producing property, currently running 70 prime lamb ewes. Shearing, machinery, hay, workshop sheds, large cool room, 2 stables. \$1.3m. Phone 0432689136

3660 JABIRU J160-C



Immaculate condition factory built October 2006, 570 TT engine and airframe. Well equipped Dynon D10A, Microair transponder, radio, PCAS, autopilot, Garmin GPS, cabin covers. Always hangared, regular maintenance and nil accidents. One owner Jabiru and never used for training. Contact: theo@graftedvines.com.au Mob: 0418 805204. Located S.A. \$45,000.

3735 NORTHERN RIVERS NSW

Northern Rivers NSW. Property 228 acres. 700m airstrip. Cottage, hangar, workshop, all usual farm facilities. 3.3kw solar power + solar HWS. Runs 50 breeders. Suit retiree, club, group ownership etc. Dual river frontage. Asking \$648,000. For further details, photos etc 0427 115225 or didja@skymesh.com.au

3815 SAVANNAH VG MODEL



Savannah VG Model Category: 3 Axis (UL) Build Year: 2005 Total Hours: 480 Engine Hours: 480 Rego: 194405 Price: \$48000 Posted: 27 Jan 2014 STOL, always hangared and now at Cessnock, kool prop, 100hp rotax 912, tundra tyres, observer doors, 8 hours fuel, landing light, gps, radio, intercom Phone: 0419 414 031

3875 J230



Jabiru J430. t/t 540 hrs top end a/h 40 hrs ago 2006 and flies like new. 3blade, fuel flow meter, UHF, can deregister to raa, vert compass. lot of extras, \$68,000.00 Phone: 0428 826 551 or Email: arrandale2@bigpond.com

Selling your aircraft?

RA-Aus head office & Members' Market enquiries

Ph (02) 6280 4700 Fax (02) 6280 4775

E-mail admin@raa.asn.au Web www.raa.asn.au

3889 JABIRU J120



Factory built, Transponder, 295 Garmin GPS, Cruise 100kts at 2900rpm, Average 13.8l/hour. 1070 hours. great condition, fly's very well. Must sell Call Brett for more details 0419 694365. Email - harthy79@gmail.com . \$35000. Or make a reasonable offer. Dalby QLD.

3907 RANS S12 AIRAILE



RANS Airaile S12 2 place dual control in excellent condition - nil accidents Flown 330 hours only on Rotax 912 Always maintained by Level 2 mechanic/engineer Kept in spotless hangar at Wedderburn Airport in Sydney Lovely-to-fly aircraft with long rego New Lexan windscreen, tyres, battery, boost pump, radio intercom \$30,000 (negotiable) Contact Neville (02) 4701 9499

3908 X AIR F

X Air F 19-3276 TT194 hrs Eng 54 hrs Rotax 618, 3 blade prop, just reweighed, usual instruments, microair radio 2 x headsets, garmin 96C Gps, ELB, reg. to 3/15 \$10,000 with custom trailer Contact John (03) 9746 1010 or 0408 351 072

3909 ZENITH CH 300



Zenith TRI-Z 2+2, Light Sport Aircraft. Cruise 110 Kts, Range 900 nm. LYC O-320, All Aluminium aircraft T/T 32 hrs. All Olio undercarriage, all instruments, GPS, Radio, TXPDR-Mode C, Stall 48 kts, with fresh 100 hrl. Contact Bob, (02) 6495 9251 or Email: boboshkosh@yahoo.com \$38,000 ono

3942 VP1A VOLKSPLANE



VP1A Volksplane. Total hours only 1143, 21 hours since engine rebuild. Registration number 19-0484, Full flying tail, enclosed cockpit. Only using around 10 litres per hour, ICOM radio and GPS fitted in cockpit. Thompson Propeller. Well maintained overall and ready to fly. Only \$7500 ono. Call Harry 0412 426 581 for details

3947 HKS POWERED BOORABEE



Reliable and easy to fly, 70 knts cruise using 11 ltrs/hr. 90 ltrs fuel in wings. Is 2 seater but rear seat only for small person. Very reliable and economical HKS 700E 4 stroke. Registered till Dec.2014. Asking \$20,000 ono Phone: 0407 502 782

3950 GAZELLE CA25N



Bought new 1997, always hangared, brand new Rotax 912-A2, gearbox, prop and workshop manual. Bright yellow condition, maintained by LAME/L2. Pleasure to fly, affordable fun flying. Good for 20 knot Xwind. Can be flown into CTA with appropriate pilot qualifications. View 24-3505 at YBTH \$38,750.00 obo. Call/sms Mike Faine 0427 406 521

3956 RANS COYOTE II S6ES



\$22,000 246 airframe and 86 engine (Rotax 582) hrs. L2 maintained with all recent history. Airworthy in March 2014. Registered to March 2015. ICA 210 radio and King transponder. ZEON MRX PCAS. Portable Garmin GPS loaded with Worldmap. Original construction manual. Registered trailer, extras. Ph Jeff 0405569205. govo49@hotmail.com.

3962 CESSNA 150L



Price Reduced Must Sell! Cessna 150L 1973, TT 6899, ETR 970, PTR 1370, Excellent paint, interior, radios and glass. Economical GA aircraft hangared in SE Qld. \$25,500 with fresh 100 hrl. Ph Peter: 0407 624 937. or email: tony_urbanick@yahoo.com.au

3977 FLOAT TRIKE



Outback 912 float trike, 40hrs suit new buyer. Comes with dual wheeled tilt trailer and launch and retrieval dolly with winch. Full trailer covers. Change over frame for wheeled flying. CASA primary certified. Great colours. Will separate trailer and floats if you already have own base and wing. Fun to fly, \$65,000. ph John 0419 793 877 or Email: tangojohn@hotmail.com

3991 JABIRU LSA 55/3J



Factory built great aircraft to fly always housed in hangar, engine well maintained with all required updates done 135 hrs on engine and 604 on airframe. Lambswool seat covers, full dash with extra instruments. phone John 0428727152 johniep@bigpond.com.au \$33500.00

3995 JABIRU 160C



Immaculate !!! As new, factory build, lame maintained, 410hrs engine/frame, recent top end o/haul, also honed and new rings. Std panel, dual microair, transponder, fuel flow, aero 500 gps, headsets, covers, service report avail, leakdowns, compressions perfect, deliver anywhere, looks and flies just beautifully. Russ 0418 276 747

3999 VARI EZE.



Vari. Eze reg 198286 engine 0200. 800 hours to run. Radio analog instruments. Cruise 150 knts @ 24 lts/hr or 110 knts @ 15 lts/hr. Airframe 9/10 interior 7/10. Situated Wedderburn NSW. \$32,000 Phone Steve 0425 221 271



APA
AUSTRALIAN PACIFIC AVIATION

Providing flight training
on the Gold Coast
for over 25 years

www.flyapa.com.au
0487 755 225

4000 SAPPHIRE



Sapphire 19 3866. 168hrs 503 Rotax, 3 stage flaps, 58lt wing tanks, cruise 80kt+. Always hangared, ICOM radio. Hangared at Lakes Entrance VIC. \$17,500 ono. Phone Jack 0429 801 548 or (03) 5156 4355

4016 QUICKSILVER GT400 10-1342



503DCDI 292Hrs A/F662Hrs. Dual EGT's, CHT's, & Tach's. Voltmeter. Hobbsmeter. Fully enclosed roomy cockpit. Long range tank. Oversize Lightwing wheels & tyres. IVO prop. Good condition. Flies straight. Docile & easy to land. Great STOL. Airframe & engine proven & reliable. All manuals. Always hangared (YCAB) \$9000 feendene@bigpond.net.au (07) 3256 4047

4109 TIGER MOTH FISHER PRICE R-80



Two seater dual control 80% scale, immaculate condition, 40hrs TT. 100hp Suzuki G13A engine, RoC 1000 fpm, cruises 65 knots at 4800 rpm and 75 knots at 5400 rpm Aircraft has been meticulous built, full instrumentation, radio. Magnificent to fly and land. \$40,000. Phone 0428 662 528 email barry@emugully.com.au

4126 TECNAM P92 RG



Tecnam RG fantastic plane to fly and own fast cruise slow to land full panel 2 radios transponder garmin aera 500 gps, vac DG and AH all work by L2 and L4 friend selling to make room for new plane 750 hrs rotax 912 \$88,000 phone Tony on 0429132128

4127 EUROPA CLASSIC



Europa classic only 58 total hrs GA registered but can be Registered RAA full GA panel elec trim, AH, DG, transponder icon radio with intercom and strobe it comes with its own purpose built trailer two new ANR headsets pilot with Bluetooth 125 knot cruise on 13 litres \$60,000 phone Tony 0429132128

4128 LEA KESTREL



Lea Kestrel, with 447 Rotax and Sweetapple prop. Complete with enclosed trailer. Aircraft has only flown around 50 hours since built. Currently unregistered, hasn't flown for a while, but only minor work required to return it to the air. Located in Brisbane. \$8,000 ono. Call Doug on (07) 3206 3042.

4134 JABIRU 120-C



Jabiru 120C; Factory Built May 2010; Immaculate throughout; 328 hrs; Recent Top O/H and All Ads; New Jabiru Carbon Fibre Prop; Upgraded brakes; Over-Wing control lever Cowls; Leather; Wheel Spats; Full panel plus GPS; EFIS; Transponder; VHF; HF; Always Hangared. Located Sydney. 0414 269 012. \$39,000.

4135 AIRBORNE XT912 TUNDRA CRUZE



Airborne XT912 Tundra Cruze wing. 430hrs. Comes with helmets, head sets, flight suits, training bars, radio, intercom, Punkin Head trike covers. Always hangared (currently at Dixons Creek in Victoria). Transport can

be arranged and a trailer may be available to purchase or borrow. Contact Brett 0419 610 041 Price \$38000

4138 ZENITH 601XL-B



For sale with 3300A Only 34hrs TT . LAME / L2 built with 3300A solid lifter. Has KT-76A , lcom A210 JPI EDM 700 Sensenich prop, Strobes, Aileron/Elevator electric trims, electric flaps, Grove brakes, Corrosion proofed . Todd's canopy, can be re-registered as ELSA 600kg .Empty weight 372kg. Fuel 92L .Cruise 115 knots. \$48,000 ono 0402 079 305

4140 PLAN BUILT SONEX



Plan built Sonex. First flight Dec 09, 95 hours engine and airframe. StratomasterMaxi single instruments, ICOM radio, separate analogue ASI, Cruise 90-95

kts@16 l/hr. Aerovee engine. Located Lethbridge Airport, \$30,000, near offer would be accepted. Please contact Ronald Stares 03 9314 3513. Please cotact me by phone only

4143 JABIRU J230D



JABIRU J230D Reg 24-7419 Factory built May 2010, 260 hours, Option 6 Panel, Dynon D180 EFIS Garmin 495 GPS, Microair Radio & Transponder, Twin Strobe Lights, David Clark Headsets, Always Hangared from new. Nil Damage. Contact Ian - 0419 703 926 85,000

4144 SWAP KENWORTH FOR SKYFOX



Classic w model kenworth prime mover yr 1983 new tyers to many new things to list value over \$50,000. consider swap for skyfox taildragger in exellect condition as new with trailer.No screaming two srtokes have to be something special. 0427369688 skmurdoch@hotmail.com

4156 JABIRU SP500



Beautifully built & professionally maintained, always hangared, one owner, 250hrs, all mods, all flight & engine instruments inc GA panel with Garmin GPS, radio/intercom, transponder, vac pump, artificial horizon, turn & bank, fuel gauge, fuel flow meter, cabin & elec carb heat, 85 Lt fuel, 2Pac paint, quick release wings. \$35,000. Ph 0418 573 212.

4165 FLYSYNTHESIS STORCH S500



Flysynthesis S500 Excellent cond. 24 Rego 80hp Rotax 370hrs new hoses, new fuel pump, new ignition modules, new carby diaphragms, gas struts fitted to doors. AVMAP, electronic engine display, two bouden cables fitted to elevator and rudder, pushrods to ailerons, 32kt stall, 100kt cruise, steel undercarriage legs. jabiru160@yahoo.com 0415 888 692

**GYMPIE AIRFIELD
QLD**



FLIGHT TRAINING

- Full Time / Part Time
- \$195 p/h Sportstar Max (no landing fees)
- Personalised Training by Experienced Instructors
- Accomodation Available
- Pilot Certificate - Instructor Training & Testing
- Ground Instruction For All Theory Subjects



**Contact: Tim
0416 963 002**

(Tim & Anita - Owner/Operator)

info@sunshinecoastflighttraining.com.au
www.sunshinecoastflighttraining.com.au

**Get Out
of the Office!**



Learn to Fly!

**www.skysports.net.au
0419 942 645**

Located in Western Australia just 1.5 hrs drive east of Perth.

On-site accommodation and full flight training facilities using the latest recreational aircraft.

PILOT TRAINING



South East Queensland Flying Training Academy | Wondal Airport
FULL-TIME COURSES WITH ACCOMMODATION SUPPLIED
Advanced Theory Training
RA-Aus pilot certificate training
Flight Reviews
L2 Jabiru maintenance facility

RA-Aus certified flying instructor
WAYNE JENKINSON
07 5641 1699 or 0434 581 910
wayneflying@hotmail.com
www.seqfta.com.au

LIMITED EDITION DVD

TAKE A FIRST CLASS JOURNEY INTO THE WORLD OF AIR CREATION MICROLIGHTS.



\$20 Posted anywhere in Australia

Air Creation in Australia
Mob - 0438 307844
Email - upwego2@bigpond.com



THE PROPELLER SPECIALIST



**2 Blade
\$755.00^{inc}**

**3 Blade
\$990.00^{inc}**

**4 Blade
\$1225.00^{inc}**

The all new *Brolga Sport & Magnum series*

- 2,3 or 4 Blade
- Pitch Adjustable
- Carbon/glass Blades
- Alloy Hub
- Hard ware kit
- Full warranty



Call Peter on 08 8380 8396

www.bollyaviation.com.au



**SportAviation
TOCUMWAL**



Experience the thrill of Flying

Euro Fox K2 Abinitio and X-Country Training, Solo Training, Tail Wheel Endorsement.
Contact Eddie Madden C.F.I.



DISCOVER THE WORLD ABOVE - EUROFOX
Onsite Caravan Park - NOW OPEN

flying@sportaviation.com.au
www.sportaviation.com.au

Gate 10 Babingtons Rd
PO Box 44, Tocumwal NSW, 2714
Australia

Tel: 03 5874 2734 Mob: 0427 534 122

MEMBERS' MARKET

4172 JABIRU J160 PRANGED

Jabiru J160 Pranged. For rebuild or spares. Best offer
Phone 0488 241 181

4173 JABIRU J230-D



Factory built June 2010, 392 hours, Hydraulic engine, Through bolts upgrade, Option two panel, dual GPS Systems. Too much to list. Serviced every 25 hours, Only used for long trips, bitumen strips only flown by owner/pilot. This aircraft is as brand new and meticulously maintained, Nil incidences. \$82,000
Phone: 0400 713 996

4174 SUPA PUP MK4



Supa Pup Mk4 30 hours TTIS . 80 Hp Jabiru Engine \$18,000 + GST any reasonable offer considered . Located Port Augusta SA area . nonning@bigpond.com . 0428 481 814

4175 ROTAX 582 MODEL 90

Rotax 582 Model 90 c/w C 3:1 gearbox. Total Hrs not known, 3hrs since decoke, Bore & rings, compression check, crank bearings all checked out good . New water pump impeller , seals, and thermostat. Still on aircraft, you give it any test \$2500 other details Lloyd 0438 884 343

4176 ROTAX 582

120 hour Rotax 582 UL long motor kept as a spare. Checked out by LAME to show insignificant wear. fully serviced Including new plugs, C box and pull start other parts available. bargain @ \$3200 information call Lloyd 0438 884 343

4180 TL CARBON STING



Flight hours 600 Hobbs 700hours Rotax. 912 100 HP. SR3000 Woodcomp propellor. Manifold pressure gauge. Garmin296 Garmin SL40. Garmin GTX327 Dynon D10A, OAT, ASI. Rev counter. Oil temp, pressure, fuel pressure and water temp gauges. Standby fuel pump. Strobes, nav lights. Lame maintained, always hangared. \$83,000 Graham Trehwella 0428 230 750 or (03) 5428 8124

4185 LIGHTNING



Half share available in this fantastic aircraft. Very low operating costs. Based at MOORABBIN but would consider other nearby airfields as a base. Also willing to consider rego change to RAA if needed to attract the right buyer.

4186 DRIFTER SB582

Very low hour SB582 TT 723 with blue head Eng - TT231. New wing and aileron skins just fitted. Tail skins in excellent condition. Comes with spare tyres and wheel spats (not fitted). Two Peltor helmets with Intercom. Vhf radio. Located Boonah. \$18500 OBO must sell Email - platinumexcavations@gmail.com for photos. Ph-0413 200 506

4187 THRUSTER T500



Thruster T500 2 seat aircraft side by side, 582 water cooled dual carburettor ignition, 65hp 2cyl 2 stroke engine. 70ltr fuel tank, carbon fibre 3 blade propeller. All ad's complete and up to date. All flight

instruments radio headsets in good condition. Philip 0407 851 963 \$11,200

4190 1.1KLM AIRSTRIP

243 acres - 4 brm home, Fully air-conditioned. 21 solar panel system 2 x 2700ltr water tanks 4 sheds 5 car carport 4 dams 3 bores 1 windmill and seasonal creek. 1.1klm airstrip with 850mtr cross strip mapped out. 10 minutes to Gatton township. Sell \$750 000.00. Negotiable. Phone 0407851963

4191 LOHLE P5151 MUSTANG KIT

Complete kit registered with RAA, including Suzuki geo 3 cyl engine, Raven redrive. Airframe mostly completed with retracts installed. I have finally admitted to myself that I will never finish this aircraft, and it needs a new home. Located Avalon Victoria. \$25,000 Ph Richard 0427 737 787

4199 JABIRU LSA



Jabiru LSA 1999, Total 4056, Engine 584, level 2 maintained, Mechanical very good 10/10 , Body 7/10, All new control rods, Solid lifter engine, Cold start kit, ICOM radio, Transponder mode C. Please ring as I will not respond to text messages. Call Rudi 0438 402 254 \$25,000 (+GST)

4201 JABIRU LSA



Jabiru LSA 55-3643. Factory built November 2011. 2200 Engine and Airframe TT 450 hours. Standard panel. Microair radio with headphones. New brakes and tyres. Great condition, always hangared. Never used for training. One owner. Inspection invited. Located Wynyard, Tasmania. Price \$37,500 ono. Ph: Denis 0429 066 966 or denis.l.bullock@gmail.com

4203 SINGLE PLACE PROJECT



Near complete project. Full analogue instrumentation, radio and headset, 2.7 Litre Corvair engine, 66 inch Bolly prop, Grove undercarriage. All aircraft grade construction, complete building records and photos. Build cost \$27000, asking \$6000 - for recovery cost of motor and new instruments only. Full details - phone Roger - 0407 545 579

4207 TIPSY NIPPER - SLINGSBY T66



SNS 123 Selling Topsy Nipper - This single seat aircraft is a wonderful flying plane , fast, nimble with a 1000 fpm climb rate. Tip tanks for 4 hrs at 90 plus knots. Great fun plane solid and well maintained , low hours 2200 Jabiru. Call Roy on 0404756407 to enquire

4209 URBAN AIR UFM 11 LAMBADA



Motorglider factory made in Kevlar & Glass, Rotax 912 80HP. Fantastic climb , 90Knot cruise. ASI, VSI , EngMgmt , Radio, Transponder , AH, Variometer, Feathering prop. Converts in 5 mins from 11 to 13 meter glider for higher L/D. Electric Flaps. Maintained like new. Call Roy , 0404756407 02 0242943900

4210 WANTED JAB J230 NO ENGINE

Jab J230 no engine Contact: Don Woodward Email: donwoodward@outlook.com Phone: 0410 890 514

4212 CLASSIC SEAREY



New engine 2014 (912 ULS-3) TBO now 15years, 2000hrs whichever comes first. Always Hangared, new condition, spares, tools, seaplane kit, full instruments, moving map GPS. A\$90k ono. Long Range Fuel Tank, Ground Power, build supervised by retired TAA engineer. Can do CASA and RAA endorsement. Phone 0414 737 400

4218 AEROCHUTE DUAL 503



As new Suit new buyer, everything you need to fly away. Sep/2010 30hrs total time, rego Sep/2015. Extras inc. 63" Bolly Prop, electric start, Lynx intercom with dual radio and Bluetooth, VHF/UHF radio's. Composite water/dust proof professionally built trailer, separate fuel and camping gear compartments, stainless fittings. Info/pics m: 0488 900 857 email: darren@ourinfo.biz \$26000 negotiable

4221 SKYFOX CA22



Skyfox CA22 Factory Built Tail Dragger. 580 Total Hours. 80 HP Rotax 912. Cleanweld wooden prop. Excellent condition, L2 maintained. Complete with EQ1 Wireless Headset System and PLB. Hangared in WA \$33,000.00. Phone Andrew 0400 246 906

4226 503 ROTAX AEROCHUTE



Great con, many extras,tacho,foot webbing& floor front,solo weight,flying suit x2,stone guard, wind sock & pole, air filter and prop cover,rectifier/regulator, wide top plate, fuel sep funnel, microtim altimeter,all manuals, option to buy lynx headsets x2@ 5 hours use. Great entry level buyer will be happy. 14,000ono Negotiable

4227 RANS S4 COYOTE 1



Original owner/builder, clear coated , Rotax 447,Bolly Optima 3 blade prop, 800fpm climb, ASI, VSI,ALT, tach, hrs, dual CHT, radio, garmin GPS, reliable, docile, easy to fly with 60kt cruise, 3.5hrs range plus reserve. New bungees, disc brakes, regularly serviced, with books, enclosed trailer & tools. SA. \$15500 0418894380. glendavidauto@bigpond.com

4229 EUROPA MONOWHEEL



EUROPA MONOWHEEL Brand new aircraft. 25 total time. Flies beautifully. 130 kts cruise @ 17 lt/hr. Rotax 912 with Airmaster AP332 propeller. Dynon Skyview panel. XCOM radio. 2K professional paint work. Selling because builder has lost medical. Test flying by RAAUS certified instructor. \$85000 ono Contact Drew Done 0427316524 dj.done@bigpond.net.au

4230 AUSTRALIAN LIGHTWING SPEED



316hrs.TT. Rotax 912ULS Hughes/Bolly inflight variable pitch prop. All flight and engine gauges, GPS, Mountainscope Nav.System & Xcom radio. 120 litres fuel, 105-115 kts. Hangared at Tumut. \$65,000 must see to realise good value. George will meet you at Tumut with prior appointment on 02 6291 9912. Info from snowman@snowmaking.com.au

4233 AMPHIBIOUS TRIKE



Fly off water or land with this fun machine. Ramphos Trident 912 80hp. Strutted H15 wing. TT 115hrs. All the gear you need including 2 life jackets, 2 Icaro helmets, 2 headsets. LSA Registered 27th June 2015. \$45,000. Phone

Paul 0439 922 323.

4234 SKY FOX GAZELLE CA25N



Lame maintained, 80HP Rotax powered, Bolly 3 bladed propeller, folding wings, GPS factory fitted, flies well, 1919 hours, all Ads up to date. Hangared at Tyabb, Vic \$33,000 contact Roger 0419 891 431.

4235 SEAMAX



Beautifully presented and finished Seamax seaplane. Glass cockpit, Leather seats, widest cabin in its class for comfort.123 hours airframe and engine. Cruises 100 knots. Present owner can endorse for Water Hull, retractable undercarriage, AP. Always hangared, presently at Gympie. Would consider syndicate with 3 to 4 members \$155,000 Phone: 0402 958 444

4236 JABIRU 230D FACTORY BUILT



2009. Airframe 1452hrs & Engine 1118hrs. Engine rebuilt 1084hrs by Jabiru. Was GA now RAA reg. Jabiru option 5 night VFR dash, strobes, landing lights, leather seats, 2 coms.

Repainted Leisure Build, refitted Jabiru. Immaculate, everything up to date, always hangared. \$78,000ono Contact Cameron 0437388453 or email cscheuber@gmail.com

4239 SAVANNAH S



Savannah S, 2011 build, 2 pak paint, 140L fuel, Xcom VHF, 327 mode c, AH, Vert compass, Mods: front axle, 600kg wing mods, tinted roof, RB doors, Condor tyres, new battery. Ex cond, always hangared, \$63,000 at Caboolture 0418 883 116.

4240 SAVANNAH XL 600KG MTOW



Savannah XL 2011 19-7675.(Exp Oct 2015) TT 86Hrs. 912 Rotax 100Hp, 2000 TBO. STOL. 80 Kts. cruise. Conventional instruments, GARMIN Aera 500 GPS, VHF & UHF. L/R tanks. Nav/Hazard Lights. Always hangared, cockpit cover. MTOW 600Kg. No accident damage. Excellent condition. At YNTM deliverable. \$65,000 Bruce. gjon@inet.net.au, Mob 0427 917 541.

4243 JABIRU J230D



Jabiru J230D Reg 24-7492, Factory built end 2010, 160 hours, MGL Extreme EFIS, Garmin 495 GPS, Microair Radio & Transponder, Grey leather seats, Set of Covers (Brand new, never used) Always Hangared from new. One owner, never hired, no training, NULL accidents. Ben 0459 320 386

4244 WANTED AIRFRAME

I have a Lycoming 0235 and am looking for an airframe to place it in. Don 0417 696 461 donwoodward@outlook.com

4245 SKY FOX CA22



Rotax engine, rego 550-684 good condition, trailer included. Ring Jim (02) 4421 3980 \$28,500.00

4247 ROTAX 503

Hi fellow members - I have two Rotax 503 engines for sale complete with electric starters ,Reduction gearboxes,and exhausts -- as near as i can tell they have done around 30 hours in my hovercraft ph Brian 0414 360 300 engines are in SA

4248 EAGLE X-TS 150



Factory built, 2 place carbon, electric flaps, trim / pedal adjustments, microvision digital display, Bendix king coms, 125HP fuel injected engine, 25Lph, 100L range, 1000 km , 120kts, 1000 ft/min, fighter style joystick controls, very responsive thou forgiving a real pilots aircraft an absolute joy and pleasure to fly. Contact: libertyandassociates@gmail.com

4251 ROTAX 100 HP 912ULS ENGINE



Rotax 100 HP 912ULS engine for sale. (TBO1500 hours). A good reliable engine running extremely well. Fuel consumption average around the 13 LPH. good compression. Has been maintained by a GA Maintenance firm. All work is up to date, logbooks Available. \$6,400.00 negotiable. Rob 0427 500 255

4253 JABIRU J170C



Factory built April 2011. 35hrs since factory engine overhaul in June. Serviced every 25hrs by L2 since new. Option 1 panel, Microair radio and transponder, EPIRB, window vents, Punkin Sport cover, spats not shown. Excellent condition inside and out. Can assist with delivery anywhere. \$67,000.00 ONO. Contact Mick 0408654588. Michael.Brannan01@gmail.com

4255 JABIRU J230D

Jabiru J230D Factory built 2012 \$80,000 Airframe TT 805 Engine TT 805 always LAME L2 maintained. No accidents and great condition inside and out. Option 1 panel, TXPDR, ICOM A210 radio, provision for GPS. A smooth flying plane, mainly used for cross country flying. Contact David 0402 830 146

OMEGA PROPELLERS

Bill Izard
www.omegapropellers.com
bill@izard.co.nz
 0064 7871 8940 landline
 0064 2142 3853 mobile
 106 Herbert Street Kihikihiki 3800 NZ

4256 ZENAIR 701 STOL



Excellent condition. No expense has been spared. Total time 630 hours. 80 ltr fuel, 12.1 ltr per hour, 75 knot cruise. Rotax 912. Take off 60ft (single) 115ft (Dual). Tundra tires, electric trim, flaps, landing light, strobe lights Intercom, all metal, Hangered at Lakeside (Whitsundays) Only \$38,000 phone 0417 646075

4257 MORGAN SIERRA



Morgan sierra transponder flight comp duel radio AH auto pilot long range fuel tanks ground adjustable Bolly prop. 6 cylinder Jabiru all up dates Cruise 120 -130 kns approx. 21 ltr/hour Climb rate 1100-1200/ min 6 hours endurance reluctant sale Kevin Harrison 0417 808 772

4258 WANTED - SLEPCEV STORCH

OR personal references, please, for or against buying a Storch from Nestor Slepcev in Serbia. I would appreciate a phone call to Sandy on 0427-45-3333 or email sandy.racklyeft@gmail.com.

4259 REVO 912 MINT CONDITION



The very best trike money can buy, custom designed and manufactured by Larry Mednick, every conceivable extra. Replacement cost over \$90,000. Wife keen to do more motor homing around Australia so price reduced to \$75,000, also custom designed tandem fully

enclosed trailer 7 metre internal length \$18,000. Email: gary@eldering.net.au Mob: 0411 550 280

4260 FOXBAT A22 LS



Excellent condition, L2 maintained. 100hp Rotax, Warp Drive Prop. Complete with Dynon Skyview panel including transponder, Analogue ASI and Altimeter, tundra tyres and spats, long range tanks, centre joystick, strobes, cabin heat, EQ1 Wireless Headset System and PLB. Hangered in York, WA. \$99,500. Andrew Cotterell Phone 0400 246 906 or Email: andrew@thecotterells.com

4263 SUPAPUP MKII



SupaPup MkII. Always hanged, nil damage, 165Hrs, a well sorted and nice flying plane. 503DCDI, 50l fuel, powerfin carbon ground adjust prop, includes a well built registered trailer, has wheel spats that aren't pictured, \$15000ono Ph. Scott 0429361795 Duckmaloi NSW, Here's a video <https://www.youtube.com/watch?v=Zb5OuyUbrlc>

4266 RV3 KIT

RV3 Fast Build Kit complete ,wings factory built,tail feathers done, At gympie,\$22000 ono. EA81 Turbo Subaru engine with a spare block. Rob 0417833648 or rob27954@hotmail.com

4269 X-AIR STANDARD



X-Air standard 582 blue head rotax 96 hrs frame, 208 hrs motor.Sweetapple prop, lcom radio,Garim gpsmap 196,EGT,CHT,regular instruments .comes with oil injection kit to be fitted,spats,rings plus assorted bits.Located Casino NSW. Phone Bryan 0414 722 740. Great first plane \$18,990negotiable

4270 INCOME & LIFESTYLE PROPERTY



Have your plane at your backdoor on this 185 acre income producing riverside cattle property featuring a beautiful restored Queenslander home with a very large shed and hanger situated near Kilcoy, one hours drive to Brisbane Airport. \$675.000 contact owner Phone 0402 133 742.

4271 XT 912 TUNDRA



Beautiful 912 Tundra 2011 excellent condition 107hrs. Always been hanged streak3 wing microair 760 radio two helmets with Lynx intercom and headsets full Punkin Head covers and stone guard and ballistic chute fitted.All manuals and log books Raa

registered. Genuine reason for selling inspection invited,will deliver \$47500. Ph 0428456728

4272 BRUMBY 610

2013 Model - LSA - Reg 24-8129 - 60.5 HRS - One owner from new - Sensenich 3 Blade Prop - VHF Receiver - Garmin GPS - immaculate condition - Metal construction - 110 kts from 100hp Rotax - Phone 0428 286 296 110,000 or agreed price

4274 JABIRU SK2200

Winner best Jabiru Natfly 2013 Great reliable plane now for sale. 110 knot cruise @ 14L/hr. 140 hrs since 1000 hr TBO Brent Thompson 44/60 prop fitted with Jabiru 42/60 spare. Icom A200 radio, Peltor headsets, aircraft cover, Garmin 96 GPS always hangared, no accidents. \$35,000 ono. Peter 0429 694 459

4276 WANT YOUR OWN AIRSTRIP?

Nice 4BR house with large hangar and airstrip on 100 acres in the Cowra district with town and tank water and good established gardens and orchard. Reluctant sale due to divorce and sold the aircraft. \$680,000, private sale. 0411 155 855.

4277 912 A ENGINE # 4380746

Engine can be picked up at Callala Bay or I might be able to deliver it. Contact me on 0412 013 061

4278 582 ROTAX

582 Rotax engine due for re-build plus fully reconditioned starter motor, 2 x carbys, gear box, aircleaner, exhaust system. \$1500 call Peter 0469 675 852

4279 BRUMBY 914 TURBO

A fast X-county tourer. Only 162 hours TTIS. Rotax turbo, auto-pilot and anti-collision system linked to Dynon Skyview with GPS, Garmin SL40, Garmin GTX327, Cobram ELT, electric trim, radar altimeter. Can be RAA or VH registered. Price reduced to \$112,000 inc. GST. Contact Ross (02) 63425150 or email ross.mcrae@webone.com.au

4281 JABIRU 6 CYL ENGINE

3yrs old, never started. Used only to fit cowls. Hyd lifter engine with 40 amp alternator installed, thru bolt nuts changed. Complete with installation kit, welded muffler, ram air ducts & 2" prop ext. Enquiries contact Steve Mob 0407218203

4283 FLY-IN BED & BREAKFAST

Victoria's Premier Fly-In Bed & Breakfast with complimentary loan car Check out www.buckleyinternationalbnb.com.au

4285 ROTAX 912S - 100HP ENGINE

Rotax 912S - 100HP Serviced regularly & in good condition and with 2000 hrs on it - (which in my books is well under half way through it's useful lifespan) - (retired Marine engineer & serial aircraft builder speaking here) Rick 0416 041 007

4286 AIRBORNE TRIKE XT 912

2007 XT912 Trike with the CRUZE wing - all in excellent condition 190 Hrs Total Time Always hangared Comes with ALL the standard gear 2 helmets & headsets, radio + move around dolly. Only used for FUN Ph Rick 0416 041 007 \$37500 near Taree NSW

Members can now place their advert online

FOLLOW THIS LINK

www.raa.asn.au/market

Your advert will still appear in the magazine, as well as online.



Advertising rates are \$55 (inc gst) per issue online only, \$55 (inc gst) per issue in *Sport Pilot Magazine* only and \$88 (inc gst) per issue for both the online and classified advert in *Sport Pilot Magazine*. The deadline for print bookings is the first of the month prior to the cover date of the issue. Once the ad is booked for any future print and online issues, it will appear online immediately. (50 words maximum - text will be edited when it exceeds maximum limit). You can place 6 photos online, one photo will appear in the magazine.

Neither RA-Aus nor Stampils Publishing accepts responsibility for any errors or omissions. The members' market is subsidised by members and is for non-commercial sales only.

Before purchasing any aircraft/engines/equipment that appear in the members market make sure that the technical details and registration information is correct for that type and model of aircraft/engine/equipment. RA-Aus takes NO responsibility for the technical accuracy of the details and information attached to each advert in the members' market and may not be able to transfer the aircraft purchase. It also reserves the right to edit or delete advertisements, which it deems inappropriate or mis-leading.

RA-Aus and Stampils Publishing reserve the right to withdraw from publication, without refund, any ad deemed unsuitable, including low quality or faulty images.

DISCLAIMER: Neither RA-Aus, nor Stampils Publishing accepts responsibility for advertising errors and omissions. Advertisers are also responsible for assessing both the integrity of potential buyers, and the risks that attend online transactions. Since phishing scammers have reportedly been contacting advertisers via the RA-Aus website, you are strongly encouraged to familiarise yourself with the ACCC's guidelines for recognising and guarding against online scammers.

HORSHAM AVIATION SERVICES

ABN: 65 007 339 451

Now Importing THE EUROFOX AIRCRAFT:

- Quality Factory Built
- Quick folding wing design
- Glider Tow certified to 750Kg
- Short take-off & landing

And DYNON AVIONICS Products:

- Now with Autopilot capability
- Solid state sensors
- Checklists
- Audible alarm capability

PH: 03 5381 1727

Email: info@horshamaviation.com.au

GOSTNER AVIATION

- New Airline Glass Recreational & General Aviation Jabiru's
- Airline Pilot Training
- Recreational, Private, Commercial Instrument, Twin & Instructor Ratings
- Full/Part time courses & live in aviall
- Employment Opportunities



For more info contact David Maddock
(Camden Airport) on 0414 788 105

www.gostneraviation.com.au

LEARN TO FLY



RA-Aus FLIGHT TRAINING & PILOT SUPPLIES

Foxbat A22LS Also: Trial Instructional Flights
Jabiru J120 Biennial Flight Reviews
Jabiru J160C (Rotax) Private Hire all aircraft
Jabiru J160D Gift Vouchers
Jabiru J230D Human Factors day Course
Drifter Air Leg/Radio/BAK Courses

Caboolture Recreational Aviation

Location at: Caboolture Airfield, Hangar 104, QLD

Ph: (07) 5499 1699

email: caboolture-warbirds@bigpond.com
web: www.caboolture-recreational-aviation.com.au

AVIATION INSURANCE

experienced aviation insurance specialists

Authorised Insurance Representative of Ambro Insurance Brokers Pty. Ltd.
AFS Licence Number 236675

Stewart & Gladys Smith would like to assist with your RA-Aus or GA aircraft insurance, or hangarkeepers public liability policy needs. The only insurance we handle is aviation, we do it well, and we are both friendly and economical to deal with!

We cover the market for you, obtaining multiple competitive quotes from all appropriate insurers, and then help you pick the best cover and price.

We welcome clients in all parts of Australia, and if you can't catch us at the office on 1300 308 700, we are often available after hours on 0433 278 700.

AIRCRAFT FINANCE

In affiliation with Linx Finance Australia Pty. Ltd

If you seek aircraft finance, we, via our affiliate Linx Finance, welcome the opportunity to seek to assist if the application is for \$40,000+ and the applicant is in a good financial position. Good bank rates, normally fixed over 5 years. Security is normally over just the plane. Ring Stewart Smith to discuss your needs, and to see if we/Linx can assist.

AUSTRALIAN COMMERCIAL CREDIT PTY LTD



Ph: (03) 9816 3264 or 1300 308 700
Fax: (03) 9816 3270
Website: www.insureplanes.com.au
Email: stewart.smith@insureplanes.com.au
A.H: (03) 9857 5963 or 0433 278 700

Tucano R

Flying Legend



Tucano T27 replica
Rotax 100-130hp*
Retractable Gear
Factory Alodine
Bladder Tanks
Kit or Quick Build www.flyinglegend.com.au



Gift card

Can't decide what Christmas present to buy for the pilot in your family? Skyshop offers the perfect solution – a gift certificate from \$50 - \$300.

Skyshop sends you an email with the gift certificate so you can print or email it to the recipient. Comes with a free personalised message.

Gift certificates are valid for a period of 12 months from the date of issue.

Price \$50 - \$300
Web www.skyshop.com.au



Action Camera

Garmin's VIRB Elite camera offers a 3.5cm colour display which makes setup and playback simple and ensures pilots capture the in-flight angle they desire. It can provide up to three hours of true HD (1080p) video on one charge. Digital stabilisation and lens distortion correction ensures video footage is clear and vibrant.

VIRB Elite can also capture high quality still photos even while the video camera is recording. The VIRB Elite incorporates all of these features along with built-in GPS, WiFi and ANT+ connectivity for remote control functionality with a variety of other Garmin products. With this data you can embed track and flight data to display your GPS location, right on the video. Included in the bundle is a Prop Filter, which reduces the blur created by a propeller as well as a stereo headset cable for capturing and synching cockpit audio with your HD video. A mix of mounting (with the addition of a suction mount) solutions will enable pilots to easily capture footage from a variety of places.

Price From \$605 AU
Web www.ozpilot.com.au

OFF THE SHELF

Powerline Detector

Safe Flight has launched its new dual frequency Powerline Detection System. The system is based on a state of the art Digital Signal Processor receiver that detects both 50Hz (International) and 60Hz (US).

The DPDS is a lightweight (less than .5kg) and passive system which increases pilot reaction time to the hazard of powered electric transmission lines by providing a warning when approaching an energized powerline. The system provides both visual and audio warnings.



Price N/A
Web www.safeflight.com



Racing Simulator

Seriously, if your pilot partner really does have everything, including money to burn, here is the perfect fantasy Christmas gift.

The Motion Pro 2 Racing Simulator is mostly for serious car nuts (see the price below). It features an ultra-powerful steering force feedback motor, professional-grade steering wheel and pressure-sensitive pedals allowing the driver to feel every detail of the vehicle's behaviour. Optional manual gear-changing configurations and various dedicated steering wheels all feature quick-disconnect systems for easy customisation.

When you get sick of tearing around the world's race tracks, the simulator can transform in just two minutes (with the optional Combat Flight Pack), allowing you to fly aircraft from any airport in the world. Fly commercial airliners, fighter jets, private planes and more over realistic scenery based on high-resolution satellite imagery.

The Motion Pro II comes standard with a screen system of full 1080p resolution and a 60-degree field of view. Upgrade to the panoramic triple-screen setup, which delivers 6,220,800 pixels and a 180-degree field of view and you have to turn your head to see the corners.

Price From \$92,990 AU
Web www.cxcsimulations.com



GoFly Aviation

Learn to Fly DVD

Complete Australian Recreational Pilot DVD Training

Study at home 24/7
Be prepared for every lesson
Save on actual flight time

www.learntoflydvd.com.au

Order Online

Order Online



Start the new year prepared !
The perfect Christmas gift !

3 DVD Box Set

Extended Limited Offer !
Box set normally \$168 now only **\$128**
Offer ends 16/02/2015
Price includes GST postage extra \$7.00



Pilot Certificate and Cross Country

Thanks for the Learn to Fly DVD box set, Wow !!! I didn't know what to expect when I ordered them but I would have to say they are fantastic and I'm positive they are going to help in a lot of ways. Amazing !!

Trent, Bairnsdale Vic

Fly one of our brand new sling aircraft Today at www.goflyaviation.com.au

Advertisers index

| | |
|--------------------------------|-----------|
| Adelaide Biplanes | 36 |
| Aerochute Industries | 40 |
| AeroKits | 65 |
| Aerosport Aviation | 66 |
| Air Creation | 57 |
| Alpine Aircraft | 38 |
| Anderson Aviation Australia | 5 |
| Asia Pacific Light Flying | 52 |
| Atec Aircraft Sales - Zephyr | 42 |
| Australian Commercial Credit | 40, 62 |
| Australian Lightwing | 38 |
| Australian Pacific Aviation | 55 |
| Bert Flood Imports (Rotax) | 67 |
| Bill Owen | 2 |
| Bolly Props | 57 |
| C & H Freight | 39 |
| Caboolture Recreational | 62 |
| CASA | 8 |
| Central West Flying | 42 |
| Coominya Flight Training | 40 |
| Corvus Aero Australia | 51 |
| D-MOTOR AUSTRALIA | 65 |
| Foxbat Australia | 48 |
| Gofly Aviation | 64 |
| Gostner Aviation | 62 |
| Horsham Aviation | 48, 61 |
| Jabiru Aircraft | 52, 53 |
| Kelmac Aviation | 65 |
| Leading Edge Aviation | 19 |
| Low Flight | 36 |
| Mendelssohn Pilot supplies | 68 |
| NSW TAFE | 13 |
| OMEGA PROPELLERS | 60 |
| PSB | 34 |
| Quicksilver | 42 |
| Recreational Flying Co Gympie | 40 |
| ROTEC | 25 |
| Seaplane Endorsement Training | 17 |
| SEQFTA | 57 |
| Silent Wings Aviation | 6, 21, 22 |
| Skysports Innovation | 65 |
| Skysports Training | 57 |
| Sling Aircraft Australia | 8 |
| Soar Aviation | 16 |
| Sport Aviation Tocumwal | 57 |
| Sunshine Coast Flight Training | 57 |
| Tucano | 62 |
| Wilmington Airpark | 43 |
| Yarrowonga Flight Training | 36 |
| Yarrowonga Pilot Shop | 36 |



The
**Quiet Revolution
in the Cockpit**

EQ1
COMMUNICATIONS




**A complete wireless
communication solution**

**FULL DUPLEX
WIRELESS
HEADSETS**

Sky Sports Innovations
www.skysportsinnovations.com.au
Ph 0419 942 645



KELMAC AVIATION

GERALDTON AIRPORT
Western Australia

**FLIGHT TRAINING
INSTRUCTOR TRAINING
RA TO GA CONVERSIONS
GA TO RA CONVERSIONS
FORMATION
LOW LEVEL
FULL TIME/ PART TIME
GROUND THEORY**


Fully accredited GA/RA-Aus
Flight Training School



CALL 0438 257 395
www.kelmacaviation.com.au

AeroKits
Performance + Quality = Safety
+ Reliability

Supplier of Savannah STOL Quick Build
Kits, LSA Factory Built Aircraft and all
Savannah Parts.
New MTOW 600Kg.




SUPPLIERS AND MANUFACTURERS OF
Aircraft Building Tools and Clecos
Avex Blind Rivets
Stainless Button Head Screws
Rivnuts (Nutserts)
Instruments Non TSO'd
VHF and UHF Radios, Aerials,
Custom Savannah Harnesses,
Bolly and Sensensich Props
Airmaster C/S Props
AeroShell Sport Plus 4 oil for 912ULS

UPGRADE PARTS FOR SAVANNAH
Fuel Distribution Manifolds
Improved Fuel Filter Kit
Improved 3 Point Door Latch Kit
Clear View Luggage Area Restraint
Front Axle strength Mod
Low Permeability fuel hose
Flexible "Build Assist" Programs

P 02 6729 9202 M 0418157044
www.aerokits.net.au
email rrbrost@bigpond.com

D-Motor Australia

Will Keep Your Prop Spinning



D-Motor LF 26 4 Cylinder Engine
Water Cooling
Direct Drive
92hp @ 3000rpm
57kg Installed
EFI
1500hrs TBO
€12600 + Shipping + GST

CALL ADAM 0403 485 400
info@d-motor.com.au
www.d-motor.com.au

HAPPY LANDINGS

Third generation

RA-Aus has welcomed another young pilot into its ranks.

Tristan Sigley, of the Gold Coast, went solo on his 15th birthday recently, the third generation of the family to be involved in recreational flying.

Tristan is the grandson of AUF / RA-Aus pioneer, Barrie Sigley, and the son of Heck Field Instructor and former RA-Aus board member, Nick.

Tristan was the very first RA-Aus Junior Pilot Member and legally started flight training when he was ten years old.

"After years of flying it was nice to finally have the wait over and go solo. The sense of freedom was like nothing I've ever felt before and something I will never forget," says Tristan.

He says wants to follow a career in aviation and is looking forward to taking his grandfather as his first passenger once he gets the endorsement.

Tristan says he is thankful for the support his family and instructors have provided and has a special thanks to his theory instructor, William Ginn.

You can watch Tristan's first solo on YouTube <https://www.youtube.com/watch?v=aLWTZV3JG>.



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



>>Tristan and dad, Nick Sigley



ROKO VIA GET THE ORIGINAL

by Rokospol Aviation

Get the Facts Get the Truth Get the Spec Get the Performance
Get the Room Get the Luxury Get the Price Get the Service
Get the Back Up Get the Best Get the Aircraft Get the Original

BE QUICK! IN STOCK NOW - AT OLD PRICE

AEROSPORT "Where Quality meets the Sky"

Aerosport Aviation Ltd

✉ anton@aerosport.co.nz ☎ +64 212995999 ☎ +64 7 8295940 🌐 www.aerosportaviation.com.au

QLD, NSW, VIC, WA, NZ



912 iS Sport

STRONGER. FASTER. HIGHER.

The new Rotax 912 iS Sport aircraft engine is a further improvement of the 912 iS and offers outstanding performance with low fuel consumption. Pilots will appreciate the improved take off performance which results in a better climb rate a shorter take off run and a higher cruise speed.



914 F/UL | 115hp

The turbo charged Rotax 914 series offers more performance at high altitudes while keeping weight at a low level.



912 S/ULS | 100hp

In comparison to the 80 hp version of the Rotax 912 series the 100 hp product line offers more power while keeping the weight.



582 MOD. 99 | 65hp



912 A/F/UL | 80hp

ENGINES YOU CAN RELY ON.

More than 170.000 units of Rotax aircraft engines have been sold in total. Since 1989 BRP-Powertrain has manufactured more than 40.000 units of the Rotax 912/914 engines family.

Distributed in Australia, New Zealand, South East Asia and Taiwan by:
Bert Flood Imports Pty Ltd 17 - 18 Chris Drive Lilydale Victoria 3140 Australia
Email: gary@bertfloodimports.com.au Visit us at: www.bertfloodimports.com.au
Tel: 03 9735 5655 Fax: 03 9735 5699



GARMIN



The new **G3X Touch** is a large touchscreen, glass flight display system designed for experimental amateur-built and light sport aircraft (LSA). The non-certified G3X Touch system offers pilots easy-to-read, easy-to-use, high-resolution 10.6-inch flight displays with split-screen functionality and a host of advanced interface options – all at a great price. PLEASE CALL OR SEE OUR WEB SITE FOR DETAILS

- GTR 200 Com 10w 25khz .. \$1450
 - GTR 225 Com 10w 25khz .. \$2115
 - GTR 225A Com 10w 8.33khz \$3150
 - GTR 225B Com 16w 8.33khz \$4225
 - GNC 255A Nav/Com 10w \$4750
 - GNC 255B Nav/Com 16w \$5950
 - GNS 430W recertified \$9675
 - GNS 430 recertified from \$7595
 - GTN 650 GPS/Com/Nav \$12500
 - GTN 750 GPS/Com/Nav \$17995
 - GTX 327 transponder \$2195
 - GTX 328 Mode S transponder \$3295
 - GMA 240 Audio panel \$1050
 - GMA 340 Audio panel \$1595
- For all other GARMIN AVIONICS not listed please call



- GARMIN AERA 500 \$ 742
- GARMIN AERA 550 \$1264
- GARMIN AERA 795 \$2118
- GARMIN GPSMAP 695 \$1889
- GARMIN GPSMAP 196 \$ 725



- Portable ADS-B with Attitude
- GDL 39 3D unit \$1000
- GDL 39 3D w/DC cable \$1055
- GDL 39 3D w/cable/bat \$1115



- Virb Elite Aviation Bundle \$625
- Virb Aviator Action Pack \$999
- Action Pack included D2 watch and Virb Elite Aviation Camera



- VivoFit Activity Monitor \$159
- VivoFit Activity Monitor with heart monitor \$209



- D2 Pilot watch \$565

- WAAS GPS
- Altimeter
- Go To function
- Ground speed
- Track
- Distance

FOR iPad



- Bad Elf Pro GPS \$220
- Bad Elf 1000 GPS \$160
- NEW Bad Elf 1008 GPS \$180
- Garmin GLO Aviation \$160
- Garmin GLO GPS \$130
- GNS 2000 GPS \$139
- DUAL XGPS150A GPS \$140
- DUAL XGPS160 GPS \$199
- Kneeboards
- i-Pilot for iPhone \$ 60
- i-Pilot for mini pad \$ 70
- i-Pilot for iPad \$ 80

HEADSETS



The revolution continues with **ZULU PFX** Improved comfort and noise attenuation blue tooth connectivity and auto shut off

- NEW ZULU PFX ANR Headset \$1350
- Zulu.2 ANR GA version \$1045
- Zulu.2 ANR Helicopter \$1045
- Zulu.2 ANR Lemo panel ver. \$1045
- Sierra ANR GA version ... \$825 with blue tooth and music input



- HM40 GA H/set \$175
- HM40 ANR H/set ... \$495
- HM51 child headset \$199
- Peltor 8006 GA H/set \$350
- Sennheiser HME 110 \$329
- Sennheiser S1 Passive \$499
- Sennheiser S1 Digital \$1095
- Sennheiser HMEC250 \$599
- David Clark H10-13.4 \$459
- David Clark H10-60 \$499
- David Clark H10-13H \$489
- David Clark ProX ENC \$895



Bose A20 Headset

- A20 GA twin plug w/bluetooth \$1350
- A20 GA twin no bluetooth \$1250
- A20 Helicopter w/bluetooth \$1350
- A20 Lemo w/bluetooth \$1350
- Installed wiring harness \$75

DYNON AVIONICS



AFFORDABLE GLASS COCKPIT AVIONICS

* Not TSO'd. For experimental aircraft or for certified aircraft with a CAR35 approval



SKYVIEW Touch

- The latest touch screen display
- SV-D1000T/B 10" display ... \$4850
- SV-AP-PANEL A/Pilot control \$695
- SV-KNOB-PANEL \$320
- SV-INTERCOM-25 \$375
- SV-VHF COM-C25 \$1595
- NEW SV-COM-X83 VHF 8.33 \$2600
- NEW Video Input adaptor .. \$235



SKYVIEW

- SV-D700 7" display \$3295
- SV-D1000 10" display \$4375
- SV-ADAHRS-200 \$1475
- SV-EMS-220/A \$750
- SV-XNPDR-262 Mode S .. \$2195
- SV-GPS-250 GPS receiver \$275
- SV-32 Auto Pilot servo .. \$925



- NEW D2 Pocket Panel \$1750
- portable true attitude indicator
- D1 also available \$1450
- EFIS-D6 \$1950
- EFIS-D10A \$2695
- EFIS-D100 \$3150
- EMS-D120 \$2695
- FlightDEK-D180 \$4150

MICRO AVIONICS



- MM001B Integral helmet \$795
- MM001C Integral helmet with VOX electronics \$995
- MM020A Helmet only \$349
- MM001 UL100 headset \$440
- MM001A UL200 ANR headset \$575
- MM005 Powered Radio Interface \$440
- MM030 Single Head Strobe \$165
- MM032 High Power Double Strobe \$395
- MM033 High Power Triple Strobe \$495

TRAFFIC ALERT

- MONROY TRAFFIC WATCH
- ATD-300 Traffic Watch ... \$1095
- ATD-300 + ANT 300 antenna \$1495
- ATD-300 + ANT 300 + ARINC \$1895

PORTABLE AHRS



- LEVIL AHRS-G mini SW \$950
- LEVIL AHRS-G mini AW \$1185

TRIG

TRIG MODE S TRANSPONDERS ARE AUSTRALIAN ADS-B COMPLIANT



- TT21 class 2 mode S \$2795
- TT22 class 1 mode S \$3095
- TT31 class 1 mode S \$3150
- TT31 class 1 mode S direct replacement for King KT76a \$3100
- NEW VHF TRANSCIEVERS 8.33 kHz Remote mount very small & compact
- TY91 VHF 6 watt transmitter power for 14 volt or 28v aircraft. Fits into 57mm cut out \$2500
- TY92 VHF high power 16 watt transmitter for 28 volt aircraft \$5900

BENDIX/KING

- KY 97A VHF (OHC) 14v \$1995
 - KY 196/197 VHF (OHC) \$3395
 - KN 64 DME (OHC) \$2595
 - KT 76A transponder (OHC) \$995
 - KRA 10A Rad Alt (OHC) \$9995
 - KR 87 ADF (OHC) system \$2995
- For New BK Avionics please call

INTERCOMS

- HM 2 place portable \$175
- HM 2 place for Icom \$175
- HM 4 place portable \$250
- PS Engineering PM500EX \$350
- Sigtronics SPA 400 \$295

ICOM

- ICOM
 - IC-A15 \$375
 - IC-A6 Sport \$495
 - IC-A6 Pro \$695
 - IC-A24 Sport \$595
 - IC-A24 Pro \$795
- Sport versions come with cigar lead and alkaline battery case. Pro version comes with charger, rechargeable battery, cigar lead, and headset adaptor
- IC-A210 (panel mount VHF) \$1299
 - IC-A110 (VHF Mobile or Base) \$1595

FUNKWERK

- ATR833 LCD 8.33kHz VHF \$1995
- ATR833 OLED 8.33kHz VHF \$2295
- TRT800H mode S xpndr \$3500

INSTRUMENTS

RC ALLEN

(TSO approved)



- RCA 2600 digital horizon (electric) \$3650
- RCA22-7 horizon (vacuum) \$1195
- RCA82A Turn Coordinator (electric) \$1195
- RCA15 series D.G. (electric) from \$3250
- RCA11A-8 D.G. (vacuum) \$1195
- MID-CONTINENT (TSO approved)
- 4300-411 LIFESAVER Electric Horizon with 1 hour emergency battery \$5250
- MD200-306 Course Dev. Ind \$2575
- 1394T100-7Z Turn Coordinator \$1095
- 7000C.31 Vertical Speed Ind. \$ 895
- MD90 Quartz clock from \$ 395

JP INSTRUMENTS

FS450 FUEL FLOW With Transducer, fittings, Firesleeve and GPS interface \$850



- PRECISION vertical card compass \$429
- NON APPROVED INSTRUMENTS
- GH030 (vacuum) Artificial Horizon \$695
- GH025 (electric) Artificial Horizon 14v .. \$1495
- GD031 (vacuum) DG \$695
- GD023 (electric) DG 14v \$1495
- BZW-4B turn coordinator \$525
- BG-3E Altimeter 20,000 ft \$495
- Vertical Speed Indicator \$225
- Magnetic compasses \$150
- Vertical card compass \$299
- Air Speed Indicators from \$225

AVIONICS INSTALLATION

We specialise in experimental and most LSA aircraft.

- Custom made instrument panels available.
- Experimental IFR upgrades.
- Dynon EFIS installations available.
- Quality work fully guaranteed.

SURVIVAL EQUIPMENT

SURVIVAL PRODUCTS 4-6 PERSON TSO'd RAFTS



- TSO'd raft with canopy .. \$3595
- TSO'd raft with FAR91 survival equipment \$3895
- Specially designed for light aircraft
- "The lightest most compact rafts in the world"

LIFE JACKETS

- HM SURVIVOR Slim line NON TSO life jacket with light and whistle .. \$150
- 5 Year Service Life (HM Survivor pictured)
- RFD 102 MK3 Approved life jacket in sealed bag 10 year service life ... \$199
- PLB and ELT
- GME MT410G PLB w/ GPS \$375
- Ameri-King AK-451 ELT (406 Mhz) \$1195

