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RECREATIONAL AVIATION AUSTRALIA / AUGUST 2017 VOL 72 [8]

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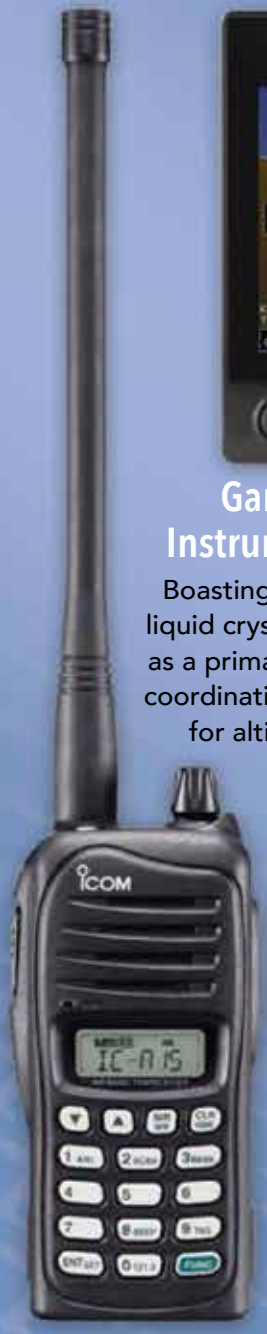

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ON THE COVER

"Performance is scintillating, even more so considering it meets RAAus weight and stall limits."

Prototype Spacewalker II-RR
Photo: Martin Hone

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NEWS

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EXTRAS

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ONE MAGAZINE TWO FORMATS

RAAus members get *Sport Pilot* free of charge online at www.raa.asn.au. But if you are not a member or would prefer a hardcopy magazine, here is how you subscribe.
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TERMS AND CONDITIONS

Making headway not headlines

BY MICHAEL MONCK

I OFTEN hear people talking about medical reform and the division between RAAus and general aviation.

The argument often goes a bit like this: GA has medical requirements which involve a pilot going to a DAME and passing various tests which are then signed off by CASA before the pilot can go flying. If the DAME finds something wrong, or CASA questions the medical because of any of a number of reasons, the pilot is at risk of not being able to fly. They may be subjected to a battery of additional tests or even grounded. Assuming this system is sound, anything less than this level of scrutiny must be dangerous and thus, RAAus must be dangerous.

Then we have the other side of the argument; RAAus has been flying for years without the need for more than a driver's licence standard of medical fitness and this hasn't led to any significant problems so the GA standard must be flawed.

Which is it? Is GA or RAAus wrong? I don't think it is cut and dried. If we stop for a moment and consider the types of activities in which we engage we have a much better chance of applying the correct level of scrutiny of pilots in terms of their fitness to fly. If we fail to do this, we will contribute to a failure of aviation in general.

RAAus pilots are engaged in a relatively simple set of operations. We only fly during the day. Only in VMC. Only in single engine aircraft. Everything about what we do is simple. It's the basis for our existence and underpins our philosophy of simple rules for simple flying. So how does this philosophy relate to medicals? For an answer we have to examine the physiological link between the things we are doing and the way our bodies react.

There's a whole bunch of people in the field of medical science who have researched and developed a substantial body of work in this area. I won't delve into the detail of some of the papers I have read but suffice to say, if you put stresses on your body due to the things you choose to do, there will be a physical response.

Most people will be familiar with the concept of your heart rate rising when you engage in physical activity. If you're sitting still your resting heart rate will be (or at least should be!) much lower than if you're jogging down the road. The same applies to flying.

Anyone who has flown at night, in IMC, done aerobatics and so on, understands there are physical side effects of these activities. For RAAus pilots the physical aspects are much less onerous. The GA medical system is not appropriate for us. Having said all of this, I suspect there will still be, for some of you, a niggling feeling in the back of your mind that can only be satisfied with cold hard evidence. So let's take a look.

There are a couple of suppositions people make when looking at RAAus. The first is outlined above – our medical system is not adequate. The second is that when someone fails the GA medical they move over to RAAus. If we link these two together we should arrive at a logical conclusion.

If the RAAus medical system is not adequate, a pilot who fails the GA test should logically be more likely to experience some sort of medical incapacitation, leading to an incident.

The implication is that, in order to fly safely, you must have passed the GA medical examination otherwise you will be likely to experience a medical event while flying.

Is this true? The simple answer is no. There is no higher incidence of medical incapacitation in RAAus aircraft than there is in GA aircraft. Do we have these types of events? Yes, we do. But so does GA. Indeed, so do commercial pilots who are subjected to even more scrutiny.

The point of all of this is not to defend the current GA medical system or claim it is perfect for that sector of aviation. It is, however, to show that the RAAus system is working.

We have had this system in place for over 30 years and, at no point, has it been suggested that it is causing problems. RAAus pilots, plain and simple, are not falling out of the sky because of clogged arteries and dodgy tickers. It just isn't true.

To me the bigger issue is that some people simply don't understand our end of aviation and seem to be intent on driving a wedge between the different sectors of aviation. The motivation for this has puzzled me for some time and continues to do so.

I just can't get my head around the fact that some in aviation want to throw stones at others, the regulator, government departments, the Minister and so on. What possible purpose could it serve other than creating a rift between aviators and industry stakeholders? Surely we're all in this together and something that benefits one part of aviation also benefits others who share our passion, right?

Right now RAAus is working with other organisations and CASA to advance our cause. We are getting some credibility and recognition. We've been appointed to various panels and committees to help shape aviation policy. We're being heard.

Our progress is slow but it is in the right direction. We are not making headlines, but we are making headway. One thing slowing us down are the disappointing fingers pointing at us, from people intent on avoiding a collegiate approach to tackling the broad issues facing aviation.

So the next time someone claims RAAus medicals lack substance or that the GA medical standards are too onerous, stop and have a think about what is being said. Instead of us being reactionary and defensive, maybe we should ask ourselves how we might be able to help. After all, if the industry grows and more people fly, surely that is a good thing.

A. 19-20 AUGUST
GATHERING OF EAGLES

Watts Bridge Memorial Airfield invites all aviation enthusiasts to be part of the biennial fly-in. In addition to the air display and parachute drops, expect to see a variety of aircraft types including warbirds and replicas representative of WW1 and WW2, vintage, aerobatic and homebuilt aeroplanes as well as a wide cross section of general aviation and light sports aircraft. Vintage cars and military vehicles on display, WW1 and WW2 military re-enactors and other interesting exhibits. Saturday evening BBQ meal. For more information, info@wattsbridge.com.au or www.wattsbridge.com.au.

B. 20 AUGUST
WINGS AND WHEELS

South Grafton aerodrome open day. Free entry, free parking. Vintage and classic sports cars, motorcycles, hot rods, go-karts, caravans, boats, stationery engines, plus all sorts of aeroplanes.

Joyrides. For more information, www.graftonaeroclub.com/wings-and-wheels

D. 8-10 SEPTEMBER
GOONDIWINDI FLY-IN

The Gundy food and wine festival provides an excellent reason to fly-in. The aero club will host an aviator's dinner on Saturday. Breakfast Sunday from 7:30am. The Gundy festival is set among the beautiful gardens of the local Community Cultural Centre, located on the Macintyre River, and has been staged in the Goondiwindi region for the past 16 years. The festival focus is 'Food, Wine and Music' showcasing fine regional food, award-winning wines and live music. The weekend also features the running of the Goondiwindi Cup. For more information, Marg Scells (07) 4677 5186 or 0439 775 184.

C. 26-27 AUGUST
TUMUT VALLEY FLY-IN

We expect a variety of aircraft and welcome all comers. BBQ and refreshments both days. Saturday night meal with guest speaker. List of accommodation options available on request. For more information, Craig Cullinger 0417 060 589 president@tumutaeroclub.org.au or Rod Blundell 0419 135 249 secretary@tumutaeroclub.org.au.

E. 9 SEPTEMBER
WINGS OVER WARWICK

Queensland Recreational Aircraft Assn incorporating Warwick Aero Club (www.qraa.info) invites pilots and enthusiasts to the annual fly-in at Warwick Aerodrome. The strip is 1,600m all bitumen (www.warwickaerodrome.com) Food and drinks available. For more information, Phil Goyne 0417 761 584 or Graham Hawthorne 0427 377 603.

H. 19-21 OCTOBER
AIR VENTURE AUSTRALIA

Narromine airport. Matt Hall, Roulettes, Aerobatics, buy, sell, trade. Free seminars. Biggest fly-in of the year. For more information, airventureaustralia.com.au.

I. 6-7 JANUARY 2018
GREAT EASTERN FLY-IN

Evans Head Memorial Aerodrome. Fly-in for a unique Australian aviation get together. Camping, fun activities, air displays, drones, joy flights, aviation history, classic cars, markets, great food and much more. For more information, greateasternflyin.com.au or Gai Taylor 0427 825 202.

F. 9 SEPTEMBER
ONE LONG TABLE FESTIVAL

An invitation has been extended to aviators for the Chinchilla One Long Table Multicultural Food Festival. The event is a celebration of the diverse culinary delights of the region. There will be multiple food vendors and live entertainment. The event is held in the main street of Chinchilla which is closed and tables placed together to form one long one. Starting at 5pm and finishing around 9pm. Fun for the whole family. For more information, manager@chinchilla.org.au (07) 4668 9172.

G. 7-8 OCTOBER
JAMESTOWN FLYING GROUP 30TH ANNIVERSARY

A weekend celebration to mark the founding of the group. Sir Hubert Wilkins Aerodrome, Jamestown SA. Saturday dinner, Sunday fly-in and BBQ. For more information, Chris Bretag 0428 485 651 or Danny Keller 0428 385 907.

HANGAR TALKS

23 SEPTEMBER
AIRWINGS FLIGHT CENTRE

Narrandera/Leeton Airport, Irrigation way, Narrandera, NSW. 11am - 1pm. For more information, http://airwings.com.au/

14 OCTOBER
YARRAWONGA FLIGHT TRAINING

Yarrawonga, Victoria. Topics Radio Calls and Aerodrome operation. For more information, http://www.yarrawongaflighttraining.com.au/

NEW FRIENDS

I feed the wild birds and soon a couple of white cockies turned up. But it wasn't long before seven of them arrived and demolished my good rain gauge, by picking it up in parts and dropping it to the concrete four metres below. Now, a rain gauge can only take so many drops and so I had to buy a new one at $30 a pop. However, a couple of months ago, 21 of my feathered friends arrived. What a racket! Another new rain gauge. Since then only two or sometimes three will arrive nice and quietly. However today there were 16 or 18 (it is hard to count a moving mass of white feathers). They covered the house, the patio, the furniture and the neighbour's house, all accompanied by an awful racket. While I am on my third or fourth rain gauge, this time it survived. Does anyone know where I can buy them in bulk?

KEVIN MC GRATH

AFFORDABLE FLYING

It might be time for some honesty here.

With the recent rise in membership and registrations, it might be prudent for RAAus to justify why members should stay with RAAus or ditch them and do the full CASA PPL.

Would it be possible for the board to do a side-by-side comparison of the costs so members can see what they get for their dollar on a RAAus v CASA PPL basis, considering things like:

Membership, courses, exams, BFL fees, aircraft registration fee, pilot licence/ certificate fee,

MTOW/passengers, annual inspection fee by RAAus/CASA... and so on.

My first thought is that an annual membership of $235, combined with the local club membership (which includes insurances on aircraft) can start off as $450 a year, just to get into the pilot seat. Why should I be forced to pay this when I can do my PPL and use the membership fee towards another lesson?

Wasn't the basis of the RAAus to keep flying affordable?

BEN LONGDEN

RAAUS RESPONSE */ Based on your question, there are two areas to compare. Cost of initially gaining a RAAus Certificate, or CASA Licence, and ongoing costs once trained.*

In basic terms RAAus membership is a minimal annual cost of $235. Part of this membership fee includes insurance coverage of $250,000 for any passenger carried by a Pilot Certificate holder and $10 million cover for third party property damage. There is no requirement to belong to a club to fly RAAus aircraft. There is no annual medical cost for a RAAus member unless you have a medical condition requiring a doctor's statement or are over 75.

By comparison, to achieve and maintain a CASA issued Recreational Pilot Licence

(RPL) while there is no annual membership, you must apply for and maintain a RAMP-C medical or CASA issued Class 2 Medical Certificate (doctor fee of $150-$200 plus $75 CASA processing fee) every four years, if under 40, and every two years if over 40. You will also require an Aviation ID (AVID) at $152, or $99 depending on initial application or renewal (every two years) according to the CASA website. There is no insurance coverage with any CASA licence.

While it is impossible to exactly compare costs of training without spending significant time on the web and this will vary depending where in Australia you are, in general terms many RAAus schools charge about $150-$250 per hour to train in a relatively new aircraft. These aircraft often have the latest glass cockpit instruments not always available in older GA aircraft.

Once you achieve an RAAus Pilot Certificate (minimum 20 hours, five of which must be solo) you can fly an aircraft up to 600kg MTOW and with a cross country endorsement (a further 10 hours dual and two hours solo) you may fly anywhere in Australia outside controlled airspace. Add 10 hours solo for a passenger endorsement and you can take your friends flying. At the higher cost noted above this would equate to about $8,000.

For an RPL, the hourly rate is generally about $250-$450 and the minimum hours for an RPL includes 25 hours dual, five of which must be solo, plus additional training for a navigation endorsement of five hours solo and two hours dual instrument time. At the higher cost noted this would equate to around $14,000. For a CASA issued Private Pilot Licence (PPL) the required minimum hours is higher at 40, so about $18,000.

Exams are required for Certificate or Licence and many RAAus schools only charge a minimal cost for each, which you can sit at the school under supervision of one of the instructors or the CFI. By comparison, for CASA exams you must book the exam at a certified location, pay about $164-$186 per exam, plus a delivery fee of $99-$121. These fees apply every time you sit the exam, so failing is quite costly.

Finally, as a RAAus member and once a basic online course is completed, members can maintain their own aircraft, saving about $2,500 - $6,000 for the cost of an annual inspection by a LAME. Registration for a two seat aircraft with RAAus is $165 per year.

A Biennial Flight Review in RAAus costs about $150-$300 versus about $450-$800 for GA.

So while it appears to be more costly per year to belong to RAAus, for the reasonably minimal membership fee of $235 and $165 for aircraft registration, members operate with more relaxed requirements for medical standards, have third party property damage and passenger liability insurance coverage, can maintain their own aircraft and get to talk to real people in an office devoted to members only. Less bureaucracy and more personal service is a major plus.

STICK THE ASIC?

Regarding the changes to ASIC issuing (*Sport Pilot* July 2017).

I'm pleased to read that we have a little common sense and concern being shown by the RAAus administration.

As far as I'm concerned the government can stick their ASIC you know where. I've had an ASIC since 2010 and renewed it bi annually as required. I've been asked to show it only three or four times since then. I'm sure most people have tried to do the right thing as well. According to the article in *Sport Pilot* RAAus considers "the risk placed onto our CFIs, staff and the Board has been assessed as too great for RAAus to accept. As an example, as an issuing body, anyone processing an ASIC application will be required to identify fraudulently prepared and forged documents and there are penalties for failure to take all the steps necessary to identify such documents. RAAus does not believe this is the role of our organisation."

Thank you to the administrators at RAAus for showing brilliant concern over this matter, by referring to it as onerous. It most definitely is.

IKE GOODWIN

DINOSAUR FANS

Erlina Compton and I just read the dinosaur article (*Sport Pilot* May 2017) with our son, Brigalow. What an excellent article.

Congratulations Rick Frith, we've decided where our next family adventure is headed. We can't lose with a young boy when dinosaurs, lizard racing and a memorial to a cockroach called 'Destructo' are involved.

DAN COMPTON, WINGS OUT WEST

JUDGE AND JURY

On reading the Notification of the Fatal Accident sent out by RAAus on May 25, I took a more than usual interest, because I live in the region where the accident took place and fly out of Lismore which is nearby.

When I read paragraph 4, my interest turned to dismay that RAAus could come to a conclusion of the accident due to what locals had witnessed and historic information.

On reading, it became apparent the investigating team had concluded that the pilot had been doing aerobatics or was flying low. The final report was right there in that one paragraph. No need to report further.

If this was from CASA, I would probably understand, but from RAAus which is trying to be more professional, I feel you have failed.

Then to finish it off, you offer condolences to his family after just telling them that he died because he was doing something wrong.

Do you think this would have been more professional and compassionate if you had deleted paragraphs, three and four from the notification and sent out a notification a couple of days later outlining low flying and aerobatic dangers.

Please don't tell me it's all about safety, which gives you the right to be judge and jury without compassion before a final report is released.

PETER IMESON

***FROM THE CEO** / It appears Peter has misread the communique. At no stage did RAAus suggest any cause of the accident. Our investigations are continuing.*

During the course of our investigations we did become aware of behaviour by other people whereby the requirements of the RAAus Operations manual may have been breached. RAAus takes its responsibility seriously and, as such, felt it was important, in the interests of transparency, to inform members of what we were told.

WRITE IN: EDITOR@SPORTPILOT.NET.AU

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. (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).

INSURANCE AND SAFETY PARTNERSHIP FOR RAAUS MEMBERS

PSB Insurance Brokers is pleased to provide a tailored insurance program exclusive to RAAus members, underwritten by QBE Insurance and Agile Aviation Underwriting Services.

The partnership has safety at it's core with Australian Red Bull pilot and RAAus member, Matt Hall delivering a number of safety initiatives.

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AGM NOTICE

BY MICHAEL LINKE **COMPANY SECRETARY**

RAAus invites members to the 2017 AGM

The AGM will be held from 2.00pm on Saturday 23 September, 2017 at the RAAus Head Office Unit 3, 1 Pirie Street FYSHWICK ACT 2609. Members can appoint a proxy if they wish.

Members are also invited to submit resolutions for consideration.
The closing date for resolutions is 5.00pm Thursday 31 August, 2017. This closing date allows RAAus to then notify all members of any resolution within the required 21 days of the meeting.
Resolutions received after 5.00pm on 31 August 2017 will not be considered.
Resolutions can be emailed to admin@raa.asn.au or posted to RAAus Ltd PO BOX 1265 FYSHWICK ACT 2609.

CURRENT AGENDA AND RESOLUTIONS

1. Opening of the meeting
2. Receipt of apologies and proxies
3. Confirmation of quorum
4. Declaration of the result of the election
5. Minutes of last Annual General Meeting
6. Business arising out of the minutes of the last Annual General Meeting
7. Presentation of Annual Reports
- Chairman (see annual report)
- Audited Financial Reports (see annual report)
- CEO (see annual report)

8. Appointment of Auditor
- Resolution: That RMS Australia (Canberra) is confirmed as financial auditors of RAAus Ltd

9. Close of Annual General Meeting

Following the AGM, a member's question and answer forum will be held.

Following the question and answer forum, RAAus will host a function to celebrate 2017-2018 GYFT scholarship winners and other special awards. Light refreshments and a light meal will be provided. The AGM and question and answer session will be live streamed on the RAAus Facebook page: www.facebook.com/RAAus/

BOARD MATTERS

DURING July RAAus members had the opportunity to elect two Directors. Information regarding nominees was included on the website, in the pages of the July edition of *Sport Pilot*, and posted to all financial members.

Because of the deadlines associated with the printing of the magazine, it has not been possible to update you with more information about the election. Voting closed on July 31. This magazine went the printer a week before then. More information about the result will be printed in the September edition and on the website.

AUDIT

The CEO of RAAus Ltd advises that, as a result of the formation of RAAus Ltd, coupled with the resignation of our financial audit firm Nexia Duesbury, the Directors of RAAus Ltd appointed a new financial auditor. RSM Australia has been appointed for the 2016-2017 financial audit. This appointment has been approved by the Australian Securities and Investments Commission (ASIC) and RSM Australia agreed to undertake the audit in July 2017.

RECREATIONAL AVIATION AUSTRALIA

ACCIDENT UPDATE

RAAus member, Milfred Knight, was killed in an aircraft accident on March 4. He was flying an amateur built Avid Flyer in the Devonport region of Tasmania.

One of RAAus' trained and qualified accident consultants attended the scene and assisted the police.

We have recently finalised our report and provided a copy to the police. They and Coroner will now consider the report, together with other material they collected as part of the investigation, before any further comments are made.

RAAus would like to remind members to be particularly aware of all service and mandatory bulletins associated with the safe and continual operation of aircraft. Specifically, members should review AN 08082014 Rev2 regarding flight control duplicate inspections.

RAAus will provide a further update once the Coroner has made a final determination regarding the accident.

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582 MOD. 99 | 65hp

912 A/F/UL | 80hp

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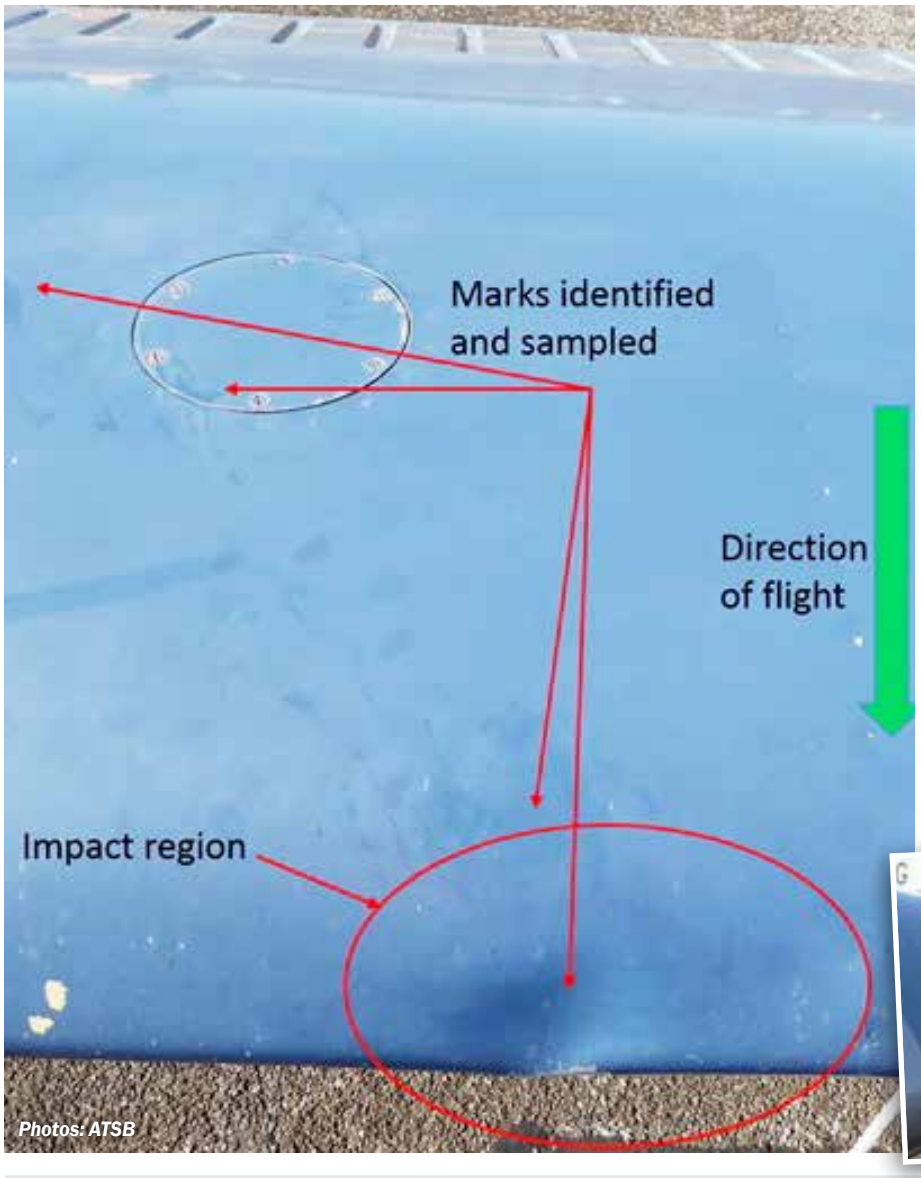

A LIGHT aircraft was damaged when it was hit by what was thought to have been a drone near Adelaide's Parafield Airport in July.

But it turned out to be a bat.

The aircraft, operated by Flight Training Adelaide, was coming in to land after sunset when it was struck by something.

The ATSB says the plane received minor damage to the right wing but a search of the ground under the flight path did not immediately locate anything.

The impact damage appeared to be generally smooth in nature, with no sharp impacts or significant scratches.

Several smear-type marks were observed in the region of the impact damage and along the upper surface of the wing. Samples of those marks were taken for analysis with the aim of identifying their origin.

And the tests came back drone free. The DNA indicated it had been a grey headed flying fox.

Under CASA rules, drones are banned from flying within 5.5kms of a controlled aerodrome and never at night. Fines range from $900 to $9,000.

ANOTHER ELECTRIC AIRCRAFT

AERO Electric Aircraft Corp. has announced plans for a new airplane, Sun Flyer 4, to join the Sun Flyer family.

The company has already taken a deposit for the new aircraft from a US Flying School which put down deposits already for more than 20 Sun Flyer 2.

The two-seat Sun Flyer, Sun Flyer 2, will be the first FAA-certified all-electric trainer aircraft under FAR Part-23. The new four-seat version will closely follow the certification of the two-seat version. Features of the Sun Flyer 4 will include a 116cm cabin width, 11.5m wing span, ballistic parachute recovery system and a gross weight of 1,200kgs with a full 360kgs of payload for pilot and passengers.

"Like Sun Flyer 2, Sun Flyer 4 will run completely on batteries," said George Bye, CEO. "As a result, the four-seat airplane will have operating costs five times lower than costs associated with similar combustion-engine aircraft. With four hours of flying time, the versatile Sun Flyer 4 will appeal to both flight schools and pilot-owners."

The prototype Sun Flyer 2 has been undergoing testing in Denver since the start of the year.

A GREAT DEAL

WERE you one of the switched on members? To celebrate the end of financial year, RAAus gave members the chance to save on a one year *Sport Pilot* magazine subscription.

*Sport Pilo*t is Australia's leading sport aviation magazine, read by more than 10,000 people every month. The magazine has been the main communication channel for members of RAAus and aviation enthusiasts alike. It's chock-full of news, reader stories, columns, feature stories and aviation classifieds - simply the best wrap up of sport aviation news in the country.

The 118 members who subscribed on June 30 will now have a printed copy of *Sport Pilot* delivered directly to their door with a 12-month subscription for just $50 (a 28% saving on the usual price of $69). Keep your eyes open for another one day special deal later this year. If you can't wait, and you shouldn't, subscribe to the printed edition of *Sport Pilot* on the RAAus website today and never miss a another thing.

The whole team at the inaugural Safety Month Launch at Canberra Airport, October 2015

THANK YOU Katie

BY MICHAEL LINKE **CEO**

ONE day in February, during the scorching hot summer of 2014, a quiet and unassuming person walked into an interview at the RAAus head office in Canberra.

The position for which this person had applied was the newly created Safety Manager role. RAAus had decided to dip its toe in safety and was offering a six-month contract to build a Safety Management System (SMS).

Katie Jenkins was appointed to the role and thus began the mammoth process of building the system.

One of the first wins Katie had was an agreement by the regulator that RAAus could develop an organisation wide SMS so that each of our schools did not have to go out and build their own. This was a massive success for RAAus. Straight away the new role was paying dividends. Many of our schools are run by a single person, or are relatively small operations. Having RAAus invest and develop an SMS on their behalf was a massive win.

It also meant that the planned six month job, grew to be a whole lot bigger. Katie's contract was extended and the real work of building an SMS started.

Three and a half years on and Katie has all but put the finishing touches on the SMS. So she has taken the very difficult decision to leave RAAus, pursue other interests and continue to build her career. She will continue with RAAus in the short to medium term to finalise some crucial documentation, but has resigned from the role of National Safety, Risk and Compliance Manager.

> "Her legacy will last a lifetime at RAAus"

Looking back at some of Katie's achievements in the Safety portfolio, we begin to understand the enormity of the task.

SINCE 2014 RAAUS HAS:

- Developed an SMS implementation plan and schedule, including identifying key personnel and development of an SMS gap analysis;
- Developed a purpose-built occurrence management system (OMS) and associated reporting and measurement of occurrences to provide guidance for decision making;
- Since its introduction in October 2015 the OMS has received over 600 reports from members and we continue to see an increasing willingness to report;
- Trained key personnel in the use of the SMS;
- Developed a range of safety education and promotional campaigns, including Safety Month, the annual Safety Booklet, quarterly safety e-news communications and regular presentations at member forums;
- Established a formal safety committee which meets each quarter to review progress and develop strategies to continually improve safety within RAAus;
- Developed a completely new Complaints Handling and Disciplinary Framework to ensure RAAus and members have a clear and simple process available;

Jill, Mick, Katie, Michael At Avalon 2017

Katie, Mick and Michael February 2016, after three days in Tasmania and a delayed flight, holed up in Melbourne overnight.

Avalon 2015, Max, Narelle, Kelly, Michael, Katie, Darren, Janelle

Katie at Avalon 2017

RAAus staff at the Scholarship awards function, Canberra May 2016

- Finalised development of a risk framework, including establishment of a Board level Risk and Audit Committee, development of a Risk Appetite and associated risk policies;
- Developed a Safety policy, which embodies our prime directive of an open and fair reporting culture;
- Developed an Emergency Response Plan to place RAAus at the forefront of accident investigations.

On top of Katie's work in the Safety portfolio she played a crucial leadership role both internally and with members and schools. She also played a key role with stakeholders from CASA, AMSA and the ATSB. She provided invaluable support to me as CEO in terms of policy development, research and analysis.

Katie has been at ease providing guidance and mentoring to junior staff and working with the Board to breathe life into our strategic imperatives. Katie is an accomplished professional who gave everything she could to RAAus during her time with us.

On a personal level, no one will really know how much she gave up. Katie and her husband have a young family: three kids and some goldfish. A lot of the time her role required she be away from home. Whether it was a week at Avalon engaging with members and presenting forums, or a couple of days on the road with me and other staff attending member forums in Tasmania, rural NSW or Victoria. Katie was always available. She was so giving of her time and always there. She often worked on weekends and after hours. I remember one instance of many where we were finalising a policy document. The process started with a Board teleconference at 7.00pm on a Tuesday night. The telephone call finished at 8.30pm and Katie and I worked through until 1.00am finalising a document for review. The document in question was our risk profile for our proposals to CASA for access to CTA and increased weight.

Her legacy will last a lifetime at RAAus.

On a personal level Katie became, and remains, a dear friend of mine and all staff at RAAus. We shared some great times on the road and in the office. Katie always has a smile on her face and is ready for the next challenge. She was always eager to help and able to see solutions.

She leaves RAAus in a wonderful position and I, together with everyone at RAAus, wish her luck with the next phase of her life.

12 TIPS FOR WEIGHING YOUR AIRCRAFT

Source: CASA

1 **ENVIRONMENT:** the aircraft should be weighed inside closed hangars on level floor so wind and floor angles don't affect the accuracy of the results.

2 **CONDITION:** the aircraft should be cleaned inside and out. If it has been exposed to rain or washed, it should be properly dried before weighing.

3 **CONFIGURATION:** all control surfaces must be retracted or in a neutral position.

4 **EQUIPMENT:** all empty weight items should be placed in the appropriate positions and all items not part of the empty weight should be removed. An equipment list must be writtenif one is not one available, documenting the equipment state of the empty aircraft. Any discrepancies must be addressed before weighing, either by adding or removing items as appropriate, or by subsequently adjusting for the weight and moment of the items when the empty weight and empty weight centre-of-gravity are determined.

5 **FUEL:** fuel tanks should be drained in accordance with the manufacturer's instructions. If draining is not feasible, fuel tanks should be filled to capacity. Because unusable fuel is part of the empty weight, subsequent adjustments for the fuel state of the aircraft should be made when the empty weight and empty weight centre-of-gravity are determined. Care should be taken to apply the Specific Gravity applicable to the fuel used.

6 **OIL AND OTHER FLUIDS:** total quantities of oil, engine coolant and hydraulic fluid are part of the empty weight; therefore, all reservoirs and tanks containing such fluids should be filled to capacity.

7 **BALLAST:** fixed ballast should be in its appropriate position; temporary ballast must be removed or later adjusted for its weight and moment when the empty weight and empty weight centre-of-gravity are determined.

8 **JACKING:** aircraft may only be jacked at the specified jacking points. Jacks should be activated simultaneously to avoid side loads, which may cause the aircraft to slip off or provide erroneous reading on the load cells.

9 **LEVELLING:** all aircraft must be weighed in a flying attitude as specified by the manufacturer. On many aircraft, the manufacturer has installed levelling devices such as lugs, pins, plates or plumb bobs with grades to allow for correct positioning. In case the aircraft can only be positioned in the required attitude by placing weighing ballast at one or more locations within the aircraft, the required weight and moment adjustments should be made when the empty weight and empty weight centre-of-gravity are determined. Where lateral centre-of-gravity is required as well as a longitudinal one, lateral levelling is equally important for positioning in the correct attitude for weighing.

10 **REACTION POINTS:** to determine the accurate empty weight centre-of-gravity, the exact reaction points must be known. If landing gear with oleo struts is used as reaction points, measure the relevant distances, rather than relying on published information. Differences in oleo strut extensions can vary reaction points to a significant degree. If fixed reaction points are used (such as specified jacking points on the wings or airframe) aircraft records data for the particular aircraft should be used. The reaction points can be projected to the hangar floor using a plumb bob in order to measure the required dimensions accurately.

11 **BRAKES:** if the aircraft is being weighed using its landing gear as reaction points, brakes should be in the OFF position to avoid side loads developing that would influence the readings.

12 **TARE WEIGHT:** in case the aircraft is weighed using any tare weight (such as tyre chocks or jack pads/adaptors), scale readings and subsequent centre-of-gravity calculations must be arithmetically adjusted for the weight and moment of the tare used.

The equipment state in which the aircraft was weighed should be properly documented, either by referring to the document, manual or other written procedure used (including the document number and its revision status, if applicable), or by properly documenting the weighing as it has been carried out.

Weighing documentation should be clear on what was and what was not included in the empty weight when the empty weight and empty weight centre-of-gravity were determined for the easy verification of the information entered on the load data sheet and its comparison with future weighing information.

***More information**: casa.gov.au/wcmswr/_assets/main/download/orders/cao100/weight_control.pdf.*

On brakes, wheel pants and canopies

BY DAVE KING

I READ with interest the Editor's Choice column (*Sport Pilot* May 2017) entitled 'Using up friends'.

I have many times experienced similar problems with brakes on at least two of my planes. So I thought I would share with you how I overcame my failures and those of other planes I've serviced as part of my L2 activities. Aside from engine and airframe work, the three main areas which dog our little aeroplanes are brakes, wheel pants and canopies.

20 years ago, I built a Rans S6S which had tiny four-inch disc brakes on the main gear. When it came to the brakes, I took most of the parts needed out of a box labelled 'Tennessee Wheelbarrow Co'. It had the same type of set up as the Editor's Zephyr - fluid in the calliper and a closed master cylinder where the compression from the master transfers to the calliper and, when released, simply flows back into the master. In theory, it should work well but in practice it doesn't and the culprit is heat. Heat is really not an issue on a wheelbarrow, but on a small aircraft, that's different.

After continual failures, I set to thinking about the problem more deeply. The first thing I did with the S6 was to eliminate the passenger brakes (fewer joints and complications). Failures still occurred and frustration prevailed. The most notable failure was at Mascot airport at Christmas in 1996. I had landed after failing to be able to continue along Victor 1 enroute to Evans Head due to weather. When I was leaving, the controller asked me to make a left turn from one taxiway to another and, you guessed it, the left brake failed. I had to turn right - do a 270' turn to complete what should have been a 90' left. The controller made a comment and I told him I was a bit nervous. No way was I going to admit my brake had failed. Fortunately, the next turn was right and onto the high speed curved entry to the runway. We were off half way along and flew away.

So something had to be done. During testing, I overused the brakes until they failed and worked out what was happening. Heat softened up the plastic line and it was sliding out of the olive under pressure. Voila, no brakes. Prior to that, the plastic line swells and softens before it actually lets go, so when you release the brake it sucks in air, hence the gradual degradation of the effectiveness of the brakes.

The fix was easy. I eliminated the joint of the plastic line to the calliper where the greatest heat was generated. To do that I made up two metal lines, one for each leg which joined onto the plastic line at the fuselage side. The heat was dissipated by the cold air around the gear leg and had no effect on the join to the plastic line.

You would think I would have learned my lesson when building my current plane, an S19 Rans Venterra. This plane came with bigger 1/4" Parker plastic brake lines and I wrongly assumed they would be more durable. Well, that wasn't the case and they failed on the first day of high speed taxi testing. I then immediately set about building metal brake lines and have had no problems.

Regarding wheel pants. There would not be a fly-in I have attended where probably half the aeroplanes there, which come fitted with wheel pants ex-factory, are actually flown without them. Some people remove them because they operate from unprepared strips, but most owners take them off because of bracket or fibreglass failures. Nose wheel pants seem to cop the most number of problems. Over the years I have built many stronger, or redesigned, holding brackets. Fibreglass repairs are the obvious way to go but now I don't bother with that process, unless the damage is of the smashing variety. A lot of these failures are from the vibrations knocking out the fibreglass around mounting screws. To save time and the obvious painting and messy repairs, I just make an Aluminium sheet (25 or 30 thou) patch and I rivet it to the pant over the damage. This has been more successful for me and the mounting holes have greater strength around the screws. Often times the repairs look like they are meant to be there. A good repair would have the rivets supported internally by a 1/8" washer so they don't crush the fibreglass material.

Canopy latches are the other issue.

To a lesser degree, a few of our aircraft types suffer from latching problems particularly those which hinge from a forward pivot point. Most owners of earlier versions of these aircraft have overcome these situations with a variety of extra fittings.

Sealing a canopy to prevent wind noise and draughts can be tricky. This used to generate many trips to a Clark Rubber store which specialised in a wide range of different rubber extrusion shapes. Unfortunately, these stores are few and far between nowadays so a fair bit of research to seek out solutions is usually required.

Peter, Brad and Matt

COPING WITH PIGS

COPING WITH PIGS

BY PETER JACKSON

MY flying started in 1970 when my brothers and I purchased a Sky Craft Scout. We tried to fly it, but it stalled and crashed.

It then stayed in the shed until we sold it. Then, 15 years ago, I came across the Aerochute and had it in mind ever since then. What my new found interest in the powered parachutes came about because of pigs! On our wheat property, we lose crops worth $25-30,000 per year to feral pigs and I thought the Aerochute could help with some payback. Usually we pay $600 per hour for a helicopter to round up the pigs.

So I rang Stephen Conte, at Aerochute, and he introduced me to his brother, John. John and his two mates, Barry and Perry, came up to our property and demonstrated how we could best to deal with the pigs using an Aerochute.

A mere three days later and we had 60 pigs in the chiller. Also, I had a ball with the entire experience and was sold. So we went down to Werribee and had one of the best experiences learning to fly our new aircraft. It had to be the Hummerchute because I'm a solid bloke and most of my friends are solid blokes.

Since then we have flown 450 hours in it and 330 hours are mine. Because we run our own property I sometimes fly two or three times a day. I just love it so much. Our weather conditions make it ideal for the Hummerchute and I have taken up about 220 friends and neighbours as passengers who now all share my thrill of flying.

> "It just looks so safe and it is"

I never tire of seeing our local countryside from the air. A beautiful patchwork of different colours of crops, soils, forests and grasses. I also love the inherent safety of the machine. So many of my neighbours have come flying with me only because of that big beautiful parachute. It just looks so safe and it is. Oh, I do love it.

Peter ready for takeoff

Field of dreams

Matt, Peter and Brad getting their certificates

Peter and Janice

Landing pad

A flight in a GT-Lite will stay with you forever

I love a GT-Lite

BY PETER MCLEAN

The GT Lite combines the popular 13sqm GT450 wing...

...with the smooth Rotax 582 engine

Empty weight 200kgs and a MTOW of 450kgs

OF all the aircraft types I have flown over the years, I am probably recognised more for my time flying trikes than anything else. I don't mind this, because I really do like flying them. With over 15,000 hours I now have in recreational aircraft, I have flown almost all the different types of trikes there are, and I like most of them. Mind you, there are some I personally would never own or choose to fly. But I do like P&M Aviation aircraft. At our hangar, we have the GT-Lite, QuikR and the PulsR. I love flying them all. If I had a favourite, it would have to be Anne's PulsR. Yes Anne tells everyone that she owns the PulsR and that she lets me fly it.

The GT-Lite is an entry level aircraft powered by a 582 Rotax engine. I think it's a winner. The GT-Lite even has carby de-icing fitted, just like the 912 engines. So how different is it to the QuikR? They look the same and they almost fly the same, too. They both have 65 litre fuel tanks, and the GT-Lite has a cruse speed of 60 to 65kts, compared to most two stroke aircraft which only have 43 litre fuel tanks and a speed of less than 50kts.

The difference only comes into the equation if you intend to fly more than 100 hours a year or to fly longer distances more quickly with better weather penetration, rather than just fly in your local area. This is why, at YFT, we encourage potential students to begin their training before they start looking around for an 'affordable' aircraft. They really won't know yet what type of flying they really want to be involved in.

When you step into the cockpit of the GT-Lite you will notice it appears to be the same as all the other P&M Aviation aircraft. Everything is in the same position. It is called commonality with the fleet. So the transition from one aircraft type to the next is seamless. I like this in aircraft because it means there is less training time needed for a conversion. The GT-Lite only comes in orange. I actually like the orange, and my next QuikR will be orange too. Setting up the GT-Lite is very easy. From trailer to ready-to-fly is less than 30 minutes, one of the quickest setups and pack ups of any trikes I have seen.

Let me take you for a flight in it. To get you into the rear seat, first you put one hand on the solid seat rail and the other on the compression strut. Then you step into the aircraft and push yourself back into the seat. Once you are comfortable in the seat, you can slide your arms through the seat belt. These seat belts don't come loose like a lot of others do. When I get into the front seat, first I hold the compression strut and slide one leg across the instrument panel and put my foot on the rudder pedal. Then I sit into the seat. This again is very easily done.

On the lower left corner of the instrument panel is the power supply key. The instruments and trim indicator lights come on when I turn it on and a quick scan of the panel will show my fuel and temperature status. I then reach with my right hand to move the cutoff switches to the 'ON' position and I check the hand throttle to make sure that it is 'OFF'. The

Fuel capacity 65 litres

See the country at a comfortable 65kts cruise

"The GT-Lite only comes in orange"

engine will not start if the throttle is anywhere other than in the flight-idle position (another safety feature). The choke is underneath the throttle. It needs to be pushed forward. Next is the trim, which is in front of the hand throttle and choke. By lifting the switch, the trim moves into the takeoff position. Next I remove the control lock. We are ready for the engine start. I have a good look around the aircraft and call "Clear Prop". I wait for second or so, make sure my left foot is on the brake and my right foot is off the throttle. With a finger on my left hand, I press the starter and the engine starts up. My left hand now moves back to the choke and puts it into the 'OFF' position. The radio is on and the instruments start to move into the green. Once I am happy with the aircraft and systems, I make a radio call and taxi to the holding point.

The last checks are made and we enter the runway and line up. The brake is released. Power comes up slowly and the GT-Lite starts to roll faster and faster down the runway. At 35kts the bar is rocked forward and the GT-Lite rotates, climbing away quickly into the sky. Once airborne we climb at 500 feet per minute. It's very comfortable in the GT-Lite, with very little wind in the cockpit, because of the design of the windscreen. At 500ft I put a small input into the control bar. Basically, just 'input, hold, neutral' and the GT-Lite will roll into a very stable turn. With another input the aircraft will roll back to wings level. At 1000ft I reduce power and the GT-Lite will level off and the speed will increase to 65kts.

The GT-Lite has one of the safest wings P&M Aviation has ever made, the GT450 13sqm wing. The stall is very docile, in fact it is hard to get the GT-Lite to stall at all. The pilot puts the nose of the aircraft into the wind and brings the power back slowly. At the same time, the pilot pushes the bar forward all the way to the compression strut. The GT-Lite speed will slow down and it will still climb. Finally, the aircraft will move into the stall but drop the nose a small amount and it will fly again.

Back to the aerodrome, we join the circuit. Turning base, the throttle is adjusted, the nose comes down a little, and a stabilised approach path is acquired. The GT-Lite appears to be on rails as it flies effortlessly on base. With a quick check for traffic we turn onto final.With this aircraft I don't play with the throttle on descent, I control the airspeed and attitude with the control bar. As the GT-Lite gets closer to the runway I slow the aircraft down and, when only just above the runway, I take the power off and the aircraft will gently settle its main gear on the runway first, and then the nose wheel touches down. The GT-Lite rolls to a walking pace as the taxiway edges closer.

As the aircraft passes the holding point I will make the clearing call and stop. I will then also turn the transponder to standby and reduce the trim back. I check the instruments to make sure everything is normal then taxi back to the hangar and shut down the engine. Then we climb out the same way we got in. A flight in a GT-Lite will stay with you forever.

Tempting the aviation Gods

BY GREG O'SHANNESSY

MY flying started later than it would have done had circumstances been different.

I always wanted to be a pilot. As a kid, my dream job was to be a chopper pilot. Having type 1 diabetes though, ensured this would never happen. I thought I would never be able to fly.

I had done a couple of TIFs in gliders and loved it. My wife gave me the best 40th birthday present possible, a TIF in a Robinson R22 helicopter. Wow! But I still believed that I would never get to be a pilot in command.

About five years ago, I heard about RAAus and the recreational Pilot Certificate.

I visited the Wings over Illawarra air show at Albion Park and talked there to the staff from Fly Illawarra. In April 2011, I took my first flight lesson with Bruce Robbins. Just over six months later, and with about 20 hours in my log book, I flew solo for the first time. It was a beautiful calm late Saturday afternoon, the circuit was clear and the weather perfect.

I now have a bit over 100 hours up and already done my first solo navigation exercise.

I remember my first solo and the unbelievable feeling of excitement and nerves about being in command, and how there was no one there to bail me out if there were problems.

The same feelings were there for my first solo nav. Sure, I knew how to fly and land and had done a number of navigation exercises with Bruce and Ned. But what if I got lost, had engine troubles or made a mistake with communications and caused an incident?

My home airport is YWOL, which is located at Albion Park Rail on the east coast of NSW, near Wollongong. The winds were 230/25-30, west south westerly 25 to 30 knots.

I had planned three legs,

YWOL- YCRL (Wollongong to Crookwell)

YCRL – YGLB (Crookwell to Goulbourn)

YGLB – YWOL (Goulbourn to Wollongong)

The first leg was great. I made all my waypoints. I marked off the 10 minute markers on the map and was pretty close to time on all of them. I thought to myself, "This is easy" but, of course, one should not temp the aviation Gods.

When I turned towards Goulbourn I ran into turbulence all of a sudden. I decided to climb to 7,500ft from my planned height of 5,500ft. I climbed above a few CU clouds forming and, soon after-

wards, the engine started to run a bit rough, the dash started vibrating quite a bit and I remembered that the owner had said this was a sign the carburettor was icing up.

So I pulled on the carbie heat and descended to 5,500ft, deciding to put up with the turbulence rather than risk further carbie icing.

I made my inbound call for YGLB but the radio responded with a request for me to stay 2nm clear of YGLB because parachute operations were underway. Bummer, I thought, not on my first solo nav and with the turbulence lifting me out of my seat. I ask him to repeat, but knew I would get the same answer. So there was nothing for it but to get the map and make a hurried course change. I decided to turn for my final leg over Goulbourn township, instead of the airfield.

When I turned for home, the turbulence got worse. More CU clouds were forming and so I tightened my seat belt. I needed to make a couple of course corrections on this leg, but decided that marking them off on the map would take a back seat to keeping the plane flying more or less in a straight line. I got a fix on a set of two telegraph lines running parallel to each other and, according to the map, pointing towards home, so I followed them.

Soon I was in familiar territory, which was a good thing. When I crossed the escarpment and spotted the airfield it was a great relief. I decided not to descend on the western side of the airfield because westerlies roll over the escarpment and cause quite a lot of turbulence. I had had enough of that. So I flew over to the coast and descended away from the rough stuff.

The landing was pretty good, even with the crosswind, and I was glad to be on the ground.

I was surprised that on my first ever nav I had been forced to use so much of what I had learned throughout my training, but I was glad all the training had paid off.

The most important learning I think was, don't tempt the aviation Gods and never be complacent.

"The training had paid off"

BE FAST OR BE LAST

- BY BRIAN BIGG -

IT takes a fair-sized set of brass cojones to make the claim that your aircraft is the fastest ultralight in the world. After all, most of us recreational pilots don't care how fast we get from place to place. We prefer to get there cheaply and simply. We recognise and sympathise with the people who want to get there quickly. They tend to buy more or bigger engines and spend much more money than we do. We stare in envy at their machines, but we recognise that short of winning the lottery, we will never own one. So to claim to make the fastest ultralight in the world seems a bit of an overkill for this crowd.

But the brash statement 'be fast or be last' is the motto of Pelegrin, a Latvian aircraft manufacturing company based in Ādaži, on the outskirts of Riga. Pelegrin is busy marketing and selling the Tarragon, a drop dead sexy, two-seater tandem aircraft the company says is capable of 310kms an hour.

Latvia does not have an enormously large history of aircraft design, but it hasn't been because of their own fault. A bloke called Karlis Skaubitis was the first Latvian off the ground when he built his own glider in 1903. He later switched to balloons. But just six years later, the first Student Society for Aeronautics and Flight Technology was set up and its members flew a biplane around Riga. In 1910 the Teodor Kalep Motor Factory started manufacturing aircraft engines which were later accepted for use by the Imperial Russian Air Service.

The first all Latvian aircraft design was the I-11 by Kārlis Irbītis in 1936, a low-wing monoplane with a two-seat tandem cockpit and fixed conventional landing gear. There were nine versions of this model developed up to 1939, each more sophisticated and modern. But any Latvian's dream of an international aviation design or manufacturing business ended suddenly on the morning of June 17, 1940 when Soviet Union troops occupied Latvia and the powers that be told them to give up their silly plans. Latvian aviation has taken a long time to recover from that heavy-handed era, but today is reportedly full again of dreamers and planners, just as it was at the turn of the 20th century.

And for a country late to poke its toes into an already crowded marketplace, you need to have something fairly special. Hence the provocative slogan and a completely gorgeous fighter type high speed ultralight.

Now if you are asking yourself "haven't I seen this aircraft somewhere before?", you would be mostly right. The Tarragon is another model based on the Millennium Master, just like the Blackshape Prime, featured in the pages of *Sport Pilot* in September 2016.

To refresh your memory, the original design of the Millennium Master was done by the Department of Aerostructures at the University of Turin in Italy. It, in turn, was based on an earlier model, a wooden kit called the Asso X. Instead of wood, the Department used prepreg carbon fibre. It also modified the trapezoidal wing, extended the wing root fairing, and gave it Küchemann type wingtips with curved leading edges.

The Master first flew in 2006 and appeared in public for the first time at Aero at Friedrichshafen in Germany in 2007. According to

SPECIFICATIONS

PELEGRIN TARRAGON

STALL SPEED 65kts
VNE 370kts
CRUISE 270-310kts
FUEL 15-18lph
TAKEOFF & LANDING DISTANCE 150m
WEIGHT 295kgs
CABIN WIDTH 700mm
ENGINES 100-130hp
STORAGE 60ltrs
FUEL CELLS 96ltrs
FEATURES Constant speed propeller
Retractable gear, Ballistic chute

BLACKSHAPE PRIME

ENGINE Rotax 914 ULS3
WING AREA 9.51sqm
WING SPAN 7.94mt
HEIGHT OVERALL 2.41mt
LENGTH OVERALL 7.178
FUEL TANK CAPACITY 2 x 50 lt
MTOW 472.5 (up to 620)
MAX BAGGAGE WEIGHT 20kgs
CRUISING SPEED VC 280km/h
STALL SPEED @FLAP LDG 65km/h
MAX RATE OF CLIMB 1450ft/min
MAX LOAD FACTORS + 4 / -2 g

"Latvia does not have a large history of aircraft design"

the Internet, production of kits was due to start in October that year. But, as is common in aviation business, the company went bankrupt before production could begin. The design rights were later acquired by both Blackshape of Italy and Pelegrin of Latvia who set about doing their own versions of what was obviously a fabulous design.

As reported in *Sport Pilot*, the Prime premiered at Aero 12 and has since been selling 11 or 12 aircraft per year.

Pelegrin launched its version of the Master in 2012 too, but has been slower out of the gate with sales and marketing. It is only just started to appear outside of Europe, although the company says sales within Europe have been steady and it lists Norway, Sweden, Germany and Switzerland as places where the Tarragon has found a home. Like the Prime, the Tarragon is not offered as a kit, only as a fully finished factory model with all the bells and whistles.

The Tarragon, according to Pelegrin, is "lighter, faster and more aerodynamic than the Master. It is made out of material which is highly durable, temperature resistant, rigid and lightweight. At its maximum cruising speed, Tarragon can reach up to 310kms per hour, making it the fastest ultralight aircraft. The plane can be in the air for up to five hours without the need to refuel".

Unlike the Prime, the Tarragon is offered with both analog or digital panels. From the photos it appears the finish is of the same high quality potential buyers expect from an aircraft worth more than $200,000. Those were 2015 dollars, by the way. It's probably gone up a bit since then. And, yes it is a bit cheaper than the Prime, but fair dinkum, a quarter of a million dollars for an ultralight aircraft still staggers the mind, doesn't it? RAAus pioneers could have taken every member of the organisation and their aircraft to Hawaii for a year for that sort of money.

There is no indication yet, if or when the Tarragon will be offered for sale in Australia. Blackshape, after the visit of the CEO here last year, appointed a distributor, Tooradin-based Precision Light and Air to represent that aircraft in Australia and New Zealand.

If it does decide to market the Tarragon down under, Pelegrin will have a fight on its hands. The potential market for an ultralight worth a quarter of a million won't be huge. Any edge, when the two aircraft are obviously so close together in style and performance, will make a difference.

Even the name could make the difference. Blackshape Prime conjures up CIA, skunkworks and technology. According to the Internet, a Tarragon is "a perennial plant of the daisy family, with narrow aromatic leaves that are used as a culinary herb". Good luck with that Latvia.


YL-ACE
TARRAGON


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A PROTOTYPE SPACEWALKER II-RR

BY MARTIN HONE

A RETRO rag & tube 1930's-style aircraft based on the original late 1980's Spacewalker design, but revamped to take an Aussie-made radial engine. With the 150hp 9 cylinder engine, performance is scintillating, even more so considering it meets RAAus weight and stall limits.

Currently there are another seven under construction in Australia, USA and Switzerland.

COVER OPPORTUNITY

WANT TO SEE YOUR AIRCRAFT ON THE COVER OF SPORT PILOT?

Because of the success of our poster opportunity, we've decided to extend the idea and offer you the cover of *Sport Pilot* as well. If you have a spectacular photo of your aircraft or you and your aircraft, send it in and maybe get to see it on the front cover in all its glory! The file size has to be at least 4megs and the shot should be in portrait, not landscape mode, if possible. A simple uncluttered background would be good too. Send in your photo to editor@sportpilot.net.au.

KEEPIN' IT REAL

BY HEATH BIRLEY

HEATH AND TREV'S J160
Just north of Keepit Dam in the NSW Central tablelands.

POSTER OPPORTUNITY

Want to see yourself or your aircraft larger than life on your clubhouse or bedroom wall?

Sport Pilot **is offering subscribers the chance to show off their favourite aviation photo in this double page centre spread of the magazine each month.**

Each edition one photo will be chosen (We will try and make sure every photo sent in gets a run). If you are an aircraft seller, it's a great chance to show off your product.

If you have a fancy paint job, now is the time to show it off. And if you have a great photograph of you and your mates at a fly-in, it will make a good memento.

Send your photos (as separate jpeg attachments) to editor@sportpilot.net.au. It obviously has to be in landscape, not portrait, mode and be as big a file as possible please.

Fifty shades of green

BY DAVID P. EYRE

A SERIES OF STORIES FROM FLYING INSTRUCTORS. THEY ARE DESIGNED TO BE EDUCATIONAL, AMUSING OR SERIOUS – SOMETIMES ALL THREE. THEY CARRY A MESSAGE ABOUT SAFE OPERATIONS.

I GUESS many of us have experienced passengers and students who have turned that ghastly green colour, rather like the chameleon on 'Death in Paradise'.

This anecdote deals with airsickness, what causes it and a few tips on how we might help the affected person. But, first... I was taking a young woman up for her first flight. The weather was 'fine and beaut' with scarcely a bump in the sky. As the flight proceeded, the woman suddenly threw her head back and forth in a fairly violent nodding motion. I observed her face start to go pale with a touch of green, so I gave her a sick sack and terminated the flight as soon as possible.

On the ground, I asked why she had thrown her head up and down. She told me her grandmother had advised her that, if she felt queasy, she should make these movements and the queasiness would go away. After explaining the physiology and cause of airsickness, we booked a flight for the next day and her training proceeded without any more signs of airsickness.

At another time, I was working for a company where one of the directors owned a Cessna 172 we used for charter operations.

One day I was chartered for a photographic mission. The photographer was an older man who, although renowned as a photographer, was not experienced with aerial photography. During the passenger briefing, I showed where the sick sacks were stowed within easy reach. During the flight, the photographed turned pasty green, reached for the bag and promptly used it. The only trouble was that he forgot about the microphone still in front of his mouth. I have a medical background, so it didn't worry me. I reached over and eased the mike out of the stream.

When we landed, it was lunchtime and I was tired, hungry and needed a break. I also intended to get some antiseptic and clean the mike. These good intensions, however, were thwarted by the owner of the aircraft who announced he wanted me to take him flying. I explained I needed a break but he menacingly insisted, so off we went. I took great delight in watching him twitch his nose as he tried to reduce the smell of vomit on his mike. Revenge is sweet.

Airsickness is very common in student pilots. It is caused by a confusion of senses within the body, especially the confusion caused by what the person sees and what the body feels.

Within the ear, there are the semicircular canals and other organs including the utricle and the saccule. These organs detect movement of the head and body and convey this information to the brain. Due to inertia, these organs can inform the brain that the body is moving when, in fact, it is not. They also detect gravity and thus inform our brain of our position in space.

Pitching, yawing and rolling can cause spatial disorientation and result in nausea and vomiting.

TIPS

- Always fly smoothly, especially with newbie. This is not the time to show your ability with aerobatics;
- Always tell your passenger where the airsickness bags are located and make sure they are within easy reach. Knowing where the bag is will lessen their anxiety about making a mess;
- Advise your passenger to have only a light meal before flying. Brekky could be toast and coffee for example. An empty tummy can, in fact, make a person feel nauseous;
- A good pre-flight briefing can lessen anxiety because the student will know what is expected;
- Advise susceptible students that airsickness is common and, in most cases, will go away with more exposure to flying;
- Advise the student to concentrate on a fixed point on the horizon to prevent confused messages to the brain. Minimise head movements;
- Sometimes a student can get relief by hands-on flying the aircraft;
- And, above all else, do not listen to old wives' tales. By the way, ginger has not been shown to be effective against airsickness;
- Pilots should not take anti-sickness tablets because they can make you drowsy.

David welcomes your own aviation anecdotes.
Email them to editor@sportpilot.net.au

GETTING WARMER

BY MICHAEL LINKE **CEO**

AS the temperatures in Canberra dropped under minus five, Operations Manager Jill Bailey and I were fortunate to be able to travel to south east Queensland to visit a number of RAAus schools, clubs and members.

During our three days in the north we made it to Redcliffe, Caloundra, Clifton, Coominya and Boonah.

Sincere thanks to Doug Heath who flew Jill and I around on Friday as we visited Go-Fly in Caloundra. We were invited to assess some very interesting training tools, including the immersive 360 degree training video series.

Doug also showed us his comprehensive online training tools.

We have some great resources in this area and anyone wanting to get into aviation should get in contact with one of our schools and check out the latest innovations in training.

We then made our way to Clifton and hosted a member's forum on Saturday morning. Around 50 members attended breakfast and the forum. That afternoon we made our way to Coominya where around 25 members met with us and enjoyed a great BBQ lunch.

Both forums were live streamed on Facebook and we've saved the full video onto Facebook as well, so feel free to go back and watch it. We were also asked a range of questions, a summary I've repeated below.

On Sunday, we drove to Boonah and enjoyed a great day with the Boonah Tigers. During the day we visited the Ultimate Aerosport training facility, Bill Finlen and his wonderful vintage aircraft and Ultimate Aerobatics where we saw an astonishing array of vintage aircraft.

The forum at Boonah was also very enjoyable and attracted around 50 members.

Similar themes ran through each of our events with key issues like controlled airspace, increased weight, maintenance and training.

We'd like to thank everyone for their attendance and specifically the hard-working committees of each of the airfields we visited for their generosity of time, spirit and hospitality.

Q&A

WHAT ARE CURRENT PRIORITIES AT RAAUS?

MEMBERS

i. CTA/MTOW;
ii. Training;
iii. Financial stability;
iv. Communication;
v. Maintenance of current requirements and commitment to ensuring no additional unnecessary requirements are imposed (status quo).

CORPORATE

i. Governance;
ii. Sustainability beyond personalities;
iii. Improvement of accountability and member engagement.

WHAT IS THE BOARD FOCUSING ON?

Four key things:
i. Policy;
ii. Strategy;
iii. Governance;
iv. Accountability.
To stay up to date with Board communication, keep an eye out for the Board Communique, an email newsletter sent to members every three months.

WHAT'S THE FUTURE OF SPORT PILOT?

The current model of *Sport Pilot* being offered free digitally and a paid subscription for a printed copy remains in place. This is an area the Board will soon seek input as we review how *Sport Pilot* is delivered and how best to ensure information gets to members.

The current model continues to be preferred because:
i. We continue to operate a deficit;
ii. The magazine still costs +$200K per year to deliver.

WHY ARE THERE NO FLY-IN EVENTS WHICH FOCUS ON RAAUS RELATED ACTIVITIES? FLY-INS EDUCATE, PROMOTE, FOCUS, CREATE FRIENDSHIPS AND ARE A GOOD METHOD OF KNOWLEDGE AND IDEA EXCHANGE AMONG PEERS.

a. There are dozens of fly-ins which are RAAus based and RAAus staff and Board have attended many of them. They are promoted by RAAus through the magazine and on the Facebook page, as well as in email newsletters;
b. Oz-Kosh was a joint venture by RAAus, SAAA, APF and HGFA and will run in again in 2017 and will be called AirVenture. RAAus has partnered with the SAAA and the APF;
c. We agree fly-ins are great opportunities which is why we attend so many;
d. A single RAAus-only sponsored event would exclude most of the membership.

WHERE IS THE L2 SUPPORT CHAMPIONED BY RAAUS HQ?

SUPPORT L2S WITH WORKSHOPS, FORUMS, METHOD AND EXPECTATIONS AND SAFETY AND RISK MANAGEMENT WILL BE ADDRESSED AND ENHANCED. L2 INSURANCE?

a. We are working on an L2 strategy now and expect some announcement later in the year regarding more practical training;
b. L2 insurance is not something we will pursue any further. It is costly and carries risks to RAAus because it would require all L2s to take part.

WHY DID RAAUS BECOME A CORPORATION?

The move to a company limited by guarantee was two-fold:
i. Improved governance and accountability of the board;
ii. Modernisation of our structure: The incorporated association model is best suited to a state based, smaller, not for profit entity.

MANAGEMENT OF ROGUE AND UNDISCIPLINED RAAUS PILOTS BRINGING RAAUS INTO DISREPUTE.

a. RAAus recently introduced an overarching complaints handling and disciplinary framework. This framework will be used to address any areas of concern;
b. Members are encouraged to report rogue behaviour for further investigation;
c. It is also important to remember

RAAus operates an open and fair reporting culture, so self-reporting is the best solution.

AIRSPACE TRAINING AND QUALIFICATIONS?

Our proposal is with CASA for consideration and we are continuing to work with CASA with a view to finalising decisions around access to controlled airspace by the end of 2017.

1,500KG APPROVAL?

Our proposal is with CASA for consideration and we are continuing to work with CASA with a view to finalising decisions around increased weight by the end of 2017.

MANY RAAUS PILOTS SEEM CONFUSED OVER THEIR OBLIGATIONS. IT IS IN THE RAAUS ISSUED MANUALS, HOWEVER IT NEEDS TO BE REINFORCED BY ARTICLES, SEMINARS, EMAILS TO MEMBERS, L1S, L2S ETC... CAN THIS BE CONSIDERED?

a. We have produced a number of articles in *Sport Pilot* and email newsletters;
b. More is planned in this area and we are very keen for feedback from members on where we should focus.

THE LEARNING MANAGEMENT SYSTEM DOES NOT PROTECT MEMBER'S PRIVACY?

No information is shared with Canvass (the RAAus learning platform) beyond what is entered into Canvass. All personal member data remains on the RAAus database and is not shared with Canvass.

WHAT IS THE ROLE OF THE L4 INSPECTION FOR AMATEUR BUILT AIRCRAFT?

The L4 is there to overview and assess that the builder has constructed the aircraft. The responsibility for an amateur built aircraft rests with the builder/owner. The amateur built inspector should provide guidance and answer any questions relating to the aircraft's ongoing maintenance requirements. They are there to validate the aircraft with the builder however are not required to physically check the aircraft themselves as the builder is required to do this for the inspector. With the new process in the Tech manual 4, the L4 examines the aircraft but the Tech team now issues the permit to test or fly. This process ensures L4s are monitored and that additional steps, such as a flight test program and maintenance schedule, are identified and conveyed to the owner/builder.

THE REGISTRATION FORM FOR AN AIRCRAFT ONLY ALLOWS FOR ONE NAME WHEN MORE THAN ONE PERSON IS BUILDING OR IS THE OWNER OF THE AIRCRAFT. WHY IS THIS?

RAAus registration certificates are not proof of ownership. RAAus requires one individual to be the nominated registrant who is responsible for the operation, ongoing maintenance and registration requirements. The only case where it is prudent to list all builders is where they will all learn to fly in the aircraft and therefore must have been a 'builder'. RAAus will investigate adding an additional builder's field to the application.

WHY DO I HAVE TO DO THE L1 EXAM?

RAAus has had the best operational conditions on the planet when it comes to the ability of owners to maintain their own aircraft for private operation. In order to maintain these benefits RAAus has a responsibility to ensure our aircraft owners are aware of their responsibilities. It is a method for aircraft owners to achieve a basic understanding of where to get the information required. The L1 also ensures there is a consistent message of correct procedures and requirements. There have been many cases where an aircraft owner has completed their 'annual' inspection every four years when the aircraft has accumulated 100 hours. How does RAAus best respond to this type of basic non-compliance where we have constraints relating to finance, a geographically diverse membership and having to satisfy the regulator that safety is not overlooked? The L1 exam also allows us to shows the regulator we have a membership which will grow and learn with online learning tools. It also aligns RAAus with other organisation such as the SAAA which has a similar mandated process as directed by CASA

I HAVE LOTS OF SKILLS, I BUILT MY OWN AIRCRAFT. WHY DO I NEED AN EXAM TO SAY I CAN MAINTAIN AN AIRCRAFT I BUILT?

The Level 1 is definitely not an assessment of competence to carry out work. It is more of a method of imparting required information for the aircraft to be maintained in accordance with the regulation and the RAAus Technical manual. Because an individual has built their own aircraft does not mean they have read the Technical manual and understood their responsibilities and maintenance requirements. Auditing has identified areas of concern around compliance. This area is being addressed with the L1 process and the development of online training modules for the membership. RAAus strongly encourages all members wanting to maintain their own aircraft to complete the L1 exam. A better educated and aware membership is a better thing and will assist RAAus has we continue to grow and expand and explore additional endorsements. If you feel strongly that the L1 exam is not for you, please contact the Tech Office.

TO OWN OUTRIGHT OR SHARE?

BY MARTIN CASTILLA

IN SEVERAL EDITIONS THIS YEAR, SPORT PILOT HAS EXPLORED THE HOWS AND THE WHYS OF OWNING YOUR OWN AIRCRAFT. IN JULY, WE LOOKED AT GROUP OWNERSHIP AS A CHEAPER ALTERNATIVE. HERE IS MARTIN'S VIEW ON THE SUBJECT.

Above: Whitrow (L) and Castilla at Aldinga summer 2017

RESEARCH on what recreational pilots most whinge about shows that one of the (if not the) biggest single factors is the cost of flying (for the purpose of this we'll ignore CASA).

For the private pilot, flying is relatively expensive. More so than playing golf, tennis or bocce, but roughly on par with running a fishing boat, for example, and there are plenty of those around.

As a low hour student new to RAAus, and with no plans to go commercial but just to enjoy the breathtaking thrill of vistas best viewed at low altitude and modest speed, the thought of flying occupies much of my free time.

I want to be smooth on the controls, wings level and range far across the countryside. I want to depart the circuit area with its invisible 1,000ft high walls (where I've spent a year going around and around doing touch-and-goes so often I've logged almost 200 landings. At one airfield. I need to build solo hours and escape).

But flying lessons cost money. Depending on the aircraft I fly, the cost is between $235 and $350 per hour. If I fly weekly – as I did for a few months last year to keep up momentum – we're talking thousands of dollars every few weeks. For that I could own my own airplane.

So my plan is to buy one when I'm sufficiently skilled and have endorsements to fly solo away from my home airfield. My enthusiastic wife can't wait to join me.

Through RAAus connections last year, I met two pilots who share ownership, with a third, of an Evektor SportStar SL. One of those is a fellow Adelaidean, winemaker Tim Whitrow.

Tim invited me to fly with him to Thistle Island (YTHI), where he enjoys holidays in a beach shack. The island has a runway long enough even for GA aircraft. Tim regularly does this water crossing, specially during summer, when he sometimes makes the one-hour-and-a-bit flight over and back several times in a day ferrying his friends and supplies for the extended New Year holidays.

I understand nowadays Tim flies the Sporty more than his two partners; one has temporarily relocated interstate; the other is taking a breather due to family commitments (where I've found myself the past three months, so I empathise). Tim keeps a regular eye on his vineyards, spread across SA, from the air. The aircraft significantly reduces the time required to view them all. He takes overseas business colleagues and wine buyers on flights to see where the grapes they're buying and drinking are grown – brilliant marketing and client schmoozing. And often he flies for the thrill of it; several times I've flown with Tim on such flights of fancy.

Last year, with regular passenger and avid aviator wife Rachael, Tim pointed the Sporty towards the Flinders Ranges, then headed north, culminating in flights around Uluru, landing at many locations along the track both there and back, before returning home. Around two weeks of daily flights, take offs and landings in remote airfields and country stations, in his own airplane. What a blast! From way back, I've had plans to do a similar trip. When I saw his photos and read his descriptions on social media my mind lit up. It was exactly the motivation I needed.

But here's the thing – I can't afford to hire an aircraft for two weeks. So instead I plan to buy into a syndicate.

What costs am I facing? Usually, there is an upfront purchase price for a share of the syn-

Tim Whitrow

dicate (or the actual aircraft purchase), then a monthly credit to an account which builds up a float for 50- and 100-hourlies, and other regular expenses. From there, each pilot pays a set hourly rate for his flights, plus fuel. What could be more democratic?

Every syndicate and aircraft has different expenses, so the following amounts apply to Tim's syndicate. I thank the owners for their kind permission to share these.

The aircraft was bought new by one of the other owners, then leased to Aldinga Aerodrome-based Adelaide Biplanes – where I take flying lessons – to use online in the flying school. Later, Tim paid $10,000 for his share.

They collectively spent a further $5,000 on a new prop, upholstery and carpet, and had paint chips repaired. They each deposit $196 per month into the kitty for hangarage, insurance, registration and airfield usage, and each pilot pays $45 per hour of flying (Tim explained this rate reflects the cost-per-hour of this particular aircraft, given the engine had over 1,000 hours at time of purchase; a low hour engine may attract a lower hourly rate). The kitty builds up and is used for all ongoing expenses as outlined earlier.

For who's flying when, they use an online calendar to check availability and block out the times they intend to fly. Prior to popular periods like holidays and for longer trips away, they check with each other as to who wants to fly when, which keeps everybody happy.

After each flight, the pilot rolls the aircraft into the hangar, gives it a thorough clean both inside and out leaving it gleaming and fully fuelled, so it's ready for the next flight. Then the canopy and prop covers are fitted and the bird is left to sleep.

Given my financial capacity today, a syndicate is my preferred model of ownership. Jointly sharing a ship with several other keen, respectful, skilled aviators means I will get to fly as often as I choose (or can afford), in a well maintained aircraft, sharing ownership expenses with others instead of wholly covering them on my own.

And, to me, that's a winning formula. What do you think?

Back to the drawing board

VIEWPOINT

THE theory of Learning changes with remarkable rapidity; indicating we still haven't got it right. Educators realised from the late 19th century that memory was involved in learning and the concept of fixed spaced repetition was introduced. It wasn't until a commercial company in the 1980s (SuperMemo) introduced computer generated timing intervals based on individual students' 'forgetting time' that this concept finally became meaningful. Finally, at least in the field of memory, it was the student who was important and not the system.

The 'command and control' method of teaching still predominates. The instructor has control and commands the student to do as he says. But studies show only about a third of students do well in this system and the rest perform sub-optimally. In fact, many of the remaining two thirds demonstrate 'resistance'. They subconsciously rebel against the control and perform poorly. Hard as that is to believe, we actually sabotage our own learning, and hence performance, by taking a rebellious stance against being controlled!

The system where the teacher stands (hierarchy) writing on a blackboard and the student sits and learns (hopefully) should have evolved with the advent of computers. But anyone who has had to sit through a boring Powerpoint presentation will tell you that not much has changed. It's become easier for the teacher but worse for the student (Google 'death by Powerpoint' and see). The concept that the student, the teacher and the relationship between the two are all important is gradually taking hold - but educators are still loath to give up control.

"Educators are still loath to give up control"

The truth is that all students are different and there is no one-size-fits-all system of education. Consequently, if the teacher has control, regardless of which learning theory he uses, there will always be a third of students who do well, a third who are average and a third who do poorly. The student has to have control if he (as only he can) is to have the ability to mould the information to his particular way of learning and understanding.

Not everybody, for instance, has the natural ability to read left to right. Many cultures have chosen right to left or up and down. Presumably the rule of one thirds applies to those cultures too. Not everybody learns while sitting down, or even sitting still. Some people learn better with background music and some people learn better from pictures rather than words. The list goes on and on and, although only the individual should be in control of their own learning process, the fact remains that despite the numerous teaching/learning systems which have been tried, the rule of thirds always seems to apply. Only the people change which third they're in.

So, what has this to do with aviation? Everything, because we still teach by command and control and I wonder if this isn't why some students take 15 hours to go solo and others do it in 10 or less. Is it why some students give up mid training in avoidance of sitting down in front of a blackboard and reliving past school day angst against control.

My very anecdotal survey (of only four flying schools) shows only about 1% of people take up training after a Trial Introductory Flight (TIF). Could it be they recognise the impending command and control structure and prefer to avoid it? I wonder if it would be possible to design a study where different schools use different teaching techniques when conducting TIFs and then measure their 'return for training rate' as an indicator of which system of teaching is the best? How would you design a teaching system to give the student control of their own training and hence their own performance?

Interestingly, we already use a system of modelling (see Neurolinguistic Programming articles) where the student copies the instructors' behaviour and actions. This is probably subliminal training and works, perhaps, because the student chooses to do it. Demonstrating particular flying sequences is actually quite different because the instructor has control and the student is 'forced' to copy it. It's still command and control teaching and still has the potential for resistance.

W. Timothy Gallwey in his book 'The Inner Game of Tennis' has an interesting take on handing over control to the student. Basically, he says, make the student concentrate and be so aware of their situation and surroundings that it prevents self-talk. It's self-talk which is the saboteur. The instructor then trusts the student will use his own learning systems to sort it out - without being told what to do. The student's performance will depend on their own motivation not upon the ability of the instructor. Sounds counter intuitive but apparently it works.

So, what would the instructor do in this brave new world? I guess his role would be to put the student in an environment conducive to learning and then just point things out as they now exist and leave it up to the student to learn i.e. butt out. I suspect, however, that those with control will refuse to relinquish it, and I suspect that those of us given freedom wouldn't know what to do with it. In the meantime, it's worth thinking about how you personally learn and about what you personally expect from a teacher.

Perhaps, when the time is right, the correct teaching system will appear. Until then it's back to the drawing board.

How to survive hang gliding

BY VIC KIRWAN

IT'S A LITTLE OUTSIDE THE RAAUS BALLPARK BUT THERE ARE LESSONS FOR ALL OF US IN OVERCOMING OUR FEARS

DEATH by hang-glider is not a way I'd like to go.

From an estimated height of half a kilometre, plummeting to the ground at 32 feet per second squared, until reaching a terminal velocity of approximately 200 kilometres an hour. Coming to a definitive stop at ground level. Yes, that'll do it.

In 1983, I confronted my fears and decided to overcome them. Well, some of them at least. My fear of spiders was deferred until another year. That left my fear of heights.

Standing on tip-toe to reach the top shelf was okay, provided I didn't look down. My two metre step-ladder had a safety harness.

I knew the best way to overcome my fear was to go at it full-bore. I would have to do more than jump off a chair. Or a table. What could be more fear-confronting and extreme than hang-gliding? Maybe parachuting out of an aeroplane, but that wasn't going to happen.

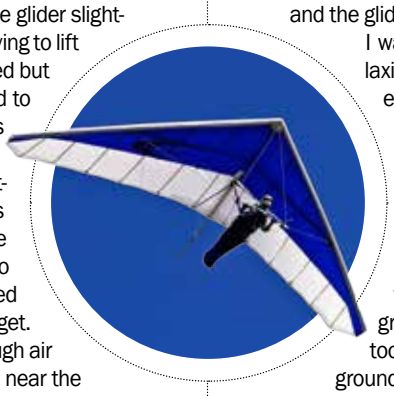
There was a hang-gliding school at Kurnell sand hills, an hour south of Sydney and about an hour east of where I lived. I booked in and fronted up, just a little nervous. Let's be honest: I was bloody nervous. It was a lovely sunny spring morning, perfect for blood on the sand.

The instructor was a world champion hang-glider who had done his thing around the world, including through the Grand Canyon. The six of us students helped assemble a hang-glider under his critical eye. Then we checked and double checked everything. A new experience for me. As a home handyman and amateur mechanic, putting something together for me was always full bore, she'll be right mate, and any bits left over probably weren't necessary. Anyway, we can always sort it out later.

It is obviously the wrong attitude with flying machines. If you're up in the air, you do not want essential portions falling off.

Then we got to the flying part. We were standing on top of a sandhill and there was just a whisper of breeze blowing in off Botany Bay. A long way off and a long way down was a brightly coloured overnight bag near the water's edge. That was our target.

Instructions: With the leading edge of the glider slightly elevated, run down the hill until I achieve a wind speed of 17kph and then I will be lofted up into the air. Do not look down! Look at the target. As I approach the target, I pull the bar back, effectively bringing my weight forward, thus bringing the glider nose down and land, running. At the last moment I had to shove the bar forward and I would have, as glider pilots say, flared out gracefully. Then my only job would be to accept congratulations from admiring colleagues and bystanders. The instructor demonstrated this. Once aloft, he released the control bar and folded his arms, hanging by his harness, to demonstrate that the glider automatically headed into the wind and happily flew itself. Depending on the wind speed and thermals it would fly forever, we were told. As he approached the target, he steered towards it, pulled the nose down and landed gracefully. Easy. Can't go wrong. The instructor selected me to go first. I suggested I could learn more if I went last and watched my peers crash and burn. But no. The instructor harnessed me up while the others held the glider steady and nose down. With a cheerful, "Bon voyage," and a "don't look down" I was released to the mercy of the elements. Off I ran down the sandhill with the nose of the glider slightly elevated. I could feel it trying to lift me. The breeze had dropped but I got enough running speed to be lifted into the air. I was flying! As instructed, I didn't look down, but I was told later I was about four metres in the air and flying. There was insufficient breeze to keep me aloft and I landed running half way to the target. I kept running and got enough air speed to fly again and land near the target. I had survived. Exhilarated! I was a magnificent young man in a flying machine (well, dangling there-from, to be precise,) I received a "well done" from the instructor as we harnessed up the next potential birdman.



We all flew successfully. For the second run-through, the breeze had strengthened slightly and this time we got all the way to the target, and some of us even began experimenting with actually controlling the glider.

For the third run through I was first again. As the instructor harnessed me in, I pointed out that the breeze had built to a force nine gale and that I was feeling a little less than intrepid.

"Rubbish, Vic," he said. "The breeze is steady, not gusting. This will give you a great lift."

All the students held the glider steady, nose down, as the instructor strapped me in and with a cheery, "Look at the target. Don't look down. Off you go," They released me and up I went. Up and up and up. It was like I was in an open air lift or riding a rocket. I knew something was really wrong and that I was going to die. I remember all this ticking through my head. Analysing, working out what was wrong. I heard yelling. Shut up, I thought, I'm trying to solve a problem. The yelling was insistent. I looked down. My heart missed a beat. All I could see were my feet dangling in space miles above the earth. My heart missed quite a few beats. The yelling seemed to be coming from way down there. From the tiny dots milling about. They seemed to be yelling, "Pull the bar in". Right, there was the bar in front of me. I had it locked in a white knuckle, death grip. I pulled it towards me, after an eternity, the nose came down and so did I. Like a Stuka dive bomber. Oops. Too much. Push the bar out a bit. I noticed I was starting to think again. My dive eased off and I was flying. I wasn't quite pointing to the target, so I shifted my weight to the side and slowly lined up. I was still too high, I was likely to end up out in the bay. I pulled the nose down and the glider came down.

I was really flying! I was also relaxing and starting to enjoy the experience. No cockpits or canopies, a breeze in my face and no roar of engine noise. This was pure flight. I was soaring like a bird. Well, floating about in a semblance of controlled flight. I got down to just above ground level. I was still going too quickly, but I was close to the ground. I skidded in on my belly and knuckles as the nose of the glider buried itself in the sand.

I was enthusiastically hugging mother-earth when the instructor and the other students came running down and separated me from my flying machine. They told me I was a quarter mile up, verging on stalling and going over backwards. I was told this was not a good procedure for anyone, let alone a novice. The instructor packed up his glider and went home mumbling and shaking his head.

I expect over the intervening years there have been many safety features incorporated in the teaching of hang gliding. Doubtlessly electronic. Two-way radios, wind speed meters with red and green indicator lights and auto-pilot over-ride gadgets. There's no excuse now for daring young men and women not to have a go. I believe hang gliding is very safe. Provided you keep people with a fear of heights away from the sport. The only people to hurt themselves are beginners without training, who go and jump off a cliff. Or extremely experienced veterans who get cocky.

Parachute jump next? Never, ever!

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Fingers crossed

BY BRIAN BIGG

WE'D noticed Trev had been acting funny for a while.

He'd retired a few years ago and had since been a constant presence at the airfield.

He was a funny bloke to hang around. He knew a lot about aeroplanes and was always willing to share advice or help out when one of us needed a hand fixing something.

He and his little plane were away a lot at fly-ins. He particularly loved exploring western NSW and Queensland, where, he said, there were miles and miles of open skies and no airspace restrictions. He was long divorced and had no reason to rush home, so he was chalking up more hours in the air than the rest of us put together.

But just before Christmas a couple of years ago some of us noticed Trev's personality had started to change.

He was becoming grumpy and was often snappy for little or no reason. He got angry over silly things. And not just about aviation either. He starting going on about politicians and the general political scene. He swore about the government, the migrants, muslim extremists and how the country was going to hell because of influx of so many Chinese people. We just shrugged. He sounded like a lot of old blokes in our area. Old people like to watch the news, but it ends up scaring the pants off them. That's why young people look so happy. They don't have a clue about what is going on around them. Trev was no doubt just showing signs of getting old. A few of us advised him to stop watching the news.

"For a bunch of confident decision makers, we proved to be uncharacteristically wishy washy"

In February last year, he took off for a flight to Broken Hill for a few days, but was back on the ground half an hour later because, he told someone, he'd left his overnight bag in the back of his car. Not a big problem, we've all done it. Except the bag wasn't in the car. It was still at home in his unit. According to the person who told me the story, the incident made Trev very angry at himself. Such a waste of good flying weather, he railed, before taking off again.

At a pilot information night at our airfield, Trev got very angry at the CASA bloke who was trying to explain some airspace changes which were being considered near us. Trev often flew through that space and it looked like soon he'd have to go around it. He got up and asked about the boundary of the new airspace, which the CASA bloke explained patiently would not be determined until they had carried out more community consultation. Trev sat down but got up again 15 minutes later and asked the same question again. We all bagged him. 'You asked that already, you old bugger", we called at him. He sat down looking confused.

And a little while later, the owner of the hangar took Trev aside and gently reminded him he was well behind on his rent. Trev promised to fix him up right away. He'd been busy, he'd explained and had just forgotten to do it. He apologised.

It all came to a head a couple of months ago. Trev had taken off on a long awaited trip in what most of us would have considered marginal weather at best. But he made it through to clearer skies in the west then, according to someone at the other end, he barged into the circuit at a small field scattering a student doing circuits and proceeded to do what was described to us as a very ugly landing. When someone on the ground chipped him about his lack of Airmanship, apparently he growled at them and stalked off.

Word got back to us through friends and over a few beers one night, the subject of what to do about Trev, or if we should do anything at all, came up.

One of our group had recently put his mother into a nursing home because she had been unable to care for herself and, according to him, Trev was exhibiting the warning signs of dementia. After all, he is getting on a bit.

But should we broach it with him? And who would do it and how? It's news no one in their right mind wants to hear. Certainly no one wants to think their friends are discussing behind their back, whether or not they are going bonkers.

How do you tell someone you think they are becoming incapable – not just in aviation – but in life itself?

And how much of a responsibility do we have as pilots to tell him, or some responsible authority, that we think it might be about time Trev hangs up his goggles. After all, he might be just going through a phase and might fly happily for ages without further incident. Were we sure about it? No we weren't. And who were we to butt in on someone's life in such a big way?

Pilots are known for being an independent and self-reliant sort. We don't dob on our mates. As they say in the movies, we catch and kill our own. The general feeling was that we shouldn't say anything at all.

It's typical of our British based politeness. We'll mind our own business. If things continue down the same path, maybe one of us will have to make a quiet call to RAAus, but maybe not. I guess we have to hope Trev doesn't do something which hurts himself or someone else. How do you make that decision in the end? On such flimsy information? In the end no one volunteered to put their hand up to say anything to Trev. For a bunch of confident decision makers, we proved to be uncharacteristically wishy washy. So I guess it's just fingers crossed.

Two years on

BY THE OPS TEAM

IN JULY 2015 I WROTE ABOUT THE UNACCEPTABLE SERIOUS AND FATAL ACCIDENT RATE RAAUS HAD BEEN THROUGH OVER THE PRECEDING FIVE YEARS AND WONDERED WHAT WE COULD DO ABOUT IT. TWO YEARS LATER IT'S TIME TO EXAMINE WHAT WE DID AND WHETHER OR NOT IT MADE A DIFFERENCE.

WE started by having real conversations with the members. Not standing in their faces and waving a big stick, but really talking. We started providing much more open and transparent information to members about serious and fatal accidents. We started talking about an open and fair reporting culture, built around transparent communication. We wanted members to provide information, not to lay blame or find fault, but remind everyone that accidents do happen and give everyone the opportunity to learn from others' mistakes.

CHECK THE PROGRESS

Compared to the years 2010 to 2015 how are we going? Over the past two years (2016 to 2017) there have been nine fatal accidents in RAAus aircraft, resulting in 12 deaths. Basic maths would indicate this is a significant reduction over the previous five years (39 deaths).

While some of them are still under investigation, analysis of the fatal accidents of the past two years have determined just over half were attributed directly to human factors and/or poor pilot decision making. That's 55%, which is vastly different to the 87% caused by human factors, noted in our analysis of 2010-2015.

Based on this relatively small sample, it appears there has been a difference, although pilots still need to apply basic threat and error management, risk reduction strategies and good decision making principles. That's also not to say pilots are still not making poor decisions, flying when they should stay on the ground, flying low when not trained to do so or still pushing on into poor weather.

However, we have received some good news stories too. Such as the pilot flying back from a big fly-in event in another state, who was only 20 minutes from home, over territory he knew well. He had set off feeling the weather wasn't going to let him get home, but had pushed on hoping for the best. When he realised he wouldn't get through he conducted a precautionary landing in a paddock, tied the aircraft down and hitchhiked home. All good decisions. He came back the next day with friends, took everything non-essential out and loaded it into a car then took off and flew safely home with no damage to himself or the aircraft. He also reported to us via the OMS what had happened.

CONTRIBUTING FACTORS

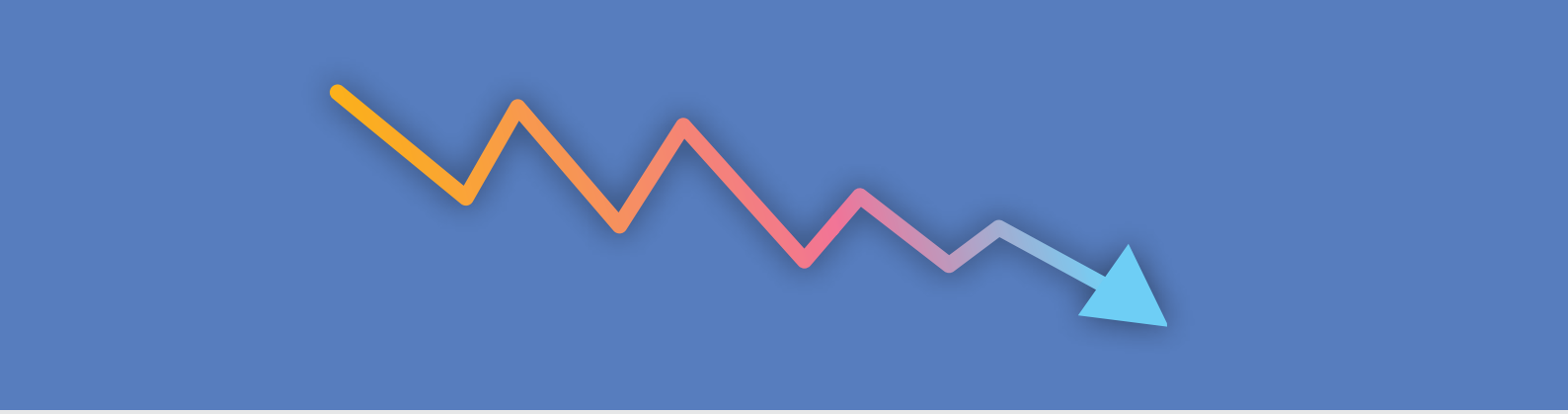
In 2015 contributing events included many flights outside the rules, flying into cloud, (either deliberately or from poor pre-flight planning), untrained pilots mustering, close proximity flying without a formation endorsement, flights at low level with no training (below 500ft AGL) resulting in wire strikes, flights close to or after last light and other illegal flights which resulted in impact with terrain. More than half the deaths might not have happened if the pilot just followed the rules. More than half.

In 2016-2017 only 22% of the accidents involved operations outside the rules, whether from flying into cloud, flights at low level with no training (below 500ft AGL). Again, some of these are still under investigation, however other possible factors relate to pilot loss of control on approach or departure, first flights of amateur built aircraft, medical incapacitation, mechanical failure or lack of familiarity with the aircraft.

There is still nothing new in any of these contributing factors. As I stated in 2015, pilots rarely find new ways to kill themselves.

DID WE PREVENT MORE ACCIDENTS?

Did the change in our organisational culture and the corresponding greater awareness by members change the accident rate? The data



and evidence is saying yes and we have seen some fundamental shifts in the past 24 months regarding flight outside of the rules. Members are getting the message, RAAus is here to simply assess reports and only act if serious or wilful breaches occur. Reporting an occurrence is becoming okay and we are all learning from knowing more about the problems we all have and share.

We have not added any new rules, required pilots to complete more training or mandated a new course.

What we did was provide more information in a timelier manner. We stopped hiding behind closed reports and closed doors and communicated with you.

We reminded pilots they were responsible for their actions, and asked them to consider the effects of their actions on the rest of us. We asked you to tell us about your experiences and shared those stories in a de-identified way in safety booklets, on our website, *Sport Pilot* articles and more.

We created the Occurrence Management System and asked you to report. By golly you did. Reports increased by 31% from 2016 to 2017. And we managed those reports better, more thoroughly and quicker than before. In the members' section of the website, under the Safety tab members can read all the reports. When a report is entered, the member who reported it is kept advised of its progress and provided with an outcome. We have also enabled filtering in the reports, so members can assess locations, aircraft and engine types and dates of accidents.

We created videos, Power Point presentations, encouraged hangar talks, reported on trends and spoke more about accidents than ever before. Check out our YouTube channel to see these videos, there is a link in the top right hand corner of the website.

And how many pilots were disciplined or had suspensions applied to their Pilot Certificates in this time? Very few. The pilot mentioned above wasn't suspended or asked to complete further training because he noted in his report what decision making errors and other factors led him to land in the paddock. We have asked some pilots to stop flying until they completed specific retraining, we have asked some CFIs to work with pilots and often the pilot themselves voluntarily stopped flying until they complete retraining. All of which speaks of a maturing accident reporting culture and an organisation that is about flying and supporting members.

We led by example. Board Chairman, Mick Monck, included two stories from his own experiences in a Safety Booklet created for sport aviation by CASA Safety Promotions. We asked CASA to create an online Human Factors course and they did. Check this out at this link https://www.casa.gov.au/education/landing-page/elearning-catalogue

So we are making a difference. A cultural change has started. A change in behaviour, with pilots looking out for each other, pilots feeling confident enough to discuss their mistakes openly so the lessons they learned from their mistakes can be passed on to others. Hangar talk and chats over a beverage in the club are proving to be highly effective communications. As the saying goes, we won't live long enough to make all the mistakes possible, so we have to learn from others.

We can't stop now. We need this cultural change to occur not only at the member level, but to start from the very top of the organisation. We need to ask the pioneers, the members who were around when RAAus was the AUF, to step up. Some of those CFIs, PEs and ROCs who have been involved since the first Weedhopper and Scout aircraft took off, are also required to change. They need to lead by example, own up to their mistakes, report them and recognise we aren't going to turn on them or make their lives a misery. They also need to speak up and report their incidents and accidents. Knowledge isn't power. Knowledge sharing is power. Seeing the leaders in our community lead by example will have a further positive effect on all members.

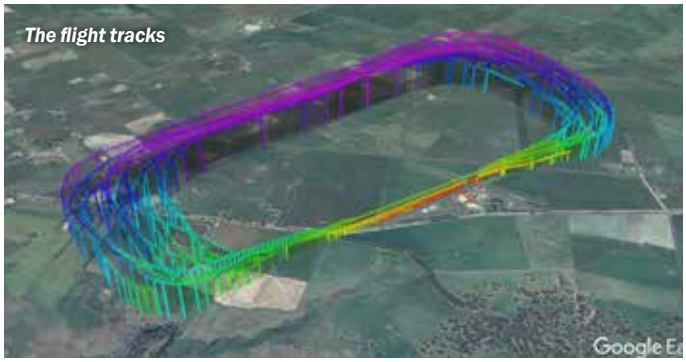
SEE SOMETHING, SAY SOMETHING

RAAus has taken a vital step and become a leader in accident prevention. Don't forget, though, that each of us can also be an unsung hero by taking the first step - talking to our friends, other pilots and instructors about our concerns and leading by example.

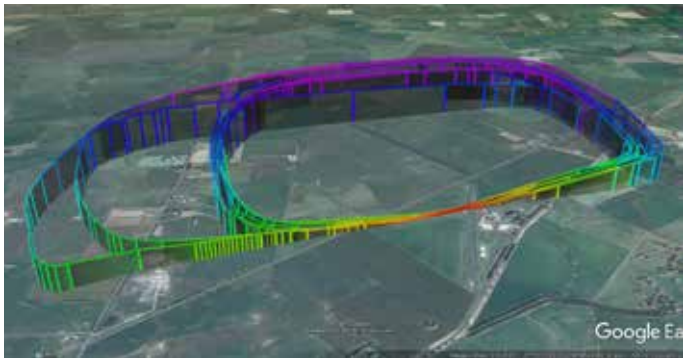
You can become an advocate for safe flying, talking about and thinking about how to assess each and every flight, not just your own, for risks. RAAus has made a change. Come along on the journey with us and support this great movement.

Round and round

BY KEN NICHOLAS



The flight tracks



LET'S see now, where were we? Ah, yes going round in circles. Well to be more precise, rectangles.

After my previous lesson with Don, not my usual instructor, and the rain with both of us getting rather wet before flying, followed by the fogging of windows and the difficulties that brought on (*Sport Pilot* Learn to fly June 2017), I was glad to get back to some clearer days with my usual instructor, David, albeit some windy ones. I did enjoy flying with Don, not just to get the different instruction by him, but also the different perspective and I learned a few new tricks. What can you really say about doing circuits? We went round in circles, lots and lots of circles and it was actually interesting because, as I may have mentioned, I'm a bit of a technology geek - a button pusher. I was out to extract every bit of information about my flying I could take away and review, you know with the GoPro camera and the like. There was one other little bit of technology I also enlisted, my mobile phone.

I had been thinking about an app my daughter uses to track her performance while out bike riding. She would quite often show me the GPS track which showed, not only her route, but also the elevation of the roads along which she had been riding. Thinking outside the box or, in particular a bit above the box, next time out I recorded my GPS track using the app on my phone to see what I would get. Reviewing the GPS track later using Google Earth I freed the track from its earthly bonds and bingo! I could see exactly where I'd been and what went on up there. Displayed in a glorious 3D fully rotatable and zoomable flight path, it showed me where I'd been. Magic stuff I thought.

It turned out to be very interesting to see exactly where I went during an hour of circuits and the instant recollection of the little things which happened to me during the session. This part of the learning curve as a student covered about four lessons in total. Circuits, circuits, circuits. Looking back now I can see it was all about preparing me to go solo. I looked at my logbook in the comments column and I could see it was a good preparation, noting the runways used, (28, 34, 16) and the days where there was a crosswind and the days where there were quite strong winds in general. It was days like these I enjoyed and I was up for the challenge. The GPS track of my circuits was interesting to look at. David would often remind me to think about the wind in the circuit and it certainly showed up on the GPS tracking. David had been going through the pre-landing checks with me and it showed the stronger-than-usual downwind leg had caused me to go almost double the usual distance before turning base. Of course all I had to do was fly it all the way back again. This overshoot on downwind had occurred a couple of times on this particular day, as I was to see later reviewing the recorded track. David had told me in the circuit to look at where I was now and I had replied "but you were distracting me going over the pre-landing checks".

His comment to me was, "this is how easily things can go wrong when you are distracted by a passenger while in circuit and it may not be as simple as overshooting your base turn next time". A valuable lesson learned.

I studied the recorded track and the video of those flights very carefully. It was amazing how vivid a recollection it made for me, well worth the exercise. Going over some of those crosswind approaches and landings, I felt like I was at the beginner's flight Olympics, sitting on the sideline holding up the score cards on myself for each landing. I think most, if not all, pilots self-assess each landing, no matter how many hours they have done. There were some landings on those not-so-pleasant days which didn't rate too highly, but as time went on, the ratio of good to not-so-good improved quickly and that was pleasing. It wasn't all just circuits over those weeks either. We did a few departures and circuit re-entries, just to mix things up a bit and keep it interesting. David would also chuck in an engine failure in the circuit, with a glide approach on the odd occasion. They were also challenging and something I actually quite enjoyed practicing.

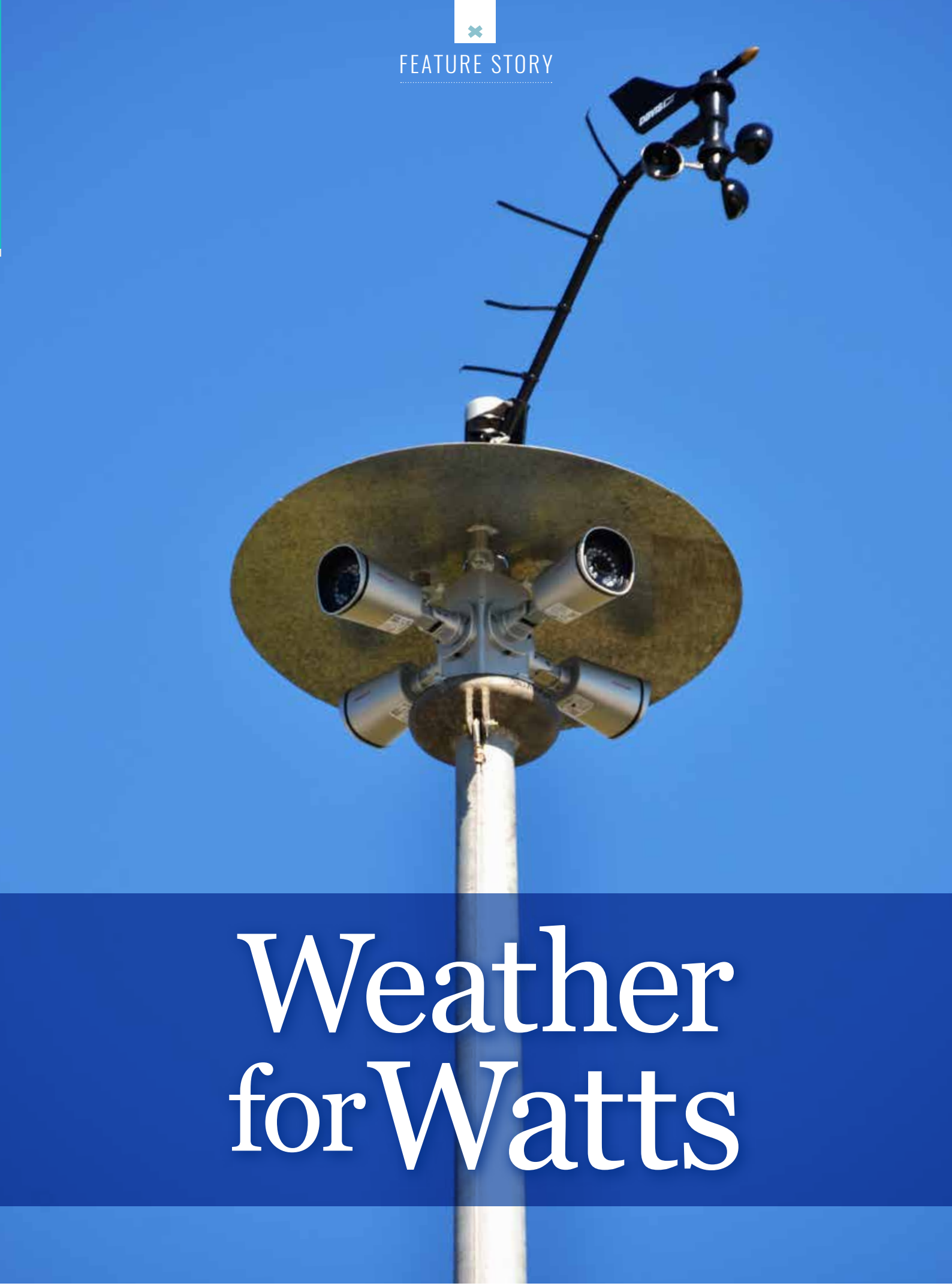
"Don't forget it's a glider now", David told as he whipped the throttle back to idle and called engine failure. "Now", he said, "land it". On this particular day wind was pretty much straight down 28 at about 12kts and he'd pulled the throttle when I was about three quarters of the way down wind. The instructions were aim for about a third to half of the runway so I didn't fall short. With a sweeping turn to final and remembering the words, "think wind, you don't want to fall short", I found myself about to cross the fence. From the post flight video review I later saw I still was 400ft above the end of the strip. All well and good now was the time to test my side slipping skills.

While I'd been happy side slipping previously, this was an awful lot of altitude to lose in a very short distance. So starting into the slip, I found to get the little Tecnam pointing at the bit of runway I wanted to hit (softly), I wound up with full right rudder, the appropriate amount of opposite aileron and balancing the descent speed to around 65kts. I think it even surprised David because he commented, "comes down quickly doesn't it?"

I think I got it all pretty spot on, with a nice round out, straighten up and touch down. That was it for the day and I was feeling quite chuffed with my efforts.

Little did I know that the next student (Sarah) and one of the other instructors, were watching my efforts and hadn't heard the glide approach call. Sarah afterwards said how she'd commented, "wow, who's flying that? They're coming in pretty high." I smiled and explained. So the hours are going in the logbook, all is looking good and I'm still having fun.

The app Ken uses is called Speedometer (App store). It has to be used in conjunction with a website called 'GPS Visualizer'. Put it in your search engine. It's quite amazing, if a little complicated. I've asked Ken to do a story about how to use it, something for another edition soon, taking us step by step through the process of getting a visual 3D map of a trip. - ED.



Weather for Watts

Weather for Watts

BY RICHARD FAINT
PRESIDENT, BRISBANE VALLEY SPORT AVIATION CLUB INC.

WATTS Bridge has recently commissioned a professional weather station and four airfield cameras which provide up to the minute weather observations and imagery of the airfield and surrounding areas, directly to the airfield's website.

The purpose of the system is to provide inbound pilots a better appreciation of the current weather conditions at the field. The system was made possible by a generous donation from Dick Smith, plus the considerable efforts of dedicated volunteers at the airfield.

The weather station and airfield cameras will help promote safer aviation in SE Queensland.

People involved in the project were:

Dick Smith: Donation
Richard Faint: Project co-ordinator and custom software
Peter Freeman: Custom hardware and system installation
Watts Volunteers: Installation and cabling

NEW WEATHER CAMS

SIX new sites have also been added to Airservices weather camera portal.

The cameras allow pilots to view actual weather conditions at locations across the country.

The new sites double the number of locations on the website.

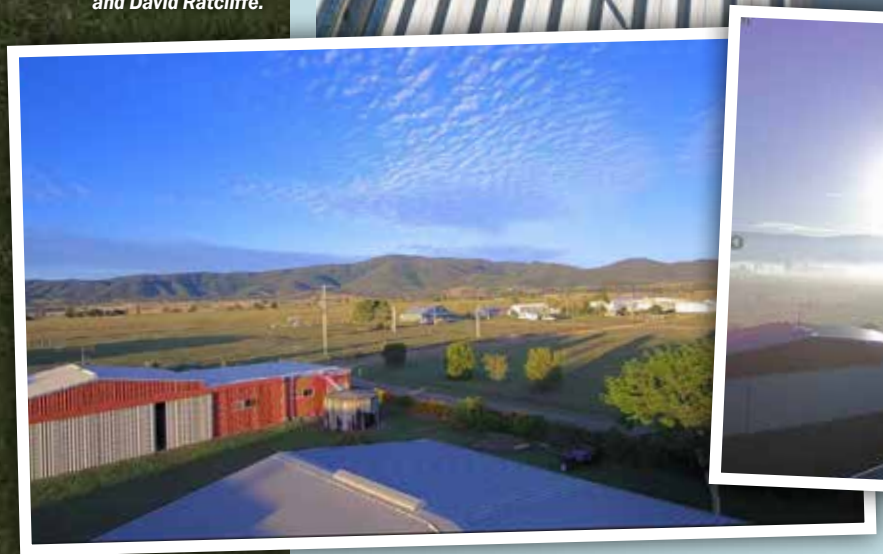
Airservices Acting Chief Executive Officer Paul Logan said this phase of the project had focused on planning and delivering camera infrastructure to the new locations as Airservices expands the weather camera network.

"With the Bureau of Meteorology's valuable assistance, we are pleased to be activating six new sites with more to come," said Mr Logan.

The new locations added to the Airservices weather portal are Albany, Coffs Harbour, Esperance, Kalgoorlie, Mount Gambier and Wagga Wagga.

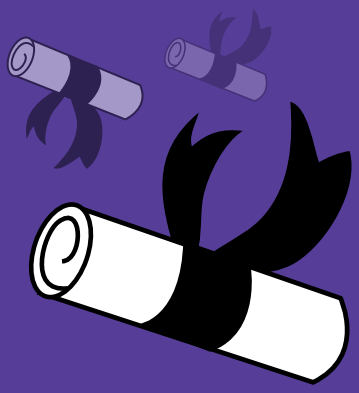
Already on the portal are camera views of weather at Archerfield, Kilmore Gap, Kingscote, Launceston, Norfolk Island.

WBMA members Peter Freeman, Peter Ratcliffe and David Ratcliffe.



Making radio waves

BY PROFESSOR AVIUS **AVIATION GURU**



RADIO calls seem to be an ever present and ongoing issue. There are many sayings in aviation including, 'see and be seen' and '95% outside 5% inside'.

From your perspective, you really need (and want) to know of other aircraft in your vicinity; and, from another perspective, other pilots in your vicinity need to know where you are. Both aspects make up situational awareness.

The importance of see-and-be-seen increases as air traffic density increases. For recreational aviation and general aviation pilots, the traffic will mostly increase near non-controlled aerodromes and may include other traffic (such as gliders), agricultural operations, parachutists and regional RPTs.

When departing or arriving at non-controlled aerodromes, pilots have a duty to monitor their radios and clearly broadcast their intentions.

RADIO BROADCASTS

The CAR requires a pilot to make a broadcast whenever it is reasonably necessary to do so to avoid a collision, or the risk of a collision, with another aircraft, and the broadcast must include:

- the name of the aerodrome;
- the aircraft type and call sign;
- the position of the aircraft and the pilot's intentions.

The name of the aerodrome – hopefully the pilot knows where he/she is: But we all make mistakes, hence when you realise your error, take positive steps to correct. Similarly we will be familiar with the aircraft type and call sign:

POSITION BROADCASTS

Don't forget the mandatory call turning base.

IDENTIFYING THE APPROPRIATE FREQUENCY

- When at or near a non-controlled aerodrome or in a Broadcast Area with a CTAF, including those assigned MULTICOM 126.7, listen and broadcast as necessary on the published frequency. Ensure that your ERSA is current.
- When at or in the vicinity of non-controlled aerodromes marked on charts that have not been assigned a discrete frequency, use MULTICOM 126.7.
- When operating at aerodromes not depicted on aeronautical charts, pilots should monitor and broadcast their intentions on the relevant Area VHF.

MAKING RADIO BROADCASTS

First and foremost – there is no prize for speaking fast and trying to cram the broadcast information into the minimum time span. It just doesn't work; and, more often than not will be followed by a request to "say again". Remember many people listen like they speak – slowly and clearly. If you don't understand the broadcast don't be embarrassed to request "say again"; and make sure that your students products are also not afraid to request "say again".

Prompt: Think about what you are going to say to deliver the message – be brief and clear:

A Civil Aviation Advisory Publication (CAAP) provides guidance, interpretation and explanation on complying with the Civil Aviation Regulations 1988 (CAR) or a Civil Aviation Order (CAO). In summary, a CAAP provides a simply plain English explanation of the requirements.

Operations in the vicinity of non-controlled aerodromes are covered by CAAP 166-01, the current version being V4.1 which was revised in April 2017 and was a minor update to the version released in August 2014.

DEPARTING THE CIRCUIT

Aircraft should depart the aerodrome circuit area by extending one of the standard circuit legs or climbing to depart overhead; and be aware of arriving aircraft.

ARRIVING INTO THE CIRCUIT

The pilot should overfly or circle the aerodrome at least 500ft above the circuit altitude, usually 2,000ft or more above aerodrome elevation. Pilots should not descend into the active side of the traffic circuit. Aerodromes which have right-hand circuits are listed in the ERSA

So what phraseology should be used?

- Location traffic – "Birdsville Traffic";
- Aircraft Type and Call sign – "Jabiru 9999";
- Position - 12 miles to north east inbound;
- Level - On descent through 3,500;
- Intentions - Estimating the circuit at 52;
- Location - "Birdsville" (only – do not include traffic)

Prompt: Where am I/what am I doing/when will I get there?

- Where am I? 12 miles to north east
- What am I doing? Inbound, on descent through 3,500
- When will I get there? Estimating the circuit at 52

FURTHER TIPS

Be careful not to clip the transmission when broadcasting your location, because confusion can arise at aerodromes which are close together and sharing the same CTAF.

Calls should be made as clearly and concisely as possible. Pilots should speak at a normal pace, because rapid speech can make transmissions difficult to understand. Think about what you are about to communicate – then communicate.

Pilots should make circuit broadcasts before making a turn, because banking aircraft are easier to see. A simple strategy to remember when flying in the circuit is 'Look, Talk and Turn'.

When listening to radio transmissions, pay attention to the detail in the message being transmitted – it will likely give some indication of performance eg: If a pilot reports 50 miles; inbound; on descent through FL180; estimating the circuit at ... (which is 10 minutes to run). The aircraft is obviously fast – The prof has met pilots who heard only the distance and thought they had plenty of time without understanding what it said about the other aircraft's speed.

ITEM	CIRCUMSTANCE (NON-CONTROLLED AERODROMES)	PILOT RADIO BROADCASTS
1	The pilot intends to take-off	Immediately before, or during taxiing
2	The pilot intends to enter a runway	Immediately before entering a runway
3	The pilot is about to initiate take-off	Immediately before commencing the take-off roll
4	The pilot is inbound	10nm, or further, from the aerodrome, commensurate with aircraft performance and pilot workload with an estimated time of arrival for the aerodrome
5	The pilot is ready to join the circuit	Immediately before joining the circuit
6	The pilot intends to carry out a straight in approach	On final approach and not less than 3nm from the threshold
7	The pilot intends to fly through the vicinity of, but not land at, a non-controlled aerodrome	When the aircraft enters the vicinity of the aerodrome
8	Landing aircraft is clear of all runways	When clear of all runways

Changing the engine

THE BEST BITS ABOUT BUILDING YOUR OWN BY DAVE EDMUNDS

MY Jabiru is just approaching 1,000 hours in service with the original engine. It has had a top-end overhaul during this time, but it is now time to assess its options. While the following analysis applies just to my aircraft, the same issues will face any of you with an aircraft more than a few years old.

The Jabiru maintenance manual specifies a TBO of 2,000 hours for the full overhaul, with a top end overhaul at 1,000 hours.

The engine is running well, and passed its most recent leak-down test, with one cylinder only just making the grade. I can feel a difference in compression when I pull the engine through with the propeller. It is now using around 115mls of oil per hour, and this usage has accelerated a bit in the past 100 hours.

So what to do?

The aircraft was built in 2004, and there have been a few later models since. I believe my older and slightly smaller aircraft may be a knot or two faster than the later J160 aircraft. Nevertheless, with an engine of this age and the older airframe, it is probably not worth much more than around $23,000 as is.

"My plane has truly horrible brakes"

So, there are a lot of options. It is not 1,000 hours since it had a top-end overhaul, so perhaps I could just ignore the whole thing, get a 100-hourly done and hope the leak-down test is within specification and perhaps get another year out of it. I'm not going to do that.

I could buy a new engine from Jabiru for a bit under $16,000, plus a bit for installation, but I don't think I will do that either. I believe this would overcapitalise the aircraft and I understand it is not actually legal. More on that next month.

Jabiru has produced a number of engine upgrades since mine was built. The only one I am actually interested in is the head upgrade. The later head, called the 'fine-finned head', would be nice because it improves cooling. Only I don't have a cooling problem and Jabiru won't actually have any available until later in the year. So it is pretty unlikely I will go in that direction either. The heads, when they become available, will sell for around $600 each.

It is entirely possible that, at my age, I will not fly another 1,000 hours. So if I get a top-end overhaul at, say, $3,500, and fly another 600 hours then sell the aircraft, it will then have around 1,600 hours, suggesting to a prospective buyer that they should factor in a complete engine rebuild or replacement in the not too distant future.

A complete engine rebuild will cost around $8,000, perhaps a bit less. It doesn't take long to work out that the additional $4,000 to go from a top-end overhaul to a zero-hour engine looks like a good prospect.

Then there is the propeller. My current one is not in bad nick, but it does have quite a few stone chips. It would be a good prospect for reconditioning, which costs around $1,000. A new wooden propeller would cost $1,500, and a composite propeller would cost $1,820. Unfortunately, it is not legal to fit the composite propeller sold by Jabiru, and this will be part of next month's story. I understand the composite prop gives a substantial increase in performance. I really don't know what to do here, but am tempted by the composite propeller. If it provides the performance boost that Jabiru suggests is possible, the additional performance would probably justify a sale price in excess of the cost difference.

My plane has truly horrible brakes and, while I am doing this upgrade, I am considering doing something about the brakes. One option is to fit additional callipers, but the certification of such a change is again an issue.

The aircraft has always been hangared, and I think it looks pretty good, so there is no need to do anything to pretty it up.

I would like a transponder, then I could get my old GA licence back and fly in controlled airspace. This sits in the back of my mind, but having just completed a substantial trip with absolutely no need to fly into controlled airspace, that subject can go onto the back burner for a while until I can swallow the cost of the other work.

I hope by next month to have made a few decisions and to have my head around the certification issue. Just as a taster, my aircraft model is LSA 553J. But it is not a certified LSA aircraft. It is just described as a Light Sport Aircraft. The formal certification of LSA aircraft came into being after my aircraft was built. So, my LSA 553J aircraft is not actually LSA and this makes a difference to any changes I might want to make. It took me a while to work this out, thank you Darren Barnfield our technical manager, for the explanation.

In last month's column I included the photograph of the view of a dirt strip on short final, because I thought it looked cool. However, in hindsight I think it was a bit misleading. The strip was the one at Dig Tree on Coopers Creek, about 20 miles from Innamincka. The strip is a bit sandy on the surface, but in good condition with a hard-packed surface, 1,400m long with easy approaches from either end. The only problem can be if it has had recent rain. But it doesn't rain much there and there is a contact number you can call for information.

LIGHTWING SOLDIERS ON

BY NICK HUGHES AND THE TEAM AT HUGHES ENGINEERING

IT was with great sadness, we at Hughes Engineering formally acknowledged the passing of our incredible CEO, Howie Hughes, who lost his battle with cancer in 2016. During our difficult time of grief, we were deeply comforted and overwhelmed by the outpouring of calls and messages offering sympathy, admiration and respect.

To put it simply, there will never be another Howie. In the aviation industry, he was an innovator, designer and engineer, but he was also an architect, writer, poet and musician. In every area of life, Howie was an unrelenting force of creativity and inspiration.

The list of projects Howie started and brought to fruition are too numerous to mention, but suffice to say his mind worked at a prolific pace. We have barely had the chance to maintain his online presence, which included up-to-date reporting on his many and varied projects via the Australian LightWing website, his blogs and social media.

We have regretfully concluded that we cannot possibly hope to fill these enormous shoes. And, although it would have been fun to see a line of flying dinghies or flying electric folding cars, you can no longer expect to see these produced in our workshop anytime soon.

We are however, fully committed and equipped to continue focussing our exceptional skills and extensive knowledge on Australian aircraft design and manufacturing, as well as aviation refurbishment and repairs. This knowledge and expertise encompasses every individual design point of every single aircraft we have ever manufactured. Our team will also continue to welcome and support our dedicated community of Australian LightWing owners, pilots and local aviation enthusiasts.

We have spent time creating a new office space, which reflects the more specific direction our company will take, and we are currently orchestrating the 2017/2018 calendars around refurbishments, new orders and manufacturing of our in-house designed variable inflight pitch propeller.

We now share the space in our industrial precinct with the award-winning design team, LJ Signs, alongside the growing hub that is Ballina-Byron Gateway Airport. Please make our airport and factory part of your next journey on the way to your next fly-in or event.

Check in online via our website or social media, or pop in and say hello. Our growing Australian LightWing community has, and will always be, our most valued accomplishment.

We also have a range of Australian LightWing aircraft available for immediate sale on the showroom floor. We are offering exceptional deals on these single, two seat and kit aircraft because we simply don't have the floor space to keep up with our orders and projects. If you've ever considered purchasing an Australian LightWing aircraft, now is the time to check out what is on offer or place your aircraft in line for your personalised reconditioning.

5032 MORGAN CHEETAH

326.2 Airframe Hours, 55 hours Engine Hrs, Cheetah. Morgan Cheetah, Camit 2200 engine, 350 airframe, no accidents, 115 KTS cruise.
PRICE $35000
CONTACT JOHN TERENCE MURPHY 0409 308 232

5039 RANS COYOTE II S6ES

260 Airframe Hours, 260 Engine Hours, S-6es Coyote Ii. Registered till June 2017. Rotax 582 UL engine. New BRS recovery chute installed December 2015. Large roomy cockpit with sliding seats. Folding wings for easy storage/trailering. All VFR instruments. Search Youtube for "Tuflux RANS Coyote".
PRICE $26000
CONTACT GORDON JAMES BAILEY 0409 348 293

5057 RV-3A

286 Airframe Hours, 626 Engine Hours, RV-3A. RV performance with Lycoming reliability. Lycoming O-320-A2B 150HP,150-160kt TAS cruise @32lph. New prop, instruments & paint. A/C can be registered VH if aerobatics required, and can be delivered anywhere in Australia for cost.
PRICE $60000
CONTACT PETER GILBERT 0428 719 639

5080 JABIRU J120

450 Airframe Hours, 114 since Zero timed Engine Hours, J120. Engine 114 since Zero Timed.Many new parts used. Crankshaft magnetic particle checked. Aircraft could go back into commercial work with check. 1/2 share in Steel Hangar near Bega/ Merimbula available cheap.
PRICE $45000
CONTACT NEVILLE JOLLANDS (02) 6494 4125

5088 FLIGHT DESIGN CTLS

621 Airframe Hours, 621 Engine Hours, CTLS. 598 airframe and engine hours. 130L fuel giving over 6 hours endurance at 110-115 TAS. Empty weight of 329kg giving useful load of 271kg.Always hangared and L2 maintained.No accident history. Immaculate condition inside and out.
PRICE $129000
CONTACT WILLIAM DAVISON 0419 632 477

5094 PIPER ARCHER II SHARE FOR SALE

0 Airframe Hours, nil Engine Hours, Piper Archer. Wanting to get your CASA ,Äì RPL/PPL/CPL Or just fly cheaply from Parafield this is the deal for you: PARAFIELD SYNDICATE SHARE ($5K) ,Äì PIPER ARCHER II. Fly $150 per hour wet and $75 per month fixed.See website: www.parair.webs.com
PRICE $5000
CONTACT COLIN DREW 0431 613 388

5098 KARATOO J6

660 Airframe Hours, 385 Engine Hours, J-6 Karatoo. Two (2) seat side by side recreational aircraft with Subaru EA81 engine and Warpdrive 3 blade propeller. Two owners only and mine since 2007. This is a stable, reliable, economical aircraft to own and fly.
PRICE $22000
CONTACT CHRISTOPHER ROBERT STEWART 0419 486 125

5121 JABIRU J170C

1920 Airframe Hours, 160 since overhaul Engine Hours, J170C. Jabiru 170C located at Jindabyne in Snowy Mountains. Lives in an excellent NEW hangar owned by Alpine Aviation Australia. The aircraft can remain here and be hired to/maintained by flying school. Great opportunity for a new owner! Great Position!
PRICE $49900
CONTACT NORMAN COOKE 0417 876 195

5140 PARADISE P-1

286 Airframe Hours, 286 Engine Hours, P-1.
PRICE $95000
CONTACT JOHN DARBY 0402 210 913

5177 SAVANNAH STOL **PRICE REDUCED.**

708 Airframe Hours, 708 Engine Hours, Savannah. 2003 Savannah STOL for sale. Excellent condition. Always under cover. Located near Ingham in Nth Qld. Rotax 912. 4 Fuel tanks, VG Kit, No accident History.
PRICE $38000 NEGOTIABLE
CONTACT GEOFF BROWN 0417 191 852

5196 TECNAM P-92S ECHO FOR SALE

920 Airframe Hours, 920 Engine Hours, P-92S echo. Great recreational plane on property at Manilla NSW, Always hangared and in excellent condition. Many extras parts and fittings included in sale price.
PRICE $50000
CONTACT BILL GREENSLADE 0427 010 586

5197 SKYFOX CA21

309.2 Airframe Hours, 309.2 Engine Hours, CA21 Skyfox. Skyfox CA21 in excellent condition,T/Hrs 309.2 recovered using Stitts system, new upholstery. All ADs completed incl. alum. laminated aileron hinges GA dash. May be oldest flying Skyfox in existance S/N CA-21010. Easy to fly.
PRICE $24000
CONTACT PHILLIP MCGUIRE 0427 632 590

5208 ROTEC RALLY

1191 Airframe Hours, nil Engine Hours, Rally. Rotec Rally/Pather, slight damage to one wing strut via transport. A strong built, easy to fly aircraft, cruises at 75 kts, 50Ltr long range tank.
PRICE $3500
CHARLES DARMANIN (02) 6496 7254

5237 SEAMAX AMPHIBIAN

32 Airframe Hours, 32 Engine Hours, M22. Compare this Seamax with any other amphib LSA. 100kt IAS in cruise. 18L/hour 95 octane mogas. Reverse thrust and water rudder for water handling. 279kg useful load. Salt water friendly composite /stainless steel , no alum frame like searey
PRICE $145000
CONTACT TERRY O'BRIEN 0400 747 401

5241 SUMMIT II PPC ***** SOLD *****

18 Airframe Hours, 18 Engine Hours, Summit II.
PRICE $15000
CONTACT David Tunkin 0412 638 390

5249 XCITOR POWERED PARACHUTE WITH BRS

77 Airframe Hours, 77 Engine Hours, Xcitor. German Built Xcitor Powered Parachute with factory BRS. In excellent condition and awesome to fly. This is my 3rd and by far the best Powered Parachute that I have owned. I am selling as I have moved into fixed wing flying. TRAILER ALSO AVAILABLE
PRICE $35500
CONTACT NICK BURI 0408 923 710

5255 ULTRALIGHT WASP GT KIT, NOT FINISHED

0 Airframe Hours, nil Engine Hours, WASP GT. I bought this Ultralight WASP GT kit from Australian Aircraftkits Pty Ltd in Laurieton, NSW for $23100. Due to work overseas and now health issues I can't finish it and have to sell it. For less than half the price, this is a bargain. Invoice and manuals all included.
PRICE $9900
CONTACT GEORG NEUHAUS WWW.AIRCRAFTKITS.COM.AU/AIRCRAFT/WASP.HTML

5261 LIGHTWING GR912

2523.9 Airframe Hours, 311.7 Engine Hours, GR912. Lightwing GR912 Tailwheel - 1989 factory built and registered. Always hangared, L2 maintained. Suitable as trainer for tail wheel endorsement. Recently overhauled, Reluctant sale, Negotiable.
PRICE $32000
CONTACT ANTHONY CATHCART 0427 200 377

5266 KAPPA SABRE

500 Airframe Hours, 1,200 Engine Hours, Kappa Sabre SOVA KP2U. KAPPA SABRE, I am selling my sabre at well below it's value to fund my new aircraft purchase. At $55,000 its little money for alot of Aircraft. Cruise 110-130 kts. (VNE 140 kts) Stall at 38 kts. A real head turner.
PRICE $55000
CONTACT JOHN ANTHONY MITCHELL 0407 404 585

5271 ROTAX 912ULS ENGINE & GEARBOX

nil Airframe Hours, nil Engine Hours, nil. Rotax 912ULS 160 hrs to run complete with oil tank (value $1500). Exhaust System (value $2616) and all oil & coolant hoses. Only heat exchangers required (Oil & Coolant Radiators) for installation.
PRICE $8000
CONTACT DOUG WILLIAMS (03) 5763 2440

5275 QUICKSILVER GT 500

5 Airframe Hours, 5 Engine Hours, GT 500. Quicksilver GT 500. Owner meticulously Built. Fun Plane to Fly. Selling to start a new project.
PRICE $26000
CONTACT STEVEN PARISH 0428 668 737

5281 HUGHES LIGHTWING

466 Airframe Hours, 466 Engine Hours, 3A. In storage for six years built in 1988. VW engine, factory conversion with dual ignition. excellent instrumentation. Just 600 hours engine and air frame. Requires new fuel hoses. Good working order prior to storage. any fair offer considered.
PRICE $20000
CONTACT MICHAEL KULOW 0427 684 227

5286 JABIRU-UL450

494.9 Airframe Hours, 494 Engine Hours, UL. Selling this beautiful little plane as i am wamting to upgrade. Cruiae at 90knts using 15lph
PRICE $23000
CONTACT AIDAN GILLILAND 0488 924 326

5290 ENGINE AND PROPELLER

nil Airframe Hours, nil Engine Hours, nil. Jabiru 3300 6 Cylinder Liquid Cooled Heads. Runs well. Ivor Magnum Propeller 68 inch Electric pitch Change. 18 inch Spinner.
PRICE $5800
CONTACT JIM WICKHAM 0408 142 060

5291 AIR CREATION TANARG 912ES

320 Airframe Hours, 320 Engine Hours, Tanarg 912ES. AIR CREATION TANARG 912ES. 320 airframe hours, 232 hours Bionix13 wing. Built 2013, always hangared, never road transported, full documentation incl flight history and maint. releases. immaculate in every way. Now well over $95k to replace.
PRICE $48000
CONTACT MARTIN ALAN RICHMOND 0458 110 932

5293 WANTED

N/A Airframe Hours, nil Engine Hours, N/A. Wanted to buy, derelict, damaged or written off aircraft. Will consider anything any condition. Ph 0419476677
PRICE $0
CONTACT TOM MOXEY 0419 476 677

5295 SPORTCRUISER - CZECH SPORT AIRCRAFT

695 Airframe Hours, 685 Engine Hours, Sportcruiser. Immaculately presented and well-appointed LSA, this all-metal aircraft would suit a discerning or new aircraft buyer. Features Rotax 912 ULS, 3-blade prop, twin Dynon 10" Skyview displays, Garmin 695 GPS, autopilot, electric trims, 114 litres (5 hrs)
PRICE $129000
CONTACT CHRIS HOWARTH 0418 796 778

5297 RV6 VH-MJH FOR SALE

283 Airframe Hours, 283 TIS Engine Hours, RV6. TT AF/ENG/Prop 283 Hrs LYC. O 360 180 HP. Metal FP prop. Nil accident. Best SAAA, All Metal Aircraft, in 2006 CRZ 160 KTAS on 30 ltrs. CoA, Day/Night VFR with NO flight over built up area restrictions. E: rv6mjh@bigpond.net.au
PRICE $110000
CONTACT MIKE HORNEMAN 0417 931 872

5299 AIRCRAFT SYNDICATE SHARE

9000 Airframe Hours, 850 to run Engine Hrs, Airtourer. Share in Victa Airtourer hangared at Caboolture. Fixed costs are $300 twice a year and current flying rate is $100 per hour wet on tacho. Well run syndicate with on-line booking system. Tidy aircraft with 120kt TAS and aerobatic. Licence min PPL
PRICE $4500
CONTACT NEIL COOPER 0401 356 659

5300 37 TIGERMOTH AVE, TEMORA AIRPARK

nil Airframe Hours, nil Engine Hours, nil. Change in circumstances means #37 Tigermoth Ave Temora Airpark is on the market! Brand-new 15x15x 6m high hangar on a 50 x 25m freehold block, it has unrestricted views across the entire northern side of the airport. Power, water, gas & sewer avail.
PRICE $190000
CONTACT ROBIN WILLS 0401 023 271

5303 HANGAR FOR RENT AT GATTON AIR PARK

nil Airframe Hours, nil Engine Hours, nil. Hangar for Rent At Gatton Air Park. Inquires 0468 345 972
PRICE $0
CONTACT TIM POWELL 0468 345 972

5306 UNIQUE RIVER/LAKEFRONT 120ACRE PROPERTY WITH LANDING STRIP IN SA

nil Airframe Hours, nil Engine Hours, nil. This unique RIVER/LAKEFRONT 120acre property has a 800x20mtr E/W & 400x20mtr N/S laser leveled lawn strips . A 3 Bed cottage that overlooks its own private sandy beach. Huge 120x30x16ft shedding with B/ room,Toilet & Kitchen plus mezzanine storage
PRICE $1500000
CONTACT BRIAN STOTT 0410 401 139

5307 SEAREY KIT - 2012 YEAR

0 Airframe Hours, nil Engine Hours, Searey. SEAREY KIT 2012 YEAR. As life has interrupted my plans I have for sale my SEAREY KIT still in its crate. I believe if you were to order one now you would pay Approx $15,000 more.
PRICE $50000
CONTACT BRIAN STOTT 0410 401 139

5308 TECNAM P92 ECHO CLASSIC DELUX

120 Airframe Hours, 102 Engine Hours, P92 Echo classic Delux. Tecnam P92 Echo Classic Delux. Very good condition. Hangared from day 1. Washed and inspected for corrosion regularly. Kept under wraps in hangar. Rotax 100hp. ULS, 3 Blade Bolly.
PRICE $118500
CONTACT JON ANKETELL 0457 526 984

5309 SHARE IN AEROPRAKT A32 VIXXEN AT CABOOLTURE QLD

150 Airframe Hours, 150 Engine Hours, A32 Vixxen. A share is available in The Davewood Syndicate Vixxen based at Caboolture. Long running syndicate dedicated to providing a low hour high (currently 150) standard machine at reasonable rates of $85 per hour wet and $100 per month fixed.
PRICE $10000
CONTACT IAN MCDONELL (07) 3886 5828

5310 JABIRU J160-C IMMACULATE CONDITION

560 Airframe Hours, 290 hours (18th April 2008) Engine Hours, J160-C. Jabiru J160-C - Immaculate condition. Garmin 296 GPS. Transponder. iPad holder. Illuminated Compass. Electronic T&B indicator (for Auto Pilot). Electronic Carb Heat. Turbo Extractor exhaust. Petroni composite prop. Large battery and external charger
PRICE $48000
CONTACT DAVE LLOYD 0417 328 435

5311 LIGHTWING GR582

798.7 Airframe Hours, nil Engine Hours, GR582 . Factory built Lightwing GR582. Two seater. Rotax 582 UL 2 stroke (Hours to run). Bolly 2 blade prop. Icom A200 VHF. Total refurb in 2003. Approved for training. Fun aircraft, fly's great, well looked after and maintained, always hangared
PRICE $22000
CONTACT TOM EMMANS 0417 592 354

5314 FLYING FLEA

0 Airframe Hrs, nil Engine Hrs, HM.420 2 seater. 95% complete HM.420 2 seater. Reproduced from Mignet's own plans. Aeropower 80hp engine. All instruments. Black Max Wheels. Hydraulic brakes. Carb heat, cabin heat. Cato prop. Also custom made tilt trailer.
PRICE $10000
CONTACT BILL PRICE 0459 021 886

5315 HANGAR PARKING AVAILABLE BENDIGO VIC.

nil Airframe Hours, nil Engine Hours, nil. We currently have one hangar space available for an RAA aircraft, preferably high wing. 20 x 22 metre secure hangar at Bendigo airfield. $160 per month. please contact Dave on 0411066135 for details and inspection
PRICE $160
CONTACT DAVE HENTY-WILSON 0411 066 135

5316 JABIRU 230 WANTED

nil Airframe Hours, nil Engine Hours, nil. Wanted J230, must be 24 registered as it will be used for training. Not after a new or near new plane price. Just something well maintained at a fair price.
PRICE $0
CONTACT DARREN MILGATE 0409 300 606

5317 SONERAI 2L

unknown Airframe Hours, 120 Engine Hours, 2L. Sonerai 2L, great planes 1915cc engine run approx 120 hrs with aerocarb running unleaded. Built approx 1984 original design with no electrics, hand start, hand held radio thru headphones.
PRICE $15000
CONTACT PETER BURGESS 0407 616 496

5318 WAIEX FOR SALE

260 Airframe Hours, 5 since rebuild Engine Hours, Waiex. Kit built plane. Recent winner Avalon Air Show.

Best in show, light recreational aircraft
PRICE **$50000**
CONTACT **KEITH JEFFS 0438 508 576**

5319 FOR SALE - ZODIAC CH601.

221 hours Airframe Hours, 221 hours Engine Hours, Zodiac ch601. Zodiac ch601
PRICE **$32900**
CONTACT **BRIAN 0439 702 649**

5321 THRUSTERT300

1420 Airframe Hours, nil Engine Hours, T300. 1988 Thruster T300 25-0238 1420 Hrs 582 grey head, electric and pull start, 74 lt. tank,alloy wheels, fluorescent yellow wings, red tail and pod. Good looking aircraft, great to fly, always hangared and currently hangared at Lethbridge Victoria.
PRICE **$6800**
CONTACT **PAUL BERNARD FALLON 0423 966 756**

5322 GOLDEN OPPORTUNITY - END OF LEASE SALE BY TENDER

1902 Airframe Hours, 245.28 Time Since Overhaul Engine Hours, G58 Baron. GOLDEN OPPORTUNITY - END OF LEASE SALE BY TENDER. FOR FURTHER DETAILS, PHOTOS & TENDER DOCUMENTS GO TO: www.lloydsauctions.com.au/tenders. OVERHAULED PROPELLERS - RECENTLY OVERHAULED ENGINES - ADS-B COMPLIANT - IMMACULATE INTERIOR. Tender Closes: 4pm 8th Friday September 2017. Location: Perth, Australia. Inspection: By appointment only
PRICE **$0**
CONTACT **DAVID CRICK 0411 861 186**

5324 SKYFOX GAZELLE AIRCRAFT 24-7292 "TWEETY BIRD"

1737 Airframe Hours, 1737 Engine Hours, CA25. Skyfox Gazelle - "Tweety Bird". Great presentation and condition. Owned and maintained by L2. Always hangared. Engine in excellent condition. Will be sold with fresh 100 hourly and 5 year rubber replacement. TTIS 1737 hours. Full set near new Punki
PRICE **$29000**
CONTACT **GREGORY JOHN NIXON 0419 283 847**

5326 JABIRU J230C (24-5013)

575.6 Airframe Hours, nil Engine Hours, J230C. Factory built 2007 excellent condition All AD,Äôs up-to-date TTIS: 575.6 hours Glass cockpit: Dynon D100 EFIS, AvMap EKP IV, GPS, Sentient AirNav GPS Lots of extras Hangered at Warwick (Qld). Negotiable, Phone (after-hours)
PRICE **$75000**
CONTACT **GWENITH TYBURCZY 0421 322 618**

5327 BALLISTIC PARACHUTE

nil Airframe Hrs, nil Engine Hrs, nil. BRS ballistic parachute suit Airborne 912 Tundra trike or any trike or ultralite aircraft up to 475Kg. The unit consists of parachute canister with detachable rocket ID BRS-6-1050 . The rocket is due 4/23 . The parachute is due for repacking now .Includes lanyard and actiivating hardware.
PRICE **$3500**
CONTACT **GREGORY 0434 284 715**

5331 FISHER 303 G.C

228.4 Airframe Hrs, nil Engine Hrs, Fp-303. Propeller crack and couple of other more repairs needed. Currently out of registration for about 3 years.
PRICE **$4500**
CONTACT **MOMOTA TOULI 02 6280 4700**

5333 AIRBORNE EDGE X TOURER

240 Airframe Hrs, 240 Engine Hrs, 582 Edge X Tourer Streak. For sale is my Airborne Edge X 582 Streak. The Streak Wing is a great mid level wing currently set to trim at 50-55kts. The 4 blade Brolga Prop has great acceleration & gets off the ground with great ease even with two people.
PRICE **$11500**
CONTACT **CRAIG DINGWALL 0421 615 730**

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RAAUS FLIGHT INSTRUCTOR REFERENCE MANUAL

A REVIEW BY PROFESSOR AVIUS

WHEN my copy of the RAAus Flight Instructor Reference Manual arrived in the post, it was with eager anticipation that I tore open the package. The good feel and look of the manual was an invitation to delve into the contents.

The manual is presented in a very professional way. The binding allows flat page reading and the quality of the paper ensures a relatively long life, especially considering it is a reference manual and, presumably, will be well thumbed through. Another excellent feature are the tabbed sections. These provide quick access to the relevant section the reader is seeking.

On the copyright page, I think it would have been useful to indicate that flight instructors and others are given the right to freely use and adapt the content in their own operations. Also, some thought should have been given to, if not mandating the manual, at least strongly recommending its use during instructor training courses.

The contents pages are well set out and, in some respects, obviate the need for a separate index.

I question some of the mnemonics used under the heading of 'Checklists'. Although page 137 states that students should use the school checklist, my view is that written or electronic 'tick-off' checklists should be used rather than trying to remember a mnemonic and then hoping that you have not missed something.

A couple of points about chapter three.

It has been my experience that, in the main, instructor applicants are not so much chosen as make application by their own initiative. There are also those applicants who respond to advertised instructor training courses. This, of course, raises an important issue. How does the instructor trainer reject an applicant who presumably is going to be a source of income and whose experience seems okay but other factors about the applicant are not known?

The traits for an instructor, shown on page 39, are right on. I especially liked the dot point asking whether the applicant is seeking only status and self-aggrandisement.

Chapter four deals with the Principle and Methods of Instruction. To me, this is one of the most important chapters and is well written. The points delineated form the whole basis of an instructor course. They also outline the very essentials of what good instruction should be and how to achieve these essential outcomes.

Chapter five deserves to be closely studied by instructor trainees. It is also a very useful chapter to be used, from time to time, by qualified instructors to refresh their techniques. I would have liked to see a section devoted to 'the first solo'. It could cover all sorts of things from psychological aspects, monitoring and solo consolidation, right down to post solo celebrations.

Chapter six details how to create a lesson plan. It is good to see that the chapter stresses the importance of the ground briefing, as do other areas of the manual. It is extremely disappointing to know that some schools do not undertake this most important brief.

The details shown on pages 230-232 outline the core elements for the training of the student pilot. These lay down what is expected, at the very least, what the trainee instructor should follow. Note also, that these details should be followed by qualified instructors.

Chapter seven outlines some student and instructor faults. This is not an exclusive list but it does contain those faults which are fairly common. The point of this chapter is that instructors should be honest and assess whether these faults apply to them.

The concluding chapters are all relevant and essential parts of the manual.

TO SUMMARISE

The manual is well written and a credit to the authors, particularly Jill Bailey and Neil Schaefer. They are to be congratulated for their initiative and persistence in following through the production of this excellent reference manual.

The content is very well thought out and laid out. One of the best reference manuals I have seen in that it offers a unique guide to the trainee flying instructor. There are some omissions but these do not detract from the value of the manual.

Likewise, there some spelling errors, double phrases etc., which can be corrected in Edition two.

Although it is expensive it does very much offer value for money. I would have made it a mandatory manual for all flying schools and highly recommended as an essential addition to the library of all instructors.

This review contains my own thoughts and opinions and has been written without any consultation with RAAus.

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WHERE IS CAGIT?

CAGIT STILL IN THE WEST

AGAINST all the odds, the highly sought after Come And Get It Trophy remains firmly lodged in the west of the country.

At the time this magazine went to the printers, John Reymond still retained possession of the trophy at Karakin (10nm east of Lancelin) in southern W.A.

If you, or your crew, are contemplating a high-speed heist of recreational aviation's most coveted prize, it's best to keep up-to-date with its latest location by checking the CAGIT hunter's Facebook page, administered by Dexter Burkill, Peter Zweck and David Carroll - Facebook.com/cagithunters.

For a full list of rules about how you can grab CAGIT for yourself, check out the RAAus website.

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A demanding approach

BY FRED NOLAN

SIMON Goodhew took to the sky on his own, for the first time, on the morning of Sunday, July 12.

Simon completed his first solo flight off runway 05 at Moree Airport in challenging weather conditions. The wind was variable crosswind at a moderate strength, making the final approach quite demanding.

We had done a check flight on Saturday in similar weather and a follow up on Sunday morning, where Simon demonstrated he was ready to be in command of the airplane.

I said jokingly to him, "bring the plane back in one piece, I need it this afternoon".

Simon did an excellent approach and landing. The first solo flight is something student pilots always remember.

After qualifying for his full RAAus Pilot Certificate, Simon plans to buy his own aircraft to commute to Cubbie Station in South West Queensland, where he is a farm manager.

SEND IN YOUR STORIES

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

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Sincerely,
Rodney Stiff
Managing Director

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