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Get Involved! Have Your Say! Send in stories, articles letters and photographs. Let everyone know what your club/school/group is up to. Make sure we all know when your fly-in is coming up. And don't forget to send us photos of the big day. All contributions welcome. Contact editor@sport pilot.net.au

WHAT IS RA-AUS?

Recreational Aviation Australia Inc is an association of recreational aircraft owners and pilots. It exists to look after the interests of more than 9,200 members across Australia. The members fly a variety of aircraft under 600Kg, some factory built, others built from kits, and some home built.

WHAT QUALIFICATIONS DO I NEED TO LEARN TO FLY?

If you are medically fit and physically capable, and you are above the age of 15, you can earn a pilot's certificate. You can actually learn to fly before then, but you can't go solo or get your certificate until your 15th birthday. And if you are under 18 years old, you will require written parental consent. Flying a recreational aircraft is not as complex or demanding as other types of aircraft. And once you have become a recreational pilot, it's a reasonably easy step to progress to more complex types, if you are looking for a career as a pilot. Holders of PPL, CPL or ATPL licences who want to obtain an RA-Aus Pilot Certificate can undertake conversion training at an RA-Aus flight training facility. Every applicant must complete such dual training as deemed necessary by a CFI and, in any case, shall have not less than 5 hours experience, in an aeroplane registerable with RA-Aus, which shall include a minimum of one hour solo.

WHERE DO I START?

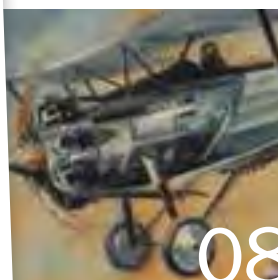
Call RA-Aus head office in Fyshwick in Canberra. The staff can help by telling you what's required and point you in the direction of the nearest flying school or club to where you live. Or you can call one of the board members listed here, who represent different Australian regions. They can answer all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

FINDING YOUR NEAREST FLIGHT TRAINING FACILITY (SCHOOL)/CLUB

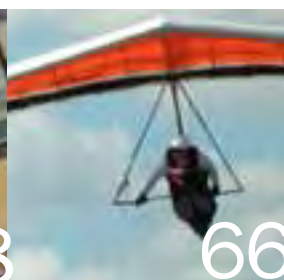
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>> Cover Image: Topsy Nipper photographed by Arthur Marcel



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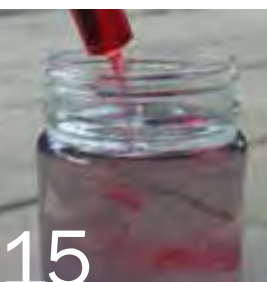
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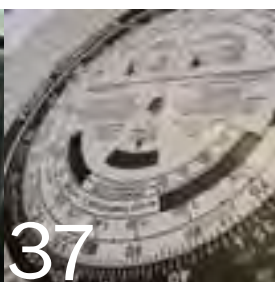
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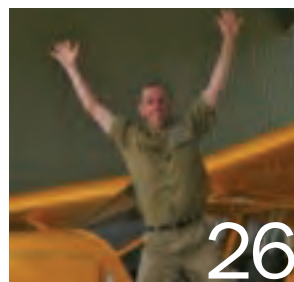
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It was Mr. Tips' intention to create an aeroplane which was easy to fly, cheap to buy and even cheaper to maintain



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President's Report

STEVE RUNCIMAN



MARCH already, where does the time go? However, we are another month closer to both NATFLY and NORRA-Aus and, if you are anything like me, the excitement continues to build.

Most board members gathered in Canberra on Wednesday, February 8 to attend a two day assurance workshop, facilitated by Aerosafe. The object was to look in to all functional areas of RA-Aus and agree on the areas and level of depth of oversight relevant to the board. This helped the board identify deficiencies or areas which might require further development. It resulted in the production of an action plan to ensure the points be addressed in an efficient and timely manner. All board members able to attend, found it useful and very worthwhile. Work will now begin to address those areas identified for improvement.

Immediately after the workshop, board members went straight into a board meeting during which many topics were discussed and many decisions made.

Junior Student Pilots. Without a doubt, this was the most debated topic and the most difficult decision made. The board had to decide whether or not to set a minimum age limit for the conduct of formal flight training. After careful consideration, legal and insurance matters, advice from the Operations staff and board members, the decision was regrettably made to discontinue Junior Pilot Membership. The minimum age for application for a Student Pilot Membership and Certificate was set at 14 years, with the first solo flight remaining at 15

years. It was also decided we could not offer grandfather rights to allow young people already issued with the now discontinued Junior Membership, the ability to maintain a full membership. This affected 15 young people and to you, I offer our apologies for needing this change. The board realises the importance of recruiting and maintaining the interest of future young pilots and those affected will receive a number of benefits to retain their interest and passion for learning to fly.

Next AGM. A proposal was put forward to change the location of the next AGM to allow more members to have the opportunity to attend, meet the board and some of the staff and to have their say in the organisation. I am pleased to say this motion was passed and so the next AGM will be held in South East QLD beginning at 0930 on Saturday, September 22. The finer detail, including the location, has yet to be decided and organised but you will hear about it in the coming months. The intention is to hold meetings in different locations around the country in the coming years.

Constitution Review. It was agreed to form a sub-committee to do a complete review of the constitution. This will be headed up by Don Ramsay. I am sure you will agree this is an extremely challenging undertaking, which will take some time.

Website. By the time you read this, you will have seen the new website, but there is much more to come! We have agreed on a company to take the development even further with the view to have

many more features included, such as a members only section, automated payments, the provision of forums, an improvement to the members' market and the RA-Aus shop, to name but a few.

NATFLY. As you would expect, preparations for NATFLY 2012 is gathering pace and all indications are that it will be a superb event and well worth attending. It was decided to trial a live webcam to the NATFLY site to bring it closer to everyone unable to attend this year. The finer details are yet to be worked through, but I am sure you will agree this is a fantastic initiative and I am looking forward to seeing it up and running.

I was extremely pleased how the workshop and board meeting went and I can assure you board members remain very enthusiastic. They continue to work hard for the good and benefit of the organisation and its members and you are all being very well represented.

As well as what is mentioned here, there are a number of other matters which will affect the organisation, including the introduction of the Recreational Pilots Licence by CASA and a legal matter currently being dealt with by our insurers and solicitors. The staff and board are working extremely hard to try to gauge the affect these issues may have on the organisation and as soon as we have anything in concrete, we will be sure to let you know.

In the meantime, be happy in the knowledge the organisation is being well run and looked after by the board and staff of RA-Aus and continue to enjoy your passion for flying. 🇺🇸

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calendar of events



Tyabb Airshow

4 March

Flying operations began at Tyabb, Victoria in 1962. This milestone will be the theme of the 2012 Airshow. Proceeds of the show will benefit local charities, boost the town, the aero club and private aviation. For more information www.tyabbairshow.com.au

Aerofest

4 March

Busselton Aero Club will stage its Fly-in plus Family day with food and static entertainment for the family. Pilots arriving Saturday will be provided food and accommodation on an RSVP basis. For more information 0429 098 032 or www.busseltonaeroclub.com.au.

Clifton Fly-in

11 March

Darling Downs Sport Aircraft Assn. Inc. Annual Clifton Fly-In at Clifton Airfield (Bange's). This fly-in has become an iconic event in the region and is the premier attraction for all types of aviation in southern Queensland. See various types, shapes, sizes and models of recreational, ultralight and homebuilt aircraft including sport, vintage, general aviation and any other flying machine. Come late pm Saturday, 10th for BBQ, drinks. Fly or drive in, see ERSA. On field camping, bring your swag. Advise for catering. Contact: Trevor Bange Phone 0429 378 370; A/h:(07)4695 8541; Email: trevorbange@bigpond.com

Hamilton Aero Club Fly-in

10-11 March

A great weekend in Western Victoria. Aerobatic displays, joy rides in a Tiger Moth, parachute jumps. Dinner Saturday night, Brekkie Sunday. For more information David Gough 0428 528 295 dfgough@bigpond.net.au

Myrup Fly-in Estate

24-25 March

Esperance Aero Club invites everyone to YMYU (33 47.2S 121 57.4E). Saturday Lunch available (if you let us know). BBQ Saturday Evening - \$20 per person; Sunday Breakfast available (if you let us know). Limited billet accommodation (first come first served). No formal flying program but plenty of aviating and sightseeing. For more information Dick 0438 179 088, David 0407 036 173 or dwf177@bigpond.com

Lightweight Aircraft Association Annual Fly-in at Yarrowonga

24-25 March - Note the date!

Trikes, RA-Aus and VH aircraft are all welcome. BBQ lunch Saturday, Dinner Saturday night. There is plenty of accommodation in Yarrowonga, but book early. We expect to be joined by the Sonnex and the Jodel flyers, and the RV group is always represented. For more information, Lachlan Wishart 0417 586 012.

A Weekend in the Riverland

24-25 March

A full weekend of activities. Saturday two workshops at Renmark Airfield including Rowan Wilson presenting Oz Runways (www.ozrunways.com) Multi leg flight planning, one tap direct to anywhere. And Wayne Johns - maintenance guru. Workshop focused on all you need to know about maintaining your engine. Lunch provided. Dinner Saturday night. Sunday fly to Loxton Airport for Breakfast/Brunch. Spot landing competition. For more information Brian Carmody 0427 840 052, microbe@riverland.net.au or Ian Schober 0427 837 315.

Port Macquarie Fly-in and Fly & Spy

31 March

Aircrews are invited to participate in our Fly & Spy fun observation trial or soak up the friendly club atmosphere. Food and Drink available throughout the day. A welcome/presentation dinner at the clubhouse Saturday night. The aim is to promote aviation activity and fellowship in the Hastings area. For more information Rod Davison, Hastings District Flying Club at roddi194@yahoo.com.au, phone (02) 6585 3835 or www.hdfc.com.au



Tumut Aero Club All Day Lunch

8 April

Why not drop in to Tumut on your return trip from Natfly for an all day lunch. Take the chance to stretch the legs, grab some lunch and enjoy the great social atmosphere of the Tumut Aero Club. For more details www.tumutaeroclub.org.au or contact Simon 0428 472349 or email president@tumutaeroclub.org.au

Wings Over Illawarra

6 May

At Illawarra Regional Airport, Albion Park NSW. This major annual air show event features fabulous aircraft including the De Havilland Caribou from the HARS collection, the Connie, Caribou, Catalina and Neptune bomber, and Australian military aircraft including the Roulettes aerobatic team, visiting warbirds and civil aircraft. Vintage and classic cars, motorcycles and farm engines. The co-located Light Rail museum will offer train rides. See woi.org.au for full details.



Wings, Warbirds and Wheels Fly-in

12-13 May

The Maryborough Aero Club's Fly-in supports the RFDS and Angel Flight. Warbirds, vintage, and modern aircraft, vintage cars, motorbikes, stationary engines, aero engines, trade stands, model aircraft and more. Camping available and there many hotels, motels and caravan parks in the region. Spit Roast Dinner Saturday evening. For more information Tony Pope 0408 988 081 info@maryboroughaeroclub



Watts Bridge Memorial Airfield Inc. All-in Fly-in

19 May

Watts Bridge Memorial Airfield, situated in the Brisbane Valley, is the home base for a wide range of aircraft including Vintage, Aerobatic and Recreational Aircraft as well as Gyroplanes, War Birds and a variety of Homebuilt Aircraft. On-field catering and coffee available. Free Entry. No landing fees. For more information Richard Faint 0412-317-754 or www.wattsbridge.com.au



"Come Along" MEGA BIG Fly-in Caboolture

21-22 April

Poker flight & BBQ dinner & fly-in. Movies & overnight stay & Q&A. Navex & BBQ breakfast. You can do all the events or just do some, walk/drive/fly-in. All profits go to Angel Flight. For more information Sean O'Driscoll ycabevent@gmail.com



Megafauna Flyers Goolwa Trip

24 March - 1 April

We will start at YFT and heading for Horsham for the first night. Monday, we head to Naracoorte, with a trip to the caves. Tuesday we arrive at Goolwa, for three days of flying around and seeing the sights. We will track back to Wentworth on Friday, and then Hay on Saturday. We arrive back at Yarrawonga Sunday morning. Anyone wishing to sign on may ring or email YFT for a sign-on form. First in gets the slot. Contact Peter or Anne on 03 5744-1466 or yft@yarrawongaflytraining.com.au

The Childers Wings and Wheels Fly-in

5-7 May

Isis Flying Club. Gold Coin entry. Lucky Draws, Entertainment, Stalls & Static Displays. For more information contact President, Bill Brown 0418 724 645 or Vice-President, Ian Laing 0428 714 690.

Shining a light

I have just received the February issue of Sport Pilot and must congratulate you on the whole issue and especially on the cover story.

What a terrific story and great pictures to go with it, but the experience was spoiled for me by difficulty deciphering the bits of the text hiding among the darker greys of the pictures.

You were right to show the pictures as big as possible, but is it possible to use a larger typeface or change to white lettering where text runs over the rocks, to make it easier for older eyes to read?

I was also surprised that "Avia Club Nepal" doesn't fit Rotax 914 engines (turbocharged) to maintain performance at those altitudes.

Any comments?

Kind regards and best wishes for 2012,

- David Houston

Ed - David, thanks for your kind words. Dark backgrounds were something we used to find so frustrating about the magazine in the old days. Black or white letters on dark background are just too hard to read for us old buggers. Sport Pilot has a strict policy on not doing it (mainly because I can't read it either) and I use my own poor eyes as a standard setter. I found that article readable enough, but rest assured we are always vigilant about it. And 914s would make sense, wouldn't they?

That RA-Aus spirit

Last year I had the chance to travel interstate for a family gathering. We're all getting on a bit and there have been a few health scares, so getting all the siblings together was going to be special. The long drive put me off but I fluked some good weather, so I decided to fly my little plane. The big problem was leaving her unattended at a strange airfield.

A phone call to their Aero Club solved the problem. Despite being a complete stranger, I was offered the use of a hanger overnight. I

had the thrill of flying my little baby and being able to tuck her away safely while we had a great family re-union.

I had a great flight each way, cutting travel time to a third and avoiding many hours dicing with death on the highway.

Thanks Graham, a wonderful gesture to a fellow flyer.

- Lyle Passfield

Ed - Next time get a photo and the names of the people involved and we'll give them a big cheer in the magazine. That friendly attitude is one of the things which makes this industry special.



A special GYFTS story

For as long as I can remember, all I wanted to do was fly. My mother, though, tells me that my first career choice up to about Year 3 was to be a "Bin Man".

So from the tender age of eight (2002), and because of my love for flying, I spent much of my free time on Microsoft Flight Simulators until I was introduced to a Boeing 737-800 simulator in 2006 in New Zealand while on a family holiday, which I loved. When I started my first part time job at Coles in 2009 (15 years old) I told my parents I wished to purchase a large block of time on one of these simulators. It stimulated my father to research into what was available for a 15 year old in the world of flight and maybe prepare me for a career as a pilot.

After much research and discussion with various people, we decided that recreational aviation was the way to go. So off we went to Australian Pacific Aviation at Jacobs Well in Queensland. I was hooked after my first flight and thanked my parents for stopping me spending my money on a simulator. Now it could go towards the real thing. All was going well at Heck Field and I was progressing well, when we discovered the GYFTS grant on



the RA-Aus website. I applied for and was successful in my application for the grant, which was fantastic, because I was funding my own lessons through my part time job. The grant allowed me to go from flying only once a fortnight to being able to fly every weekend.

During this time, the flying school purchased a new model of the Foxbat aircraft I had been flying. It had a few small changes from the previous model and with me being close to 200cms tall (six foot seven) I could no longer safely fit into the newer model. So after a two month layoff waiting to see if a modification would allow me to fit in the new aircraft, I was forced to start in another aircraft, in unfamiliar air space and at a new flying school, GoFly Aviation at Caboolture, Queensland.

After being grounded for a couple of months (which felt like years), I started all over again. Weeks turned into months and finally, a couple of weeks after gaining my "P" driver's license on the road, I passed my flight test in September, 2011 (aged 17). I think after my first Solo flight, I felt as if I needed to change my pants, but I was well and truly hooked. Another few months after that, I completed my senior year of High School and applied to Jetstar for their Pilot Cadet Programme.

I was interviewed and am very happy to report that I was accepted and started in Melbourne in February.

I cannot thank RA-Aus enough for the GYFTS grant and all five of my instructors for all their help, advice and patience. So in a couple of years, if you happen to be on a Jetstar flight and hear

that the First Officer (hopefully aged 19 by then) is called Joe Masters, you should feel some pride knowing that you helped a young pilot achieve his dreams when you added those couple of extra dollars to your RA-Aus membership fee.

- By Peter Gilmore

Something to say?

Email editor@sportpilot.net.au

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

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

Email editor@sportpilot.net.au and have your say. (By the way - the editor reserves the right to edit Letters to the Editor to shorten them to fit the space available or in case of libel. We don't want your completely reasonable opinion to land you in court.)



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NEWS



Natfly Fly-Market

TIME to start rummaging through your hangar or shed for those unwanted aeronautical bits and pieces. Those pre-loved items can be turned into cash at the Fly-Market hangar at NatFly 2012 at Temora.

Anything of an aeronautical nature is welcome - from a washer to an entire aircraft - we will do our best to sell it for you. There are always plenty of buyers looking for the bits you no longer need. You'd be surprised at just what

people want or will buy.

And remember, this is a voluntary service to RA-Aus members by RA-Aus members of the Holbrook Ultralight Club. No commission is charged on either sales or purchases (but, if you are happy with the service, we are not averse to accepting donations for the Club or the Australian Ultralight Aircraft Museum).

So go and clean out the shed. We look forward to seeing you at NatFly.

Are you listening?

PILOTS are being warned by CASA of the dangers of failing to use their radios properly at non-towered aerodromes. They are also being warned to correctly follow alerted see and avoid procedures.

The warnings follow continuing reports of break downs in separation and near miss incidents in the airspace at non-towered aerodromes. Incident reports show some pilots are operating within the vicinity of a non-towered aerodrome without correctly monitoring the aerodrome frequency.

Pilots must check relevant documents such as ERSA and NOTAMS for up to date information on frequencies. Information from broadcasts on the local frequency,

air-ground radio services and transponders increases a pilot's chance of detecting other aircraft by a factor of eight.

Alerted see and avoid - looking out of the window for other aircraft as well as using the radio - is a vital part of safe flight.

Pilots are being told it is vital not to be distracted while keeping a watch for other traffic and making radio calls. The theme for CASA's campaign to warn pilots about the dangers of incorrect radio use and failure to follow alerted see and avoid procedures is 'Be heard, be seen, be safe'.

For more information: www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_100058

Keeping cool

CORBI Air of the US has launched a new air conditioner, light and reliable enough to work in small aircraft.

The system is all-electric. It uses the standard 12-volt Rotax system, common in LSA, augmented by an independent alternator and small 24-volt batteries.

Corbi Air President, Ron Corbi, said "Because it is compact, light, and powerful, the system is ideal for other small aircraft, including Experimental-class aircraft, many of which



already use a 24-volt system and thus would not require electrical system modifications."

"The air conditioner will be particularly welcomed by instructors who teach all day in hot cockpits, and by private fliers who just want to arrive fresh," said Corbi. For more information: www.corbiair.com; www.amt-aero.com.

Tecnam Tail Dragger



TECNAM has announced the successful first flight of its latest edition to the Tecnam P92 family of aircraft, The Tecnam P92 Tail Dragger (P92TD).

The company says many existing operators and pilots of tail draggers are keen to change their existing models for a new and modern aircraft. The aircraft will come with three power options - Rotax 912ULS2, Rotax 914 Turbo (not US) and Lycoming O-233 engine.

Tecnam says market research showed a

more than 50% preference for tail wheel compared with standard configuration airplanes within the pilot community. Other findings included a 60% preference for side by side seats (very few legacy tail draggers offer this cabin configuration) and 70% of pilots indicated they preferred a metal vs. fabric constructed aircraft.

"This tail dragger version of the Tecnam P92 is the first new aircraft this particular marketplace has seen in a very long time and

promises its owners and pilots significantly improved flight characteristics" says Tecnam's Managing Director, Paolo Pascale.

"With the introduction of our 5th generation P92 Eaglet in 2011 and our P92 Sea-Sky Hydroplane earlier this month, we know our customers really appreciate the continuing innovations and improvements we are making to our P92 range of aircraft."

For more information, visit www.tecnam.com.

Avgas returns to Portland



AFTER almost two years without Avgas, the Portland Aero Club has begun operating a brand new 24 hour credit card facility at Portland Airport.

The old facility was removed as part of the airport redevelopment and club members have been travelling to other airports (100nm round trip) or using drums ever since.

The new facility was made possible after much lobbying by club members, led with great passion by club President, Peter Tapscott.

The facility became a reality because of a State Government grant and funding from the local council.

So if you're on the south coast of Victoria, fill up at the new facility and support the club's effort to make sure Portland is not one of the growing number of airports permanently losing access to Avgas supplies.

Vale

Colin Treloar 1956 - 2012

COLIN was born into aviation. His family owned an aviation business in South Australia. They had a string of aircraft - a Dove, Lockheed Electra's, Navajo's, a Ryan, Cessna's, Auster's and a Fox Moth on contract to the Flying Doctor Service.

The company failed, as most did in those early days of commercial aviation, for lack of government support and lack of population to keep them viable.

However, the seeds were sewn and, although Colin could never have held a Commercial Pilot's Licence due to his medical condition, he went on to own and fly a string of ultralight aircraft.

Colin's aviation exploits started in the North West of WA (where as a young man he was employed as station mechanic). He built a Scout and taught

himself to fly it. He went on to modify and improve the Scout with a larger and heavier Robin engine and tricycle landing gear. The tricycle gear helped enormously with ground handling, but did nothing for the centre of gravity - have a look at the photo - full up elevator just to fly!

Colin survived the Scout and went on to build and fly several more aircraft. A Bumble Bee, which he built from a kit bought from pioneer, Don Bailey; a Grasshopper, a SV11 and his final triumph, a retractable Mirage TC2.

A foundation member of WA Ultralight Flyer's Club,

he served in every senior position - Secretary, Treasurer, decades as President and he became a life member.

Colin would be a worthy addition to the Pioneer Honour Board in Canberra. Colin is survived by his wife, Sue, and will be sadly missed by the WA Ultralight community. He was a true gentleman.

- By Ben Sharpe



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The Easter rocket route

by Arthur Marcel

EARLY in the morning of Easter Friday (if the weather is favourable) ten, twenty or more South East Queensland alarm clocks will wake their sleepy owners a little earlier than usual. Before the sun has risen, in fact, and these intrepid SEQ pilots will kiss their better halves goodbye (or, in some cases, take them along for the ride).

After a quick breakfast, they will motor themselves out to their respective airfields and hangars where their RA-Aus and VH registered pride and joys are waiting for them, chaffing at the bit, fully fuelled, neatly loaded, flight planned and in every other possible way ready and rearing to





Today's oils seem to diffuse more easily

Pilliga Scrub is definitely not the place to have an engine failure. It is where you become glad you changed spark plugs and overhauled the fuel system as per the manual prior to departure. Surviving an engine-out event over the Pilliga Scrub would be very problematic and it is not just two-stroke pilots who become aware of the fact as they fly over it.

Flying around this forest requires a significant diversion, but many pilots do and they sleep better for it. There is, however, a route

>> Oil can be diffusion tested by gently adding some to a small jar of fuel and watching it disperse

go. The sound of aero engines will be heard in every corner of the Great South East at about six or seven in the AM as the annual Natfly odyssey begins for another year.

For some Natfly regulars it will just be a matter of pointing the aircraft in the right direction (setting the autopilot?) and watching the world go by as they burn a wing-load of fuel sufficient enough to take them all the way. For others, however, the relocation of Natfly from Narromine to Temora has meant at least one extra refuelling stop. Many aircraft will need to stop in Moree as well. They will start to arrive there at about 9AM, one after the other, taxiing up to the refuelling point.

Sometimes there is dismay at the realisation that cash is not accepted, but a gentlemanly arrangement might be possible (as has been the case in the past) with someone else's card and a new and lasting acquaintance will be made. In fact, many new contacts are made at refuelling points en route to Natfly. It starts at Moree, and by the time

Position & Field Elevation	CEAF	Area	LS Alt	FL Level	TAS	Trk	Wind	Hdg	GS	Dist	Time	ETA/Rev	ATD	Fuel	Fuel	Fuel	Fuel
	Freq	Freq		Altitude									ATA	Used	Res	Req	OH
YRHH 400	328.7	328.2										Full Fuel					60
A/Clifton 1470	328.7	328.2	035	A045	85	223				34							
Inglewood 930	328.7	328.2	032	A045	85	223				49							
Yelarbon		328.95	023	A065	85	232				20							
YMOR 701	328.7	327.1	023	A065	85	210				73							
										176							
YMOR 701	328.7	327.1										Full Fuel					60
Wee Waa		327.1	027	A065	85	194				48							
Kenibri		327.1	020	A065	85	201				39							
A/YGL 1050	328.7	327.1	059	A065	85	193				59							
YNRM 701	328.7	328.9	021	A065	85	193				37							
										183							
YNRM 701	328.7	328.9										Full Fuel					60
A/PKS 1000	328.7	328.9	028	A065	85	184				53							
A/FBS 700	328.7	328.9	024	A065	85	184				17							
YTEM 6289 021	328.9	324.85	034	A065	85	184				67							
										137							

we all pull in together at Narromine, we are like old friends - parking our planes wingtip to wingtip and spending the weekend together.

The feelings of camaraderie upon seeing each other at Temora are no doubt enhanced by the feat of having once again flown over the Pilliga Scrub and survived. This 3000 square kilometre forest, located just north of the halfway point between Moree and Temora, is the largest surviving continuous remnant of semi-arid woodland in NSW. From the cockpit of a light aircraft, chugging modestly along at 5000ft, it looks vast. From the seat of a Drifter or weight-shift trike, it looks even vaster, and concentrates the mind wonderfully. The

from Wee Waa to Kenibri (going south) which does open up some possibilities for emergency landings, especially for aircraft with a reasonable glide performance. Having a bit of airspace under the aircraft for the transition is also a great advantage, psychologically at least. Probably the dangers of the Pilliga scrub are mostly psychological. Nonetheless, this particular forest leaves a lasting impression on all pilots who fly over it. And most of us from the north side of the border do fly over it on our way to Natfly.

Talking about two-stroke pilots, when they finally get to the head of the queue at the Moree and Narromine avgas bowlers, they may



find the four-stroke jockeys behind them none too sympathetic about the time consuming task of pre-mixing the two-stroke fuel. There is a method for speeding up the process, but it depends on the diffusion qualities of the oil. In days gone by, when everyone swore by Penrite TS40C "Green Slime", mixing was an arduous affair with much vigour required to get this treacle-like mineral oil properly diffused before it was put in the tank. Today's oils seem to diffuse more easily. Oil can be diffusion tested by gently adding some to a small jar of fuel and watching it disperse. If the oil is completely dispersed in seconds with no pooling (see photo), this is a good sign for a quick mixing technique.

For faster refuelling, a five litre container is required (far easier than a ten litre one to stuff into a small aircraft already loaded to the gills with camping gear), plus a good funnel. While in the queue, estimate the fuel deficit and add the necessary oil to the container. At the bowser, put three or four litres of fuel into the container and shake vigorously. The rest of the fuel goes directly into the tank funnel. The concentrated fuel oil mix is poured in with the other hand at the same time. Note that an assistant is needed to read out the numbers on the bowser or the plane has to be backed up to the bowser tail first so that the numbers can be read by the refueller. This method seems to work perfectly well, but a little wing rocking for additional psychological benefit doesn't go astray.

Another phenomenon which should be noted on this trip is that today's GPS equipped aircraft tend to keep to their planned tracks very accurately. It means that if you are flying the hemispherical rule in a slowish plane, faster aircraft may overtake you reasonably closely. At about midday on Easter Friday, especially from Narromine onwards, the Temora route becomes a little like the Hume Highway. Probably the most common type of midair collision occurs in a lane of entry or circuit leg when a faster plane runs up the tail of a slower one. For this reason, perhaps it is a good idea to stay a little off track, maybe a mile or two to the west. However, again, this precaution is probably mostly for one's psychological benefit because midair incidents outside circuit areas are rare.

A typical Rocket Route flight plan looks like this one (see left - but note that the frequencies are from 2010 and may be different in 2012).

However, no matter from which direction you come this year, if you are heading for Temora at Easter, may you enjoy blue skies and safe flying. 🍷

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Editor's choice

Brian Bigg

A PROBLEM STOPPING

EVEN though it's been raining for what seems like a year, there were two days last week when there was a strange blue colour in the sky. Not to miss an opportunity, I pushed my Zephyr out of the hangar, intending to go for a quick flight to dust off the cobwebs.

But there was a problem. I set the brake for the start-up, but when I pressed the ignition, the aircraft rolled forward.

The brakes were not working. I did all the things you do when a machine doesn't do what it is supposed to do. I repeatedly pressed the brake, the same way over and over again, in the hope that somehow magically the brake would begin working again. No luck. I jiggled the brake lever backwards and forwards vigorously. Still no luck. I also stared at the brake intently for more than a minute. That didn't help either for some reason. So on to plan B. I sat there for several moments, and then tried all those things again, with the same results. Sigh. After five minutes or so jiggling and swearing, I had to accept the brakes were not going to come back to life. I turned off the engine.

The Zephyr has hydraulic disc brakes, which I'm told were originally designed for a Ducati motorcycle. Lovely bike, but obviously its brakes are something its riders should be wary of at high-speed. The Zephyr's brakes are operated via a hand operated lever attached to the joystick. And they've been a bit of a problem on my aircraft, I have to admit, although other Zephyr owners have not reported the same issues. I've replaced both disks over the past four years after they cracked under load. Not a peep out of them since.

I've also had to bleed the brake system a dozen times during that period, because there was a pinprick sized hole somewhere in the tube. But I thought I'd solved that problem by replacing the tube. Obviously not.

So the question then arose. Could I still go flying even though I suddenly had no brakes?

The only reference in the RA-Aus Technical Manual I could see applicable was under Section 4.2. It states 'The pilot-in-command of an aircraft must ensure that the aircraft is fit for flight.' That's all well and good, but how was I going to be able to work out if my aircraft was actually fit for this particular flight?

(Yes, I realise I could have easily found the



correct answer to my problem before writing this column by ringing RA-Aus head office, but then I wouldn't have been able to generate a discussion about the topic, which is my intention – I'll call them next week).

A lot of aircraft operate quite safely without brakes, as any Tiger Moth owner will tell you. Ballina, where my aircraft is hangared, is 1900m of wide bitumen. I rarely use more than 100m either end of it. If I tried to take off and encountered an emergency, I could easily land and stop in the vast distance remaining. The same with any emergency on landing. Acres of room.

Obviously, I would have to rethink the issue if I was taking off from a 400m grass strip with trees at either end. Even with good brakes, I'm cautious when doing that. And what happens if there's an emergency while I am mid-flight, over the top of rugged bushland or a suburban street? How would I land on a street and pull up before hitting the crowded preschool, if I had no brakes.

In the absence of an official opinion, my conclusion was that it would probably be okay to fly at my home airstrip without brakes, as long as I didn't go too far away and didn't inconvenience any other traffic. I really wanted to go flying.

But when I started the engine again, it rolled forward again, and I realised I really shouldn't go. We are given responsibility as pilots in command in the expectation that our internal decision-making processes and training will be better and safer than relying on the authorities to regulate every little nut and bolt. That decision-making discipline is one of the things that separates us all from non-pilots. It's ultimately rewarding, even when my own decisions upset my own plans in the short term.

The self-responsibility is one of the things that make recreational flying so appealing. So you have to take the good days with the bad ones. I'll go flying another day, when I have fixed my brakes... again. 🛩️

THE LITTLE VOICE

by Norm Sanders



THE subconscious mind is constantly ticking over. Call it sixth sense, a “feeling”, intuition or something else, but it should be listened to. Often while our conscious mind is fixated on an immediate task or goal, the subconscious is still roaming freely.

A pilot may be planning a cross country flight to get back home before work on Monday. The weather is a bit marginal, but seems to be improving. The Get thereitis bug has a firm hold and the flight begins. But all the while, there is a niggling doubt in the pilot’s mind, stemming from the subconscious.

“Hang on. What if the weather DOESN’T improve? Maybe I’ll be over tiger country, maybe I’ll be socked in with no place to land. Is getting to work on Monday worth the risk?”

A safe pilot, having had this internal dialog, would abandon the flight. A potential statistic would press on and probably make it, but maybe not.

A few years ago, a light twin left Brisbane for Swan Hill with a group of businessmen on board who HAD to get there for a dinner. I happened to be on the ground at Temora that day and was huddled inside as a purple squall line passed, with 50kt gusts and hail.

Gann was flying from Honolulu to Burbank, California in a DC 4 shortly after WWII. The vibration was slight and intermittent. On landing, engineers found a quarter inch bolt missing from the elevator hinge. Only massive luck prevented the elevator from “unporting” which would have led to a non-recoverable dive into the Pacific.

I recently had my own opportunity to exercise my guardian angel (already complaining of over-work). We just had the engine rebuilt on our Sonex. The old crankshaft checked out OK, but we didn’t magnaflux it. Bad mistake. After six hours time on the rebuild, I taxied out for takeoff and started to roll. It just didn’t feel right. Nothing I could put my finger on, but rather than continue the takeoff, I throttled back and taxied back to the hangar. I ran up the engine and had the rare experience of watching my propeller leaping along the ground in front of the aircraft. The crankshaft had failed just behind the hub. If I had been driven by Get thereitis and ignored the little voice, we would have been rolled up in a ball in the trees at the far end of the runway.

In order to take in data, all the senses must be turned on. In the early days of portable music, people flew all over America

In order to take in data, all the senses must be turned on

The light twin flew into that wall and broke up.

Another businessman was desperate to get to the mountains with his wife for an appointment. His pilot didn’t want to go, because heavy snow was falling. The employer persisted and the result was three more air fatalities.


The subconscious has another, less well defined role to play. Often the mind is taking in data without us realising it. The flight might be going smoothly, but something still doesn’t seem quite right. The instruments all look OK, but the pilot detects a faint vibration every once in a while. “Hey, there’s an airport, maybe I should have a good look at this bird.” An inspection revealed a missing elevator hinge bolt.


This was the scenario reported by flyer and writer, Earnest K. Gann, in his excellent book “Fate is the Hunter.” (This book and others by Gann and Richard Bach are required reading for anyone who wants to be called a pilot.)

listening to 8-track stereo (and not their engines). The sound gear is smaller (and better) these days, but the pilot who can’t hear their aircraft because of a deafening blast of Metallica is losing a valuable safety tool.

Of course, the subconscious mind is not infallible. Anyone who has ever flown across Bass Strait, vast remote areas or at night, knows about how an engine can develop some truly horrendous sounds. At first the subconscious mind, always a worrier, picks them up. Then the conscious mind follows its lead. In fact, engines have a multitude of bangs, knocks and rumbles all the time. But they can cause major concern if listened to intently. This is a phenomenon called “Auto Rough” when flying over tiger country.

The subconscious mind gets more finely tuned as it gains experience over the years. But even early on common sense is very valuable.


So, listen to that little voice in your head. It could save your life. 



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A classic CLASSIC

by Rob Knight

ERCOUBE 24-7986 could be described as a classic, classic aeroplane. In spite of its modern appearance, the first Erco was the creation of Fred Weick, an early US aviation design engineer and companion of both Charles Lindbergh and Amelia Earhart. While working for the National Advisory Committee on Aviation (NACA), Weick specialised in drag reduction and the design of aircraft safety features, winning innovation awards in both fields. Later, in 1957, Weick joined Piper where he was a co-designer for the Pawnee and Cherokee lines.

In 1940, Weick was working for Erco (the Engineering and Research Corporation) trying to produce a

simple, safe, and robust little aeroplane incapable of spinning. The result was the ERCO 415, an all metal aircraft with side-by-side seating, vertically sliding cockpit windows (doors), a tricycle undercarriage, and twin rudders interlinked with the ailerons to prevent even deliberate spin entry.

Erco 415c, S/N 727, exited the ERCO factory doors in Riverdale, Maryland, on March 12, 1946 as NC93404, and over the next 65 years it flew just 1420 hours. Age eventually caught up with it and it was rebuilt in 2002 by Ward Marsh, the President of the American EAA. The aircraft has since come to a new home in Queensland. Ward's excellent restorative





▶ The plane had lost just 1mph over all these years

Start up is simple. Brakes on, radio off, fuel valve onto “header”, mags on both, clear prop and pull the starter knob on the panel. With the engine running smoothly, Jennifer made the radio call and we taxied. Here was the first challenge; after 51 years steering aeroplanes around on the ground with rudder pedals, I now needed to steer it like a car and the change was surprisingly difficult. It was also heavier to steer than I had expected.

After running-up the motor, the pre-take off checks were simple. The Ercoupe has no flaps and an automatic mixture control, but there are a couple of unique aspects to the pre-takeoff ritual. The sliding windows need to be raised to improve performance, and only the elevator can be checked for full and free movement – the interconnected rudder prevents the ailerons being moved unless the aeroplane is rolling or flying.

The take-off renewed the challenge of using the control wheel to keep the aircraft straight. I ignored the heaviness of the wheels and mentally drove the aeroplane like a car along the centreline. It became easier as the plane accelerated. This is no STOL aircraft, and it was a good distance down the runway when I finally reached the 60mph needed for rotation. Firm back pressure eased the nose up and we were airborne. On Jennifer’s advice, I set an attitude for 80mph and we climbed out at a steady 450rpm. Now that we were flying, the controls were lighter and the aeroplane was stable in all axes. I noticed the balance ball was glued between the goal posts, the twin tail fins eliminating the slipstream effect normally felt against a central keel surface.

work was very evident to me when, in the company of Suncoast Cooloola Flying Pty Ltd CFI, Jennifer Beck, I had the opportunity to look over the little plane at Gympie.

It’s a big step up onto the Ercoupe wing and an even bigger one down onto the seat protector before finally reaching the floor. The seat was soft and, as I settled into it, the sill of the open sliding window came almost level with my shoulder. A quick look showed an alarming lack of rudder pedals – there was just a single brake pedal on the floor. The panel displayed a typically 1940s grouping with the flight instruments located centrally. The two control half-wheels looked like something from a WW2 movie. The central throttle was slightly higher than usual, but not badly placed, and below it was the yellow-handled, ratchet locking, hand-brake – straight out of a 1940s automobile.

The 415c has a main fuel tank in each wing and a header tank in front of the cockpit, which gravity feeds the Continental C85 engine. The header tank is constantly filled from the mains by a mechanical pump. The header cap has a fuel level indicator and a falling reading indicates either a pump failure or empty mains. A full header tank has enough fuel for about an hour’s flying.



>> No rudder pedals, just a brake pedal



>> An interior straight out the 1940s

Generally speaking, the controls felt rather like those of a Piper Cherokee. The nose was not especially high on the horizon and visibility all around was good. Vibration levels were low, but the windows slowly crept down until they were open. This aeroplane is a convertible, and I continued climbing with my elbow out the window, just like any self-respecting movie star from the 1940s.

Level flight at 2400rpm gave us 94mph IAS; pretty good for a 65-year-old machine. Assuming the ASI was reading correctly, the plane had lost just 1mph over all these years. Trimmed out, it was comfortable and flew straight and level "hands-off."

Level turns were simple – the ball stayed centred as long as the roll control input was gentle on entry and exit. It remained centred while entering steep turns with gentle control inputs, but inducing more rapid roll rates with the control wheel did cause small adverse yaw imbalances. However, as soon as the roll rate was zeroed, the ball returned faithfully to centre.

I hope Jennifer doesn't notice the two dents I pushed into the floor trying to use the phantom rudder pedals

To sample the stall, with carburettor heat on I closed the throttle and maintained height. The wheel became unexpectedly heavy as the elevator was raised, and it would have been easy to allow the aeroplane to sink. At 55mph, the life went out of the wheel and the aeroplane sagged away with no further warning. The only wing drop response was when I provoked the aircraft by keeping on substantial power and the torque rolled us to the left at the stall. Recovery was im-

mediate with forward stick and the wings were quickly levelled with aileron and the linked rudder. The placard in the instrument panel states, "this airplane is characteristically incapable of spinning". This statement is quite correct. The myth is not a myth.

Back in the circuit, Jennifer suggested 80mph for the approach. With rounded tips on low aspect ratio wings, this aeroplane was never meant for performance soaring, so we kept the circuit fairly tight. Pulling power on the base turn gave a good approach angle even though we had a hefty tailwind component. A check of the windsock on final showed around 10kts, mostly across the runway, and I set up a heading which corrected for the drift. As Jennifer suggested, I tracked the centreline into the flare and through the float. There was no jerking or swerving and the nose wheel immediately pulled us straight as we touched the bitumen. It was quite an amazing experience and I fully understand why this aircraft has a rated crosswind component of 25kts.

After another uneventful circuit, we returned to the apron and parked. With the window down, I climbed out and looked over this remarkable machine. There were no wrinkles in its skin and the paintwork was pristine. It sat there with its deep chin jutting forward as if to defy the world. Its glossy surfaces mirrored me as I took some final pictures. This is a very, very different aeroplane. It has bags of charisma, and I feel decidedly privileged to have flown such a delightful piece of history. After all, it is two years older than I am! 🍷

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Story of the month

I was still to undergo a check flight then be allowed some time alone to bond with my new Ukrainian mistress

Send in your stories and photos in.
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Das Foxy Babushka by Peter Stanton

I GUESS this story begins several months ago, when I finally convinced my boss (and CFI of The Recreational Flying Company), Paul McKeown, to invest in an A22-Foxbat.

In the Ukraine, the aircraft is known as 'Das Foxy Babushka'. No lie. Swear to God.

(Sorry Peter, but a quick Google search reveals some very different (non aviation) definitions for Das Foxy Babushka - Ed).

Those of you who know Paul, will appreciate how hard it was for me to convince him to commit rag and tube adultery, and turn to the seductive arms of a tricycle undercarriage aircraft.

Even so, I pulled off the impossible and lured him across to the dark side on the pretext that the school would become more attractive to students if we had something a little faster and more comfortable than the open cockpit and roar of the Drifter, which occupies our flight line with pride.

Don't get me wrong, I love the Drifter. Wire braced, strut braced, Fisher special, it doesn't matter. The enticing allure of unobstructed visibility from the open cockpit as you soar through the skies with the wind in your hair (in my case, thinning) and bugs in your teeth, is enticing. But to fly somewhere a considerable distance away in comfort, makes a Foxbat a more logical choice.

After waiting four long months for Das Foxy to escape the clutches of the Ukrainian winter, she was at last set upon the

sandy shores of Port Melbourne.

In no time at all, the factory at Morabin had assembled, test flown, and certified her as a naturalised citizen of the land down under. Then it was time to introduce her to her new family - those of us who call The Recreational Flying Company home. This is where the hero appears! I'm talking, of course, about me, but you already guessed that.

Armed with a four day weather forecast, cash and a Leatherman (which never got through security - I hate you, Virgin Blue) I left the friendly surroundings of Gympie and was taken to Brisbane airport.

From there, I flew directly to Melbourne where a shuttle bus awaited to transport me to the CBD. Thanks to my extensive navigation training and fluent use of the Hindi language ("Namaste"), I was able to find the correct train to take me to Tyabb, where Das Foxy was waiting.

Hopping off the train, I was greeted by the Foxbat marriage counsellor (aka agent) Peter Harlow, who then drove me the last 20 minutes to the field.

Up to now, I had ridden in a car, a plane, a bus, a train, and another car. But the day was far from over. I was still to undergo a check flight then be allowed some time alone to bond with my new Ukrainian mistress.

Peter was very thorough and professional (not to mention friendly) as he explained all the features Foxy had to offer. Yes, she was somewhat inexperienced in

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>> Peter ecstatic with joy at meeting his Ukrainian mistress



the art of aviation ecstasy, but with the warm tender touch of an experienced instructor (that's me again) I knew that magic could happen. Peter was an honourable chaperone as Foxy and I danced around the circuit, feeling one another's strengths and weaknesses. I don't know about Foxy, but I found no weaknesses in her, whatsoever. She was strong (like bull) with her overall body design. But when you looked closely at her smooth and slender lines, you understood why she was so swift yet stable through the air. A real beauty.

I suspected Foxy felt the same way about me. Every time I pulled back the power on downwind in preparation for a full stop landing, she extended her glide as if to say "just one more, Peter". Who was I to deny her? So the dance continued for circuit after circuit. Frolicking in the delight of still air and each other's company.

The day finally drew to an end as the shadows extended across Tyabb's long and narrow airstrip, so Foxy and I finally kissed the ground and taxied back to the open doors of the hangar.

Was I dreaming? Was Foxy for real? I guess I would find out the answers the next morning when we set our sights for Gympie, a thousand miles away.

Would we make it with our relationship intact? Or would the pressures of weather and confined spaces end this short, but sweet, love affair. Time would tell. 🍷

Around the coast by trike by Ian and Elaine Willis

ELAINE and I set off from our hanger at Cootamundra in our red 912 XT Tundra for a week or so around South Eastern Australia. It was New Year's Eve and we wanted to travel prepared.

We'd packed two self-inflating jackets, five shirts, socks and undies each, the quilting bag, emergency food, two litres of water, tie down kit, funnel, two sleeping bags, money, and (this time) the phone chargers. That was in addition to maps, ERSA, cameras, lunch, spare oil and safety wire.

The first leg to Yarrowonga took only 2.5 hours because of the slight tail wind. Peter McLean kindly hangared our trike for the afternoon. Later, we took part in the last flight of the year. It's a tradition at Yarrowonga that the trikes go flying at about an hour before sunset. Peter did some formation flying over Lake Mulwala with two others as Elaine and I flew down the Murray, following all the bends and waving at the campers from 1000ft up.

The next day, we took part in another tradition, the New Year's Day flight to Albury. Normally it's CTA, but on the first of January, the airspace doesn't become restricted till 0900. A most enjoyable flight.

The next day we flew off with a tail wind towards Shepparton, then south to the Kilmore Gap, turning south east to pass near Coldstream, and south to Tooradin, still with a tail wind, keeping low enough to avoid the heavies.

After avoiding the parachutists at Tooradin, we had a sleep under the wing.

We decided to follow the coast to Lakes Entrance. On the way, some interesting things went under us, including a new desalination plant, some sort of test track and lots of beaches.

In the lee of the Prom, the wind caused some unpleasant turbulence with a 30kt south westerly coming over the mountains.

Yarram clubhouse is a nice place to stop for a rest. Bainsfield had some fuel for us after we pre-organised it and we followed the beach again to Great Lakes airport. Sale military area was OK for transit out of hours.

It was really blowy by now and I chose the wrong strip at Great lakes. I had to do my first real go around. The other strip direction was not much better, but at least didn't have the rotor of the main strip. There was a very large open hangar available cheaply so we accepted thankfully.

Next day, with another tailwind we flew via Orbost, Mallacoota (which has a very nice terminal), Merimbula for fuel and landed at the Moruya aero club. From Moruya, we followed the coast to Milton then turned inland, gained a lot of height, crossed over the Budawang Ranges and landed at Arnold Millet's place for a cuppa.

Another tailwind followed us back to Cootamundra. It was very thermic at the middle part of the day and I was grateful to be able to cruise above the bumps at 8500ft.

We had covered 19.2 hours flight time and put more pins in the map marking all my landings around the country. The count is now up to 146. 🍷

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by Arthur Marcel

WIKIPEDIA describes the Topsy Nipper T.66 as a light aircraft, developed in 1952 by Ernest Oscar Tips of Avions Fairey at Gosselies in Belgium. It was Mr. Tips' intention to create an aeroplane which was easy to fly, cheap to buy and even cheaper to maintain. It was designed for both factory production and home building. "Nipper" was the nickname of Ernest's first grandchild.

The first aircraft flew on December 12, 1957, with test pilot Bernard Neefs. It had an open cockpit, a length of 4.56 metres, a span of 6 metres and a range of 400kms extendable with tip tanks to 720km.

Wikipedia goes on to describe the aircraft as having a welded steel tube fuselage and rudder, with a wooden

and fabric covered wing, tailplane and elevator. It weighs 165kg without an engine. Early aircraft were equipped with a 40hp Stamo VW-engine with later types using either 40hp Pollman-Hepu or 45hp Stark Stamo engines.

The Nipper is a mid-wing design. Entry and exit require the unlatching of a small wing panel on the left hand side of the cockpit. The plane is stressed for aerobatics (+6, -3g) and is fully certified. It is rated for up to eight turns in a spin. The stalling speed is 32kts with power off and Vne is 127kts. Some aircraft are fitted with tip tanks which give an extra 1.5 hours range (up of 4.5 hours and 390nm).

According to Ron Chappell of Sydney (RA-Aus website), there are only



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>> Roy and the Nipper are perfect examples of the spirit of RA-Aus

It is dirt cheap to run, is aerobatic, side slips like the proverbial fridge, and, most importantly, it is a blast to fly

three Nippers in Australia - Roy Bartlett in Queensland has a MKII; Ron himself owns a MKIIa, which he keeps at The Oaks airfield near Camden; and one of Ron's fellow club members (of The Oaks Flyers), has a MKII which crashed at Parafield 28 years ago, and which he is "threatening" to rebuild. Ron Chappell's Nipper has a Jabiru 2.2 motor and he describes it as "a bit like a poor man's RV4 - it has good STOL, great climb, good range, is dirt cheap to run, is aerobatic (therefore strong and safe), side slips like the proverbial fridge, and, most importantly, it is a blast to fly".

Roy Bartlett keeps his pristine Nipper at Forest Hill airfield, west of Brisbane. He has owned and maintained it for more than 40 years. He can't remember exactly when he bought the little aircraft, but he knows it cost him \$1900 and his log book describes his first flight in it in 1971. Before moving the Nipper to Forest Hill three or four years ago, Roy flew it out of the Gatton university campus airfield just up the road. However, this field was closed in 2008, due to a change of policy by the University of Queensland. Roy was then a member of the Lockyer Valley Flying Club, the club which operated out of that university airfield. This is the club Randal McFarlane, the principal developer of

the Lockyer Valley Regional Airport, hopes to see operating once again at his site near Lake Clarendon.

Roy was a painter by trade. He learned to fly at Archerfield in the early sixties. They were the good old aero club days according to Roy, before General Aviation became so expensive, complicated and vocationally oriented. Roy could hire a Cessna 150 for just a few pounds per hour. From the start, however, he was always dreaming of one day owning his own. When the Topsy Nipper came on the market, he went straight to the bank and the quaint little aircraft was his.

After a time, Roy began to realise the aircraft was a little underpowered. It also required a change of fabric. So he decided to give it a complete overhaul. The project took him about a year, during which time he made several modifications to improve the performance, such as low drag wingtips and a new motor. Roy replaced the 1300cc Stamo VW with a more powerful 1700cc VW motor he built himself. This motor has dual ignition with proper GA type plugs, and still runs as smoothly today as any motor I've ever heard.

When the new simpler system of aircraft registration became available, Roy even-



tually got around to transferring his plane across. The Nipper has sported its 28 category registration, 476, ever since. Roy says the RA-Aus system suits him just fine. He's quite capable of maintaining his own plane and simply wants to operate it the way he's always done it.

Now into his eighties, Roy still goes out to the airfield every week. He doesn't fly the plane as much as he used to, but there is no doubt it is still his pride and joy. When he isn't mowing the strip (which Roy has done since he arrived at the field), he is doing something with his plane. Roy is always ready to help anyone with anything, and his mates who operate out of Forest Hill all say it is truly a pleasure to share the airfield with him. Roy and his Topsy Nipper are perfect examples of the spirit of RA-Aus. 🇦🇺

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Resignation of the RA-Aus Technical Manager

THE RA-Aus Technical Manager, Stephen Bell, has resigned his position. President Steve Runciman, said the Board and the staff of RA-Aus thanked Steve for all his work and wished him well for the future.

The process of recruiting a new Technical Manager has begun and RA-Aus hoped to have a new Technical Manager in the chair as soon as possible. In the meantime the post will be covered by Dean Tompkins and all queries of a technical

matter should be directed to the Canberra office number of (02) 6280 4700, or through the Technical Manager's e-mail address of tech@raa.asn.au.

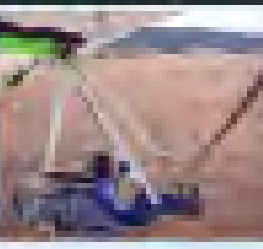
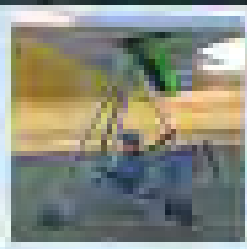
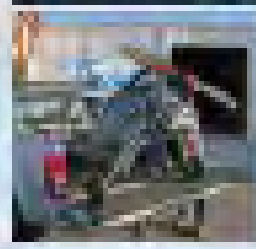
Obviously, the process of recruiting the Technical Manager will take some time. All members are asked to be cognisant of the fact that the current Technical Manager is a stand-in and are asked for their patience and understanding during this transition.



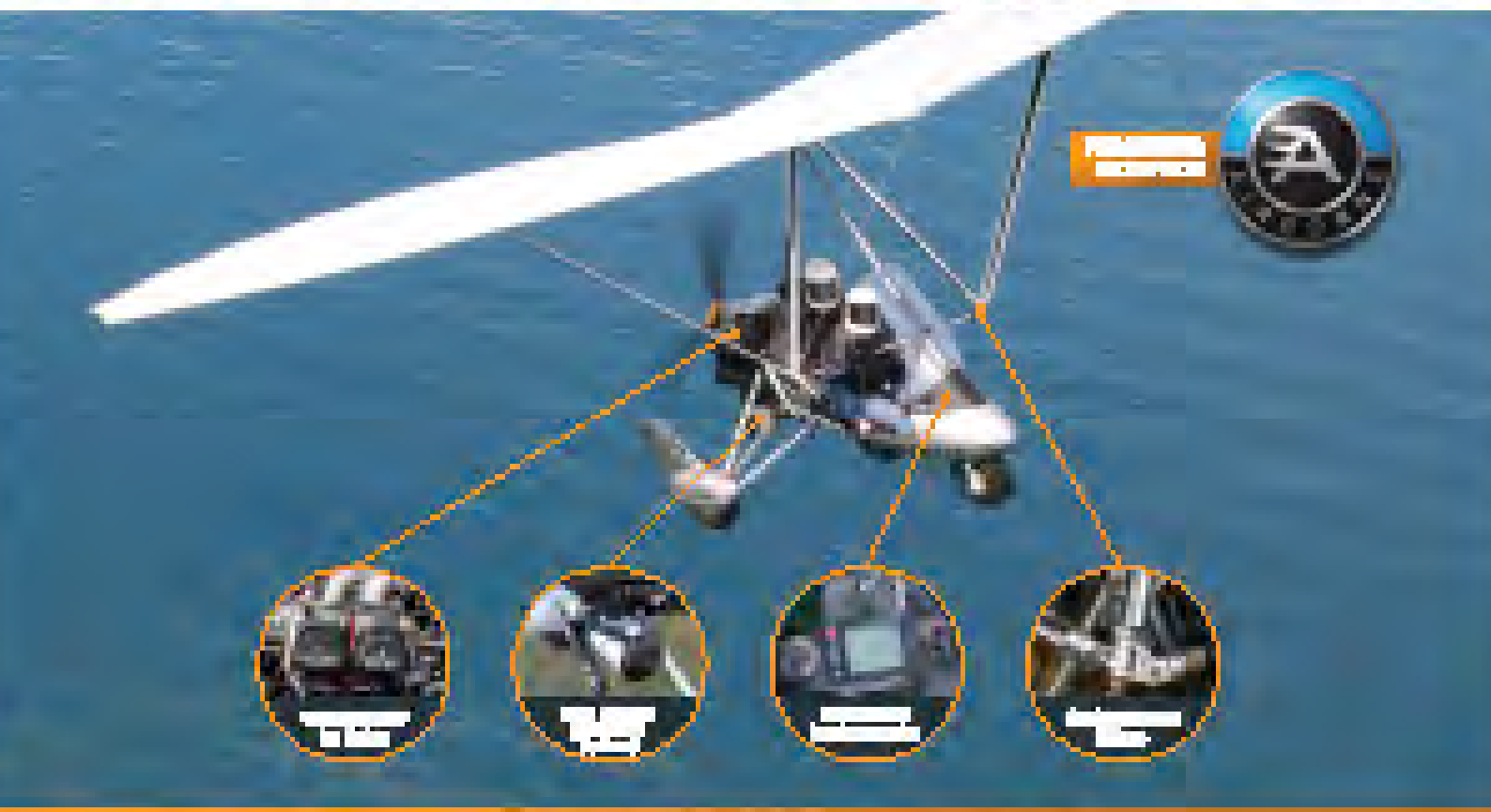


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the E6-B



In The first of a two-part article, senior instructor Paul Smith comes to terms with the most important computer pilots use

I'VE never liked doing things I don't fully understand. Why am I doing it and how does it work?

It's like being a child asking "why?" and copping the parental position of "just do it because I say so". No-one has ever learned anything that way. Understanding doubles the learning.

Similarly, I've always found my Flight Computer, an E6-B, to be something of an enigma. It always gives the right answers for course corrections, but I've never really understood how. The numerical slide rule face, for me, is relatively straight forward, but not the course correction face. Being a civil engineer, maths has always been a reasonably strong point for me. Vector geometry never bothered me either, which is exactly what our Flight Computers are using to give course corrections, ground speed etc.

However, despite being a senior Instructor, I've lately been embarrassed to have to admit to Nav students that I couldn't properly explain or remember why the damn thing works. And being reduced to the "parental" response is clearly not a satisfactory training response to my students.

So I set out to design my own Flight Computer from first principles, first on graph paper then with scales and protractors. Eventually the penny dropped- it finally made sense! Despite the age of GPS, and because students will always need to do their cross country endorsements from first principles with slide rules, maps, pencils and protractors, there may just be a few others out there in my position too

who would benefit from my soul searching. I hope it helps your understanding and improves your safety.

Heading + Wind = Track

When we begin learning to fly, one of our first lessons introduces aeronautical principles around lift and drag, and the effect that wind speed relative to the aircraft has on these. We learn to take off into wind, not downwind, in order to minimise our take-off distance, but once airborne the aircraft is influenced entirely by the wind direction and our relative airspeed, not by any contact with the ground. We learn that if the aircraft can lift off at an airspeed (TAS) of 50kts, then a 10kt headwind allows us to be airborne at just a 40kt groundspeed (GS). Conversely, a 10kt tailwind means we must achieve a 60kt GS to be airborne.

You have just used (perhaps unwittingly) vector mathematics according to the simple equation

Heading + Wind = Track where the vectors happen to be parallel and negative (headwind) or additive (tailwind). Diagram A shows the simple vector geometry involved. The vectors have been drawn off-set from each other for clarity.

What is a vector?

It is a measurement of something which has a directional component to its quantity. In our case, the wind vector has direction (degrees true from which it is blowing) and

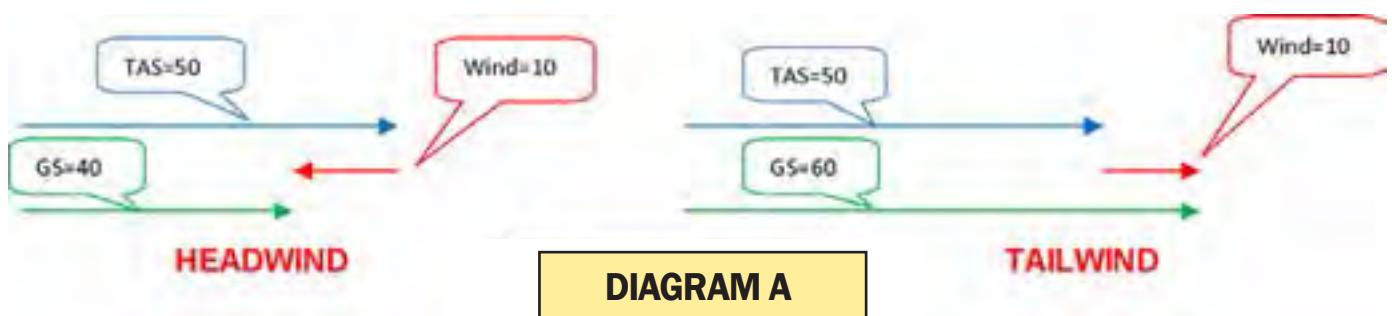
speed (knots). Its correct term is wind velocity rather than wind speed and is quoted in a standard format such as 270/15. The feature which confuses many students is that the compass bearing quoted with wind speed is NOT the direction TOWARDS which the wind is blowing, but the direction FROM which it is blowing.

This seems counter intuitive because all our other compass bearings for aircraft heading and track are TOWARDS our direction of travel. I suspect the explanation is hidden in the mists of time - we turn our face into the wind to sense its direction because that's where our sensory organs are concentrated. We smell smoke from the fire, see rain from the storm, prey smells the hunter coming and vice-versa. Hence the direction FROM which the wind is blowing can be a major indicator of potential danger.

How much can the wind affect heading?

Our other frequent experience of the vector equation above, is having to allow for drift in the circuit to ensure we fly a good rectangular pattern, particularly on the cross-wind and base legs, or when taking off with some cross-wind component and feeling the aircraft "weathervane" into the wind at lift-off.

Instructions on the flight computer use True Air Speed (TAS). In the past we typically ignored the conversion of IAS (Indicated Air Speed) to TAS because of the low speeds and altitudes at which ultralights



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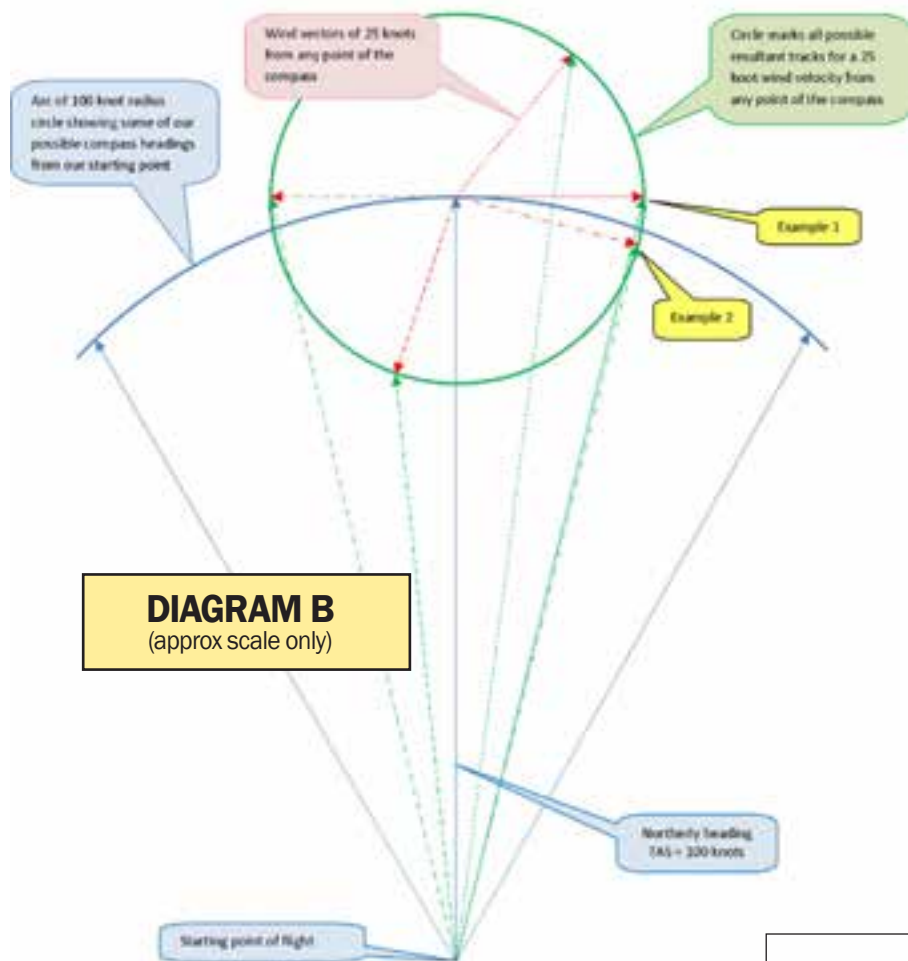
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flew. With RA-Aus aircraft now capable of 125+kts at 10,000ft, we can't afford to ignore it in many cases. An aircraft flying at 90kts IAS at 5,000ft in 20°C air temperature is achieving 100kts TAS, which is too large a difference to ignore for navigation purposes.

We'll assume our aircraft flies on a northerly heading at a TAS of 100kts, that the wind speed is 25kts, and that it could be blowing from any direction. Diagram B (approximate scale only) shows all the possible resultant ground tracks and speeds which we can fly under these conditions (green circle). Maximum and minimum GS are 125kts (southerly tailwind) and 75kts (northerly headwind). Several vector samples are illustrated, but two special cases are worth examining.

Example 1: Northerly heading at 100kts and 25kt westerly wind (270°). The resultant vectors form a right angle triangle where the track speed can be calculated using Pythagoras' Theorem from simple geometry.

Track speed2 = Heading speed2 plus Wind speed2

Track speed2 = 100² + 25² = 10,625

Track speed = √10,625 = 103kts

Track direction = angle which has tangent = 25 ÷ 100 = 0.25, hence 14°02'

Example 2: Maximum deviation from our northerly heading is defined by the resultant track which is tangential to our 25kt wind circle, which is a slightly more easterly result than Example 1. Again this is a right angle triangle but defined slightly differently because the right angle is in a different position -

Track speed2 = Heading speed2 minus Wind speed2

Track speed2 = 100² - 25² = 9,375

Track speed = √9,375 = 97kts

Track direction = angle which has sine = 25 ÷ 100 = 0.25, hence 14°29'

These two examples demonstrate that in some simple cases where vectors are at right angles, the calculations are relatively straight forward using simple geometry, even if you have to re-read your high school text books.

It also explodes the commonly held view by many pilots that the largest deviation from your heading is caused by a wind at right angles to that heading. In fact, it's caused by a wind with a slight headwind component, the actual bearing of which will vary depending on the ratio of wind speed to your TAS, and in our example blowing from 284°29' not from 270°. The error caused by this incorrect assumption is relatively minor, around half a degree, or 0.5 nautical miles in 60 in our examples. Remember the basic rule of thumb that 1 in 60 approximates one degree? Clearly the error increases for slower aircraft in stronger winds, around 3.5 nautical miles in 60 for a TAS of 60 and wind speed of 30.

Another fallacy commonly expressed by pilots, that a wind directly abeam your heading has no affect on your groundspeed, is clearly demonstrated as false - 100 TAS becomes 103 GS in Example 1.

In summary then, the maximum possible deviation from our heading for any given wind speed is defined by the angle having its Sine = Wind speed ÷ TAS. If the reader wants to research the more complete set of equations, Wikipedia has a good article on both the history of the E6-B and the full geometrical equations.

Sine (Max Deviation Angle) = Wind Speed ÷ TAS
Max Deviation Angle = Sine-1(Wind Speed ÷ TAS)

Next month: How to apply this to the Flight Computer. 🛩️





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Red sock v green sock



MIKE Tuohy, the CFI at Chinchilla in Queensland, contacted me with a problem. He was training a chap who seemed to have a problem identifying left and right. When instructed to turn left, the student would try to turn right or, when told that the right wing was low, used right rudder to correct it. Mike wanted to know what was wrong and how to overcome the problem.

In fact, this is not an especially rare situation and I have often come across similar situations in the past.

One case, in particular, is worth commenting on.

Some time ago a German couple wanted to convert their German licences to Australian. After the paper work and briefing was completed, it was decided the husband would fly first and his wife would observe from the back seat. As we commenced our take-off, the aircraft, as usual started to yaw to the left and when the pilot did not act to correct it, I pattered 'more right rudder'. His response was to apply some left rudder. Again I repeated 'more right rudder' but again got no response. At this stage, his wife from the back seat leaned forward and told me to tell him to use left rudder. In spite of this being against all my natural inclinations, I told him 'more left rudder' and he immediately applied right rudder and the take-off and climb out proceeded fairly normally after that.

During the post-flight briefing, it was revealed the pilot had a form of dyslexia. Because of my medical background, I knew what this meant and also the implications for a pilot.

The word 'Dyslexia' is derived from the Greek meaning 'difficulty with words'. Dyslexia is a very broad term and can be mild or severe. It manifests itself in various forms, one of which is difficulty with spatial orientation and confusion determining left or right. The cause of dyslexia is not known despite intensive research, but we do know it seems to be related to the short term memory and

the information processing part of our brain.

We know it is not related to IQ levels or to any other idiopathic cause. There is no cure, but strategies can be developed to allow affected people to cope.

Nowhere is this more evident than in some of the very famous people who have been reported as having dyslexia.

Thomas Edison; Leonardo da Vinci; Richard Branson; Alexander Bell; Winston Churchill; Henry Ford; Pablo Picasso; Mi-



chael Faraday; Walt Disney and Steve Jobs are just some of those people.

(I wonder sometimes whether I have a mild form. When I am upside down performing a loop, I cannot decide which way to move the control column to keep the wings level).

People with a left/right interpretation problem, can develop strategies to over-

come or even mask their difficulty. For example; they might tie a piece of string around their right hands. Some will always wear their watch on one wrist or the other and know this represents left or right. One common strategy is to hold their left hand out with the thumb extended. This then forms the letter 'L'. Some sufferers even tattoo a big L and R on their hand. I know one air traffic controller who wears a red sock on his left foot and a green sock on his right foot so he can sort out port and starboard.

Generally then, pilots with this disorder can learn to cope. However if they are recognised during their training as not coping, they should be encouraged to visit a psychologist for proper investigation. Because the condition can be diagnosed in later life and can be in a quite serious form, consideration should be given to suspending their training until this assessment is made. People with this condition can be embarrassed and become distressed by their confusion. When offering counsel about referral to a psychologist, it would, of course, be prudent to have due consideration for their feelings.

In the case of Mike Tuohy, I advised him to try not mentioning left and right, but simply indicate with his hand which direction to turn. Also, because the confusion is with words, it may be useful to not to say, e.g., 'pick up the right wing' but instead 'keep the wings level'.

Another confusion can become apparent if the instructor uses the terms 'port' or 'starboard'. These words are archaic and should not be used in this modern world, especially if their use becomes confusing for the student.

If the dyslexic pilots out there have any specific strategies which help them cope with their own disorder, please let us know so it might help others. Names held in confidence, of course.

I will leave the readers with this safety message. 'It is better to be left than right!' 🐦

Email contributions to guruavius@gmail.com or editor@sportpilot.net.au

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PILOT NOTES

Airborne XT 912

Conditions: Light wind and turbulence

Pilot experience: 420 hrs, 113 on type

While landing on an agricultural strip the aircraft bounced and veered off the strip. The pilot applied power but was unable to prevent the aircraft from entering long grass after which it struck a fence and came to rest on its right hand side. The aircraft sustained major damage and the pilot suffered cuts and bruising.

Airborne Redback

Engine: Rotax 503, 175 hrs ttis.

The engine failed while the aircraft was in flight and an uneventful forced landing was carried out in a paddock. An inspection revealed that the nut securing the cooling fan had come off and the engine had overheated and seized.

Rono

Conditions: Light wind and turbulence

Pilot experience: 404 hrs, 198 on type

On touchdown a wind gust lifted the right wing and the aircraft veered off the runway. The pilot attempted to correct the drift, but accidentally applied throttle and the aircraft accelerated causing the wing to lift further. One wingtip contacted the ground and the aircraft came to rest on its side with severe damage to the wing, propeller and pod. The pilot suffered lacerations and bruising.

Aeroprakt Foxbat A22 LS

Engine: Rotax 912 ULS. 50 hrs ttis

While conducting circuits the oil pressure dropped to zero. The pilot carried out an uneventful forced landing and inspected the engine. The cause of the low oil pressure indication turned out to be a faulty oil pressure sender unit.

DEFECTS

Jabiru J230

Engine: Jabiru 3300, 710 hrs ttis.

AFTER an aborted take off due to a loss of power, the engine was examined and it was discovered that the No. 6 cylinder through bolt and stud had failed.

Piper Sport

Airframe: 267 hrs ttis.

DURING a pre-flight inspection, it was noticed that one of six fasteners attaching the nose wheel yoke to the pivoting nose gear assembly had failed. This allowed the yoke to bend, rendering it unserviceable.

Aeroprakt A22 LS

Airframe: 627 hrs ttis.

DURING an inspection, a crack was found near the LH undercarriage mounting bolt. Closer inspection also revealed a crack in a doubler under the floor in the same area. It was noted that the aircraft is operated from rough surfaces.

Evektor Sportstar SL

Airframe: 2500 hrs ttis.

DURING a routine 100 hourly inspection damage was found around the port main gear structure which required extensive repair. The aircraft has done approximately 12,000 landings.

X-Air S

Airframe: 276 hrs ttis.

WHILE cruising at altitude, the left door failed and the lower half of the door panel departed the aircraft. The cause of the failure is unknown but was possibly due to incomplete latching of the door catch. It has since been reported that the doors were not part of the original aircraft but were fabricated by the builder.



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PILOT TALK

Jill Bailey & Zane Tully
Operations Managers

Do you just turn on your GPS, hit 'Go To' and follow the pink line?

Flight planning for Natfly

EASTER has come around again and we are all becoming excited about heading to Temora, catching up with old friends, attending forums and seeing what is new and improved in the world of aviation.

How do we get to Natfly?

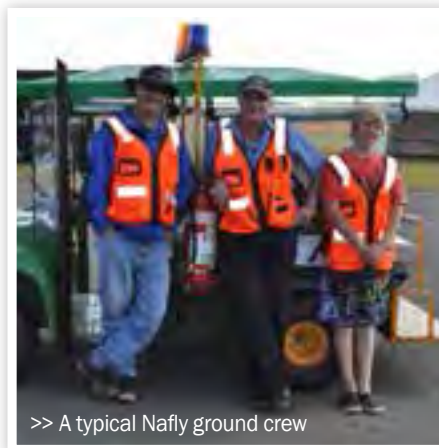
The obvious answer for many is by air, and preferably flying our own aircraft. When was the last time you did serious nav-ex pre-flight planning? Was it when you did your cross country endorsement a few years ago? Now do you just turn on your GPS, hit 'Go To' and follow the pink line? This is where I could start quoting regulations; you then roll your eyes and turn the page. However, as a Pilot Certificate holder, you are required to have a better than passing acquaintance with the rules under which you are permitted to operate your aircraft.

As part of a thorough pre-flight planning process, pilots are required to spend time planning. This planning should include as a minimum: headings, distances, ground speeds, estimated time intervals, appropriate heights, fuel calculations and weight and balance information. You must also plan to avoid controlled airspace, active restricted or prohibited airspace and ensure appropriate radio frequencies are ready along the intended flight path. This requires up to date charts including WAC, ERC-low, VNC, VTC, PCA and publications such as ERSA, along with weather and NOTAM information from www.airservicesaustralia.com. These processes form part of our responsibilities as a Pilot Certificate holder exercising the privileges and freedoms we all enjoy.

Why was the 'up to date' reference underlined? It should be obvious. Frequencies and airspace classifications change and pilots often arrive at an aerodrome on the wrong frequency, blissfully unaware of the trail of havoc they leave behind after they breeze into a circuit, wondering where all the aircraft are. A recent frequency change at Narrandera, only 52nm from Temora, resulted in many aircraft arriving at the aerodrome transmitting on the

old frequency of 126.7, while aircraft already in the circuit were operating on the new frequency of 132.85. As responsible pilots, we owe other pilots the courtesy of arriving at an aerodrome on the correct frequency and aware of local circuit procedures.

There is an excellent resource available online from www.casa.gov.au which used to be available in printed form, but now only as a download, called the Visual Flight Guide. Do a search on CASA home page for Visual Flight Guide and you will be taken straight to the page. This publication represents a one stop



>> A typical Natfly ground crew

shop for pilots with VFR information, references, appropriate CAO's, CAR's and AIP's relevant to flight planning for long distance and local flying, along with information about appropriate hemispherical levels when tracking west or east, distances from clouds, procedures at non-controlled aerodromes and more. It is an invaluable reference guide, providing essential information for pilots.

Important Temora information for flight planning

Temora has Restricted Airspace (R406), which may be active over the Easter weekend due to an anticipated aerobatic display. To ensure

you receive accurate information regarding this Restricted Airspace, enter the number R406 into the boxes in NAIPS when requesting the area 22 and YTEM forecast.

Temora now has an Aerodrome Weather Information Service (AWIS) which can be received from approximately 25-30nm around the aerodrome to advise of wind speed and direction, QNH, temperature and rainfall in the past 10 minutes. The information is updated every 10 minutes and allows the savvy pilot to anticipate and plan circuit structure for landing on the appropriate runway. It is accessed by selecting 134.45, transmitting a one second pulse and listening to the recording. Remember to return to the CTAF frequency 126.15 after receiving the weather information. Alternatively, call 02 6977 2896 and receive the same information before you take off. By the time Natfly is here, the frequency will hopefully be in ERSA, and it has also been added to the handout in the magazine and the AIP Supplement issued for Natfly.

Remember too, it is always possible that RA-Aus Operations and/or CASA may conduct ramp checks at any time, so now would be a good time to revise your requirements for Pilot Certificate and cross country flying. You should be asking yourself the following:

Have I checked that my RA-Aus membership, pilot BFR and aircraft registration are all current? Do I have current charts and ERSA and do I have the current weather forecast on board? Have I ensured my aircraft Take Off Weight has been calculated and is not in excess of maximum (MTOW)? Is my flight manual aboard the aircraft? Have I done the appropriate fuel calculations? Do I have my flight plan with me in the cockpit? Not only is this sensible flight planning, many of the items listed above are required by legislation, and we should always ensure we comply. Not just because we think someone may check on us, but also because we would like to be considered by our peers or friends to be professional pilots.

Safe flying, and see you at Natfly 2012.

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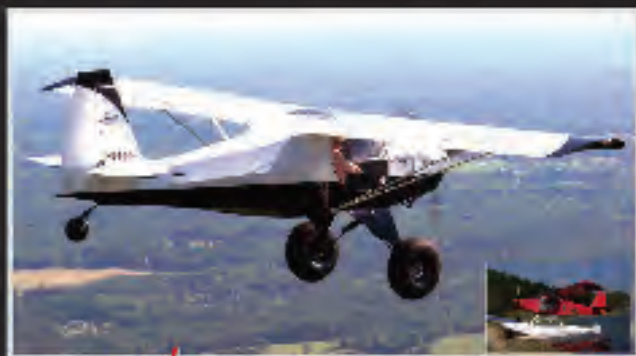
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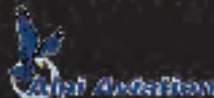
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I glided I DID



by Kreisha Ballantyne

RECENTLY, I received a letter in response to an article I wrote about an engine-off exercise as part of my flight test (SP, Jan, Hooray for RA) which inspired the CFI of The Byron Gliding Club to write to me, suggesting all students should first glide in order to familiarise themselves with engine off (or, engine absent) ops. Immediately, I wrote back asking for a demonstration. He responded, saying 'Sure! Come glide with me!'

The man is the legend, Norm Sanders - he has an entire Wikipedia page devoted to him, and is surely the finest gliding teacher in the land. I was quite bubbly with excitement and nerves.

But first, I had to get there. I flew to Ballina, where the Editor, Mr Bigg hangars his Atec Zephyr. Mr B agreed to follow me in Mimi (that's what he calls his aircraft) to Tyagarah airstrip to provide moral support for my first glide.

The flight from Ballina to Tyagarah (which I nicknamed Viagra

for reasons which will become obvious in a moment) is only 15 minutes. We refuelled at Ballina and took off (me first) to look for the airstrip, of which Norm had sent a photo. Sure enough, right on time, we spied the 1000m grass strip. I was relieved and delighted to see the wind favouring 05, allowing me to approach on the non-tree side facing out to the sea. The landing was peachy, the wind being only about six or so knots. Greeted immediately by Norm and his dog, we were then taken to the club to meet the other pilots. It was decided I would join the Glider Federation and have a full, hands on lesson. Mr Bigg landed in Mimi behind me and settled down to watch with a smug look on his face.

I was strangely nervous, but Norm was fabulous in putting me at my ease, explaining each facet of the strange looking flying machine with the extraordinary wings. Turns out it was a Scheib SF 25 Motorfalke, built in Germany.

"I know you can already fly," said Norm. "But this is some-



On short final, Norm pulled the airbrakes and hung out all the washing. The drag was phenomenal

thing different. It's not just about pressing buttons. Sometimes GA pilots take a little time to unlearn the parts of their training not necessarily useful for gliding. Some people think gliding is a step down, but it is, in fact, actually a different skill. Captain Sully, of the Hudson River incident, credits that landing to his training as a glider pilot, you know."

The first massive difference - apart from the size of the wings, the canopy, and the strange wheel on the low-lying fuselage - was the fact that the stick is operated with the right hand, leaving the left hand free for the airbrakes. It took me ages to undo the habit of holding the stick with the left. The cockpit panel was mostly the same, except for the "liftometer" (not the correct name, but that's what it tells you) which is kind of like a VSI.

Norm started the motor (a Jabiru 80hp engine) and taxied out and we took off in what felt like 50m. We climbed to 2000ft, and Norm demonstrated the characteristics of the powered glider. The first thing which struck me was how much rudder input was necessary. Because of the long wings and pronounced adverse aileron yaw, you actually have to lead into a turn with the rudder. I got the hang of it pretty quickly, but noticed that a left hand turn caused a nose drop and a right hand turned caused a nose climb. Norm explained that all new Motorfalte pilots had this difficulty. It's something about the seating position. Norm then demonstrated a stall, which was so sedate it was barely noticeable. Ditto the thermalling stall (the most dangerous and likely stall for a glider pilot) - again a very polite little shudder. Then, Norm turned off the engine.

"Let's glide!" he beamed.

Turning off the engine is a slow process. First you bring back the power little by little and check the cylinder head temperature until the numbers are suitable. And then - total silence, apart from maybe the sound of my beating heart, and throbbing veins. Funnily enough, once I realised we weren't going to plummet to the earth (yes, yes, I knew we weren't; I know it's not only the engine keeping us aloft; I can see I have allowed myself to become "engine dependent") I soon got used to it. There'd be moments where I suddenly shout 'no engine!' and Norm would beam. Only when we flew quite low over the ridges, to ride 'ridge lift' did I feel a little freaked out. But once again, I chilled and dug the feeling. It really is quite awesome. Until your instructor turns to you and says, "Boy, the wind has really picked up. Brace yourself for a rough landing."

A GA pilot always, always, has a go around in his or her back pocket. With gliding, there are no second goes. Admittedly, we had an engine, and it could have been powered up if absolutely necessary, but the Byron Gliding Club has a 'no engine landings' policy. Its pilots believe engine landings are not in the spirit of gliding. I rather got the impression that turning on the engine for landing would be the social equivalent of bursting into a Mariah Carey tune, scratching your armpits at the dinner table, or perhaps admitting you'd voted for the nudist party.

Closer to the ground it did get bumpy. The sock was swinging like a suburban couple as we joined a close downwind. Norm never let the strip out of his sight, and remained high saying, "with height and speed, you have a full bank account. As you get slower and lower, you start to withdraw from that ac-



count. The only time that account is to be empty is when you're on the ground, tied down".

On short final, Norm pulled the airbrakes and hung out all the washing. The drag was phenomenal. By now it was so bumpy, Norm was dancing on the rudders. Unlike me on such landings, he was not drenched in sweat. It looked like he was working hard, but he certainly didn't seem fazed. The ground roll was much smoother than I had expected and as we taxied back to the club he just said, "Phew! Quite a crosswind".

I was charmed by his humility. If I had taken a crosswind like that, I would have been yelling "Whooooo! I am the crosswind queen!" But, of course, I am still a 'Baby Pilot', and a bit of a prat at the best of times, whereas Norm (it turns out, unbelievably) is almost eighty, and a man of wisdom and dignity.

After the post flight briefing and the shaking of hands, I began to think of my own departure from the, by now, blustery strip. The wind had

picked up considerably. It was still mostly down the strip, but it had continued to strengthen. The upwind leg contained a stretch of tall trees that screamed 'turbulence!' As is his right as my boss, Mr Bigg bravely ordered me to go first as the guinea pig. Even though I was flying an aircraft with a reasonable weight and horsepower, I was still trepidacious, having experienced strips like these in late afternoons far too often. There would be too large a tailwind to take the other side, so it just had to be suffered. And suffered it was. I began with a short field take off, with the intention of gaining plenty of height to clear the worst of the burbly. But it just wasn't enough. You would have needed a helicopter to get out without aerial breakdancing.

I admit I swore. Despite having a Christian passenger, I am ashamed to say I took the name of the saviour and combined it with words rhyming with 'cluck' 'pit' and 'farce'. No pilot likes turbulence so close to the ground.

Mr Bigg said later that from the ground, the takeoff looked just like an extreme Dreamworld ride. His own takeoff moments later, he says, was just as bad and on arrival at Ballina, he had taken some time to get his seat cushions prised out of his shorts.

Back at home, I received an email from Norm declaring that I'd taken to gliding "like tape to a duct" and wishing I could have tried a few landings on my own (gah!). I'd already decided I'd like to try again. And again. And maybe again.

All my (Australian) life, I've watched surfers and wondered what was so magical about waves. What motivated people to get up with the lark, don an unflattering rubber outfit and plunge themselves into a cold sea. I think perhaps for them, it's the very same buzz as catching a thermal, or riding ridge lift, or managing a cross wind landing without power brings to a glide pilot. Getting joy from the elements. Thanks Norm, I'm glad I glid, I am. 🌊

2432 FISHER YOUNGSTER BIPLANE



19-4436 280 hours Jabiru 80hp. A unique aircraft, twice winner of best single seater at Narromine and best homebuilt at AAAA 2010 awards. Full panel 75-80 kt cruise 1000 FPM climb 4 hours range. Excellent condition. \$24,000. Ph:03 5579 3204.

2439 FOR SALE JABIRU J-170C



24-5281 Airframe 1700hrs, Engine 300hrs on new factory recon. engine, latest mods carried out by Jabiru factory. New tyres, Dynon 10 EFIS plus analog instruments, Garmin 296 colour GPS, external charge connector, Lambswool seat covers, spats as new, adjustable rudder pedals, strobe, L2 maintained, always hangared, one owner since new. \$67,000 incl GST. Phone Bill 0429 054 205.

2518 19-3651 ZENITH ZODIAC 601 HDS



(HDS = High speed wings) 105 hours, EA81 engine, 3 blade ground adjustable prop, wing lockers, 60 lt tank. This is a unique aircraft, it has Stick and Throttle BOTH sides. Flaperons & electric Trim. Easy to land & fly. Hangared at Bacchus Marsh Vic \$27,000. For info contact Adam 0417 589 154.

2521 SHARE IN DRIFTER OWNERSHIP



Third share in a Drifter at Cessnock airport. 582 blue head engine with less than 100 hours. This is a great opportunity for part ownership of a proven aircraft and economical flying. Third share is \$5,000. <http://tinyurl.com/driftershare> Contact Lindsay 0414 586 255 or Leighton 0407 564 174.

2568 KR2 - FAST & FUN



Jabiru 2200 engine, 110 Hrs TT, Sweetapple Propeller, Galaxy Ballistic Chute, XCom 720 Radio with Intercom, 110lt Fuel Capacity, L2 maintained, Always hangared, 110Kt Cruise, 15lt/hr, \$28,000, 07 4095 3956, 0419 654 048, more at <http://athertonairport.com.au/atherton/forsale/kr2>

2580 TECNAM BRAVO LSA



Immaculate condition only 165 hrs TT. 100hp Rotax 912. Dynon EFIS D100. Garmin Mode C transponder. Garmin radio. AvMap large screen colour GPS. Dual fuel flow meters with electric fuel gauges. Electronic trim. Fully maintained by LAME. Always hangared. \$113,000 + GST. Phone 0411 471 273 for more details.

2588 ROBERTSON STOL B1-RD

The ultimate STOL fun machine, this 95-10 built by Robertson Aircraft Corporation using standard aircraft components. Massive 162sqft wing gives stall speed of 15mph and cruise speed 38mph. Website www.ultralightnews.com/antulbg/b1rd_ultralight.htm. Original Cuyuna 30Hp plus spare Rotax 503. \$4,500ono. John 0427 757 922

2644 JABIRU LSA-55-1059



1600 hrs TTIS. less than 200hrs on factory rebuilt solid lifter engine, with new through bolts, ignition coils & leads. Full GA panel with Bendix King transponder & Icom A200 VHF, Garmin 196 moving map GPS. Recent 2-pack repaint, interior immaculate. Always hangared, one of the neatest around. Flies beautifully, cruise 95-100kts at 13-14 litres/hour. Full L2/LAME history from new, Regularly serviced. Selling to make room for new project. Located near Launceston, Tas. \$38,500 Ph 0419 375 291.

2663 AERO PUP



2 seater only flown 30 hrs. Fitted with Jabiru 6 cylinder engine. \$45,000, cost \$55,000 to build. It takes only 5 minutes to fold the wings back to put aircraft on a car trailer Ph 0412 421 032.

2696 DRUINE TURBULENT AT100



19-4864, built under 101.28, brand new with permit. 0hrs. Single seat wooden, VW 1835cc. Expect 90+kts cruise, stall 32kts. 14 lph, total 401. dual ign. (Bendix mag. + coil), 25A alt. Fifth plans - built by experienced builder. \$19,000ono. Ph: 02 4351 1437.

2671 JABIRU SP 500/6 19-3717



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

2722 JABIRU J170



24-5182 LSA MTOW 600kg Engine 273 TTIS since factory overhaul Exterior & Interior 9.5 out of 10 Hangared always. Micro Air VHF & Transponder Garmin GPS 296, colour moving map. Maintenance Release Expiry 08/06/12, 86 hours to run. Factory built 2007, TT 1306. \$63,000 inc GST.O.N.O. Contact Tony:tonypete2@bigpond.com or 0412 474 016.

2750 JABIRU SP-6 19-3485



Regd to 27/6/12, TTIS A/F 449hrs, Engine 14.4hrs (new), 3300 (120hp) Hydraulic Lifter. Garmin 126/8 GPS, Icom A200 Radio/Intercom, ASI, ALT, RPM, EGT, Turn Co-ord, Oil Pressure & Light, VSI, CHT, Oil Temp, Volts, Elec Fuel Pump, Compass, Throttle Lock, Wheel pants to mains, Hyd Brakes, 80lt Tank,

RA-Aus head office & Members' Market enquiries

Ph: (02) 6280 4700 Fax : (02) 6280 4775 E-mail: admin@raa.asn.au Website: www.raa.asn.au

Cockpit cover, Build Books, Extras. VNE 132, Cruise 110-120Kts. Asking \$60,000ono for quick sale. East Gippsland. Ph Ray 03 5155 5181 or 0411 956 734. rjwheels@gmail.com

2760 JABIRU J230C



Factory built, Natfly 2008 winner, 24-4937. Excellent condition, Flies "Hands Off". Always hangared, TT420hrs, Microair radio, transponder, Fuelscan 450 (couples to GPS),. Low fuel light, new battery, dual stobes, heater, 10ply tyres. Serviced every 20hrs. Many extras. Ph: 0418 930 100. \$81,000 includes GST. Will be at Natfly this Easter.

2768 EVEKTOR SPORTSTAR



24-4467 2005 model. Bendix/King VHF and Transponder. Rotax 912ULS, 1100 hrs, 2000 TBO. Always hangared and L2/LAME maintained. Located at Gawler. \$75,000 Bas: 040 5011 330 bas@scheffers.net

2776 SAVANNAH ROTAX 912



19-5106. Very low kms, rarely used. Slat wings. Always hangared. Local WA delivery arranged. \$50,000. Ph. 0418 932 756.

2783 PARADISE P1



In immaculate condition. Airmaster Constant Speed Propeller , Dynon D180 plus all standard gauges. Dual axis auto pilot HDG & ALT hold. Large screen Garmin GDU 370 coupled GPS Transponder with Mode C, ready for entry into Class C airspace. 142Ltr long range fuel tanks. Low hours suit new plane buyer. PH: 0412-834 225.

2793 MUST SELL NEW PRICE



24 Rego, Aug 07, Airframe and engine 460hrs, Rotax 914 turbo 2000hr TBO. Autopilot, VHF and UHF radios. GPS, AOA, transponder, in flight adjustable prop. Fuel mizer, computer aided navigation (Fagawi and Mountain Scope) and 120L/500+nm fuel capacity at 110kt. Located Warwick QLD \$87,000 Ph 0407 733 836.

2796 XT 912 TUNDRA



Streak 3. Under 100 hours TT, in Mint condition. Extras include, Rear hydraulic disc brakes, Engine cover, Micro-air radio, Lynx headsets, Aircraft high output strobes. Price is \$55,000. Contact Rob -0428 527 200.

2800 SPORTSTAR SL



Immaculate low hour Sportstar SL, private use, 210 hours approx TTIS. Dynon D10A EFIS, Almost new Varia 2-blade in-flight adjustable prop, Garmin GPS495 AirGizmo dock, electric t&b, Whelen LED landing light and external power socket. 600kgs MTOW. L2 maintained, RA-Aus registered. \$120,000

- no GST. Please call Mark 0414 642 340.

2801 SUPA PUP MK 4



19-3572 41 Hrs TT Single Seat, Jabiru powered, superbly built and very nice to fly. Fold wings in 2 minutes for easy storage. Radio, fuel flow, GPS, all standard instruments. Cruise 85 kts, \$18,000 ONO, Sydney area, Phone Robert 0433 833 946 or missyc140@hotmail.com for photos

2802 XT912 STREAK 3



32-5351 Microair radio, Linx headsets/intercom, Helmets, pilot 3 G.P.S. panniers + more. 1 covers, Rear discs, 165hrs TT. One owner. \$48,000 . Medway. Raven. Jabiru 2200 Sweetapple prop. Full instruments, 90 litres of fuel in 2 tanks.

Cruise 58kts. Disc brakes. Radio, headsets, intercom, Helmets. pilot 3 G.P.S. panniers + more. 1 owner. 101hrs TT. \$22,000. Contact Greg. 0419 633 523 bissaker@grapevine.com.au

2806 KARAONE



10-3025 Reluctant sale due to ill health. Rotax 503 two stroke electric start. lcom radio. Hangared at Narrogin WA. Good condition. \$15,000. For more information phone 08 9419 3408.

2809 JABIRU J160 2200A



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maximum limit). Photos - \$15 (include stamped addressed envelope for return). Neither RA-Aus nor Stampils Publishing accepts responsibility for any errors or omissions. The Members Market is subsidised by members and is for non-commercial sales only. RA-Aus and Stampils Publishing reserve the right to withdraw from publication, without refund, any ad deemed unsuitable, including low quality or faulty images.

MEMBERS' MARKET

95% complete. Built by experienced builders. Extras include VSI, dual strobe (not fitted), upholstery kit, interior finished in speckle paint. For further info contact John (02) 9351 7137 or Duncan on (02) 9351 2459 between 8.30 AM & 5.00 PM email john.todhunter@sydney.edu.au \$49,900 or \$39,000 less engine.

2813 JABIRU J160C



24-4478 TT 801 Built 05. Private use only, Garmin 296, Microair T2000 transponder, all major engine services by LAME & L2. Up grade cyl heads, new pistons, rings, Conrod bearings, fuel pump. Up grade through bolts. New main landing gear wheel bearings and rubbers, bolts. Have spare prop, tyres & tubes. Sale to make way for upgrade. Always hangared. Asking price \$50,500. Contact Taz 0401 367 785. Busseton WA

2814 SUPAPUP

Single seat. 2200 Jabiru, 90k cruise. \$18,500. Ph: 07 4665 3255 or 0407 750 325.

2816 TRIKE

2002 Executive. 295h, 582, \$18,500. Ph: 07 4665 3255 or 0407 750 325.

2822 KR2

Unregistered. Has flown in Canada. Needs tidy up and regis-

tration RAA or VH, 2 seats, taildragger, inline 4 auto conversion with belt drive PSRU and wooden prop. Save yourself the trouble (2-5 years) and cost (about \$40,000 est) of scratch building. \$14,000 ono. Call Martin 0419 333 525.



2823 XT912 - AIRBORNE TRIKE

New sst wing with only 45hrs, base 450hrs, excellent condition, no incidents, always hangared and covered. Set up for touring. c/w covers, pylon bag, o/night

covers, landing light, bar mitts, engine cover. Trailer available. For further info please phone 0419 518 353. Making way for new aircraft.

2827 JABIRU SP6 24-7987

Jabiru SP6 3300 engine (solid lifters) approx 175 hours total time. Instrumentation includes DG, AH, VSI, electric turn and bank, ASI and TSO'd electronic altimeter which includes density altitude, pressure altitude, OAT, VSI and altitude alert functions. Microair radio, Microair transponder CHT, oil temp and pressure, vac gauge and tachometer with hour meter plus nav lights and strobes. Garmin Aero 500 GPS, Sweet Apple Propellor plus spare prop 85 Litre fuel tank. The aircraft performance is plan 115kts at 18 lts per hour but usually achieve 120kts. Phone 0408 544 970 or john@wsoc.com.au

2828 SAVAGE CUB 2009

90 hrs. Rotax 912 100HP. Factory built-RAA reg. As new. Many factory extras. Transponder. Rear instruments. Runways optional. \$85,000 ono. 0418 681 898 or email: savagecub5@gmail.com for more information.

2829 AIRBORNE 912 TUNDRA

SST Wing. As new-20hrs TT. Radio, intercom, Helmets, Covers and BRS. \$60,000 or reasonable offer. email: 912tundra@gmail.com or 0418 681 898 for more information.

2831 PEGASUS TRIKE

32-3908 X1-Q is 2 Place microlight. Has 347 TT on Rotax 462 Engine and Airframe. Has had 2 owners and registered to May 2012. In very good condition and always hangared. Helmets, intercom and base covers with sale. Full history of maintenance. \$8,000 - Ben on 0417 262 330.

2832 SAVANNAH



Built 2006 with leading edge slats, Rotax 100hp, TT 180 hours always on 98 octane Mogas, 4 blade Brolga prop, Tundra tyres, long range tanks, trim and fly hands off and mushstall at 26 knots. Always hangared with fuel, oil, oil filter and air filter changed every 50 hours and well maintained by owner. Can

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rent hangar to suit near Brisbane also. \$48,000. Call: Al mobile 0427330020 or alshort01@hotmail.com

2835 FLY SYNTHESIS TEXAN TOP CLASS 600



Manufactured December 2007, excellent condition, always hangared, TT 600 Hrs, 2000 TBO, Rotax 912ULS 100HP, cruise 110/115 knots, 100 litres fuel (2 x 50 litre wing tanks), L4 maintained, strengthened main undercarriage (heavy duty), ballistic parachute, wing & tail strobe plus nav light, blue tinted canopy, carby heat, cabin heating, electric trim on stick, 2 x noise cancelling headsets, cabin key lock, canopy cover, Garmin SL40 comm, Garmin GTX327 transponder, Trutrak ADI 3, Trio Avionics 2 Axis autopilot coupled to Garmin 695 GPS, toe brakes, new tyres, wheel fairings. \$12,3500 Ph: 0400 888 362.

2836 RAMPHOS TRIDENT

32-7039 Weight Shift LSA (Amphibian) Exceptional performance: MTOW: 600 kg Max payload 338 kg VNe 67 Kts VSO 31 Kts. Digital instrumentation. Minor hull repairs completed. Wing HZ15S, ROTAX 582, Composite five blade propeller. Transport by trailer. Trailer NOT included in sale. Australian CoA issued 20.01.09. Details www.planesales.com.au

2837 BREEZY 19-906



Built 1994, 420 hours total time. Ground up rebuild finished mid 2011. Comprehensive receipts for \$37K of work and new equipment. Engine Rolls Royce 0200 - 100HP with 1680 hours to run. This is a sweet aircraft in like new condition, you can expect years of trouble free economical fun flying. \$50,000. PH. John 0418 727 575

2839 FOXBAT A22 L



Built 2005. 200hrs, Rotax 912 ULS. X Com radio, microair transponder, JPI FFM, Garmin 296 GPS. Excellent condition, always hangared. Complete set of canopy covers included. \$75,000. Ph Jeff 0400 505 058.

2840 DRIFTER ULTRALIGHT



Rotax 582 wire braced, rego 25-0355, 845h total

airframe, new upholstery, electric start, UHF, VHF, always hangared. 4 blade brogla prop, assorted extras including air seeder, helmets, jackets, spare parts. \$24,000. Phone Doug 0458170470.

2842 SPORTSTAR MAX



2009, 380 hours T.T. full panel incl, Garmin 495 GPS, Garmin SL-40 com, transponder, plus Dynon EFIS. Electric trims. In new condition, work available if required. \$115 000 + GST. Ph. 0419 784 715.

2843 ZERO HRS FACTORY LIGHTWING



This factory Lightwing with a new, zero hrs 912s engine is ready and legal for flying school operations or for a discerning private owner. Recently rebuilt with new fabric and in very good condition. Privately owned and maintained by an L2. This aircraft flies exceptionally well, Cruise 83km. \$49,000. Ph 0419 132 777.

2844 CORBY STARLET 19-7636



First flew November 2010. TT 70 hours. Jabiru 2.2 engine. For more information contact John Edwards at johndanjan@tadaust.org.au or ring (08) 8767 2907 or 0408 891 159.

2845 LIGHTWING 25-0699



Tail dragger GR Helliview factory built. 912S engine 600hours. All instruments VHF & UHF radios, colour GPS. aircraft in good condition. \$38,000. Ph. Bob 07 4939 7897. This aircraft had previously been advertised with an incorrect phone number.

2846 AEROCHUTE 32-4752

Wide top plate, bolly prop with chip resistant leading edges, jerry cans & other accessories, on open trailer that tows well with 4 cyc car. Reason for sale: bought motorbike. Located Sunshine Vic. \$12,000. Ph Frank 0417 114 782.

2847 GENESIS SLIPSTREAM 4142



Always Hangared, as new. 100 hp Rotax 912 uls, 120 hrs TT airframe & engine. Warp Drive ground adjustable prop. Stratomaster Digital panel, Garmin 296 GPS, Xcom VHF. T2000 transponder. 2 sets of noise activated head sets. 2 axis electric trim, 70 lts fuel. Take off in 150 mts land the same. 2 seat side by side very comfortable & roomy. All log books, build & component manuals. Hervey Bay area. Ph Terry 0400 411 772 or TERENDY@bigpond.com \$34,500 ONO.

2848 AIRBORNE MICROLIGHT TRIKE



LC 582 Outback. Hangared at Bunbury airport. Meticulously logged 187 hours. Excellent condition and recently serviced by Chief Flying Instructor. Includes Airborne trailer, all equipment and heaps of extras. \$25,000. More info: <http://stayingintouch.com.au/microlight4sale/>. Brett. 0412 950 399.

2854 ZODIAC 601 HD

912 Rotax motor. Airframe completed, many extras. Ph Stan 07 4661 4698.

2856 ZENITH 601 XLB



350hrs TT, Jabiru 3300, Hydraulic lifter with hollow push rod upgrade, all AD's current. Petroni 3 blade prop, Cummins Spinner. Standard instruments and engine gauges. XCOM radio, Micro Air Transponder, Air Gizmo dock for Garmin x96. Electric flaps, Ray Allen aileron/elevator trim controls on the stick. Matco wheels and brakes, Canopy Cover. Excellent condition, superb to fly. Hangared Cessnock NSW. \$59,900 ono. Full build log available. Contact Work: 02 9925 5032, Mob: 0402 829 966, email: eddie.seve@clarity.com

2857 JABIRU 2.2 SK 19-3521



Total airframe and engine 180 hrs engine. Service every 25 hours, Large Wheel & Spats included but not fitted, 65ltr tank with new electric fuel gauge. Tank Relined, New Odyssey battery 625. Cruise 90kts @ 12/15ltr per hour, All necessary instruments, Always in a hangar. Beautiful aircraft to fly, Climbs at 1200 to 1500 feet p/m. Also has a photo bay on pilots side, Adelaide SA. \$37,000 (\$41,850) REDUCED !! Email: Adelphipt@yahoo.com.au Inspections welcome at any time. Contact Nick Ph 0415 835 149.

2858 JODEL D18



MEMBERS' MARKET

Project for sale. Wooden aircraft, 2 seat, 87-knot cruiser on 65-80HP. Empennage and ailerons completed and ready for covering. Fuselage 90% completed, includes 2 Fuel tanks, new Sliding bubble canop, wing ribs completed...Wing spar completed and signed off by LAME.U/C 75% complete, numerous hardware items, all ply and 4130 to complete aircraft included. Asking cost of materials \$7,800 Ph: 08 8242 1275.

2859 KT76A TRANSPONDER

With mounting tray and an A30-2 altitude encoder. Both items were working at time of removable, aerial not included, some wiring for encoder to transponder. Removed to fit an efis & nav/com in my RV4. \$680. Ph: Ray 0428 409 107.

2860 SKYFOX GAZELLE 4685



This Gazelle has new fabric on wings aluminum aileron hangers, full cockpit instruments bolly 3 bladed prop, leather seat, new paint and decals all mechanical history \$34000 including purpose built trailer. Based in Rowville Vic. Email John: jfwig@netspace.net.au or 0417 032 528.

2861 COLYAER MARTIN 3 LSA



As seen at Natfly 2009/10. Excellent condition, 252hrs TT, Rotax 912ULS 100hp, AirMaster fully featherable CS prop, Dynon 180, Garmin 296 GPS, electric trim. Glide ratio better than 23:1. Cruise 97kt. 130L fuel, 600kg MTOW. Great visibility. \$110,000. Will deliver. Phone or email for more details. WA 08 9851 4147, jandshoward@westnet.com.au

2862 DRUINE D5 TURBI (1991)



Airframe & engine (Blackburn Cirrus Minor with extensive spares) TTIS350. (Propeller Invincible Airscrews) TTIS60. Takeoff run 150m, lands easily in 300m. Stalls 27kts, cruises 90kts, climbs 700fpm, range 3hrs. \$32500 ono. aduff64@hotmail.com . French design, extremely manouverable, light & crisp on controls.

2863 ZODIAC 601HDS



Rotax 912 80hp 420 hrs A/F and Engine very well built aircraft originaly VH reg now RAA 19-3855 full panel including A/H,VSI,Icom A200 ,Transponder, Garmin 296.Airmaster CS feathering variable pitch propeller 70hrs since new,125 LTS fuel in 3 tanks, toe brakes, electric elv and aileron trim excellent cond and great to fly hangard bindoon WA \$38,000 Ph: Tim 08 9295 1484 mob 0410 660 212.

2864 SLEPCEV STORCH



Factory build, as new 200hrs, rotax, 100hp uls, ideal shortfield aircraft, always hangared. \$60,000. No tyre kickers. Ring Joe 0419 255 746.

2865 WANTED

2 seater BIPE like Fisher Classic or mono like Pietenpohl air-camper. Please send details to rolf.gerste@gotosage.com Mob. 0417 837 933.

2867 NIEUPORT ELEVEN, 10-1968



7/8th scale WW1 replica fighting scout. Cruise 63knts, VNE 100knts, stall 25knts, Rotax 503 SCDI, ASI, ALT, TACHO, dual EGT, 'machine gun' Absolutely

Best in OZ. Multi award winner, Fantastic fun, great at dogfighting birds and the 'archibald' blues. Watch out Von Richtofen it's only \$22,250!! MIKE 0422 231 520 (8am-8pm) or nieuporthappy@y7mail.com

2868 JABIRU J170

2010 Factory built Jabiru J170. Always hangared and



professionally maintained. No accidents. Complete with headsets and spats. Fuselage has 1,100 in service. Has just had a 0 hour factory reconditioned engine fitted. This is an ideal aircraft for a private owner and it will be available late April, 2012. The Committee of the Adelaide Soaring Club has decided to purchase a new aircraft and is offering 24-7314 for sale at a very reasonable price of \$66,500 o.n.o. For enquiries contact: Karl Faeth. kfaeth@chariot.net.au 0414 701 019.

2869 EVEKTOR SPORTSTAR



2007. Only 138 hours TTIS - owner upgrading to 4 Seat IFR. Fresh 100 hrly, level 2 maintained, always hangared. 3 blade Woodcomp in-flight adjustable prop. Bendix/King Xpdr and VHF. Garmin Aera 500 GPS. Tru Track ADI. Electric trim. Full covers. Awesome STOL performance. Approx 23L/hr All A/D's complete. Townsville, QLD. Text Chris with email address for info and photos. 0419 668 743. \$115,000ono. No GST.

2870 ZENAIR STOL CH 701



Rotax 912s 100 H.P. T.T 412hrs. 3 Blade Kool Prop 65 hrs. Standard Eng. Gauges plus Elec. Fuel pump,

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CD-ROM DIGITAL PDF BOOK \$50.00
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2871 CHEETAH

Part kit form Morgan Aeroworks, fuselage, seat belts and fuel tank, \$5,000, 0423 419 464.

2872 GAZELLE 24-4308



97 model ex GA aircraft with T&B, AH and Transponder, stock airframe with 1644hrs, and 912A with 1222hrs. All AD's done, average condition, honest, easy to fly aircraft, 75kt cruise @ 14Lph. Suit first time owner, has folding wings (no trailer). \$27,500 ONO, phone 0425 323 306 or email; pylon500@gmail.com

2873 SONEX



Taildragger. Aerovee 80HP. Polished metal. Dual controls. Garmin 196 GPS. New tinted canopy. Microair Radio. Grand Rapids EIS. 60 litres fuel capacity. 18 litres / hour. Cruise 100kts. Aerobatic. TT 90 hour \$49,000 OBO Contact Shane Fewings. Phone 0412 537 730 Email: sonex386@gmail.com

2874 SAVANNAH FOR SALE



Original slat wing. True STOL performance. 26 knot stall. 290 hours airframe & engine - last 240 on premium 98 octane MOGAS LAME maintained Always hanger stored Good condition COMMANT antenna XCOM radio/intercom Fuelflow meter Warp

Drive propellor Rotax 912 ULS 100 hp engine. Asking \$62,000. Contact: 0417141542 or email kym_trewin@hotmail.com

2875 ENGINES

A65 CONTINENTAL O-170, 420 TT, currently installed in operating aircraft, can view running. Wooden Sensenich prop also available, \$9,000 Ph 0418 459 147.

2876 SAVANNAH CLASSIC 100HP



19-4299 IN VICTORIA. Just 105 hours only. Hangered in a vacuumed hangar. Immaculate two pack paint. Instruments include Radio, Transponder, Turn, Intecom, EIS, Horizon, GPS, Headset, Strobe, standard gauges also. \$62,000. Ph: 0428 516 138 / 03 5627 8555.

2877 THRUSTER



582 rotax t/t frame and motor 357hrs skins good. \$12,500. Ring Brad 0449 798 809.

2878 SAPPHIRE

Good Condition. 447 Twin engine. \$7,000 O.N.O. Ph: 02 4443 8307.

2879 SAVANNAH SERIES 2 VG 2005



455hours. 100hp 912. Always hangered. 150ltr tanks @ 17 ltrph. Tundra tyres. Three bladed Kool prop. Landing light. Bubble doors (makes it wider). X-Com radio with inbuilt intercom. Extended luggage bay. Fuel flow meter and standard instruments. Lowrance 2000c GPS mounted. \$53,000. Ph: Tom Grierson 0419414031 or email

Enquiries

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MIKE APPS is the successful candidate

There were 317 valid votes, 36 invalid votes.
All the candidates have been advised of the results by telephone.

RESULTS		
	First round votes	Second round votes*
Mike Apps	150	160
Dave Caban	75	80
Colin Jones	37	-
Mark Dunstone	55	61

*After the elimination of the candidate with the lowest number of votes and distribution of the second preference.



16 voters elected not to mark second or subsequent preferences.

Ken McCloskey and Max Brown witnessed the counting and Malcolm Yates (a non-member) was the scrutineer.

I am delighted to give something back to my life's obsession

I WOULD like to take this opportunity to thank all those members who voted for me in the State Election which closed on Friday February 3.

After a lifetime of flying enjoyment, I am very humbled and delighted you have elected me to the RA-Aus Board and given me the opportunity to represent the members of NSW and the ACT. I am delighted to be able to give something back to my life's obsession. I realise we have a lot to do, not only to preserve and build on what we as an organisation have achieved over the past couple of decades, but to cash in on the wealth of experience and talent we have in the membership of RA-Aus; to grow and develop our Recreational Flying organisation to be one of the best in the world.

I started my flying career in 1944 and though I have built up thousands of hours in all types of aircraft, I know I can't change the aviation world, the entrenched minds of some in the regulatory organisations or even some of our RA-Aus diehards. But I am a determined and, some say, stubborn person and hopefully will

change a few minds to make things better. Throughout most of my aviation career, I have asked regulators, bureaucrats and even boards to justify their decisions and insisted on that excellent question 'WHY NOT?' One doesn't always win, but I have found it does make our lords and masters think a little more carefully before enacting another draft regulation, legislative change, unnecessary restriction or bloody silly rule!

I am most encouraged by the new board at RA-Aus under the leadership of Steve Runciman, which I saw in operation at the September Meetings in Canberra. They impressed me with their dedication and determination to keep the organisation on the right path, and to ensure members are consulted and their views heard. We have a good team of hard working staff in the office headed by my old friend, CEO Steve Tizzard, and I feel honoured to be joining them to help you.

Thanks again for electing me and let's hope we can keep recruiting new members, keep costs down, keep regulations to a minimum and finally keep enjoying safe, affordable flying for fun.

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Safety near powerlines



Essential Energy is asking pilots across regional areas to pre-plan their flight paths to avoid flying near overhead powerlines.

Essential conducts public safety awareness sessions that stress the importance of pre-flight planning and vigilance when flying or operating machinery near powerlines.

The company's Group Manager, Public Safety & Compliance, David Harris, says private, recreational and commercial pilots need to be aware of, and take steps to minimise, the potential danger posed by flying near overhead powerlines.

"But it's not just pilots who need to be aware," David said. "Property owners hiring pilots for low level aerial operations also need to know the location of overhead lines in the vicinity of their properties."

"Essential Energy has around 200,000 kilometres of powerlines across 95 percent of NSW which makes pre-flight planning and briefing critical to air safety."

Essential Energy recommends that, as part of the pre-flight hazard identification process, a ground based pre-flight assessment is carried out – even when flying in familiar territory, as changes in the area and new powerlines may not always be shown on existing maps.

Powerline awareness doesn't

stop just with pre-flight planning – pilots need to remain vigilant while in the air as powerlines can sway in strong winds and can sometimes be difficult to see from above, especially at dawn or dusk and on overcast days.

"The Department of Primary Industries can provide examples of appropriate pre-flight planning and pilots can obtain up to date maps detailing the location of Essential Energy powerlines by calling 13 23 91," says David.

"Visibility markers are available for placement on powerlines and Essential Energy has installed around 1,500 standard markers in areas considered high risk," says David. "We've also got high visibility line 'mudflap' markers which are lightweight so they don't put much stress on the line, are visible both day and night, and flap in the breeze to attract attention."

Essential Energy will conduct power line awareness training free of charge for clubs and groups to assist in risk assessments for avoiding power lines.

To report an incident involving an overhead powerline, contact Essential Energy immediately on 13 20 80. For maps detailing the location of Essential Energy powerlines, call 13 23 91 or visit www.essentialenergy.com.au.

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Home grown Starlet

by Phil Bird



SHORTLY after finishing my last project, a Fisher Koala, in 2002, I started looking around for something else to build. The main requirement was that it had to look good. It also had to be primarily constructed of wood and be transportable.

The aircraft which seemed to fit that bill was the Corby Starlet. I had seen a couple at Narromine and thought it was a good looking aircraft. Researching, I learned the wing could be built as a one or two piece, which made me believe it could be easily dismantled.

After a trip to Hornsby in NSW to see John Corby, I was the owner of plan set number 348. Studying the plans when I got home, I soon learned two things. For a small aircraft there is a lot of work in it. Also, the two piece wing does not mean the aircraft can be dismantled easily.

When constructing the Fisher, I had joined a chat group on the internet. It's a great way to ask questions, keep in contact with other

builders and see projects not too far away. As part of that project, I met many builders and have remained friends with them for years. The Starlet group is no different.

Being plans built means everything for the Starlet has to be sourced or made. As luck would have it, shortly after I discovered the Starlet was not trailerable, hanger space became available at my local airstrip where I could park the Koala. This also allowed me somewhere to put the Starlet. The other major stroke of luck was finding a friend of a friend with a Spruce wood kit for a Starlet for sale. It wasn't cheap, but it was just about the best quality Spruce you could get. Norm Edmunds in Melbourne was getting some undercarriage legs made, so I put an order in for a set, too.

I discovered Brian Turner in Victoria could supply Starlet fuel tanks, control columns and a few other parts. Composite International in NZ supplies some fiberglass parts including wing and tail tips, plus sliding canopies. A few

different canopies can be used on the Starlet (or just a windscreen if you like) but I like the looks of the NZ Slider.

Construction of the fuselage started first. Australian Hoop Pine Plywood was chosen and is highly recommended. Because of different engine weights, the wing position on the fuselage has to be decided early on. I had thoughts of either a 1600 Jabiru or a HKS, both of which are light, so I chose a rearward position. I also figured it's easier to correct a forward C of G than a rearward one.

I had also met a fellow Starlet builder around this time, Dave Butler, who gave me lots of help and pointers. He also offered me the loan of his Cowling mold he had made for his VW powered Starlet.

I attended the 40th Starlet anniversary at Wagga and got to see several VW powered models. I prefer the looks of a VW Starlet, plus the cost and the fuel consumption are a bonus. I also got to see these engines being

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hand propped. To save weight, some VW's go without starter motors This was no big deal, I thought. I could do that.

After more investigating, I decided to go with a Great Plains 1915cc 69hp VW engine, single Magneto with a fixed timing secondary ignition. This was in kit form, which I was quite looking forward to assembling. The weight and balance would require a bit of juggling, but the cost was less than half that of a New Jabiru. The money saving meant I didn't have to sell the Koala. Plus, Dave's cowl would go straight on, sort of.

I chose to build the two piece wing, mainly because the Spruce kit I had purchased was cut that way. The two piece wing has a max AUW of 700lb in the normal category, against 750lb for the one piece. The two piece wing is easier to build in some ways, but more work is required making the wing joiners. I was fairly confident of being able to build light.

The engine arrived from the US and was put together. That was fitted to an engine mount I had made and a friend had welded for me. It didn't start first pull, but it did start. Another milestone, plus I got my own back on my noisy neighbors. With that done, the cowl and canopy were fitted, wings and control surfaces covered in light weight fabric, the fuselage and tail plane in lightweight glass cloth and the whole lot sprayed with Poly Tone.

The batteries ended up living under the

tailplane to get the C of G correct and the weight came in at 465lb.

Some people have built a Starlet in under two years, but not me. Almost seven years to the day from when the plans were first purchased, the plane was taken to the airfield. A few hours of taxiing followed, getting used to the quick steering and playing with different tailspring tensions, until the day arrived for the first flight.

The little aircraft flew itself. What a great day that was. A little like when you first go solo, only 10 times better.

It burns 11 litres/hr@105knots. It has a VNE of 138kts and a stall speed of 35kts. It cost less than \$25k to build.

This really is one of the best possible aeroplanes you can fly, and that comes, not just from me, but from some very experienced pilots.

The Starlet is easy to fly, it's very forgiving, yet keeps you on your toes when landing. The controls are just great, extremely light and very powerful.

Two years on, 130hrs just ticked over, I still have yet to find something that is as much fun to fly as a Corby Starlet. It simply does everything so well. It's a rocket ship when fitted with a 2litre Jabiru or a 80hp VW and would go past VNE in a straight line easily. But keep it simple, keep it light, and 65horses is all you need for your own personal fighter. 🛩️



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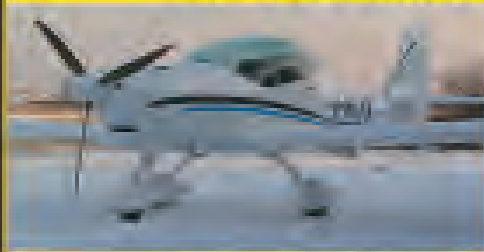
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The incredibly nimble Dragonfly

by Bruce Crerar *Tug Pilot*

ONCE again, the Dragonfly did a superb job at the 2012 FAI Hang Gliding Pre-World's Hang Gliding Competition at Forbes in January, where more than 100 pilots from 17 countries strutted their stuff. With help from CASA, RA-Aus, HGFA and mostly the people of Forbes and the Forbes Aero Club, the event was a great success.

Nine Dragonflies and one Airborne Trike did 1800 tows over the 14 days of practice and competition. With 100 hang glider pilots to launch each day in the space of one to two hours, it was no mean feat! The Dragonfly has towed hundreds of thousands of hang gliders in the past 20 years in 12 countries without any collisions.

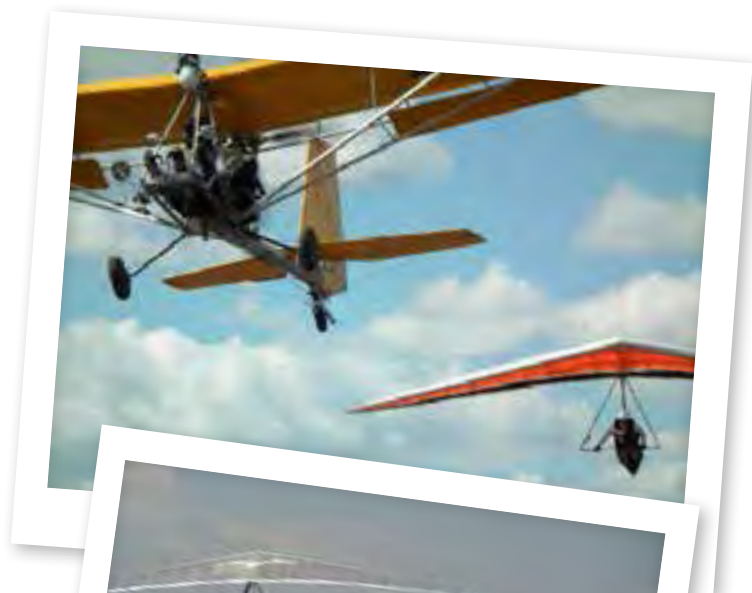
It stalls around 19 knots, depending on weight of the pilot,

it is powered by either a 582 or 912 Rotax engine and its optimum control speed is 30.4kts.

For the Pre-Worlds this year we had some of the world's best tug pilots from the US, Netherlands and Australia. The two US pilots alone had 54,000 tows between them. The FAI Representative from the Netherlands said his report would read that he had never attended a better run or safer competition in his years representing the world governing body.

Next year we will host the 19th FAI World Hang Gliding Championships at Forbes. With an expected 160 pilots to launch, these incredibly nimble little aircraft will do their job once more.

To those of us who tow, the Dragonfly is a beautiful little aircraft. 🐛



A picture of grace, the Dragonfly tows another hang glider



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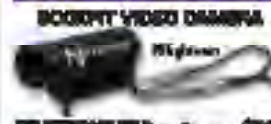
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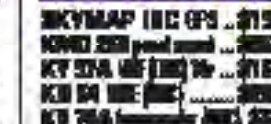
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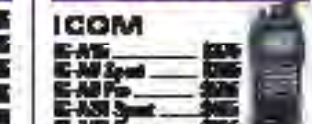
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