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# CONTENTS

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24

## AOPA AT WORK

- 4 EDITORIAL**  
Try a little kindness
- 5 LETTERS TO THE EDITOR**  
AOPA spirit alive and growing
- 6 PRESIDENT'S REPORT**  
A call to action
- 7 NEW MEMBERS**  
Welcome to AOPA
- 8 AOPA AT WORK**  
Executive Director's Update
- 8 MEMBERS LEGAL FUND**  
Helping to protect GA
- 11 SUNSHINE COAST**  
AOPA in Queensland

## AIRCRAFT REVIEWS

- 24 BELL 505**  
Object of desire
- 30 R66 TURBINE**  
California Dreaming
- 34 GUIMBAL CABRI G2**  
State of the art rotary GA
- 42 R44 CADET**  
Fun Fun Fun
- 46 TECNAM P2010**  
The Italians' are coming
- 56 AEROPRAKT A32 VIXEN**  
Redefining flight training
- 60 VULCANAIR V1.0**  
Flight school game changer

## PROFILE

- 10 TONY TAGGART FCA**  
Cessna 200 owner
- 77 STATESIDE: MIKE SMITH**  
GA Business in the USA



42



14

## FLIGHT TRAINING

- 66 ROTARY STEPS**  
Gaining your helicopter licence
- 70 BANKSTOWN**  
Flying School Review

## MARKETPLACE

- 84 CLASSIFIEDS**
- 86 BUSINESSES**
- 86 SERVICES**

## FEATURE

- 14 TRY IT, YOU MIGHT LIKE IT**  
The world of rotary flying

- 52 BEECH REDUX**  
Refurbishing the BE76 Duchess

## MEMBER COLUMNS

- 67 THE STATE OF GA**  
Chris Campbell
- 72 HANDSOME**  
1965 Beechcraft C33 Debonair
- 75 MID-WEST AERO CLUB**  
The Gem of Geraldton
- 48 FLYING SOLO**  
Norfolk Island 1996



46



60



## COVER PHOTOGRAPH

**Robinson R44 Cadet**  
Heliflite's new demonstrator two seat R44 Cadet on display at Bankstown airport.

## Editor's Perspective

AOPA Australia Editor, Paul M Southwick

Email: editor@aopa.com.au



In this issue we take the unconverted fixed wing pilot on a rotary wing journey of discovery, with the editor as a guinea pig.

It starts with a degree of derision, ignorance, and doubt, but ends with total addiction. Seriously folks, our introduction to rotary wing flying, and

**“Beware... helicopters are highly addictive and you may not be able to go back!”**

getting to fly some of the world's best helicopters, with some of the world's best pilots, dispelled many a myth and left us wanting much more.

We take you on a trial flight out of Bankstown; up and down Sydney harbour and over the bridge at 500 feet in a jet-powered Bell 505; over LA and Hollywood in a Rolls Royce turbine-powered Robinson R66; and down the Waimakariri River, near Christchurch, at 50 feet in a French-built two seat Cabri. We show pilots who may not have considered rotary before, just how enjoyable and highly addictive helicopters can be.

Rotary is of course also a great career option, even without fixed wing experience, and we tell you what's involved in getting your licence.

### THE ITALIANS ARE COMING!

There is a strong theme of passion in our “The Italians are coming” reviews of two very different, but significant aircraft for Australia - the Naples sourced, tough little Vulcanair V1.0, a 172-lookalike trainer, that seems perfect for Aussie flight schools; and the classy high-quality tourer, the Tecnam P Twenty Ten, which scored an irrefutable and undeniable perfect ten out of ten in our test flight.

### THE ACT MUST CHANGE

We feature a summary of the Wagga Wagga general aviation summit and Ben Morgan tells us what's next in AOPA Australia's advocacy on behalf of pilots, businesses and others in general aviation in Australia.

### YOUR STORIES

As usual we are proud to profile some of our members and carry their stories - stories all about their passion for, and pure joy experienced in general aviation.

If you would like AOPA Australia to feature your story, business, product or service - drop us a line on (02) 9791 9099 today!

## Letters to the Editor

Have your say with AOPA Australia

Email: editor@aopa.com.au

### E33C Aerobatic Bonanza

In reply to the editorial in the Jun/Jul 2018 edition. I had helped Bill Arkell, who was at that time a farmer at Yandanooka, (50nm SE of Geraldton, WA), move his Beechcraft C33 Debonair, back to the farm in May 1979. Naturally, over a beer, we got to talking aircraft, and he mentioned being very interested in an aerobatic version of the '33. It so happened that I was already booked to fly to the USA in July 1979. It resulted in Bill asking whether I'd be interested in meeting up with a prospective '33 seller in Van Nuys, California, as I'd accumulated over 700 hrs experience on most of the Debonair and Bonanza models. So in July, I drove myself out to Van Nuys, (a brave act!), and visited the Van Nuys FSDO of the FAA, where I was issued a US PPL on the basis of my Aussie CPL.

Then I met with the owner of our subject E33C Bonanza, and we took it out for a test flight east of Van Nuys. Pretty impressive airport, with some impressive traffic as well! I duly phoned Bill and favourably commented on the aircraft. The upshot of it was that Bill purchased that aircraft, had it placed onto the Australian register as VH-KZA, and then flew it out of the Geraldton-Dongara district for many years.

**RALPH BURNETT**  
AOPA #6150

### Low Cost ADSB Success!

Now this is a success for common sense!! Well done AOPA for putting forward a great submission on low-cost ADSB for general aviation and congratulations to CASA on announcing a good commonsense reform. Removing the need for EO's for installing ADSB equipment for VFR aircraft will save aircraft owners thousands! Great to see the AOPA putting wins on the board for members, building on the successes of the past two years!

**DAVID JARDINE**  
AOPA #48475

### Why i've joined AOPA

As someone who has been exposed to the industry for the best part of the last 30 years, I joined AOPA a couple of weeks ago because I can see how hard AOPA is working on behalf of all general aviation industry participants. For the first time since my father was a member in the early 1990's I can see an organisation in AOPA that is publicly out there sharing information not withholding it, holding the government and regulator to account and more importantly demonstrating leadership. If it wasn't for the transparency and visibility that AOPA is showing now, let alone the urgency that Ben Morgan has brought to AOPA I wouldn't be anywhere near as informed as I am now. I've had my own issues with CASA AVMED in the past (LASIK and the surgeon was a consulting DAME to CASA and they wouldn't accept his post op report and sent me to a range of less experienced ophthalmologists at a cost of nearly \$1000 to get the same report my own surgeon was prepared to give them in the first place) before allowing me to fly again after nearly a month grounded. I thank Ben and the AOPA team for their hard work and commend the Board for the direction the association is now headed.

**ANDREW WHITEMAN**  
AOPA #50325

### RAAus vote against GA medicals

It's hard to comprehend why the RAAus would actively vote against drivers licence medicals for RPL and PPL holders. Whats harder to comprehend is how they expect to achieve their weight limit increases, without RAAus members being forced to hold Class 2 medical certificates! Has their management gone mad? The RAAus needs to pull their heads in and realise that they are part of our industry and working against GA will only lead to their own demise.

**GARY GOULD**  
AOPA #49994

### Don't give up on med reform

Ben and team, do not give up on the push for medical reforms. Why should we be forced to sell up and out of GA to then be thrust into the RAAus where we are exposed to fees to be considered safe? Same aircraft, same airspace and same pilots - its a farce! Keep at it.

**TONY TABART**  
AOPA #4847544195

### Mildura GA expansion

I'm just back from Mildura where I spent yesterday with the local member - Peter Crisp (a pilot). When I arrived I had a tour of Mildura airport with Peter & the airport manager - Bill Burke. Part of that was looking at the first of the new 172's for the Chinese flying school that is about to open. The Chinese currently have: The first 8 of 46 C172's, 2 x Diamond Star twins, plus they are in the process of buying either a citation or Mustang. They have bought 4 x AOC's. They will be establishing a maintenance base at Mildura. They have also bought the "Overlander Motel" in Mildura for students and are negotiating on another. I was told they are expecting 120+ full time students. I discussed if this would trigger the need for a Control Tower at Mildura and kind of got blank looks and vague answers. I didn't get the feeling that they have taken this up with Airservices Australia yet. My concern is; How does locating what will be head & shoulders the largest flying school in Australia at Mildura affect the operation of the local GA airspace - especially with the mix of glider RA(Aus) and RPT traffic at Mildura? Furthermore, the navex destinations from Mildura are a bit limited, so presumably it will have a significant impact on surrounding airports within (say) 1-2 hours C172 range from Mildura.

**DOUG GOULD**  
AOPA #40693

### BELOW

Piloting the Bell 505 demonstrator along the Sydney Paramatta River.



# A call to action!

**AOPA Australia President, Aminta Hennessy OAM**

Email: [president@aopa.com.au](mailto:president@aopa.com.au)



**Calling all members of AOPA Australia – This report is short but it is a call to action. All AOPA members are asked to step up to the plate and help. I will explain.**

General aviation (GA) has never been under greater siege, cost-wise, than it is now. With CASA Part 61 and 141/142 manuals; proposed Part 135; Airservices' requirement to fit ADSB; and regional airports receiving government subsidies and then creating plans that push hard working GA operators out; the cost burden has become unsustainable.

The inability of the government to see that GA makes a substantial contribution to the Australian economy with the demand for pilot training at an all-time high, has the potential to significantly grow this contribution, is the cause of industry-wide frustration and anger. The cost imposts piled one after the other on GA are crippling.

The bureaucracies claiming there is no decline in Australian GA are burying their heads in the sand. The fact is that GA has the potential to be a mega-dollar export industry. "Who cares" seems to be the attitude from on high. It seems our individual hard-earned investments can go to pot and our retirement plans can be decimated due to the value of our businesses being destroyed.

The Deputy Director of Aviation Safety is asking AOPA Australia to give examples of what is so costly and why the industry is complaining so vociferously. Rather than list them in a public forum such as this magazine, I am asking for the following action by our members.

**1. Submit your issues including the cost impact on your business, or personally, of the requirements imposed by CASA.**

The issues can be anything from medicals to Part 61, 141, 142, Flight Examiner Rating costs and Flight Examiner biennial testing by CASA over and above the normal Instructor Rating proficiency check. It could be on float planes, charter, safety and maintenance – the requirement to get an Aeronautical Engineering Order to put equipment into aircraft. The non-acceptance by

CASA for pilots to transfer their Reduced Vertical Separation Minima (RVSM) qualification on to their Australian licence.

There are numerous issues and we need the adverse cost impact this has had on your business or individual members.

Submissions will be sorted under their appropriate headings and sent by AOPA Australia to the Deputy Director of Aviation Safety to demonstrate, en masse, why the industry is complaining. Follow up discussions to address these matters can then be conducted by AOPA Australia with solid evidence of the unnecessary burdens being placed on GA.

We ask that you submit your issues by email and limit each issue to no more than 700 words. Please include your name and AOPA Australia membership number, along with your email and best telephone contact.

**2. Our membership is building. We now have over 3,400+ members and I call on everyone to do the following to mount a campaign for the GA industry.**

- Renew your membership, regardless of whether you are still flying.
- Join up one new member every month.
- Flying schools join up your students, who are free for one year!
- Corporations join in and help so that your aircraft can be bought and maintenance organisations can be utilised.

Advocacy costs money. We need more staff, more capacity, and more people available to talk to our members. So pick up the phone or log on to [www.aopa.com.au](http://www.aopa.com.au) to re-join or renew.

The future of GA in Australia depends on your support.

**AMINTA HENNESSY OAM**  
**AOPA Australia President**  
 Email: [president@aopa.com.au](mailto:president@aopa.com.au)



## ARE YOU CONNECTED TO THE AOPA AUSTRALIA VIA FACEBOOK?

Each day, the AOPA Australia updates our members and supporters via our Facebook page. Industry news, local events, important reforms and AOPA Australia initiatives are all updated via our Facebook page.  
[www.facebook.com/aopaaustralia](http://www.facebook.com/aopaaustralia)

# Welcome to New Members!

**AOPA Australia Executive Director, Benjamin Morgan**

August-September 2018 has been another strong period of membership growth for the association with our numbers surging through to 3,600 strong! Our goal this year was to grow to 4,000 members and we are well on track to achieving this important milestone! You can help by reaching out to all of your aviation friends and colleagues, encouraging them to join AOPA Australia! Stand with us as we campaign for a strong and vibrant general aviation future!

## +3,600 Members Strong & Growing!

### NSW

Alan Tindall  
 Alexander Turner  
 Amir Zoghi  
 Andrew Whiteman  
 Chris Campbell  
 Craig Marshall  
 Dominic Spora  
 Doug R. Drummond  
 Gerald Davies  
 Jonathon Grahame  
 Juan Chacon  
 Mark Conn  
 Mark Whitehead  
 Merit Aviation  
 Miles Currington  
 Neville J. Black  
 Philip Ryan

### QLD

Robert Maslin  
 Steve Fenech  
 Steve Harding  
 Steve Loane  
 Tammy Augustin  
 Alan Rosedie Din  
 Craig Macartney  
 Darren Dreis  
 Drouin Aviation Group  
 Jack Fitzgerald  
 Ken Veal  
 Kingsley Just  
 Kristen Lowe  
 Mark McPhail  
 Max Allan  
 Michael Watson

### ACT

Peter Ramson  
 Peter Edney  
 Phillip Hawker  
 Craig Dows  
 Gautam Khurana

### SA

Bill Stock  
 Brett Pulford  
 Mark Wisbey  
 Gavin Tweedie  
 Lawrence Kimpton  
 Paul Butch Pettet  
 Richard Smith  
 Terry Marshall

### WA

### TAS

Alistair Sim  
 Bob G. Harris  
 Duncan Greer  
 Greg Ellis  
 Jonathon Zilber  
 Laurie Shaw  
 Matthew Brennan  
 Raymond Hurley  
 Richard Lewis  
 Stephen Orr  
 Wes Summers

### USA

Merv Hill  
 Andrew Leece



**FROM 1,700 TO 3,600 IN JUST TWO YEARS!**

Not since the early 1990's has the AOPA Australia membership experienced such strong growth and participation, surging from 1,700 to 3,600 in just two years!  
 Join: [www.aopa.com.au/membership](http://www.aopa.com.au/membership)

## Welcome to our new student pilot members!

Alberto Casal-Barreiro  
 Alex Jenkins  
 Andre Motteroz  
 Andrew Agnew  
 Bailey Armstrong  
 Beau Matthews  
 Beau Tanton  
 Beau McAuley  
 Belinda Scott  
 Ben Dubedat  
 Benjamin Bayly  
 Brett McAlpine  
 Brain Chow  
 Cameron Adams  
 Christopher Smith  
 Damian Mammino  
 Daniel Radivo  
 Daniel Atkinson  
 David Wong  
 David Shang Style  
 Dean Bracht  
 Dimithri

Maddumahewa  
 Ethan Coleman  
 Evan Winick  
 Francis Piens  
 Harrison Cowie  
 Helen Ashton  
 Howard Waterson  
 Ian Buchanan  
 Isaac Wynyard  
 Issac So  
 Jack Laurens  
 James Sheehan  
 James Nation  
 James Danielson  
 Jamie Zammit  
 Jason Ryan  
 Jeff Pargetter  
 Joel Rodney  
 John Fischer  
 John Dozzi  
 John Place  
 John Drill

Jurgen Dale  
 Justin Clarke  
 Laura Miles  
 Laura Cervantes  
 Lee Fahey  
 Leonie Williams  
 Leslie Webb  
 Luke Pinder  
 Luke Martinez  
 Matthew Thomas  
 Mia Iversen  
 Michael Tibbitts  
 Mitchell Vayro  
 Mitchell Bertram  
 Muhammad Murtaza  
 Nathan Holloway  
 Nicolas Ami  
 Nigel Sibio  
 Ninus Kanna  
 Olivia Dingiria  
 Paul Sivell  
 Peter Jowett

Philip Robertson  
 Philip Isaac  
 Philip de Bomford  
 Prakhya Sharma  
 Rajneesh Nand  
 Rameez Mushtag  
 Reece Davies  
 Richard Todd  
 Robert Timbrell  
 Rowan Ross  
 Ruarai O Luanaigh  
 Scott Butler  
 Shane Aul  
 Shane Arkwright  
 Shannon Kupfer  
 Sovan Dey  
 Tim Ochse  
 Tom Parker  
 Tristan Cheam  
 Vikki Woodward  
 Zhaobo Fan

# AOPA at work

**AOPA Australia Executive Director, Benjamin Morgan**

Email: [ben.morgan@aopa.com.au](mailto:ben.morgan@aopa.com.au)



## SENATE INQUIRY INTO PILOT SHORTAGE

The AOPA Australia has been holding meetings with Senators from all sides of Parliament, calling for an inquiry into Australia's growing pilot shortage and how over regulation is driving the GA industry into decline. Stand by for an announcement soon!

## LOW COST ADS-B FOR VFR

This past week CASA has announced reforms for the GA industry, following submissions from AOPA and other industry bodies calling for broad relaxation of regulations surrounding ADS-B installations. Under the new rules, owners will no longer need expensive Engineering Orders to install equipment, with installations reclassified as 'minor modifications' able to be fitted by your LAME.

## DRIVERS LICENCE MEDICALS

This past month the AOPA Australia made public a range of documents obtained under FOI that show the RAAus, RAAA and TAAAF all voted in support of CASA denying GA RPL and PPL holders a self-certification private drivers licence medical. Has the world gone crazy! AOPA has publicly pushed back calling on the Minister to explain how CASA concluded that it is safe for a pilot to operate on a self-certified medical as long as they pay a fee to the RAAus, yet have argued its unsafe for GA RPL and PPL holders. More on this as it develops.

## FREEDOM TO FLY TRADEMARK

Over the past month the association found itself locked into a unique trade-mark dispute with the Recreational Aviation Australia Limited (RAAus) who in July of 2018 trade-marked the slogan 'freedom to fly' which has historically been used by AOPA USA and Australia for many decades. I am pleased to inform our members that the RAAus have since cancelled their registration and our association is now working through the registration processes with IP Australia to secure the slogan.

## UPCOMING EVENTS

### 14 OCTOBER - ALDINGA OPEN DAY

The AOPA Australia will be travelling to South Australia to participate in the Aldinga Airfield Open Day, Sunday 14th October. We would love to see as many of our members attend this event, so fuel up those tanks and fly on in!

### 18-21 OCTOBER - AUSFLY 2018

AOPA Australia is working with our partners at the SAAA to help put together a fantastic AUSFLY 2018 event - 18th to 21st October 2018 in Narromine NSW. I would encourage all of our members to fly in and join in the fun.

### 3 NOVEMBER - WALCHA AIRSHOW

AOPA Australia and our Freedom to Fly airshow display team will be joining in the fun at the Walcha Aero Club airshow. Fuel up and fly in for a great Saturday of country hospitality and flying.



## ARE YOU FOLLOWING THE AOPA AUSTRALIA ON FACEBOOK?

Each day the AOPA Australia team are posting updates and notices to our facebook page. You can keep up to date by following us at: [www.facebook.com/aopaaustralia](http://www.facebook.com/aopaaustralia)

# Member's Legal Fighting Fund

**Working together to safeguard our members freedom to fly**

Email: [ben.morgan@aopa.com.au](mailto:ben.morgan@aopa.com.au)

**The AOPA Australia is fully committed to the protection of our freedom to fly and has proposed the creation of a Members Legal Fighting Fund to provide financial assistance to members facing legal hardship.**

As our members are undoubtedly aware, aircraft owners and pilots are facing continuing and escalating legal attacks on our freedom to fly at the hands of the Civil Aviation Safety Authority.

Increasingly, our members are being forced to apply to the Australian courts to defend their individual and our collective rights.

The vast majority of these cases are heard in the Administrative Appeals Tribunal (AAT), where even if you win you cannot be awarded costs.

These cases require extensive use of barristers and senior counsel which can cost our members tens of thousands of dollars. In some cases, the costs exceed our members capacity to pay, leaving them unable to defend their and our rights.

In response to this situation the AOPA Australia Board has proposed the formation of a Members Legal Fighting Fund. Working together, the AOPA Australia membership can provide our association with essential financial resources to protect our members.

Properly managed and cultivated, the proposed Members Legal Fighting Fund can become a powerful instrument of industry advocacy, sending a clear message to CASA that our members are not alone in their fight to protect our freedom to fly.

## FUND KICK-START

To kick-start the Members Legal Fighting Fund, the AOPA Australia has proposed to seek a one-off fund start-up contribution from all members of \$99, with the funds to be held in an interest bearing term deposit account.

## WHO CAN ACCESS THE FUND?

It is proposed that only financial members of the AOPA Australia who have held a membership for a minimum of 6 months can make an application for assistance.

## HOW CAN A MEMBER APPLY?

It is proposed that members will submit an online application and will be required to attend face to face interviews with the AOPA Australia Legal Director and Board.

## HOW MUCH CAN I APPLY FOR?

It is proposed that each application for assistance will be assessed individually by the board, along with independent legal representatives.

## WHAT CAN THE FUND BE USED FOR?

It is proposed that fund assistance will only be available for legal proceedings that involve the Civil Aviation Safety Authority.

## FUND REPORTING

It is proposed that a bi-monthly report be published to members detailing the performance of the fund, each edition of AOPA PILOT AUSTRALIA.

## CONTINUED FUNDING

It is proposed that \$79 from each Premium \$249 membership will be re-invested into the fund.

## FUND DONATIONS

It is proposed that the fund will accept monetary donations from members and sponsors.

## FEEDBACK

The AOPA Australia Board of Directors is calling for feedback from members and is inviting persons to email through their suggestions and/or recommendations to:

**BENJAMIN MORGAN**  
Executive Director - AOPA Australia  
Email: [ben.morgan@aopa.com.au](mailto:ben.morgan@aopa.com.au)

Submission due by  
Tuesday, 30th October 2018.



## TAKE PART IN THE AOPA AUSTRALIA FACEBOOK POLL

The AOPA Australia is currently polling members and supporters regarding the proposed Members Legal Fighting Fund. Take part online: [www.facebook.com/aopaaustralia](http://www.facebook.com/aopaaustralia)

**82% SAY YES**  
**18% SAY NO**

With a little under a month to run, the AOPA Australia Facebook poll is already showing some telling results. Make sure you have your say online at: [www.facebook.com/aopaaustralia](http://www.facebook.com/aopaaustralia)



# TONY TAGGART

AOPA AUSTRALIA MEMBER PROFILE

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR



# SUNSHINE COAST

AVIATION EXPO SUCCESS!

BY BENJAMIN MORGAN  
AOPA AUSTRALIA EXECUTIVE DIRECTOR

T

**Tony Taggart FCA is a long-time member and supporter of AOPA Australia. He is the principal of a chartered accounting firm at Moorabbin. The firm also has an office in the regional Victorian town of Maryborough, located 58 kilometres north of Ballarat, and 168 kilometres north-west of Melbourne, in the Central Goldfields shire.**

In 1987 Tony obtained his private pilot's licence and by 1992 had obtained his commercial licence and a multi-engine command instrument rating.

Perfectly natural then, with an intimate knowledge of costs, tax treatment, and economics that Tony would use an aircraft to avoid a two and a half hour drive each way, and efficiently travel between offices – making it there and back in a single day.

In Tony's case his chosen aircraft is an immaculate 1967, turbocharged, fuel injected, 285 BHP @ 2700 RPM and 32.5" MP Cessna 210. He flies for business every week (weather permitting) and has a very well structured and sensible avionics package which combines steam with glass and several layers of contingency.

Tony, who has owned and operated several aviation-related businesses, used to own a ten-seat Beech Queen Air B80 twin, which he swapped with a man who wanted it desperately, for his 210, with no cash changing hands.

Tony loves flying and says his only real frustration is that Maryborough does not have a GPS approach, with the Council reluctant to stump up the ~\$50,000 required to get one. Says Tony, "Being where it is in Central Victoria, Maryborough is subject to some restrictive weather. A GPS approach would really open up the airport and the economy for the local area."

On a perfect Melbourne day Tony took the editor for a Bay flight in his much-admired 210. Sitting under the tower, outside the YMMB terminal, we were approached by flight instructors from a nearby school wanting to know if he hires it out. His answer was, according to the instructors, the same as most 210 owners give "No!" It seems that 210s are like pilots' babies and as such are rarely if ever trusted to anyone else.

We rotated off runway 31L at 70 knots and climbed out at nearly 1,000 fpm on near ISA day. His 210 was a stable and fast performer and we experienced tourist-pleasing views under the high wings, of Mt Martha, the Mornington Peninsula, the harbour heads, and then the long white sandy beaches and seaside homes of the Bay as we reported at Carrum and headed back for a 31L landing. Tony approached at 80 knots had had us stopped in just a few hundred metres.

Tony says the more hours he puts on the 210 the less his maintenance bills seem to be. Perhaps that's why he also generously volunteers as an Angel Flight pilot too. *Good on you Tony!*

**The AOPA Australia team on 4th August travelled to Queensland in support of the Sunshine Coast Aero Club's Aviation Expo, helping give local youth a kick-start into careers in aviation!**

It was with great pleasure that our team ventured north in August, marking our first Queensland event for AOPA's new Members' Coach and Junior Pilots Flight Simulator system.

The Aviation Expo attracted over 4,000 participants to the Sunshine Coast Airport, with all manner of aviation attractions on hand for budding young pilots! Over 1,500 youngsters got hands on with the AOPA flight simulators keeping our team busy right across the day.

Without doubt, the Sunshine Coast Aero Club's organising team did a fantastic job and a big congratulations must go to Aidan Bickhoff, Ivan Tyson and Colin Appelton! The club is now giving considering making the event a calendar fixture run every two years. The AOPA Australia will be looking forward to returning in 2020.

Many thanks must also go to our member Greg Nugent who volunteered to drive the 2,000+ km round trip, spending a combined 30 hours at the wheel in support of this great event.

**Would you like the AOPA Australia Members Coach & Flight Simulators at your next aviation event? Call (02) 9791 9099**



# P2010



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sleek IFR package.



## Getting GA growing again

AOPA Australia Director, Ross Harrison

Email: [ross.harrison@aopa.com.au](mailto:ross.harrison@aopa.com.au)

**As a newly elected AOPA Australia board member, pilot, aircraft owner, and general aviation business operator (Cirrus Aircraft representative), here are my thoughts on what is needed to get GA moving, and to help renew Australia's aging fleet of aeroplanes.**

There are many factors working against GA fleet renewal. Here are the key ones, followed by some suggested remedies:

- The ageing GA fleet in Australia creates a huge price gap between new and used aircraft;
- As most new aircraft are imported and priced in US dollars or Euros, the Australian dollar's poor recent performance and low value greatly inflate the purchase price in local currency;
- Many potential new buyers are non-pilots, for example, business people, who need to reduce valuable time lost to travelling across our huge continent, especially to regional locations. They are busy people, often with families, who can't believe the time and the cost required to get a PPL and instrument rating;
- Financing a new aircraft purchase in Australia is a difficult process. Unlike the US where 25-year loans are available buyers here are stuck with a shorter term - usually over five years. This increases monthly repayments and is out of sync with loans available on other types of machinery or equipment;
- Rates of depreciation for aircraft are also out of sync with other industries too. In the US immediate write off incentives greatly assisting business cash flow;
- Insurance costs for new aircraft, if the new owner is a non-pilot and wants to learn to fly, it is very expensive during the first year and training process;
- Each new aircraft imported into Australia must have an Australian Certificate of Airworthiness, adding huge costs and time process to the aircraft price;
- GA in Australia is so over regulated, imposing unnecessary costs on pilots and aircraft owners; and
- Visible government or regulatory support for general aviation is near or non-existent and monopoly or anti-aviation situations that harm GA have been allowed to develop, for example, privatised airports charging excessive fees.

**Things that could be done to kickstart GA in Australia:**

- More realistic tax treatment, for example, an accelerated depreciation on new aircraft purchases;
- Educate financial institutions on bringing aircraft finance terms into line with other industries;
- Access to federal funding for rural aircraft acquisitions similar to farm machinery;
- Reduce and remove landing fees at aerodromes and on route charges;
- Local council promotion of airport facilities;
- The FAA certify single engine piston aircraft under certain conditions to operate on Charter (Part 135) under the IFR and at NGT. For example, in the USA Cirrus aircraft are approved, having the Cirrus Airframe Parachute System (CAPS), effectively enabling a modern aircraft to operate with significant safety advantages over the incumbent fleet of tired GA twins. The Cirrus (predominantly flown by private pilots) achieves a fatal accident rate equivalent to a turbine multiengine aircraft. The myopic focus on having two engines ignores life-saving capability of modern technology;
- CASA should be required to promote general aviation and be accountable to the Senate if GA stops growing;
- ASIC cards are a major financial and resource burden on GA. Once a pilot licence has been issued there is no good reason why an ASIC should not last as long as a passport, namely 10 years;
- Security controlled airports should only be in place for aerodromes with turbine powered RPT aircraft with a seating capacity of more than 19 passengers. Airports like Moorabbin, for example, should not be security controlled as the only RPT uses Piper Chieftain aircraft;
- The FAA in the USA has mandated that the usage of aircraft hangars for non-aviation purposes is only allowed where there is excess hangar capacity at an airport. CASA should do so likewise;
- Using Cirrus Aircraft again as an example, the new aircraft leaves the factory in the USA with a FAA certification, which surely should be accepted by CASA here in Australia.

# TRY IT YOU MIGHT LIKE IT

HELICOPTERS ARE FUN

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR



**W** Why is it that so many fixed-wing pilots go their entire lives without considering helicopters as an option, let alone flying one? Even stranger, some turn their noses up at the mere mention of things rotary.

Is it because they wrongly perceive helicopters as being unsafe; is it because they think flying rotary machines might be too hard; or is it perhaps because they found it difficult enough to learn fixed wing, and they have no more room in their head space for rotary? Perhaps they feel a rotary experience would “spoil them” for fixed wing.

AOPA PILOT AUSTRALIA decided to answer these questions by putting three different pilots or “guinea pigs” through some rotary fun, with an experienced pilot of both fixed and rotary wings – someone who loves and excels at both – AOPA Australia’s director, Dominic James. James flies the Falcon Jet 20 for a living, and has lots of helicopter experience too, including in a late model, turbine powered, Bell Jet Ranger.

#### GUINEA PIGS

The somewhat nervous and apprehensive pilots were: the editor, who based on a corporate helicopter experience in the USA several years ago (wrongly) regarded rotary wing aircraft as like chrysalises hanging from a tree waiting to drop to the earth, without the benefit of lift from wings; Amy Chang, AOPA’s Youth Ambassador, an instrument-rated

commercial pilot and flight instructor, who admitted to total curiosity, having never even having been close enough to touch a helicopter, and unsure of how they worked at all; and Ben Morgan, AOPA Australia’s Executive Director, who took six hours of helicopter instruction many years ago, but gave up, as he felt unsafe in the “shaky machines”, concerned that the wing shouldn’t move faster than the pilot.

The guinea pigs first built up courage with a shared Cabramatta Yum Char lunch – there is none better. Their rotary experience was to start with a Robinson R44, four-seat, 235 hp powered helicopter provided by Bankstown Helicopters at Bankstown (YSBK).

Bankstown Helicopters teaches many people to fly helicopters. They take many tourists and locals on scenic or gift flights over Sydney. The company is part of the Australian Helicopter Pilot School that has “wings” in Orange in NSW, and Radcliffe in Queensland. With one of the largest helicopter fleets in Australia, including nine R22s, six R44s, one R66 (the turbine version) and two Jet Rangers, it’s a big school.

The R44 is the world’s largest selling four-seat helicopter. James describes it as the Cessna 182 of the rotary world. Last year, Torrance Airfield (KTOA) in California based Robinson sold more than 300 helicopters, including 194 of the four-seat R44s, 34 little siblings two-seat R22s, and 77 turbine R66s.





## WALK AROUND

James, patiently, and in detail, walked around the helicopter explaining all the relevant, and oh-so different-to-fixed-wing, components, how the machines fly, how it is controlled, and why it is indeed, if flown properly, a safe machine.

The three fixed-wing pilots marvelled at the extent of (different) technical knowledge required to fly a helicopter; the number of doors that had to be opened, and things that needed to be checked – not just by looking but understanding too; and most significant of all – how incredibly different the craft was from a fixed wing one.

There was the need to climb up to the top of the R44 and inspect so many parts of the rotary wings and the attached components. The same was also true for the tail rotor.

An interesting fact about the R44 is that some parts, for example, the tail rotor, are deliberately planned to be replaced, that is thrown out, after a set number of hours. This is not just for safety reasons, but cost, as it means less maintenance is required, saving both money and downtime. That reduced downtime is critical for a training or busy charter fleet.

Seeing all these mystical helicopter secrets for the first time, the editor was reminded of Mr Spock from Star Trek, and couldn't help thinking "It's an aircraft Jim, but not as we know it!"

## LET'S GO FLYING

After a full and detailed pre-flight, the guinea pigs strapped into VH-WMS, multiple cameras and iP-



hones in hand, and prepared to launch into the unknown – to use another Star Trek parallel, the "last aviation frontier."

As James lifted the R44 off the pad outside Bankstown Helicopters, rotated and headed for the helicopter holding point, it seemed that everyone's apprehensions instantly disappeared. As the R44 climbed out for a couple of Runway 11 Left low-level helicopter circuits, all the AOPA pilots experienced – because they compared notes later, the same sensations and thoughts. Maybe they were following in the paths of many fixed-wing pilot before them. Was this their "road to Damascus" moment? Their thoughts included:

First, the visibility, as in out through the bubble canopy and side windows, was far superior to a fixed wing. Second, the view itself was spectacular – not just because of the visibility but because everything was done at a much lower height. The helicopter circuit is lower and closer into the field than a fixed wing. There was a slightly smug feeling – perhaps as an eagle, looking down from on high seeing every little and big thing in so much detail.

Third, the helicopter was smooth and none of the occupants felt like it would shake itself to pieces. Stabilisation technology had obviously come a long way since Morgan's earlier flights. Of course, the experience was also aided by James' quality flying skills. He talked the passengers through each phase of the flight, including the constantly changing required control inputs in different phases of the flight, and indeed the circuit itself, as the wind affected both the main and tail rotors in different ways. Ever heard of backwash – well the guinea pigs have now.

Fourth, there was a new respect for helicopter pilots. It seemed that to master one of these machines, pilots must be qualified one-person band experts too – capable of doing multiple different things with different hands and feet, all at the same time – and keeping those little stands of wool on the windshield straight. And oh, the radio still must be worked – even though there is no spare hand when flying a helicopter.

Fifth, there was a desire for more, perhaps best encapsulated by Ben Morgan's decision when back on the ground to immediately make a booking to resume his helicopter flight instruction. "All this after just a couple of simple circuits," commented James. Similarly, Chang wanted a trial flight and the editor couldn't wait to get a turn at the controls on his first instructional flight too. That can be the power and seductive appeal of the rotary wing – once experienced in real life, rather than avoided from afar.



## TAKING CONTROL

Bankstown Helicopters offered the editor a one-hour trial flight in a Robinson 22 helicopter in the third week of May 2018.

For years the 22 has been the world's bestselling two-seat helicopter. It lost the title briefly last year to the Cabri G2 but come back strongly in quarter one of 2018 with 14 deliveries vs seven for its competitor.

The editor, perhaps not uncommon for an only-ever-fixed-wing pilot approached the 22 flight with a sense of inadequacies. Perhaps this was the result of hearing the 22s controls were "free moving" and would not return to a neutral position, or even stay put (this is called dynamic instability); the need to have all limbs on and operate three or four differ-

ent controls at the same time; and every rotary pilot saying it was all about "feel" not flying, and that a feather-light touch was required at all times.

On arrival at the very busy Bankstown Helicopters, the editor was greeted and quickly assigned to Max Tibbett, a young helicopter instructor with eight years rotary experience in the UK and Australia.

The first task was to watch a 20-minute video about the controls on the 22. It was obvious that a tremendous amount of learning about how to teach helicopters had gone into this video.

The method, after a few aspirational and lifestyle shots of helicopters in flight, was to present each of the three main controls and what they do (their primary effect – the secondary effects would come later), one by one. In simple terms (a fixed-wing pilot can understand). First the anti-torque pedals (yaw); second the collective = that handbrake like lever rising from the floor (climb or descent); and third the cyclic – similar to the control stick on a fixed wing (attitude and bank).

It all seemed way too easy and the editor had some doubt he could remember what each control did when the time came, let alone how to make them all work together.

After the video there was a 20 to 30 minutes whiteboard session with Max. He went over each control again, together with some general points regarding airmanship.

The method and language of instruction were crystal clear, and the editor moved from full doubt to a touch of optimism, that perhaps, he might just not disgrace himself after all. Huge points to Bankstown Helicopters for their quality standardised training syllabus. The editor was starting to understand just why they are so successful – and busy.

## LET'S GO FLYING

After the walk around and pre-flight, which we will not cover here because the flying is the focus, the editor was strapped into the helicopter with an automobile like belt and given a headset. The first impression was of lots of room – much more than say the Cessna 152 fixed wing training equivalent, and perfect forward visibility unobstructed by a panel, controls or engine out front. It is a lot roomier inside the 22 than it looks from the outside.

Max pointed out the most important "instrument" in the aircraft – a few pieces of wool attached to the middle centre of the perspex canopy. These strands, plus the position of the compass on the horizon, let's call that attitude, were to be the keys to flying well. If these were mastered, the important conscious har-

mony of coordinated control input would assume lessor, but still important, significance.

The other big point of note was the simplicity of the low-down, out of the way, control panel. The airspeed indicator, rate of climb and descent, and manifold pressure being the three key gauges.

The editor had heard differing answers to the question so asked Max "Is it easier to teach a fixed-wing pilot to fly helicopters or someone who had never flown before?" Max was of the view that the former was easier, and that was reassuring.

## LIFT OFF

Max started the helicopter and made the usual calls for clearance. We were soon flying to the lift-off point and then up, up and away.

Max asked the author to follow through on the controls and promised to then, just like in the video, and the briefing, let this student experience one control at a time before handing over all three.

The professionalism and clarity of the way control was handed over and taken back was impressive. It was starting to seem that helicopter instruction – perhaps for reasons of safety, had evolved to a higher standard than fixed wing. That's is not meant as a criticism of fixed wing instruction, but as a compliment to rotary wing instruction.

The amazing visibility was a marvel. Even when we go to 1,000 feet it seemed like we were much lower – more like 500 feet. There were three reasons for that – first the bubble canopy; second the slower forward speed, and third, as Max pointed out, because in a helicopter pilots can see straight down, the aircraft appears closer to the ground than for fixed-wing pilots, who tend to look only ahead or perhaps sideways.

## WARMING UP FOR THE ACID TEST

Once past Prospect Reservoir Max gave the editor the experience of each control. One by one. First the pedals, then the collective, and finally the cyclic. Each seemed not too difficult on their own with Max controlling the other two.

The author had in his head: keep the wool straight; keep the nose attitude in relation to the horizon constant; always apply just gentle pressure, rather than push the controls – in a patient way, as there is a slight lag; and the key power numbers of 19 inches in climb, 25 in cruise, and 13 in descent.

Max seemed happy with editor's "mastery" – or was it beginner's luck of individual controls? He said, "This time I'm handing over all the controls to you – your aeroplane."

Remaining calm, focusing on the light touch and the things taught it all came together. What a realisation – after decades of avoiding rotary wing, the author was really, actually, truly, flying one – and kind of knowing what he was doing. Well for a few minutes, after which things "wandered off a bit" and Max got them back on an even keel. Each time the author took control it was better.

About now the bug hit, and it suddenly became apparent why so many pilots, both fixed wing and new to flying, get hooked on rotary. James, an AOPA director had warned the editor about this. Now the editor, rather than hoping he would not disgrace himself and that the flight would be quickly over, wanted to stay out flying the 22 for hours.

Fortunately, Max was indeed in no hurry to return and the editor was then talked through and flew climbing and descending, turns left and right, and much more. But sadly, all good things do come to an end and it was time or head back to Bankstown via 2RN and the "Helicopters South" reporting point.

Having had a turn at flying it was then instructive to watch Max fly perfectly in balance and on the numbers. The helicopter approach was so enjoyable being low, slow, and overhead the mid-point of the runways at 500 feet to the helipad, followed by a landing to change frequencies – there is safety in not doing this in the air (it is easy to flip-flop in the air but harder to dial in a new frequency with no autopilot or stay put controls). We then taxied back to Bankstown Helicopters at a few metres above the ground,

## OVERALL IMPRESSIONS

To be honest, if the author was younger he would want to go on and get a helicopter licence, it was that good.

The quality of the standardised instruction by Max and Bankstown Helicopters was outstanding and made a humble fixed wing pilot not only look good but feel good.

Lastly, it left the author with a strong desire to fly a helicopter again and master this incredible machine.

## RECOMMENDATION

**AOPA PILOT AUSTRALIA's recommendation to fixed wing pilots is clear – try helicopter flying, you will likely love it. But be warned, rotary can be instantly addictive. AOPA would like to express special thanks to William, Max and the team at Bankstown Helicopters for making this flight possible and commends them to readers.**



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# ROTARY STEPS

GAINING YOUR HELICOPTER LICENCE

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

# A

AOPA PILOT AUSTRALIA was surprised just how busy Bankstown Helicopters were, over several visits. Similarly, helicopter schools at Essendon and Moorabbin are flat out. There would appear to be increased demand from people wanting to fly for fun and professionally. Across the Tasman, the former All Black Captain Richie McCaw has become a commercial helicopter pilot, and this has greatly increased exposure there.

This perceived uptake or interest in all thing rotary and learning to fly helicopters is not without foundation. For the first quarter of 2018 The General Aviation Manufacturers Association (GAMA) reported "Piston rotorcraft led the first quarter, rising from 58 to 81 units, a 39.7 percent increase. The turbine rotorcraft segment also grew by seven percent to 138 units delivered. The total rotorcraft billings in the first quarter was \$0.67 billion, an increase of 18.3 percent."

AOPA PILOT AUSTRALIA looks at what's involved in getting a helicopter licence, the costs, and the many opportunities.

## REQUIREMENTS

The requirements for the issue of a helicopter private pilot licence in Australia are set out in CASA's document "Getting your private pilot licence" which is available on its website and is based on CASR Part 61. It is important to note that changes were made to

the requirements in 2014 and some flight school still have the old requirements on their website. As with a fixed wing licence there are minimum competency requirements and each student will vary in the time required to reach the required standard.

The requirements for a helicopter licence can also be found in CASA Form 61-1PH or "Private Pilot Licence (Helicopter) Application."

The requirements differ for an integrated course versus a non-integrated course. CASA defines an integrated training course as "an approved program that combines ground theory with practical flight training in a structured course and is designed to be completed within a condensed period. Theory training is delivered in parallel to the practical training as a planned integrated sequence. The benefit of integrated training is that the flying experience required is reduced compared to non-integrated training."

We will detail the requirements assuming students have undertaken the integrated course (non-integrated course experience requirements are higher).

The information about what is required is best presented and understood as a list. The minimum requirements are as follows: Total aeronautical experience of 35 hours; Flight time as pilot of a helicopter of 30 hours; Solo flight time of 10 hours; Solo cross-country time of 5 hours; Dual instrument time of 2 hours; and Dual instrument flight time of 1 hour.

**POINTS OF NOTE**

To be eligible for a PPL(H), applicants must have at least the minimum aeronautical experience prior to the flight test.

Any of the required aeronautical experience that is not completed as flight time as a pilot must be completed as simulated flight time in an approved flight simulation training device for the purpose or as tethered time.

Flight time in a helicopter must be completed in a registered or recognised helicopter.

Minimum total aeronautical experience includes all categories. In others words up to five hours fixed wing time can be counted towards the total experience required 35 hours.

The United States FAA requirements are near identical but include two extra items: 3 hours dual instruction at night; and 3 solo take-offs & landings at an airport with an operating control tower.

In addition, helicopter PPL candidates are required to: Hold or pass a Class 2 aviation medical; Pass the helicopter theory exam; and Pass a practical flight test.

In terms of the flying required this is set out in CASA's document "Day (VFR) Syllabus Helicopters" obtainable on the organisation's website. The introduction says that the document details "the progressive flying and ground training standards required to exercise the following privileges for VFR (Day) operations in a single-engine helicopter" and contains many sections very similar to those for a fixed wing PPL, together with some unique to helicopters.

The competency standards contained in the syllabus are "organised into units of competency that represent the areas of skill and knowledge required to perform the task of piloting a helicopter." For example, Unit H5 of the PPLH standards is "Control helicopter in normal flight."

The units of competency are further subdivided into the elements of skill that go to make up the unit. For example, the elements listed for Unit H5 are:

Climb the helicopter, Maintain straight and level flight, Descend the helicopter, Turn the helicopter, Perform circuits and approaches and Comply with airspace requirements.

Section 1.19 "Terminology Used During Assessment" contains a very useful summary of helicopter specific language and is well worth a read for students starting out.

**COSTS**

Helicopter are quite a bit more expensive to fly than fixed wing aircraft. There are however significant discounts if pilots pay in advance - perhaps that is a good way of ensuring they do not give up part way through. Here are some prices from Bankstown Helicopters - all hire rates are per hour excluding GST and movement fees: R22 \$550 casual hire, \$450 with \$20k prepayment. R44 \$895 casual hire, bulk training rate \$745. R66 \$1,150 casual hire. Bell Jet Ranger 206B \$1,320 casual hire. Landing Fees for an R22 at YSBK are \$12.50, \$77 at Mascot. An ATC clearance is \$33. Landing Fees for an R44 at YSBK are \$35.50, and at Mascot \$ 77. An ATC clearance is \$33.

**CAREERS**

For those pilots that go on to pass the commercial licence - which requires more hours, and exams, multiple job opportunities open up including:

Search and rescue, Movie appearances, Offshore oil services, Marine pilot delivery, Aerial stock mustering, HEMS (Helicopter emergency medical services), Photography, Police air wing, Scenic flights, Tourism, Instructing, Corporate, Firefighting, Crop spraying, Powerline survey, Media and Filming.

**ADVANCED RATINGS**

Once the basics of helicopter flying have been mastered there are additional ratings or endorsements that can be added including: Gas turbine, Sling loading, Low level operations, Multi-engine, Night, Instructor, Floats and Winch to name a few.

**TRY IT YOU JUST MIGHT LIKE IT!**

If readers think that helicopters might be for them or are simply curious as to what the fuss is all about, then a trial instructional flight (TIF) might be a good idea. TIFs as they are called, cost between \$300 and \$900, and include letting the student take control - but be warned, as we have said many times in this edition, helicopters are incredibly addictive. Many fixed wing (and ab initio) pilots, have found that once they start, it's hard to stop.



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# 505

## BELL JETRANGER X

THE OBJECT OF DESIRE

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR



**The Bell Jet Ranger is an icon of aviation. More than 7,300 examples have been produced since the 1960s in a substantially unchanged shape. It is a two-blade, single and sometimes twin-engine, turbine powered, rotary aircraft, manufactured by Bell, a wholly-owned subsidiary of Textron Inc, headquartered in Fort Worth, Texas.**

### PRESTIGIOUS PEDIGREE

Founded in 1935 by Larry Bell, Bell was first to certify a commercial helicopter – the Bell 47B, and the first to break the sound barrier, with the Bell X1. The company initially specialised in the design and production of fighter aircraft - first the XFM-1 Airacuda, and the P-39 Airacobra. Bell also designed and built the P-59 Airacomet, the first American jet fighter, and the P-63 Kingcobra.

Bell has delivered more than 35,000 aircraft. In 2017 the company delivered 132 helicopters worth US\$696m. In quarter one of 2018 the figures were 46 deliveries worth US\$120m. Of those quarter one deliveries, 25 were the 505-model tested here.

Originally developed for military purposes the Jet Ranger was not initially picked up by armed forces. However, when it was, it served, and continues to serve in multiple jurisdictions. A stretched seven seat version known as the Long Ranger had 30 extra inches (760 mm), including rear-facing seats.

In civilian use the Jet Ranger is favoured by news agencies, as an air ambulance, for personal transport, for bush work, and for transporting executives.

In 1983 well known Australian aviator, and AOPA Australia member, Dick Smith AC, used his Jet Ranger VH-DIK for the first ever solo flight around the world in a helicopter.

### NEW VERSION

The 505 version of this VFR-only helicopter, has a streamlined (or fast looking) external design that splits opinions, but is still clearly recognisable as a Jet Ranger.

There has been a panel upgrade to include the Garmin G1000 (helicopter version). Whereas this is a welcome modernisation from the traditional steam gauges, the high speed NXi version of this popular avionics suite is becoming the norm for fixed wing aircraft, so owners will look forward to that being added soon.

A helicopter synthetic vision (HSVT) option is available for the 505 that gives pilots a 3D depiction of terrain, obstacles, traffic and more, in any visibility condition. The two 10.4-inch (26.4 cm) flat panel high-resolution LCDs, are interchangeable for a Primary Flight Display (PFD) or a Multi-Function Display (MFD).

The spacious five place cabin is a friendly and more communal place now, having just one compartment, rather than being divided by a centre column.

Pilots are always kept busy flying helicopters and so the introduction of a so called “idiot-proof” Arrius 2R, dual channel, Full Authority Digital Engine Control (FADEC) turbine engine, will be popular. The engine has a (relatively long and competitive) 3,000-





hour TBO, and a data recorder. It features automatic start up and surge protection.

The take-off power available gives the helicopter its name – it is ~505 shp (377 kw). Maximum continuous power is 459 shp (342 kw). The earlier Jet Rangers' engines were 420 shp (albeit derated from there).

Performance wise the 505 has a higher gross weight, useful load, and full-fuel payload than its forerunners.

#### THE INVITE

The editor was invited by Hawker Pacific and Bell Australia to fly a near new 505, registration VH-HRH from Sydney airport (YSSY) on a local flight, and then into Bankstown (YSBK) where it would be on display at Bankstown Helicopters.

Having recently flown the R22 and had some time in the R44, the thought of flying the technologically advanced 505 was enticing, as was the realisation that it's powered by a "jet" or turbine engine, of about twice the power of the engine in a R44 (or Cessna 182).

Our guide for the day was Bell demonstration pilot and Business Development Director for Australasia, Daniel McQuestin. He learnt to fly with the RAAF, initially on the PAC CT/4 Airtrainer, before transitioning onto the Pilatus PC-9 and later the OH-58 Kiowa, an Air Force or Army version of the Jet Ranger. He is a qualified instructor, a rating he is so

glad he did, as it has opened up so many opportunities to fly and demonstrate the 505 around the world.

#### SYDNEY HELIPORT - A WELL KEPT SECRET

Only part of the heliport at the eastern end of Sydney airport is visible from the road. Driving past it is easy to miss. Few people not "in the know" could imagine a heliport on the Kingsford Smith site. It is a micro world adjacent to the threshold of runway 25, with hangers, offices, landing pads, and green open spaces surrounded by bushy trees. Jets roar high overhead as they depart runway 07 or 34 right. There are special procedures listed in ERSAs for helicopters to come and go quite easily, and without conflicting with fixed wing "heavies."

The heliport is a busy place. While we were there many helicopters came and went on scenic, private and commercial work. For those who can afford it, the heliport is a nice adjunct to the nearby corporate jet area which can be accessed by a small road inside the perimeter fence.

#### GAS TURBINE ENDORSEMENT

In the editor's gas turbine endorsement ground course (the subject of a future article in AOPA PILOT AUSTRALIA), conducted by AOPA Australia director, and turbine pilot, Dominic James, the very first question asked was "What is the most important

instrument on a turbine aircraft?" The answer, perhaps a surprise to piston pilots, was "the battery meter." The reason is because if a low charge exists, it may be enough to start the turbine rotating, but not enough to draw in the air to cool it. The result could be a "hot start," melt down, and bye-bye to that expensive turbine engine.

It was therefore interesting when we found that the battery on HRH, which is generally only flown by the owner in the weekend and holidays, was a little low. McQuestin made the decision to postpone the flight until a charger could be attached, and the battery fully charged. Such delays are part and parcel of test flights - they seldom go exactly according to plan.

Before we could take off, and while charging the battery, the 505 was to experience its first mobbing of the day - with the local pilots, and those that had just flown in, wanting a close-range walk-around, a sit inside, and detailed Q&A session.

#### WALK AROUND

VH-HRH was a brand new looking, just 30 hours on the clock, shiny, blue flecked machine, with several distinctive features, including: a huge elongated clear canopy; a large two blade main rotor - proven on and "borrowed" from the Long Ranger; an obvious turbine engine and outlet on top; an executive interior, with soft tan leather and raised rear seats for good passenger visibility; and a game changing Garmin G1000H avionics suite.

At this point the author detected that there was something special about the 505, but it would take a few more hours to put a finger on and encapsulate that for AOPA PILOT AUSTRALIA readers.

#### LET'S GO FLYING

Strapping into the front right seat (the pilot in command or student's seat in a helicopter) there was a feeling of familiarity because of the G1000, albeit with a few additional or different indicators. It is much easier to swap pilot seats in a helicopter, as the same extremities are on the same controls, in the same place, unlike in the fixed wing where flying from the other seat means going "cack-handed." For a helicopter, from either seat, it is left hand on the collective, right hand on the cyclic, and feet on the pedals).

The seats were comfortable and there was a generous amount of elbow, leg and headroom - way more than in the typical fixed wing aircraft. The wrap around glass seemed invisible and gave an impression of an unobstructed magic carpet ride.

The between-the-legs cyclic stick felt natural, the collective was easily reached - with the all-important ability to rest the left hand on the seat or leg, and the pedals large. The seat easily slid back and forth but



must be in the forward, locked position for flight with pedal adjustments being used for pilots of different heights. There was plenty of room for the author's AvPlan equipped iPad on the knee.

Start-up was little more than pushing a button, with the dual channel FADEC engine doing all the checking. We only needed to monitor the large gauge with its needle – it's a "Power Situation Indicator" that references the limiting parameters of the three key indicators at the same time. It was good to know that in the case of any out of limit indications the FADEC system would shut the turbine down to avoid damage. FADEC makes turbines a breeze.

McQuestin called ATC for clearance and we departed VFR over places not normally seen so close by fixed wing pilots - wharves, ships, hidden beaches, and warehouses. We had a spectacular view of aircraft approaching all Sydney runways and many jets backed up for take-off on runway 34 right.

We flew at 500 feet out to the coast and then north past the multimillion-dollar cliff top homes and famous beaches to the harbour heads. We had life jackets strapped to our bodies and McQuestin had given the author an excellent and interesting (I am glad I know that now) briefing on what to do in the event of a water landing. An underwater escape course would make a good future article - watch this space.

We climbed to 1,000 feet on the way to Long Reef, where we saw golfers who had escaped the rat race of Sydney for "course" of 18 holes. The author took the controls and flew for quite some time, including a turn back towards the harbour entrance and then a run up the glittering blue waters of the harbour before handing back to McQuestin as we flew past the iconic white-sail-like Sydney Opera House, and then over the left pillar of the harbour bridge, waving to bridge climbers below as we passed.

Once clear of the bridge the author took the controls again and had much fun initiating steep turns left and right to follow the increasingly narrow river westwards. The 505 handles with ease. There is surely no better way to view Sydney Harbour than through the glass canopy of a turbine helicopter at 500 feet.

The turbine hum was reassuring, and the author gained an impression of immense power reserves. The controls were firm and responsive. The best part was that, despite the 505 not (yet) having an autopilot, the collective stayed put and did not need to be held all the time, but simply "lightly guarded" with the left hand nearby. McQuestin demonstrated that even taking hands and feet off every control, the 505 did not "wander away" for quite some time. This is a great safety "feature" when at times, even with the G1000, frequencies must be changed, paperwork consulted, or a nose scratched.

There was a significant but not excessive amount of rudder required due to the torque from the more powerful engine. A G1000 experienced pilot's eyes go straight to the top of the PDF to spot the "ball" but the more experienced pilots can simply feel any imbalance and will subconsciously adjust accordingly. As with all VFR aircraft, eyes outside is key.

Overall the 505 was an absolute delight to fly, with a feeling of luxury and safety, and to be honest, a sense of exclusivity - almost superiority. We did not have passengers in the back, but if we had, they would have been delighted with their high up position and wonderful visibility from every seat. There are no "cheap seats" in the 505 - they are all "royal boxes". Behind the rear seats, and under the turbine, there is a large separate external compartment with plenty of storage for bags and equipment.

The noise levels with Bose helicopter headsets were low, as was the vibration - perhaps no more than any light fixed wing.

Speed, not that speed is what helicopters are all about, was an honest and easily achieved 125 knots, or slightly higher given we were below MAUW. Climb rates were nothing short of spectacular. Remaining fuel is displayed prominently in pounds making it easy to calculate time remaining. McQuestin made the point that helicopter pilots tend to round the figures "well in the favour of safety and allow extra margins."

Once at the western end of the harbour we turned towards Bankstown, manoeuvring around a few other rotary craft. Flying so much lower down (often at just 500 feet, below other aircraft or controlled airspace) affords helicopter pilots a great view of what is underneath or nearby. The trade-off though is that the ability to spot things in the distance by looking down at them, for example, an airfield and its runways, is not quite as good. Disorientation in the 505 is not an issue though as the author proved using the familiar G1000, by quickly pushing the "Direct to" button and dialling up YSBK.

Arriving at Bankstown Helicopters, and being fashionably late, as befits royalty of the skies, the 505 was greeted by a good-sized crowd, all with cameras and iPhones clicking. The 505 was swamped with admirers and dreamers, together with serious prospects invited by Bankstown Helicopters to look over the aircraft.

It was now becoming apparent that there was indeed something special about the 505 that positions it as a step up above other machines. It was like a magnet to the admirers.

**EXPERT OPINION**

AOPA PILOT AUSTRALIA sought out an experienced Bell 206 Jet Ranger pilot who had flown the 505 to ask his opinion. We found Andrew Leece, an Aussie aviation consultant who lives in LA, and owns www.air.one a global marketplace for new and used aircraft. His family own and he has been flying for several years, a beautiful black Jet Ranger based at Bankstown.

Leece says: "After flying the 505 I can see that it is the obvious [Bell] 206 customer upgrade. The primary reason is a feeling of security – it's more robust and more stable in the air. It made me feel comfortable."

When he first looked at the 505 Leece was unsure what Bell was trying to achieve with the shape but said "as soon as I hit the start button, and seeing the

dual channel FADEC in action with the glass cockpit, I realised that the 505 was a total game changer." He went on to say, "It's almost 'flying for dummies', making things so easy to plan, navigate, and manage the engine."

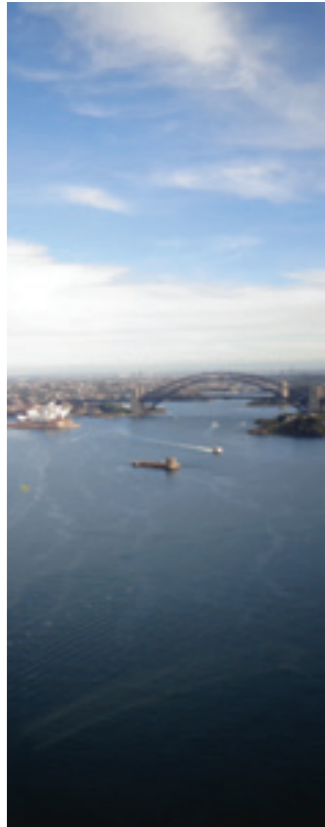
Leece thought that performance, especially rate of climb, the ability to take full passengers, and full fuel, together with the turbine reliability, will give buyers a lot of comfort.

**OVERALL IMPRESSIONS**

**The 505 is a highly desirable luxury personal aircraft, and a great high-performance tourer, but one that will most likely be put to work in the bush, as most helicopters in Australia are.**

**In the 505, Bell have succeeded in taking an icon of aviation, updating it, and making it better and more attractive. That is in part due to the modified shape; in part due to the new leather interior, with no dividing partitions now - just one single area; and in part due to the performance of the updated engine.**

**As the author watched the crowds mob the 505 at Bankstown, especially a dad with a small boy whose face was pressed hard up against the perimeter fence, just what is so special about the 505 became apparent. It is that somehow this new version of the Jet Ranger has crossed over from being merely a functional workhorse favoured by operators and accountants alike, to a luxury object of desire. It has a magic presence that will surely infect all pilots, passengers, and the public who come across it.**





# R66 TURBINE

CALIFORNIA DREAMING

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

# R

**Robinson is the market leader in general aviation helicopters. The editor, upon the recommendation of Heliflite (Australia) owner Lyndsay Edmonds was invited to tour the factory and fly the company's flagship machine – the R66.**

## FACTORY TOUR

The Robinson factory at Torrance (KTOA) is tall, long and wide, taking up about a 1/2 mile, parallel with runway 29/11. It's clean, well vented and has plenty of space for what is a busy design, manufacture, and repair line for the R22, R44 and R66 helicopter range.

Our tour was conducted by Monica Campos, a helicopter pilot and former instructor herself. She started out as founder Frank Robinson's executive assistant eight years ago and has worked her way up. She still flies all the aircraft, and of course, loves the R66.

It is always interesting seeing metal in its raw or near-raw form go in one end, and completed airplanes exit out the other. Robinson is no exception.

Interesting aspects of the factory tour included:

The blades are not composite, but an aluminium honeycomb design, filled with resin and surrounded by a metal outer skin. They are made a little longer than required and then every single one has a piece removed off each end which is scientifically examined and tested. The samples and the test results are stored and become a vital source of information in incident situations. Every 100th blade is tested to destruction.

After initial construction, the blades, which are handmade, are weighed and fixed to a central spindle. The blades are swapped around until they get two that are close to same weight. This gives good balance and means only tiny adjusting weights are required to be inserted in the end of one blade to balance the other.

There are hundreds of blades in storage. No matter what the actual orders are they are manufactured continually, so there is always a supply if customers or assembly needs them.

The factory works the equivalent of a double shift, with the earliest teams starting at 5am. This is to keep up with demand and must be reassuring for employees.

Except for the engines and avionics, almost everything is made in-house, something founder Frank Robinson, who is now retired in a nearby suburb, is said to be proud of.

The author, perhaps because we were to test fly the R66, was particularly interested in the Rolls Royce turbine engine that powers it. There were half a dozen engines on stands and they were amazingly small and light - much smaller in the metal than they look in the photos. Although they develop more power (300 shp) than the piston engine (245 hp) they weight 300 lb less. The engine is derated to 270 shp for take-off and 224 shp continuous.

The other interesting thing in the factory was that R66s can have 43 US gallon auxiliary fuel tanks installed in the rear baggage compartment. That makes the 66 a five hour plus reserves helicopter. Given the up to 130 plus knot cruise speed, this is transformational. And yes, there is still room for bags and other luggage.

Maximum gross weight is 2,700 lb. Standard fuel capacity is 73.6 gallons, and standard maximum range, with no reserves, is 350 nm. With an empty weight of 1,280 lb, the balance left for pilot, passengers, and baggage is a generous 927 lb (420 kg).

Finally, it was great to see R66 number 900 on the line, being assembled ready for shipping to a lucky customer in Australia. It was one of two soon to be partially disassembled, crated and shipped down under.

## LET'S GO FLYING

Our guide for the day was Doug Tompkins, the chief test pilot for Robinson. He has more than 20,000 hours flight experience - most of it testing and flying Robinson aircraft. He was proof that it can often be as much fun flying with the chief pilot as it is to fly the aeroplane. He certainly makes pilots feel safe, and yes, he does know what a great job he has.

LA, as is typical, had dawned misty and foggy, but by 10am the sun had burned almost all that away. The only problem was that low cloud remained over the coast and beaches. That meant our planned flight would take us north to Compton (KCPM) and then over the city and back the same way.

Start-up was typical turbine (easy and quick) and surprisingly quiet. We monitored key measures to







ensure there was not a hot start. That quietness was to continue throughout the flight. With just normal (not noise cancelling) headsets, the sound level, through all phases of flight was low.

After take-off the author immediately noticed that this was a quick ship. A turbine does that. In cruise, at 85% torque, we easily achieved 130 knots. The sweet spot in terms of fuel consumption and passenger comfort is probably about 120 knots, and with 100% torque, 140 knots is certainly achievable.

Once airborne Tompkins handed over control to the author. Making the classic mistake of looking too much inside, worsened by some slightly blustery conditions and mechanical turbulence, as we were at just 1,000 feet AGL, roll control was initially not good.

Tompkins was patient and got the author talking. Forgetting all about flying the helicopter but instead just looking out front, enjoying the view, and using the controls subconsciously, suddenly the editor realised he was flying smoothly, albeit with that mechanical turbulence causing slight buffeting. Kindly Tompkins said that if he was to have turned on the autopilot it would be a rougher ride. Experienced helicopter pilots will know the secret of relaxing and looking outside, and fixed wing pilots might have read it. Our test flight confirmed it's true.

Flying helicopters is highly addictive and that "jet fuel injection" from a turbine R66 is at the higher end of the addiction scale. It's smooth, has sensational visibility, is fast by light helicopter standards, and not too difficult to master. It is surely a machine that all who learn to fly on Robinsons dream of. It was a pure joy and a matter of high personal satisfaction to follow the "river" or "sewer" as Tompkins called it, and then the freeways, at 1,000 feet almost without thinking.

At Compton Tompkins demonstrated several autorotations. Much to the author's surprise he said that this is the way that they normally approach - staying high and then cutting power (torque) completely.

To a fixed-wing pilot that is scary. But the way Tompkins demonstrated it gave the author a huge sense of safety from those two big, energy storing Robinson blades - which we had seen being made earlier in the day. We very gently descended at between 60 and 70 knots, and as we approached the ground Tompkins raised the collective for a gentle touch down. In no way did it seem we were "dropping like a stone." As with other helicopters flown in the previous month, this had been the great revelation for this fixed wing pilot. Indeed, Tomkins said (confirmed by a R66 owner in Melbourne) that if he does not tell passengers he has the engine at zero torque, they simply wouldn't know.

It was, as usual, a very busy day over LA, and the large Garmin screen with traffic watch was particularly useful for avoiding other aircraft - including the many police helicopters. It's kind of hard to imagine flying without it now.

#### UBER THE STARS

Tourist pay about US\$84 for a minibus tour of Los Angeles - it's hot, tiring, packed, and takes all day. The other option is to jump in a R66, and that's what we did. We saw all the tourists see and more, in about an hour. We avoided LA's infamous traffic, had the best close-up bird's-eye view ever, could quickly "transport" from one spot to another, were able to "hang around" over the more interesting sights, and were in complete anonymity. This is the way the stars get around, and we liked it. Tompkins did say he had flown many famous people in his time. This is just one of many things you can do with a R66. We won't even start on the beaches, mountains, or vineyards.

Our tour included views out to the harbour near San Pedro; the hills of Rancho Palos Verdes; Compton, where the Williams sisters of tennis fame grew up; downtown Los Angeles; Hollywood - including Rodeo Drive, of Pretty Woman fame; the Hollywood sign, Hugh Hefner's playboy mansion; the Hollywood

Walk of Fame, with all the gold stars in sight; the mega-million dollar blue and green swimming pool endowed homes of Beverly Hills; police headquarters; downtown; the jail; golf courses and country clubs; and multiple buildings and plush properties with helicopter pads.

Our test flight in a R66 turbine helicopter was indeed a "California Dreaming" moment.

#### PRICING AND OPERATING COSTS

Robinson is particularly transparent about its pricing, with all figures being available publicly. Selling through a dealer network, to which Robinson is both close and appreciative of, buyers will find prices the same anywhere.

The base R66 Torrance flyaway price, with standard avionics, is US\$892k. Air conditioning adds US\$24k and an auxiliary fuel tank US\$33k. Crating (excluding shipping) is just under US\$5k. A new option, perhaps not so applicable for Australia, is warmers for the front seats, at just over US\$5k.

Robinson has found R66 buyers tend to "spec up" their machines. There was one in the delivery area, and it sure was a beaut. It was worth about US\$1m and the author really wanted to jump in and fly it away.

Total per hour operating costs for the R66 are US\$361, of which just US\$148 is direct operating costs.

#### OVERALL IMPRESSIONS

**The R66 is the top of the tree for Robinson. With its Rolls Royce turbine engine, an engine that founder Frank Robinson spent a lot of time refining; luxury car like interior; optional long-range fuel tank; large, bright, clear-screen Garmin avionics; pedigree - the majority of owners are upgrading from a R44; wonderful eagle like views; and a fully spec'd price of less than US\$1m, the R66 is an appealing offer indeed. In aviation terms, the R66 is perhaps the ultimate California dream.**





# GUIMBAL

CABRI G2

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

# A

helicopter edition that does not include the world's most delivered two-seat rotary aircraft in 2017 would not be complete. For years the Robinson R22 was the king, but last year it was deposed by the French designed and built Guimbal Cabri ("G2"), with 35 deliveries to the R22's 34. These sales figures make reviewers sit up and take notice.

Of even more interest to AOPA PILOT AUSTRALIA readers will be the fact that 30 G2s have been sold into near neighbour New Zealand. The Kiwis have a much more inhospitable landscape and weather than Australia and so it is significant that they are choosing the G2 over the R22.

With the Kiwi representative for the G2 assuming responsibility for Australia, making a push for sales here and gearing up for Avalon 2019, it is timely that AOPA PILOT AUSTRALIA checks out the G2.

## OVERVIEW

The name Cabri is an acronym of "comfort in autorotation belongs to rotor inertia" and that gives

a clue as to what the G2 is all about. The "modern" G2 brings the two-seat training helicopter into the 21st century. It is a 700kg MAUW aircraft powered by a single 180 hp (134 kW) Lycoming O-360 piston engine, rated to 145 hp (108 kW) maximum continuous power and 160 hp (119 kW) five-minute power. It has a maximum cruising speed of 100 kts, a range of 700 km, and endurance of up to 4.5 hours.

The G2 was designed by Bruno Guimbal, a former Eurocopter aeronautical engineer— a man with many distinguished inventions and innovations to his name. Unusually for a small or even medium helicopter, the G2 has a three-bladed, fully articulated main rotor, and an enclosed Fenestrón type tail rotor (which Guimbal holds the patent for along with Airbus). The main rotor blades advance to the left rather than the right – meaning a different foot must be depressed to counter torque.

The company says, "The G2 is the only piston helicopter designed from scratch with the safety of its occupants as the top priority." The internet is full of videos by owners and operators raving about three features of the G2: first and foremost, its extraordinary

levels of safety; second, it's technological advancement and beauty; and third, a claimed vast superiority over any other helicopter as a training aircraft for students.

Even a quick peek at the luxury and technology endowed cabin of a G2 show that this is no legacy aircraft. Parallels with what Cirrus, and to a lesser extent Tecnam, have done to Cessna in the fixed wing domain spring quickly to mind.

## HISTORY

In the 1990's design engineer Guimbal developed a working demonstrator of a two-seat piston helicopter while employed at Eurocopter. His idea was to incorporate technologies and safety features common place in much more expensive turbine helicopters, but hitherto out of the reach of piston owners. There was a reluctance by Eurocopter to put its name to an unproven small helicopter at that time.

In 2000, Helicopters Guimbal was set up with the aim of certifying the G2 and putting it into production. In 2007 the G2 was awarded its EASA Type Certificate and in 2015 it received its US certification.

Deliveries to date exceed 225, including some on floats. There were seven deliveries worth US\$3m in the first quarter of 2018. Since 2013 the G2 has also appeared in unmanned aerial vehicle (UAV) format, and there is strong demand for the "on the drawing board" four or five-seat turbine version.

## THE INVITE

The AOPA PILOT AUSTRALIA editor was invited by Kevin Walsh from the official Cabri G2 distributor, Pacific Aircraft Services Ltd, through its sister company "Christchurch Helicopters" to fly the Cabri from their base at Christchurch International Airport in the South Island of New Zealand.

Terry Murdoch (Director/CEO of Pacific Aircraft Services and Christchurch Helicopters) has over 30 years' experience in the helicopter industry and knows what it takes to run an efficient, profitable helicopter company whilst keeping safety as its core value. He is well versed in flying many types of helicopters and is a qualified A-Category Flight Instructor and Flight Examiner. Terry, through his experience in the flight training arena, realised early on the qualities of the Cabri G2 and the safety it would bring to both the company staff and students. In 2011 after much effort, Pacific Aircraft Services was awarded the distributorship for NZ and has since gone on to become the number one distributor worldwide.

As it happens, former All Black and Rugby World Cup winning captain, Richie McCaw is also one of the owner/directors of Christchurch Helicopters. He began flying as a private pilot in 2003 and gained both his fixed wing and helicopter commercial licences after finishing his rugby career. He recently added a helicopter flight instructor rating and has a dual role as a commercial pilot and as business development manager.





Christchurch Helicopters operates from “The Helicentre” in the Harewood Aviation Park and boasts of being within easy flying distance of “a natural environment, world-renowned for its beauty, as well as an exciting and regenerating urban ambiance.”

The company are not just the Guimbal representatives but also operators themselves, for example, charter and scenic flights, commercial and agricultural work – big business in their part of the world; a maintenance facility and flight training school for students. It currently has 14 students going through the 18-month ab initio to CPL program, culminating in finishing with a Level 5 Diploma in Aviation – Helicopter.

#### THE WALK AROUND

The G2 is bigger up close than it looks from photos and there is also more room inside than is apparent from afar. For some pilots that perceived small size may have put them off considering helicopters, so this is an important first matter of note. The aircraft body is built mostly with composite materials that give a perfect, easy-to-clean, smooth surface.

The second point of note is that the G2 has three,

not two main blades. The manufacturer says: “The Cabri main rotor was designed with training in mind, to allow safe and efficient autorotation practice. Its composite blades have a very high inertia giving the helicopter an autorotation ability which exceeds by 50% the minimum US Army requirement and is nearly twice that of some popular training helicopters. This ability, together with a large range of RRPM, make the rotor speed control easy, safe and demonstrative in autorotation.”

Walsh said one of the major reasons for the G2’s success in New Zealand has been the fact that with three main rotor blades it can safely go places and in conditions other light helicopters cannot. That is, places like the mountains, where there can be turbulence and strong winds. The G2 does not suffer from the dangerous and potentially fatal “mast bumping” or “rotor clapping” like some two bladed machines.

A conventional (open or unprotected) tail rotor is a major cause of helicopter accidents. So even more noteworthy and attractive is the G2’s enclosed seven blade tail rotor. The Cabri’s Fenestrón has a patented,

tough shroud with an energy-absorbing skid, and a ground clearance of 1.2 m. In strong crosswinds - the manufacturer claims even above 50 kts, the Cabri tail rotor is not a flight limitation. That tail rotor also contributes to the G2 being an exceptionally quiet machine - both when observed from outside and from sitting inside.

Finally, on walkaround, it’s hard to miss the luxury car like creature comforts of the G2. Behind the cabin there is a surprisingly large storage compartment that can take two airline-cabin-size bags weighing up to 41 kg, and the cabin itself looks like a Lexus car with leather seats. There are four-point harnesses and the small centre panel is mostly modern glass. There is a neat little between-the-legs cyclic for each pilot, and the views are unobstructed.

The dual controls on the passenger side can be removed by the pilot without any special tools, and stored in the baggage area, in less than two minutes.

#### BEAUTY MORE THAN SKIN DEEP

Not obvious from the walk around are many of the safety features of the G2, including its energy absorbing structure. Its seats were developed, tested and demonstrated to allow occupants to survive a 2,000-fpm crash, equivalent to a five-metre free fall, or G-loads up to 19g forward and 30g vertical.

The G2’s fuel tank is made with technologies coming from combat helicopters and Formula 1, with a dual-structure, thick, untearable fuel bladder, and reinforced fittings, also capable of sustaining a five-metre free-fall without leakage.

Every single part of the G2 seems special. For example, the purposely top exiting exhaust to prevent the starting of a fire on a dry surface (cf. a downward exiting one as used on some other aircraft); the engine doors, which even if the latches were to fail, will be held in place by a special catch and not able to fly open; the holders for the headsets when not in use; the massively strong hollow tubular legs, which flex like a spring to absorb hard landings; the easily accessed oil dip stick and refill tube; swing mounted iPad holder; and the composite crisscross type main rotor blades that are near indestructible – and not prone to cracking or splitting.

#### LET’S GO FLYING

Christchurch dawned wet, overcast, and cold but fined up nicely, albeit to a 1,000 hectopascal day of 13 degrees, with the snow-capped Southern Alps looking down on the city by midday.

Settling into the right front seat of a black and white Cabri, (which are by coincidence the traditional All Black colours) registration ZK-HZO, and donning





the four-point harness, the controls came immediately to hand and the panel was easy to read. The effective cabin and windscreen heating system was noted – but not needed, as were the multiple air vents.

The glass in front of the pilots has no dividing centre pillar - so visibility is enhanced. There is a tiny mark in the centre of the windscreen for horizon referencing – essential in VFR helicopters, and that handy piece of “ball simulating” wool. Note HZO had an optional electronic HIS and ball installed – for the compulsory instrument training hours for the CPLH.

The large electronic multiple limit indicator (MLI) is a real feature of the G2. It has a red line showing the available power and limitations at a glance. The author found this was where his eyes focused each time he glanced inside. Walsh says the MLI creates good habits for the future when students transition into turbine helicopters and it makes the step up easier.

Christchurch Helicopters have operated over 60 R22's so Walsh knows them well. His preference is for the G2 though due to its high safety features; NZ\$60 per hour lower operating cost; very significantly lower 2,200 hour overhaul cost and downtime (only three days to fully overhaul); and the comfort, as an instructor, of sending students solo (in a country with variable weather) with much less worry.

Of note in conventional start-up were two things – first the test, then “set and forget” automatic carburettor heat (competitor carb heat requires a lot of use), and second the digital display of a long list of all the previous flights and relevant date. For example, the fuel usage. We noted litre per hour usage figures in the

mid-thirties or sometimes below. Flight times and fuel used or remaining were also displayed.

After take-off Walsh handed over control as we headed north to the large low flying area over the braided Waimakariri River.

In pitch the G2 felt particularly sensitive at first but was quickly mastered. Yaw and bank were easily coordinated.

**AM I REALLY DOING THIS?**

Walsh was a most perceptive, skilled and experienced instructor. He asked the author to lower the collective and descend to 50 feet AGL. From that height, he took back control and expertly demonstrated steep turns left and right, and “180s” to follow the twists and turns of the wide, but nearly empty in winter, blue-green freshwater river. He then had the author take control and do the same. It was such a Kiwi thing to do and apparently a well proven Christchurch Helicopters technique to bring newish low time students along quickly. It worked.

Like so much else in flying, it seemed impossible when the instructor first demonstrated it, difficult, or a touch embarrassing to perform at first, but was quite quickly “mastered”.

Flying at 50 feet, at what seemed like high speed as we were so low (but was just 60 knots), and above a pristine shingle stone riverbed, in the open blue skies of Aotearoa, the author had one of those rare and special, split second, “Am I really doing this?” aviation moments, of great emotional satisfaction. It was on a parallel with the moment the testing officer said “congratulations you’ve passed your private check ride;” flying the Cirrus Vision Jet down the Hudson River Corridor; circling Bodensee (Lake Constance) to land on the grass strip at Konstanz; or landing a C182 on the aircraft-carrier-like sealed runway high up on Catalina Island, off the coast of Los Angeles.

**ACID TEST FOR THE SKEPTICS**

Thinking of all the skeptical fixed wing readers, the author requested of Walsh “OK, let’s climb back up high and show me that this thing really is safe in an engine failure [or for practice an autorotation] scenario.”

The author climbed the G2 to above the lush green grass dairy plains to the north of the river. Walsh took over and from 800 feet (500ft AGL) lowered the collective (equals “cut the power”) and nudged the nose down just enough to maintain 60 knots (that magic number again in the G2).

Down we went at 1,700 fpm. It occurred to the author that even if we did nothing, we would walk away, as the G2 is designed to completely protect the occupants

in an up to 2,000 fpm descent.

Sitting there as we descended, just why Walsh, instructors, students and owners love the G2 came into perfect focus – much more so than reading it. It did not feel at all like we were “dropping like a stone,” as perhaps some fixed-wing pilots or the public might have imagined, or the uninformed press might write. It was more like a cross between floating and gliding.

As we approached the ground and fences dividing the fields so well known to Walsh, he calmly and gently raised the collective and arrested the descent completely (we did not glide across the surface as it was covered in thick long grass with cow dung pats). He also demonstrated the particularly effective rudder (yaw) in both directions, as he had read uninformed and inaccurate comment that the G2 was deficient in that department.

Those three main “energy storing” rotors had done the job perfectly. There is simply no need to fear engine failure in a Cabri. The G2 had lived up to its acronym-name origins.

The G2 can be fitted with pop-out floats for over-water flights. It also has a purpose designed and built hook. This is important in New Zealand as sling training is compulsory for a CPLH. As we found out during our flight, the Cabri will do a lot of hooking, and not just of loads slung beneath.

**SIGHT SEEING**

As readers will know, beautiful, English-like Christchurch is called “The Garden City.” Famous for punting on its Avon River, and playing cricket on Hagley Park. It is New Zealand’s third largest city and the gateway to the beauty and splendor of the South Island.

Host of the 1974 Commonwealth Games, said to have been the friendliest and best-ever, the city of approximately 400,000 occupants suffered a massive and destructive 6.3 earthquake that struck just after lunch on the 22nd of February 2011, killing 185 people. Large areas of the city, including the famous cathedral in the central square, were destroyed. Ever since, parts of the city have been a reconstruction site. It was time to have a look at how she was doing.

Earlier in the day Peter, the author’s brother, who lives in Wanaka, and visits Christchurch often said, “If you get a bit of spare time take a car into the city and have a look around.” To which the reply, which maybe sums up the whole AOPA PILOT AUSTRALIA rotary issue was, “I don’t need a car I’ve got a helicopter.”

The author climbed the helicopter back up to 1,200 feet AGL and we were given permission to pass right over the top of Christchurch International Airport,



LAX-like (come on CASA), and headed for the nearby CBD, while remaining below 1,500 feet AGL.

The CBD was covered in a light splattering of low scattered cloud, but we could see about 70 percent of the city, including the rebuild areas, deserted spaces, new sporting stadiums, Hagley Park, and the remains of the famous cathedral which the New Zealand government has announced will be rebuilt at a cost over NZ\$100m.

Our afternoon of about an hour in the air was the personification of the pure joy of flying a helicopter. We went places, did things, and saw things in a way that “landlubbers” or even fixed wing pilots never could. We headed back over the airport runway and returned to Christchurch Helicopters for a debrief.

**OVERALL IMPRESSIONS**

**It will be difficult for even the most hardened critic of helicopters not to be mightily impressed with the multiple safety features, advanced technology, beauty, and ease-of-flight characteristics of the Cabri.**

**Despite the higher acquisition cost, flight schools will love the lower operating costs, massively reduced “rebuild” costs and downtime at 2,200 hours, and instructors will feel a greater sense of security sending students out solo in the G2.**

People with the means (about €345,000 flyaway Australia/NZ) who fly the G2 will likely want to own one, will feel safe flying it, and be proud to take passengers to all sorts of wonderful places that only

helicopters can access. Make no mistake – there is a highly addictive magic about helicopters.

With a new Australian representative, albeit a Kiwi, and strong Aussie connections building up as Australia heads for Avalon (and yes, the distributor has high hopes there will be a Cabri G2 at Avalon), there will surely be many more G2 sales to Australia. Indeed, a private buyer from Essendon was in Christchurch the day before the author and although he already has a larger turbine-powered helicopter, had decided he must have a G2 too. The wait for a new one, from order to delivery, is only about four months. This aircraft will be based at Essendon and operated by Melbourne Helicopters in their flight training school.

**OPEN SECRET**

The big open secret about the Guimbal is that the company has plans for a bigger version. While it has been distracted on the military drone version of the G2, AOPA PILOT AUSTRALIA can see quite a demand for a turbine version that could take four passengers, plus baggage, and fly 2.5 hours with reserves. Walsh says he could sell half a dozen immediately. Such a purpose-built version of the Cabri, with all the same safety and technology, would surely be a strong competitor for the world’s current biggest selling helicopter. Guimbal won’t rush it though. It will be safety first, second and third. Then ease of flight and beauty.

**MORE INFORMATION**

If you would like to learn more about the exciting new Guimbal G2 Cabri call the team on +64 3 359 0470 or visit: [www.cabri.co.nz](http://www.cabri.co.nz)



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R44 Cadet



R22 Beta II



R44 Raven I & II



R66 Turbine

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# R44 CADET

YOU'LL HAVE FUN FUN FUN TIL DADDY TAKES THE T-BAR AWAY

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

**C**ontinuing the theme of rotary aircraft reviews, AOPA PILOT AUSTRALIA looked at the two-seat Robinson R44 Cadet. We tested the skid-equipped version. A version with fixed floats is also available.

The Cadet is sometimes misunderstood, or worse, maligned or dismissed, without proper consideration (or test flight), because of its unusual - but as we were to discover appealing, and quite clever configuration.

This Robinson helicopter has the same airframe, rotor system, and Lycoming O-540 engine as the four place R44 Raven I. However, the Cadet's large aft compartment, that is the area behind the front seats, has been reconfigured for baggage or cargo (and cannot have rear seats retrospectively installed). This baggage space is in addition to the good storage space already available under the front seats.

The Cadet's maximum gross weight is reduced from 2,400 lb (for the Raven I) to 2,200 lb, and the (carburettor) engine power is derated from 225 hp to 210 hp for take-off, and 185 hp continuous. The lower weight, and derated power provide increased performance margins at high altitudes and lengthen the time between overhaul to 2,400 hours. The range is good at 300nm, without reserves, and the rate of climb exceeds 1,000 fpm.

Robinson says the Cadet is "a versatile helicopter ideally suited for flight schools and operators that want the economy of a small helicopter without sacrificing the power and performance of a large helicopter."

When at the Robinson factory in early August, the author saw Cadet's both on the production line and



ready for delivery. Robinson says the aircraft has proved popular with couples who want an aircraft with lots of room and baggage capacity, that the two of them can fly and tour around in. How nice. Cadets feature the latest in Robinson technology including streamlined instrument panels and crashworthy bladder fuel tanks. There is also a welcome air conditioning option (which is also available on the Raven II, but not the Raven I).

The other big attraction of the Cadet is the price – at a base cost of just US\$349k (compared with US\$394k for the R44 Raven I or US\$472k for the R44 Raven II) it is competitively positioned. Even against the much smaller R22 Beta II, which costs US\$297k, it looks, on paper, to be a winner.

In 2017 Robinson shipped 20 Cadets. Robinson says sales go in waves and they are confident the Cadet has a valid place in its market offering.

## THE INVITE

AOPA PILOT AUSTRALIA was invited by the friendly and accommodating Heliflite owner, and 40 plus year industry identity, Lyndsay Edmonds (who had also kindly arranged our test flight of the R66 at the Robinson factory at Torrance) to fly Heliflite's demo Cadet, from Bankstown airport (YSBK) in Sydney, during the first week of August 2018. Edmonds made a special point of saying hello and chatting to the author before the flight – a much-appreciated touch.

Our guide for the day was Robert (Rob) Bentley-Johnston, Director of Sales and Marketing and Flight Operations Director for Heliflite. Rob does not come from an aviation family but rather looked to the skies, saw helicopters, and decided that was where he wanted to be. He went directly to helicopters and never looked back – he has no fixed wing time.

Editor's note: after the flight, during lunch, AOPA Australia Youth Ambassador, and fixed wing flight instructor, Amy Chang, agreed to "swap TIFTS" with Rob, as she had never flown a helicopter. It will be interesting to hear what both report.

## HELIFLITE

Heliflite is a leading helicopter company in Australasia, providing sales, service, parts and support to the industry since 1977. The company is busy, with many helicopters being sold and delivered each year. It keeps plenty of machines in stock, confident its leaders know the market and will sell them. Clients like the fact that they do not have to wait long for an aircraft. In the month before our test flight, Heliflite delivered 10 machines and has many more on the water heading down under. Australia is a great market for rotary aircraft, and Heliflite's 40 plus year history and good reputation has it well placed.

Heliflite is also the agent for other brands including the interesting and attractive looking 2.5 metric ton class, 145 knot, FADEC equipped, turbine, Kopter SH09 (which AOPA PILOT AUSTRALIA hopes to sample once the first one lands in Australia).

## WALKAROUND

Our aircraft for the day, was the round dial equipped, VH-EYW, in pure, high visibility white, with an attractive red motive design and temporary Heliflite markings that can be easily removed when it is sold. It had just 24 hours on the clock, and still looked and smelt brand-new. The aircraft had the traditional Robinson T-Bar shared cyclic, which is much easier and less ungainly to use than it looks – pilots will quickly adapt to it – just like a side stick on a fixed wing. There was a clear warning on the cyclic – a decision made by Robinson to prevent training accidents, which says "LOW-G PUSHOVERS PROHIBITED."

Before take-off the editor used a mount to position his iPad with AvPlan software at the ready to monitor our trip, the weather and required radio frequencies.

From the outside, there was no notably significant differences from the R44 Raven in the walk around. It was just on the inside things were different, with the two rear seats "missing."

## LET'S GO FLYING

Our flight plan was to head north towards Ryde Bridge, then fly down the harbour to the heads, up the northern beaches, around Palm Beach, and then back down past Long Reef and up the harbour again and back to Bankstown via Olympic Stadium.

It was a beautiful clear sunny sky day in Sydney with just light to moderate winds. Perhaps a perfect day for a test flight in the Cadet.

With the new more powerful starter motor the Cadet came to life quickly and easily. After a short warm-up, and all those increasingly familiar but strange sounds a helicopter makes as the belts engage, Rob lifted off and we were soon flying at 500 feet in the direction of the upper Paramatta River, with between one and a half and two hours fuel on board.

Rob handed control over to the author, who from the combination of previous flights now had four or five hours rotary experience, so was able to have the Cadet flying sweetly along just 500 feet above the Parramatta River, observing all the beautiful homes, and boats below. In the distance, rapidly approaching, we could see the Sydney CBD, Harbour Bridge, Opera House, and the glistening harbour with the Manly ferries "steaming" away.

The hydraulic power controls and auto RPM throttle governor on the Cadet work particularly well and with





the collective needing only gentle guarding it was a pleasure to fly. Rob commented that the fact the author could feel the autothrottle gently twisting in his hand was a good thing – that it was not being grasped too tightly, as tends to happen with beginners. Such little compliments from an experienced instructor, signally little points of progress, can mean so much to a rotary wing student.

We both agreed how blessed we were to be flying a helicopter this day, and that this was what helicopters were all about. The views were spectacular – like we were eagles. By way of comparison, flying a fixed wing, life appears to be just fine in full-colour 2-D, but in a helicopter, everything appears in ultra-high definition 3-D – or maybe 4-D with that rotor sound, and unlike a fixed wing, it's easy to hit the pause button for a better look (slow down or hover).

There were quite a few other helicopters around this day, but strangely not so many fixed-wing aircraft, and we were often on the radio checking in and talking with the other helicopters to ensure good separation.

The editor, most reluctantly, because he was having so much fun, had to often hand control back to Rob to take some photographs and videos, but couldn't wait to take control back each time – yes, it is that addictive.

We were flying with about 20 inches of manifold pressure and this seemed to give a comfortable ride at just north of 100 KIAS. Increasing power to a smidgen over about 22 inches we saw an easy 115 KIAS (well ahead of the brochure figure of 107 knots), or more than 210 kph. This performance figure is spectacular considering the derated engine, the low altitude, the views we were getting, and of course that ability to fly in a straight line. It sure beats road and traffic constrained driving, and no car could get the views or have the fun we were.

Once we passed over the harbour bridge's southern pylon, looking down on the scores of bridge climbers, who were looking up at us, we climbed to 1,000 feet and headed around North Head for the run-up to Palm Beach. It was especially rewarding to look down on Shelly Beach and see so many people sunning themselves on the white sand, on a clear winter day – that's Sydney.

The Cadet was now flying into wind and there was some turbulence off the coast, but it handled it well. The editor sensed as a rotary wing pilot, he was more aware of the effect of wind than when flying fixed wing. Going back to fixed wing, that will certainly improve skills.

There is something magic about the northern beaches as they stretch up the peninsula towards the blues and

greens of the Hawkesbury River and the surrounding bush covered hills. We circled Palm Beach as there was a huge pod of dolphins jumping out of the water and playing near a boat just off the beach. Rounding the Barrenjoey lighthouse we started our downwind run back down the northern Beaches over Long Reef and up the harbour. We watched a large helicopter (AW139) practicing water recovery of a stranded swimmer.

Turning back into the harbour we hugged the right-hand, middle harbor side, as there was a lot of traffic coming in the other direction, and again flew over the southern pylon of the bridge before descending back to 500 feet AGL.

Having now got a good feel of the helicopter the author had just so much fun following the course of the river and was much more confident banking the aircraft steeply left and right, as required, and holding exactly 500 feet in doing so. A different application of control was required depending upon whether the turn was left or right, but it was becoming subconscious now. Fixed wing pilots can indeed learn how to fly a helicopter!

We were cleared to join mid downwind at 500 feet. It was a typical helicopter join, and quite exciting to have multiple fixed wing aircraft pass no more than 500 feet above us. Rob pointed out that it was important in this situation for the helicopter pilot to watch for fixed-wing pilots drifting a little low and remain clear of them – as (many) being low wing, they could not easily see the helicopter. The editor reminded and promised himself never to fly even a little bit low in a shared circuit again.

Rob took control and descended back into HeliFlite after which, sadly, our wonderful one-hour flight was over. It sure left the editor wanting more. By more it meant wanting to come back, fully master a helicopter and get a rotary licence.

#### FROM FUN TO A LESSON

With flying the Cadet “mastered” – at least for basic flight manoeuvres, there was time to talk about some of the theory behind helicopters. It really is interesting. Both on the ground before and after, plus during the flight Rob discussed, and things started to make sense in terms of: the height-velocity diagram (or “coffin corner”) – in much-simplified terms avoiding flying slow speeds below certain heights; transition flight and speeds; lift generated by the main rotor blades in flight; hovering, take-off; the secondary effect of controls; auto-rotation; and much more. There is no doubt about helicopters. It's not just the flying that sucks you in, but the theory too. Be warned.

#### MUCH MORE THAN A TOY

As several rotary wing pilots enthusiastically pointed out to the editor, (putting aside, for now, all the commercial job possibilities with a CPL), there are so many incredible things pilots can do with a helicopter that fixed wingers cannot even dream of. Things like helicopter-fishing, landing anywhere you have the permission of the owner (that is safe to do so); and stopping at hilltops, ranches, on river banks and so much more. A helicopter in the hands of a private pilot is not just a brilliant toy, but also a gateway to unique and unforgettable experiences – for friends and family too.

#### OVERALL IMPRESSIONS

**Some people - perhaps they never flew a Cadet, have criticised Robinson for this aircraft. AOPA PILOT AUSTRALIA's test flight showed that this criticism is misplaced – when the Cadet is purchased and used as it was intended.**

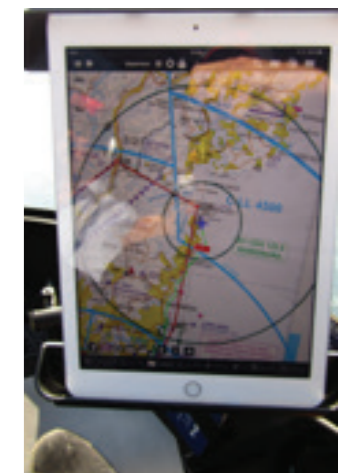
**Robinson has found a nice for both pilots who wish to train, relatively cheaply, on a larger aircraft, and then have a simple, quick and inexpensive transition to the R44 Raven II; and individuals or couples who want a larger helicopter with good carrying capacity (and room), great performance, at a lower operating cost, longer TBO, and importantly without a high acquisition cost.**

**The R44 Cadet is an all-around low-cost multi-role utility helicopter. HeliFlite reports that 80% of the buyers in Australia have been station owners or people in the agricultural environment.**

**The Cadet is a lot of helicopter for the price, easy to fly, has lots of room, and plenty of speed. But most of all it is fun, fun, fun!**

#### MORE INFORMATION

If you would like to learn more about the new Robinson R44 Cadet, call the team at HeliFlite on (02) 9766 0200 or visit: [www.heliflite.com.au](http://www.heliflite.com.au)



# TECNAM

## P2010

THE ITALIANS ARE COMING

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR



**I**n Australia there is intense competition for owner-pilot sales, especially to cashed-up baby boomers. It's hot in the training market too, with manufacturers courting flying training organisations who need to replace their old legacy fleets and meet the massive demand for "glass capable" airline pilots.

One increasingly active manufacturer is the privately-owned Italian company Tecnam. To date, Tecnam has mostly made a name for itself in the light sports aircraft (LSA) market. In June 2018 the company announced that its new 215hp four-seat, high wing tourer, the P2010 (pronounced "Twenty-Ten") had been CASA certified and would be heading down under.

Being the world's second largest producer of general aviation and light sport aircraft, Tecnam's entry into the four-seat single market is significant. AOPA PILOT AUSTRALIA was keen to find out what the P2010 is all about, how well it flies compared to competitors, and if it is suited to Australian conditions.

### TECNAM

The origin of Tecnam was two young Italian brothers, Gino and (later Professor) Luigi Pascale drawing, building and flying model aeroplanes in the early

1930s. The brothers dreamed of one day designing and manufacturing a series of aircraft. In 1951, despite so many post-WWII factors against them, the brothers achieved their goal, with the launch of the P48 Astore, named after a bird of prey that soars high in the mountains near their home.

From its design and manufacture facility in Capua (near Naples), Italy, Tecnam delivers at least one new aircraft every working day. The company has a global fleet of over 7,000, including 350 in Australasia, and 100 Tecnam Support Centres. It produces 33 variants of aircraft, with representation in over 65 countries, including an office in Brisbane run by Bruce Stark. Demonstrating the international reach, on the shuttle back to Naples, the author met Mohamed, a flying instructor and flight school owner from Sudan who had been at Tecnam for advanced training.

Tecnam has a close association with key industry partners including Garmin, Dynon, Rotax, Lycoming, and Bose. A Garmin representative was on-site during the author's visit.

With the P2012 Traveller, an 11-seat, unpressurised, high wing, Garmin NXi equipped, twin 375 hp engine aircraft, Tecnam recently entered the airliner market. The company already has more than 100 orders for the P2012, many from the launch customer Cape Air in the US, that is looking to replace its ageing fleet





of Cessna twins, with something more modern. The P2012 aircraft seems suitable for Australia too and AOPA PILOT AUSTRALIA will test it on the next trip to Europe.

The recent sale of eight two-seat P2008s to Soar Aviation at Moorabbin – and many more Tecnam aircraft no doubt on their way to Australia, has really made the local market sit up and take notice of this classy Italian company.

#### OVERVIEW

The P2010 is the first new, single engine, high wing, four-seat aircraft from Tecnam. It offers pilots advanced technology, with a claimed optimal combination of an all carbon fibre fuselage, and a metal wing and stabilator. It is available with a Lycoming IO-360-M1A of 180 hp, or an IO-390-C3B6 of 215 hp. Tecnam say the metal wing gives better flexibility in turbulence. Company executives say the carbon fibre to metal marriage, is a match made in heaven.

The P2010's maximum cruise is at 146 kts on 75% power, with its 215 hp engine turning at 2,700 rpm, coupled to a 3-blade variable-pitch propeller.

The wing is based on the well-proven NACA63A aerofoil with partial tapering. The all movable type “stabilator” horizontal tail, a trademark of Tecnam aeroplanes, provides controllability and “hands-off” longitudinal stability.

The P2010 has a fuel capacity of 63.40 US gallons with the carbon fibre structure making it lighter and more

fuel efficient. Tecnam dealers are quick to point out that the P2010 can carry four 200 lb adults, plus their golf clubs, on a two-hour flight, with reserves. These are impressive numbers.

There are three doors on the P2010. The large, luxury motor-vehicle-like cabin provides lots of room and comfort, especially on long cross-country flights. Customers can fit different avionics packages to the P2010, with high-speed Garmin NXi avionics the choice of most buyers.

In the Tecnam aircraft descriptions, the “P” stands for the founders’ surnames, and the number is the year the aircraft first hit the drawing board. There is no relationship between the number and the aircraft’s size.

The flyaway ex Gold Coast price (excl GST) for the 215hp Garmin NXI equipped P2010 is €337,800. An autopilot adds €33,800. That’s a total of about A\$600k.

#### THE INVITE

The AOPA PILOT AUSTRALIA editor was invited to fly the Tecnam P2010 from the company’s head office and airfield in Capua, near Rome, Italy, in June 2018. During the same trip AOPA PILOT AUSTRALIA was test flying the Vulcanair V1.0, another new Italian four seat, high wing aircraft.

It was going to be interesting to compare the two types, as well as assess them against the hitherto market leading Cessna 172 and 182, in which the author has hundreds of hours flight time, and the Cirrus SR20

and SR22, which the author has been flying for the last four years. The P2010 was to be aircraft type 41 in the author’s logbook and hold many a pleasant surprise.

#### FACTORY TOUR

The editor was given a personal tour of the impressive Tecnam museum, which is part of the new administration block, and the on-site factories, by Stefano Mavilio, from Tecnam’s marketing and communications department. Mavilio designed the museum, was a close confidant of Professor Pascale in his later years, was trusted to write the detailed history of Tecnam, and is a passionate advocate for his employer.

There is a separate smaller facility at busy Naples Airport where the composite shells are made and shipped up the road to Capua. As an aside, the fuselage shell for the P2010 weighs just 88kg. The main Capua factory is large and divided into many separate sections with high-quality staff, many sourced from local educational institutions specialising in aviation.

Except for the avionics and the engines, almost everything is made in-house by Tecnam, on Tecnam designed or purchased Italian machinery. It is an impressive operation. Most interesting of all was an underwater machine that cuts out metal parts, up to about 20cm thick, with an extremely high-pressure water jet. This is typical of the advanced technology in use at the factory and has the advantage of not heating or distorting the metal.

#### WALK AROUND

Seeing the P2010 up close for the first time the author found two things impossible. First, not to feel the presence of the Pascale brothers in the design; and second, not to compare the P2010 to the finest designed Italian sports car. Readers who have not seen a brand new P2010 may find these points hard to believe, but those who have had the experience will understand completely. The author was reminded of an “armchair pilot” who posted on Facebook saying he did not need to see or fly an aircraft to assess it - the numbers are enough. Nonsense!

Some observers say that the P2010 looks like a more modern version of the 182, and from a distance that might be so, to the less experienced eye. However, the P2010 is so much more technologically advanced, as to make that comparison both misleading and unfair. The far better comparison, in so many ways, is to the similarly powered, modern four/five seat American produced tourer, the Cirrus SR20.

Individual features of the P2010 that caught the author’s eye included: the handsome, perfectly smooth and symmetrical composite body; the three bladed





prop – ideal for low noise environments in Europe and ground clearance; the vortex generators on the tail fin; the convenient third door for passenger entry; the Garmin NXi kit and central electronic back up instruments; the quality leather interior, with so many special nice little touches, like an overhead case for sunglasses, and multiple USB ports; and the massive room in the back after the author, who is if average height, had positioned the pilot's seat perfectly for his frame.

### LET'S GO FLYING

At Capua (LIAU) Tecnam has the cutest bumpy grass landing "area." It is shared with a local flying club where Massimo De Stefano, the company's production demonstration pilot, and our guide for the day, learned to fly. It's an "area" not "airport" because the uncontrolled runway itself is loosely defined, part of a much larger grass field, and has the option of left or right circuits, as one prefers.

The left-hand front seat was easy to access with good visibility, except for the wingtips which are quite a way back and require a bend of the head and turn back. Start-up (and pre-takeoff) checks are pure Lycoming and the engine started immediately. In taxi the aircraft is stable and easy to control. With the differential brakes, pilots can turn on a sixpence.

Take-off acceleration felt brisk, much better than a 180 hp aircraft, and the author was quickly rotating at 58 knots and climbing out at 80. The P2010 feels strong in the climb and with 215 hp sounds much more like a six cylinder than a four. This is going to be a popular engine choice.

Climbing initially to 2,000 feet we levelled off and found a 25-25 cruise speed of approximately 130 knots. The author had no doubt 146 knots would be possible at 27 rpm. In a later climb to 3,000 feet 1,000 fpm was easily exceeded.

At 3,000 feet De Stefano demonstrated a no-flap and then a full-flap stall. The no-flap stall occurred at about 61 KIAS, and the full-flap one at about 52 KIAS. In both cases the stall was well telegraphed in multiple ways, and recovery was effected by lowering the nose and applying full power. The modest wing drop was like a 172. There are no vices here.

On our way to beautiful Gaeta there was plenty of time for the author to make steep turns in both directions to admire one of the most beautiful parts of Italy. With the wide view over the dash, and Garmin NXi artificial horizon with "ball" inside, it was easy to keep the turns balanced.

From the air Gaeta looked like one of the world's best holiday destinations and beaches. No doubt as we wished we were down there for a swim (oh for an airfield sometimes), several of the beachgoers wished they were up flying with us. It was a spectacular, no wind, no cloud, perfectly clear Mediterranean day for flying. How privileged we all are as pilots!

Reluctantly, because pilots will just want to fly the P2010 forever, we headed directly back to Capua using the NXi moving map and magenta line. De Stefano set up an autopilot climb, level off and then the descent back to the airport. It was time to briefly enjoy the beach, the countryside, and vineyard views below.

On arrival at LIAU De Stefano flew the first touch and go so the author could film it for AOPA Australia's Facebook page. The author then flew the next three, getting better each time until (near) perfection was reached on number three. Approach speed was initially high at 75 knots, with landing or full flap (there are just three flap settings – up, take-off and landing). Over the fence and in ground effect the speed could be bled off, for a comparatively slow and flat touch down, and quick stop. For anyone with some high wing time, or maybe even none, the P2010 is easily to land. That will make it popular.

### SUMMARY

**It's hard to describe the P2010 in a few words. It was, in the very best of ways, like the love child of a C182 and a SR22, in terms of design, luxuriousness and performance. It's much more a tourer, club, and owner-pilot aircraft than a trainer, but may find some favour as the latter. The P2010 is pure Italian-design-and-passion-beautiful, easy and safe to fly, has a great field, climb and cruise performance, with huge room and lots of nice touches. It's backed by more than 80 years Tecnam history, experience, and expertise, from the second biggest player in general aviation.**

**Priced at just US\$300k delivered to Australia, expect the P2010 to be a strong competitor in the touring market, one that owners will be exceptionally proud of, and an aircraft we will surely see a lot of down under.**

### MORE INFORMATION

If you would like to learn more about the new Tecnam P2010, call the team at Tecnam Australia on (02) 9766 0200 or visit: [www.heliflite.com.au](http://www.heliflite.com.au)



# BEECH-REDUX

REFURBISHING THE B76 DUCHESS

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

# A

**AOPA PILOT AUSTRALIA magazine is blessed to test fly many brand-new, multi-million-dollar aircraft, including pistons, turboprops, jets, and helicopters. Aviation is not all about the high end though, and as some AOPA Australia Facebook members have pointed out, not every pilot or flying school has millions to spend.**

This is the first of a series of test flights in second-hand alternatives. Some of these “pre-loved” aircraft can be incredibly good value for money, especially when they have been lovingly restored to “better than new condition.”

In June the editor was invited to look over and then fly a zero-time engine, “as new” (if not better), Beech Duchess twin, that had been expertly “remastered” by the team at Goair Products Pty Ltd (Goair) based at Bankstown (YSBK).

## GOAIR

Goair describes itself as is “a multi-disciplinary aircraft engineering organisation servicing international carriers, regional airlines and general aviation. Goair is dedicated to providing high quality and cost-effective services and manufacturing.” The company has an experienced and highly trained team that is

trusted by owners when they want the very best for their aircraft. More recently Goair has been making a name for itself by purchasing older aircraft and refurbishing them.

## POPULAR TRAINER

The Beechcraft Model 76 Duchess (“Duchess”) first flew in 1974. Many of the more than 400 that were manufactured remain in service down under. In the US it is hard to find a Duchess to purchase – there were only two listed on [www.controller.com](http://www.controller.com) at the time of writing, and one in as-new condition appears unobtainable.

Not surprisingly, given their popularity as trainers – especially for the increasing number of aspiring airline pilots, who need twin IFR time, there are a few tired looking high time workhorse examples of the Duchess at general aviation airfields in Australia and New Zealand.

The Duchess has a cantilever low-wing and all-metal structure. With a wide cabin and four seats, a high sitting retractable tricycle undercarriage, and two 180 hp (134 kW) engines, it is one of the most popular training aircraft for pilots seeking their twin and or instrument rating, along with the Diamond DA42, Piper PA-44 Seminole, and Piper Seneca.

Interesting features of the Duchess are that the propellers are counter rotating, eliminating the critical engine; a high T-tail; two entry doors; and a wing constructed by bonding, rather than rivets

## HISTORY

VH-DVH was acquired by GoAir, “close to death” with more than 8,000 hours on the clock (kind of like an aging octogenarian), from a flying school in Florida, in 2008. It was then flown north by Ray Clamback before being disassembled, crated and shipped to Australia. It then went through a 500 plus hour re-engine and “remastering” by the talented engineering team at GoAir - who have maintained, worked on, and restored many Duchess aircraft over the years. There are currently four or five other Duchess aircraft in their hanger in various stages of completion. Outside was a Duchess previously restored and sold to a private buyer.

## WALK AROUND

The author’s perception, let’s say prejudice, perhaps born out of seeing so many “old duffers” still in service - including at Bankstown, was of a slow underpowered training-only aircraft, most of which were ready for the scrap heap years ago. How wrong that perception was to be with respect to VH-DVH

DVH looked brand new sitting outside GoAir, in a pure white and grey colour scheme. It turned out to be quite the opposite from what was envisioned. It had two-brand new 180 hp normally aspirated engines, which had to be run at 25 inches the whole flight, as they were still on run in, and new propellers. It had tons of power, a good short field performance for a twin, and oodles of room, both in the front and back seats, as well as the baggage compartment. The leather seats were comfy and would give passengers a feeling of space and luxury. There were many nice touches to the aircraft like restored-to-new or recreated placards and insignia.

The panel was perhaps a perfect combination of old “steam” and modern electronic gauges with a central Aspen unit. The high up seating position has good visibility, even to the sides, with the wing set well back.

## HOW SHE FLIES

The author took the left-hand seat, under the watch of experienced Duchess instructor Justin Stephenson, who has just been accepted to fly the Dash 8 for Qantas. It was a conventional start-up checklist, albeit longer and more extensive than some G1000 equipped aircraft. But that’s the whole idea, it’s a training aircraft for students likely to progress to more complex types. With all the dials, switches and levers, one thing Duchess pilots become good at is the instrument scan.

The engines both started easily and after clearance we taxied for runway 29R and took off to the west. Stephenson had suggested we bring both engines up to 20 inches in the initial roll, and then when everything was in order, only push the throttles to the wall. Rotation was at 71 knots and we quickly accelerated to 100 knots in the climb out to 1,000 feet, and then to 2,500 feet, when clear of the Bankstown control zone. In the cruise, 150 knots was achieved.

We then did some air work which demonstrated both the power reserves from the Duchess’ two engines, clear visibility from all four seats, and the aircraft’s good handling characteristics. We flew out to and around the Blue Mountains and then back to Bankstown via the pipeline and Prospect Reservoir.

The author then handed control back to Stephenson who flew the approach at 90 knots, down to 80 on final and then exactly at the recommended 76 knots over the fence. There was quite a high nose attitude just before touchdown to ensure that the Duchess landed on the main wheels first. Stopping distance with a set of new disc brakes was quite short.

## A BIG SURPRISE IN THE NUMBERS

The author imagined this better-than-new Duchess with new engines and an Aspen unit as being worth



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about A\$500k. It was a shock – perhaps better described as a pleasant surprise, to hear it could be acquired for just A\$180k. As a qualified chartered accountant who used to spend a lot of time crunching numbers and working out actual and projected return of investment, it occurred to the editor that this aircraft would be a perfect buy for a busy flying school.

With a purchase price as low as this, depreciated over say ten years, and a running cost of under US\$150 per hour (as sourced from [www.what2fly.com](http://www.what2fly.com)) this Duchess could be not only be a solid workhorse but also a great money earner. With an as-new airframe and zero-time engines a new owner would also expect low maintenance bills for many years.

By comparison, a brand-new Piper Seminole, which also has 180hp engines and four seats, with similar performance, costs ~US\$700k (A\$946k or closer to A\$1m delivered to Australia). For the same price, a flight school could buy five or more Duchess aircraft!

With the same power engines, variable operating costs would be about the same, as would hangarage, instructor wages, landing and ATC fees. However, depreciation allowance and insurance would be so much higher for a new aircraft.

It really is no contest - the remastered Duchess is light years ahead of any new twin aircraft in terms of economics.

**OVERALL IMPRESSION**

The overall impression is that either new twins are overpriced, or remastered twins are under-priced. Not every twin rating or MEIR student needs to learn on a all-glass cockpit - that can come later. The remastered Duchess presents flying schools with a great economic proposition.

**MORE INFORMATION**

If you would like to learn more about refurbishing an aircraft, call the team at GOAIR Bankstown Airport on (02) 9796 3426 or visit: [www.goair.com.au](http://www.goair.com.au)





# AEROPRAKT

A32 VIXEN

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

T

The A32 Vixxen (A32) is the latest addition to the Aeroprakt range of aircraft and was in testing for over three years before being released. It joins the popular Foxbat and Kelpie in the Australian lineup.

The two-seat, Rotax powered aircraft is aerodynamically clean, with a light and airy cabin, fully sealed doors, high up seats, and an all-flying tailplane ('stabilator').

## AEROPRAKT

Aeroprakt is a privately held light aircraft manufacturer based in Kiev in Ukraine and was founded in 1991 by Yuri Yakovlev. It employs more than 80 people. The company specialises in light sport aircraft and ultralights, sometimes in kit form.

## THE INVITE

AOPA PILOT AUSTRALIA was invited by Peter Harlow from Foxbat Australia – the local distributor, to test fly a brand-new bright red / orange Vixxen on a delivery flight from the assembly centre at Moorabbin (YMMB) to the sales and parts centre at Tyabb (YTYA), in the first week of August 2018.



## WALK AROUND

The VH-OYZ held a few interesting surprises on walk around. Apart from the brilliant high visibility colour scheme, noticeable were: the large and long flaperons; the installed ballistic parachute system; the fully moving tailplane; the large glass cockpit area with unparalleled views in all directions; the lightweight composite three-blade propeller; and in the cabin, the spacious nature of the seating; the quite large zipped up storage space behind the seats; the large Dynon HDX glass screen; and the traditional, dual, U-shaped control columns.

## LET'S GO FLYING

VH-OYZ has just a few hours on the clock having been assembled and test flown the day before. We were to deliver the aircraft to the sales centre in Tyabb as the customer was due to pick it up the next day.

Our guide for the day was experienced Vixxen pilot Ido Segev who was happy for the editor to fly left seat and make all the radio calls. Ido is a commercial pilot and flying instructor, and a world champion model aerobatic aircraft pilot. He is a licensed commercial drone operator and has an RA-Aus Pilot Certificate.

There is something good about how easily and quickly the geared Rotax engines start. This 100hp motor soon had us taxiing, doing run-up checks and lining up for Moorabbin's runway 35L.

Advancing the throttle over two or three seconds and raising the nose almost immediately, as suggested by Ido, the Vixxen jumped off the runway in less than the three seconds, at about 45 knots, and we were climbing at a rate which could have put us at more than 1,500 feet AGL by runway's end. It seemed more like we were in a Pitts Special than a LSA, and that perception was to continue throughout the flight.

Avoiding other fixed wing and rotary traffic inbound to YMMB on a busy and sunny day, that was due to get too windy for light aircraft later, we climbed to 2,000 feet, and then 3,000 feet, when clear of the control zone.

Views were spectacular settling into the cruise and the (huge reserve of) power needed to be pulled back a long way. We saw speeds of 110 knots plus down low and there is no doubt the book figure of 115 knots in cruise could be obtained. Not bad at all for an aircraft that takes off at 45 KIAS and stalls at just 27 KIAS.





The author then performed multiple steep turns before handing back to Ido who demonstrated stalls. It is hard to believe anyone could stall the Vixxen unintentionally. We were at what seemed like near walking pace of 27 KIASs before the break came. Recovery was simple, easy and quick, with a forward control column movement and application of power.

Ido then demonstrated the extreme (no aerobatic) maneuverability of the Vixxen to the extent that it gave the author aerobatic like G-force feelings. It was like Ido was back winning the world model aerobatic championships and the author was inside the model. It did demonstrate the incredible performance of the Vixxen, which is s certified to plus 4 and minus 2 Gs.

The Vixxen was proving itself to be a fun aircraft with amazing performance. But it was time to head to Tyabb and try some circuits.



Up until final approach, the author found the Vixxen natural and easy to fly. Final required a little different technique though with much more rudder than aileron. Being a lot lighter than the larger singles the editor was used to, the Vixxen tended not so much to stay put. It took a few circuits to get used to really flying it down to the landing. Staying put is good if you put it in the right place. But not staying put is good if you want to change things.

The other factor was getting used to an approach speed of 45 KIAS - about half of what the author was used to. Just like it could take off in well less than 100 metres - perhaps about 50m, so could the Vixxen land in about the same distance.

Despite the editor not being 100% happy with his landings Ido said he had done well considering the conditions - that was kind.

We taxied in after the third landing and had a look at the delivery centre and large supply of spares, including wings held by the Foxbat team. This has been one of the reasons for the large sales in Australia - customers knowing that they can get a part quickly when it's required.

The bright red Vixxen looked resplendent sitting in the sun and no doubt by the time readers finish this article the new owner will have built up a lot of hours of pure fun flying.

**TARGET MARKET**

At a base price of about A\$120k for a model A32 and less than A\$150k for a fully specified, everything included aircraft, the A32 seems awfully good value for money.

At this price point the Vixxen is attractive to private buyers and flying schools alike. Farmers will probably want to go for the Aussie customised Kelpie version and economy focused buyers the Foxbat version.

**OVERALL IMPRESSIONS**

The A32 Vixxen was a real surprise package. Great value for money, quite unbelievable performance, and a delight to fly. No wonder there are so many in Australia and doubtless there will be many more sold. Members who are in the market for a low-priced, high-performance two-seater that costs little to run, and can be flown off and back onto the shortest of runways would be well advised to take a close look at and go for a flight in the Vixxen.

**MORE INFORMATION**

To learn more about the Aeroprakt A32 Vixen, call Ido and his team on 0431 454 676 or visit their website at: [www.foxbat.com.au](http://www.foxbat.com.au)

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# VULCANAIR

V1.0 - FLIGHT SCHOOL GAME CHANGER

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

T

**The traditional high wing design for trainers remains popular with students and instructors in Australia. However, the high cost of new replacements, and a lack of attractive tax incentives make positive cash flow and adequate returns on investment (ROI) challenging for flight training organisations. There has been a reluctance to “go new.”**

Additionally, there remains resentment against the traditional source of high wing trainers, after the short, troubled life of its new two-seat trainer which was perceived as overpromised and underperforming, and the cancellation of diesel version trainers from the same source.

The good news for flying schools is that a modern, well priced, and tough replacement is on its way to fill the void in Australia. Italian manufacturer, Vulcanair is to offer its “172-lookalike” aircraft for sale later this year. AOPA PILOT AUSTRALIA took a close look at the suitor, dubbed the “V1.0,” to find out if it’s up to the job.

## VULCANAIR

Former spare parts producer Vulcanair was founded in 1996 after purchasing the assets of the bankrupt Partenavia. The new owners had a massive job ahead, including recreating tens of thousands of engineering drawings - which they wisely did using computer-aided design (CAD). They also had to reverse engineer designs before reviving aircraft production ranging from the single-engine V1.0 to the A-Viator, a 400 kph turbine twin.

Vulcanair, a company that has been represented in Australia by Airitalia since 2004, has 51 Partenavia/Vulcanair aircraft on the register here. The company is committed to expanding its range and reach down under. Getting buyers to know and trust the brand, via the entry-level V1.0, is a key part of that strategy.

Vulcanair’s has a 60,000 m2 facility at the Capodichino Airport in Naples, Italy (LIRN), under the watchful eye of Mount Vesuvius. Naples is a two-hour drive south from Rome, or just an hour on the 300 kph express train. It is situated on the beautiful Tyrrhenian Sea,

part of the Mediterranean, off the western coast of Italy. There are huge surrounding hills and mountains, with beautiful sandy beaches, hidden villages, and secluded bays in tall stone structured islands. The waters are a popular playground for the wealthy who cruise the islands (like Capri) and blue waters in their yachts and launches. Even more fortunate are those who fly the skies above.

## OVERVIEW

The Vulcanair V1.0, was developed from the Partenavia P.64B Oscar, and is an Italian designed and manufactured, high wing, four-seat, light aircraft, powered by a fuel injected 180 hp Lycoming IO-360-M1A, that can run on AvGas or multiple alternative fuels including MoGas. The European Aviation Safety Agency certified the V1.0 in 2013, the US Federal Aviation Administration (FAA) in 2017, and CASA in June 2018. The certification is in the utility category.

The 2,546 lb (1,155 kg) maximum take-off weight aircraft comes standard with a variable pitch propeller, with a fixed pitch version - under demand from US flight schools, under testing, and expected to be available later in 2018.

The V1.0 is quite deliberately constructed using durable metal, rather than plastic or composite materials. Its structure is a combination of welded steel tubes, arranged in an articulate reticular fashion for the main cabin, coupled with a riveted aluminum wing, tail cone and empennage. This style of manufacturer clearly differentiates the V1.0 from its composite opposition.

The aircraft has three passenger doors and a luggage capacity of 40 kg (88lb) in a separate baggage compartment, which can be reached over the back of the rear seats or via a large access door on the right rear fuselage.

In July 2017 the company announced a Garmin equipped price of US\$259,000, which substantially undercuts the similarly powered Cessna 172SP, which sells new for US\$391,000. At the time of writing the Australian price has not been finalised but is also expected to be competitive, with several flying schools having already shown significant interest.

The standard avionics package is a Garmin G500 coupled with a GTN650 unit and a JPI digital engine monitoring system. Mid Continent’s latest digital backup digital instrument (SAM) is offered standard in as well as an angle of attack indicator (AoA). An optional full IFR version is available and will be fitted to the demonstrator due in Australia later this year.

The installation of avionics is such that the aircraft is capable to perform ILS CAT I approaches.



## THE INVITE

The offer of a test flight and a tour of the factory in Naples was too good to pass up. AOPA PILOT AUSTRALIA wanted to know how this new design would stack up in Australia, including against its obvious competitor. Might it be perfect for training fleet renewals? With a long-lasting metal structure could it be the ideal station runabout too? Would the speed and performance from the constant speed unit (CSU) lend it towards sales as a “low” cost tourer for private buyers?





**FACTORY TOUR**

The Vulcanair factory and offices are situated at the Runway 24 end of Naples International Airport. The factory has a large forecourt and view of the big planes coming and going. It's a busy place with multiple aircraft under construction, repair, or maintenance. Under the Italian flag that proudly flies in the hangars, there is much room for expansion, as sales ramp up.

During our visit, there were about half a dozen V1.0's complete and ready for delivery all over the world, either by flying or disassembly and shipping by a container. The wings and engine are removed for shipping, as containers can be subject to high G-forces that cause damage. That is a risk Vulcanair prefers not to take. Reassembly is quick and easy, taking about two days.

Of most interest in the factory was the V1.0 for Australia that was starting to take shape. There was also a P68 Observer with the new Garmin NXi kit being installed.

Touring the factory and talking to the engineering staff certainly gave a sense of the strength and quality of the V1.0's construction. It gave a pilot-feeling of comfort about the Vulcanair range, and flying the V1.0 in particular.

**WALK AROUND**

The V1.0 is a smart and better-looking aircraft in the metal than the photos, especially in the "contemporary" blue and white scheme which will be coming to Australia.

In the metal, metal is the key point, and gives a clue to how the aircraft flies, and where it is targeted. This is not a "pretty supermodel" but designed as a handsome, practical workhorse capable of standing up to the day-in-day-out rigours and demands of flight training schools and their not so perfect or careful student pilots.

The third door on the right side for passengers is a great little feature and was to come in handy so many times, for example when wanting to place or retrieve items on the back seat. Kids climbing into the long two place single back seat will love it too. In an emergency an extra door would also be good.

The handy baggage compartment can hold 88 lb (44kg).

The pants-covered fixed gear looks strong and aerodynamic. Having held the stays for the gear a few minutes before in the factory emphasises their strength. The two-blade propeller clearance is good for grass operations. The ailerons and flaps are of a good size. They look and feel sturdy.



The cockpit seating is comfortable, and the large U-shaped control column, with a chronometer set in the middle, will be welcomed by IFR students. It's also great in turbulent conditions. The panel is well laid out with the G500 directly in front of the pilot. The position of the horizontally mounted EFIS standby instruments to the right of the pilot is perfect for the instructor to monitor students without having to lean all the way over. The view from the cabin in all directions is great, especially with the cut down side windows of the front seats.

The electronic engine monitoring system on the right side is a bonus for a training aircraft – and may very well help preserve engine life. An additional nice touch is a small brightly lit digital readout of manifold pressure and prop RPM just above the G500, right in front of the pilot. It seems like Vulcanair has thought of everything a training aircraft needs in the modern real world.

The central throttle quadrant is ergonomically perfect, especially the large ribbed elevator trim wheel, which comes so naturally to hand and is easy to use. The switches are of the reliable "silver flick type" and once again are designed not to fail or cause maintenance headaches for flight schools. It's obvious when a switch is on or off.

The rudder pedals are more to the centre of the aircraft, than directly in front of the pilot, but this gives the advantage of a space to the side to stretch out the legs on long trips, or the nth flight of the day for the weary instructor. The seats look basic but are strong, functional and comfortable. They look like they too will last well.

Above the pilots is a glass roof – ideal for avoiding those low wing - high wing accidents or observing the weather above. There are also neat little moveable window shades for those sunny days.

The back seat is adequate, if not large, and again points to the fact that this is more likely a trainer and will less often carry four adults – more likely a student pilot and instructor. Or maybe mum and dad plus one or two bambinos. But if four adults are to be carried there is certainly the room and load carry ability to do so comfortably.

The overall finish quality of the V1.0 is of a high standard and flying schools will be proud to post pictures of it on their web sites.

**LET'S GO FLYING**

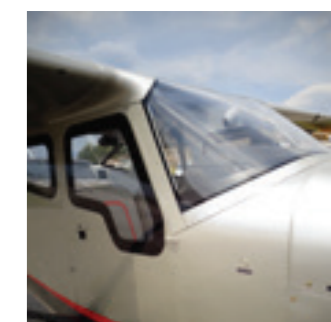
Vulcanair has its own exclusive taxiway at Naples airport called Sierra Charlie. Airport security had to be in attendance when our aircraft was pushed through the opened gate. There was a proper frisk

and check of papers, but officials were friendly and seemed well used to the Vulcanair team.

It was a long taxi to the other end of the runway and a longer wait for the nonstop stream of large jets on final for runway 06, plus the obligatory two minutes for wake turbulence, lessened by backtracking for full length not used by the commercials.

Our guide for the day was Vulcanair's Italian chief test pilot, Andrea Maranga, who was suitably decorated out in a bright orange flying suit with aviation emblems. Our aircraft had only a few hours on the clock and carried the temporary registration sticker of I-PDVA. The V1.0 felt secure to taxi with its 2.1m track, visibility was good, and its toe brakes were most effective. Start up and pre-take-off checks were Lycoming 180 hp conventional.

Once cleared for take-off, the author taxied onto the runway and applied full power, conscious of the bright landing lights of a jetliner full of holiday makers on final. Maintaining runway directional control was easy and rotation speed (VR) was 65 knots. It did seem to take a wee while initially, but the last fifteen knots happened quickly. Ground run at MAUW is just 500 feet. The V1.0 was powerful in the climb, yet required only modest application of right rudder, and easily settled into the best rate of climb speed (VY) of 80 KIAS.







The author made a right turn and levelled off at 1,000 feet as we headed to and reported over Portici. After that we were cleared to the Sorrento VOR to the west, positioned high up on one of the many large mountains or hills around Naples. We brought the flight plan up on the G500 which was crystal clear.

Looking down we saw populated areas with what seemed like large swimming pools filled with green water. It then occurred to the author that this was netting covering vineyards.

On the flight to Pontecagnano there were many beautiful little seaside villages on the coast – either high up, with spectacular views, or in walking distance of white sandy beaches. Surely none of these local inhabitants would ever want to live anywhere else.

Because of the 30-knot easterly winds, the hills to the east were generating huge turbulence and we were suddenly bounced around like a cork in a washing machine. Memories of learning to fly in and around the windy hills of Wellington came flooding back. We reduced to a safe margin below the design manoeuvring speed (VA) of 125 KIAS, and the V1.0 handled the turbulence well – perhaps aided by a wing span of less than 10m (compared with 11m for the main competitor). It passed that test for sure. Even so, we headed a little more out to sea for a smoother ride. About wind, the V1.0's maximum demonstrated crosswind velocity is quite high at 20 knots – yet another student pilot training plus.

Up high Maranga demonstrated the effectiveness of the manual trim control and how it is possible to fly level, climb, descend, or even flare to land the aircraft using that “wheel” alone – in the unlikely event the main control column was to become inoperative.

We looked down on lots of millionaires' yachts and launches enjoying cruising the glass like deep blue seas and stopping at the fable-like islands. There was little other general aviation traffic about.

Maranga was making the radio calls in Italian and then briefing the author in English. Lots of corporate and tourist jet pilots could be heard talking in English as they headed to or from Pontecagnano – which is a gateway airport. We were asked to make several right-hand orbits to avoid inbound IFR traffic. This was a good opportunity to test the V1.0's handling and enjoy looking down on the many ships. The handling was solid and will please instructors and flight school operators.

The approach itself was over the beaches and then into a strong cross wind. The V1.0 does not fly or land like a light composite aircraft, or indeed a 172. Maximum flap extended speed (VFE) is 79 KIAS. With the shorter wing there is no “cut the power and float down” in this aircraft. Some power is left on and the aircraft flown down to ground effect before the power is cut. This is an ideal characteristic for budding airline pilots. Despite a relatively high 70 knot approach speed, recommended final touch down speed is 51 KIAS. The V1.0, with the use of highly effective brakes, stopped embarrassingly quickly, leaving us a few kilometres to taxi quickly the other end of the runway.

We taxied to park outside the local aero club, where Maranga seemed to know everyone. We enjoyed a cold drink, while savouring a huge range of light and corporate aircraft on the field. It was warming up now and the wind down low was abating. It was still turbulent up high. The turbulence combined with the busy restricted airspace would prevent us from doing any significant air work.

The return flight was uneventful, but again flown out to sea around between the Sorrento VOR and the tall famous Island of Capri - from which a few birds did their best to hit us. When they got close it seemed they sensed the strength of the V1.0 and thought better of it.

In the clear off-shore air we had no problems hitting the book “cruise” numbers of at least 130 knots. In ISA conditions at 3,000 feet the cruise speed using 26 inches of manifold pressure and 2700 rpm (90.5% BHP) is 135 knots burning 13.4 US gallons per hour. At 9,000 feet with a setting of 20-24.5 (or 66% BHP), the speed is 124 knots while burning just 10.5 US gallons per hour.

After reporting over Torre del Greco, we were instructed to join downwind for runway 24. It is a long 8,622-foot runway and we were landing downwind

with a 10-knot tail wind, due to a restriction of single engine aircraft approaching over the city. The author again had to fly multiple tight right-hand circuits while downwind as we waited for jet traffic to land in the other direction. It was easy and fun looking at Mt Vesuvius, the glittering coast, and toward the airport as we circled. There is a very good video of the landing on AOPA Australia's Facebook page if readers would like to see it.

### OVERALL IMPRESSION

The V1.0 is a tough little training aircraft that needs to be flown and a good combination of old and new. The variable pitch propeller performed well with a 25-25 cruise speed of 125 knots easily achieved. VNE is quite high at 179 KIAS. The short field performance will go well in Australia with so many grass and dirt strips.

Our aircraft had no auto pilot or air-conditioning. Vulcanair is working on a little flap for the front doors which will let more fresh air in. This will be essential for the Aussie summer as there is no window that can be opened on the doors. That instructor trick of taxiing with a door open won't change.

Given the Wellington like conditions, and two hours flight time, we got a good sense of the V1.0. The overall impression is of an aircraft ideal for the Australian training market. This is a strong and robust long-lasting metal aircraft, with modern avionics and a trusted and easily serviced engine. The V1.0 seemed well suited as an aircraft for teaching students to fly – from ab initio right up to their glass instrument rating. That utility category toughness and training flexibility, together with Vulcanair's commitment to Australia will please flight schools.

### SUMMARY

**Even before landing on these shores the V1.0 has attracted significant attention from flight training organisations in Australia. When the demonstrator arrives later in the year and flight schools get to fly it, AOPA PILOT AUSTRALIA expects to see this well-priced model become a hit for fleet replacements.**

**Although it will most likely be primarily seen as an ideal trainer, the V1.0 will also attract private buyers who want a tough but modern high wing touring aircraft with good performance, benign handling, and a good load carrying capacity. Quite a few will end up as “flying utes” in the bush where Mogas is the aircraft fuel of choice – due to the difficulty of obtaining Avgas.**

**The V1.0 is the sort of plane that as soon as students get their licence, they will be proud to take their friends and family up in.**





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# THE STATE

## OF AUSTRALIAN GENERAL AVIATION

BY CHRIS CAMPBELL  
AOPA AUSTRALIA MEMBER

# L

Lately I have been reading a lot about the 'state' of general aviation (GA) in Australia and the issues we face as a community. But is it really that bad?

While I agree that there are certainly issues surrounding GA, I can't help wondering if these issues are starting to overshadow our love of flight, making a lot of us forget why we started flying in the first place. In an age where we are bombarded daily with all different forms of media, from the traditional print magazines to web-based social media, it is very easy to get caught up in the politics of aviation. GA is in danger of losing touch with its roots.

For many years, the weekend routine at Mum and Dad's house on the NSW far south coast has been the same. The ritual begins with toast, Vegemite and coffee, followed quickly by Dad and whichever of we three boys are home out the window at the treetops, watching for hints of which way the wind may be coming from. We look at the clouds and mentally start to calculate cloud heights and visibility. We look

across at the lake and decide how rough it looks then almost as one we speak, "Looks all right, want to go flying?"

Mum can nearly set her clocks to this each weekend. Inevitably this is followed by a flurry of "I'll meet you at the hangar" and "Does PKN (Dad's ever faithful 1964 172) need fuel?" We are lucky to live in a beautiful part of Australia and the scenery for flying is second to none: only a touch over an hour to the Snowy Mountains, the Sapphire Coast has some of the most unbelievable coastline in the country and the rolling green countryside of the Bega Valley is a sure sign you're home as you descend over the hills and down the valley to our home airport at Merimbula. This is our playground and we love it.

The routine at the airport doesn't vary much one weekend to the next. Dad and Ryan drag "Doug", Ryan's beautiful bright yellow 1952 Piper Super Cub from the hangar. I preflight the 172, usually with middle brother Adam, if he is home on a break from his busy career as an ag pilot, and in no time Dad, any

number of his three sons and even Mum on occasion are soaring over the Far South Coast, forgetting the problems of the world and sharing a passion for flight that only aviators understand.

That passion is what drives us to fly and is the greatest asset GA has in its corner. It's people like my Dad, my brothers and myself at airports all over Australia who are willing to sit, watch planes and talk flying for hours on end. It's the little kid peering through the fence; the look of sheer delight when you ask if he'd like to sit in the cockpit; the smile that cracks across his face as you put the headset on his head and he pretends that he too can fly.

It's introducing your friends to light aircraft; the giggles of kids in the back seat on their first flight; hearing them talk about it for weeks afterward. It's the buzz you get doing sunset circuits or flying down the beach in a Super Cub at first light. This is what GA has in its corner. It's the passion and the people behind it that keep GA going.

For many years with the ability to just "jump on a commercial plane" being such a part of our normal everyday lives, the magic of flying for many of the general public has been lost.

In the halcyon days of airline travel, women would dress in their Sunday best, men wore coats and ties and a flight on an airliner was a special occasion. It was classy, almost opulent and very much an extravagant experience. These days, it's the kid crying in 37A, the toddler kicking your seat back and the overhead locker that just will not accept your carry-on, no matter how good you thought you were at Tetris as a kid.

In 100 years we have gone from the first flight to worldwide flight, supersonic flight and now into the era of the super jumbo, and while for some of us the magic remains, for the vast majority of the general public, aviation is just another way to get from A to B. That is a tragedy and while it may be too late for commercial aviation travel, GA still holds that magic for many and it is our responsibility as pilots to ensure that magic never disappears.

In November last year a group of us flew from Merimbula to the Mount Beauty "Gathering of the Moths" fly in. Dad and Adam in Dad's 172, Ryan's famous "Doug" the Cub with Mum on board and myself and good mate Andrew Scanes in my Uncle's 172 Cutlass RG II, which he kindly allowed us to pinch for the weekend. What followed was one of the best weekends I've had in a long time and outside Oshkosh, one of the best experiences I've had in aviation. The scenery at Mt Beauty is breathtaking and with an airport full of everything from RVs to

Super Cubs and helicopters there was something for everyone. If you haven't been to a fly in and camped under the wing of a plane it really is something you must experience!

The other place to reignite the passion is your local aero club. My brothers and I are the youngest members of our local Frogs Hollow Flyers by a fair margin but it's a place all of us make sure we get to at least once each time we are home. The kettle is on, the cakes and scones are top notch and there is plenty of great company and some very nice machinery as well. President Drew Done has a beautiful all wooden home-built Falco that's worth the trip to see by itself! It's like the 11th commandment in our house: "Thou shalt attend Frog's and aviate on Sunday."

Sharing and cultivating our passion for flying is the greatest thing we can do as individuals for aviation. Go flying! Even just for a quick flight around your local area. Get out to your local aero club, swap stories and share the passion. Take people who haven't flown before and show them why our necks snap skyward almost involuntarily at the sound of a plane passing overhead. Go and learn to fly something new and continue to grow as a pilot. Go bush flying! Low and slow off airport flying is amazing fun and is gaining popularity at a very rapid rate. In the end it doesn't matter how or what you fly, if you are flying and feeding your passion. Get out there, remember what got you started in flying in the first place and reignite your love for flight.

**Make it your mission to bring the magic back to flying and share that magic with others. In a time so full of change and uncertainty don't let the politics and the back and forth between a whole bunch of different regulators and organisations dull your passion for flight or take away the magic of aviation.**




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# BANKSTOWN

FLYING SCHOOL

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

T

**There's a new training organisation on the scene at Bankstown with some old wisdom and new technology.**

Bankstown Flying School (BFS), based at Hangar 663, on Drover Road Bankstown Aerodrome is owned by experienced Cirrus Platinum CSIP instructor, and CASA testing officer, Nige Clark. Nige has more than 7,000 hours flight experience. That means he's in big demand.

Located in modern premises, with good office and hangar facilities off taxiway H, Nige is joined by grade one instructors John Warner and Peter Zhang. The friendly office manager, a pilot herself, is Kristen (Kris) Gabrielli.

BFS is a part 141/142 certified flying school and offers the full range of licences and ratings. Clark says "At Bankstown Flying School we specialise in providing quality flight training for both recreational and professional pilots."

BFS is co-located at the same spot as the NSW Cirrus Sales Centre. Indeed, a brand new blue and silver Cirrus SR20 G6, is available for training and hire together with a Piper Archer II, Beechcraft Duchess, and CR12 (Simulator). Private hire rates (all including GST) are \$285 for the Archer, \$508 for the Duchess, and \$399 (dry) for the SR20, based on air switch. Simulator time (dual) is \$176.

Cirrus has plans to tap into the relatively unrealised potential of the Sydney market and having aircraft on display and available for trial flights (TIFs), scenic flights, training, and private hire is a key part of that. There are rumours that a SR22 may join the fleet soon too.

AOPA PILOT AUSTRALIA paid a visit to BFS and went for a one-hour check-out flight with Nige Clark in the SR20, registration VH-VJH. It was a quiet but fine Saturday morning and we surprisingly had the circuit to ourselves.

Even though we were scheduled to fly from 8.30am, it was already Clark's second instruction session of the day, having just come down from IFR training for a student in the twin Beech Duchess. Busy people these top instructors.

The SR20 is a little different to the SR22 the editor usually flies but after a few circuits and some sage advice from Clark the flying was good. "You saved the best until last and finished with a good one" said Clark as the editor landed for the last time and taxied up back to the Bankstown Flying School hangar. Isn't that the way we like it on a check ride?

At AOPA PILOT AUSTRALIA we hope to hire the SR20 for a few trips away on AOPA business. If members are looking for instruction from ab initio to advanced, and or Cirrus conversion training, or even a flight test give Nige Clark and the team a call. Do remember to book well in advance.

**MORE INFORMATION**

To learn more about the team at Bankstown Flying School, call on (02) 9707 3822 or visit their website at: [www.bankstownflying.com.au](http://www.bankstownflying.com.au)

**WANT YOUR SCHOOL REVIEWED?**

If you would like your flying school reviewed by AOPA PILOT AUSTRALIA magazine, call editor, Paul Southwick on (02) 9791 9099 or email: [editor@aopa.com.au](mailto:editor@aopa.com.au)



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# HANDSOME

## 1965 BEECHCRAFT C33 DEBONAIR

BY MARTIN CASTILLA  
AOPA AUSTRALIA MEMBER

**Whether it's an old house, piece of furniture, or an airplane, there are few things more attractive, more emotion generating than a lovingly restored aircraft (project).**

John Ashcroft's 1965 Beechcraft C33 Bonanza Debonair is such a project. He originally bought the C33 in 2002 from the president of the Australian Bonanza Society. Over the next 10 years he flew it between his Adelaide base to Melbourne, Sydney, Coober Pedy, Lake Eyre and airfields in between, with wife Miriam and then young daughters Jordana and Sarah as happy passengers.

When John moved from Melbourne to start his architectural business in Hahndorf in the Adelaide Hills, he bought a house on 30 acres in nearby Jupiter Creek. A lush, green valley, with kangaroos roaming the grounds and dirt roads leading to the house.

His enthusiasm for flying saw him lay out a 5% sloping, 300 metre grass runway, right alongside his home. There are fences at both ends and large trees beyond, so short takeoffs and steep descent landings are required. Somehow, John accomplished these in a Debonair. "Sometimes the wind had to be just right," John adds with a wink.

John acquired his PPL at age 33 and has around 1200 hours in his log book. He is now looking to complete his instrument rating. With family still living in Melbourne, he regularly departed from Jupiter Creek

and hugged the pristine South Australian coastline along the Coorong, past Robe, overhead Victoria's Torquay, then tracked left into Melbourne's Port Phillip Bay, with final a destination of Moorabbin Airport.

"The Debonair served that purpose well", John said. "It has an auto pilot, cruises at over 160kts, seats four plus luggage, and holds enough fuel that the restriction is more personal comfort than range."

When he sold it in 2011 the Debonair went to a home in Petwood, where it sat around and fell into poor condition.

His short runway in mind, John then bought a Maule M5, a US-built tailwheel aircraft with a truck-like engine and comfort to match. Although suited to takeoffs and landings on the sloping home runway it was somewhat uncomfortable, the seats low, and the cabin noise mixed uncomfortably with airframe vibrations.

In 2017 I flew with John in his Maule to a fly-in at a fellow pilot's private airfield in Sherlock, SA. My memories of that flight are of a surprisingly steep climb on take-off, feeling the engine's powerful pull upward, significant vibration at each stage of flight, and barely audible radio comms due to the noise (not aided by an old headset I'd borrowed). Landings were short, sharp and aggressive – an ideal STOL workhorse.

The Maule was sold, and a Cessna C182 bought to fill the gap, but "...almost immediately I realised this would be no long-lasting romance, and began looking around," John said. "I sold it after owning it only eight weeks. There was a Debonair for sale, in poor condition, with a reasonable asking price. It was my original Debonair!"

A call was made, the plane checked over and price negotiated. Two weeks later the Debonair once again was at home in John's hangar.

Both interior and exterior were showing every day of its 53 years, so immediately a renovation project was started.

Seats were reupholstered, also door linings, the instrument panel with all gauges and wiring, and the outside sanded back to primer coat then expertly and lovingly repainted. All components were re-installed, and externally the paint perfectly matches the as-new condition of the cockpit.

Such is the quality of the restoration, John flew his Debonair to the Echuca Fly-In this year where it was awarded "Grand Champion Contemporary Aircraft" from around 90 in attendance, and some 30 in its class!

Behind the Hartzell 3-blade prop sits a 9.5 litre (580 cubic inch) Continental IO-470 putting out 225hp. John is considering replacing it with either the 260hp or 285hp gutsier options. "Each 15 horsepower adds many thousands to the purchase cost, with little extra in the way of cruising performance, so a balance will be struck." Either way, that will make this Debonair an even more attractive, fast, stable cross-country machine.

My contact with John's beautiful Debonair came about when he posted in a pilot's social media group that he had a spare seat on a flight to Moorabbin the following weekend. Leaping at the opportunity to fly in a different aircraft, I met with John at the Debonair's hangar at Aldinga Aerodrome in Adelaide's picturesque Southern Vales.

Wing mounted tanks filled to their 303 litres capacity, we lifted into a soft cloudy sky. Climbing at 110kts to 5500ft, we cruised at 170kts for much of the flight west. (200mph cruise speed is OK, isn't it? It sure beats driving).

The Debonair has a single throw over pole-style yoke, mounted on a rotating control arm that exits from the centre of the console. To swap control between pilots, a column lock is undone and the whole arm swings in an arc to the other seat. John said he's considering replacing the single control setup with a conventional twin yoke control.

Tracking south over Goolwa, the Coorong and Robe, after Hamilton we turned inland toward the Grampians, but with some low cloud around, we skirted them and pointed the nose at Elephant Rock. The return leg in more favourable weather would see us fly directly over the magnificent Grampians.

Once past Elephant Rock we turned towards Torquay on Victoria's glorious south coast, famous for hosting a round of the World Surf League.

Across Port Phillip Bay to the southern tip of the Mornington Peninsula then up the Bay to report at Carrum at 1500ft. We were cleared for a straight in approach under CTA direction onto Moorabbin's Runway 35R.



Once landed, we called the refuelling truck and added 170 litres to top the Debonair's wing tanks. This conflicted with the JPI Fuel Scan-450 dash-mounted fuel computer, which indicated 190 litres used. John had been running the engine slightly lean to keep fuel burn within reasonable levels. When CH temps increased on climbs, he richened the mixture with a corresponding increase to 98 LPH indicated. Once temps dropped, he leaned it back to around 68 LPH, and at straight and level cruising, temps remained fine. When he found we'd burned up 20 litres less than estimated, he realised the fuel computer calibration was incorrect – we could have run the engine richer, with cooler CHTs at every stage.

Next morning, before departing from Moorabbin John recalibrated the computer by a calculated percentage to compensate for the error. This would allow more accurate fuel consumption readings, power and CHT management.

Moorabbin's a busy airport, its four main runways in constant use by fixed and rotary wing aircraft, and replica warplane joy flights operators. The helicopters particularly were swarming this Sunday, so careful

attention was paid to radio calls and departing CTA instructions.

After waiting for the sun's warmth to do its job dissipating Melbourne's morning haze, at 1.30pm we lifted from Moorabbin's busy R17L, tracking south toward the Carrum waypoint. Such was the concentration required while listening to ATC and looking out for other aircraft that at 1000ft I pointed out the retractable undercarriage was still down. "Never done THAT before!" John said as he flicked up the switch.

Across to Torquay then inland toward the Grampians – this time we flew directly overhead, and the view was breathtaking.

The return leg took just on half an hour longer flying into wind, and this one we did mostly with AP controlling our flight. So relaxed and calm yet quick was the flying, the only thing missing was flight attendants dispensing food and drinks.

*My thanks to the Ashcroft family in Melbourne for generously hosting me overnight, and to John for agreeing to share this story.*



# MID-WEST

## AERO CLUB, GERALDTON

BY JEFF WHEAT  
AOPA AUSTRALIA MEMBER

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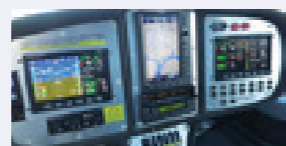


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Originally a keen group of aircraft pilots and owners of the Midwest district of WA in 1986, this group evolved into the Midwest Aero Club (Inc) in 1990 and is primarily a social club for anyone with an interest in aviation at any level.

Current membership stands just shy of fifty and includes past and present aircraft owners, past and present pilots both Commercial and Private, RAAus members, a RAAus flight school operator, two recently joined microlight owners and a LAME pilot. In the past we have had parachutist and hang-glider members.

We conduct regular flying competitions, usually bi-monthly, to add a little fun into staying current. We acknowledge the sponsorship and support of local flight school operator Shine Aviation Services in supplying an aircraft, instructor and support to conduct these events. The most recent competition was a Night VFR circuit which attracted 11 competitors and was held in conjunction with a barbecue dinner and social evening.

In addition, we try to conduct several fly-away events during the year, sometimes with overnight stays.

The MWAC also administers on behalf of the Trustees of the past Geraldton Aero Club, local sponsors and our own contribution, a biennial Aviation Scholarship (~\$5000) to a young person aged 16-25 aiming towards a career in aviation. Past Midwest Aviation Scholarship winners have gone on to become both military and civilian pilots (airline and GA) and LAMEs. Not a bad record for a Club which is basically an aviation social club and does not operate its own aircraft or a flight school.

Several club members have created a formation flying team which recently carried out a well-received display fly-past at the inaugural Geraldton Wind on Water Festival.

The social highlight of the year is the Annual Awards Presentation Dinner, generally held in November, with a Dinner held at the clubrooms and presentation of awards for Club Championship, Meritorious Achievement, Club Contributor and the ubiquitous Wooden Spoon, a light-hearted dig at an event the winner may prefer to have forgotten.

Five years ago, the Club was given notice by the City that they were to resume possession of our then clubroom premises. Subsequent negotiation with the



City resulted in the peppercorn lease of a “site with a view.” Then followed much fundraising, generous donations from Club members and local businesses of both cash and kind and many working bees to result in our new clubrooms premises officially opened by the Mayor in July 2015. We are immensely proud of our clubroom premises and our efforts in pulling the whole project together – the building may not be elaborate, but it is ours and the Club is way better off than before.

Members are generally present at the clubrooms most Wednesday and Sunday afternoons, at least after 4:00pm (nowadays often also Friday evenings and Saturday afternoons) and visitors are always welcome.

Feel free to contact us by email at [midwestair@wn.com.au](mailto:midwestair@wn.com.au) or our Facebook page - just search for Midwest Aero Club in Facebook and send us a message.

MWAC has recently renewed our AOPA Australia Aero Club membership, in support of all the great work that AOPA Australia is doing on behalf of general aviation in Australia.

Congratulations on the new AOPA Pilot Magazine, the rejuvenation of AOPA Australia and for raising the profile of the GA predicament in Australia. With already demonstrated success in the CASA medicals arena, we look forward to so much more!

**Would you like your local Aero Club reviewed by AOPA PILOT AUSTRALIA magazine? Contact Editor, Paul Southwick, on (02) 9791 9099.**



# STATESIDE WITH

MIKE SMITH AVIATION

BY PAUL M SOUTHWICK  
AOPA PILOT AUSTRALIA EDITOR

**I**n Mike Smith, AOPA Australia members are blessed with having an ATP qualified director who works as an instructor and flight school owner in, and knows well, both the FAA (US) and CASA (Australian) systems.

Some members will have met, or watched on live-stream, AOPA Australia Director Mike Smith at the July Wagga Wagga conference and been enthralled by his talk about just how easy general aviation can be in the US compared with Australia.

## THE PLAN

AOPA PILOT AUSTRALIA decided to pay Mike, his wife Kimberly and their team a visit in Rancho Murieta, Northern California, and to let members know what’s on offer and why they may want to make Mike Smith Aviation a destination when heading to the US.

Rancho Murieta (KRIU) is a long busy-traffic drive of about three hours from San Francisco International Airport (SFO) or a much shorter 40 minutes from Sacramento International Airport (SMF). Rental cars



in the US are cheap. If readers have an AOPA US membership the discount code for Hertz works very well.

Our visit was part of the Oshkosh trip in the middle of July 2018 and we made full use of the special rate Mike has kindly arranged for his students and visitors at the nearby Murieta Inn & Spa Hotel.

Arriving at 10.30am ex Virgin's VA001 from Sydney on Delta's DL0896 from Los Angeles, we made Rancho Murieta by mid-afternoon.

Our plan was to say g'day, check out the operation on our day of arrival, attend a BBQ put on for us and other Aussie visitors, and then do some flying on the second day.

For members that do not have a US certificate and want to fly solo, please check out the guidance in the June-July issue of AOPA PILOT AUSTRALIA. It really is simple, easy and cheap to acquire one. If the thought of going PIC is too much, then it is a good no pressure idea to simply do the flying with a local instructor like Mike.

Over decades of US flying the author has always found the standard of instructors in the US to be very good. They are happy to do the navigation and radio work and leave the visiting pilot to enjoy flying the plane. After a couple of goes like this, to 'learn the ropes,' pilots should be happy to go PIC.

**AIRPORT**

Rancho Murieta is a privately owned, single 04/22, 1,158m x 23m runway airport, with no fences or barriers. There is some low key airport security but it is not usually visible (come on Australia). The airport has a lot of private hangers but no control tower, and is situated in Class G airspace. There are moderate landing fees but only for visiting aircraft (so rent one of Mike's).

In other words, this is a fantastic, cost-effective place to learn to fly. KRIU is close to multiple larger centres and airspace like San Francisco, Sacramento, Reno and Lake Tahoe, again perfect for training. Weather is generally good – with a short mild winter and hot dry summers. Rainfall is low most of the year and the sun likes to shine on this farming area and lakes of Northern California.

**FLEET AND FACILITIES**

Mike operates a good stable of Cessna 150, Cessna 172 and Beech 76 Duchess aircraft but has access to other aircraft as required. There are many types based on the field including many Cubs, Bonanza's and light twins

**HELLO AND INSTANT RAPPORT**

Checking in at the nice "High Chaparral-like" hotel first – which is just five minutes' walk from Rancho Murieta, the author took the short drive there and did an internal cycle of the airport before finding Mike outside his hanger. It was then over to the office to meet Mike's pilot wife and head of admin and ground training Kimberly – a local, and several other aviators sitting in the office talking aviation – as pilots do. There was an instant rapport and the author felt right at home in a friendly environment. Mike and his team could not have been more welcoming. And of course, Aussies are especially loved.

After about an hour of chatting Emmie Smith, who trained with Mike and recently landed a job as a Baron 58 pilot for a large litigation law firm, offered to show the author her mum and step dad's hanger and the planes therein. Most impressive of all was a beautiful V-tail Bonanza in blue and white. "Would you like me to take you for a flight to Tahoe tomorrow morning?" was the question from Emmie, to which an emphatic "Yes please" was the reply. This local young pilot was keen to share her passion for aviation and show off the local area.

**BBQ AND MINI "AIRSHOW"**

Mike quite often arranges BBQs for local pilots – a very popular gathering and at the heart of what makes his school and the airfield so popular. It is all



about people. There were three or four other Aussies there who were also passing through on their way to Oshkosh. Mike had intended to fly them in his B76 but a huge demand from experienced helicopter pilots for 25 hours twin time, so they could slot into the airlines (happening everywhere) was soaking up his instructor time and he had to stay home.

Other interesting aviators in attendance included an 89-year-old former 747 Captain for Pan Am and his ex-flight attendant wife, who he wooed on a trip to Stuttgart; a C130 Hercules pilot in the Coast Guard; young pilot Hailey and her step Dad who put on a mini air show with another pilot with both his bright yellow cubs.

It was one of those perfect summer evenings that you never want to end - especially when talking aviation and watching aeroplanes.

**LET'S GO FLYING**

The author was invited for three flights the following day. First a right seat (but the chance to fly too) Tahoe trip in the Bonanza with Emmie, second a ride in the back of the B76 to observe Mike training an older pilot who had been accepted into the airlines; and a left seat flight for lunch in a Cessna 150.

The Tahoe flight was in three parts: first a climb up high towards Tahoe. About ten miles out from the lake, Emmie and the editor came to the same conclusion at the same time. Despite perfect forecast

weather a combination of smoke from fires and fog below was quickly rising from the ground and a layer of cloud was descending just as fast from above. This was setting a "VFR sandwich trap." "Let's do a 180 and head back to safety," we both said. And so we did. We then descended and flew over the boats and shoreline homes of one of the many pretty lakes near Rancho Murieta.

The second flight was a great opportunity to see firsthand Mike's expertise and gentle manner as an instructor and why he is sought out by pilots across the US (and from Australia). It was great to observe some emergency descents- required for the check ride (pronounced nose down attitude in a B76) and instrument approaches.

The third flight in the C150 was when Mike said, "Come on let's go to airport 103, better known as Lodi for lunch." The author last flew a C150, well actually a C152, in the 1980's but was pleased to find he had forgotten nothing, and all the checks came flooding back – funny that. This was pure US\$100 hamburger stuff. What a great day. It was sad to say goodbye.

**RECOMMENDATION**

It's hard to put into words what a great place Mike Smith Aviation is to fly. It's not just the location, the airfield, the low costs, or high quality of flight training, or even the aeroplanes. It's about the friendly and inviting aviation environment that Mike and Kimberly have created. All the people there were so warm, with outstanding hospitality.

For any AOPA Australia pilots wanting to convert to a US licence, do some training, or simply have great flying fun in a welcoming and almost familiar Aussie / USA environment, Mike Smith Aviation is the place to be.







# FLYING SOLO

NORFOLK ISLAND 1996

BY ALAN J ELLIOT  
AOPA AUSTRALIA MEMBER

**A** “fly-in” to Norfolk Island to commemorate 75 years of the RAF’s involvement in the protection of that territory had been widely publicised. This seemed an ideal opportunity to test my capability for solo flight over a reasonable slice of ocean. My goal was to one day fly my Cessna solo Round the world!

And so with a ‘massive’ 530 hours logged in command of my Cessna 172M VH-UGD (known affectionately as the Ugly Duckling), I promptly entered this event. A solo round the world flight in a single-engine aircraft, was at this stage, somewhat in the future!

(Not many people appreciate it IS possible to fly RTW i.e. cross every degree of longitude, with no single leg greater than 450 nm. I have discussed this with Dick Smith, Peter Norvill (1st to fly RTW solo in a C172), and Gabby Kennard, the first woman to fly solo RTW in a single-engine Piper Saratoga. And of course, I have an autographed copy of the late Louise Sarchi’s book “Ocean Flying”, which is the “bible” for distance flight over water.)

Despite the wide publicity, only 19 aircraft had registered to fly from Australia, plus a few from New Zealand, which is a bit closer. Of the 19, seven were the Roulettes (six plus a spare aircraft for the airshow); also going were Dick Smith, and Barry Hempel, household names in aviation.

Most of the singles had planned to leave the coast at Coffs Harbour and fly to Norfolk via Lord Howe

Island. Through the registration list, I “met” Ron Aurish, who would be flying a Piper PA28 single with extra ferry tanks and taking a friend.

I arranged to fly to Coffs on Friday 19th April and stay the night with Ron. Early next morning, weather permitting, we would fly to Lord Howe (300nm), top up fuel, and continue to Norfolk Island, a further 500nm. This would be 800nm ocean flying for the day!! We met John Lewis (Cessna 182 RG with HF radios). If he left half an hour after Ron and I on both legs, we would then have radio contact via him with Brisbane Control all the way to Lord Howe Island, and with Auckland all the way from there to Norfolk.

I ordered a new Magellan yoke-mounted GPS which arrived only seven days before the flight – new technology at the time! Other mandatory equipment included my ELB (EPIRB), life jacket, and a hired raft. Unable to locate a CASA approved small life-raft, I eventually hired a nine-person raft from Fred Blake at Moorabbin complete with five litres of water, five days rations, first aid kit, smoke and colored flares, a torch and fishing tackle!! I had no intention of going fishing.

This large raft weighted 24 kg, was about the size of two rolled-up sleeping bags, and sat in the co-pilot seat, belted up. Over water it was tied to my waist but would have been near impossible to get out with if needed.

I took off from my base at Kyneton at 8 am on Friday very ordinary weather, which as usual greatly

improved heading north, and just got better and better all day. I tracked via Albury to Cowra and landed there to top up the tanks.

It was then on over Mudgee, some very high tiger country over Taree, and then coastal to Coffs, which of course has a control tower, and on landing I was directed to the local aeroclub parking bay.

Ron Aurish was there to meet me and after phoning my wife Heather, topping the tanks to the brim and tying down, we spent a few bob in the bar—it was hot. It was about 3 pm and the customs and quarantine folks were coming at 4 pm to clear us for beyond LHI. John Lewis arrived just in time for customs, which was a pretty casual affair.

Then it was off to Ron’s place in Coffs where his wife cooked us a great steak dinner, then into some serious meteorology. There had been a big low almost stationary over the ocean for about a week, but the bureau predicted it was starting to move east. We ordered up to the minute Avfaxes right to Norfolk, to be sent to us at 4:30 am Coffs time. This would be our early morning call.

I don’t think any of us slept very well, and when the Fax/Phone rang we all jumped out of bed as 50 metres of fax paper spewed onto the floor. John Lewis had done this trip before, plus Tonga, Fiji, Noumea and most of the Pacific so we let him do most of the analysis. As Ron was putting the coffee on he noticed it was 3:30 am and not 4:30, but we decided to stay up.

The route to LHI was CAVOK so we phoned Norfolk Island Control at 5 am our time (6:30 there) to get an “actual”. It was still marginal there, but the huge low was moving towards NZ, as shown on our Avfax satellite maps. We would fly to LHI and re-assess.

After coffee and toast, we headed off to the airport in the pitch dark. Following thorough pre-flights, we lodged our domestic flight plans to LHI, and then my first international flight plan LHI to Norfolk Island. Coffs Tower wasn’t open yet, so after thorough warm-ups, Ron and I both used the very long east/west runway, taking off with a little breeze, so we were over water immediately after lift-off, right on 6 am! 315nm to run to LHI.

We were well out over a calm sea when the sun rose. It was a beautiful sight, but right into our eyes for quite a while. I found my best ground speed at 7,000 feet and was getting 130 kts for a while. Ron, with a passenger, extra fuel and gear, was having trouble keeping up with me however we remained in sight of each other most of the way. We were talking on the VHF chat frequency (123.45), and when John Lewis and wife Maxine took off from Coffs at 6:30 am we were all able

to chat. They passed above us at 10,000 feet over fluffy CU, with the beautiful blue ocean below.

I was starting to master the GPS and the oceanic charts, which have mythical waypoints about every 100nm. These were punched into the GPS - “Possum” and “Bilby” between Coffs and LHI. Possum came up in under an hour, and Bilby in well under two. 115 miles to run to LHI, and we both had the powerful LHI NDB on our ADF’s.

We got LHI visual 25nm out - it looked like two mountains jutting out of the ocean with a gap between, which we assumed would be the runway. I recalled all the doom and gloom in ERSA---

“One sealed runway—10/28, 1Km. Due topography LHI certain wind conditions may generate severe turbulence On approach to the runway and preclude a safe landing. Only safe course of action is to divert to a mainland aerodrome. Met is unable to forecast

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severe turbulence in all cases. Moderate to severe orographic turbulence when free stream winds in excess of 12kt.”

From tourist brochures we had checked out all the beaches as a diversion anywhere was impossible. Today things looked benign and so we overflew and even though all three socks were out at right angles in three directions, we both joined downwind for runway 10. No problems on final, however, and we both taxied to the refueler. It was 9 am EST—exactly 3 hours from Coffs.

The 182 was already on the ground and refuelled, so while the re-fueler filled our tanks, we went to the terminal to empty ours, and then to phone our wives. Avgas was \$1.63/l on LHI (1996).

We then had a quick conference regarding going on. There is an excellent weather station on the field, so we visited the met man. There was still a low over Norfolk, but as we had five hours flying the consensus was that it would have passed towards Auckland by then. The satellite pictures seemed to confirm this. The visible weather looked brilliant, so Ron and I were back in the air within half an hour. John Lewis in the 182 gave us a half hour start again.

We climbed into a cloudless sky and set heading for Norfolk Island. 483 miles to run to the next speck of land, with a few unpronounceable waypoints in-between. I think one was “Teepo” possibly a NZ breed of sheep.

For the first two hours the weather was superb and we were maintaining a good 100kts ground speed. John was soon in front again and so we now had contact with Auckland and stayed on our chat frequency. He reported a “build-up” ahead but was well above it at 15,000 feet.

Before long, Ron and I, at 7,000 feet, found ourselves above scattered cumulus, which became broken, and then layered stratus. I would have preferred to stay on top, but he reckoned he could get a better ground speed down lower. We descended, and so did the weather. I didn’t see clear blue sky again until my second day on Norfolk!!

And I was now well past my PNR. (Point of no return). The weather was getting worse by the minute, we had lost visual contact, but GPS readings put me about 4 nm in front. Ron, with heaps of extra fuel, was still higher but in poor visibility also. With 183 nm to run (i.e. 300 nm from LHI, I was down to 1,000 feet in showers and cloud, and then heavy rain. I was virtually in total IMC for over an hour, and GPS had lost all sense of direction. As a VFR pilot, this was uncharted territory. To make matters worse, my ground speed had dropped to a maximum of 75 and a minimum of 65kts!

At least the rain was easing, and I now had a visibility of about a mile, but both fuel gauges were wavering just above empty as the GPS clicked over 100nm to run. Whilst Cessna tank gauges are notoriously unreliable to read unless wings are level in still air, things were getting serious.

I contacted Norfolk Control and advised “possibly fuel critical” and requested a priority approach. This was immediately granted by the local controller, who wanted regular updates on my position and distance to run.

I pressed on in increasing rain, decreasing light and visibility, and before long I found I had a RAN Orion on my starboard wingtip and a C410 inbound from

Brisbane on my port wingtip. The Orion crew had all sorts of instructions and advice, which did nothing to help my personal struggle. This was no time for further flying instruction!!

I kept glancing at the GPS nm to run---89.9...89.8, then much later 20.0, 19.9, 19.8... and so on. It is the longest approach I have ever made. Finally, the island came into view through the pouring rain, and then the main runway, right on the nose. I flew over the threshold at 500 feet, poked the nose down steeply, and I swear to this day that the engine gave one little cough as the fuel ran forward in the wings. As I flared and rolled to the parking bay, the engine ran smoothly again. When I refuelled, I had 16 litres useable remaining; just over half an hour endurance!!

Perhaps my arrival was the most noted, as it was still just before dusk. However, there were several others worth noting. A Long Eze pilot lost the plot and couldn’t find the Island initially, and when he did, couldn’t find the runway, until people stood at the threshold with flares to guide him down.

The weather got worse as darkness fell. One female pilot in a Sukhoi touched down and almost nosed over, embedding three prop blades in the tarmac!!

Later on an Ansett B737 full of tourists couldn’t get in and had to return to Brisbane, and an Air New Zealand B737 tried two approaches and then returned to Auckland. It was well and truly dark by now, with heavy rain and fog, and there was no ILS at Norfolk.

Later that night we were guests of the Services Club, and the Orion crew, in full uniform, came over to me starting to read the riot act. “You don’t realise how much it costs to fly an Orion out to help you etc.”

I had been up since 3.30am, had flown for over eight hours, and I didn’t need this. In the politest way, I reminded them that I didn’t ask them to come out to meet me, that they added to my considerable stress, and would they kindly go away. Later, they apologised and bought me a drink.

The next few days were all sunshine and perfect weather and my stay on Norfolk was excellent - the airshow and celebrations, a gala concert, and some great locals who billeted me. The return trip was uneventful, in good weather, and I spent a great day and night on LHI, a brilliant unspoiled Australian sub-tropical Island.

*Just before take-off from LHI for Coffs, I visited the men’s rooms in customs. Amongst many aviation related stickers on the wall, there was one which I will never forget, and which I often quote. It reads simply “LIFE IS NOT A REHEARSAL.”*



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#### PRESIDENT

Aminta Hennessey

Email: aminta.hennessey@aopa.com.au

#### VICE PRESIDENTS

Marc De Stoop

marc.destoop@aopa.com.au

Richard Talbot

richard.talbot@aopa.com.au

#### SECRETARY

Dominic James

Email: dom.james@aopa.com.au

#### TREASURER

Richard Talbot

Email: richard.talbot@aopa.com.au

#### EXECUTIVE DIRECTOR

Benjamin Morgan

Email: ben.morgan@aopa.com.au

Mobile: +61 415 577 724

#### DIRECTORS

Richard Talbot

Benjamin Morgan

John Glynn

Mike Smith

Ben Wyndham

Shawn Kelly

Gerard Kitt

Ross Harrison

#### MAGAZINE EDITOR

Paul M Southwick

Email: paul.southwick@aopa.com.au

#### ADVERTISING +61 (2) 9791 9099

Email: advertising@aopa.com.au

#### HEAD OFFICE

Phone: +61 2 9791 9099

Fax: +61 2 9791 9355

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#### MEMBERSHIP

Phone: +61 2 9791 90099

Email: mail@aopa.com.au

#### ACCOUNTS

Phone: +61 2 9791 9099

Email: accounts@aopa.com.au

#### ADDRESS

Hanger 600 Prentice Street, Bankstown Airport NSW 2200, Australia

All mail: PO Box 26, Georges Hall, NSW 2198, Australia

#### WEBSITE & SOCIAL MEDIA

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