

BRISBANE VALLEY FLYER DECEMBER 2011



**Watts Bridge
Memorial Airfield,
Silverleaves Road
via Toogoolawah,
Qld**

*www.wattsbridge.com.au
www.qva.org.au*

The Penultimate Little Aussie Sapphire (page 12)

All Boonah Sapphire photos taken by Rob Knight



Rob Knight reviews the Austflight SB-582 Drifter



Peter Stanton at The Recreational Flying Company in Gympie had been pressing me for some time to go “Drifting” with him in their Austflight SB-582 Drifter so, with Maggie, my trusty assistant and wife, I drove from Brisbane to take advantage of his offer. Thunderstorms were brewing upwind of Gympie airfield as he kitted me out in black jacket and white combined headset/helmet. Then, with me feeling like a flash-back to old crop-dusting days wearing helmet and muffs, Peter went through the starting procedures. These were straightforward and we quickly set the CTAF frequency and waited for the engine to warm.

Under Peter’s guidance, taxiing was a breeze so long as the speed was kept low because the brakes were not especially efficient. Although the rudder was effective in the slipstream, the tail-wheel springs were soft and the tail-wheel was less useful for steering than I expected. The run-up was uneventful and the pre-take-off checks uncomplicated – this is a very basic aeroplane. With checks completed, a lookout showed that there was no other traffic and the runway was ours. We were ready to go.

After carefully taxiing onto the centreline I gingerly cracked the throttle, straightened the tail-wheel, then opened her up fully. The centreline disappeared over my left shoulder.

The prop turns anticlockwise when viewed from behind, and so the swing was all to the right. I jabbed belatedly on the left rudder pedal and the centreline re-appeared. Unlike a tractor aeroplane, thrust is now an un-stabilizing force. The tail rose and the bitumen now streaked past far too close to my posterior for comfort. I reminded myself that I was strapped onto this thing, and not in it as is usual with a flying machine. Then I remembered the airspeed, we were approaching 45 knots, nearly the rotate figure that Peter had given. The silence in the back seat could have been his activated survival instincts, or maybe



tacit approval for what I was doing. Surprisingly quickly I had to adjust the nose upwards to hold a 50 knot climb. Then a shudder started and shook the windshield and front cockpit. It was only a wheel out of balance, an issue, as I later found out, that is typical of Drifters. The ASI held nicely at 50 knots after a touch of nose-up trim, and the balance ball centred with just the lightest left rudder pressure. The VSI indicated 550 fpm up as we climbed to 3000 feet. I levelled off, trimmed to hold the nose in the level flight attitude and the ASI settled to 54 knots at 5500 RPM. This was all the speed we were going to get at this power setting. I tried the controls, each in turn. They were all light but remarkably responsive because the mass of the engine is close to the aircraft’s centre of gravity. Control harmony was impressive.

Rob's Drifter review (continued)

In 45° banked steep turns, airspeed decayed quickly until I raised the power and here I noticed the first significant Drifter characteristic. Turns were easier to the right than the left, a trait caused by the propeller being close to the rudder, and more slipstream striking the right side of the fin than the left. Thus more rudder is needed to coordinate when turning left than right, and adding power aggravates it. A 60° bank needed full power to maintain height and 50 knots. Stalling was simple and straight forward. OK, it sagged sideways a bit on some stalls, but rudder stopped the yaw and the aircraft levelled its own wings. Then Peter suggested I try a full power stall. This was an impressive demonstration of the aeroplane's general docility. Stuck on a screaming pole like a demented witch on a broomstick, with the nose wavering at what seemed like 60° to the horizontal the aircraft just sat there, dancing on its tail. So long as I stopped the yaw, the nose just waved around while the ASI flickered around 30 knots. What a party trick!

Gliding is sensational with an angle only marginally better than an anvil. Power off requires a simultaneous and substantial nose-down attitude change or the airspeed vanishes. The low nose attitude seemed extreme until I checked the ASI and saw that we had cornered the correct glide speed. Obviously, gliding range is restricted: better than a helicopter in autorotation but that's all. Returning to the circuit we had just 10 knots of wind with 5 of it across the runway. Under Peter's direction I set the required 50 knot best glide speed on a base leg that appeared impossibly close to the runway's end. And then, as I turned final, everything stopped except our descent. To make the field we had to penetrate the headwind so I



raised the IAS to 60 knots. Gympie's grass was too wet from recent storms so we were stuck with the bitumen. Slowly we closed on the threshold, with only a toss-up deciding whether we made that or the boundary fence until I added a burst of power. We skipped over the runway numbers and into the flare. The elevator was light and lively, even with the falling airspeed and it was no effort to hold off in the float. The hard bit was getting the float height right as this seemed so close to the runway that I was going to get a gravel rash on my nether regions. Then with a gentle bump we were down. There was no bounce and Peter quickly called for the stick to be centralised and for full power for the go-around. Then the Drifter's sensitive directional control swung into action and left me swerving across the runway. Quick feet and rudder solved the problem and at 45 knots we lifted off. I accelerated to the required 50 knots and we climbed away. As a low performance aeroplane we flew a 500 ft AGL circuit so I nailed 760 feet indicated on the altimeter for each downwind leg. We did a further four circuits, each one more precise and further reinforcing the steep approach and high descent rate inherent in this little aeroplane. Then Peter climbed out and I did another four circuits before the wind started to rise and I made a full stop landing and taxied back to the hangar.

This is a delightful aircraft that challenged me in ways that I have not been challenged in for a long time. It has unique characteristics due to its high centre of gravity, pusher propeller and the pilot being so exposed to the elements. The small performance envelope is also a challenge with almost constant power adjustments being necessary to maintain both airspeed and altitude. In the Drifter, the pilot cannot just sit there and let the trim do the work. This aeroplane will not give an inch and the challenge this presents makes a checkout in it a very worthwhile exercise for any pilot, regardless of their level of experience. I liked it very much and, considering its uniqueness, recommend it, even if for nothing else than the sheer experience. I'll probably be back before long to have another run in it. All I have to do is find someone else who will enjoy being part of the atmosphere at 2000 feet.

For Sale: Panasonic FZ8 Camera with Leica 12x lens

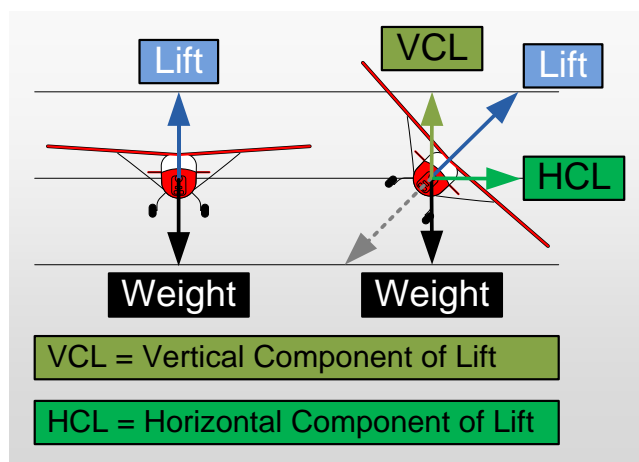
For a full professional review of this model, copy this link to your browser: <http://www.dpreview.com/reviews/panasonicfz8/> I bought it brand new in 2008. The original RRP price was \$599.95 (Harvey Norman), but I remember getting it cheaper than that. All the photos in the club newsletters for the past two years (since I became editor), unless otherwise attributed, have been taken with this camera, (eg. Sapphire taxiing at Forest Hill, page 13). Altogether, I have taken about 4000 photos with it. It is in absolutely perfect working order, has never been dropped, scratched or taken out in the rain – always (well, nearly always) carried in a Lowepro padded camera bag. It comes with a 2Gb memory card (about 750 HQ photos), battery charger, cables and manual, all in the original box. I am selling it because I want to buy a higher performance camera (possibly a DSLR). I am asking for \$250 but this is negotiable if there is not too much interest. Contact: a.marcel@optusnet.com.au



The Overbank Question (A simple explanation sent in by Rob Knight)

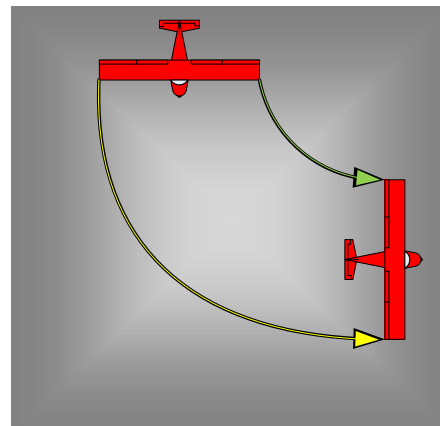
To understand overbank, first we must look closely at the mechanics of a turn. As Newton once said, “An object will continue in a state of rest or uniform motion unless acted on by an outside force.” So, to turn an aeroplane that is flying straight, we need another force and this force is provided by the wings when they are inclined in a banked attitude.

The sketch on the right shows the forces required to make a level turn. In this sketch several things are evident. In the turn lift is increased because it now carries out two tasks – the VCL supports the weight of the aircraft and the HCL provides a horizontal force to turn it exactly as Newton said. In the turn, the lift line is slightly longer than it was in straight flight, and this extra lift provides the energy for both tasks.



Assuming a constant airspeed, for the period that the aeroplane is banked at a constant angle, and is exposed to these forces the aeroplane will continue to maintain height and change its direction at a constant rate. A pilot wanting to change the rate of turn at that airspeed will need to change the angle of bank which will change the HCL and so change the rate of turn. The steeper the angle of bank the greater will be the HCL and the higher the resulting rate of turn. When the pilot wishes to stop turning he (or she) just levels the wings, the HCL disappears, and the turn ceases. In a turn each wing scribes a different arc around the sky. The outer wing will travel a greater distance than the inner wing because its arc is greater. The sketch to the right shows that the outer wing travels a greater arc than the inner, but it does it in the same time. Therefore the outer wing must travel faster and in doing so will provide more lift than the inner wing. This causes the bank angle to steepen (overbank) which must be countered with slight out of turn aileron if the angle of bank is to remain constant.

What about the rudder? Good question. Rudder is used to counter adverse yaw caused by aileron drag. When aileron is applied, to prevent the nose yawing, rudder must be applied. If out of turn aileron is necessary to keep an angle of bank constant, then an appropriate amount of “out-of-turn” rudder must be applied to offset the aileron drag/adverse yaw. I have to say that it looks as if Richard is correct on both counts. Well done, Professor Faint.



Do you need to be a member of Watts Bridge Airfield?

Brisbane Valley Sport Aircraft Club members are required to also be members of Watts Bridge Airfield Inc., if they are users of the airfield. The term "user" does not apply to members who only attend on invitation, such as attending meetings and fly-ins. However, if you use Watts for training, circuits, regular visits without invitation, etc, you are required to become a member of the airfield. The following questions and answers are from the WBMA website:

Q) Can anyone operate at Watts Bridge Memorial Airfield?

A) Watts Bridge Memorial Airfield is a private airfield that welcomes all forms of recreational aviation. Provided your aircraft is suited to the runways etc, you're most welcome. Commercial ventures such as flight training centres and maintenance facilities should contact WBMA Management for additional guidelines.

Q) What does it cost to become a Watts Bridge Member & how do I join?

A) Membership is currently \$110.00 per year. To become a member, download the Membership Application Form and return it to the address on the form.

Q) What does it cost to land at Watts Bridge Memorial Airfield?

A) There are NO landing fees at Watts Bridge. Pilots and groups using Watts Bridge Memorial Airfield must take out Membership and by so doing contribute toward the running of the airfield.

Q) What can a Chalet Site be used for?

A) A Chalet Site allows the owner to construct a hangar and attached dwelling. No commercial activities are permitted.

Q) I hangar my aircraft at Watts Bridge. Do I have to be a Member?

A) Yes - Owners of aircraft hangared at Watts Bridge must be Members of WBMA.

Q) I hangar my aircraft in a Private Hangar. Can I sleep over the weekend in the back of the hangar?

A) Unfortunately not. Local Government Regulations expressly forbid this usage of the Private Hangars. You may like to consider using a caravan or camping in the designated camping areas.

Q) Are Night Operations permitted at Watts Bridge?

A) All operations at Watts Bridge are covered by the Operations By-Laws. Night Operations are not permitted under those by-laws.

Q) What's the difference between Private and Commercial Hangars?

A) What they can be used for. The only "Paid For" activity permitted in a Private Hangar is providing aircraft hangarage. Commercial Hangars allow aviation based businesses to be located on the airfield.

Q) What kind of activities are permitted in a Commercial Hangar?

A) Businesses which carry out aviation based activities such as the design, manufacture and repair of aircraft and their associated components and systems.

Q) What rules or documents control the overall management structure and day to day operations at Watts Bridge ?

A) Watts Bridge Memorial Airfield Incorporated is bound by the Constitution and attendant By Laws. These documents are freely available for download.

Q) I have a question not covered by the website. Who should I contact?

A) Contact Watts Bridge Memorial Airfield Management by using the Contact Us page. Your question will be answered promptly by the relevant person.



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Email: info@wattsbridge.com.au

Breakfast on Straddie

Many South East Queensland pilots are attracted to a hearty Aussie breakfast, especially one served to them in the picturesque surroundings of North Stradbroke Island. The Straddie Aero Club has been hosting a fly-in breakfast at Dunwich airfield on the third Saturday of the month for about 8 years. I had heard rave reviews about the cuisine on many occasions, so on November 19th, I decided to go there and check out the menu first-hand. Actually, flying into Dunwich is a lot cheaper than taking the car over on the ferry, especially if you fly a minimum aircraft like a Sapphire. I teamed up with three other aircraft from Boonah for the journey.



What a surprise when we approached the airfield. It was like flying into Natfly on the Friday afternoon. Fifty-three fix-winged aircraft of all shapes and sizes, plus three very expensive looking choppers from the Gold Coast converged on the airstrip between 8.30 and 9.00am, five or six aircraft in the circuit at a time. And, even though we all had to land downhill into the north, over some very tall and uninviting trees, everyone handled the situation with ease.

The smallest aircraft on the day was the Sapphire (so, what's new) and the largest was an amateur-built (at Southport) Murphy Moose. This aircraft is best described as a scaled-down De Havilland Beaver, fitted with a 360hp Russian radial that burns 60 litres an hour (and that's just the oil, as they say)!



There were some very pretty planes indeed parked along the sandy Dunwich airstrip, a mixture of RAA and GA types – several Lightwings, a Sportstar, Kenny Edwards' immaculate Courier 19-7222 still turning heads, Jabirus aplenty, a Whitman Tailwind from Caboolture, a neat-as-a-pin V-tail Bonanza, a very speedy-looking Italian Falco, a Cirrus and many, many more. What an amazing turn up for a Saturday morning on such a pleasant little airfield on a beautiful, exotic island like North Stradbroke.

The camaraderie was at its usual very best and I was glad to catch up with some old friends. Everyone enjoyed themselves immensely. From about 11am, the aircraft began to leave, but at slightly longer intervals than they had arrived thank goodness. It was a wonderful morning – a monthly get together that can certainly be recommended to every pilot in SEQ.

Is there still such a thing as a Form 225?

A Forest Hill pilot recently had his RAAus Pilot's Certificate suspended because he was photographed a little low over Lake Dyer. These days just about everyone has a camera in their back pocket. We live in very politically correct times and, safety issues aside, the authorities are more than ready to come down hard on errant pilots just to be seen to be doing their jobs. That's what makes the behaviour of this helicopter pilot hard to understand. I was one of a group of about ten people standing at the side of Dunwich airstrip, photographing departing aircraft when this exuberant fellow tried to give us all a haircut. Rob Knight was standing next to me and took three photos before he hit the deck. I took the last one, then followed Rob into the dirt (or should I say, "into the sand").



Note: this helo is not VH-JPJ
(as seen in the photo on the
previous page)

Super Petrel LS Test Flight by Kelvin Hutchinson

Thanks for the opportunity, Arthur. See attached a photo (over Lake Leslie - that's Mick Poole and Kelvin Hutchinson)



The LS model replaces the SP100 model. There are around ten SP100's still flying in Australia today. The main difference between the old and new model is that the body shape is more streamline and aerodynamic, support cables have been removed and there is more space in the cockpit. When you first approach the LS model, you can't help but be impressed by the quality of the finish and the attention to detail throughout. A major unique feature of the LS is its biplane wings. There is 15M^2 of wing area. The body of the LS is composite and the wings predominantly fabric covered, but visually you can hardly see the difference due to the high quality finish. Landing, navigation lights and strobes were fitted in the plane we tested and looked great. Leather adjustable seats with headrests, central dual controls with numerous switches and buttons built into the handgrips and the fishbowl like visibility from the cockpit certainly also grabbed our attention.

The power plant is a 100hp 912ULS Rotax mounted above and behind the cockpit. The fuel tanks are in the lower wings and hold a total of 90 litres giving an endurance of five hours. Both wing tanks feed a holding tank mounted behind the passenger seat which is in full view of the pilot. The holding tank holds 45 minutes of fuel and is easily checked by the pilot. Two reasonable size bags fit behind the seats. The range of instruments available is impressive. The plane we were testing has two 7" Dynon Skyview's, and a centre-mounted Garmin VFR Panel package (GPS, transponder and radio). A 12 volt power outlet is also conveniently mounted in the dash (great for the iPad). The cockpit layout and ergonomics is impressive. Two large guys fit comfortably and legroom is more than sufficient. Anyone over 181cm would find the headroom a bit tight, however. There is also a cabin heater to keep you warm during those cold frosty days.

Before we decided to head for the sky and Lake Leslie, we elected to remove the cabin doors. The removal of two hinge pins on both sides saw the doors safely stored in the hanger and we climbed in and prepared for flight. As we throttled up on 09 we were literally off the ground well within 100 metres and climbing out at an impressive rate. The electric trim (stick mounted) worked well as we tried to keep the nose down when all the Super Petrel wanted to do was climb out at a rate we were not prepared to try. As we reached the end of the airstrip, we raised the undercarriage with the centre-mounted undercarriage lever and the lights on the dash went from green to blue. Then it was booster fuel pump off and no flaps to worry about.

Super Petrel LS Test Flight by Kelvin Hutchinson (cont.)

In 15°, 30° and 45° degree turns, stalls, turning on a point, side slips and stall recovery, the Super Petrel LS performed very well. The aircraft's responsiveness is readily apparent. Cruise speed at straight and level, to achieve an economical fuel burn, is 90knots. The manufacturer promotes 97 knots cruise speed. Stall speed is a slow 30knots, and the rate of climb is an impressive 1000ft/minute. The glide ratio is 10:1.

All was clear at Lake Leslie, so we checked the landing gear was up, fuel pump and bilge pump on and started our descent. The swish of water on the hull established we were on the lake and we pulled up within 100 metres. We turned into the wind and powered up again. Stick hard back, forward and back again to get her up onto the plane and within 120 metres we were off the lake. We climbed out low and straight ahead until we had reached 1000' AGL then turned to fly a downwind, base and final leg again. This time on the lake we tried a few additional procedures, such as crosswind taxi, sailing, power sailing, beaching, anchoring, step taxi and water plow. The Super Petrel LS performed all of these manoeuvres very well. We did not get wet or have any situation where the bilge pump needed to do any work. Manoeuvrability of the Super Petrel LS on water at a low power setting was very good due to the hull shape and prop position pushing air over the tail section.

As we landed back at Warwick airfield, with undercarriage down (something I must get used to) the plane flared nicely and pulled up within 120 metres. At no time did we find any vices or performance problems with the Super Petrel LS. The seats were comfortable and visibility good.

The aircraft dimensions are length 6.35 metres, height 2.33 metres and wing span 8.9 metres. Not only is the LS a good-looking plane with good performance and endurance, it's at the lower end cost-wise against its competitors at around \$125,700 fly away. If you are in the market for a versatile amphibious aircraft, the Super Petrel LS is well worth a test fly. For more information, go to www.superpetrelaustralia.net (or contact Kelvin on kelvin@visioninaction.net)

Lightwing SP-2000 SPEED, Reg 24-7373 by Rob Knight



Prefixed "SP", and named the "SPEED", "Howie" Hughes' newest Lightwing is very snappy to the eye. With its low wing and large windshield, it promises excellent visibility, and its flowing lines predict a performance to match its name.

Nick Hughes, Howie's son, fitted his tall frame easily into the front seat and my shorter one was just as comfortable in the wide cockpit. I adjusted the rudder pedals, then looked across the Speed style instrument panel. The tachometer, ASI and altimeter

sit to the left of a recessed section displaying the glass panel. In the recess, to the right of the glass presentation, sit the manifold pressure gauge for setting the power when using the CSU, and the VSI. Below the recess, lie the engine instruments indicating the health of the engine. Above us was a row of airline style tumble switches including the ignition and other electrical services. The arrangement is imaginative, logical, easy to use, and makes the cockpit seem larger.



Lightwing SP-2000 SPEED, Reg 24-7373 by Rob Knight (cont.)



Controlling the Speed's casting nosewheel with individual toe brakes and propeller slipstream against the big, classic Lightwing rudder was easy as we crossed the apron to the holding point. Then, with checks complete, we taxied onto runway 06, lined up and gently applied full power. This is where the most unique design feature of this pretty little aeroplane, the side mounted stick, would have to prove itself. With just finger power, the weight came off the nose as we passed through 50 kts and the aeroplane flew itself into the air at 60. WOW! You could fly this plane with the precision of a surgeon – muscles are redundant. Needing no trim adjustment, the Speed quickly settled at its V_x

of 65 kts and the VSI steadied at 1050 fpm; performance aplenty due to the variable pitch propeller. There was little turbulence to upset the attitude, so I couldn't check on the Speed's stability, but it felt very solid – a good, safe platform for aviating. Climbing turns were easy, the stick was light and responsive and the rudder was very positive. There was just a little overbanking tendency.

Level at 2000 ft, the ASI settled at 104 kts IAS with 28" Hg (throttle setting) and 5500 rpm. This was so GOOOOD. The old yardstick of 1 mph per hp was history; the SPEED had bettered that at 1 knot per hp. In the level flight attitude,



the nose was low and the visibility all around was excellent. All turns were straight forward. The rudder pressures were light and the rudder coordination to counter adverse yaw was easily accomplished. While at 45° bank in level flight, the ASI held steady at 104 kts, a 60° banked turn did need full power to maintain height and speed against the rising induced drag, a feature of the low aspect ratio wing. Left turns or right turns, each was as easy as the other, and the lookout was a simple task, the low nose allowing me to return to the correct level flight attitude with ease. I found the layout of the controls excellent – the side stick and the throttle fell easily into my hands. The arrangement made flying the Speed an easy task. Whilst unusual, to me the side stick is an innovative and winning item with no drawbacks.



As I suspected, the stall at 40 kts indicated was a non-event except for the high nose attitude – another attribute of low aspect ratio wings. Again, the side stick was easy to use and fingertip light. Regardless of the aeroplane configuration, each stall was preceded by a deepening buffet and then a gently nose sag with little or no tendency for a wing to fall away. Instant recovery came with appropriate forward stick, and the IAS rose quickly.

Lightwing SP-2000 SPEED, Reg 24-7373 by Rob Knight (cont.)

Stalling in both left and right turns gave a buffet with the nose sagging towards the lower wing. Recovery was quick, smooth, and very positive. This aeroplane has every attribute that a good stall trainer needs. Closing the throttle provided a nose pitch down but little appreciable yaw. The small elevator trim change was easily countered by a tiny movement of the trim wheel nestled beside the throttle. We steadied at the best glide speed of 70 kts. The nose was low in the glide with superb visibility ahead; an important asset in an emergency when looking for a field. Easily trimmed to fly hands-off, it would be a simple matter to set up a glide whilst carrying out emergency procedures. Our return to the circuit saw no other traffic apart from a parachute dropping Cessna somewhere behind us. Again, low wings made lookout in the circuit simple and positive.



Downwind, we called for a touch and go, and base turn saw the power pulled and the speed slowly reducing. As the airspeed settled below the V_{FE} of 80 kts, we set the electric flaps to “half” and the speed washed back to 70 kts. A quick trim change and we were turning finals. It would be easy to feel crowded if flying tight circuits before having mastered this aircraft’s slipperiness.

The touch and go was an easy flare, a comfortable float, and then no bounce, just a little rumble and squeak as the wheels touched the tarmac before we added power to go around. The yaw caused by the power change was easy to correct with just a light touch of right rudder, and we climbed away at the right speed with just the smallest adjustment of nose down trim to hold it. The second approach was again done with half flap. This time there was a rising crosswind from the left and I noticed on the climb-out that countering both the asymmetric blade effect and the aircraft weathercocking due to the crosswind was easy with the available rudder.

For the last approach we used full flap, steepening our path considerably with just a trickle of power as we crossed the boundary fence to flare on the runway numbers. This time the float was less, but the landing was just as good as the previous two. The rollout was easy, still with ample rudder authority even as the airspeed diminished. We used minimal braking but had we needed to, we could have stopped the SPEED with a very short ground roll. This is an impressive aeroplane all around. If I was looking for a recreational aircraft, and especially if I was looking for a training platform, I would have to consider the SP 2000 SPEED. I would ask Howie for just one modification – a flap indicator on the right wing (as well as the left) so the instructor could read it too.

This aeroplane looks like a thoroughbred, and flies beautifully with its racy lines and superb cockpit layout. It has an excellent flight handling envelope. It’s a real pilot’s aeroplane, and it’s made right here in Australia. What more could you want?

Brisbane Valley Sport Aircraft Club Meeting Dates for 2012

10.00am, Saturday February 4th at the Watts Bridge Clubhouse

7.30pm, Monday March 5th at the Archerfield Terminal Building

10.00am, Saturday April 14th at the Watts Bridge Clubhouse

7.30pm, Monday May 14th at the Archerfield Terminal Building

10.00am, Saturday June 2nd at the Watts Bridge Clubhouse

7.30pm, Monday July 2nd at the Archerfield Terminal Building

10.00am, Saturday August 4th at the Watts bridge Clubhouse

7.30pm, Monday September 3rd at the Archerfield Terminal Building

10.00am, Saturday October 6th at the Watts Bridge Clubhouse

7.30pm, Monday November 5th at the Archerfield Terminal Building

10.00am, Saturday December 1st at the Watts Bridge Clubhouse (Xmas gathering)

The Penultimate Little Aussie Sapphire



Responsive controls, panoramic view, perfect symmetry and a powerful motor humming away down the back – there is a lot of fun to be had in a Sapphire. One of the smallest aircraft on the RAAus register, the diminutive, all fibreglass single-seater performs way ahead of its class. This particular Sapphire, 19-4826, climbs at close to 1000 fpm at sea level and has a very comfortable cruising speed of 85 knots, well short of full power.



Like any aircraft, however, Sapphires need to be understood. For instance, later models have an under-the-seat stabilator centring system, which is critical to the aircraft's hands-off pitch stability. This system needs to be checked regularly (the only airworthiness directive ever issued on the type). Sapphire 4826 has a modified system behind the seat instead of under it, using the same principle (shockcord applied to the pushrod), but more accessible, robust and adjustable from the cockpit in flight.





Being the second last Sapphire made, Sapphire 4826 has a Rotax 503 dual (Ducati) ignition, dual carburettor motor. Most flying is done throttled back at about 10 litres per hour, and with nearly 60 litres in the wings, that's a lot of cheap flying. The downside to the bigger motor is that weight and balance has become more of an issue – lightweight pilots need up to 15kg of forward ballast. Sapphires will fly OK with their C of G behind the approved range, but three-pointers become increasingly problematic, and bounces become very difficult to recover from (and remember, it is the landings that count most).

If there is one aircraft that would benefit from a set of airbrakes, it is the slippery Sapphire. The flaps are effective but have a narrow speed range. The plane responds well to rudder, however, and slips left or right with excellent forward visibility and control, considerably steepening approaches and making those tight strips much more manageable. And while it is definitely a small aircraft, the cockpit cannot be described as cramped. A backpack parachute is possible for all but the largest of pilots and there is headroom enough under the canopy for a helmet. There are 25 litres of contained luggage space at C of G, with extra space in the rear fuselage for lightweight bulky items such as a sleeping bag, ground mats, bivy bag and/or empty fuel container.



Second-hand Sapphires are regularly advertised in the RAAus magazine. Sapphire 4826 is one of at least two Sapphires in the South East Queensland area. Although the type is not so often seen these days at fly-ins, more than fifty Sapphires have been produced over the last twenty-five years or so. Sapphire 4826 is quite possibly the second last Sapphire that ever will be made. As such, it will indeed be the penultimate Sapphire. Steve Dumesny in Victoria currently owns the final (the ultimate) Sapphire (19-4825), as well as the Sapphire manufacturing business, but both have been for sale for some time. The move towards two-seat, more sophisticated aircraft has led to a change of career for Steve. A small but significant chapter in Australian aircraft design, production and marketing history appears to be closing.

Mal McKenzie's been touring European aviation museums. Here are some of his photos:



The club has a new website and mailout address

Thanks to our trusty Webmaster, Will Miller, the club's web address has been changed to www.bvsac.org.au

As well, the mailout facility is now mailout@bvsac.org.au. Remember that anyone on the mailout list can mail to the list, and replies can be to everyone (reply all) or only to the originator (reply).

The latest on Scott Hendry's Skyranger Nynga project

Arthur, we've covered the wings and the firewall is installed and the gaps around the corners have been sealed with aluminium. I have also sealed the firewall from the cabin side with silicone to keep as much of the draft out as possible. On the engine side of the firewall, I have foil covered foam to reduce the engine noise and also to stop drafts. The radiator and oil cooler are now plumbed and mounted, although I haven't cut an opening in the lower cowl for the oil cooler air flow yet. The fuel lines are connected and sleeved with Firesleeve. The fuel boost pump is plumbed into the fuel system as well. I've made a couple of attempts at the instrument panel and now have one that works and I've started fitting the coamings around the panel. I'm rather proud of my little switch guards around the magneto switches. I made them from 6mm aluminium rod. I had to make a bender to get the nice curved top on them and they polished up quite well. I'm now at that point where 90% of the kit is built and have 90% left to do! The metalwork on the panel is finally finished. I made a few mistakes along the way and this panel is version 3. Finally, I'm happy with it and the metal goes off to be powder coated tomorrow. When the metal comes back, I'll start wiring and plumbing the gauges and electrics. Regards, Scott.

Well, since then, Scott has sent me this photo of the powder coated panel and it looks absolutely sensational!



Aviation Events December & January

- Dec 3 Temora NSW Aircraft Showcase - Pearl Harbour Temora
- Dec 3 Wagga Wagga, NSW Official Opening 🌞 Wagga Wagga
- Dec 3-4 Jdandboo Airfield, VIC Airtourer Assn Victorian Christmas Fly-In
- Dec 4 Frogs Hollow (Merimbula-Bega), NSW XMAS BBQ 🌞 Frogs Hollow
- Dec 4 Wagga Wagga, NSW Wagga City Aero Club Monthly BBQ Lunch Wagga Wagga
- Dec 4 Lethbridge, VIC AAAA-Victoria Toy Run Lethbridge Airpark
- Dec 17 Dunwich, North Stradbroke Island, QLD Straddie Breakfast Fly-In 🌞 Dunwich / Stradbroke Island
- Jan 14 Caloundra, QLD Aero Engine Run Day 🌞 Caloundra
- Jan 21 Temora, NSW Aircraft Showcase - Australian Made Temora

Emergency Airworthiness Directives (x2) for Rotax 912/914 series (dated 16th November 2011)

There has been a defective series of crankshafts fitted to certain engines. The ADs outline that the gearbox and drive gears need to be removed for inspection for cracks at the PTO end of the crankshaft. If the crankshaft is OK, then the gearbox can be refitted. If cracks are present, a new crankshaft needs installing at the owner's cost. For details, see the RAAus website.

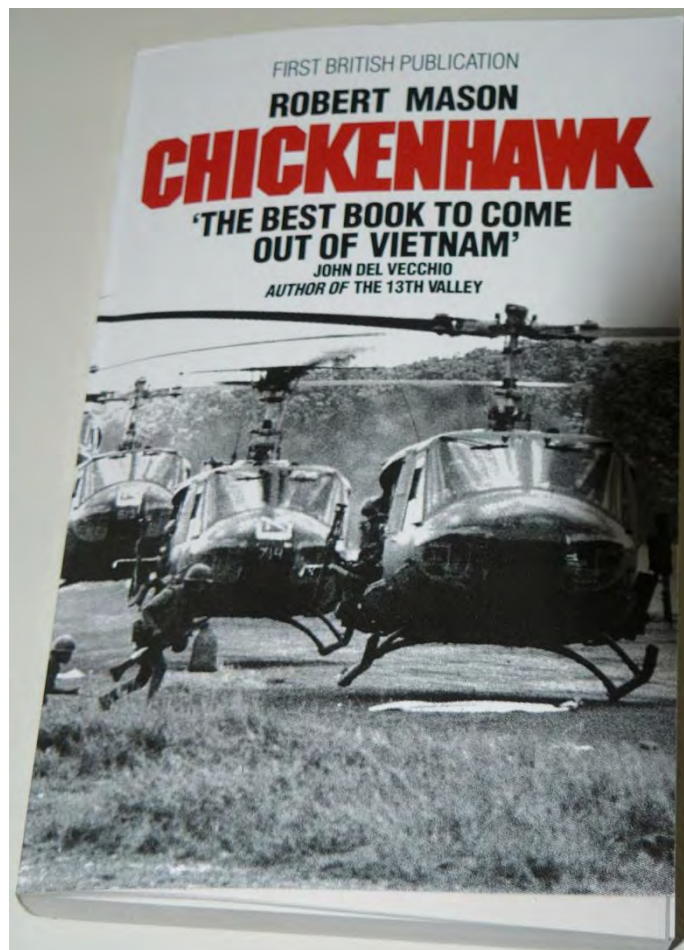
Book of the month

Chickenhawk by Robert Mason, originally published in 1983, is the story of a helicopter pilot's life in Vietnam in the mid 60s. Starting at flying school in 1964, it is a totally gripping, factual account from beginning to end – highly recommended. I recently saw this book in paperback form at QBD bookshop at Mt Ommaney for the amazingly low price of \$5.95. Now, that is an absolute bargain!

RAAus politics, etc.

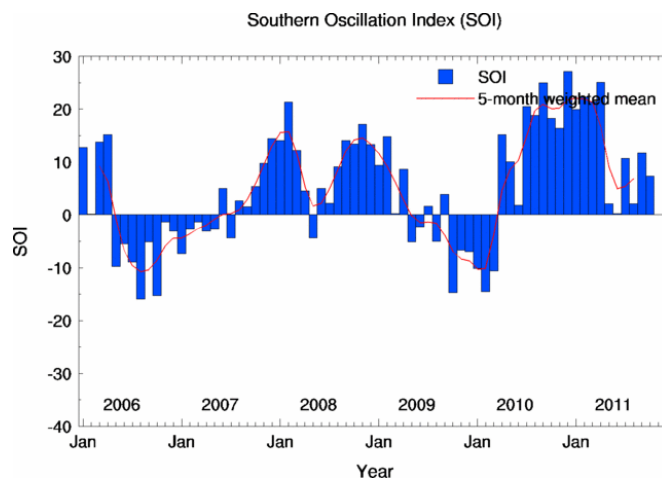
What a difference a year makes. The two constitutional amendments were passed at the AGM by an overwhelming majority of members' votes. Steve Runciman has been voted in as president. As well, the minutes of the AGM and the general meeting, plus the annual financial statement arrived with the magazine in a very timely fashion. The association even has a budget for the coming year. And, on top of all that, we have a monthly magazine with an excellent inclusive attitude towards encouraging member contribution. I recently heard from one of South Queensland RAAus representatives, John McKeown, who had been a vocal critic of some board matters last year, and, briefly, his words were, "it's all good!"

Speaking of our magazine, Sport Pilot, you may have noticed that they had more than a few editing and proof reading problems with the last issue. Kreisha Ballantyne is more aware of this than anyone, and has explained that there were several contributing factors, including an unexpected resignation. She has promised things will improve from December onwards.



Southern Oscillation Index

For those of you watching the SOI as an indication of how much flying you might be doing over the holidays, you will have been no doubt disturbed to hear that the Queensland Government is reducing the level of Wivenhoe Dam to 75% on the advice of the Bureau of Meteorology, who are saying that we are in for a wet season like last year's. However, it is hard to see what they are basing their predictions on because the la Niña event we are currently experiencing is nowhere near as intense as last year's at this stage. We have had more than ten similar intensity la Niña events since the previous big ones in 1974 and 1975 without any flooding.



Latest Southern Oscillation Index values

Note: Calculated using the 1887-1989 base period. This information is usually updated every weekday at 2:00pm (AEST), public holidays excluded.

Date: 26 November 2011

Average SOI for last 30 days: **10.4**

Average SOI for last 90 days: **10.2**

BRISBANE VALLEY SPORT AVIATION CLUB

MINUTES OF THE NOVEMBER 7th 2011 GENERAL MEETING

MEETING LOCATION: Archerfield Aerodrome
MEETING DATE: 7th November 2011
MEETING OPENED: 8:00PM

MEMBERS PRESENT: 11

APOLOGIES: Mal McKenzie

VISITORS: Nil

NEW MEMBERS: Priscillia Smith

MINUTES: October Meeting of the QUA / BVSAC
Proposed: Ian Ratcliffe. Seconded: David Ratcliffe Motion carried.

PRESIDENT'S REPORT: Commented on the club name change.
Complimented to the Editor on the magazine.
Highlighted coming events.

SECRETARY'S REPORT: The Secretary listed the Inward and Outward Correspondence and commented where required.

TREASURER'S REPORT: Bank Account Balance is \$8,446.52.

WBMA REPORT: Peter Freeman gave an overview of drainage work being undertaken on RWY 03/21
Richard Faint gave an overview of the Watts Bridge AGM and commented on the issues aired at the meeting.

BUSINESS ARISING: Richard Faint presented the proposed BVSAC Logo to the meeting.
Arthur Marcel updated the meeting re the formalities of changing club name.

GENERAL BUSINESS: There was discussion re: the aircraft in the QUA Hangar which are continually in arrears and breach of agreement. The Secretary is to write to the aircraft owners requesting that they remove the aircraft from the hangar.

Christmas gathering to be at the QUA Clubrooms Watts Bridge on the 3rd December.
Simple catering to be organized by committee. Arthur Marcel to promote and organize numbers for catering.

QUA will cater for the QF&R Training Day at Watts Bridge. Mike Smith to be the point of contact.

TRAINING TOPIC: Discussion of balanced turns and the necessity to hold off bank in a balanced turn.

NEXT MEETING: 04th February at the QUA Clubrooms Watts Bridge at 10:00AM.

MEETING CLOSED: There being no further business, the meeting was declared closed at 8:50PM

**The BVSAC Xmas Party is at 10am on Saturday 3rd
December at the Watts Bridge Clubhouse.**

PRESIDENT: Mike Smith 0418 735 785 **TREASURER:** Ian Ratcliffe 0418728238

SECRETARY: Richard Faint 0412317754 Email richard@auav.org

NEWSLETTER EDITOR: Arthur Marcel Email a.marcel@optusnet.com.au