

BRISBANE VALLEY FLYER

MARCH - 2014



Watts Bridge Memorial Airfield, Cressbrook-Caboonbah Road, Toogoolawah, Q'ld 4313.



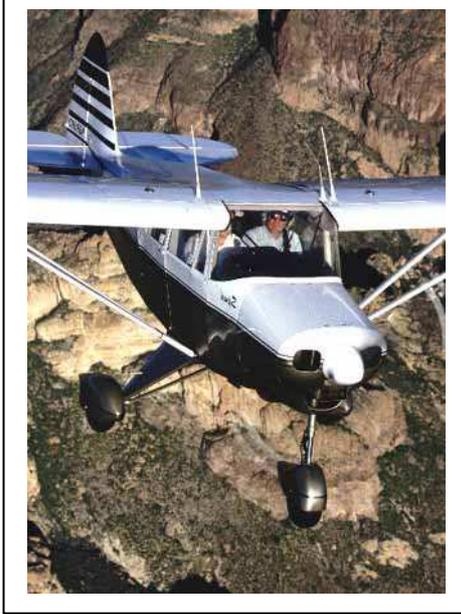
RAF 2000 Gyrocopter airborne at Watts.

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The Ubiquitous Tri-pacer - Piper's Utilitarian Milk Stool (best value for money around) (Adapted from Budd Davisson)



One of the reasons the Tri-Pacer suffers so much in the eyes of high-brow purists is its landing gear. The original PA-20 Pacer, from which the Tri-Pacer descended, was a cute-as-a-bug airplane which unfortunately demanded some attention on takeoff and landing. As soon as Piper hung a nose wheel under it, sales sky rocketed as the airplane became brain-dead simple to takeoff and land. Unfortunately the cost paid was that it earned its "milk stool" moniker because of the near-tripod appearance of the landing gear.

What many of the purists fail to concede, however, is how well the airplane performs. If you compare POH numbers you'll see a 1958 160 hp Tri-Pacer will cruise within 4 knots of a similarly powered 1986 172P, stalls four knots slower, out climbs it, lands shorter and has a much higher service ceiling. It does give up some distance in the takeoff roll and has 50 pounds less useful load and 7 gallons less fuel, but it also costs about a third as much.

But the big question is: How does the ol' "pie chaser" fly in the real world? To find that out we contacted Stan Watkins, Executive Director of the Short Wing Piper Club Foundation, who bases his PA-22-160 at Scottsdale, AZ.

Stan's airplane, nick-named "Spud", came to live with him in 1990 and it was, in his words "...ugly as homemade sin..." He had the airplane painted in Ditzler Durathane and turned the interior over to Paul Sanchez at Elite Interiors in Portland, Oregon who did it up in leather. At the same time, Sanchez completely rebuilt the seats for comfort and Stan says the difference is remarkable.

The Tri-Pacer is one of the few airplanes (I can't actually think of another) that has a right door for the front seat and a left door for the rear seat. The upside to that is the rear passengers have their own door. The downside is the pilot has to be in before the front passenger. Fortunately, boarding through either door is actually easier than getting in a 172.

Once inside, the smallish size of the cockpit is exaggerated by a window area that is smaller than on modern aircraft. For someone coming out of a four-place Cessna, for example, the cabin is going to feel dark and claustrophobic. Fortunately, that feeling goes away in minutes.

The first test while flying a Tri-Pacer is figuring out how to start it. If a person comes to the breed with no prior knowledge his chances of getting it fired up are absolutely zero because they'll never find the master switch and starter button. Unless the airplane has been converted, the pilot has to reach between his legs and under the bottom of the seat for both switches.

With the engine cranked, we were ready to taxi. The nose wheel steering feels pretty much like any other however some people find the lack of individual brake pedals a little disconcerting. A lever, often called a "Johnson Bar" hangs from under the panel and activates both brakes at once. In reality individual brakes aren't needed for tight manoeuvring, as the turn radius with that narrow gear is so tight the inside wing tip is nearly tracking backwards. Also, the wings are so short it'll fit in some awfully tight holes.

While taxiing, I was reminded that Tri-Pacer's came with two basic instrument panel configurations. The early airplanes had the "low panel" and have much better visibility over the nose than the later

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ones but are cramped for radio space. "Spud" has the high top panel and is IFR equipped, although Stan seldom uses it as such.

On takeoff, the 160 hp Lycoming tugged us along with respectable acceleration which was nice. Tri-Pacer's come with engines as small as 125 hp (fairly rare) with 135 hp and 150 hp being by far the most common. The 160 hp was on most of the later airplanes and the extra power is very noticeable. The small engine airplanes are really too under powered to give solid performance at gross weight. This is especially true out west. With only two people on board, however, they fly just fine.

Keeping Spud on the centre-line during takeoff was an absolute no brainer and, even though there was a slight crosswind, I don't remember using my feet for anything. Stan advised rotating cleanly off the ground at 65 mph or when the nose felt light. This too was a no-brainer. A gentle tug at the right moment and it stepped into the air with no hesitation or tendency to settle back on.

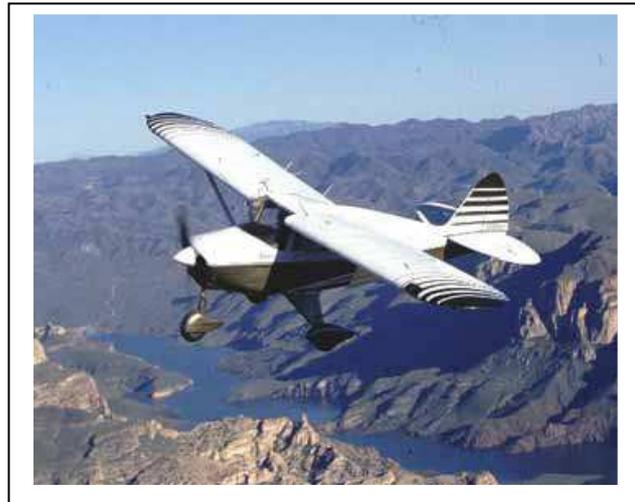
I purposely kept a shallow attitude letting the speed build to 80 mph which Stan said was a good speed at our weight. The airplane was quite speed stable and willing to sit on 80 mph with only a little trimming. It was the trimming that was a problem, albeit, a minor one. The overhead trim crank takes a little getting used to, if only to remember which direction to turn it. 100% of the time I turned it the wrong way first, even though Stan told me counter-clockwise was down. Or was it up?

As the airplane settled into a climb, the ASI glued itself to 900 fpm and stayed there until we levelled out at altitude. Considering that we were three people and full tanks that's not bad for an airplane everyone makes fun of.

When we levelled out in cruise Stan commented that he really babies his airplane and purposely uses lower than normal power settings, around 2300 rpm, for cruise. Also, his prop is a compromise between cruise and climb. This power setting gave us about 115 mph indicated which is what he says he uses for flight planning purposes, but almost always beats that number. Other Tri-Pacer owners report that most will true out at 120-125 mph at 2450 rpm depending on the prop.

Considering that one of the integral parts of the airplane's unearned reputation is its short wings and its supposed tendency to imitate a hockey puck, the stalls are hardly worthy of the name. In any configuration, gradually pulling the yoke to the stop produces nothing but a soft mushing and the VSI needle sagging to something around 500 rpm. It's nearly impossible to get it to break short of a full power, accelerated stall.

People tend to forget that the Tri-Pacer is a product of the time when they were trying to engineer required-skill out of the pilot equation. The Ercoupe was the extreme example in that it eliminated rudder pedals completely. The Tri-Pacer didn't go that far, but it did have spring interconnects between the aileron and the rudder so you could fly it with your feet flat on the floor and still have the ball centred. It had been some time since I'd flown a stock Tri-Pacer and I was surprised to find the interconnect wasn't as strong as I remembered. While rocking the wings with the yoke did cause a little automated rudder input, it was easily over come to induce a slip, if wanted. Also, the roll rate is quite a bit higher than I remembered and higher than a C-172, which I liked.



The 'Milk-stool' in flight. You can't see the undercarriage when you're flying it!
(And it flies too well to worry about its looks)

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While cruising around, the visibility is perfectly fine, although the illusion is that it's less than something like a 172 because everything in the cockpit is a little closer together. However, if sight angles were measured, I'd be willing to bet there really isn't that much difference, if any.

One thing about the Tri-Pacer legend that is absolutely true is its glide ratio. Notice I said glide ratio, not rate of descent. Yes, it's coming down a little faster than some airplanes, but it's coming down a lot steeper than most. Its power off angle of descent with only one notch of flaps is about the same as a Cessna with the boards all the way out. This much I remembered and planned the approaches accordingly.

I brought the power back to 1500 rpm and set up 80 mph as an initial number intending on going down to 70-75 over the fence. As the runway numbers started moving down the windshield indicating we were high, I eased the power to idle and we immediately started sliding down towards the numbers. We only had 10° of flaps out and it was obvious we didn't need any more. Stan says he seldom uses full flaps for anything.

I was using the 1000 foot markers as my touch-down point and they stayed rigid in the windshield as we fell at the ground. To a Cessna pilot, the angle and rate of descent may look high but I think they'd also sense the rock steady feeling of the airplane in that situation. There's no moving around or fidgeting. The airplane feels as solid as a cement block. Right at the bottom, as I started to flair, I cheated by squeaking on just a touch of power as insurance and bled it back off as I got deeper into the flair.

The mains touched with an authoritative "thunk" and stayed there. I was able to hold the nose off only briefly before it too came down. Then it was carb heat off, flaps up and let's do it again.

I really enjoyed Spud. In fact, I enjoyed just about everything about the airplane. I'm now convinced that most Tri-Pacer fanatics aren't bothered at all by the airplane's less than glamorous reputation. That helps keep the prices down and that undoubtedly suits them just fine.

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Cessna 162 Skycatcher – Going – Going – GONE???

There is new evidence that when Cessna Aircraft CEO Scott Ernest said at the NBAA Convention in October that the Skycatcher has "no future," he meant it. While no official word has come out of Wichita, Cessna has removed all traces of the LSA from the single-engine product line on its website, seemingly moving the Skycatcher program to the history books. Cessna did not immediately reply to our requests for comment.



The C162 Skycatcher

Assuming the program is indeed done, it's a quiet demise for Cessna's lightest airplane after a troubled history. The Skycatcher was plagued with challenges from the start. The light sport model's tail design had to be revised after a prototype spun and crashed late in the development phase. There was negative reaction from the flying public after the Wichita, Kansas-based company announced it would produce the Skycatcher in China.

Then, in 2012, safety alert SA162-57-01R1 was released as a result of wing spar cracking, requiring mandatory spar improvements and

the removal and replacement of a section of the leading-edge wing skin with segments containing new inspection access panels. Cessna covered the cost of the work, provided it was completed at an authorized service center within one year of the publication of service bulletin SB12-57-01.

Another unpopular announcement was the increased price of the LSA, which Cessna had originally hoped to deliver for under \$110,000 in 2007 dollars. That figure skyrocketed to \$149,900 at the start of 2012.

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These challenges combined to reverse the flow of excitement Cessna created when it first announced the Skycatcher program. Four years after the first Skycatcher was delivered in December 2009, only about 200 Skycatchers have been delivered.

More Diesel News

Premier Aircraft Sales has launched an upgrade program for the Cessna Skyhawk that adds a new Continental/Centurion 2.0 diesel engine to the airplane to go along with fresh paint, new interior and modern glass avionics.



The first airplane upgraded under the program is a 1997 Cessna 172R model with a sticker price of \$289,500 — about \$70,000 less than a brand new Skyhawk. In addition to the 135 hp Centurion turbo diesel, the airplane includes paint and interior and a Garmin G500 cockpit with GTN 750 touchscreen navigator.

Premier hopes to have the airplane ready for delivery in time for Sun 'n Fun in Lakeland, Florida, in April. Art Spengler, the Fort Lauderdale, Florida company's vice president of operations, told *Flying* interest in the Skyhawk upgrade program has been strong right out of the gate. While this is the first airplane Premier has upgraded with diesel power, Premier hopes to turn it into a full-fledged refurbishment program for pre-G1000 Skyhawks. The engine accounts for \$95,000 of the purchase price, with the final out-the-door tally dependent on what options the buyer chooses. If all goes well, Premier plans to pursue a similar STC retrofit for Piper Warriors.

The Centurion diesel burns 6 gallons per hour of jet-A, versus the Skyhawk's stock Lycoming, which burns around 9 gallons an hour of pricier 100LL avgas. The Centurion also includes a Fadec for single-lever operation.

Request from YWSG committee.

Please see below a request for those using the BVSAC/AAC rubbish bin.

Hi Merryn and Richard,

Bruce Clarke placed the above bin near the AAC water tanks some time ago.

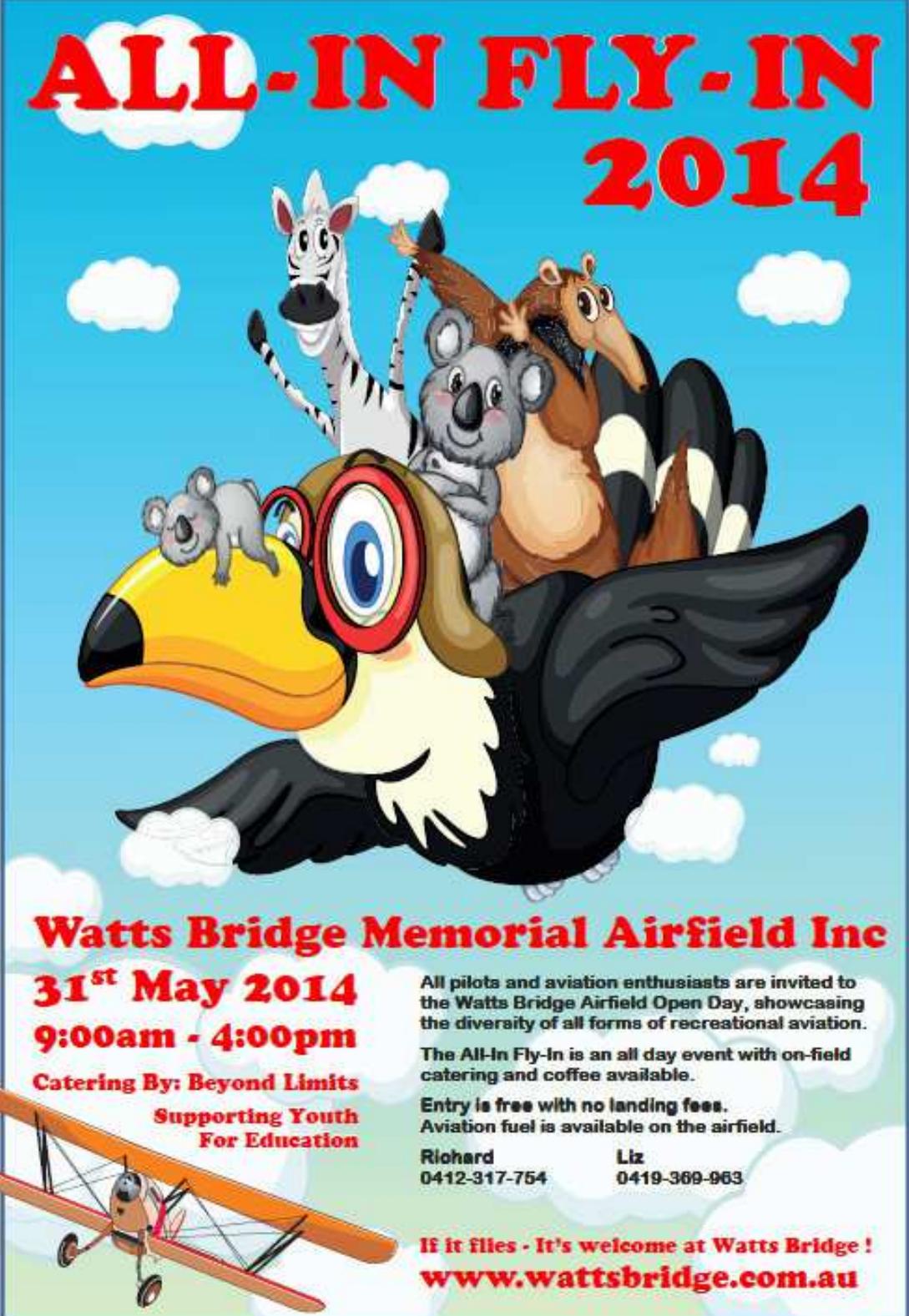
Bruce has asked if we can place the bin near the power pole on Sunday afternoons so it is easier for Mary & him to collect and take out to the Cressbrook-Caboonbah Road.

Additionally, Bruce mentioned it would be helpful if all rubbish placed in the council bin could first be placed in large garbage bags as this makes it easier to transfer between bins if required.

Please advise your members.

Many thanks

Liz



ALL-IN FLY-IN 2014

Watts Bridge Memorial Airfield Inc
31st May 2014
9:00am - 4:00pm

Catering By: Beyond Limits
Supporting Youth For Education

All pilots and aviation enthusiasts are invited to the Watts Bridge Airfield Open Day, showcasing the diversity of all forms of recreational aviation.

The All-In Fly-In is an all day event with on-field catering and coffee available.

Entry is free with no landing fees.
Aviation fuel is available on the airfield.

Richard Liz
0412-317-754 0419-369-963

If it flies - It's welcome at Watts Bridge !
www.wattsbridge.com.au

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You've got go with the flow, you can't beat it!

Recently a conversation about an aviation problem that's so old it's growing moss took place in my hearing. It related to a pilot who was educated beyond his IQ and was quite convinced that he preferred a wind to be blowing when he did any cross country flight because his aeroplane always got there and back faster than it would have with no wind. It was all a question of tailwind.

A younger and less experienced pilot challenged his logic but the errant orator refused to relinquish his soap-box and listen to reason. His arguments grew louder as he used increasing vocal volume to impress his audience in lieu of common sense.

Let's have a look at this situation once and for all. Take an aeroplane with a cruise speed of 60 knots as it flies a return trip to a destination 90 nms away. If there is no wind the 180 nm trip at 60 knots will take 180 minutes or 3 hours.

This problem has no issue with drift so let's assume for another trip along the same route that a 30 knot wind is blowing from the departure airfield towards the destination. The groundspeed outbound will be 90 knots ($60 + 30 = 90$) and 90 nm at a ground speed of 90 knots will take 60 minutes or 1 hour. However, it all turns to custard on the return leg. Here the aeroplane will give a ground speed of just 30 knots (60 knot TAS into a 30 knot headwind gives a ground speed of 30 knots). This return leg will therefore take 180 minute or 3 hours. Adding the flight times for the two legs in this case will provide a total time of 4 hours for this flight.

From this it is clear that any wind is detrimental to flight times. Assuming the headwind/tailwind component remains unchanged, you can NEVER make up what you lose because you spend longer in the headwind sector. To some small extent, varying cruising altitude to regions of increased tailwind or reduced headwind can minimize the effect but you'll never make it up.

Of additional concern is the attitude displayed by the pilot who was clearly on an ego trip and could therefore not afford to listen to dissenters. He won't be hiring any aircraft of mine!

FLY-INS Looming

Mar 8	Murgon (Angelfield), QLD	Angelfield Brekkie Fly-in Murgon google calendar
Mar 8-9	Caloundra, QLD	International Women of Aviation Week google calendar
Mar 15	Dunwich / Stradbroke Island, QLD	Straddie Fly-in Breakfast google calendar
Mar 21	Sunshine Coast, QLD	SCAC Friday Clubhouse BBQ & Bar google calendar

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Mystery Aircraft (March Issue)

What's this?



ALAS
No one contacted me to identify this
aircraft.

Mystery Aircraft (February Issue)

The mystery aircraft in the February 2014 Issue was a BE2C. These were produced by the Royal Aircraft Factory in the UK and were in service with the RFC and then the RAF from 1912 until the end of WW1, in 1918.

Of note – these were the first aircraft type purchased for the RAAF.

Joke for the Month

1. Basic Flying Rules:
 1. Try to stay in the middle of the air.
 2. Do not go near the edges of it.
 3. The edges of the air can be recognized by the appearance of ground, buildings, sea, trees and interstellar space. It is much more difficult to fly there.

BirdsiPhotography

Want an air-to-air or ground shot of you and your dream machine? It's easy to arrange and will cost less than you might think. Grab the phone and contact Peter Davies or Rob Knight on 0400 89 3632, or email kni.rob@bigpond.com



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Keeping up with the Play (Test yourself – how good are you, really?)

1. By changing an aeroplane's angle of attack, a pilot changes that aeroplane's:
 A. Lift, IAS, and Drag.
 B. Lift, IAS, and CofG.
 C. Lift, TAS, and interference drag.
 D. Lift, and IAS, but not drag.
2. What cloud types are most associated with convection turbulence?
 A. Cirrus clouds.
 B. Lenticular clouds.
 C. Alto stratus clouds.
 D. Towering cumulus clouds.
3. In the Southern hemisphere, an aeroplane compass will indicate a turn towards SOUTH when:
 A. A right turn is entered whilst on a westerly heading.
 B. A left turn is entered whilst on a westerly heading.
 C. The aeroplane is decelerated whilst flying on a westerly heading.
 D. The aeroplane is decelerated whilst flying on a westerly heading.
4. An aeroplane's load factor is its LIFT:
 A. Divided by its "G" loading.
 B. Multiplied by its 'G' loading
 C. Divided by its total weight.
 D. Multiplied by the aeroplane's acceleration.
5. As an aeroplane climbs, the IAS at which it stalls in a particular configuration will:
 A. Remain the same regardless of altitude.
 B. Decrease as TAS decreases.
 C. Increase as TAS increases with altitude gain.
 D. Increase as TAS decreases.

ANSWERS: 1. A, 2. D, 3. C, 4. C, 5. A.

If you have any problems with these questions, call me(in the evenings) and let's discuss it! Ed.

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BRISBANE VALLEY SPORT AVIATION CLUB Inc

MINUTES OF THE 01.02.2014 GENERAL MEETING

MEETING LOCATION:	Watts Bridge Memorial Airfield – BVSAC Clubrooms
MEETING DATE:	1 st February 2014
MEETING OPENED:	10:40AM
MEMBERS PRESENT:	17
APOLOGIES:	John Innes, David Ratcliffe, Peter Ratcliffe, Liz Cook
VISITORS:	1
NEW MEMBERS:	Nil
MINUTES:	November 2013 meeting of the BVSAC Inc. Proposed: Mike Smith Seconded: Neil Bowden Acceptance motion carried.
PRESIDENT'S REPORT:	No report.
SECRETARY'S REPORT:	Richard brought to the meeting's attention: 1) "Wheelie Bin Request" from the WBMA Secretary. 2) ANZAC Day "Wreath Request" from the WBMA Secretary. 3) Amberley Airspace Safety Briefing to be held at Watts Bridge on the 8 th February. 4) All-In Fly-In 2014. Previewed BVSAC involvement and the need for volunteers on the day.
TREASURER'S REPORT:	Priscilla provided a financial statement. It advised that the BVSAC Bank Account Balance is \$16,617.44 and provided a summary of the major income and expenditure items.
WBMA REPORT:	Bruce Clarke advised that all goes steadily with Watts Bridge with nothing major to report. No new developments on the Rates Increase.
BUSINESS ARISING:	Nil
GENERAL BUSINESS:	<ul style="list-style-type: none">• Concreting the hangar floor was discussed.• Richard to write to the WBMA Secretary asking if prior approval is required and if so from whom.• It was agreed BVSAC would place a wreath at the ANZAC Day Remembrance.• Neil Bowden will provide and lay the wreath.• Painting of the clubrooms floor was discussed.• Richard to contact Frank Francis re: His offer to provide the paint.• Richard to contact Denis Brown re: Paint he used on his hangar floor.• Jotun Paints was suggested as a good quality product.• Priscilla is to investigate short term investment opportunities for our cash deposits.• Bruce Clark, on behalf of QVAG , thanked all those who attended the WW1 Seminar.• Glenda Faint thanked everyone for their good wishes, support and encouragement shown to her during her long stay in hospital.
NEXT MEETING:	The next meeting will be 01 st March 2014 in the BVSAC Clubrooms Watts Bridge at 10:00AM A BBQ lunch will follow the meeting.
MEETING CLOSED:	There being no further business, the meeting was declared closed at 11:05AM A BBQ lunch was held after the meeting.

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