

# BRISBANE VALLEY FLYER

OCTOBER - 2015



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



Patrick Martin in his Flying Flea at the Gathering of Eagles

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## **Are you crossed up with cross winds?**

By Rob Knight

I used to be. I was apprehensive every time the wind sock pointed any other way but down the runway.

“Why”, is a big question? Personally, two factors were prominent - stories from other pilots, and bewildering instruction from a procession of bewildered instructors who gave widely confusing instructions. Combined, these became a festering mass of confusion and stress, clouding thought processes and performance. There just wasn't time to recognise, assess, and appropriately control, undesired aircraft actions.

Operating across the wind is not difficult. It merely requires an understanding of the effects that wind has when acting at different angles to the aeroplane's longitudinal axis, and fundamental knowledge of the effects of an aeroplane's controls. However, add turbulence, stress, and already lowered pilot confidence into it as well, and cross wind operations can become a sobering concern.

There are two parts to this issue – the crosswind approach and the crosswind landing. The crosswind approach, to me has no issues. There are just the two methods of making a crosswind approach and they have both been discussed to destruction. Either *tracking*, where *drift* maintains the approach line over the extended centreline, or the wing down method where *slip* does it instead. A good pilot is capable of using either, as he or she deems appropriate. I have a personal preference but it's mine and has no seriously arguable facts to support it. But whatever method is used, the sole purpose of the approach is to set the pilot up for a flare and float at the right place, the right time, and the right height and airspeed.

This tract looks at the second part – the crosswind flare and landing so let's assume the aircraft is at the right flare height, at the right airspeed, and examine the techniques from there.

Again there are two commonly prescribed techniques – the “*drift and kick-er-straight*” method, and the “*wing down and let-her-rip-in-a-slip*” method. I was initially taught the former but now do the latter. I find it is more straightforward and less fraught with luck and gusts so is far less stressful on my airframe.

Let's look at a perfect model of a crosswind landing. At the flare, the pilot arrests the aeroplane's descent and enters a level flight mode with the wheels a little above the runway. Maintaining height at this close proximity to the runway, the pilot continues to keep the aeroplane's direction of flight along the centreline as the airspeed falls. As the lift reduces with the falling airspeed, the pilot allows the aeroplane to touch it's main wheels (in a tricycle U/C machine) ensuring, at the time of touch and thereafter, the aeroplane's nose is aligned with its direction of motion along the centreline. The pilot allows the nosewheel to settle and uses the rudder pedals to control any yaw so the roll-out is also straight as he progressively moves his aileron into wind. Sound simple? It is but pilots tend to confuse themselves as all this takes place over just a few short seconds. So many things are happening that require the pilot's input to correct that missing any one can create problems in the rest.

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So what can go wrong? Many things, in fact. Some external and environmental, others relating to aeroplane type and characteristics; and there's still the pilot and his/her proficiency in there as well. Let's look at them each in turn.

The environmental issues are generally caused by wind and heat but can also include runway slope (both lateral and longitudinal). The wind can gust or swing or both, separately or simultaneously. All have effects of the aeroplane's path along the runway and rate of airspeed reduction which affects controllability. Gusts cause momentary increases in airspeed which increase drag. The increased drag reduces the airspeed and when the gust has passed, the residual airspeed is lower requiring a change in the rate of pulling the stick back to maintain height in the float. A change in wind direction is worse – the resulting change in headwind component will cause airspeed decay at the same time as weathercocking requiring directional control. As long as the pilot sees the yaw and corrects it early there will be no further effect of yaw, and roll will not result. However, if the pilot misses the yaw, roll will inevitably follow and now the pilot must exercise control over yaw and roll at the same time as the airspeed is reducing, controllability is falling, and the aircraft is in close proximity to the ground. The pilot becomes overloaded and a bad landing results damaging confidence if not the aeroplane.

The aeroplane type and characteristics include whether it is high or low winged. High wings are generally influenced more by the wind than low wings because of their greater distance above the ground and thus require more control input by the pilot. Low wings are more susceptible to ground effect where the shockwave in the air caused by the wing passing through it bounces off the runway surface and increases air pressure under the wing. This prolongs the float. The pilot's field of vision – the height of the cowling ahead (and tailwheel configuration) can impose serious limits on forward visibility making it harder to see and judge the landing. Last but not least, the effectiveness of the controls. So let's simplify the crosswind landing technique so it's easier to carry out successfully.

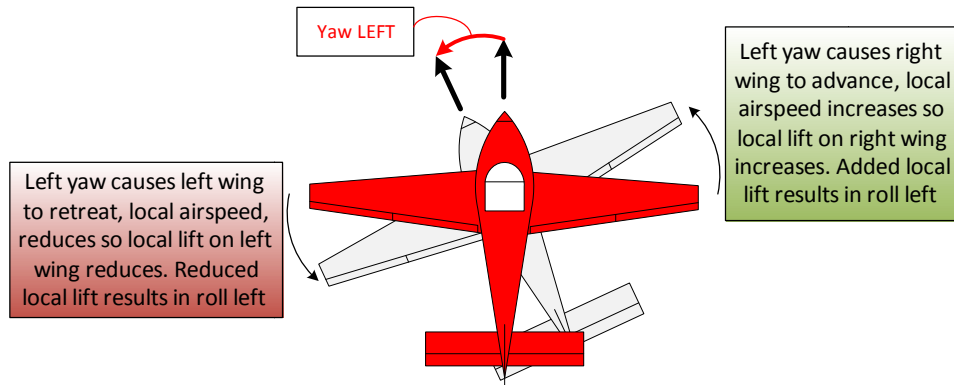
At the flare, stop the descent and fly level. Keep the stick coming back to hold the height and lower the windward wing so the machine will touch down initially on the windward wheel. At the same time, use just enough rudder to keep the nose aligned with the aeroplane's directional path along runway.

I admit it's a bit like rubbing your tummy whilst patting your head, but it is a whole lot less than that necessary in conventional crosswind landing techniques. By removing some of the considerations that are pattered by instructors and relying on the simpler concept above, the process is more easily followed to a good and safe landing conclusion. Good landings bring confidence and, with rising confidence in one's performance, come mental ease, and more good landings.

In essence I am not changing anything, just promoting a simplistic method of landing in a crosswind that is easier to apply. Too many things can be happening too close together for a pilot to recognise each one and act appropriately on that recognition. Maintaining the, *"Just land on the windward wheel"*, concept made it much easier for my students to cope that they learned more quickly and effectively. Without thinking about it, they naturally applied quite sufficient slip to counter the drift being experienced. It was a win-win situation.

The following sketch relates to a landing when a component of the wind is blowing across the runway from right to left (Starboard to port).

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Why not watch for the yaw and stop it and correct it before the roll can take place?

As an aside, I also found that, with the reduced pilot mental load during the landing sequence, my students seemed to make better go-around decisions. Using the conventional pattern and techniques, too frequently they became so gripped in the stick waggling and rudder shaking that they didn't make appropriate go-around decisions when it would have been more prudent to have left the scene of the impending accident for another try.

### **Watts Bridge Gathering of Eagles Annual Fly-In – Saturday 29 - Sunday 30 August 2015**

August 29 2015 arrived with the threat of wind and thunderstorm, not an ideal start of the Gathering of Eagles Fly-In for 2015. However, although some did stay away, there was still an impressive turnout.



Beech T34 Mentor



Something for everyone.



The ubiquitous DH 82A Tiger Moth



The Tecnam stand

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Classic Aircraft Corp-YMF



De Havilland DH-104 Dove, Gypsy Queen engine



Grumman G-73 Mallard



Cessna O-1 Bird dog



Yak 3Y VH-YOV



A T28 Trojan on cigars



A Marshall in motion



Patrick's Flying Flea

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### BirdsiPhotography

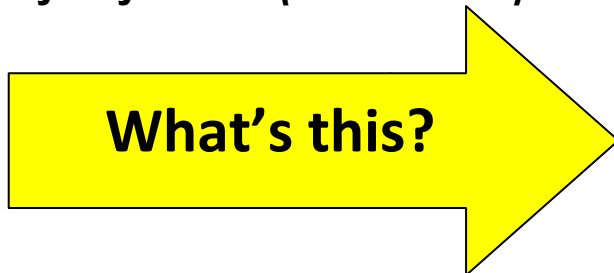
Want an air-to-air or ground shot of you and your dream machine? It's easy to arrange and will cost less than you might think. Grab the phone and contact Peter Davies or Rob Knight on 0400 89 3632, or email [kni.rob@bigpond.com](mailto:kni.rob@bigpond.com)



### FLY-INS Looming

<b>Saturday October 10</b>	Murgon	Angelfield Breakfast Fly-n
<b>Saturday 17 October</b>	Dunwich	Straddie breakfast Fly-In
<b>Sunday November 1</b>	Gympie Aero Club	Breakfast Fly in

### Mystery Aircraft (October Issue)



### Mystery Aircraft (Last Issue)



The Piper PA-8 Skycycle, manufactured from a WW2 drop tank.

Well done Richard Faint – he's done it again.

Who would think that this was a Piper aircraft?

Just a reminder that the BVSAC Monthly meeting (which would normally be held this Saturday) is to be held on next Saturday 10th October 2015. This is to avoid the long weekend for Queensland Labour Day celebrations.

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### Forest Hill Fly-in

Saturday 03<sup>rd</sup> October saw the first Fly-In held in recorded history at YFRH (Forest Hill Airfield). The boys in Hangar 1 had the runway grass under control and had beaten to death the peripheral overgrowth so the field had something of a manicured look.

The attending visitors included John Raison in his immaculate RV12 followed by Mike Smith in his Jabiru. David Watson appeared like an avenger from WW1 in his Maltese Crossed Drifter. Vern Grayson emerged from the haze and landed as did Brad Lange in his Bearhawk out of Warwick. Some also drove in – Mal McKenzie and Tony King, the latter a YFRH resident.

The Hangar 1 boys, Ray Morgan, Clive Ryan, Ray Jones, and Clyde Howard manned the BBQ and cold drinks awhile Maggie Knight sorted out the cole slaw, sauces and coffee.



John Raison's RV12



Brad Lange's Bearhawk



David Watson's highly visible Drifter



Mark Smith's Jabiru – first in the line-up



Keeping out of the sun while waiting for lunch



Vern Grayson's modified Zodiac 601XL

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

1. Why does the stall speed of an aeroplane carrying out a level turn increase compared to its stall speed in the same configuration in straight and level flight?
  - A. The angle of attack is higher in the level turn.
  - B. Loading increases in any turn.
  - C. The aircraft's weight increases in a turn
  - D. The vertical component of lift is no longer vertical in a banked attitude.
2. A pilot and passenger take off at 1103 AEST and fly a track of 301° M. They experience 8° starboard drift but have only allowed for 5°. At 1233 AEST they confirm that they are off track to Port. The pilot calls ATC and requests an updated ARFOR. By what angle has the sun's position changed thus far over the course of this particular flight?
  - A. 22.5°.
  - B. 15°.
  - C. 06°.
  - D. 28.5°.
3. Thunder storms require particular circumstances and conditions to form and grow. From the following list select the correct circumstances conducive to CB formation and growth.
  - A. A low relative humidity, a trigger action, and strong stability in the low to mid atmosphere.
  - B. Rain, atmospheric uplift, and a near standard temperature lapse rate.
  - C. A low QNH, a low relative atmospheric density, and strong atmospheric uplift..
  - D. Moist air, a trigger action, and strong instability through at least 10.000 feet.
4. Does lowering flaps increase induced drag?
  - A. No, because it doesn't change the angle of attack.
  - B. Yes, because it changes the pressure differential between upper and lower aerofoil surfaces.
  - C. No, it only changes the profile drag because it changes the aerofoil "thickness".
  - D. Yes, because the stall speed is lowered.
5. Can yaw increase an aeroplane's stall speed?
  - A. No, because it doesn't change the angle of attack.
  - B. No, unless the airspeed decays.
  - C. Yes, because yaw induces roll which will increase the angle of attack on the down-going wing. This increase can exceed the critical angle of attack.
  - D. Yes, changes to the relative airflow caused by the outer wing acceleration can induce a stall.

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

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 BVSAC Annual General Meeting held on the 11<sup>th</sup> October 2014.

Location: Watts Bridge Memorial Airfield – BVSAC Clubrooms.

**Meeting Opened:** 10:16AM

**Members Present:** 13

**Apologies:** Sandy Walker, Scott Meredith, Peter Ratcliffe, David Ratcliffe, Danny Fowler, Mary Clarke, Max Bain.

**Visitors:** 2

**President's Report:** Neil Bowden reported it had been a pleasure and honour to be the BVSAC president for the last two years, but was of the opinion that it was time to move on and have someone with new ideas take the position.

**Secretary's Report:** Richard Faint was pleased to report that BVSAC was in good shape, retaining membership numbers from previous years. 2013-2104 had seen the completion of two major club projects, the BVSAC Clubrooms and concreting the floor of the BVSAC Hangar. The club had been involved with the Watts Bridge All-In Fly-In and the Gathering of Eagles which were good for the club. In addition BVSAC had conducted the most successful Fun Fly Poker Run.

**Treasurer's Report:** Priscilla Smith tabled the audited financial statements and reported .....

We have had a good year financially; finishing the year with a \$6,384 Surplus.

Again, pleasing progress has been made inside the clubhouse, without significant outlay, thanks to all the hard work of our members. A special thank you goes to Wayne for the many unpaid hours spent on the clubhouse cupboards.

The most significant outlay for the year was for the concreting the hangar floor, which has greatly improved the value of this important club asset. Thanks to all involved.

Income was up from last year in all areas, especially Hangar income and total net income was up 56% overall.

Overall, operating expenses were down 16% on last year.

As shown in the Auditor's report (which has been distributed around the room), starting from the top, you will see net income from:

➤ Memberships	\$3,250.00
➤ Hangar	\$3,109.06
➤ Food & Drinks	\$1,429.06
➤ Solar Credits	\$1,225.88
➤ Other fundraising	\$ 165.00
➤ Donations	\$ 100.00
➤ Interest	\$ 32.13
Giving us a gross surplus of	\$9,311.13

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Operating expenses were made up of:

- Clubhouse expenses \$2,643.93
- Memberships paid \$ 215.00
- Postage \$ 12.00
- Fees & charges \$ 55.60

Giving us a net surplus of \$6,384.60

At 30<sup>th</sup> June Cash on hand was \$2,888.94 and the total of the association's assets had increased to \$108,692.98.

I congratulate everyone for contributing to the continued progress of our club and its facilities.

In conclusion, I would like to thank Melissa Ratcliffe for auditing our financials promptly and free of charge.

**Minutes:** Minutes of the 2013 AGM were voted as a true and correct record.  
Moved Mike Smith, Seconded Wayne Petty. Carried.

**Business Arising:** Nil.

### Election of Office Bearers

All executive positions were declared vacant.

Wayne Petty was elected unopposed as President.

Richard Faint was re-elected unopposed to the position of Secretary.

Priscilla Smith was re-elected unopposed to the position of Treasurer.

Richard Faint was re-elected unopposed to the position of WBMA Delegate.

**Meeting Closed:** The BVSAC AGM for 2014 was declared closed at 10:35AM

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# BRISBANE VALLEY SPORT AVIATION CLUB Inc

## MINUTES OF THE 05.09.2015 GENERAL MEETING

<b>MEETING LOCATION:</b>	Watts Bridge Memorial Airfield – BVSAC Clubrooms
<b>MEETING DATE:</b>	5 <sup>th</sup> September 2015
<b>MEETING OPENED:</b>	10:06AM
<b>MEMBERS PRESENT:</b>	15
<b>APOLOGIES:</b>	Ken Hulse, Mal McKenzie, Glenda Faint, Scott Hendry, Ian Ratcliffe, Danny Fowler, Liz Cook, Mary Clarke
<b>VISITORS:</b>	Nil
<b>NEW MEMBERS:</b>	Robert Dalziel
<b>MINUTES:</b>	August 2015 meeting of the BVSAC Inc. The secretary advised Ian Ratcliffe had made contact to advise he was at the August meeting, but the minutes showed he had offered an apology. The attendance register confirmed this. Proposed: Vern Grayson Seconded: Mike Smith Acceptance motion carried.
<b>PRESIDENT'S REPORT:</b>	No Report.
<b>SECRETARY'S REPORT:</b>	Richard Faint outlined the inward and outward correspondence for the month.
<b>TREASURER'S REPORT:</b>	Priscilla Smith provided a financial statement summary and advised that  the BVSAC ING account balance is \$549.17 and that the BVSAC NAB account balance is \$3145.46. Priscilla tabled financial documents for those members requiring additional details.
<b>WBMA REPORT:</b>	WBMA President Bruce Clarke thanked the many volunteers that helped to make the Gathering of Eagles 2015 the success that it was. The public reaction had been great and it is anticipated that in years to come the Gathering of Eagles will be a major fund raiser for the airfield.
<b>BUSINESS ARISING:</b>	Nil
<b>GENERAL BUSINESS:</b>	Wayne Petty opened discussion regarding the Watts Bridge Memorial Airfield's pending purchase of the land upon which the airfield resides. Wayne then handed the discussion to WBMA Council delegate Richard Faint. Richard informed the members present of the current situation regarding the land purchase and also made mention of BVSAC's historical ties to the airfield and the leases the club holds. On behalf of the BVSAC Committee Richard proposed a motion : "That BVSAC support the WBMA purchase of the land by providing a \$2,500 loan to WBMA for 5 years at 0.00% interest and that the loan was unsecured." Vern Grayson seconded the motion, which when put to the vote, was carried unanimously by those members present. Richard went on to say that the BVSAC Committee was prepared to raise funds by way of accepting member loans or donation expressly

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for the purpose of BVSAC lending those funds to WBMA to assist with the purchase of the land. The terms of the loans would be similar to the conditions being offered by WBMA BoM being a loan for 5 years at 0.00% interest and that the loan was unsecured.

BVSAC would accept the loans from members with appropriate loan documentation. It was stressed that there was no compulsion upon any member to make a loan or donation, though members were encouraged to consider the future of the airfield. It was suggested that \$10,000 was a reasonable target for the club funding.

The discussion was opened to all members for comment.

Mike Smith, Scott Meredith, Peter Freeman and Richard Faint took the opportunity to speak.

The BVSAC Committee asked for those members who wished to make a loan or donation to contact a committee member following the meeting. All loans would be anonymous.

Wayne mentioned that for some time the club monthly BBQ had been running at a loss and asked how the members felt about increasing the cost. A motion was put by Sandy Walker: "That the cost of the BBQ lunch be increased to \$10.00." The motion was seconded by David Ratcliffe and carried unanimously by those members present.

**NEXT MEETING:** The next meeting will be 10<sup>th</sup> October 2015 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 11:03AM  
A BBQ lunch was held after the meeting.

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### Aircraft for sale

Rans-S-7S Courier. \$Below build cost.



A double winner at NATFLY 2011, this delightful aircraft is powered by a ROTAX 912US AIRMASTER which swings a CSU with a 3 bladed prop.

To date there are 280 hours on both engine and prop. It carries a Garmin SL40 VHF with IC5 system., a Garman GTX 327 transponder and altitude encoder, and a Garman GPS (colour)

Contact Ken Edwards.  
Mobile: 0438 178 869  
Email: kenedwardsqld@gmail.com

It has STOL performance and cruises at around 90 knots at 25" Hg and 5050 RPM.