

Queensland Ultralight Association

January 2005 NEWSLETTER

Watts Bridge Memorial Airfield, Silverleaves Road, via Toogoolawah Qld

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From The President.

Welcome back from the Christmas break. I trust all members managed to get some great flying in over the Holiday break. I managed to get some limited hours, though it appeared the weather and the bank balance continually conspired against me.

I have just had a 5-week break as I am changing Employers. It is amazing how neat one's lawn can get if you have the time to spare.

As we look at the year ahead, and with the approach of winter, and the superb flying weather, I hope to see more Ultralights, oops! I mean Recreational Aircraft, both on the fields and in the air.

I raised the issue of QUA membership in recent times and I urge all members to either sponsor people to membership or to encourage all fellow aviators you meet to join. Without adequate membership subscriptions, it is difficult to maintain momentum.

I was talking to a workmate who at this time has had no contact with aviation except as a passenger in Commercial Airlines, and during the discussion, he realized how easy it would be for him to get into flying. With subsequent discussions with his Father, he has decided to learn to fly and his Father as an Engineer has now started researching with a view to the construction of an aircraft. This just goes to show how many people would be interested, if only they knew how affordable and easy it is.

The Wattsbridge Memorial Airfield Committee has made tremendous in-roads with SEQ Water and the Esk Shire Council and as a result, the QUA has now legal leases on both the Hanger and the proposed Clubhouse site. The next step is to build up the bank balance and look towards the purchase and construction of the Clubhouse.

With the resignation of Bevan as Secretary of the QUA, with his move to the Gatton South Airpark, I encourage all members to give serious consideration to the position of Secretary. I personally would like to thank Bevan for his past efforts and consider him a real asset to Recreational Aviation.

The Committee is always looking for new ideas that may help the club so please feel free to e-mail me at gavin-mcgrath@bigpond.com.au

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Photo credits

PRESIDENT: **GAVIN McGRATH 5426 2118**

SECRETARY: **This could be you**

[TREASURER: RICHARD FAINT \(07\) 3818 1988](#)

If you want to remain anonymous, please let me know and I will put the ideas forward in future newsletters.



Remember, there are always members looking for aircraft at the "economical" edge of the spectrum, so all those members with their first love, I mean aircraft, still gathering dust in the back shed, take advantage of the free advertisements in this newsletter and get it back up in the air with a new dotting owner.

So, to all members, happy flying, and to those in the middle of projects, happy building.

Gavin McGrath



Happy New Year.

Just a brief note. Evans Head was very windy this year which prevented Loyd flying the Beachcomber as intended. We drove down instead and were welcomed by Andy who had also driven.

He was busy entertaining a van full of mostly Jabiru, or ex Jabiru people. Mike had flown in with Priscilla but went home late Thursday afternoon.

Richard flew in very briefly and out again Saturday as unfortunately there were not a lot of ultralights there. There was a good deal of GA there over the three days but as they didn't stay long, from time to time it did look patchy on the ground which was deceiving as the majority didn't stay the distance.

We left early Sunday morning and were glad to get home away from the heat. The event was well attended by the public and there were several displays of aerobatics. If you will also just thank the people who helped me with the Xmas Bash . It was very much appreciated.

Cheers Robin S.



Pics taken from the Tyro web site.

TYRO PROJECT

A complete photographic record of the Tyro project is available should any members wish to have a look at it. Later this year I hope to use these photos to build a web site describing the Tyro construction in some detail. Today's article is an overview of the project and the trials and tribulations associated with it.

After training to solo stage on Drifters at Boonah and deciding that ultralight flying was something I wanted to do on a regular basis, the next step was to purchase an aircraft of my own. When I sat down and looked at my finances I found that I could not afford a certified factory built aircraft but I did not want anything second hand. The other option was to build from a kit, but did I have the skills necessary to do this?

I then began to do some research on available kits. My requirements were for an aluminium high wing single seat Australian designed and built aircraft with a proven history of safe operation and a reliable 4 stroke engine. When I first saw photos of a Volkswagen powered Tyro I knew it was exactly what I wanted. Fortunately I was able to track down a Tyro builder in Brisbane whose project was about 75% complete so off I went to have a look at what he was doing. I was very impressed with the quality of the kit, but the plans looked a bit complicated and once again I wondered if I had the skills necessary for the job. The Tyro kit is not supplied with holes pre-drilled. All drilling has to be done by the builder with critical hole locations and sizes determined from the plans, so this makes the job quite difficult and errors are easily made.

In January 2000 I contacted Geoff Eastwood from Eastwood Aircraft in South Australia. Geoff designed the Tyro Mk I back in the late 1970s and developed this into the Tyro Mk II in the early 1980s which gained "approved kit" status from the then AUF (now RAA). In the 1990s Geoff began to supply the VW engine with the kit in response to market demand for a reliable 4 stroke engine for the Tyro. The kit price was within my budget and following discussions with Geoff I ordered a kit and took delivery in April 2000.

The rudder is usually built first as it is the simplest part and gives the new builder some experience working with aluminum and interpreting plans. Next is the ailerons, then tail plane, wings, fuselage, fabric covering, fiberglass pod/instruments, control cables and finally engine/prop. I had no idea how to do fabric covering, so I had an experienced person help me do the rudder and this taught me the basics. I then found it surprisingly easy to complete the tail plane and wings on my own. I used American "Randolph" aircraft finishes (Nitrate and Butyrate Dope formulations) after heat shrinking the fabric. Randolph supply an easy to follow manual which I used to guide me through the fabric spraying process with good results. The aluminum butyrate finishing coats provide a long life finish and 100% U/V protection.

During the construction phase I was doing a bit of ultralight training as time and money permitted. Geoff Eastwood suggested that I consider completing my training on a Thruster rather than a Drifter because a Tyro handles much the same as a Thruster and ideally should be wheel landed, so off I went to Tony Hayes to get some Thruster training.

Due to limited spare time the building project dragged on until finally the engine was delivered and fitted in late 2003. Some basic engine tests were carried out at home and in early 2004 the Tyro was transported to Watts Bridge.

Numerous frustrating problems then began to appear. Tony Hayes carried out a full inspection of the Tyro and his report contained recommendations for a number of improvements which were gradually done as time permitted. In May 2004 I finally gained my Pilot Certificate but there were still faults with the Tyro and I was unable to fly it. The fuel system was the major headache. I ended up re-routing the fuel lines, removing the SU carburetor for a complete overhaul, replacing the primer, fixing manifold leaks and trying to get the mixture right.

I eventually got the engine running well and took the Tyro out for some taxi tests only to find oil spraying onto the windscreen. The engine had to be completely removed from the aircraft to get to the faulty seal that was causing the problem.

Finally in September 2004 the Tyro was ready for flight tests with John Walmsley as test pilot. More delays occurred while we waited for suitable weather for the test program which eventually got under way. John was unhappy with aircraft's trim (unsatisfactory control pressures in pitch) so we adopted the simple bungee trim system used on Malcolm Mackenzie's Tyro and John was able to trim the Tyro for hands off flight at 50 knots.

On 9 October 2004 I flew the Tyro for the first time. It was a great experience (once I got over my initial nervousness!) and I had no problems with it. Since then I have clocked up 5 hours just orbiting the field at 4-5000 ft getting a feel for the aircraft and monitoring/fine tuning the engine. The Tyro has passed it's initial testing phase and is now ready for some cross country adventures. Although the building project and flight training were a long hard road, it was worth all the effort.

Robert Shaw

Editors Note.

Hello! and welcome back.

I am looking forward to Mach as the heat during January and February is just too much for anything except shopping in the large air conditioned centers. Aircraft building takes a back seat and the VCR get a good work out. The article you see in this edition have made my job easy this month and I'd like to thank the members for their contribution.

The annual Clifton Fly-In is on the 13th March 2005.

An Invitation (A reprint from the SAAA newsletter).

Bill Whitney is a Reg 35 Engineer. He will be running another Aircraft Design Course in April 2005. Bill has run a number of these courses over the last couple of years and they have been very good.

If you are designing your own plane or are just interested in how aircraft fly then this course is for you. Bill will cover a wide variety of subjects relating to aircraft design, notes will be provided and the course will run for the whole day.

It will start at 9:00am and finish at 4:00pm with an hour recess for lunch. The course will be held on a Saturday the 9th April 2005, it will be held at St Philip's Anglican Church Hall, Cornwall st, Annerley Brisbane. The cost of the course will be \$25 (including notes) and lunch can be purchased for \$10. All proceeds from the course will go to help the church.

To register for the course you can contact Bill via E-mail at bwhitney@bigpond.net.au and let him know that you will be coming.

In summary:

Course :

Aircraft Design (A 1 day short course on Aircraft Design that will cover a variety of topics such as stability and control, horizontal stabilizer and elevator, fin and rudder, aircraft weight and balance, propeller efficiency, structures and many more topics.

Instructor:	Bill Whitney (Reg 35)
Date:	Saturday 9 th April 2005
Time:	9:00am – 4:00pm (1 hour lunch break)
Venue:	St Philip's Anglican Church Hall. Cornwall St, Annerley, Brisbane.
Cost:	\$25 (includes notes)
Lunch:	\$10 or BYO.
To register:	bwhitney@bigpond.net.au