

Uni Gliding

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This magnificent Australian built CA-18 Mustang Mark 21
(Ex RAAF A68-104) belongs to a proud Bob Eastgate.
One of the fastest piston engine aircraft built.
it can fly at 703 k.p.h. at 25,000 feet.

EDITORIAL

Over the last few weeks we have had some varied weather. From 20° days, to rain with 45 knot gales. One pilot flew to Barn Hill and back, 60km, in 15 minutes, averaging over 200km/h. He mentioned something about the northern ridge working pretty well.

Club members are travelling far and wide in their pursuit of the sport. A contingent has gone to Western Australia to the Stirling Ranges, flying wave. In the coming summer pilots will leave for Balaklava, Leeton, Horsham and possibly a few other places as well.

Finally, after months of intensive procrastination, there will be an Assistant Instructors course. Gary Hill (El Presidente) will join other candidates from Balaklava and Gawler and once they have their ratings they will then join forces with other instructors, defending the skies from ignorance and stupidity.

Finally, the A B & C certificate saga. As far as I have been able to ascertain, the cost is now \$5 per item, for students only. The previous charge was, I think, just another money raising idea. To me it still is excessive, because it's pointless. Instead it could just be a logbook endorsement like all other ratings, most of which are far more important in their implications than the A B & C certificates.

Bradley Gould

PRESIDENT'S REPORT

The recent weeks at Lochiel have seen many hours of ridge flying although I haven't been there to witness any of it (darn). Congratulations to Gavin Rowell, Derek Spencer and Sonya Fennell for going solo. Derek has also converted to the Arrow and Jeff Brenton the Super Arrow. Andrew Huggins recently made a 6-hour flight in the Super Arrow to complete the requirements of the Silver C certificate. Well done Andrew.

On the negative side, the Bocian had suffered some slight damage during a heavy landing, but this has been fixed. The annual inspection was done at the same time. The second bathroom is progressing well although using it will be a while away yet. The Lamb on a Spit went down well, as did "Patriot Games" which was enjoyed by all.

Congratulations again to Andrew Huggins for gaining his Component Replacement rating, to Stephen Were and Gary Hollands for getting their Form 2 ratings and to Peter Cassidy for being upgraded to a Qualified Flying Instructor.

Finally our CFI Redmond Quinn has moved up the political ladder, becoming the GFA Vice President for the SA/NT region, giving him a voice within the upper echelons of power of our governing body.

Gary Hill

AUGC'S NEWEST AIRCRAFT : THE SUPER ARROW

Most of the active members of the AUGC will be aware that there is now another club aircraft at Lochiel. The Super Arrow was purchased late last year in need of its 'twenty yearly' major inspection, and since then many hours of work have been put into its restoration and inspection. At last, though, the work completed, TJ has arrived at the airfield and is once more taking to the skies after a three year break. Many club members have already flown it, ranging from our most experienced instructors to early solo pilots, and all are delighted with its handling qualities.

Development:

The ES-60B Super Arrow, or 'Sparrow', was developed from another standard class single seater, the ES-60 Series 2 Boomerang, in turn derived from the ES-59 Arrow. All of these types are represented in the Adelaide University Gliding Club, with the club's Arrow, November Foxtrot, the privately owned Boomerangs QZ and PN, and now the latest addition to the club fleet, Tango Juliet, the Super Arrow.

The Boomerang was designed in 1964 for competition flying, and the first of two prototypes made its first flight on 28 November 1964, followed by the second on 24 December that year. These were followed by six ES-60 Series 1s built in 1966, and 28 ES-60 Series 2s completed in two more production runs in 1967 and 1968, plus a few more built since then. The Series 2 differed from the Series 1 in having the height of the plywood-covered fin reduced by 3", and the sideways-opening Perspex cockpit canopy lengthened; later production Series 2s had the nose lengthened by 2.5", a larger monowheel, and an adjustable seatback for the pilot. Notably, the Boomerang was the first production aircraft to employ a Wortmann section wing, an FX 60-126, designed to preserve a laminar boundary layer for a large proportion of the chord, thereby achieving quite remarkable performance for a sailplane of the mid-1960s. The Wortmann series of wing sections has since become almost the standard for high performance aircraft since the Boomerang. The Boomerang soon made its mark in contest flying, and for a time held all the Australian speed records over 100km, 200km and 300km triangular closed circuits, at speeds of 87, 89 and 95 km/h respectively. In the early 1970s, however, the Boomerangs were overtaken in contest flying by the advent of the fibreglass Libelles.

The Boomerang was succeeded by the ES-60B Super Arrow, which first flew in prototype form on 22 September 1969 and was awarded a C of A on 31 October that year. It was the same as the ES-60 Series 2 Boomerang but with three minor differences; the tailplane, the tailwheel and (in some aircraft) the airbrakes. The Super Arrow had a conventional tail unit with an unswept, fixed tailplane mounted at the base of, and forward of the fin with a spring-type trim instead of the Boomerang's swept-back 'all flying' tailplane with a trim tab that also acted as an anti-balance tab. The Super Arrow was given a tail wheel in place of the Boomerang's spring steel tail skid for ease of ground handling, and in the last few Sparrows built, the Boomerang's powerful airbrakes were 'tamed' somewhat by modifying the dual surface brakes of the Boomerang to top surface only brakes.

The two types are otherwise identical; of wooden construction, with a cantilever high-set two-piece wing with a beech spar at the 50% chord line, a moulded plastic leading edge and birch ply covering back to 60% chord. The tail units are also of wood, with the elevator and rudder fabric covered. Being standard class, there are no flaps, but metal scissor-type air brakes with epoxy-bonded wooden flanges are fitted at 55% chord; the wooden ailerons are plywood covered. The fuselage is a ply-covered semi-monocoque structure with a fibreglass fairing around the cockpit.

The undercarriage consists of a fixed, unsprung mainwheel forward of the C. of G. to make the aircraft a taildragger like most of the AUGC's aircraft (but unlike the Arrow). At the tail is a spring steel tailskid. The mainwheel is large, and fitted with a powerful brake to stop the aircraft in an emergency.

VH-GIJ: Tango Juliet

Tango Juliet is an unusual aircraft. Although registered as an ES-60B Super Arrow, TJ was manufactured in 1967 as a Series 2 Boomerang, serial number 100. The first flight was on the 4th of October that year. It was originally purchased by the Gliding Club of Victoria,

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based at Benalla, as an aircraft for their early solo pilots, and was registered and operated normally as a Boomerang for some two years. In 1969, Harry Schneider developed the Super Arrow, and the GCV decided that a Super Arrow would better suit their needs than a Boomerang. They sent TJ back to Schneider's for conversion, and the Boomerang's heavily swept all-flying tailplane was replaced with the more conventional Super Arrow tailplane. In August of 1970, the aircraft was issued with a new Certificate of Airworthiness and re-registered as a Super Arrow, even though it still retains the tailskid of a Boomerang. Hence, TJ is really something of a hybrid aircraft, combining elements of both the Boomerang and the Super Arrow, and is now often affectionately referred to as the 'Barrow'.

The GCV operated TJ as one of a pair of Super Arrows for many years; it was painted with a yellow fuselage and white wings, and is quite well known around gliding circles as "Benalla's Yellow Super Arrow" (the other was green). In October 1986 Benalla sold it, and TJ was bought by Brian Knight, of the Cunderdin Gliding Club in Western Australia. It remained there for some years, but received little use. It was last flown in February 1990, and its Certificate of Airworthiness expired in August 1990. The twenty yearly inspection required to renew the C. of A. was never carried out, the aircraft simply gathering dust in a hangar. In 1991, the AUGC heard that this aircraft might be available for purchase, and, considering that it would make an ideal addition to the club fleet, made an offer and bought the aircraft later that year for the bargain price of only \$7000. Since then, members of the AUGC have expended much work to refurbish the Barrow and complete its twenty yearly inspection in the AUGC workshop at West Beach. It was test flown by Stephen Were at Lochiel on the 16th of August, 1992, no longer yellow but resplendent in its new all-white livery.

Accommodation:

The single seat is deep set into the fuselage, with a quite upright seating position. The cockpit is noticeably larger than that of the Arrow, but otherwise remarkably similar. Most pilots will want a cushion or two to position themselves comfortably for reaching the controls and instruments, and for best visibility. A cushion behind the back will make reaching full forward stick much easier for most pilots. A handle in front of the pilot, at the top of the instrument panel, is provided to assist with entry and exit from the cockpit.

Behind the pilot is a large luggage compartment where the battery and the thermos flask capacities for the variometers are normally secured. There is plenty of room for the stowage of other gear if desired. A cover is clipped over this compartment so the space is not accessible in flight. Low down on the right hand side of the rear wall of the cockpit is a cylindrical storage space, originally designed to carry an oxygen bottle for high altitude flight, although this is currently not used.

Visibility in flight is not particularly good, especially compared with more modern gliders, largely due to the deep cockpit with high front and sides, and the high wing which blocks the view upwards to the rear, although not as badly as the wing of the Arrow.

Cockpit ventilation is excellent using the vent on the right hand side of the front of the cockpit wall, adjusted easily with a screw knob. The canopy itself is latched in the same way as that of the Arrow. Large pilots tend to fit easily into the Barrow, although the all-up-weight-limited 90 kg maximum cockpit weight may be a limiting factor for some pilots.

Controls:

The ailerons, rudder and elevator are very light to operate, making TJ very pleasant to fly indeed. They are easily reached only if the pilot makes sure to position him/herself sufficiently far forwards in the cockpit. The elevator may feel a little strange compared with other aircraft pilots may be used to, because it has a very large travel from forward to back control stops. It is also very light to operate, and until experience is gained in the aircraft may seem to have very little 'feel'. The ailerons and rudder are also pleasantly light and very nicely co-ordinated to make accurate flying very easy. Roll rate is considerably better than that of the Arrow.

The rudder pedals adjust independently by an adjustment in the rudder cables to one of three positions, in the same manner as the Arrow. The pilot should make sure that they are adjusted comfortably and equally before take off. Adjustment in flight is difficult and not

AN INTERVIEW : GAVIN ROWELL

UG decided that we need to know what makes the average trainee/solo pilot. And we could'nt get any more average than Gavin. This informing insight is suprising in that it is both scary and poorly written.

AGE : 23

Total Flying Experience : 7.5 hours

Sent Solo By : Stephen Were

Introduced to Gliding By : Gary Hill (El Presidente)

UG: Your first flight was with Gary Hill (El Presidente), what did you think of that flight?

Very exhilarating.

UG: What is your Best Athletic Achievement?

Beating Gary Hill (El Presidente) in this years City-Bay by over 30 seconds.

UG: Given the opportunity, how would you crash an exotic European sports car, say a Porsche 924?

Ram raiding Country Road.

UG: What is your Favourite TV show?

Live & Sweaty.

UG: What is the Best Pickup Line you have used?

Milkshakes make me fart. And it worked.

UG: Favorite Restraunt (Expecting the answer Fasta Pasta)?

Fasta Pasta.

UG: What is your Favourite Song?

God only knows, by the Beach Boys.

UG: Do you get enough pizza at Pizza Hut on a Sunday night?

NO.

UG: Goals in Flying?

To be World Champion, State Champion just doesn't cut it.

UG: Least Favourite Vegetable?

Cabbage.

UG: Favorite Party Trick?

Sculling frozen peas. (Gavin refused to verify his outrageous claim when confronted with said frozen peas)

UG: Your Worst Fear?

Finding out what my worst fear is.

UG: What is the airspeed velocity of an unladen swallow?

What do you mean, an African or European swallow?

UG: I don't know.. aaaaaaagh!

CLUB CONTACT NUMBERS

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| President | Gary Hill | (08) 332 2258 |
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| Treasurer | Stephen Were | (08) 352 5137 |
| Social Convener | Adrienne Walker | (08) 231 4714 |
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| | Gary Hill | (08) 332 2258 |

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| Club Contact | Bradley Gould | (08) 381 2072 |
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| Chief Flying Instructor | Redmond Quinn | (08) 344 5331 |
| Lochiel Airfield | | (088) 262 203 |

SO YOU WANT TO FLY THIS WEEKEND?

First you must ring the club contact person on Thursdays between 8:00 and 10:00 pm. You must do this so he can organise instructors and transport, not necessarily for you but other people as well.

If you do need transport to Lochiel it can be organised with a lift from the University Footbridge at 7:00am or from the Caltex service station on Port Wakefield Road, Bolivar (Just past the White Horse Inn) at 7:30 am. Remember to ring the contact person or you could find yourself forgotten.