



Adelaide University Gliding Club  
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NEWSLETTER

vol. 2 No 2

CLUB DIRECTORY

April, 1987



DES MASLEN

Club President and chairman of the winch sub-committee. His main pastimes are sailing and pretending to be a student. ph. 293-4732



TONY KIECK

Secretary of the Club and one of the driving forces behind the Club's fundraising activities. One of the hardest working members in the Club he spends most of his time writing letters to other gliding organizations all over the world. What is left of his time is spent out at Gawler where he keeps the Adelaide Soaring Club solvent by spending huge amounts on gliding. ph. (H)31-3999 (W)223-4333 ext. 2718



ANDREW HORTON

Being Treasurer of the Club he is responsible for keeping the Club solvent. Not an easy business when the committee is spending money like it was going out of style and has five accounts. ph. 71-0395



EMILIS PILECKAS

Emilis is the founder of the Club and was running it virtually single-handed



GUY HARLEY

Social Convenor and newsletter editor. Selected for these positions because of advanced alcoholism and literary flare. He was also stupid enough to volunteer for the job. He is also exceptionally good at destroying gliders. ph. 31-3788.

ES 59 ARROW



Some of you will know that the Club Executive has hocked the Club to the hilt in order to buy an ES 59 Arrow Single-seat Glider, registration VH-GNF, from the Wimmerra Soaring Club at Horsham in Victoria. The Arrow, which is pictured above, cost \$4,000. This amount was raised by a five year loan from the National Bank. The price included a trailer and basic instruments.

After a month of negotiations the Arrow was finally bought on the morning of Saturday, 12th March, 1977 by Guy Harley who had driven over in his Toyota Corolla on Friday night. He then towed the glider to Lochiel, a trip which took ten hours at a speed of 45-50 m.p.n. on the flat, a good deal less through the hills. On the next day, the aircraft was rigged and test flown by Emilis. Guy Harley, David Stobie, David Biggs and Adam Kirkland were then converted onto the Arrow and proved it to be a good soaring aircraft with long flights during the afternoon. The Arrow was finally de-rigged at 5.30 p.m. so that it could be towed down to Gawler by Guy for use, during the week, by Club members who were also members of the Adelaide Soaring Club. It was now that disaster struck.

A mile from the Lochiel airfield, whilst towing the glider down a straight dirt road at 40 m.p.h., the trailer started to sway viciously. Guy was unable to stop it and finally, after the car had been thrown from one side of the road to the other, the trailer rolled onto its side. Damage to the aircraft was extensive although, luckily, no spars or bulkheads were damaged. The damage consisted of:-

- (1) Port aerilon destroyed
- (2) Ten feet of wing trailing edge destroyed
- (3) Top half of rudder and tail fin destroyed
- (4) Canopy destroyed, and
- (5) Damage to the fuselage below the wing mount.

In additon, the trailer and Guy's car received minor damage.

... parked behind at the airfield arrived

The cause of the accident has still not been determined but modifications to the trailer and limitations upon the towing speeds and types of towing vehicles allowed have already been formulated.

### TECHNICAL DETAILS AND OPERATIONS

by Emilis Prelgauskas

#### The Choice

The choice of this aircraft for our Club was based on the following:-

- (1) it was available,
- (2) it offered a reasonable compromise of cost and performance,
- (3) we could just afford the price and still keep flying rates low,
- (4) it offers a logical step up from the long-wing Kookaburra, and
- (5) we hope it will allow our Club to offer the next step in soaring - solo flight, cross country and competition flying.

#### The Aircraft

Built by Edmund Schneider Pty. Ltd., it consists of an all wood construction. It is therefore similar in maintenance to the Kookaburra. It has a 13m single piece wing, a 7 m long fuselage, a swept tail and rudder and a normal tailplane mounted on the fuselage.

#### Rigging

The Arrow is rigged and de-rigged on the trailer. With practice this becomes a 3-man job. It is time consuming but not labour intensive.

The wing is jacked up on its supports, swung into position and a prong on the front of the wing is located in a socket behind the head rest. The wing is then lowered onto the fuselage and a rear pin is bolted through the fuselage and metal fittings on the wing as in the Kookaburra. The controls hook up as for the Ka6.

The tail is held on with three nuts. These should be finger tight, no more, since the fuselage can be squashed by tightening the nuts too much. The elevator connection is accessible through a small inspection hatch on the port side of the fuselage. The elevator is connected to the elevator linkage by a pippin.

#### Conversion

A pilot will be converted to the Arrow after soloing in the Kookaburra and satisfying an instructor with his solo flying skill. Before being allowed to take the Arrow cross country, the pilot must have had a minimum of three flights in the Arrow. The duty instructor's permission is also required.

#### Performance

Claimed best L/D 28:1 at 55 m.p.h. Minimum sink 200 ft/min at 45 m.p.h. The Arrow is suitable for Silver and Gold 'C' badge flights. It is, however, the lowest performance glider in the Sports Class.

#### Handling

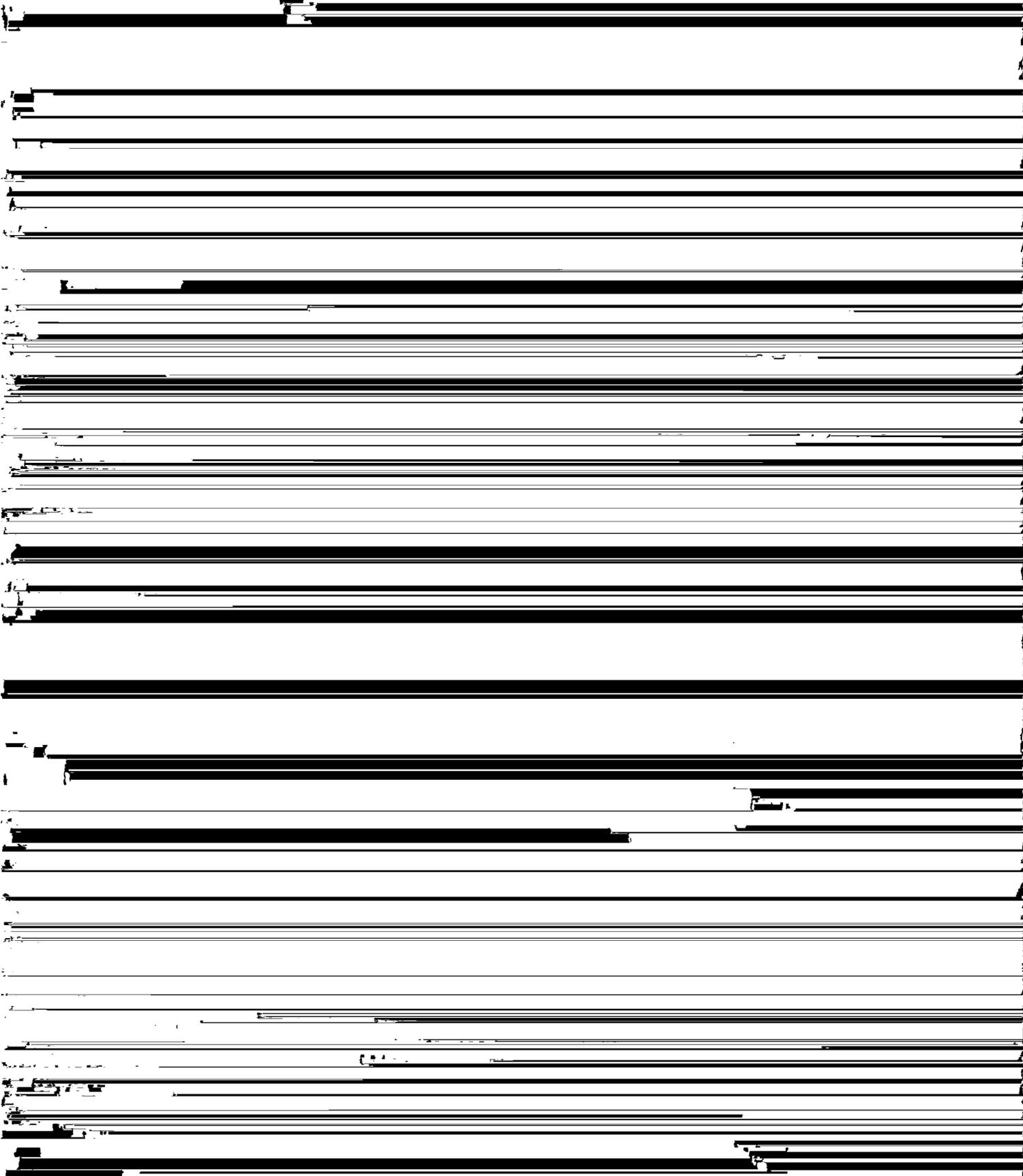
The elevator is relatively sensitive with light loads throughout the speed range and an effective spring trim. Aerilon loads are low and, with the small wing span, the rate of roll is high - about 2½-3 secs. for 45° to 45°. Rudder power is good for low pedal traverse; if anything it has too much rudder after flying the low rudder powered Kookaburra.

Although a nippy little sailplane without the slipperiness of fibreglass types. It should prove a relatively easy conversion from most two-seaters, particularly the long wing.

It is stressed that care must be taken at all times, better a slow and uneventful retrieve than a fast and costly one.

FLYING

... moved its operations to Lochiel permanently.



### A MOUTH FULL OF RED DIRT

Reprinted from Aviation Safety Digest. The author was taking part in a competition cross country flight on the final day of the State Gliding Championships. The weather was fine and mild with only weak thermal activity. At 1200 hrs. his aircraft was aerotowed to 2,000 feet where he released. He continues the story himself:-

Without delay I joined a thermal already occupied by an M200 and Blanik and together with a KA6 which joined later, we all thermalled to 3,000 feet which, owing to drift, positioned us about half a mile south-east of the aerodrome.

Max Howland in the M200 was the first to leave with the KA6 in close pursuit; the Blanik moving off a little later. I decided to maintain my relatively secure position until I saw how my companions made out.

Good! Max had found lift, a little to the west so I headed off, crossing the starting line at 1230 hours at 2,800 feet. I joined the thermal about 500 feet below Max, worked it to 3,200 feet and left it about three minutes behind him. Max Howland is one of Australia's best soaring pilots, so I decided to stick with him as far as possible.

Another two miles and Max had found another thermal. Again I attempted to follow suit, but he must have sensed my intention, for he left it before I had time to join him. After searching for a little, I found the thermal's centre and to my delight discovered that I had a good 200 feet per minute climb which carried me to 4,000 feet. This gave me a definite advantage over the others.

Two miles from the first turning point found me level with Max Howland's M200, which was thermalling about 1,000 feet below me and a quarter of a mile east of track. Should I use this lift or carry on around the turning point and pick it up on the way back? I was at 3,000 feet - plenty to round the turning point and get back to Max's thermal. It was clearly marked as it was originating from quite a large fire. Another advantage was that I would be spending time in the thermal on the downwind run. Off-setting these advantages however, was the chance that the thermal might not be what I hoped and, in this case, 1,500 feet wouldn't give me much time to find another. I decided to go on, and rounded the turning point at 1330 hours. This put me in the lead. I struck a little lift at the turning point, but after trying a few turns, decided it wasn't worth bothering about.

Back now around the fire, I searched for lift in vain, flew through the smoke tried every trick I knew, but still I went down. Now I was at seven hundred feet I decided to give it away and set up a circuit for landing. But all wasn't lost for just then I smelt smoke. I threw the 'BG' into a turn - sure enough up came the variometer to the neutral position. Get the speed back - only one foot a second! Come on, come on - find it! Thump - she had lost it just as quickly, dropping her wing to show her protest. I curse as I bring the machine around towards the thermal again. Thump again! I tighten the turn, lower a notch of flap, tighter still, and a bit more speed. Good on you, you've got it! But we only manage two turns and fall out again.

This went on for the next quarter of an hour. By then I had squeezed all I could out of it. It was time to move on - I was down to 1,000 feet again. I try a little further to the east and find some lift there. I manage to maintain 700-1,000 feet, but am drifting downwind towards some hills. I tell myself to give it away - you could be having tea and scones at that farmhouse if you land in that paddock over there. But I carry on, up to 1,000 feet again, then down to 700. I sight a large, sunny contour field on the side of a hill - maybe I'll find better lift there. Flying around the field, it seems reasonable for a landing but there's no lift. Do I give up or carry on over the hills and try my luck there? That side of the range is a bit too far for a retrieve on the last day of

Full flap and I grope for the spoiler lever - got it now, full spoiler. That's now I'm heading in the same direction as my original base leg and maintaining the turn. I'm 40 feet up with another 45 degrees to turn before I'm lined up on final.

But suddenly the nose drops sharply. Good grief, the ground's coming straight up at me! This is it! Will it kill me? How clearly defined the ground is! Bang! Crash! ... I see the canopy hitting the ground in front of me ...

Comment:

There is no doubt that the accident was the result of the pilot's departure from accepted outlanding procedures, as he himself points out.

The pilot had already reached a point on base leg from which a safe outlanding could have been effected and when he found lift he was at a height of only about 300 feet. As all glider pilots know very well, G.F.A. procedures require that, once having committed himself to landing, a pilot should ignore any further lift he might encounter and continue with his approach. But in this instance, the pilot disregarded the established procedure and attempted to work the lift. Doubtless his judgement was coloured because he was competing in a major gliding event and was leading at that stage. However, as indicated by the fact that the pilot was unable to centre and remain in the thermal, the area of lift he encountered was of insufficient width to contain his radius of turn.

A glider working a thermal at a steep angle of bank and at low airspeed, can stall very quickly if it passes out of the lift into a surrounding area of sink. It is apparent that this is what happened on this occasion and the pilot, recognising the onset of a spin, effected a recovery with a minimum loss of height. But with little or no time to consider the glider's flight path during this recovery, the pilot found himself apparently overshooting his original aiming point and he immediately extended the flap and spoilers. Although the pilot had recovered control, it is clear that the glider had not regained sufficient speed to permit the extension of full flap and spoilers with any margin of safety. As a result, the glider lost what flying speed it had, stalled, and nose dived into the ground from about 40 feet.

It seems that the pilot's decision to extend full flap and spoilers at this stage was based solely on the aircraft's apparent nose-down attitude. The pilot realised afterwards that he was misled by the upward slope of the field into which he was approaching, with the result that he thought the aircraft was in a much steeper nose-down attitude than was actually so.

There is one other important lesson to be learnt from this story. It very much concerns the fact that the pilot was able to tell the story at all.

It is difficult not to conclude that the outcome of the accident can be attributed almost entirely to the fact that our contributor's harness was a sound one. Gliders by their very nature afford little enough protection to their occupants, the least that glider pilots can do is to ensure that their harness gives them the best possible chance of survival in the event of an accident.

Guy Harley  
Editor

13th April, 1977

AMENDMENT TO FIRST PAGE.

Since this issue of the newsletter was typed the Club has had its A.G.M.