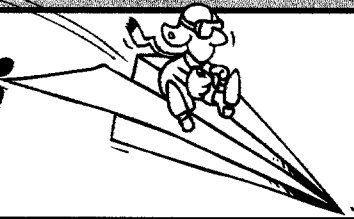


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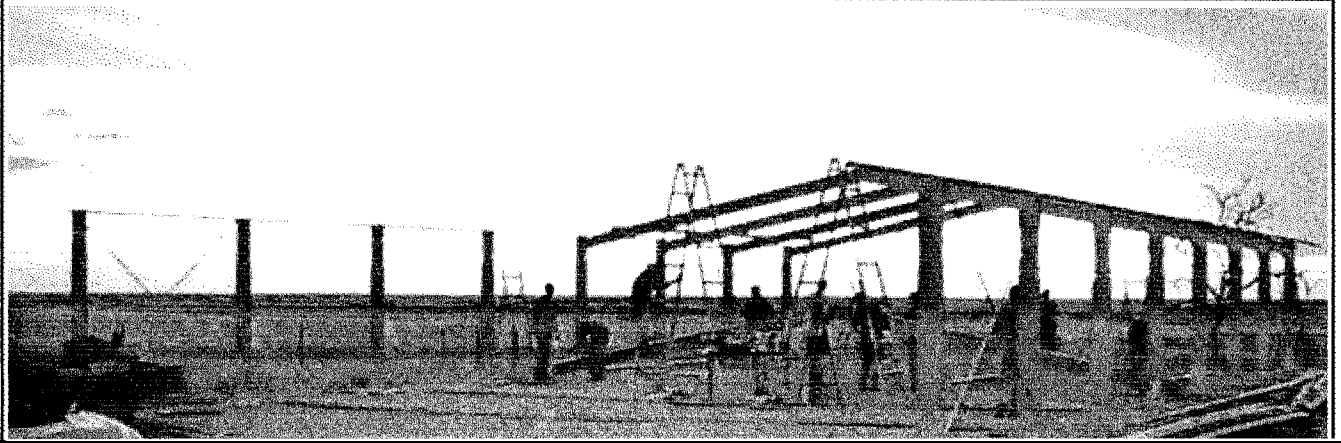
Volume 22.10

Uni



Gliding

The Official Journal of the Adelaide University Gliding Club



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STOP PRESS

Renmark Regatta is on 6 and 7 Dec 97. Have a go at competition cross country soaring and book a seat in an aeroplane. Call the contact person for details.

PRESIDENTS BIT

Dear fellow motorless fliers,

Again another newsletter. Congratulations to Andrew McCauley for converting to the Arrow and Matthias Kretschmann for going solo. Well done to the club for maintaining an erection after all these years (of the hangar, note spelling Peter Cassidy!)

Some good soaring and ridge days have been happening. Where are you all? It looks like its going to be a great summer.

Congratulations to Peter temple for winning "Ballasted" class at the Balaklava Competition. Andrew McCauley and myself took the Bergie for a short cross country sojourn (but that's another story). (*Actually it's two, because Michael took off home leaving Andrew behind! Ed*)

Remember that during the soaring season that we will visit other clubs. It is important to be ambassadors of the club and so please behave yourselves, fly safely and please don't show off!

As always, fly safely

Michael

FOR SALE

Chilton Olympia VH-GLY. One of only two in the world (the Yellow Witch is the other) and very close to the original Meise design for the 1940 Tokyo/Helsinki Olympic Games.

Total hours 730, total launches 1060. Ceconite fabric, finished in Randolph clear dope and Dulux automotive lacquer, with Olympic markings. Winner of "Best Restored Glider" at the 1996 Vintage Regatta. U/V protected with "Aero Ultrashield". A practical vintage glider, with a pilot weight range from 76 to 109 kgs. Aerobatic. Will be sold with fresh Form 2. 40-yr survey due 2001.

Excellent Victorian-registered all metal enclosed trailer. Complete rig ready to go \$10 000. Contact Mike Valentine (03) 9338 1703 for further details.

Schleicher K2b two seater VH-GHO. Built in Sydney in 1960 to Schleicher plans and a tribute to the Illawarra Soaring Group who built her. Total hours 1170, total launches 2450. An excellent trainer or fun machine, with 185 kgs carrying capacity, very low sink rate and 27:1 L/D. This 16 m span machine is the precursor of the K7 and ASK13 series and is essentially a K7 with a wooden fuselage. Simple to maintain, with easily accessible push-rod control system. In excellent condition with new Stits polyfiber fabric applied at the 30 yearly in 1991. Can be seen and flown at the Bendigo Gliding Club. Will be sold with fresh Form 2 inspection. 40 year survey due 2002.

Victorian-registered all metal enclosed trailer. Complete rig ready to go \$10 000. Contact Mike Valentine (03) 9338 1703 for further details.

EDITOR'S PAGE

G'day everyone and welcome to my latest attempt at a newsletter.

This month was a long time coming, partly due to work and travel commitments and partly due to writer's block (I am rapidly running out of ideas). This is also partly due to no-one doing anything silly at Lochiel. This is good (doing silly things is dangerous!), but it does not give me anyone to pay out on like last month's newsletter. Claire has also complained that I am 'picking on her' too much. Apparently her mother got hold of the flyer from the previous week and now wants to read all the newsletters to find out what she has been up too! Sorry Claire! I have made a conscious effort not to 'pick on you' too much this time.

This month features the continuing design of a home built glider for Redmond. It also has a historical letter which, although not written by a club member, is about our favourite club aircraft when it was in Pt Augusta Gliding Club's ownership.

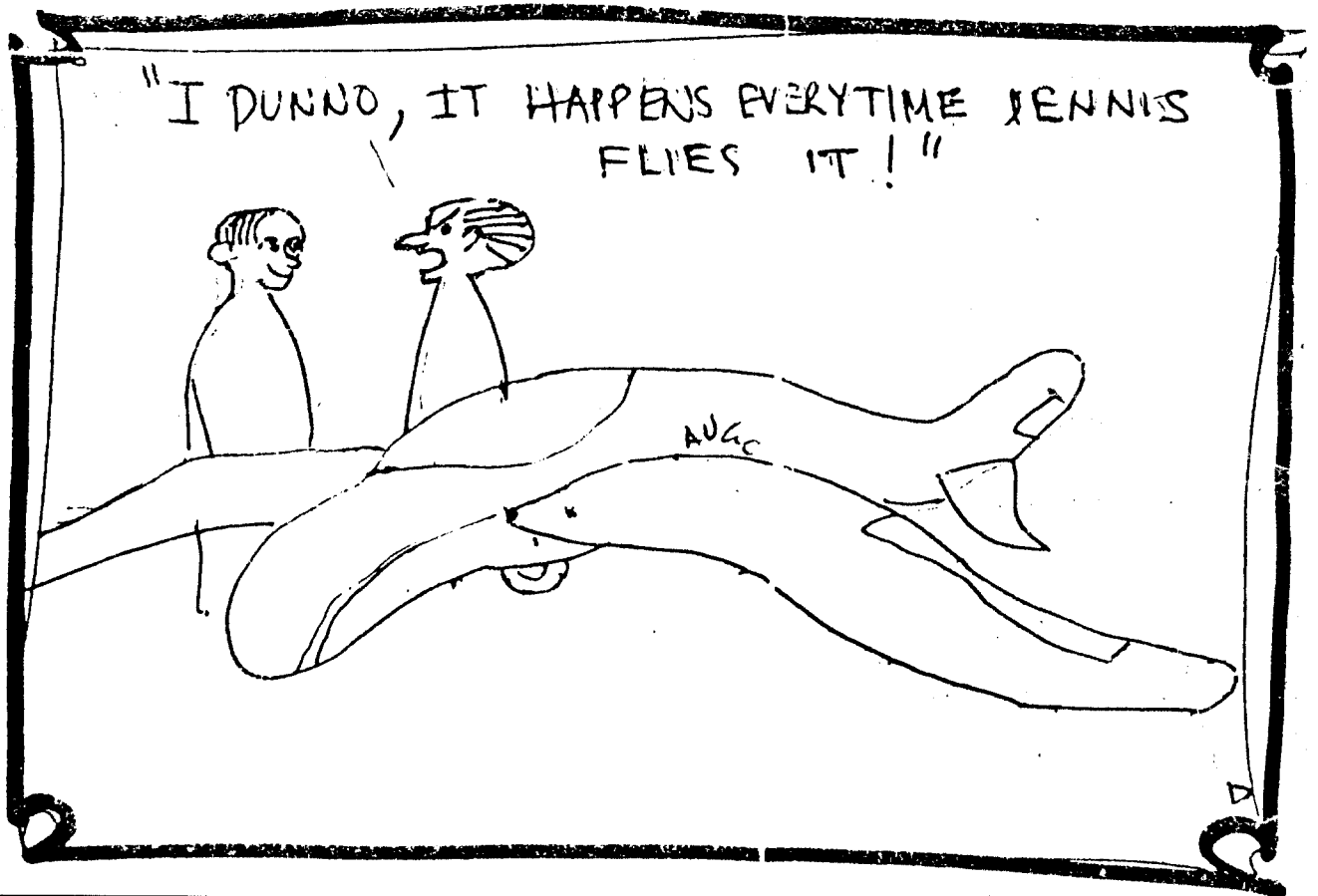
This month has two Don Hein cartoons. The cover comes from March 1987 when the club built the T hangar. The one below comes from October 1985, obviously Dennis' flying is just as bad today as it was then! Dennis tried to demonstrate a stall turn at Balaklava in the Bergie, but ended up performing a spectacular tail slide which produced a few Ooohs! and Aaahs! from the spectators.

While not picking on anybody in particular, it is important to remember that an awful lot of accidents are caused by people showing off. Always think things through before doing something, not how much you impress somebody by. Dead people or damaged aircraft are not impressive!

Hope you have great flying,

Anthony

(Editor and Contact Person)



WHEN FLYING CROSS COUNTRY...

This is a copy of a letter which may be of some interest to AUGC members. The letter was written to Geoff Horwood (who was CFI at the time) by the pilot concerned and is reproduced verbatim. Consider the decisions made by the pilot and imagine yourself in the same position. This applies particularly to early cross country pilots.

SWK

Box 330
Port Augusta
8/2/65

Mr. G. Horwood
Anstey st
Pt Augusta

Dear Sir

I would like to advise that on 7th Feb I attempted a x country flight - Burra and return - my aim being Gold C distance. I left Pt Augusta Gliding Field at approx 1 PM and found lift up to 6800' which enabled me to get away on the intended journey. Conditions were quite good until I reached a point between Jamestown and Caltowie where conditions deteriorated and I was forced to land at 1520 hrs. on a property I now know belongs to a Mr. C. Hockey. Just previous to landing (at an altitude of approx 1000' above the ground, I did about six 360" turns over a ploughed paddock and had the choice of several stubble paddocks in case of a forced landing - I chose a huge one adjacent to the larger homestead (remembering the availability of phones etc). Whilst turning over the ploughed paddock I was able to assess the direction and approximate velocity of the wind which was South West and 5 knots. as I was unable to contact more lift I flew over to paddock chosen and commenced to land everything was like any normal approach and I opened dive brakes to full position and just before touchdown would do what I have done so many times before - ease dive brakes off a/c disc brake on landing wheel - however just before latter stage was reached the canopy came open. I immediately threw up my left hand and retrieved canopy but was unable to lock same when I returned it to its nominal position and also couldn't let dive brakes off (without releasing my grip on canopy which I now realise would be the wiser) at this stage the port wing dropped and I was unable to arrest same with the result that the said wing engaged the ground before the landing wheel (approx 5') and a ground loop took place. after leaving the aircraft an arrow VH GNF I started to tie down and inspected the wing tip during this process and found it to be damaged to the extent of two stone holes on underside and a split about 7" on top near leading edge just inside of wing cap. As this didn't appear to be serious damage a retrieve was arranged and the aircraft is now in Port Augusta hangar for inspection by you.

yours sincerely

FROM THE EXECUTIVE MEETING

The intent of this page was to highlight some of the decisions and discussions carried out at the monthly executive meetings. These meetings are where the committee runs the club and are not as boring as you think. This page is not intended to cover all of the decisions or the minutes of the meeting to the nth detail.

General Stuff

There are a number of things being done around the club to improve things, quite aside from the major projects, like the new hanger or winch. For example: a new radio is being fitted to the Bergfalke by Kevin Zietz and I am making the new instrument panel to fit it.

Financial Things

Raj presents a summary of the financial standing of the club each month. As of 14 Oct we had:

Operating Account	\$6 252.62
Cash	\$ 153.70
Total	\$6 406.32

For the previous four weeks cash flow:

Cash In	\$1 808.70
Cash Out	\$ 125.00

As you can see the cash flow is much more balanced than last months. Thank you to all those outstanding debtors who have paid up.

The club receives two grants from the Sports Association. A capital grant of \$8 000 for procurement of new equipment and an operating grant of \$10 000 for spares and other recurring costs of keeping the club going.

The other benefit we receive is a sales tax exception as we are a University club. This means we can buy things without sales tax and a special form is needed from the Sports Association Office to get it. **Warning:** This tax exemption is for

puirchases to be used by the AUGC only. Anybody who uses the club tax exemption for their or anybody elses benefit is committing **fraud** which is illegal and the tax office takes a very dim view of anybody doing this. **Do not abuse the clubs benefits** or they might be taken away.

Super Arrow VH-GTJ

If you were not aware TJ is up for sale to a good home. Sure it needs a little work, but have a look at QZ and see just how good a Boomerang or Super Arrow can be. All enquiries to Redmond.

Furniture at Lochiel

The clubhouse has always been furnished with hand me down furntiure that people no longer want. The mice also get into it and use it to make nests out of. Hence it has a very run down appearance. The commitee is interested in improving this and hence improving the image of the club and the comfort of you, its users.

I have had a look around some of the second hand office furniture stores to get an idea of prices. If you have any ideas on what to do for furniture in the clubhouse or any other improvements that could be made, tell me or one of the commitee members.

Regatta

The AUGC regatta is being held 27 and 28 Feb 98 and I have been appointed as competition director. This promises to be a lot of fun and it is well worth booking an aircraft if you are interested in having a go at a cross country competition, especially since its being held in 'our' area.

I will also be looking for volunteers to help run the competition. There will be more information published as the date draws nearer.

Anthony

DESIGNING A GLIDER: PART 2

Many people have asked me whether Redmond and myself are really designing a glider and building it. The answer is yes.

This is the second in a series of articles to give club members an insight into the aircraft design process and which should culminate in the complete detailed design of a glider. Last month outlined the specification or list of requirements for the aircraft. From this list of requirements we can start to determine the preliminary sizing of an aircraft. If we look at gliders with a similar design ie similar size, performance and construction we can make an educated first guess at what we expect the glider to weigh. Here is what we guessed:

Wings (17m):	160 kg
Fuselage:	125 kg
Max Pilot:	110 kg
Engine Pod:	95 kg

Max Take-off Weight	490 kg
---------------------	--------

By comparison the 17 m wooden wings of the Bergy are 176 kg, but we will have carbon fibre caps. The Bergy's steel tube fuselage is 136 kg but we have only 1 person to carry. Without the engine pod the total weight is 395 kg compared to the Schiebe SF27A of 295 kg (the SF27A is basically a 15m, single seat Bergfalke). The extra weight comes from the extra 2 m of wing and the extra strength required to survive Redmond's flick aerobatics. The engine weight is based on a Rotax engine @ 45 kg and 35 kg of fuel. The extra 15 kg comes from structure, fairings and controls.

From this weight we can now perform a draft design. At the end of this draft design we estimate the weight and see how close we got to the original guesses above. If we are close then we can continue with the detailed design. If not then we iterate the process using the draft design weight estimate until we converge on a weight.

The Joint Airworthiness Requirements (JAR) - 22 prescribes the minimum airworthiness standards for the issue of airworthiness certificates to

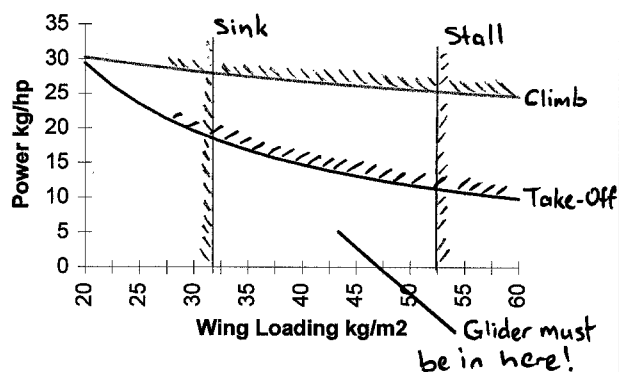
sailplanes and powered sailplanes. This is the document that the glider must be designed to.

JAR 22.49(b) specifies that a powered glider must have a maximum stall speed of 80 km/hr (43.2 knots). By using the lift equation, this means that for 490 kg the wing must have a minimum area of 9.35 m² (ie 52.4 kg/m²) for a maximum lift coefficient of 1.7 (this is about the maximum for a Wortmann flapped profile).

JAR 22.51 specifies that the maximum take-off distance to a height of 15m at a speed of not less than 1.3 stall speed must not exceed 500m. This requirement determines the smallest engine to be fitted into a glider. There is an equation (which I haven't included for simplicity) which approximates the take-off distance for an aircraft with different power, wing loading etc. At the extreme case the glider must have at least a 42 hp engine.

JAR 22.65 states that a powered glider must climb 300m in four minutes after take-off. This was easily met by the above requirement.

Finally, JAR 22.71 states that the minimum sink must not exceed 1.0 m/s (1.94 kts) with the engine off. This relied on a drag curve estimation and resulted in the maximum wing area of 15.3 m² (ie the more wing area, the more surface area and hence more drag). We now have an area specified on the graph below which we must be in.



We chose a wing loading of 42 kg/m² for a stall of 40kts with short wings and engine on and a power loading of 7.54 kg/hp (ie a 65hp engine).

ANAGRAM PUZZLE PAGE

Every so often the names of the club members get fed into a computer program that scrambles the letters around and produces anagrams, often with amusing results. Some may even be considered very appropriate for the person concerned! Try and unscramble the names below, the answers are upside down on the bottom of this page:

sly vulgar magician
boric rust
thy tin monash
seaside crypt
metallic screen
o sludge dish
cool dry beatnik
globular eddy
dr gwen globe

extremal chile
hasn't thick armaments
once thin raceway
torture cribs
video dagger
mr giant yak
doll hunts jan
call hyena ash

windy salmon
wiley coachman
semantic felon
macho kittens
banjo or halt
akron sandhill
cram lunacy weed
watch german dr

Thanks to Peter Cassidy for putting together the anagram program, throwing all the names in and sifting through all the results and extracting the 'good ones'. If you want a page of anagrams of your name, see Peter Cassidy.

SCRIBBLE AREA

mandy wilson
michael conway
fiona clements
simon hackett
raj bhola
karin holland
andrew mccauley
andrew mcgrath

michael texler
mattias kretschmann
catherine conway
ruth curtis
david george
mark tngay
john dunstall
lachlan hayes

angus macgillivray
rob curtis
anthony smith
peter cassidy
claire clements
doug shields
today corkindale
bradley gould
greg newbold

ANAGRAM PUZZLE ANSWERS

WHAT'S ON NOVEMBER!

Ice Skating, Wed 12 Nov 97

7:00 pm at Ice Arena

23 East Terrace, Thebarton.

Come along and watch everybody fall over!

Black Tie Day at Lochiel, Sat 15 Nov 97

Get dressed up for a photo day at Lochiel. The aim is to look like the photos of yesteryear with people flying primary trainers wearing ties!

Executive Meeting, Tues 18 Nov 97

7:30 pm at Angus McGillivray's place

5/179 Fullarton Rd, Dulwich

Everyone welcome to have a say in what happens in the club.

Renmark Regatta, Sat/Sun 6/7 Dec 97

Try out competition flying and book a seat in an aircraft for the Renmark Regatta. Call the contact to arrange an aircraft and travel / accomodation details.

AT WEST BEACH

West Beach is where we carry out the maintenance and repair on our gliders and equipment. There are usually volunteers working down there on Monday and Tuesday evenings. Here is a summary :

Puchatek: Oh no! It's back! Redmond broke it and now he has to fix it again! While he's at it we will do the Form 2 inspection as well.

Club Libelle: The Form 2 (annual inspection) has been almost done and it now needs to be put back together. MI pilots should want it back in time for the Renmark Regatta.

Bocian: Yes it's still at the back being slowly rebuilt. Progress is slow because of the above work. This will get more done once the Club Libelle is out of the way.

Winch #3: The winch drums and diff have been mounted on the chassis. Part of the back wall of the cab needs to be cut away to fit the drive shaft to the transfer box.

SO YOU WANT TO HELP AT WEST BEACH?

- Do you want to help fix the gliders at West Beach, but can't get there?
- You can ring the club contact person, Anthony, on 018 810 963 or (08) 8393 2646, E-mail: Anthony.smith@adelaide.on.net. He can organise a lift for those who need it. If you are **truly desperate**, his work phone and work e-mail are : (08) 8393 2897 and smitht@esa.gvl.esys.com.
- A lift is available from the Adelaide University footbridge at 7.30 pm Mondays and Tuesdays.

SO YOU WANT TO GO FLYING THIS WEEKEND?

- You must ring the club contact person, Anthony, on the Thursday before, between 8.00 pm and 9.30 pm, on 018 810 963 or (08) 8393 2646, E-mail: Anthony.smith@adelaide.on.net, so that he can organise instructors and transport for those intending to fly. If you are **truly desperate** (ie its Friday and you forgot to ring, his work phone is : (08) 8393 2897.
- A lift to Lochiel is available from the Adelaide University footbridge at 7.00 am, or from the Caltex Service station on Port Wakefield road, Bolivar at 7.30 am
- **Remember to phone the contact person or you could be forgotten.....**

AUGC: What's on?

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
3 7:45 pm West Beach Shed Club Libelle Form 2 Puchatek Form2 Bocian repair Winch #3	4	5	6 Call Contact Person 018 810 963	7	8 Hangar building day Go gliding...	9 Go gliding...
10 7:45 pm West Beach Shed Club Libelle Form 2 Puchatek Form 2 Bocian repair Winch #3	11	12 7:00pm Ice Skating at Mt Thebarton. 23 East Terrace, Thebarton	13 Call Contact Person 018 810 963	14	15 Black Tie Day Get dressed up for a photo day at Lochiel. Go gliding...	16 Go gliding...
17 7:45 pm West Beach Shed Club Libelle Form 2 Puchatek Form2 Bocian repair Winch#3	18 Executive Meeting. 7:30 pm at Angus's 5/179 Fullarton Rd Dulwich All welcome!	19	20 Call Contact Person 018 810 963	21	22 Go gliding...	23 Go gliding...
24 7:45 pm West Beach Shed Club Libelle Form 2 Puchatek Form 2 Bocian repair Winch #3	25	26	27 Call Contact Person 018 810 963	28	29 Go gliding...	30 Go gliding...
1 7:45 pm West Beach Shed Puchatek Form 2 Bocian repair Winch #3	2	3	4 Call Contact Person 018 810 963	5	6 Renmark Regatta Try out competition flying. Go gliding...	7 Renmark Regatta Try out competition flying. Go gliding...

THIS MONTH ON FIELD

Wed 1 Oct: General meeting discussing cross country flying. Just in time for the thermal season too!

Sat 4-6 Oct: The Balaklava Regatta. This weekend was plagued by bad weather with only one competition day attempted. Andrew McCauley and Michael Texler tried to cross country ZM but turned back early. Peter Temple won his class in WUZ. Instead, Raj Bholanat got his aertow rating and Dennis 'I like flying backwards' Medlow demonstrated what goes wrong in a stall turn to everybody on field. Flights: 26 Total Time: 3 hr 0 min

Sat 11 Oct: A huge day with a strong westerly wind onto the ridge and good but turbulent thermals to 5000'. Rob Curtis got his 5 hour long flight for his Silver C and everybody got a lot of flying. Redmond laid out the framework for the new hanger and then broke the Puchatek airbrakes (Arrgghh!) with Matthew Nicholls. Flights: 11 Total Time: 22 hr 38 min

Sun 12 Oct: Another great day! With more aircraft to fly than people wanting to fly them. The wind wasn't as strong as the previous day and slightly more southerly. The less wind allowed stronger and smoother thermals and you could get closer to the ridge. Raj tried for his 5

hours for his Silver C but landed early after he got a cramp in his leg.

Flights: 13 Total Time: 18 hr 12 min

Tues 14 Oct: Executive Meeting at Mandy Wilson's and Peter Temple's place. See page 5 for details.

Sat 18 Oct: Circuits with a couple of thermals to 4,300 ft. Matthias went solo but broke the cable. Flights: 24 Total Time: 3 hr 9 min

Sun 19 Oct: Only three people on field. Michael Texler and myself flew up in a Cessna 182. Doug came down for a fly so we got the Bergy out. Thermals to 5100' with a strong southerly. Andrew McCauley dropped in and lent a hand. Flights: 4 Total Time: 2 hr 8 min

Sat 25 Oct: Hangar building day with another great BBQ afterwards. See the front page. Hot day with a few thermals that cycled through the day, but they went to 9000 ft. Andrew McCauley converted to the Arrow. Claire starred in her own home video! Must see viewing!

Flights: 18 Total Time: 6 hr 38 min.

Sun 26 Oct: Southerly wind with circuits and a few thermals to 3700 ft. Bradley converted Jed Weitjtns from crop-dusting to gliding. Flights: 12 Total Time: 2 hr 6 min

Uni Gliding

If undelivered please return to:
AUGC Inc.
c/o Sports Association
Adelaide University, SA 5005

