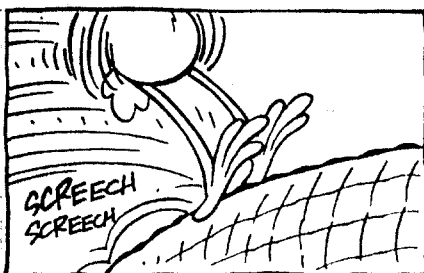
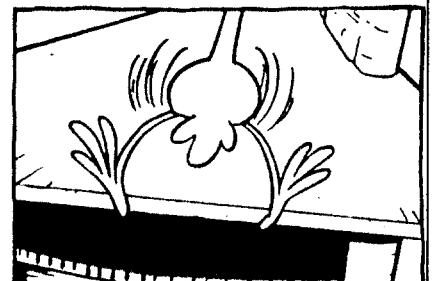
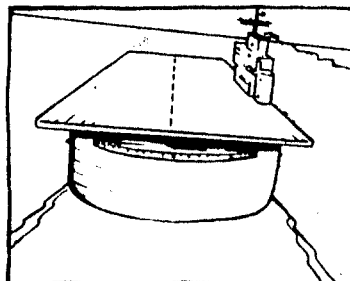
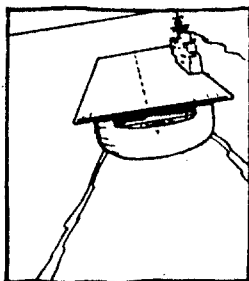
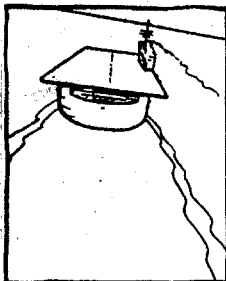
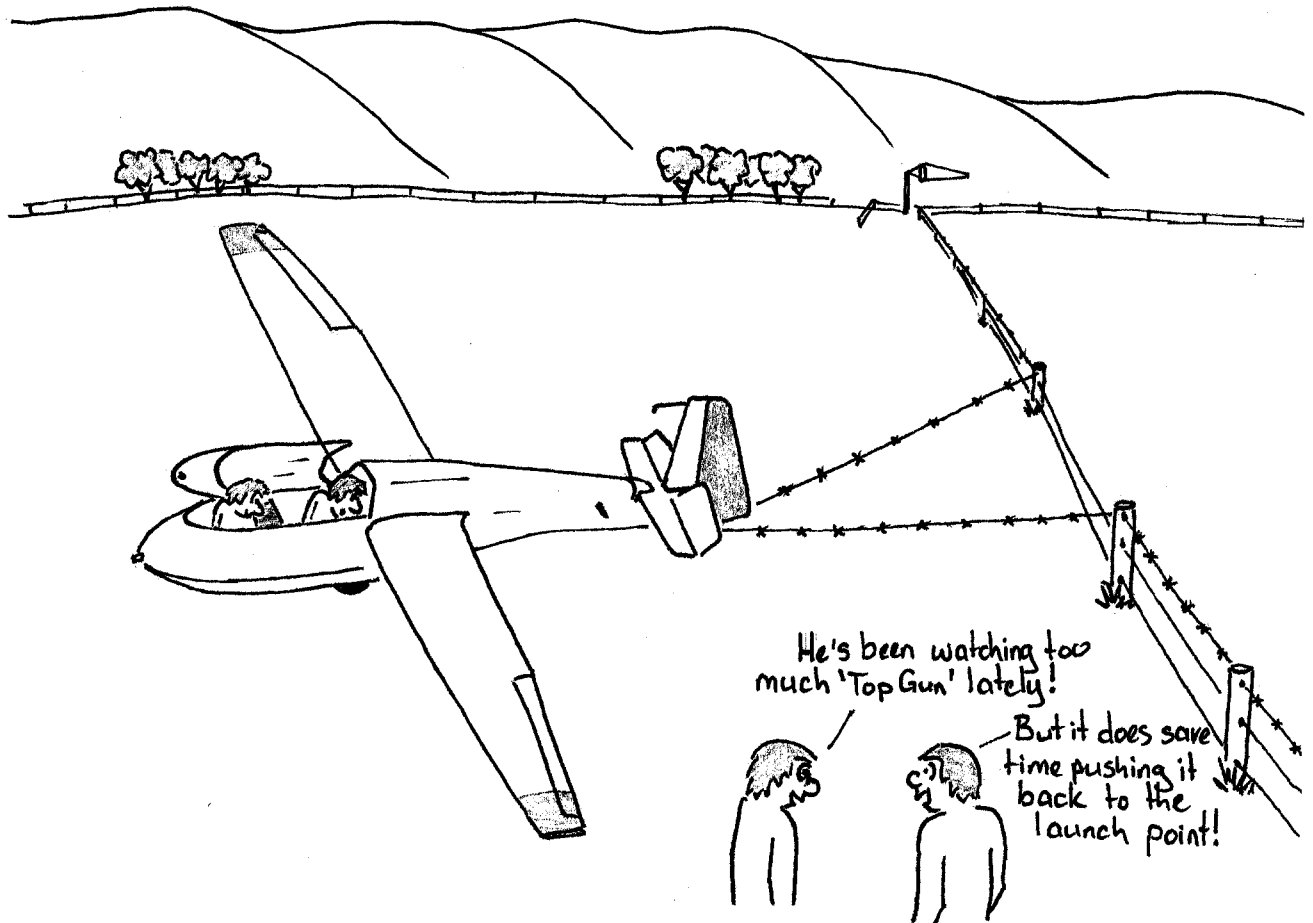


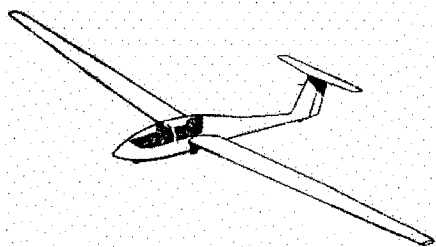
# Uni Gliding

The Official Journal of the Adelaide University Gliding Club



## IN THIS ISSUE

Presidential Words .....	2
Rock Climbing Races...	2
Editor's Page .....	3
Don Hein cartoon.....	3
Arts and gliding.....	4
Food Is Not Free .....	4
Cross Country Flying..	4
From the Exec Meeting	5
Designing a Glider.....	6
What's on October.....	8
At West Beach.....	8
What's on calender.....	9
This month on field....	10



## PRESIDENTIAL WORDS OF WISDOM

Dear fellow aviators,

Spring is upon us and that means thermals are starting to appear. The next General Meeting is designed to capitalise on this by discussing the art of cross country flying. This would be of great interest to those who have recently gone solo or are about to.

Congratulations to **Andrew McCauley** for going solo and **Kevin Zietz** for converting to the Super Arrow.

Thanks to **Angus MacGillivray** for filling in as acting secretary for the club. He is only acting until we get around to having a Special General Meeting to vote on it. In the mean time keep up the good work.

Indoor rockclimbing is another way to get off the ground, which has been enjoyed by many club members on two occasions. For those who missed out we are having a third night very soon.

As always, fly safely

*Michael*

## INDOOR ROCKCLIMBING RACES

Rockclimbing proved to be so popular last time, that we did it again on Tuesday 9 Sep. If you missed out this time, then we are having one last go on Tuesday 28 Oct.

This time we decided to get carried away and held time trials up one of the easier walls. The rules were simple: the time started from when your second foot left the ground until your first hand reached the top and you could use any colour hand / foot hold. This eventually proved to be easy, with a couple of the more nimble people climbing faster than the belayer could pull in the slack, which resulted in a caution from the rockclimbing staff.

It was then decided that the younger and taller competitors (Dhar and myself) held a distinct advantage of the older or shorter (Redmond) so I

spent some time devising a handicap scheme. I also applied a 'girl' factor to Mandy's as strength certainly played a part as well (although she declared she wasn't racing).

The results are as follows:

	Time	H'cap Time
Angus MacGillivrey	29.14 s	27.17 s
Mandy Wilson	43.15 s	21.14 s
Peter Cassidy	27.33 s	20.33 s
Redmond Quinn	30.88 s	19.25 s
Dhar Kurban	18.76 s	17.55 s
Raj Bholanat	18.84 s	16.67 s
Peter Temple	19.53 s	14.96 s
Me	15.11 s	13.18 s

*Anthony*

## EDITOR'S PAGE

G'day everyone and welcome to my sixth newsletter. Gary Hollands is holding his own short competition this month. The prize, as usual, is a bottle of wine. Gary believes there will be wave at the Stirlings Camp. **How high Above Mean Sea Level will Gary get during the Stirlings Wave Camp 97?** I will accept all entries up to 3 Oct.

This month features the start of a long running article on the design of a home built glider for Redmond. I hope to feature regular installments over the next few months and you will be able to see the design develop. Eventually, Redmond plans to build an fly it. Certainly, this will fulfill an ambition of mine since I completed Aerospace Engineering at RMIT and who knows, may lead to bigger and better things.

Last months theme discussing women in gliding certainly provoked a few comments from people, but failed to produce any angry letters to the editor. Obviously I will have to get even more con-

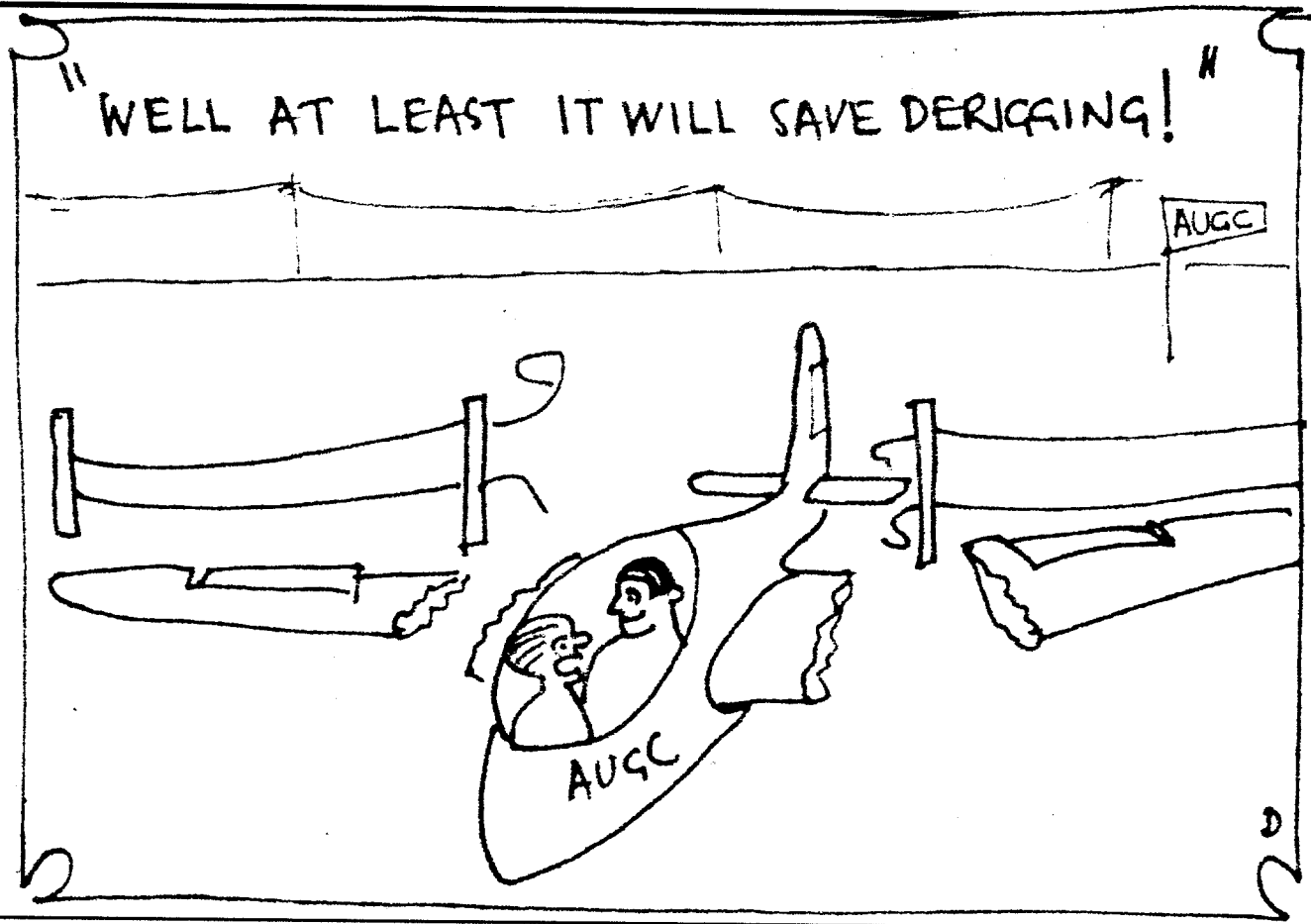
troversial. This will either provoke people to write articles, or get me sacked as editor.

However, Justine's excellent article did provoke Angus (two articles in as many months! Outstanding!) to write a light hearted response about the excessive numbers of engineers in the club. Thanks Angus.

This months Don Hein cartoon comes from June 1983. On Saturday 6 Sept, Greg Newbold with a passenger collected the top of the fence with the Bergfalke tail because of the strong headwinds. The Bergy is alright and the passenger went flying again, but it is a timely reminder about wind-shear on strong days.

Hope you have great flying,

*Anthony (Editor and Contact Person)*



## DESIGNING A GLIDER (AND EVENTUALLY BUILDING IT)

Why go to all the time and effort of designing and building your own glider when there are plenty around to bought? The answer is the satisfaction of having created it yourself and ending up with an aircraft that suits your needs perfectly. The story behind this article is Redmond (the Chief Flying Instructor) has been interested in building his own machine for some years. Unfortunately, there is not an aircraft available that meets his discriminating tastes in aerobatics and speed ie a true Hoon Machine!

This is the first 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. This will not be easy. Most text books on aircraft design are focused on the design of light aircraft or bigger and tend to be exclusively based on aluminium construction (like the Puchatek). They do not feature gliders, except in passing, and do not discuss such old technology like steel tube frame or wooden construction.

Only recent text books feature fibre composites in great detail. Fortunately however, gliders are very simple aircraft and it should be straightforward to do the design calculations.

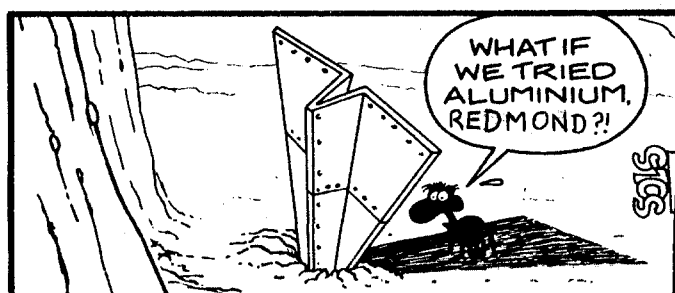
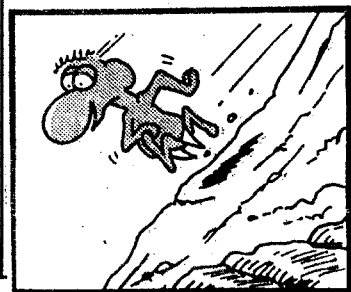
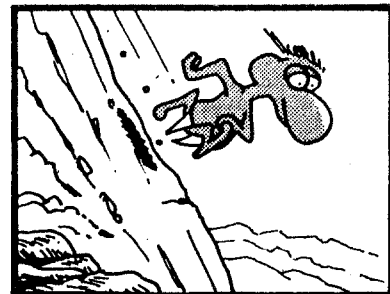
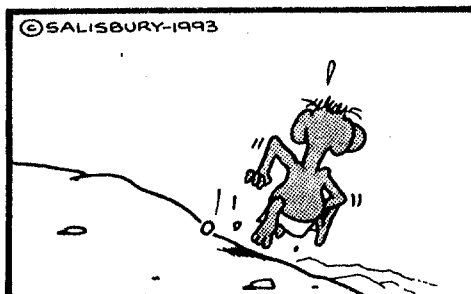
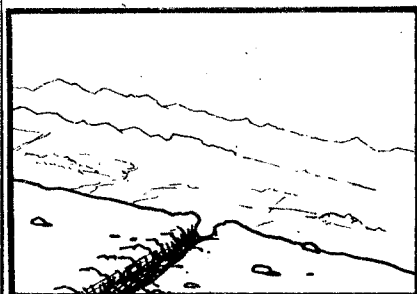
This will be my first complete aircraft design which I hope leads to bigger and better things. The first step in the process is establish a specification or list of requirements for the aircraft. From this list of requirements you can start to de-

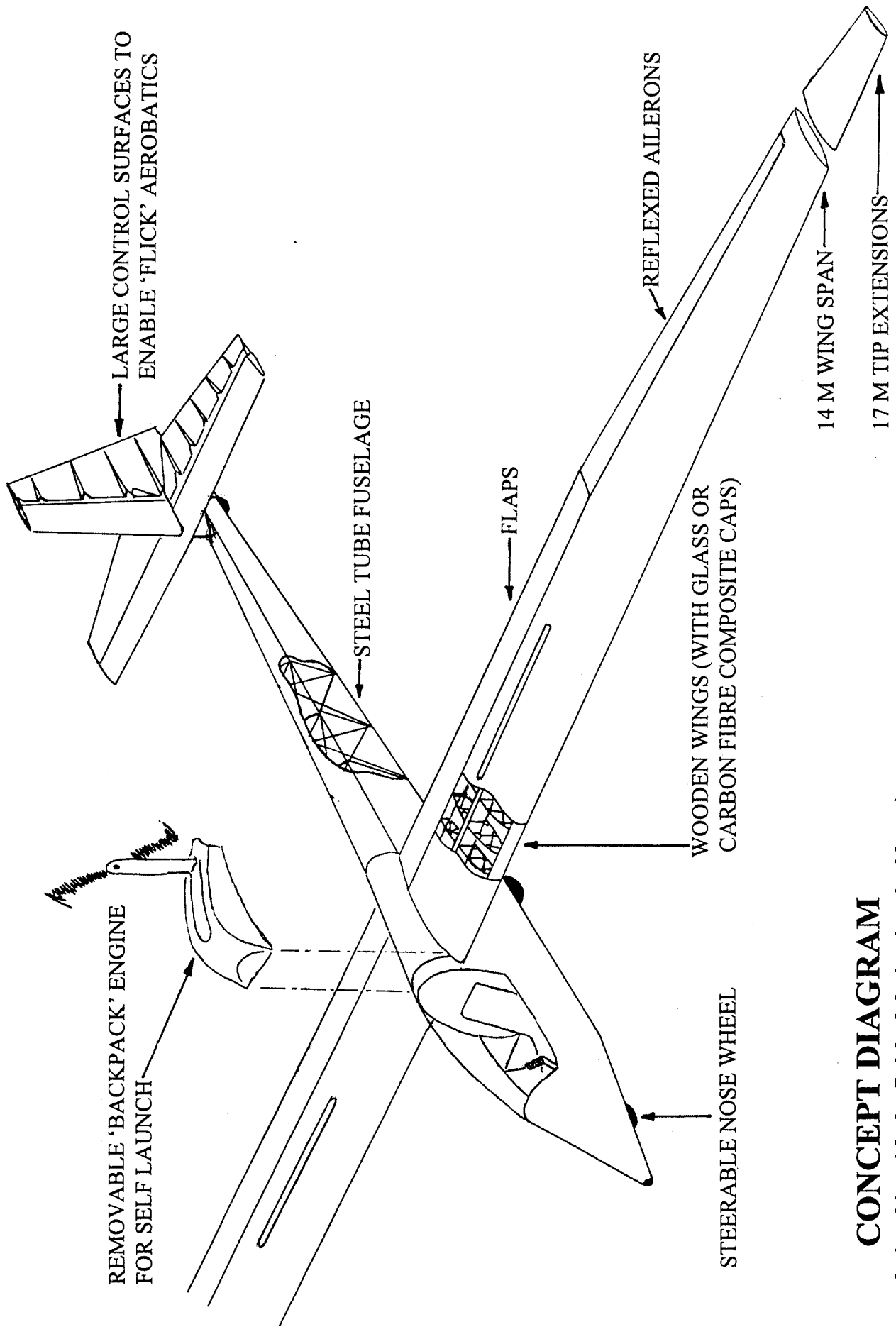
termine the preliminary sizing of your aircraft. Here is what Redmond wants:

- A fully aerobatic glider capable of 'flick' manoeuvres. This means a very strong structure and powerful control surfaces.
- 14 metre wing span with 17 metre tip extensions. The short span will allow greater manoeuvrability and higher  $V_{NE}$  while the extended span will give better glide performance.
- A very high  $V_{NE}$ . At least in the short wingspan configuration. 150 knots?
- A removable 'backpack' engine to give it a self launch capability.
- Approximately a 35:1 glide ratio, at least with the extensions and without the engine.
- A nose-dragger with a steerable nosewheel to enable better ground control and taxi-ing with the motor.
- Compliance with all applicable standards.

On the next page is a conceptual diagram of Redmond's glider. The steel tube fuselage and wooden wing is for ease of construction and maintenance. The glass or carbon fibre spar caps is to carry the large loads produced by aerobatics but still make the wing light enough to carry for rigging.

The next article is to determine the approximate weight and size the glider will be.





**CONCEPT DIAGRAM**

(any relationship with the finished design is coincidence)

## WHAT'S ON IN OCTOBER!

### General Meeting, Wed 1 Oct 97

Cross country season is just around the corner. Come along and learn what thermals are all about and how to cover 300 km or more without an engine and what to do when you don't make it.  
6:30 pm Uni Bistro for dinner, then  
7:30 pm Canon Poole Room, Adelaide Uni

### Executive Meeting, Tues 14 Oct 97

7:30 pm at Mandy Wilson's place  
6 Neptune Ave, Modbury Heights  
Everyone welcome to have a say in what happens in the club.

### Indoor Rockclimbing, Tue 28 Oct 97

7:30 pm Acme Wall Co, 171 West Tee (behind \$17 + \$5 for shoes. Great fun! Come and watch Claire and Mandy 'go all the way' (they have a fear of heights)! Call the contact person for directions.

## 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 of what has been done and what is forecast to happen:

**Puchatek:** Finished and back at Lochiel. Yay!

**Club Libelle:** The Form 2 (annual inspection) has been started and a lot of the initial stripping of the aircraft has taken place. Arrow pilots should be keen to see this back at Lochiel so they can convert to it.

**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?

Oct '97

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<b>29</b> 7:45 pm West Beach Shed Club Libelle Form 2 Bocian repair Winch #3	<b>30</b> Royal Aero Society 'Things that go flash in the night', 6:30 pm Innovation House West Conference Room, Technology park	<b>1</b> General Meeting. <b>Cross Country Flying</b> 7:30 pm Cannon Poole Room, Adelaide Uni 6:30 pm Bistro for tea.	<b>2</b> Call Contact Person 018 810 963	<b>3</b>	<b>4</b> Balaklava Regatta  Go gliding...	<b>6</b> Balaklava Regatta  Go gliding...
<b>6</b> Balaklava Regatta  Go gliding...	<b>7</b>	<b>8</b>	<b>9</b> Call Contact Person 018 810 963	<b>10</b>	<b>11</b>  Go gliding...	<b>14</b>  Go gliding...
<b>13</b> 7:45 pm West Beach Shed Club Libelle Form 2 Bocian repair Winch#3	<b>14</b> Executive Meeting. 7:30 pm at Mandy's 6 Neptune Ave Modbury Heights All welcome!	<b>15</b>	<b>16</b> Call Contact Person 018 810 963	<b>17</b>	<b>18</b>  Go gliding...	<b>19</b>  Go gliding...
<b>20</b> 7:45 pm West Beach Shed Club Libelle Form 2 Bocian repair Winch #3	<b>21</b>	<b>22</b>	<b>23</b> Call Contact Person 018 810 963	<b>24</b>	<b>25</b>  Go gliding...	<b>26</b>  Go gliding...
<b>27</b> 7:45 pm West Beach Shed Club Libelle Form 2 Bocian repair Winch #3	<b>28</b> Rockclimbing 7:30 pm Acme Wall Co 171 West Tce Booking essential!	<b>29</b>	<b>30</b> Call Contact Person 018 810 963	<b>31</b>	<b>1</b>  Go gliding...	<b>2</b>  Go gliding...

## THIS MONTH ON FIELD

**Sat 30 Aug:** No flying.

**Sun 31 Aug:** Another ridge day which faded into the afternoon. Everyone had good flying and there were a number of young eagles soaring with us (missed one by that much!). Claire even soloed the ridge.

Flights: 10 Total Time: 9 hr 59 min

**Wed 3 Sep:** General meeting but only three people turned up! So we went to the bar instead.

**Sat 6 Sep:** Strong northerly wind and they packed up early. Greg Newbold got caught by the wind shear and did an aircraft carrier style landing using the fence as an arrestor wire.

Flights: 13 Total Time: 1 hr 13 min

**Sun 7 Sep:** No flying. Too windy!

**Tues 9 Sep:** A group went indoor rock climbing at the ACME wall company. Everyone had so much fun that we are doing it again on 28 Oct (see page 8).

**Sat 13 Sep:** No flying.

**Sun 14 Sep:** A ridge day hampered by low cloud. Most people got a few minutes on the ridge during breaks in the cloud. There was a clubhouse clean-up while we were waiting for the rain to clear.

Flights: 15 Total Time: 3 hr 4 min

**Mon 15 Sep:** Dinner at Pizza Hut. Not many turned up. But there were plenty at West Beach Shed afterwards.

**Tues 16 Sep:** Executive Meeting at Michael Texler's. Angus volunteered to be temporary secretary. See page 5 for details.

**Sat 20 Sep:** Lots of people on field with four instructors! A pleasant day spent rigging the Puchatek, building the floor of the new hanger and putting new cable on the winch. At the end of the day the ridge decided to work, just, and there was a frenzy of getting enough aircraft up for everyone to have a go. Very nice BBQ in the evening followed by a *very* interesting deep and meaningless.

Flights: 10 Total Time: 3 hr 55 min

**Sun 21 Sep:** Another pleasant day with a few thermals. Benny and Peter T had the longest flight with others getting extended circuits.

Flights: 24 Total Time: 3 hr 48 min

**Sat 27 Sep:** No flying, but probably a good day.

**Sun 28 Sep:** Eight people on field enjoyed good weather, a few thermals and a BBQ lunch at the launch point. Andrew McCauley went solo, Kevin Zietz converted to the Super Arrow and Claire tried to break the winch.

Flights: 33 Total Time: 4 hr 30 min??

### Uni Gliding

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