Out of the Blue

Waikerie Gliding Club Newsletter August 2003

August Member's Flying Day

A perfect winter's day in Waikerie

By Craig Vinall

The member's flying day on 2nd of August 2003 was a great success. A good day's flying was topped of with a great barbeque. A first off win for the new social committee.

The weather was a cloudless still day of about 18 degrees. All most every glider was out of the hangar in anticipation of a good day.

Bill Mudge was the duty instructor with Peter Cassidy flying the tug. There were 9 solo pilots with a total of 20 launches for the day and Bill was kept busy with 3 check flights and 3 passenger/training rides.

The day started out a bit low (2500ft max) but increased during the day. Graham Francis managed over 4000ft late in the day in KYS and Neville Anderson had the day's longest flight in MU of 2hrs 40min.

Allen Hudson showed off his newly decorated ASW20 and even the PIK was dragged out by John Hudson. I was reacquainted with the LS1. It's a great aircraft; very comfortable and easy to fly.

Many thanks go to Jean and Marie Hudson who at reasonably short notice organised a barbeque in the clubhouse after the flying. A few beers were consumed while the food cooked and the meal was accompanied by a red wine tasting. It was a pleasant finish to the day!

The winter months provide and ideal time to hone your flying skills for the upcoming season. A flying day will be held after each committee meeting and a barbeque will be organised regardless of whether there are 2 or 20 people there. If the weather is not up to scratch then a safety briefing will be organised. John Hudson has already given presentation at Balaklava on radio procedures and given his comments about the subject I hope there is a rainy day so we can hear more.

The next flying day is set for Saturday 27th of September. Hope to see you there.

From the Workshop

By Craig Ward

This is my first article on airworthiness issues, to help pilots maintain club or their own gliders in top condition.

DIARY DATES

Next Committee Meeting	Friday 26 Sept. 03, 7.30 PM
Member's Flying Day	Saturday 27 Sept. 2003
Official Observes Course	13 Aug at University of SA
SAGA Meeting	Sat 23 Aug at Renmark GC
Cross Country Course	1-6 December 2003
Performance Week	4-10 January 2004
Sports Class Nationals	11-23 January 2004

Test your Knowledge

Why are two rings fitted to the end of a launching rope or cable?

See page 6 for the answer

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My first airworthiness article relates to L'Hotellier couplings & balls. Gliders containing L'Hotellier couplings require lubricating each 50 hours of flying. This is an airworthiness requirement in accordance to AD 177, issue 6. You will be able to find the lube cycle of the glider when you D.I. the glider before you fly. It is written on the first white page in the maintenance release – check the hours for the next lube – then turn to the aircraft hours page and check the current flown hours.

If the lube is almost due, or has gone over the flown hours, give it a lube. It is not hard, it doesn't take long and you can be proud of how much money you are saving yourself and/or your club. The current price on L'Hotellier balls is around $60 per ball, and $100 - $200 for a coupling. So it makes sense to make them last by lubing them regularly. Once you have lubed them, enter in the front of the maintenance release the hours for the next lube, and sign the one you have just done. Too easy really!

I have recently replaced some balls and couplings in a glider due to lack of lube. When they dry out, they rapidly wear. At the form 2, I then have to tell the customer that they are up for hundreds of dollars for new balls & couplings because someone didn't spend 15 minutes to lube the L'Hotelliers.

You will notice those pesky R-clips on L'Hotelliers in club gliders being replaced this year with Schempp-Hirth style locking wires. These are much easier to use, and there is no string to fall off. They work on the same principal as an R-clip by filling the small hole in the top of the wedge, but are less fiddly to use. They are available from the workshop if you want them for your own, or another club's glider. (Modest price of course). Keep an eye out for them on your next D.I.

That's enough on L'Hotelliers, next month – gel coat.

Safe Flying,

New Office Manager

The Club is pleased to announce that Mike Valentine has accepted the Office Manager's position.

Mike is a well-known identity in Australian Gliding. Apart from having held several positions with the GFA executive, he has had extensive experience in managing gliding clubs.

Mike is expected to take up his position in mid-September in preparation for the new season.

Operation Matters

Pilot Indemnity Insurance

To date, there have been no members renew their pilot indemnity insurance. Therefore we are reminding members they are no longer covered under this scheme until they personally renew their cover. For those who wish to renew, please contact the office.

Presently all members flying club gliders are liable for the cost of any repairs up to our Insurance excess of $1500, if deemed to be the fault of the pilot in command.

The small cost of the insurance may save a potentially larger bill.

Monthly rain report

We have had 7 days where rain has fallen. For that period, gauge readings totalled 5mm.

On a couple of days, it was very interesting to watch the localised cells moving though. They were cycling just like thermal and CU activity. As the cell approached it was seen to be teaming with rain, but this usually stopped just short of the airfield. The cloud cell then passed overhead, delivering little or no rain. You could then watch the cloud grow and cycle up before again teeming down with rain again (usually downwind of the airfield!).

Weather

It's been very cold in the mornings with the temperature going as low as -3C at dawn. Early morning fog in the river valley giving way to icy frost and icicles on the ground. The average temperature range has been between 0 to -3 at dawn and reaching 14 to 18C during the afternoons The sunlight at dawn and dusk reflecting off the clouds has been very beautiful.

Very Recent News

We received information from Schempp-Hirth grounding all Duo Discus gliders. Information at hand indicates there was an accident where in-flight a wing failed 4 metres from the tip. On further investigation it appears the skin separated from the sparcap causing the structure to fail. There are already inspection schedules in place to be undertaken on all Duo Discus gliders to establish the designs airworthiness.

Caravan Accommodation during the Club Class Nationals

Will those members who have caravans at the club please advise the office if they intend using their van during the Club Class Nationals. This will allow us to ascertain how many people we can book into accommodation using all available sites.

There will be a date after which, if members have not responded, we will assume that they are not going to be using their van. This will mean that they may not be able to access their van during the comps as their presence will exceed the number of persons our facility will be able to handle.

Please contact the office if you have any questions.

Winter Flying Program

Commercial flying for student training will start on 16th of August 2003. Waikerie will be welcoming up to 10 students from Japan who are each expected to complete around 10 days of training over about 4 to 6 weeks.

Eguchi-san will be lead instructor for this period with assistance from Mark Morgan and Mike McLachlin.

The students will be at both pre and post solo stages so will be looking to go solo or to gain some experience toward cross-country flying. It will be a good chance for them to experience the stronger Australian conditions. They will also experience aerotowing as most of the students come from winch clubs.

The club looks forward to seeing them arrive and every effort will be made to ensure they enjoy their stay.

Flying on July 19

by Mark Morgan

Brocky and I had arranged to go for a fix on Saturday. The plan was to launch round 11am. Unfortunately the CUs were not developing as well as we would have liked so we waited a while.

Brocky took a launch above cloud just to have a look about. I launched at 11.57 and then joined a thermal under the Dimona. Aiden was doing thermal centring practice with Nigel. Ron joined as well, which probably blew Aiden's concentration to bits having to watch 2 of us.

Ron & I departed east under a 2,600 ft cloud base. The going was OK but we decided only to go as far east as Kingston. We were aware that a temperature drop at any time would shut down the thermal activity. We then turned west running a line 5km south of the field.

The sky was also cycling. You would fly through really good streeting and then it would be very quiet. If you ran into a thermal as it burst into life you could get 4 or 5 knot gusts but only around 2 or 3 knots on the averager. Ron was ahead up the street and called me into an 8 knotter, which, at the time I arrived, was on the downward cycle. I managed to squeeze 5kts average climb out of it for a few turns only.

Being on the downwind leg it was decided not to venture too far downwind keeping the possible temperature drop in mind. Better than half way to Blanchetown we changed streets a couple of times and then headed back east again.

By this time the day was getting on and the streets just died so we returned west again. By 2.30 the sky was beginning to cycle down. We were working a thermal above some guys burning orange trees when I saw a really great CU forming just to the north west of the airfield. Departing toward it Ron's comment over the radio was whether or not it would still be active when we arrived. He was right! As we came closer the cloud was breaking up and by the time I pulled up in underneath very little of the pre-existing cloud was left and only .5 to 1.5 kt lift was evident.

After a bit of a scrabble around we thought the day was over. Just mooching around we found ourselves back at the fire above the orange trees. Two hawks

were climbing up to meet us, and of course, climbed through us. Then another joined, then 2 more! It appeared this was the only lift in the area and everyone wanted a bit of it. The comforting thing was that we were at the top and they didn't out climb us! This was a first for me!

Any way to recap the day, most of the day was spend round 2,000 to 2,400 where it seemed the best part of the lift was available. Best height gained was 2,950 feet. Calculated distance flown was close to 200kms. Nice day. Interesting as well as a good fix!!

A message from Keith

I've had 3 weeks in USA driving a large Mobile Home with Glider Trailer. 6000 kms from West to East Coast, to Kitty Hawk.

There were 44 gliders that flew over 16 days landing at the actual field that the Wright Bros operated from. This is the first time ever this has been allowed. Also, 44 caravans, etc were allowed to camp at the site over night. We were locked in so no one could get in and we were not allowed out.

It was a great journey. I left about 40 Waikerie brochures at each gliding club we visited and many were given to the pilots on the expedition.

I then flew from Washington DC to Vienna, having 9 days there. I left about 10 WGC brochures around Austria. I then went to Nitra in Slovakia, to the World Juniors and PW-5 comps. Left another 10 brochures in that area. They had 91 gliders there and flew 11 days out of 12. A Kiwi pilot at the comps flew 61 hours in that period.

From there, I hitched a ride to Leszno, Poland, with the Polish Team, to the 28th World Comps. So far we have had only 3 flying days. Tracey Tabart came 3rd the first day and is now in 13th overall position. Shinzo is 16th. There is 128 gliders competing from 31 Countries. They have 18 tow planes and get them all up in 54 mins. I will leave the rest of the brochures here amongst all the teams.

Regards from Keith Willis.

PS. On our brochure it states that Waikerie had the first World Comps in the Southern Hemisphere. NOT SO. The Argentineans made it know to me that they had the first one at Junin.

(Apparently the World Comps at Waikerie were the first FAI Comps. The brochures will be amended accordingly. Ed)

Cheap Maps

The office is having a sale of old and out dated maps; all $2.00. The maps are mainly 1:250,000 from regions around Waikerie in Victoria and NSW. There are also Maps for the Flinders Ranges area. Be quick.

Rdgelift and Slope Soaring

By Bernard Eckey

(Bernard has written a great article for the newsletter on ridgelift and slope soaring. It will be reproduced in its entirety over the next few newsletters. I hope you enjoy the first instalment. Ed.)

Although there can be little doubt that thermals are by far the most common source of lift, glider pilots are frequently blessed with meteorological conditions that

Morning Wave at Waikerie

Preparation for the member's flying day

provide alternative forms of updrafts. Readers would agree that "Ridge Lift" readily comes to mind and as it is quite common in areas of suitable topography. An entire chapter is devoted to this subject.

Quite a few spectacular flights have been performed by pilots making full use of mountain ridges that in some parts of the world can be hundreds if not thousands of kilometres long. But even a much shorter and seemingly unspectacular mountain range can provide usable lift as long as we combine some experience and skill with a basic theoretical understanding of the subject. For this reason we will first touch on the theory and the best conditions for ridge lift before we consider the most appropriate flying tactics in the second part of this chapter.

Theoretical fundamentals

Let's ask the most fundamental questions first. What is ridge soaring, what are the theoretical principles behind it? What allows glider pilots to remain airborne in front of a mountain ridge for as long as the wind keeps blowing in the right direction?
At first glance the answer is rather simple. Ridge soaring (sometimes referred to as slope soaring) is the art of keeping a glider in a patch of air that rises at least as fast as the sink rate of the glider. If the updraft is stronger the aircraft climbs ,But the glider will inevitably come down if the surrounding air ascends at a slower rate.
Rather than performing tight circles we simply keep flying parallel to the hill and gain altitude in the process. Of course we must eventually turn back, but there is nothing that stops us from completing this 180° turn in an area of particularly strong updrafts. If indeed a certain part of the hill works exceptionally well we can even fly some figure of 8 patterns to take advantage of extraordinary strong pockets of lift. Ridge lift generally covers a relatively large area and for this reason, figure of 8 pattern flown parallel to the ridge are unlikely to drop us into sink.
Although ridge lift seldom provides spectacularly strong updrafts the lift is usually on a much larger scale compared to the average thermal and hence present us with less of a challenge. We will effortlessly gain height by flying straight and level without worrying about bank angles, thermal sources, thermal triggers and the like, provided we are in the right place.

When meteorologists talk about ridge lift they often referred to it as orographic movement of air. Although this sounds a bit more scientific it simply means that when a horizontal airflow (we normal mortals referred to it as wind) strikes an obstacle it has no choice but to divert around or over it. If the obstacle is a low and conical mountain, the air can divert to the right and/or the left of it without being deflected in a vertical direction. It goes without saying, no vertical airflow - no workable lift – no joy for glider pilots.
However, if the mountain is long enough and the wind strikes it at the right angle the air has no choice but to rise and flow over the top. When that happens we have hit the jackpot – all we need to do is to fly the glider into this area of rising air for soaring with comparatively little effort to maintain lift. The strongest updrafts are always found where the steepest deflection of air occurs. Contrary to popular believe this is not right above the top of the ridge but along the line X-Y shown in figure 1. More on that later.

When we look at the airflow over the ridge more closely and divide it into horizontal and vertical components, three fundamentals spring to mind almost immediately.

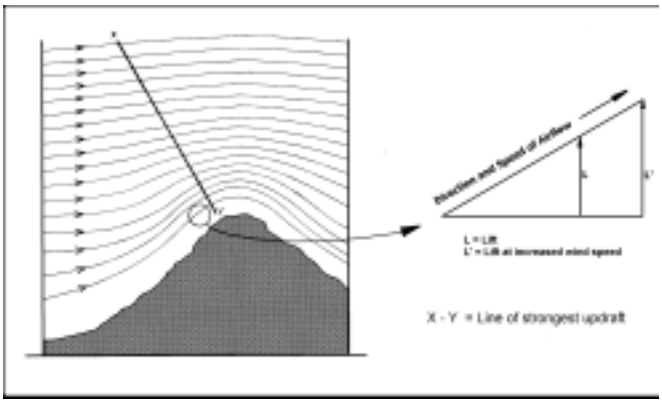
a) we can only expect to gain altitude if the vertical component (Lift L) is stronger than the sink rate of our glider.

b) the rate of lift increases in direct proportion to the wind speed.

c) At lower levels the air is deflected approximately in line with the gradient of the underlying ridge

In this context it is important to note that the wind speed not only dictates the strength of the lift but also

has a major bearing on the maximum possible altitude. Provided we are not troubled by a low inversion we can usually climb a little higher when the wind is stronger.



For sale

ASW19b VH-GWL - 1/2 share for sale. Mark Schultz. 0427793946

LS4a – VH-IIY. Rudi Gaissimaier. 8524 4595
rudiandanna@camtech.net.au

Diamant 17 – VH-GUV. Nigel Baker 0418 841 631
nigelbaker30@hotmail.com

201 Lebelle – VH-GBV. Ron Brock 8541 2809,
fax 8541 4434

Zander SR820 Flight Computer Vario, Speed director, Final Glide Computer with separate Pots for Wind and McCreedy input.
Peter Robinson robinsonp@onesteel.com
0886404809 wk or 0886453794 hm

Test your Knowledge

An Answer

Two rings are fitted to ensure that the force exerted on the glider tow-hook is a straight pull no matter what the angle of the cable to the glider.

From last month

In response to last month's question, Terry Moore points out that the answer in relation to glide angle was wrongly stated as increasing.

The answer to glide angle is no change, but speed to achieve best glide is increased.

The polar is effectively shifted to lower and further right, but best glide tangent is not moved.

Hence sink rate increases, speed increases, but speed for best glide/sink rate still calculates out at the glide ratio for the glider.

Articles for the Newsletter

Do you have any interesting news or views? If you do, then please consider writing something for our newsletter. Next month should see the start of a series of articles celebrating 100 years of powered flight.

Please send any material to **Craig@madderns.com.au**.

Flying Roster

Flying during winter will be on alternate weekends and will depend on flight crew availability. Flying will be on Saturday and Sunday where possible. Each day will require a duty instructor for operations to proceed. Other days will be scheduled when possible.

Day	Date	Instructor	Phone	Tuggie	Phone
Sun	Aug 10	Mark Morgan	8541 2644	Peter Siddall	8586 6425
Sat	Aug 16	Bill Mudge	8541 3570		
Sun	Aug 17	Bill Mudge	8541 3570	Rob Pollniz	8338 0970
Sat	Aug 30	Bill Mudge	8541 3570		
Sun	Aug 31				

E-mail addresses
If you have received this newsletter by post then you will have missed out on seeing the great photos in colour. Please send the office your e-mail address so you don't miss out.