



CHAOTIC

Monthly Newsletter of the Darling Downs Soaring Club

July 2002

President's Report

May and June have been busy months with the flying hours for both months well up on last year. As I write this we still have one weekend of the financial year to go, but we have already easily passed our goal for the year of increasing our hours flown in club gliders by 15% over last year. For the first time we have broken the 2500 hour barrier and have done 2522 hours to date. This is a 23.5% increase on last year. Of course the two expeditions contributed to these figures, but as we all remember, both expeditions were plagued by unusually wet weather. Just think what the hours would have been if we had had normal weather. Final hours for the year will be in next months Chaotic.

The aircraft that has done the most hours is the LS7, which has flown 405 hours. Thank you to David Hughes for his determined efforts to ensure we passed the 400-hour milestone. I suspect that this is the most hours we have ever done in one club aircraft in one year. What is more amazing is that for most gliding clubs it is the two-seaters that do the most hours. To have what was our top line glider doing the most hours shows how strongly oriented we are toward cross-country flying. I guess it shows that we were right in buying another glider for the top end of the fleet.

All this activity places greater demands on all of us if we are to get all the flying enjoyment we are seeking. It is important that we organise our on field operations as efficiently as we can. Most days we need the full duty crew of two instructors, two tow pilots and two duty pilots if we are to meet everyone's aspirations. Of course the duty crew needs everyone else's help to ensure we start early and keep the turn around times to a minimum.

There have been some days lately when we haven't been able to do all the flying we could have done because key people were missing, or late, or we just didn't get our act together. Its not much fun having to face up to disappointed members at the end of the day. I prefer the happy smiling kind of member that's had a good flight. Its pretty disappointing to travel out to the club and not get the flying you were hoping to get. There are some quiet days and the occasional day with bad weather but most days are pretty busy. We need everyone's help to make the most of the great soaring opportunities we have.

There is a small downside to all this flying and that is that our gliders need a little more maintenance at Form 2 time. Form 2s are coming up for most of our fleet and there is much to be done. Shane needs help with this work and if you can spare a day or two to help out it would be much appreciated. Not only will you be helping your club but you will also be learning more about the gliders you fly. The LS7 has done a lot of flying and the wings are now being refinished so we can keep this top line glider in excellent condition.

The Queensland State Comps are only three months away and if you haven't already arranged your leave, perhaps its time you did. We will need lots of help to run the comps and if you can help out please contact Shane or Libby. If you want to fly one of the club gliders in the comp please book with Peter. We have some work to do around the club and the next working bee will be on Sunday 14 July. We don't want to have a lot of last minute work to do in September so please come along and do your bit.

Thank you to Mark Robertson for replacing the water tank and doing some more running repairs to the plumbing. We take

the water in the kitchen, showers and toilets for granted, but without Mark's continuing endeavours the place would be very dry.

Thank you also to the new group who are now looking after the website. As I have said before, the website is an integral part of our operation and it must be maintained. Thank you to Jenny Thompson, Paul Bart, Russell Bennett and Tony Cavanna and Barry Kruyssen who are now all contributing to keeping it up to date. Thank you also to Mike Codling for producing the state comps website pages. The floor in the new hangar has now been completed as has the general earthworks around the hangars and clubrooms. Thank you to Bob Keen and Peter Bell for organising and supervising all this work.

As part of the ongoing process of improving our club documentation, we now have a club flight radio manual. Copies are available at the club and it is on the website. Thank you to Russell Bennett and Trevor Bange for putting a lot of work into producing this booklet. Geoff Brown will soon be holding a training session for pilots who need a radio rating. It may be the middle of winter but there have been plenty of good thermalling days of late, some of them quite challenging, but that only makes the flying more satisfying.

Ralph Henderson

Watts Bridge Queens Birthday

Weekend

To coincide with Caboolture Gliding Club's monthly pilgrimage to Watts Bridge over the June long weekend, a few of DDSC's expedition stalwarts took Kevin Senz's Blanik WVP to sample the ridge soaring & other scenic delights.

The experience started with Mark Robertson trailering the Blanik over from Toowoomba on the Saturday morning. Just when the various components (such as wings & stuff) had been laid out on the ground & the small team were scratching their heads over the "some assembly

required" issue, Glen Hart from CGC turned up & it all went together nicely.

Thanks to Glen for his cheerful professional advice. Murray took the glider off solo for a flight behind Hempel Aviation's Cessna 182, OXL, with Mark Robertson on board. Some lift was working in the foothills & after a half-hour or so, Murray's conscience took over & the Blanik made its way back to the airfield.

Alec Russell, having jetted in on board his Beechcraft Baron from Jimbour, took off for a solo flight. The serious business of flight training then got under way with new members Graham Hennessy & Bob Flood alternating for the remainder of the day. These two members joined DDSC as a result of the Jimbour Flyaway Weekend in March.

Graham, Bob, Mark & Murray then commuted to Graham & Narelle's country house at Blackbutt where the log fire & other treats awaited.

Next morning saw an early start with Bob & Murray airborne at 9.22 am. It was the same old Murray/Bob/Graham routine for most of the day but Alec took a couple of friends for flights. Frances Ning & husband Paul drove over from Hope Island and Murray & Paul had an extended flight over the ridge. Paul has now promised to join the club & learn to glide (notwithstanding that he is an accomplished paraglider pilot.) Frances & Murray took the Blanik for a winch launch.

It was a toss-up who was the most apprehensive, Fran or the Blanik. Monday started at 8.55 am with Bob & Murray. Jan Barker took a flight & Narelle Hennessy took in the scenery from OXL.

Bob & Murray had a good thermal flight & commenced spin training. Bob Ward flew over from DDSC in Ventus 2cm BW, ate launch & flew home. Richard and Anna Armstrong & family turned up for a look. The Blanik went into Hempel Aviation's hangar for a few days & we all went home early. It was a pleasant scenic, short

drive home for Murray over Mt Glorious with only one set of traffic lights en route. Altogether, a satisfying weekend with 22 flights totalling 9 hours. Sixteen DDSC members & families participated.

Significant flights: Murray Knight 0.34; Graham Hennessy 0.34, 0.34; Paul Ning 0.33; Bob Flood 0.30, 0.53; Alec Russell 0.30.

Thanks to CGC for their companionship & the winch launch and to Hempel's Aviation for the tug and the hangarage. The Blanik & the Antonov 2 sure looked cute in bed together.

Murray Knight

New Members

We welcome the following new members:

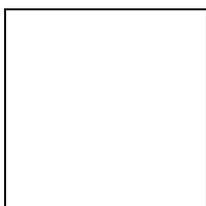
- ✈ Ron Andrew
- ✈ David Gliddon
- ✈ Richard Green
- ✈ Tim Hastings

Achievements

- First solo by Mark Andrew
- First Solo (gliders) David Gliddon
- Ventus conversion by Alf Garrone

Gossip

Congratulations to Brian Hofmeister on his 50th Birthday on 1 July.



Wanted - Memorabilia

Libby Matuszczak and Janelle McCaffrey are going to document the Club's history in photo albums and would like anyone who has photos and stories of the Club's history over the last 40+ years to help. Please contact either Libby or Janelle.

A Tale of Two Courses

In my gliding career I have participated in two gliding courses. The first 29 years ago resulted in me flying my first solo, the

second last week resulted in the student I had been training going solo.

Over the 29 years some things have changed, glider time now costs more than 4 cents a minute, and the K13s have become Puchacz, but some things haven't changed, a course is still a great way to learn, the tug is still a Pawnee, the student went solo on Friday morning and it is bloody cold in the morning on a gliding field in winter.

The other thing that hasn't changed is how thoroughly enjoyable a course is. While the memory of the course 29 years ago is a little vague, the memory of the one last week is relatively clear - a lot of good flying and a great opportunity to learn. The time to talk to people and learn all the extra things that you don't get time to learn on our now busy weekend's flying.

29 years ago I flew behind a future world championship pilot who was flying the towplane. This year my student did better, he actually flew with a world championship pilot and got to meet a 3 times world champion. What more could you want?

The reason for writing this is to emphasise the great gains that can be made in a week of continuous flying. The student for whom the course was organised, Mark Andrew, obviously progressed well over 5 days of concentrated flying. But so did the others who joined in the fun. Dave McEvoy and Joan Robinson both progressed well towards solo. Fran Ning and David Ferguson only joined us for a day but both went home with conversions into the Astir Jeans. Jim Somerville was also only there for a day but had a long thermalling flight in the Hornet.

By the end of the week, there was one first solo and two Astir conversions. For myself 11 hours instructing and after 7 years away from instructing, feeling current again.

Thank you to those who made it all possible, to Mark who came all the way

from Mt Isa to fulfil a childhood dream of flying solo in glider, and whom I'm sure will be back, to Bob Keen who towed every day, to Peter and Shane who also instructed, to Craig who was always there to help out, to John Hook who worked on the trailers and still found time to help out, to Dennis who also towed and to the others who made an effort to come and fly Dave McEvoy, Joan, George, Dave Ferguson, Fran and Jim.

The moral of the story is simple, next time there is a course on, take at least a day or two off, and get out there and do some flying. It sure beats a few days in the salt mines, more commonly known as the office. It might be cold in the mornings, but the days are fantastic. One other word of warning, red wine may make the evenings seem warmer, but it doesn't help in the morning, take an extra blanket this time of year.

Ralph Henderson

From the Instructors' Panel

What is the correct approach speed for the Grob and the Astir?

For both aircraft 50 Knots is a suitable safe speed near the ground (S in FUST). Always add 1/2 the wind speed after turning on to base (which you have estimated by checking the windsock on your down wind leg). This is the speed to fly on the approach, no less. If you go faster, you will tend to float further. This is not necessarily a problem on the airfield but it could be a problem if landing in a small paddock.

The Grob in particular, can get away from you on approach because it is a heavy aircraft and more slippery. The airbrakes of the Grob also cause the nose to pitch down when they are deployed. All of these things can make speed control on the approach more difficult and need to be monitored to achieve a stable approach.

The Grob and the Astir will float further than the Puch because the wings are lower are more immersed in ground effect

and this will be further extended if speed on approach is not controlled.

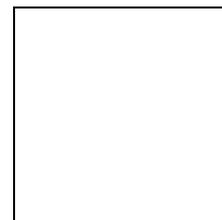
If you are new to these aircraft try observing the effect of the airbrakes on the aircraft's attitude. You can also practice approaches by choosing a paddock, setting up an approach, with half airbrake, and practice controlling your speed and approach. Carry out both of these exercises at a safe altitude and remain within range of the airfield.

Tony Cavanna

Club Furniture Needed

With the State Comps coming up in Sept/Oct, we will need more clubroom and outdoor furniture. Donations are best, but the Club can buy your second-hand furniture for a "modest sum". The following is required:

- another BBQ
- Lounge furniture
- Exterior furniture
- Pub chairs
- Bar stools.



Let any of the Committee members know if you can help.

EPIRBs

(Emergency Positioning Indicator Remote Beacon)

Following the article on EPIRBs in the last CHAOTIC, Robert Bradley has offered to bulk buy EPIRBs through Dick Smith Electronics for a reasonable price. The Committee has offered to purchase five of these and resell back to members. Four members have expressed interest so far, so if you would like to participate in this, contact one of the Committee members.

The Shortest Day

Six months ago I wrote about our achievements on the day of the Christmas Party and called it 'The longest day'. Well in case you didn't notice, yesterday was the shortest day, and what did we achieve this time?

The biggest achievement was clicking over 400 hours in the LS7 for the financial year. Have we ever done this many hours in one aircraft in one year? Perhaps someone with a longer history in the club than me can tell us.

Thank you to David Hughes for enabling us to reach this milestone. David tried to do it 2 weeks ago but the weather was against him. His first flight yesterday was also short but the second flight was over 3 hours, ensuring that we easily surpassed the 400 hours. It was a great achievement on a challenging blue day.

Another achievement was Alf Garrone converting to the Ventus. Alf must have liked flying it - he stayed up for over 3 hours and only came down at the end of the day. For the day we did 18 hours in club gliders, a total of 32 launches. A special thanks to Mark Robertson who did all the launches and used both tugs so that we could keep launching during refuelling. Thanks also to Koji who did an excellent job as duty pilot, to Tony who instructed and Barry and Craig who flew passengers.

I'm not sure what time we finished flying but the sun was low in the sky and the winter chill was setting in.

Ralph Henderson

Public Liability

I am sure that all members are aware of the general problems with public liability insurance that many organisations and businesses are facing. To date we as a club have not been badly affected and we hope this continues. However, in the current and likely future climate of litigation we need to be particularly careful that our operations are being conducted according to the rules.

All pilots are individually responsible for ensuring that they have complied with medical, annual flight check, and currency requirements.

Our operations at McCaffrey Field are easy to manage. However this is not always the case with more distant activities. Over the last few years, fly away and promotional trips have been an extremely important and successful part of our operations and we want them to continue that success. They not only attract new members, but also elevate the awareness of gliding in general.

As has been our policy for a while, the committee must approve all operations away from McCaffrey Field that involve club aircraft or that appear to be club operations as we need to be sure that these operations comply with our operational requirements. Private owners are of course responsible for their own operations when they fly independently of the club and there is no perception that it is a club operation.

In other areas of our operation, we must also be vigilant. When visitors and new members are at the club, we must ensure not only that we are courteous and welcoming, but also ensure their safety. They are not as aware of the activities and dangers on the field.

If we were to be found liable in one public liability claim we could be wiped out. Other gliding clubs have faced this threat in recent years and it hasn't been a happy experience.

We cannot risk losing what has been built up over 42 years of hard work.

Ralph Henderson

DDSC Chat

Increasingly, the club is using the DDSC mailing list via the Internet, to distribute information.



Our web provider notifies us that we have 95 subscribers to the chat line but our club membership records say we have around 125 members with email addresses. So there may be some of you with email

access who are not getting up-to-date information through the chat line. For instance, CHAOTIC is usually posted to the chat line on the first day of the month, but posted to members with the accounts some days later.

If you want to subscribe to the DDSC-chat, go to the DDSC Website, select the MEMBERS area. On the MEMBER INFORMATION CENTRE page, select MAILING LIST and follow the instructions.

For new members, much of the club information is available on the website. The username is MEMBER, and the password is szd50.

**For SALE - Quarter share in
Nimbus 2C based at DDSC**

A quarter share in the Nimbus has become available because one of the owners is moving to UK for two years.

Contact Darian Jenik on 0414 645 365 or d.jenik@qut.edu.au

Can Anyone Help Please?

As I am assisting a computer programmer [Aussie] in the building/designing of airport/landing strip locations for Flight Simulation programmes in S.E. Qld. To enable gliding x/country flying, we require the following photos members may have that would allow us to manufacture and complete the scenery of S.E. Qld.

- Airports, Gliding fields and ALA strips [including turning points i.e Silos/Railway stations or other major features] such as:
Jondaryan --Warwick--Goondiwindi--Roma---Miles--Chinchilla--Dalby--Jimbour-Kingaroy--Gympie--Pittsworth--Bange's strip--Boonah--St George--Toowoomba--Oakey and any others not mentioned which could be used. Photos of the Bunyas would also be welcome.
- Runway/strip lengths, their directions/latitudes/elevations,

including any buildings; hangars; caravan/s, refuelling area/parking; taxiways; windsock; roads/dams etc. Diagram layouts are also acceptable.

Caboolture and Watts Bridge fields are completed and are available [freeware] on the Websites for anyone worldwide. Various gliders are also available on the net, with full [working instrumentation] incl. GPS/Nav comp./Radios, even Pilots in the office with water ballast and dumping operation in some gliders, with random thermal generation programmes to make gliding as real as it can get! Note: Other programmers are doing all Victorian gliding clubs now.

One benefit is that with the scenery programmes completed, overseas clubs could fly and see what we can offer them in Qld [good plug to visit us and fly here]. If you can help in any way, we would be very grateful and all photos etc will be returned ASAP.

Please post to: Charles Kranenburg
24 Riverside Ave .
Barellan Pt. Qld 4306
Ph 0732946938

Cross Country Day

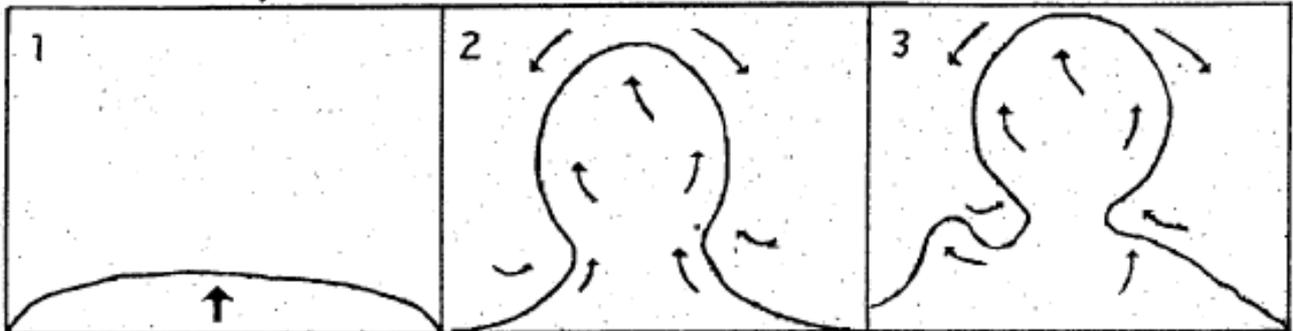
On 15th June, another Cross Country day was held. Shane gave another very informative talk on cross-country techniques, specifically on speed-to-fly, polar curves, flying tasks in strong winds, and paddock landings. The talk was well attended again. (about 20 people). We had been spoilt with the good weather on the first cross-country day but weren't so lucky this time. It was blowing a gale and difficult thermals went to about 4500 above ground. Whilst a number of pilots braved the difficult day and ventured out on track with Shane and Bob Ward, most turned back at some point in the day. Good winter practice that will hone your skills! Check the calendar for future cross-country days and book an aircraft. The talks are suitable for all pilots, so non-cross-country pilots will benefit from joining the lecture as well. Thanks again Shane and Bob.

Jenny

In keeping with the Cross-country days being held each month, CHAOTIC is reproducing gliding technique articles from various sources. We intend to harness the information imparted in Shane's talks and they will be reproduced as well in future newsletters.

THERMALS

Different types of soil and vegetation absorb and reflect heat from the sun by different amounts. The air close to the ground over some paddocks becomes much warmer than the air over the others. In this way, large bubbles of warm air are formed. As they are warmed, they expand and become less dense than the surrounding air. Eventually they break away and travel upwards. Usually the flow is not regular, but has much variation within it.



How rapidly and how high the bubble rises will depend on the initial temperature and air temperature variation with height. Air pressure reduces with height and this also causes the temperature of the bubble to become less. Since the lower layers (to 20,000 feet) are quite regular in this respect this temperature drop with height is constant at 3 degrees C per 1000 feet.

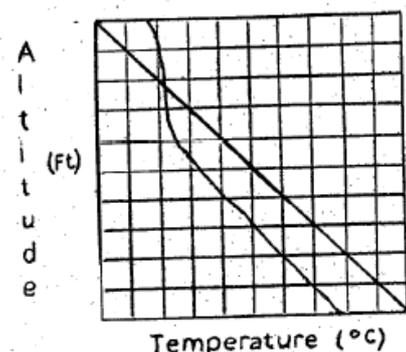
This is known as the DRY ADIABATIC LAPSE RATE (DALR). 'Dry' because the air is not saturated with water vapour. If it was, it would cool at the saturated rate which is 1.5 degrees C per 1000 feet. "Adiabatic" means there is no significant loss of heat from the bubble to the surrounding air. The thermal will rise until there is no difference between its temperature and that of the surrounding air.

The actual air temperature is measured for the day. This is called the ENVIRONMENTAL LAPSE RATE (ELR). This is graphed with the DALR to forecast the likely thermal heights. The thermal strength is governed by the initial temperature difference between the heated and the unheated air and the maximum height it is possible for the thermal to reach.

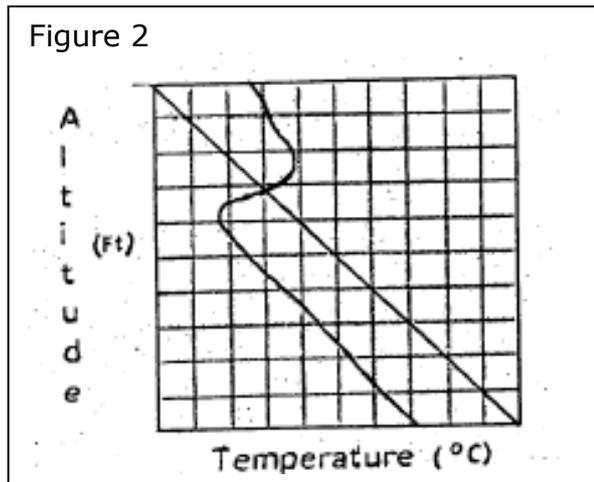
If a graph is drawn with the 1000 feet and the 3 deg C units the same size, the DALR will be 45 deg diagonal, making it easy to draw in.

Not all the thermal bubbles will get to the maximum temperature before breaking loose. The cooler ones will rise to a lesser height than those at the maximum temperature and will be of lesser strength.

Figure 1



Anticyclones often have an associated sharp increase in temperature with height. This is called an inversion and effectively produces a 'lid' for thermals.



If the thermals go high enough for the air to reach its dew point, cloud will be formed. Being dependent on temperature, the clouds will form at the same altitude and have flat bases. Any further rise on the air will then depend on the relationship between the air temperature and SALR.

Fair weather cumulus has the characteristic cauliflower shape. They have a short life (from formation to dispersal) of about 20 minutes. When the temperature relationships are unstable, once the thermal has reached cloud base, the slower rate of cooling of the SALR increases the

thermal strength. This causes towering cumulus and thunderstorms to develop. The water vapour content (humidity) is very low in inland conditions. This results in high cloud base (8000' - 12,000'), which gives plenty of height for gliding.

To understand why thermals have different sources from day today, it is important to remember:

1. The air has to be heated to a higher temperature than its surrounding environment to start to rise.
2. The sun shines through the air and heats the ground
3. The air has to be in contact with the warmer ground for its temperature to rise.

Just as a pot of water heats much quicker when in contact with a hot plate than one which is continuously moved across it, so too the air heats and produces the best thermals when in contact with the hotter ground.

The bare black surface of a burnt paddock itself heats up rapidly and on a still day will produce good thermals. However, on a day with a wind blowing, the air may not be in contact with the surface long enough to warm up.

Similar heating can occur in areas of wind shadow from hills, in valleys or wash-outs, clumps of trees and groups of buildings.

THERMALS

*As I was flying in the air
I found some lift that wasn't there
It wasn't there again today
That's twice I've had to land today*

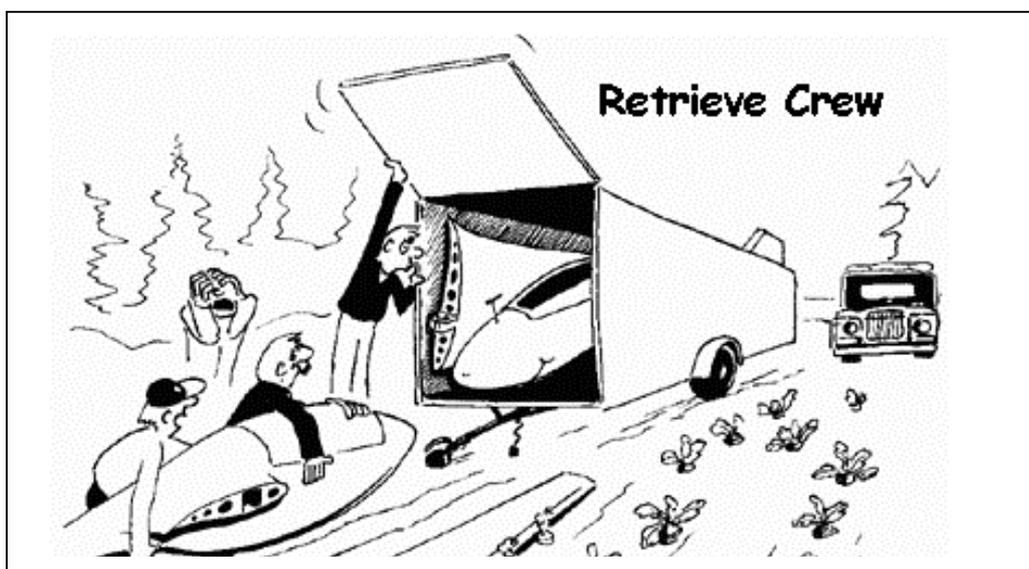
Source: Temora Cross Country Course, 1993



DDSC Events Calendar 2002

at 28 June 2002

12 Jul	Instructor Panel	
13 Jul	Scout Day and Cross-Country Day	
13 Jul	General Meeting	
14 Jul	Working Bee	
27 Jul	Duty Pilots meeting	
10 Aug	Scout Day and Cross-Country Day	
10 Aug	Committee Meeting	
14 Sep	Annual General Meeting	
15 Sep	Working Bee	
23 – 27 Sep	Teams Challenge	Kingaroy
28 Sep – 6 Oct	Qld State Comps	McCaffrey Field
18 – 26 Apr 2003	Qld Easter Comps	Dalby



Darling Downs Soaring Club

Instructor, Tug Pilot, & Duty Pilot Roster **July – August 2002**

July 2002	Instructors	Tug Pilots	Duty Pilots
Sat 6	T Cavanna D Hughes	D Cramer M Hurst	D Burrell D Dudley
Sun 7	K Senz M Codling	B Keen J Geddes	K Allen D McEvoy
Sat 13 (Scout day)	M Knight A Wetherspoon	Jenny Thompson T Barker	F Ning K Masuda
Sun 14	Jeremy Thompson B Keen	L McQueen D Gerschwitz	C Hall S Tromp
Sat 20	P Bell C Jordan	D Cramer B Ward	R Sundell R Flaherty
Sun 21	R Bennett T Lake	M Robertson D Baartz	D Ferguson L Matuszczak
Sat 27	S McCaffrey R Henderson	J Knox N Kranenburg	R Percy J Davis
Sun 28	G Brown K Senz	R Bradley D McCaffrey	H Hofmeister A Sim

August 2002	Instructors	Tug Pilots	Duty Pilots
Sat 3	R Bennett A Wetherspoon	B Keen D Baartz	B Rolfe R Green
Sun 4	T Cavanna M Codling	D Cramer R Muir	P Bart R Armstrong
Sat 10 (Scout day) (Cross-country day)	M Knight R Henderson	Jenny Thompson T Barker	J Somerville D Edwards
Sun 11	Jeremy Thompson T Lake	D Gerschwitz M Robertson	B Daniel P Downey
Sat 17	A Garrone C Jordan	J Knox D McCaffrey	B Hofmeister J Knox
Sun 18	G Brown D Hughes	N Kranenburg J Geddes	D Ferguson P Gliddon
Sat 24	S McCaffrey B Kruyssen	M Hurst B Keen	J Robinson A Flaherty
Sun 25	K Senz T Lake	D McCaffrey M Robertson	D Edwards K Johnson
Sat 31	Jenny Thompson R Henderson	L McQueen A Garrone	J Parslow J Grosser
Sun 1 Sept	P Bell B Keen	B Ward D Cramer	R Hart L Day

CONTACT DETAILS

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