

# Real Life Weddings

And some stuff about gliding.



Wedding Belles!  
Who's next?



Kissing with Confidence  
The old folk show you how!



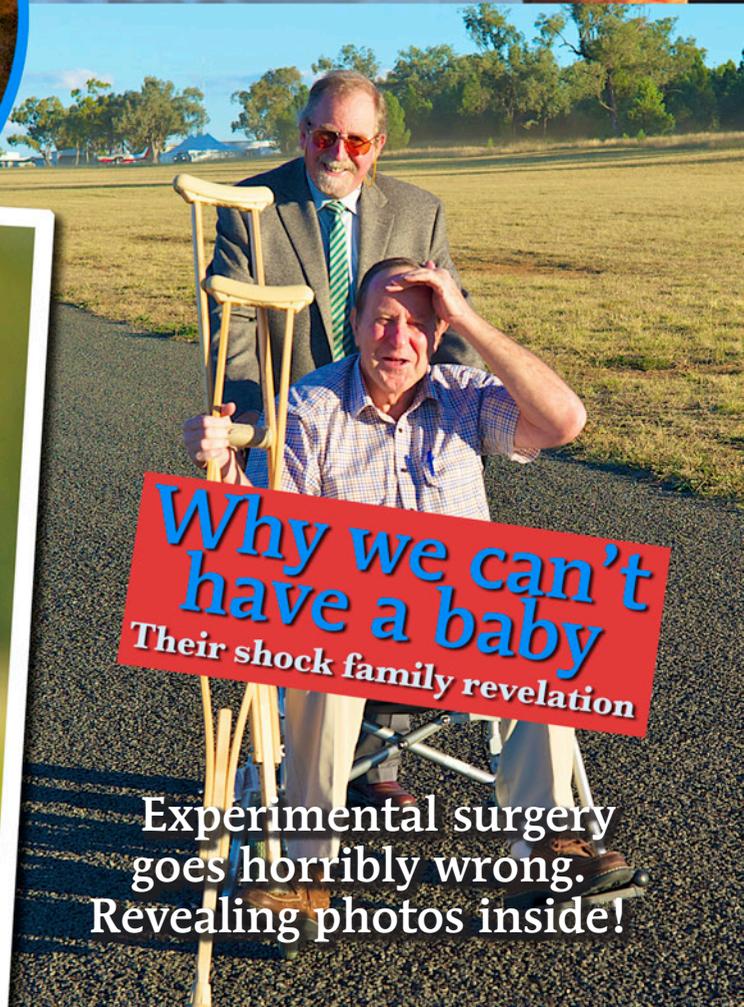
The best dressed and the worst dressed.  
50 pages of fashion hits and misses



Blushing Brides  
Waterside Nuptials  
Flowers, cakes and angles of incidence  
Getting your GPC... the easy way!



How I (finally) got my bikini body back!



Why we can't have a baby  
Their shock family revelation

Experimental surgery goes horribly wrong.  
Revealing photos inside!

## OUT OF THE BLUE AND INTO THE PINK.



At the recent LKSC committee summit, a decision was made at the highest level (Dave Shorter) to make sending out Keep Soaring a smaller and more frequent event.

What with one thing and another (work) this April-May issue of Keep Soaring has been delayed to the extent that the articles, pictures and stories have built up and up to the point that you see here. Too much!

To make things easier, there are a few more pictures and a few less words... comics to replace literature... it works for Hollywood!

Of course the big event recently at LKSC was the Wedding. As Chris Bowman noted on the night, the wedding was a major relief for the committee. There's little written down about the etiquette of the instructor-pupil relationship and fortunately our club does not have the burden of child protection duty of care to worry about... yet.

But what should the committee do when it's obvious that a club official, to wit the manager, Ian Downes, is *up to no good with a female student?*

After a long series of late-night and very secret meetings, it was decided, again at the highest level, that for the good name of the club, the student in question should make an honest man of the manager... and so it was that the president proposed to Ian Downes on her behalf and thank goodness, was promptly accepted.

The wedding itself was a grand event with an un-missable aviation flavour. It started with more or less endless fly-pasts from wings of training aircraft to vintage WW2 aircraft to autogyros and to a GA twin which was just trying to land on 14 and was held up due to the wedding taking place all over the piano keys.

Aircraft continued as the theme with the bride arriving in (her) Cessna and finished with a Cessna-shaped wedding cake which tasted a lot better than the real one, in spite of Bob's last minute mods.

The weather could not have been better. The location for the ceremony and reception was perfect, the band was great and most of all, the huge turnout of members and friends made it a really special and memorable day. Hopefully the pictures which follow will do it justice.

Fortunately the honeymoon is over and things are back to normal in the manager's office and there's someone else to keep an eye on him and make sure that he doesn't get up to no good again, any time soon.

*Complaints as usual to the Editor@Keepitsoaring.com*



## PRESIDENTS MESSAGE

It's nice that the miserable weather at the start of the year turned and gave us the most wonderful flying conditions from the time of the Regatta through till now. There have been some great flights right up to the start of winter. And even some wave flying. At the time of writing the good weather is persisting. Let's hope it continues.

A pleasing development has been the substantial increase in the number of flights being posted by members on the OLC. To date 40 pilots have registered more than 300 flights covering 66,500 km in nearly 1,100 hours in the air. There has been a gripping battle going on between Jenny Ganderton and Jacques Graells for the most number of flight, greatest distance and total time in the air, although Jenny has pulled ahead towards the end of the season. And what about Little Petunia's leading raw distance of 708kms, Steve Hedley's raw speed of 124kms/hr and John Hoye and Lee Braithwaites flights of more than 9 hours.

Who can beat these feats before the Awards Dinner on the 14th July and snatch the trophy's from their grasp? In the meantime follow the contest at <http://www.keepitsoaring.com/LKSC/index.php/competitions/lksc-x-c-ladder>.

### There are some great events coming up.

In July (13th to 16th) the 4 Day Weekends will focus on broadening members competencies – we will be working through the GPC syllabus and providing winch launching training. The GFA has advised that they are about to require Instructors to hold a GPC as a prerequisite for a rating, so why not get in early. Vic Hatfield can help.

**Our Annual Awards Dinner** is scheduled for Saturday 14th July and the Instructor Revalidation and Training Weekend on 18th and 19th August. Jay Anderson wants all you Instructors to put these later days aside.

**Maintenance Week** is from Monday 20th to Friday 25th August. David Bull is looking forward to lots of hands to help.

**The Tuggies Ball** on 6th October is timed to ensure the Keepit Safari gets off to a slow start on the 7th. This year the Safari is going all the way to Burketown for the Morning Glory. Talk to Ian Barraclough if you want to experience this amazing event.

In November we have the **Qualifying Grand Prix** from 10th to 18th. This is shaping to be the most exciting event with 19 entries so far, including Australia's best and some notable internationals.

Following immediately on from the QGP we have a major new event to replace Speed Week and compliment the Keepit Regatta. Called **Keepit Fast** (19th to 24th November), it will focus on competition coaching and be run by G Dale with the support of Bruce Taylor and Brad Edwards. Register your interest early with me. There is going to be lots of demand.

Thanks to all you responded to the Club's survey. There was some great feedback which will help the Committee to remain on track in serving your needs. A strong message was that members would like

more feedback. We commenced this by circulating the outcomes of the Committee's annual review and the Survey Results. We are now posting Committee Minutes on the website. And of course you are free to ask any of the Committee members about what is going on whenever you see them.

We have achieved a lot of physical improvements over the last year. There is the new tractor and slasher, two new gliders, a new quad, a much improved website and a new equipment refuelling facility.

Based on feedback in the Survey key priorities for the coming year include aerodrome shade structures, a glider maintenance workshop, accommodation improvements and renovations to the Clubhouse. The cost of these things is greater than the Club's current resources and we are talking to members about bridging the gap according to their ability. Some have already been very generous.

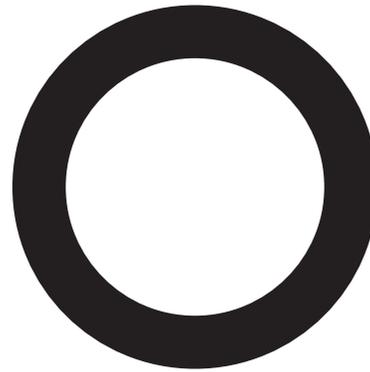
But these issues are mundane and only relate to our physical ability to lift you into the sky, so let me close with a quote lifted from Charles Lindbergh's "The Spirit of St Louis":

"Sometimes, flying feels too godlike to be attained by man. Sometimes, the world from above seems too beautiful, too wonderful, too distant for human eyes to see . . ."

That's just what gliding at Keepit is all about.

**So here's to the next great flight!**

*Chris Bowman*



*You know...for gliders...*

**Tom Gilbert**  
**T & J Sailplane Services**  
**Temora NSW**

Expert Repair and Maintenance of Gliders.  
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Geoff Sim

Trade-ins welcome except when member's wives are trying sell in their husband's Ducati

Very Late May 2012



**FOR SALE**

One or both remaining one third shares in LS6 MT and hangar at LKSC.

Includes hangar, all tow-out gear, fibreglass Cobra trailer, Mountain High oxy system, Ilec glide computer and Swiss Flarm (flight logs can be simply downloaded on a mini SD card).

Approx 3300 hrs, 3000 hour inspection completed – all mylar seals replaced etc. Re-finished in polyurethane by Peter Holmes. No accident damage.

The LS6 is renowned for its delightful handling characteristics. This aircraft is fitted with LS8 winglets and has won many competitions including The Worlds – Benalla 1987 (piloted by its first owner, Brian Sprekley).

Price - \$25,000 for one third, \$45,000 for two thirds. Will also throw in a parachute.

Contact Jay Anderson – 0418676696.

## TREMOR AT LAKE KEEPIT

A 4.2 magnitude quake struck at Lake Keepit, northeast 9.31pm (AEST) on Friday, just after the newly-married club manager of LKSC and his bride of 5 weeks had gone to bed. "He said he felt like an early night," Geoscience Australia says.

The quake had a depth of 170mm, the thickness of the average mattress.

**"DID THE EARTH MOVE FOR YOU?"**

The centre's director Dermot McSpade said these were the first earthquakes greater than magnitude 4 to strike inland northern NSW since December 1969, when a magnitude 5 quake struck near Coonabarabran.

"I was talking to people at the club. All the glass was jiggling in cupboards," he told AAP. "Terrified and under-insured glider owners were dragging their gliders out of the hangars."

"It's unusual to have an earthquake of this size. It's disgusting... especially at their age."

He said it's unlikely the quakes caused structural damage to homes in major towns, but some may have cracked walls or chimneys.

Twitter accounts have come in from Tamworth, Manilla and Gunnedah.

Leading seismologists and gerontologists are on their way to Lake Keepit to study the phenomenon.

AAP.

## GPS BATTERIES GO BANG!



Keep Soaring's foreign correspondent Jim "I'm too old to go parking but it was fun" Staniforth passed on these pictures...

"Somebody left their car GPS in the windscreen mount, in what appears to be a black car with all the windows up.

Apparently the battery didn't like it. This was in a desert town in California during summer!"

## BEAUTIFUL BUMS GO BOOM!

It's often been noted that one of the problems with the older male glider pilot is MAA...or Male Arse Atrophy (Thank's AI for that). The result is that the backs of many aging men run in a straight line from shoulder to ankle and there's little to hold their jeans or parachute up and sitting for long hours in a glider cockpit becomes increasingly painful.

Help is at hand! With the Janira Secrets "efecto boom" undies, not only can you have the perfect Latino bum for an enhanced night-life, but you can keep your trousers up without a belt and support that sagging parachute like a teenager.



The underwear leaves no mark so your gliding colleagues need never know you have MAA. Janira are reportedly working on a version which not only serves as a Camelbum™ but which also incorporates NOAH functionality.

What will they think of next!

IAN'S IPAD  
MY IPAD

JOHN - CAN YOU CHANGE THAT  
TO BEER O'CLOCK?  
TODAY AFTER WORK

110% □

Well, well, well beer sports fans - so much to tell and so little time to do it!  
After the usual hectic Christmas with family in Brisbane, it was back to LKSC  
for a well-earned rest.

But no! We were back into the swing almost immediately with students and other activities.... hmmm hmmm if you know what I mean.

Rys Porter from Brisbane was here for a week early January for training and finished the week with a couple of good solo flights.



Michael Clark, son of the Editor of this rag was also here with Rys and also soloed. This is a photo of Michael. Funny... how he looks like a bag snatcher just like his old man.

I wonder when he gets the keys to the old bastards DG808!!!

306  
19/1/12  
408

Harry (Oh to be a farmer's boy) Potts finally went back to the UK before I got him to explain what "poontang" meant. Something to do with tractors not doubt.. you can't get him off it.

Our lovely visitors from Italy, Nucia and Francesco were again LKSC after Francesco competed in the Forbes Hang-glider completion. I hope the ~~bunga-bunga~~ coming from the ~~managers cottage~~ weather did not make them miss home too much. Nucia's cold pasta salad proved to be a hit during the regatta

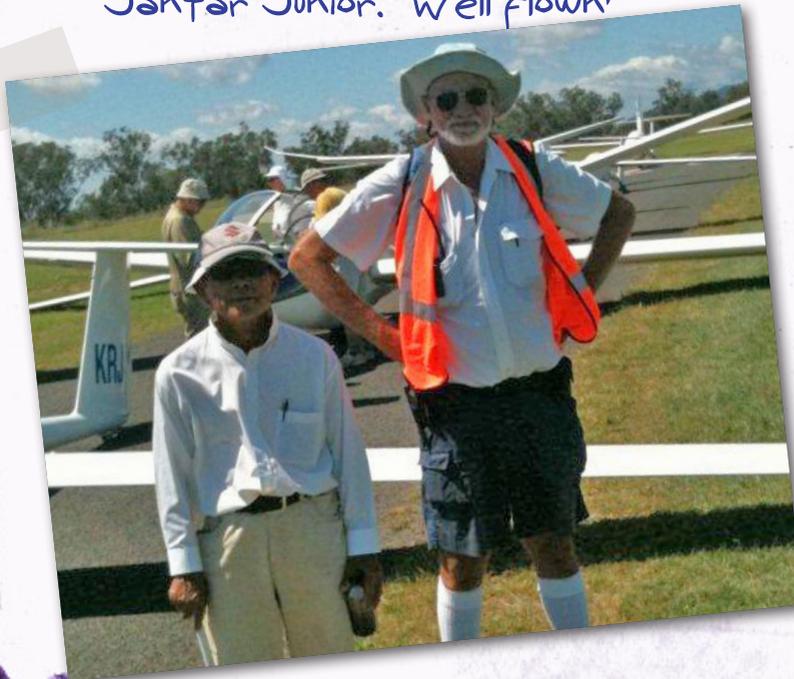


The "localist" of local members Bob Dirks, celebrates his first recorded 300 km.

Well done that man!!! He must have been so nervous that he put his bluchers trough the bottom of the fuse!

During and after the March 4-day weekend, Neva Bull and Jonny Durant both exceptional hang-glider pilots did conversion training at LKSC.

Andrew Cameron, son of the late (time-wise!) Ron Cameron completed his training and then conversion to the Jantar Junior. Well flown!



During the Regatta, the ground operation was more than capably handled by Hiroshi "Lofty" Amemya and Harry "Shorty" Potts.

During March we were fortunate to be visited by the Jakarta Soaring Club. Iffan Aviananva completed his Silver C.



Cathy Anggraina consolidated her solo flying.

After a great deal perseverance Hiroshi soloed and we look forward to seeing him back at Lake Keepit - he will be an honoured visitor.



A new addition to the LKSC Towing team is Graham Heaghy from Walcha. Welcome aboard Graham! We look forward to lots of tows to 10 knotters.

The Australian Squad were at Keepit in March for some intensive sessions on honing their skills both on the ground and in the air.



The foreign international flavour of LKSC continues with the visit of Andre Kollochka and Andrii Zazharski. Andre is now living in Sydney but both originate from the Ukraine and typify the spread of the LKSC kultur.

During the Regatta my ~~rote~~ suggestion proposal of marriage to the lovely Joy was accepted. She's made an ~~old~~ man very happy. Thanks to all who made our wedding such a

great success expect for those who tried to steal the show with their fancy clothes. I bought a whole new cossie at RM Williams (the gliding club manager's outfitter).

Tusind tak, Merci beau queve, Cheerio chaps, Hoo roo

# GOING TO THE CHAPEL!!

I HOPE I DON'T FORGET THE PLURRY WORDS IN FRONT OF ALL THESE SNOTTY NORTHERNERS ... THAT DOES NOT INCLUDE MY BELOVED OF COURSE!

WHAT WAS IT SHE TOLD ME I HAD TO SAY? I AGREE... NO... I WILL? CAN WE DO IT? YES WE CAN... NO! THAT'S BOB THE BUILDER. IT COULDN'T BE AS SIMPLE AS JUST YES COULD IT?

SOMETHING SIMPLE... SOMETHING SUCCINT... LIKE MY AIRCRAFT... MY HOUSEKEEPER, COOK AND BOTTLE WASHER. HMMM, THAT'S ENOUGH OF THAT!

IT'S DISGUSTIN' AT YOUR AGE DAD!

YEAH, AND NICE TOO!. ANYWAY, CHRIS BOWMAN TOLD ME IT WAS THE ONLY WAY TO RECOVER THE CLUB'S GOOD REPUTATION.

DON'T JUST DUMP ME AT THE BACK WITHOUT A BEER OR A VIEW OR ANYONE TO TALK TO!

SHUT IT TREVOR! OR IT'S THE LAST TIME I'LL BRING YOU ON AN OUTING WITH NICE PEOPLE LIKE THIS.



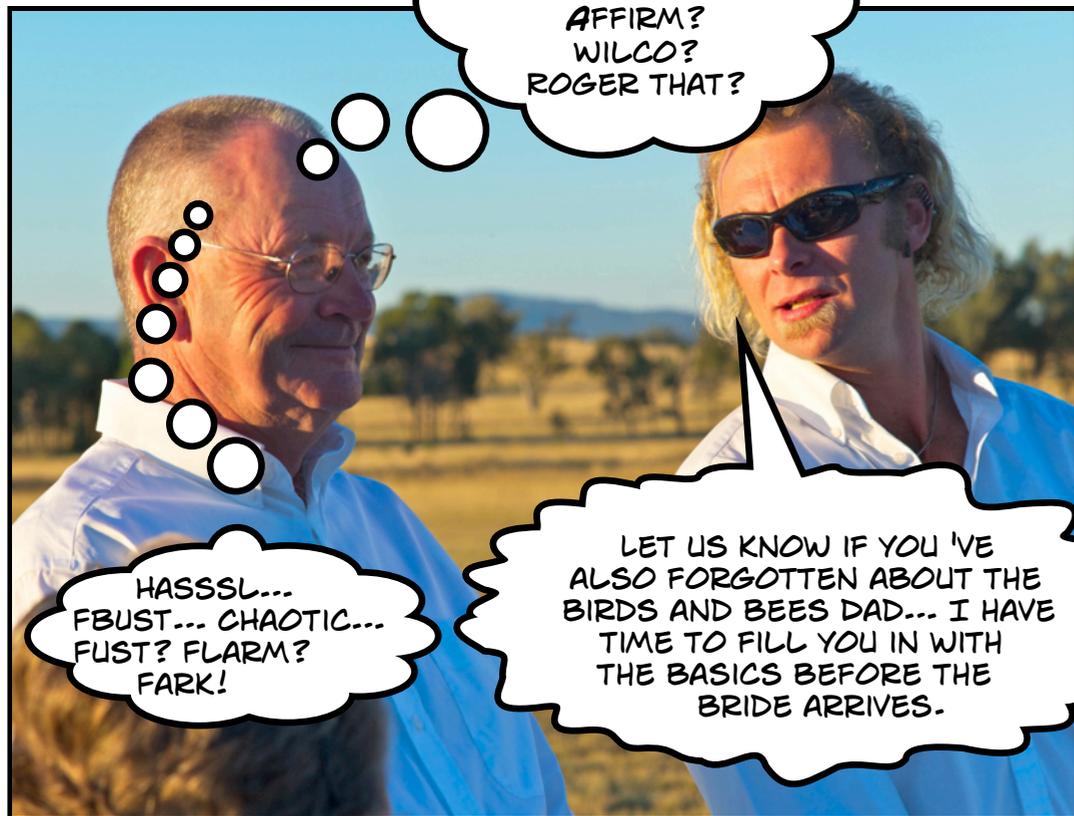
WHAT ARE ALL THOSE PEOPLE DOING PARTYING OVER THE PIANO KEYS!!

WHAT WERE THE WORDS? WAS IT AFFIRMATIVE?  
AFFIRM?  
WILCO?  
ROGER THAT?



I DON'T WANT TO GO HERE. THERE'S RABBIT POOH OVER THE RUNWAY.

IT'S NOT RABBIT POOH, IT'S ROO POOH! LIKE IT OR LUMP IT!



HASSSL... FBUST... CHAOTIC... FUST? FLARM? FARK!

LET US KNOW IF YOU 'VE ALSO FORGOTTEN ABOUT THE BIRDS AND BEES DAD... I HAVE TIME TO FILL YOU IN WITH THE BASICS BEFORE THE BRIDE ARRIVES.



AND HERE SHE IS!!

I'M NO EXPERT BUT I DON'T THINK SHE'S GOING TO THANK YOU IF YOU MAKE HER BUM LOOK BIG.

ONCE AGAIN, THE LAYOUT ARTIST SAVES THE PHOTOGRAPHER.



I WISH WE'D PARKED A BIT NEARER THE END OF THE STRIP... MY NEW SHOES ARE KILLING ME!



FORTUNATELY FOR THE LONG DISTANCE BRIDE, THE NEXT FEW HOURS WERE FILLED WITH THE ROAR OF MILLIONS OF POWERFUL AERO ENGINES... AND TWO LESS POWERFUL ONES WHICH APPEARED TO BE VIBRATING A PAIR OF TONGUE DEPRESSORS...



BBbbzzzzzzzzzzzzzzzzzzzz!!!!



zzzzzzzzzzmmmmmmmm!!!!



Phtupaphtupaphupaphupaphupa



RooAAAAARRRRGGGT!!!!

AFTER MUCH DUCKING AND GROVELLING TO AVOID THE VIRTUALLY FLYING GYROCOPTERS, PEOPLE STOOD UP TO FIND...



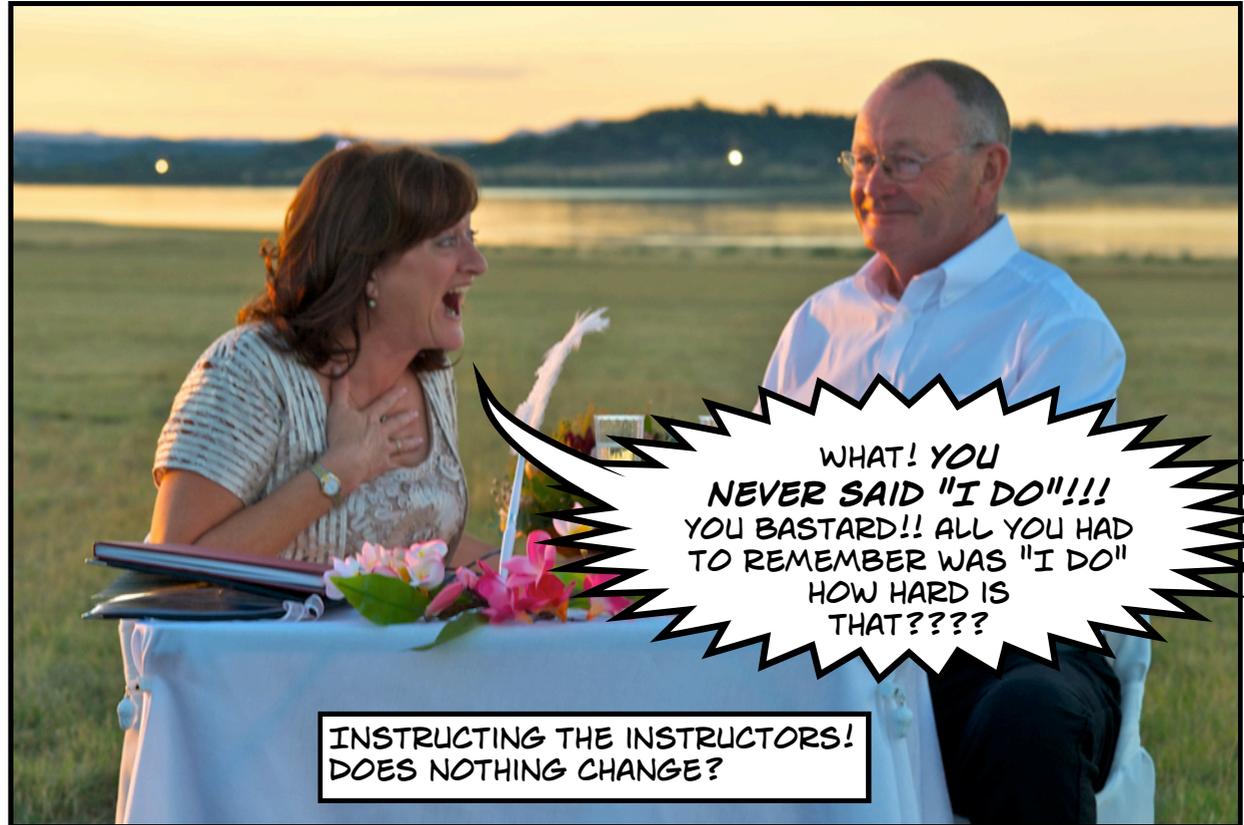
I NOW PRONOUNCE YOU **LEVEL 2 INSTRUCTOR AND STUDENT...** WHOOPS!! MAN AND WIFE... NO! HUSBAND AND WIFE... WHATEVER YOU WANT TO CALL YOURSELVES...



ALL THOSE LOVELY PLANES! BETTER GET BACK TO BUSINESS. NOW WHAT WAS I UP TO HERE.....



WAIT! YOU DON'T HAVE AN ENDORSEMENT FOR THAT **RUDE STUFF** YET!!



WHAT! YOU NEVER SAID "I DO"!!! YOU BASTARD!! ALL YOU HAD TO REMEMBER WAS "I DO" HOW HARD IS THAT????

INSTRUCTING THE INSTRUCTORS! DOES NOTHING CHANGE?

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	Points	point to finish	point for each you beat
BE Brad Edwards	6	7	7	7	5	0	32	"	24
37 Shinzo Takizawa	4	4	2	4	4	4	18	"	9
SI Sim Barraclough	5	2	5	5	3	7	27	9	10
OZ Hedley/Edwards	2	3	3	7	7	7	18	"	15
GO Mander +1	2	5	4	2	2	5	18	"	16
AB Singer/Robinson	1	1	1	1	1	2	6	2	12
CX Bob Dircks	.5	.5	.5	.5	.5	.5	3		
Super Coach									
Y/L (18m) Glenhank	-3	-3	-3	-3	-3	-3	-18		

## KEEPIT OPEN CLASS GRAND PRIX

**It really was a heap of fun.**

I first developed a taste for this type of flying when I was granted a guest spot at last year's qualifying Grand Prix at Keepit, held to select the two Australians who would go to the finals of the World Grand Prix. It was for 18m gliders. It was a lot of fun in the Nimbus 3DM, but watching these fully ballasted 18m gliders disappear into the distance sparked an idea ... we could arrange on of these events where the Nimbus would be more competitive!

There was immediate interest but mostly from people saying "possibly". The firm starters included Paul Mander and Al Buttenshaw in Paul's ASH25J, Shinzo Takizawa in his Nimbus 4DM, Geoff Sim and Ian Barraclough in the ASH25Mi and myself and Ross Edwards in our Nimbus 3DM ... a total of four gliders.

Two weeks out from the start we had what looked like eight definite starters and three more 'possibles'. The additional starters included Nick Singer with a variety of pilots in the back seat of the Duo Discus, Brad Edwards and his Chief Pilot Marion in his ASH25Mi, and Dion Weston in his ASH25M.

But the usual happened and there were a number of last minute cancellations including Dion, whose

recently rebuilt undercarriage decided not to work, so he was out. And there were a few other no-shows ... it was their loss as the event was fun and a great success.

The weather cooperated for the start of the comp on Monday. In fact it did so for the whole week, with the odd storm thrown in. Generally speaking cloudbase was 6,000ft to 8,000 ft, 6 to 8 knots climbs were available, most days with Cu's and it turned out to be one of the best weather weeks of the whole season.

As well as Brad arriving in time for the start of Day 1, Bob Dircks was granted special leave to fly his Libelle with the fleet. Grand Prix are scored with a point for each glider you beat home ... Bob was scored half a point for the day.

As organizer and scorer, I decided that I should dock myself one point for having been 50ft above the maximum start height of 5,000ft QNH and 12m past the end of the 2km long start line.

Silly me, that was about the only time this sort of thing was checked and it turned out to important on the final day. Having won the day, Brad was docked one point for not having submitted a trace. It made no difference to the outcome of course, as he went on to win nearly every day.

It is worth a look at the scoreboard at this stage to see that the event was hotly contested and yet it had a good fun feel about it. As well as a point for every glider you beat, and a bonus point if you were the winner, there were other quirky aspects to the scoring system.

There were up to five ticks awarded for spectacular finishes, with spectator amusement in mind, and 'smileys' added depending on the scorer's (that would be me) view of how happy each pilot was.

I attempted to give Brad and Marian a sad 'smiley' before the start of the last day as they were heading home, but Team Edwards claimed they had such a good time they could only accept a half sad 'smiley'.

And then an "O" was added if the pilot's trace was loaded into the day's OLC. Pilots were encouraged to ignore the fact that the tasks were not very long, and that it was quality rather than distance which mattered.

There was a protest one day over an incident at the finish. In the interests of continuing good relations between Keepit and Narromine, the protest was promptly dismissed, by the Protest Committee ... me!

As I was busy being Competition Director, task setter, scorer, social director and alcohol tester, I did not have time to blog what was happening with the event and we were even accused of running a secret grand prix. It was interesting to see that during the course of the event only visiting joy riders made written comment.

Task setting was made easy after the second day when I went on strike and just reproduced the same task each day; no one complained because no one else wanted the job.

My memories of the individual days are a bit blurred, but two days stand out. The first was Day 4 on the Thursday when a storm intervened. The task was Manilla, Rangori, Boggabri, Curlewis and back to Keepit.







It was obvious from early on that a storm was building just west of Gunnedah and that it was tracking east into the Boggabri – Curlew leg. The sky was black, it was clearly raining but there was no lightning.

Everyone went into the murk looking for a 'shelf' or lift close in front of the storm ... everyone except Brad that is.

He went 10km east of everyone else to the wisps hanging down way out in front the storm and got 10 knots up ... everyone else struggled and finally gave up, starting motors or cutting the task short to get back home. All except Geoff Sim in the front seat of SI.

After a struggle to get dome height, Ian in the back seat insisted that they limp into the Curlew turnpoint and get back home at best L/D.

They made it and were very surprised to find that instead of being last they had come second behind Team Edwards.

The other was Day 5, when Gerhard Stuck was in the back seat of the Nimbus with me. We had a blinder and managed to beat Brad by a minute or two to come in first for the day.

Gerhard had the title "Super Coach" bestowed on him! There was a huge smiley in the Nimbus column of the scoreboard that day.

On the final day the course was made Split Rock dam the first turn point where we all parted company with Brad who carried on north east to Armidale while we turned south west to Boggabri.

Geoff Sim and Ian Barraclough in SI were the stand out performers coming second most days and winning the last day. This gave Geoff second place overall behind Brad.

There was a three-way tie for third place, Shinzo, Paul and us. I did briefly consider appealing my one point deduction for missing the start on Day1, but I had a beer instead.

While Nick with Allan or Harry Medlicott, flew the Duo well, it was just not up there performance-wise to worry the bigger ships over the course of the event. That made Bob Dirks in the Libelle in seventh place.

Special leave was granted on the last day to allow Jay Anderson to fly the day's task in his 18m JS1. Jay was late to grid and was unaware of the task change where the final turn at Tamworth airport was deleted.

He did it of course and his point score was penalized heavily for having short wings and for flying too far.

And as it was a Lake Keepit event, a number of excellent meals were arranged. Bob and Jan Dircks had us all for dinner on the Wednesday night and the final night was another famous Joy and Ian BBQ.

Thanks to everyone involved for making it a great event.

See you next year.

Steve Hedley

GPO

(Grand Prix Organiser)

Ian Barraclough

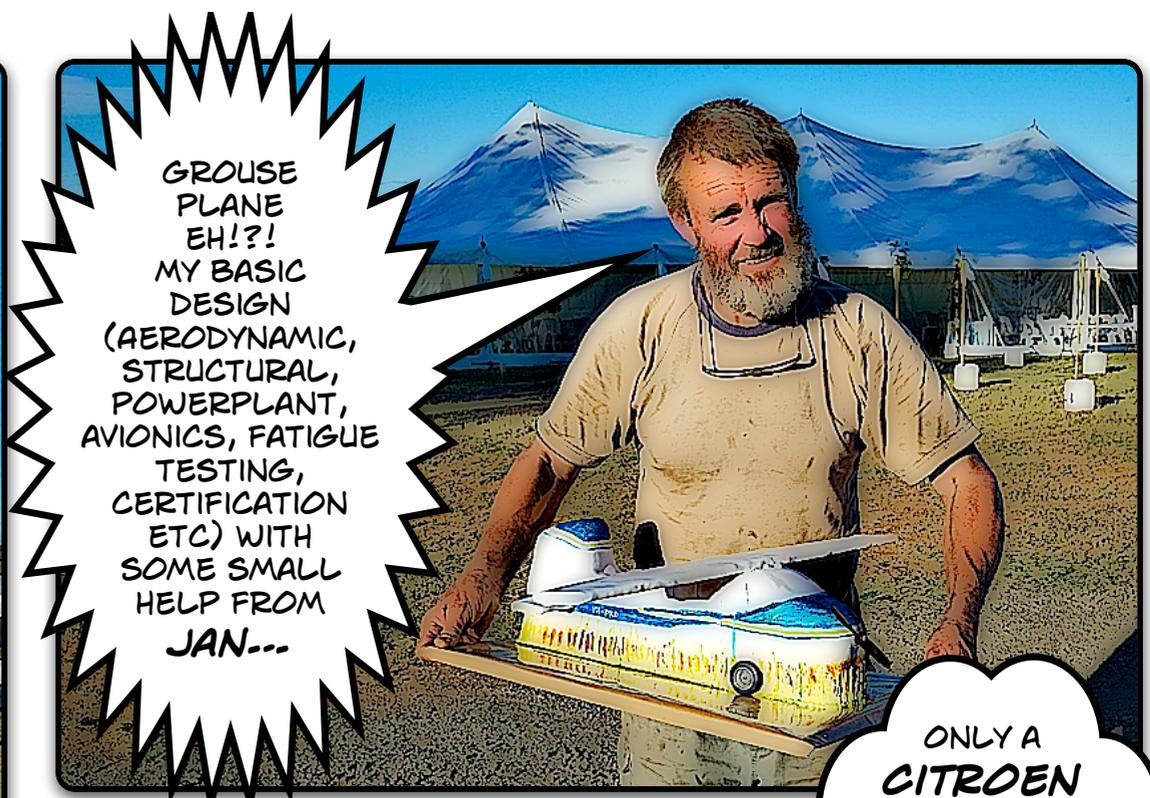
(Editorial cooperation, English language, grammar, spelling, geography, etiquette etc.)



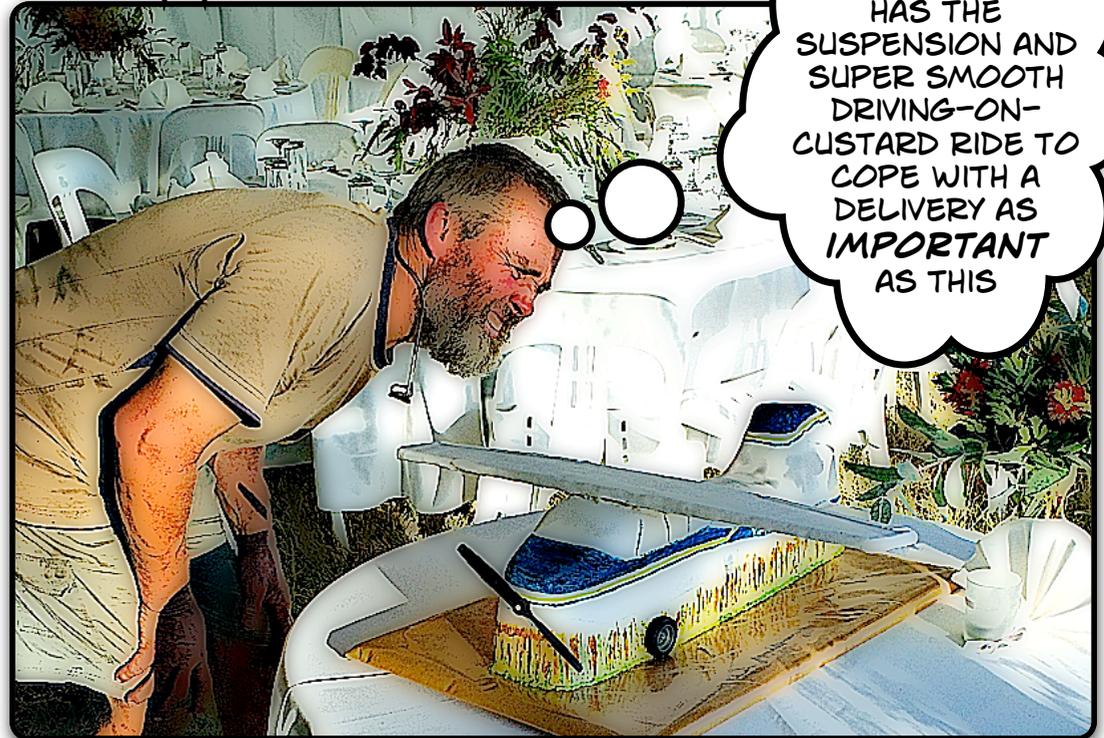
# Bob the (Aeroplane) Builder



Can we do it?  
Yes we can!!

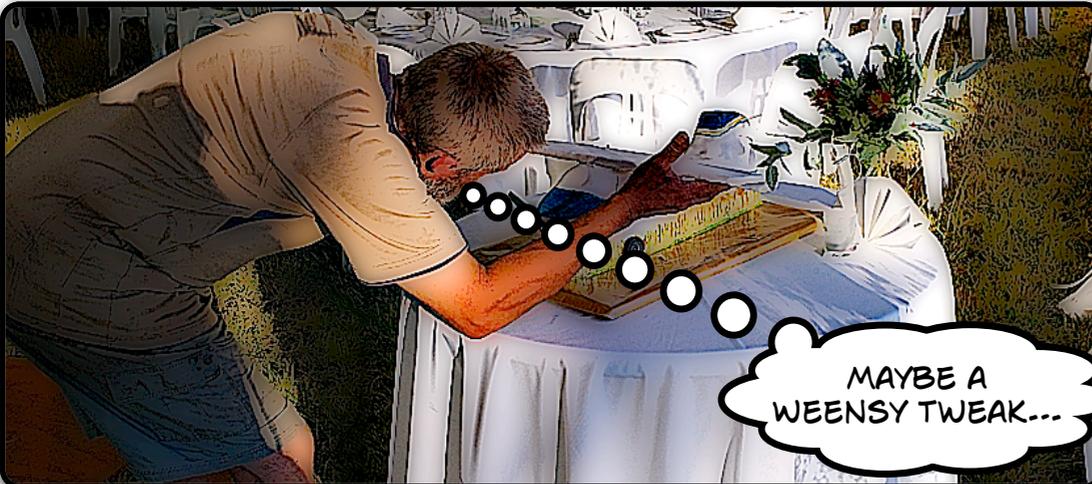
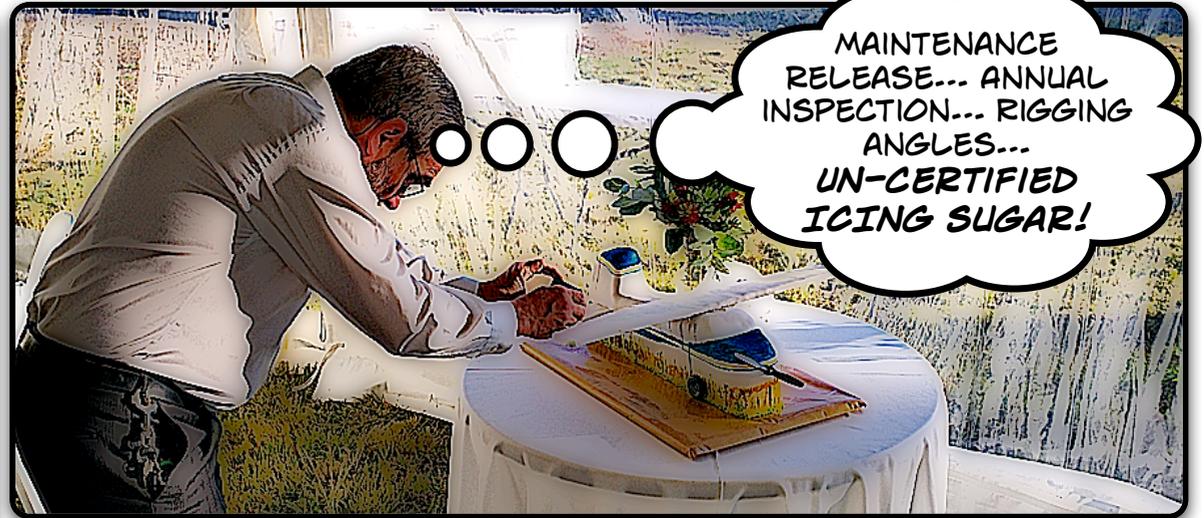


GROUSE  
PLANE  
EH!?!  
MY BASIC  
DESIGN  
(AERODYNAMIC,  
STRUCTURAL,  
POWERPLANT,  
AVIONICS, FATIGUE  
TESTING,  
CERTIFICATION  
ETC) WITH  
SOME SMALL  
HELP FROM  
JAN...

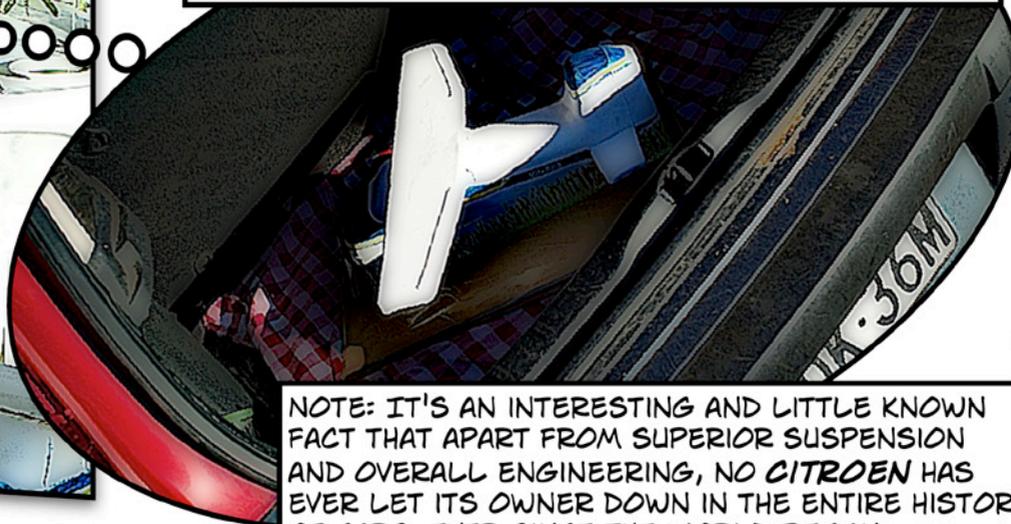


ONLY A  
CITROEN  
HAS THE  
SUSPENSION AND  
SUPER SMOOTH  
DRIVING-ON-  
CUSTARD RIDE TO  
COPE WITH A  
DELIVERY AS  
IMPORTANT  
AS THIS

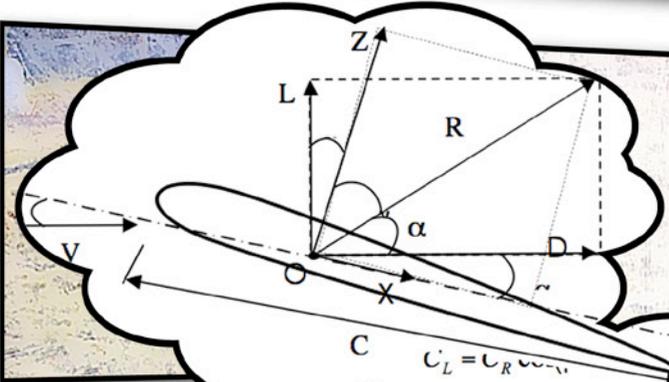
OOOERRR!! A VISIT FROM THE DREAD  
FORM 2 INSPECTOR!!!!!!



NOT THE CITROEN!!



NOTE: IT'S AN INTERESTING AND LITTLE KNOWN FACT THAT APART FROM SUPERIOR SUSPENSION AND OVERALL ENGINEERING, NO CITROËN HAS EVER LET ITS OWNER DOWN IN THE ENTIRE HISTORY OF CARS, EVER SINCE THE WORLD BEGAN...



$$C_L = C_R \cos \gamma$$

$$= C_R \cos \gamma \cdot \cos \alpha - C_R \sin \gamma \cdot \sin \alpha$$

And

$$C_R \cos \gamma = C_z \quad \text{and} \quad C_R \sin \gamma = C_x$$

Where

$$C_L = C_z \cos \alpha - C_x \sin \alpha \quad \dots(1)$$

Similarly

$$C_x = C_z \sin \alpha + C_L \cos \alpha$$





TAKE ONE CUP OF ICING SUGAR, A FRESH EGG AND A SQUEEZE OF LEMON JUICE. WHISK WITH HALF A CUPFUL OF WELL-STIRRED 5 MINUTE EPOXY UNTIL WARM. SPREAD EVENLY WITH A CLEAN TONGUE DEPRESSOR...



I HOPE THE 'POXY DOESN'T POISON TOO MANY FREELoadERS... ER PEOPLE...

I DON'T THINK SHE'LL EVER KNOW... YOU DON'T THINK SHE'D PICK THE JOIN? WONDER STUFF THIS EPOXY-CAKE ICING FOR FIXING STUFF... MUST TRY SOME ON MY PLANE. JUST THE THING FOR THE ZCV. YOU DON'T THINK JAN WILL SPOT THIS DO YOU?





## THE IRON LADY.

Recently the LS6 was out of sorts and didn't want to fly. She made it very difficult for me to climb and so I obliging returned her to her hangar for a rare Sunday rest. It was a beautiful day with good cloud streets over the sky so I looked around for a suitable aerial carriage.

The Grobs 103's were busy as had been the Puchatek but she was sitting discarded at the launch point. The rush was over and the few customers left were seduced by the charms of the newer slim fibreglass models.

Having spent many an hour flying the Puchatek when I was instructing midweek I was more than happy to fly the old lady.

She had looked after me well over the years and could take rough air and misuse by student without showing a nasty side. We took a tow to 2,000' and climbed away gently. Her tight turning abilities were welcome in the narrow cores that had to be navigated en route to cloud base.

Soon we were climbing fast and the large canopy was filled with beautifully landscapes from mountains to the plains. The dry autumnal weather had changed the colour of the landscape back to the yellow tones we had become used to over the past decade.

We followed the streets and pushed into the breeze and eventually skimmed the cloud at 7,000' near Curlewis. Lake Goran was almost within reach and

very large. Testimony to the heavy rain that we'd had some time ago.

We lingered there high above the terrain taking it all in. At one with nature, defeating gravity, following the lines of lift, soaking in the colours and textures and pretending that we could show Bruce Taylor & Brad Edwards a thing or two in their 18 meter rocket ships. (Good Luck in the World's guys)

I never seem to be able to adequately describe the feelings and emotions experienced when soaring to those who do not fly. My ex-colleagues would occasionally politely ask if I'd been flying over the weekend when we sat and chatted at tea break, they would make all the right noises but they would never

quite understand what it was all about. The normal comment would be "I'd feel much safer with an engine". How do you enjoy solitude with an engine revving its guts out? It beats me.

The shadows were noticeably lengthening and the lift became softer heralding the time to return to Keepit. All cares and worries from the preceding weeks of not flying were washed away as we descended to land.

Check for kangaroos, Plan circuit to avoid glare from the Lake, plan touchdown point for shortest walk to the hangar. The rumble of the wheel softly touching the ground confirms the end of a couple of hours of escapism and I'm ready to go back to work again.

*John Hoyer*





## LAKE KEEPIT REGATTA

Saturday 18 Feb was a club day as well as being the practice day for the Regatta, and there were heaps of people wanting to fly. Tim Carr was duty instructor and, as well as having an AFR or two to do, there were four passenger flights and an ab-initio student. Then there was a phone call to day that there was a paraglider pilot coming over some time who probably wanted a flight sometime - all very vague.

It turned out that the "paraglider pilot" was Johnny Durand Jr, Australian National Hang Gliding Champion for the last 10 years, and pretty much unbeatable. He was thinking of crossing over to the dark side so all the other cross-over hangies have no place to hide!! The rest of us had better look out too.

The instructor who flew with him didn't need to touch the controls. John did confess that he had been flying the Dragonfly hang glider tug so had some prior 3 axis experience. It had been a long time since I had seen young Johnny on a hang gliding site. He used to tag along with his dad at the age of about 10, and earn money by carrying harnesses, and stuffing battens in hang glider sails!

**Meanwhile**, there were at least 19 sailplanes wanting to launch, some of them more than once so it was a busy day. The weather was good and the task was an AAT to Quirindi Mullaley Edgeroi Manilla and back to Keepit with quite large circles except for Manilla.

The weather started brewing up a bit to the south, with a few showers toward Quirindi so most only just nicked the Quirindi circle.

Dave Shorter was boasting climbs of 11 kts, but the best I got was about 6 to 8. As we progressed past Mullaley, there was a radio call that there was a thunderstorm warning for Tamworth Keepit area, and many turned for home.

Not your intrepid writer however who thought she knew better than to believe in thunderstorms, and was out at Edgeroi when it arrived! Luckily by the time I got back to Keepit the storm had all dissipated, and the sun was shining again.

On Saturday night we had a "Welcome Dinner", with everyone sharing a delicious meal prepared by Joy Bartrup, Ann Bull and Lou Ransby. This is a great feature of this regatta - the fantastic dining experience, which is pretty much compulsory!

Sunday 19th was the first day of the "comp". As this was intended to be a coaching event, all the pilots were paired up, one being a leader and the other a follower. The score for both was the slowest pilot's score, so it did you no good to race away from your follower.

For some reason I was designated as a leader, but I felt more cut out to be a follower! Bob Dircks, my follower, is a very independent person!! This leading and following business is a skill in itself, and both leaders and followers had a lot to learn. We had a talk about it in the morning, and then into the fray!

Harry Potts, resplendent in Orange Dayglow vest, did a sterling job of marshalling gliders and tugs at the launch, capably assisted by Peter Shiels, Lou Ransby and Hiroshi Amemiya. Harry has such a perfect radio voice. We had three tugs going, flown by Ian Downes, Luke (summer tuggie) and Phil Anderton.



Phil towed, then leapt out of his tug and into his glider to take the last launch and participated in the regatta as Dave Shorter's follower.

The task set was Manilla 10km, Kaputar Tower 40 km, Mullaley 30 km and back to Keepit. Bob and I upset everyone by talking too much on the radio, but we did manage to find each other after a bit of leap frogging and flew some of the way together. Todd and Matthew Atkinson had their moments too; Matthew somehow managed to turn his radio down, and Todd thought he was ignoring him.

**Meanwhile**, they got it sorted out, and then seemed to manage very well. Vic Hatfield and Ian McPhee, flying in self launching Grob 103 LL, were paired with John Trezise in his LS4. They said he was the perfect follower, always there in the flarm radar! Dave Shorter and Phil Anderton were another very successful pairing.

The day was not totally straightforward. There were clouds, quite low only about 6000ft max, and not always reliable. There were huge areas of sink around Mt Borah, and huge areas of air containing paragliders and hang gliders - none of which seemed to be in any lift that I could find, but somehow some of them managed to go up! Jacques Graells, Matthew Atkinson and I had a somewhat "interesting" time in this area, but we did all manage to get up eventually.

Bob and I did manage to get round the task - just nicking the circles - but it was decidedly iffy on the last bit between Gunnedah and home, as the sky just fell apart. I managed to get up to 5000ft in about 1-2 kts near Kennedy's airstrip, Bob did not quite get as high.

Meanwhile Jacques had a booming 0.4 of a knot near the airport, which eventually turned into a screaming 1.4 kt thermal. I managed to squeak over the Carrol range, but needed another 500ft to make it back to Keepit. I found the necessary thermal over a ploughed paddock, with a nice white glider sitting gracefully in the centre of it. I was able to mark the thermal for Jacques, and climbed up high enough to try to go back for Bob - but he made a miraculous low save just west of the Carrols, and made it back under his own steam.

There was only the one outlanding for the day, and better and faster pilots did not grovel as much as we did!

Jacques did the scoring, and would only take pilots' traces from the OLC. He was very stern about not downloading traces for people - he said they just had to learn to download their own trace and post it to the OLC! And they did learn - we now have many more Keepit pilots posting to the OLC, which is great for publicising our club.

The day was rounded off by another excellent meal and abundant good company.

There was quite a bit of rain during the night, and next day we had thunderstorms predicted for early afternoon. However the weather forecast on Lookoutthewindow.com didn't seem too bad, so our intrepid task setter Dave Shorter set a task. Tambar Springs 40km, Narrabri 50 km Manilla 15 km Lake Keepit - making the minimum distance a modest 137 km. There was a lot of whinging at the briefing about Bob and I on the radio, so we determined to try not to talk so much and stay closer together!

I had a distasteful morning, as you do sometimes - nothing seemed to go right, the end result being that I was late gridding so was right at the back. This turned out to be quite fortunate in the end because it gave Bob a good chance to get established before the start, and it wasn't easy - there were a few relights and one or two dummy-spits!

Cloud base was pretty low, and once again the clouds did not seem to fulfil their promise. If you were lucky enough to find a good thermal, the cloud often formed above you. It was quite windy too, so progress was slow. There was a lot of difficulty even reaching the start points, but things did start to improve. I found a thermal over start point C1, and waited in it for Bob to join me.

**Meanwhile**, Dave Shorter and Harry Medicott set off toward Tambar Springs. Dave's follower elected not to attempt the task and Harry did not have a follower. Vic and Ian in LL had a stab at it, but didn't get far, and didn't submit a trace. Their follower gave it away.

Garry Speight flying in his twin astir with Graham Holland ventured away from the start and got to the hills just past Gunnedah before beetling back home. Garry Ransby and Geoff Sim went a bit further - I didn't hear either of them on the radio. I thought Bob might want to give the task away, but undaunted, he got the start, and followed me over the Carrols.

We managed to be at the same height in the same thermal for once and headed off toward Gunnedah. I encountered no lift before getting to Gunnedah aerodrome, unfortunately Bob's Libelle just didn't quite have the glide to get to Gunnedah aerodrome, and he landed at a small airstrip quite close to it. I offered to retrieve him, but my offer was rejected in favour of David Bull and Luke!



**Meanwhile**, there was a huge big black cloud brewing to the south west, and it seemed to be advancing on our area fairly quickly. Sparks were coming out of it, and the conditions fell apart past Gunnedah. Dave Shorter and Harry Medicott elected to give up and come home. Todd Clark and Matthew Atkinson were the standouts for the day - getting into the Tambar Springs circle and heading north for the Narabri one.

However Todd deposited Matthew in a ploughed paddock on the way home climbing away from 500ft himself - he didn't think there was much point in both of them landing out! As penance he went on the retrieve - they were just driving out of the gate with the glider in the trailer when the rain started.

Boy did it rain!! From about 4pm right through half the night it poured down. We had to have our delicious three course meal inside the club house instead of outside under the shade sail as we usually do.

Jacques scored the traces that were put in - but since nobody did the task, no points were awarded.

After all the rain nobody thought the flying would be much good on Tuesday. There was a low overcast and it all looked soggy and miserable. So we had a talk by Harry Medicott on safety - not just the normal things, but what to do if you stuff it up!

There was also a talk from Garry Speight entitled "My Brilliant Career" complete with statistics! Garry's conclusion is that getting a better glider does not improve your overall cross country speed - just means you don't get as low!

After that, the sun was coming out, and things seemed to be drying out, so a half hearted, not scoring "run task" was called - Gainey's, Ag45, Gunnedah Lake Keepit as many times around as you could do in 2 hrs. A few brave souls took to the air.

Those of us who didn't fly looked a bit silly later on, because the sky got better and better, and it looked really good. In fact Todd and Bruce Taylor went to Merrylands Edgeroi and back - but they are flying JS1s. Others who flew early said it was rubbish, but it definitely got better later on, and Bruce said there were good climbs out to the west.

Ian Downes flew with Johnny Durand Jr in the Duo Discus and they spent a couple of hours soaring visiting Mt Borah and Gunnedah aerodrome, where they had a low save. Ian said he only had to do the take off and the landing and John did the rest. An awesome start to his sailplane flying career.

After a nice dinner in the club house, some of the boys did the washing up - but not all were willing to be photographed in case their wives got wind of it!

As you can see from the pictures, the sky was grey and not much happened. **Meanwhile**, we had a very interesting talk from Bruce Taylor, who took questions from the floor - mostly about trying to find patterns and energy lines.

Another run task was called, and most pilots did grid, but although there were some wispy cu under the overcast, the air felt very dead on the ground, Allan Buttenshaw and Dave Shorter took a launch each - they didn't come straight down, but they did come down.

I think Dave managed about 40 minutes but didn't venture away from the field. We got the winch out, and there were lots of launches in the Puchatek pilots getting winch endorsed or regaining currency. Harry Medlicott drove the winch all day. Nobody would have bothered flying on aerotow - but we had plenty of winch launches. It's good to keep current on the winch and fun too.

Thursday was a much better day very little wind, cumulus, but cloudbase pretty low. It overdeveloped and went showery over Kaputar.

We had quite a talk fest in the morning after briefing with Allan Buttenshaw talking about radio procedures, and me waffling on about avoiding airspace. Todd gave us a couple more brief hints about being a leader. As a result, we were probably a bit later than the optimum time taking off. The task was Manilla 10km, Edgeroi 50 km Merrylands 40 km and back home - circles almost touching.

Bob and I managed to stay together for the start and to Manilla. Then we turned to fly parallel to Mt Borah under some clouds and it all went pear shaped.





The clouds didn't work very well but I found a good climb eventually. Bob flew in underneath me - not all that much lower - and did not manage to pick up the lift. I should have descended to his level at that point and helped him find it but I didn't until it was too late.

Bob did a good circuit and a safe outlanding close to the road, and I was able to relay a message to base for him. I really have a lot to learn as a leader. It means you have to know where you are going yourself!

**Meanwhile**, many others were have an ordinary time of it too. Two self launching gliders surreptitiously started their engines. Todd and Matthew were on the radio as fair bit they seemed to manage to stay together. Dave Shorter and Phil Anderton stayed together- Phil got low at one point and Dave coaxed him into some lift, and he got up again and made it home after another low save at Tranquil. Allan Buttenshaw and his follower Ben Brooks, both flying Jantars, made it around the course.

John Trezise started off following Vic Hatfield and Ian McPhee in the Grob Twin 3 LL, but left them behind when they started their engine.

Then he tagged along with Todd and Matthew for a while, then left them behind too, and did the rest of the task on his own. A good many of the pairs seemed to end up in one large gaggle. Once again, flying was followed by a sumptuous meal, and much analysis and arm waving at the dinner table.

On Friday the task set was an AAT Quirindi 30 Baan Baa 40 Manilla 10 LKSC. The day was slow to get going. Nick Singer in his self launching Pik 20E was first to take off as a "sniffer". Harry Medicott went next with his Ventus 2CXT. They struggled for quite a while, but once they got a few consistent climbs, the rest of the field was launched.

**Meanwhile**, it wasn't all plain sailing, and quite a few of the "followers" bombed out. Some took a

relight, and some didn't. My follower Bob Dircks sacked me as a leader after I put him in a paddock the day before, so I had Ben Brooks in Jantar IZV instead. Before I had a chance to lure Ben into an outlanding, he landed back at the field and elected not to attempt the task.

Conditions got better as the day went on, with climbs to 7000 ft, but it was mostly blue. There were a few bits of cumulus later in the day to the north of the area. Dave Shorter deposited his follower Phil Anderton at Kennedy's airstrip. Gainey's airstrip was a popular stopping place too - that last Manilla turn caught a few people out. John Trezise following Ian McPhee and Wendy Medicott in LL had a very good day, and got round the task.

**Meanwhile**, Chris Bowman in the club LS7 and Rob Smits in the Duo Discus stayed together very well, but they didn't turn the Manilla turnpoint. Todd and Matthew stayed together well too, and both completed the task to win the day. Garry Speight flying with Graham Holland in Twin Astir IKX, unfortunately visited Gainey's. but his follower Brian Kranz in Cirrus OX made it home.

All this was followed again by a huge dinner, and amazing dessert, so we all had a heavier wing loading for the next day.

Unfortunately the last day was grey and overcast - we had a Q&A talk with Jonny Durand, the Australian National Hang Gliding Champion, for the past 10 years. He planned to learn to fly sailplanes at Lake Keepit after the Hang Gliding State Titles at Mt Borah had finished. After some thought a run task was set - 1.5 hours. Some gliders launched and did manage to soar, but no-one made it around the task.

Despite the somewhat less than ideal weather, the Regatta was a great event - and everyone had a good time, and put on kilos owing to the good food. Eating together in the evenings and having a good yarn about the day made it very enjoyable. And we all learned from the experience.

And the winners were -----Todd Clark and Matthew Atkinson

My conclusion? Being a leader can be very frustrating, and requires a lot of practice and patience to do it effectively. Try thermalling with your airbrakes open trying to descend in a thermal that everyone else is climbing in! But doing it well can be very satisfying - and lots of fun.

## MORE REGATTA RECOLLECTIONS

More than 12 months ago, Greg, Justin and I bought a beautiful LS-6c, VH-JUS. Last year I flew it only for one hour, so this year my aviation new year's resolution was to spend some quality time getting to know the glider.

The 2012 Keepit Regatta provided me with an ideal opportunity to get to know the glider, and to increase my very limited cross-country experience. I turned up on the first day to find myself paired with Dave Shorter and his new JS-1 glider. I was happy. Dave is a great guy, an excellent Treasurer, and he has a reputation for not being timid or shy when it comes to cross-country gliding! Why not start at the deep end?!!

The weather was marginal and I flew only for 3 days. The first of these was a very successful 5.5 hour flight to Manilla, Kaputar, Mullaley and back to Keepit, faithfully following Dave and his glider into all kinds of "interesting" situations.

Generally, the LS-6c performed reasonably well compared with JS-1. I found that after longer straight flights between thermals (10-30km at 60-80kt), I was about 3-400' lower than the JS-1 at the end of the flight, as we entered the next thermal. This was probably due to my less than perfect skill getting the most out of the glider in level flight. Dave was most polite, generally finding good thermals for us and patiently answering my dumb questions about trigger points, clouds, sink and glide angles.

That day I managed to extricate myself from a dodgy position very low "600-750" over the brown fields North of Tranquil. I was unaware that Matthew Minter was nearby, reading my registration placards and wondering at the lack of height!

I had a circuit planned to land at Tranquil if necessary, however I found some nice buoyant air over the brown fields and managed to explore it systematically till I found consistent rising air. I "centred" in this very weak thermal (about 2 knots). After 20 minutes I had enough height to push for home, and, thanks to more buoyant air on the way, made it home with height to spare.

I learned some valuable and unexpected lessons from the Regatta. My problem is that, as a power pilot, I am used to flying in straight lines without losing height. As a result, I get a bit edgy flying between thermals with the vario showing 2-4 kt down, sometimes 6-7 kt down in sink. Of course I should not be worried about descending between thermals. Chances are that on a reasonable day a thermal will be found and height regained! If not, then I have learned to always keep an eye out for a "suitable" paddock. If in doubt "land in dirt and you won't get hurt".

The other lesson I learned was that, even approaching circuit height, a glider can fly a long way between potential landing areas if really necessary. In the absence of sink, I can fly about 10km for every 1000' of height above ground (That is a great "rule of thumb"). If you draw 10, 20, 30 km circles centred on Lake Keepit, it gives you a good general idea of the height needed to get back home from the local terrain.

So thanks to the Bull family, and to our hard-working Manager and Committee for running a great Regatta. I flew about 15 hours all up that week, and only had one out-landing at Kennedy's airstrip. I am now officially "hooked" on cross-country gliding. The LS-6c VH-JUS is a dream to fly.

*Phil Anderton*

# TROUGHS AND CONVERGENCE

At the multiclass National championships at Tocumwal, on the second last day we flew a trough line – one of the most exciting day's flying I've ever experienced!!

## SO, WHAT'S A TROUGH?

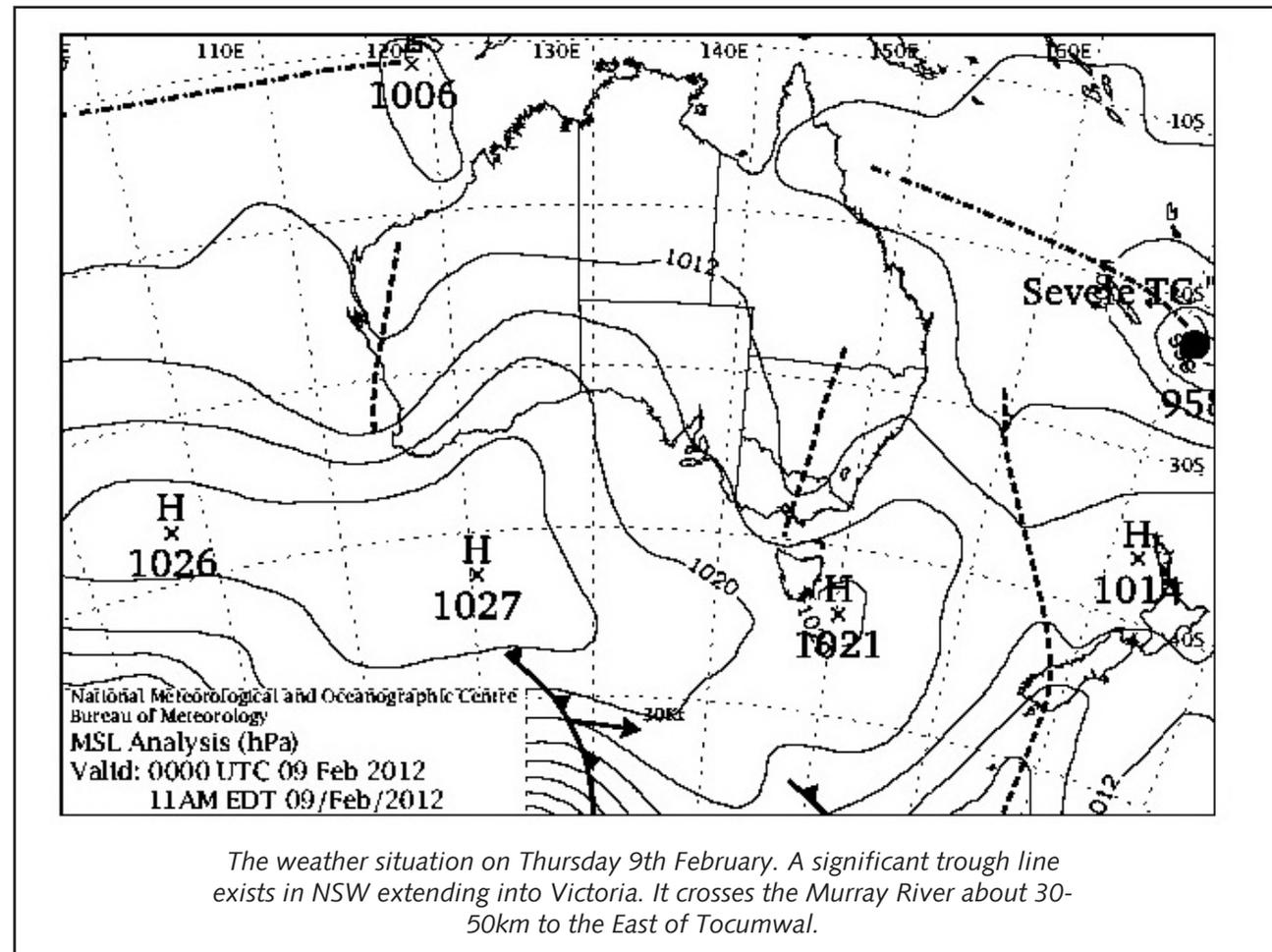
Here's some very basic meteorology.

I like to think of a trough as a “valley” of low pressure which often intrudes into an area of high pressure. Looking at the contours of a synoptic weather chart the trough may look like a “valley” leading into the side of a high pressure mountain.

The synoptic lines of constant pressure have a kink in them where trough intrudes, and the trough is normally marked on the chart with a dashed line ----- . If you were to travel across the trough at constant elevation the pressure would drop and then pick up again on the other side.

A dominant weather feature in the eastern states of Australia in summer is the “Queensland trough” which runs north south from an inland low pressure system in north Queensland (the “Cloncurry low”), sometimes extending into NSW and Victoria where a high pressure area is sitting.

This trough is a heat low, generated by intense solar heating in the arid tropical and subtropical inland areas causing the air to expand vertically and pressure to



drop. The low pressure trough sucks in moist easterly air from the Coral Sea, which rises in the trough area, causing cloud, rain and storms. Much of Queensland's wet weather during summer is caused by this trough system.

The winds flowing around a Nth/Sth “Qld trough” may be moist NE on the eastern side, swinging around to drier SW on the west.

The trough is almost invariably a dry-line separating the moist maritime air to its east from the dry

continental air to the west – the dew point difference may be as much as 20°C over a very short east-west distance.

Pre-frontal troughs of low pressure are the other trough systems we commonly observe in Australian weather patterns. They are associated with the passage of cold fronts through eastern Australia and migrate ahead of the front.

## GLIDING AND TROUGHS

Troughs can destroy a day's gliding (or a week) with overcast, rain and storms. Troughs are normally marked by a line of cloud, instability and often a major source of thunderstorms. The movement of troughs is variable, erratic and unpredictable. They can move in from the west ahead of a front, may pass overhead and then even retreat back again westwards.

When they are being fed by moist maritime air from the east they normally produce rain. Not good for gliding.

However they can also be magic for gliding.

If the inflowing air is relatively dry, then the trough can be a line of continuous cumulus cloud, seemingly going off into the distance forever. The most perfect of cloud streets. Even if moist air is flowing in from the east, the western side will be marked by cumulus formed from the drier continental air.

Harry Medlicott relates an intriguing story about a trough: "The first 1,000 km flight out of Queensland was flown by Col Norman. His southern turn point was Edgeroi which was the southern extremity of the typical trough system.

On the way south he was on the eastern side of the trough and had a NE tailwind. After turning Edgeroi he headed towards Roma and had a SW tailwind. Achieving a 1,000 km flight in a Mosquito on a day when the lift was only modest is pretty impressive." This shows what can be done when utilising favourable trough conditions – this remarkable flight stayed in the record books for many years.

## HOW DO YOU FLY ALONG A TROUGH?

It's the same technique as flying any cloud street except that the clouds are more concentrated, and there may be blue air out to one side.

- You need to be far enough under the trough to benefit from closely spaced clouds, while staying away from rain and storms which may be encountered in the centre. At least one or two clouds in from the edge of the trough. Where is the strongest stuff?

- You're probably best to stay around 500-1000ft below cloudbase so you can see the shape of each cloud – get too close to cloudbase and you can't see the strong black bits.

- When going between clouds, look at the next cloud for the strongest looking base; small tendrils; the shape and form of the upper section of the cloud. What looks nice and firm?

- Don't be afraid to make significant deviations to fly through the strongest lift. I've made 45° deviations, and more, to ensure I track under a good line of clouds.

- Try and line up multiple clouds in a row so you continue in lift for as long as possible. Remember to look a long way ahead to plan your route.

- Let your wings tell you where the strongest lift is, and follow that cue. One pilot who flies these conditions extraordinarily well has been described as a butterfly – testing the air this way, and that way, all the time changing to find the best air.

- As you leave the cloud consider running around under the back edge of the cloud – often there will be wisps trailing away from the cloud in the direction you're going, and strong lift off the back edge – clouds

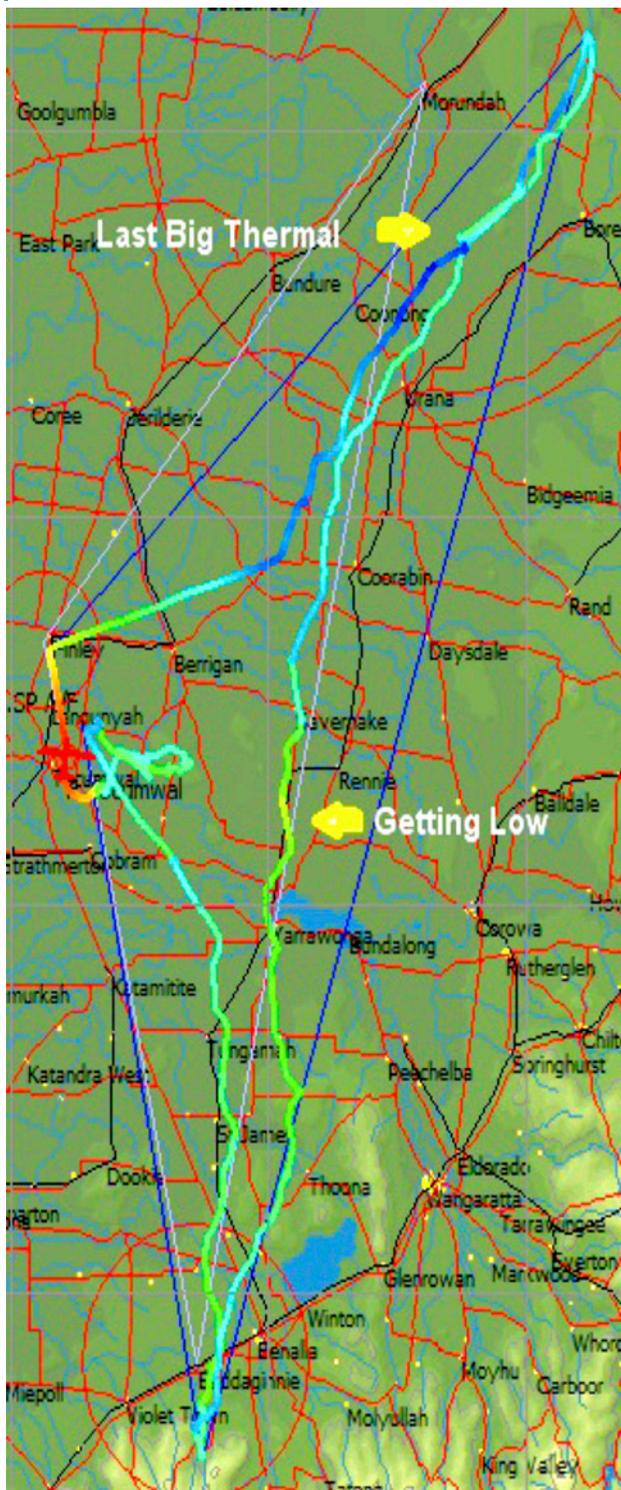
are not always round, and if they are elongated you can prolong your stay in lift by running under the elongated edge. Follow the wisps to the next cloud.

- Only circle in the very strongest of lift – if you're finding regular pull-ups of 6-8kts of lift you don't want to turn in this – wait for the 10-12 knotter, which you'll feel with a real surge of very smooth air. You don't want to stop while you're getting such a good ride – keep going forward.

- It's hard to say what speeds to fly – flying at speeds so you don't lose too much height is probably a good rule. That may be 100kts between clouds, pulling back to 60-70kts or even less in lift. If this loses too much height and you're having to stop and top up too often maybe back off as much as 80kts with 50-60kts in lift. It's important to minimise circling so you need to keep a bit of height.

- Consider stopping for a top up if you see a blue hole ahead – or fly around the blue hole under clouds if that's possible.

- If your turnpoint is not under the trough, consider running off course till you're almost abeam your turnpoint, and then duck out sideways to take your turnpoint. It may also be worthwhile returning back into the trough to continue to the following point, even if this means a substantial deviation. Averaging say, 150-160kph under the trough may be much more profitable than flying out in the blue on a more direct route.



## THAT MAGIC DAY AT TOCUMWAL

The synoptic chart above shows the weather situation we were presented with at briefing. A trough to the east of us, with the possibility of storms and rain in the trough. Clearly visible as a band of clouds to the east, with early signs of storms billowing up above in the distance. Pre-start, the edge of the clouds was about 30 km away from the nearest start point. It was blue overhead, and all the way across to the trough line.

The task was down to Baddaginnie, near Benalla, up the expected line of the trough North to Morundah. The task setters were worried about storms and the unpredictability of the trough location, so set an AAT (assigned area task) with big radii around the turnpoints.

Juggling pre-start was a real problem – not much more than 5-6000 ft achievable and in the blue I got low again. Cloudbase of the trough clouds looked more like 7-8000ft and I thought I could fly the 25-30km across to the clouds, get high and glide back to the easternmost startpoint for a 5000ft start – no chance!

In desperation I flew back near the start, picked up a few feet, and thought I'd better get going whatever the height – and stumbled into a blue thermal that took me to 7000ft at my startpoint.

From there a bee-line to the trough via a convenient Cu that popped just over the Murray river. I flew into the second line of clouds and then ran south for 87 km without turning, glorying in the abundant lift.

Got a bit low towards Benalla and had to take a less-than-desirable 5 knot climb to regain contact with the clouds, before turning near the bottom of the circle.

On the way north and approaching the Murray River the system got a bit disorganised and I found it difficult to link good clouds together. I didn't like the look of the black stormy stuff to the east, cloudbase out there was appreciably lower, so I tried the Westerly line but couldn't get any worthwhile lift and ended up getting low north of Yarrawonga – or at least 3000ft seemed pretty low and not nice when everything was booming upstairs and the clouds ahead didn't look so good.

So I circled to gain 500ft in 4kts, and then another 1000ft in 4½-5kts so I could safely press on. This was my slow point and cut back my average speed considerably – much teeth grinding as I imagined everyone else zooming overhead past me.

Things got better from then on and I had a magic carpet ride for the rest of the flight. I again contacted the black clouds and pulled up from 5000ft to 7000ft without turning. I saw a few gliders returning south overhead at around 8000ft and looking forward I could see continuous strong black clouds bottoms aligned in a street going NorthEast. Follow that as long as I could, off to the NE of the turnpoint and turned for home.

There was an extraordinary red paddock we saw the day before with probably a dozen dust devils spinning off the ground. My route home took me over this paddock again, and I could again see dust devils rising from the red earth – surely there's lift there!! And it was – testing the air I eventually found a boomer of 12½ knot for much of the climb, which I was happy to ride up to cloudbase.

## CONVERGENCE

### SP A/F - Baddaginnie - Morundah - FinleyAD - Tocumwal

Distance: 468.2km  
 Start: 14:31:09 at 7130ft  
 Finish: 17:43:01 at 599ft  
 Duration: 03:11:52  
 Speed: 146.40km/h, XC Speed: 138.37km/h

Circling:	Time	Vario	Alt.Gain	Alt.Loss	Thermals
Total	00:24:09 (13%)	4.5kts	12375ft	-1440ft	12
Left	00:07:00 (29%)	5.1kts	3770ft	-174ft	3
Right	00:17:09 (71%)	4.2kts	8606ft	-1266ft	9
Tries (<45s)	00:02:51 (1%)	1.2kts	958ft	-623ft	5

Straight:	Time	Dis.Done	Alt.diff	Netto	Avg.GS	IAS	Glides	Avg.Glide	Mean L/D
Total	02:47:43 (87%)	507.5km	-17470ft	1.7kts	182km/h	165km/h	13	39.0km	95
Rising	00:56:42 (34%)	153.7km	40007ft	4.4kts	163km/h	150km/h			-13
Sinking	01:51:01 (66%)	353.8km	-57477ft	0.3kts	191km/h	173km/h			20
Netto rising	01:41:43 (61%)	297.2km	9003ft	4.7kts	175km/h	161km/h			-108

Tocumwal was still over 100km away and out to the southwest in blue air. I was a bit wary about the chances of finding anything in between, so deviated back south along the trough line until I had final glide home.

That 12½ knot thermal was the only thermal I took after turning the northernmost point 145km away from home and from that thermal home was a 117km glide at 110-120 kts – what a day!!

The post-flight analysis was interesting and showed up how badly my second leg was in comparison to the rest of the flight – that's where I got stuck. I stopped for just 2 thermals on the first leg with one 87km glide, and one thermal on the last leg with a 117km glide.

But getting out of the low spot on the second leg I stopped 9 times for lift – very costly, and my speed for this long leg was just 139kph which dragged down my average.

Interesting to see also the average netto for the flight of 1.7kts positive – that's saying that the average air I flew through was rising at 1.7kts throughout the flight. Picking buoyant air at all times is something we need to strive for on all flights - it makes an enormous difference to your result.

At 146kph this flight was only good enough to get a 5th placing – the master Bruce Taylor returning a 156kph result. Incredible!!

One feature of this day's flight that I completely missed was the significance of cloud formations. Bruce Taylor and Miles Gore-Brown pointed out what was actually happening at the following day's presentation.

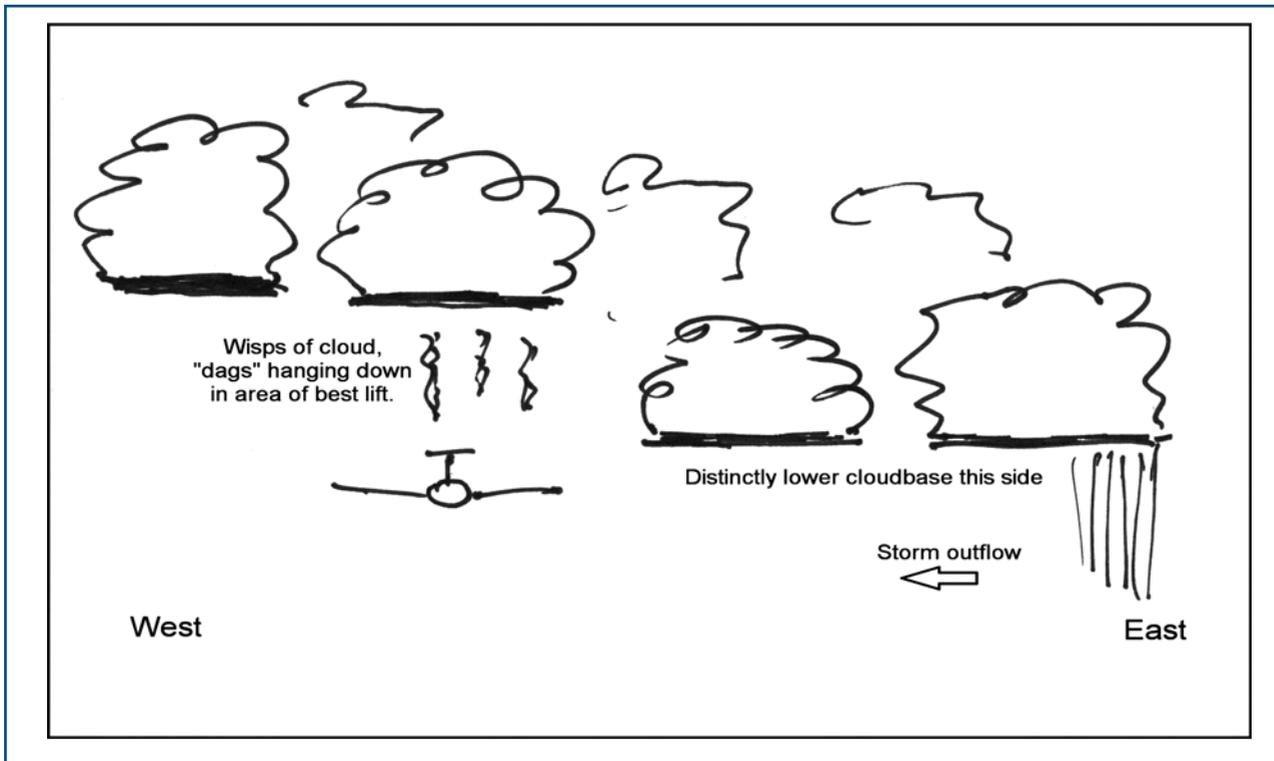
For a lot of the flight going north the clouds looked a lot like the drawing on the following page.

To the East there were black clouds, solid bottoms, and signs of rain and storms in the distance. The cloudbase was much lower than out west – maybe 1000ft lower. It didn't look nice and I veered away from it. A couple of very experienced pilots went east and outlanded.

At the boundary where the cloudbase changed, strange wisps of cloud were hanging down – dags as Bruce called them. Again, I didn't like the look of them, and would have had to fly through the wisps if I stayed on that course – so kept away. Big mistake!

Bruce Taylor flies regularly on the New England plateau around Armidale and sees this often – it's a feature of that area, and is the convergence line of incoming cool/moist sea breeze meeting the drier inland airflow. The wisps mark the line of convergence where the best lift is found.

You should travel just west of the low level clouds under the higher stuff and amongst the wisps. Travelling under this sea breeze convergence Bruce has travelled many kms of unbroken lift, running along the edge of the New England escarpment. Bruce conducted a few of us from Kentucky to Guyra and beyond on a Saturday flight at the club's Kentucky camp in November the year before last.)



In the above case at Tocumwal, it wasn't sea breeze, but outflow from the storms to the east causing the convergence. Same deal however – fly the dags<sup>1</sup> just under higher cloudbase. That was where the best lift was and pilots who stayed under this travelled the expressway.

## TROUGHS AND CONVERGENCE AT KEEPIT

I've often wondered about a line of clouds that often forms on an otherwise blue day, along a line from Manilla, Bora Mountain up the ranges towards Kaputar. You can struggle over Keepit, but if you can reach this line of clouds you'll find abundant and regular lift and you can travel all the way to Kaputar

without any problems. Everywhere else may be blue. Is it convergence or a very localised low pressure trough line? I'm not sure, but it is worth making the effort to get to Manilla to utilise this line of clouds when everywhere else looks hopeless.

I do recall one day a few years back flying with Little Petunia north of Manilla when we encountered a few clouds with a very marked step in the cloudbase – on the eastern side cloudbase was at least 1000ft lower than the western edge of the cloud. Both sides of the cloud had a firm flat bottom with a marked step-up in the centre.

Then again with Nick Singer in a Duo Discus flight from Manilla to Kaputar and having a great run we noticed a distinct step up in the cloudbase from the East where it was much lower – again I guess it was

convergence. So I believe that quite often this area is affected by a line of convergence.

There have also been some fantastic days of troughs going up to Moree. I remember an exhilarating flight tagging along behind Little Petunia again (he outran me and went up to Bellata), and another day at the NSW comps a few years ago when we were tasked north and return – Mac Ichikawa did over 150 kph that day.

So, look for these weather effects at Keepit – they make for very enjoyable flying!!

*Dave Shorter*

### A helpful dictionary note for furriners.

1: Dag

Pronunciation: /dag/

Noun

(usually dags) Australian/NZ a lock of wool matted with dung hanging from the hind-quarters of a sheep. (See: Gliderdag.)

Phrases

Rattle one's dags

Australian/NZ informal hurry up.

Origin:

Late Middle English (denoting a hanging pointed part of something): possibly related to tag. Dag dates from the early 17th century.



## DISCO LIGHTS SIR?

“See and be seen” and “Keep your eyes out of the cockpit”

These are mantras we have all heard and of which we are regularly reminded. And rightly so, as all aircraft are hard to see. Powered aircraft attract our attention by strobe lights. Until now the power consumption of strobes made them unsuitable for gliders, but recent developments with LED's may help.

Thoughts about strobes aren't new.

The effectiveness of strobe lights is mainly a question of power consumption.

Tests by Richard Johnson (see *Sailplane & Gliding*, April/May 1990, page 79) showed that at 12 Volts and 1A and a flash frequency of 2 sec, was noticeable at a range of 480ft in bright sunlight and of 700ft in bright overcast.

However, to recognise colliding gliders in time, a range of 2-3km would be necessary which might need a current of 10A. One solution could be brighter flashes at less frequency, and this is worth further research. In darker conditions such as dark overcast or twilight, strobe lights with a power consumption of 12V/300mA might work quite well, especially when the glider is viewed against dark cloud or ground.

In 1997 DG commissioned an engineer to design such a device. The main concern was minimising power consumption. Even a solar panel does not generate more than approx. 1A of current.

The strobe light was mounted on the top of the fuselage and seemed to work fine when it was tested it on the ground. Unfortunately the brightness of the flashes was more than inadequate.

It could be seen flying very close to the glider but as soon as the distance was increased it became

invisible and blended into the light appearance of the white glider in the sunlight.

DG concluded that for light aircraft there are strobe lights available with a power consumption of approx. 5A that is far too high for gliders. But even though these strobe lights would improve the visibility of the aircraft at dusk, they would not make any difference in bright sunlight or misty / hazy conditions.

At the Bayreuth world gliding championships in 1999 members of IGC and OSTIV formed the "Collision Avoidance Sub-Panel" (CASP). In addition to considering colour markings, radio methods ( e.g. Flarm) and pilot scan techniques, they concluded that:

“Flashing strobe lights can call attention to other aircraft in a pilot's centre and peripheral vision, as long as the strobe brightness is great enough against the sky, cloud or ground background. Further research is required to ascertain the best compromise between

electrical power required, the brightness of flash, and frequency of flash. A lower frequency at a higher brightness could be a useful compromise."

Browsing through Whitworths boat gear catalogue, I came across the Guardian LED Dual function white light (cat no. 74660). To quote the catalogue:

"The Guardian is rugged, easy to use and can be seen for over 1.5 Km / 1 Mile. With its dual function of flashing and steady on modes, the Guardian can offer over 250 hours of use on a single battery pack. In addition, the Guardian is very lightweight and will not restrict movement, and is extremely impact resistant."

It's quite small, 40mm long by 30mm wide by 40mm high and waterproof to 100 metres, so it will work in the rain. It would be useful to attract the trailer to your paddock in the dark.



However it could be more use fixed to your glider on each wingtip, or on top of the stabilizer, or on top of the fuselage behind the canopy, or on the bottom near the undercarriage doors - or in all these positions.

Whilst they don't meet all of Richard Johnson's criteria, at \$30 each they are much cheaper than a Flarm and are an incentive too look for other aircraft rather than the Flarm's dial.

They could be readily taped to a glider and I think it's worth the Club trying them out. Racing types may resent the minimal drag, but it's all a tradeoff.

*Graham Holland*

Editor's note:

This is an interesting idea and worth pursuing. With so many cars now coming fitted with arrays of high intensity LEDs, their availability is getting better all the time. But perhaps the most common use is currently for bicycle lights where LEDs have completely taken over from conventional bulbs.

Bicycle LED lights are used in both continuous and flashing modes for illumination and warning. From a couple of 1.5 volt AA cells, a light can deliver 2 hours continuous but 35 hours flashing at very high intensity and at a higher speed than normal for aviation strobes. That's a season's flying for many pilots.

Because these LEDs use focussed reflectors to get a lot of their performance, it would be necessary to use arrays of LEDs in a glider. Schleicher have fitted a vertical array to the fin of a glider. Because of the low current drain, there's really no requirement to have an LED strobe powered off the glider's batteries.

There are already bicycle systems which incorporate a small solar cell into the light so it is completely self contained and only needs switching on and off.

For an added layer of safety, why not?