Practical Sawing

October November 1909

Flying the Morning Glory

Dust Devil Dash

Hitting the Silk

New Babies!

Mowing Tips from Tim

And Lots More!

Everyday gliding stories for Girls and Boys

Keep Soaring

October November 2009

Welcome to the practical issue of Keep Soaring!

It's the start of a new season! Spring is in the air and the sky is full of bubbly new thermals with the promise of many great cross-country flying days to come.

This entirely practical issue of Keep Soaring is filled with people getting out there and doing it, to make you want to get out and do it too. That is to commit aviation, not to get out a hammer and glue and make yourself a glider!

A look back at wooden gliders shows how lucky we are to be flying right now. Though many would consider the 30's a golden age of gliding, there's a good case for it being right now.

The fragile wooden aircraft of that era had a performance envelope not much better than a hang glider but with a complex and easily damaged structure which was labour intensive and time consuming to build and repair. Clubs could be shut down by no more than a few hard landings in the club gliders.

The gliders we fly today are superb machines. They are incredibly efficient, strong and mostly vice-less aircraft which require very little in the way of maintenance. Most importantly, they allow us to maximise our time in the air.

So now's the time to put those plans and goals for the upcoming year into action. John Hoye offers a few words of caution on this.

Ken and Justin's story on an epic Morning Glory trip to Jim Staniforth's Dust Devil Dash story about a competition with a difference show there's more to gliding than going round and round in triangles.

We've a biography from Geoff Neeley on Wal Stott who definitely did a lot of practical things in his life. Ian Barraclough is organising another of the famous Keepit Safaris and the club is expecting and exciting new arrival any day now. Great stuff!

Most of all, we should remember the point of gliding. And that is, *there is no point*!

So as Bruce Taylor said at the end of his talk at the GFA seminar, Have fun!

The Editor.

NEW THINGS

Here's three new things up at Lake Keepit. There will probably be four by the next issue of Keep Soaring when a new LS 10 arrives, but here's the news about the first three.

1. We have a new CFI. Due to personal commitments, John Hoye resigned as CFI and Vic Hatfield has persuaded Ken Flower to step in and take on role. Welcome Ken Flower as LKSC's new CFI. and I'm sure we all thank John for his steady hand on the control stick over the last two years.

With the new Glider Pilot Certificate, the role of CFI has some new responsibilities but those who have spent some time in the air being instructed by Ken will have no doubt that he is an ideal choice.

2. We have a new quad bike. No doubt many of you have already fallen foul of the new rules, Quad Bike, for the use of, rule 1 of which says No!

Essentially the rules are trying to make sure that the new bike lasts as long as possible and is available to those who really need it. This means instructors, the towing out of club gliders and roo scaring. And only one driver at a time! Members are encouraged to use their own cars to tow out gliders.

Garry patiently waits for the kissing bit to be over before trying out the new quad.

3. This is not really saving the best news for last, but the club has got a new glider. See over…

Keep Soaring
October November 2009

NEW THINGS

It is with great pleasure that I would like to welcome a new member to LKSC. Zab (she) will be joining us in the coming weeks and I would like you all to assist in making her feel welcome. After having a short but distinguished career flying out of Southern Cross, Zab has now seen the light and the flying potential at LKSC and will be joining us to further her passion for flying.

Being another gliding nut, she prefers to be called Alpha Bravo amongst friends, and I have attached some photos below so you can all recognise her when you are next out at the club. Please treat her with respect, as it has taken a considerable amount of time and effort for the Committee to woo her to Keepit.

Zab will be looking for members to assist in introducing her to the delights of gliding at Keepit, and enabling her to become familiar with the local area. If any members are interested in sponsoring her while at Keepit, please contact the President.

2006 Duo Discus XT VH -ZAB
Airframe hours 90. Landings 117 (*Camden! Ed.*)
Solo Sustainer. 2.8 hours. Cambridge 302/303. Altair Inflight entertainment system front & back. TS Electric turn and bank. Winter vario. Dittel Radio. Altimeter. ATC transponder. Winter ASI

More information will be distributed shortly.

Tim Carr (the President)

Keep Soaring
October November 2009

From the CFI

Caution …..

It's that time of the year again when it's time to stretch our wings for the first flights of the new season. I know that many have kept in flying practice during the off season but others will have busied themselves (or been instructed) with suitable "other" tasks during the winter.

Remember dual flights are available to help those out of practice regain their competency. No one should feel uncomfortable about this course of action; it's far less embarrassing than proving that you're out of practice when flying solo and having an incident or worse.

Also, at the start of the season cross country flights should be approached with due caution and suitably increased safety margins. At all times we should use our superior judgement so as to avoid having to use our superior skills, particularly early in the season.

In S&G some years ago they ran an interesting article which compared a pilot's launches versus his hours of flying. When one got significantly in front of the other the pilot's skills became unbalanced.

At an English costal winch site one could expect that the average pilot would be very proficient with his launching and circuits but might be tempted to continue to circle and soar when it was not prudent.

At some of the inland sites the average pilot would probably be a proficient soaring pilot but, with few take offs & circuits, he would be lacking in skill when landing *aux vaches**.

At Lake Keepit we fall firmly into the second category. It is not unusual for our pilots to have many more hours than launches and a day's flying at the airfield comprises one launch / landing but probably several hours of enjoyable flying.

If you are winch rated a few extra launches can be had for little extra cost. If you're aerotow rated then an extra flight will cost more but, in both cases extra launches will help you to be ready for that difficult flight / field landing when it comes along.

"Expect the unexpected!" Douglas Adams

Safe flying,

John

* French speak for "Amongst the Roos".

Keepit Safari

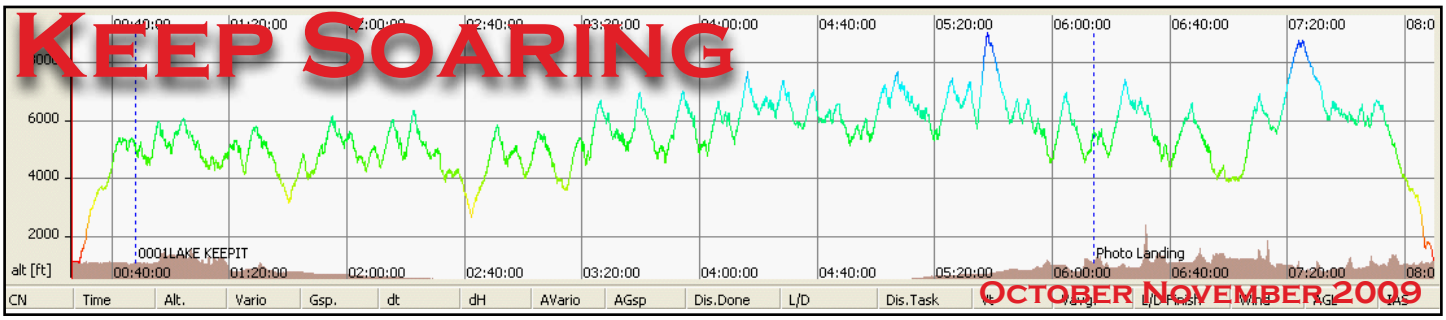
Another Keepit Safari is being organised this year… Monday 7 December to Saturday 12 December. Already seven gliders have 'entered'… five self launching gliders and two "pure" gliders. If you are interested in participating, please let me know, as we are planning a route, arranging some accommodation and need more crew. We have the last 5 rooms 'booked' at Narromine for the first night in case we decide to head that way.

An early thought is to try an out-and-return to Cameron Corner… if you are not sure where that is, look it up on a chart; it is a 2,000 km round trip or 350 km a day and there are some interesting places to visit along the way.

Another suggestion is to make a fourth attempt to get down to Brown Brothers Milawa … that is only three legs of 250 kms each way but the weather has foiled us on previous attempts. You never do know, and notwithstanding our reputation as the "Keepit Safari Drought Breakers" we might just make it this time. This will be the 15th Keepit Safari … one or two were washed out, and no two Safaris have been the same, but every year they have been good fun.

Last year we over-flew Gunnedah when it was all but underwater and Al Giles had to tow the trailer via Narrabri to get to Narromine… he was a bit late! The idea of the Safari is to end up each day somewhere different from where we launched … and not a paddock … and to have fun doing it!

If you are interested in adding to the numbers, contact Ian Barraclough 02 9948 7866 or ian.barraclough @ bigpond.com



Flight Analysis with SeeYou

I have just been reading Keep Soaring. David Shorter noted how my glider flew better than most between thermals by a large amount on a couple of days.

For what its worth, pilots need to take note of actual conditions when determining flying tactics between thermals. The two days Dave mentioned were what we call unstable with substantial cloud development.

On these days, if you could draw a thermal profile you would find that due to the sucking effect of the clouds, the lift is strongest when within 500 ft of cloud base. If you get 1,000 ft or more below cloud base, then you need to be lucky to get a really strong climb.

Closer to the ground lift can be very difficult to work. It seems that on these days there are many thermals low down but they are not very strong. I expect they join up closer to cloud base or just fizzle out. Also on these days, you can be sure that most clouds will not be working and the period that a cloud does works strongly can be quite short.

So our tactics must be to stay in contact with the clouds and this means, that unless the next good looking cloud is quite close, we should fly at a speed which enables us to reach the next targeted cloud with good height.

On some glides, I slowed down to 70 or 75 knots (10 knots below my standard cruising speed on these days) to ensure getting to the selected cloud with good height and if that cloud didn't work, still have height to go to the next cloud while still remaining high.

In short, if you get low through flying too fast or poor decisions, getting high again can be difficult and time consuming and cost you far more time than you might have gained by pushing on.

I know well. After a couple of good days at Easter, had a rush of blood to the head, rejected lift I should have taken to keep close to cloud base and found myself too low to pick up good lift. Went on and on looking for a reasonable climb and lost at least fifteen minutes.

Harry Medlicott

Kentucky Camp 2009

From Bruce Taylor.

After the AGM last w/e I made a suggestion to the assembled group of hosting a camp here at Kentucky. I now have confirmed dates with both Brad Edwards to supply the towing, and my sister-in-law Vicki Taylor to provide accommodation.

It will be the weekend (including Friday) of 23rd to 25th October. I have connections that will guarantee favourable weather for that period as well...

I envisage a reasonably structured weekend, with a short discussion each morning about flying in the New England, outlanding possibilities, weather conditions particular to the area, and suitable tasks for the day.

There will be no pressure to fly tasks any more challenging than necessary, and I am more than happy to run some lead-and-follow sessions for those who think they would be more comfortable with that.

My aim is to have everyone leave here at the conclusion more knowledgeable and content to venture up here through the coming summer. There is a good possibility that Brad will also be flying here for the weekend and he too has vast experience flying in this area.

There is plenty of tie-down area available at the airfield, and possibly water ballast, though I don't really think this will be necessary for our purposes.

The accommodation is known as "The Huts" and can be found at www.thehuts.com.au Please make your own arrangements for this period, and contact Vicki directly.

You will need to bring your own food, but all facilities are provided. It is about a five minute drive from here to the airfield.

Could all those interested please advise either Anita or myself:

email: brucetaylor10 @ bigpond.com.au

phone: (02) 67787345.

President's Report

While the cooler months have meant a slowdown of flying activity at the club over the last couple of months, there has been a flurry of activity as follows;

• Form 2 Maintenance Week - The club held our annual maintenance week in the last week of August expertly organised by our Airworthiness Officer John Trezise. This week saw the forms 2 being completed on much of the club fleet, and many of the private gliders.

Special thanks goes to John and all the members who were able to assist during the week. These efforts go along way to ensuring that the club can keep its fleet maintenance costs at a manageable level and certainly is at a considerable saving to sending the fleet off-site for this work. Thanks again to all involved!

• Working Bee - We held a working bee on Saturday 29th of August, where many members assisting with fixing many of the niggles around the club. These included replacing the northern windsock, mowing the emergency strip and placing markers in front of the trees, replacing the ceiling boards in the flight centre, cleaning out the roofing gutters etc. Big thanks to all those who participated.

• Club & Sports Class Nationals - With the Nationals now just over a month away, there has been a fair amount of preparation going into making sure that this event is a big success. As you can imagine, there are literally hundreds of things to do to make sure everything works like clockwork, and we need many volunteers to help run this event.

So if you can spare some time in November to assist, please contact Dave or Jenny. Better still, we still have a couple of places available in the comp and it would be great to see our whole fleet utilised in the event. So get involved!

• Club CFI - It is with great regret that John Hoye has tendered his resignation to the Committee for his role as CFI. John has offered to temporarily remain in the role until a suitable replacement can be found. The Committee and members of LKSC would like to thank John for his great efforts while in the CFI role, and note his diligence and perseverance will be sorely missed.

Over the weekend of Friday 25th to Sunday 27th of September, 10 members of the Warringah Radio Control Society (WRCS) visited LKSC. A great weekend of flying was had by all, albeit in some difficult flying conditions.

Friday was a magic "Keepit" day, however on Saturday the dust arrived (again) and we could only see a couple of hundred metres till about 2pm. However later in the day a blustery 20 knot+ wind arrived which caused the model pilots a bit of grief for the rest of Saturday and all day Sunday.

Each of the WRCS visitors had a fight or two in our gliders, and everyone thoroughly enjoyed the experience. Many noted that they would be back! I feel we have made some good friends and they will likely be back for another club camp in the future.

All the photos can be seen at http://www.wrcs.org.au/gallery/2009/lake-keepit

One of my favourite pcitures is below.

The videos links are http://www.wrcs.org.au/gallery/videos-page-2

Tim Carr, President.

Late Spring Caption Competition

Here's the new challenge.

Chris Carr, the Mr. Casual of the Kitchen is whipping up another batch of custard to put on top of the christmas puddings eaten by thousands at John Holye's Christmas in July (in June).

Showing all the style and wobble of Ffloyd at his best, Chris went to work like a Pro… Or did he?

What was it that Chris' mum actually said?

This month's prize is a ride for one on the club's new quad bike!

Early Spring Caption Comp Answer

I simply cannot believe that nobody got this one right! And a lot of you had some guesses as to what Trevor might have been saying which are simply not a true reflection of Trevor's style at all.

I spent the first three and a half hours of my gliding time at Lake Keepit with Trevor and I had an excellent time.

I learned a lot (not all of them were new words either) and I would like to think that I yelled back at him "Bloody sailplane pilots" as often as he yelled "Bloody hang glider pilots! Get the nose up! I don't want to die even if you do."

Anyway, the picture below had nothing to do with this.

In fact it is an episode of significant male sensitivity typical of Trevor and glider pilots in general.

And Trevor's reply was?

Keep Soaring
October November 2009

THE ENDLESS BUMMER

To provide improved training goals for pilots and clubs, a new GFA Certificate is now introduced, the Glider Pilot Certificate (GPC). This essentially extends the current training period beyond the C certificate to include an extended range of training including radio and FLARM use, entering and leaving thermals, meteorology, navigation and airspace, and cross country and more.

These changes will bring benefits to clubs like LKSC because we have the facilities and conditions to do this training where other clubs do not. But how much will it benefit the trainee pilots?

The feeling from the GFA is that new pilots are leaving the sport because they never learn essential soaring skills and another certificate will be something that new pilots will aspire to and cherish.

That's certainly a valid point of view. But is it the right one? In any case, here is another point of view.

Last week (in the USA) I was talking to someone who had done quite a bit of flying. He'd flown ultralights and GA aircraft but had abandoned his PPL because he was bored with straight line flying. As he put it, "I don't really want to learn navigation and that stuff. I just want to fly."

Now we all know that to "just fly" you do need a good number of skills, all of which are in the GPC syllabus. However you can do an awful lot of "just flying" without any formal training in these additional items and if you enjoy the flying you are doing, surely you will try and get the extra knowledge "on the job" without this being a formal requirement?

Last month a few of us in the club house were re-running the well worn discussion about getting new blood into the sport. There is no doubt that we need it. There's also no doubt that getting young people involved in gliding is a great idea. However, it's just that. An idea. The reality is that most young people have more pressing and interesting demands on their time than spending days away in the wilderness of a gliding club.

Speaking for myself and most of the young men I knew at the time, from late teenager and perhaps for the next 30 years, the most pressing demands on our time were work and women. And work was not that high a priority.

If you are trying to market a product to a group of people, the best people to target are those who have somehow qualified themselves as being interested in the product you have got to sell. There's a big group of these folk staring gliding in the face.

And that's the 12,000 other sport flyers. The first obvious group to target is other glider pilots… hang glider and paraglider pilots. If you have a little exposure to these groups you may be surprised to find out how old they are… particularly hang glider pilots, where the average age is probably over 50. (This to me, is a big argument against having a separate sailplane magazine.)

Flying sailplanes offers some big advantages for these people… reasonable cost (have you priced hang gliding equipment recently?) A big boost in performance and a bigger increase in the ratio of time spent airborne to the time spent travelling and waiting.

Are these people looking for a sport with an extended training period with an instructor looking over their shoulder?

The next most obvious group is RAA pilots. For many of us who have tried power flying, after the initial fun of learning a new skill, the shine goes of it. Unless you have some reason for flying from A to B, you just get bored. Power sports aviation presents few challenges the way gliding does (although many of the challenges powered flight does offer are ones involving extensive training, so maybe I am arguing against myself here).

RAA pilots currently have a shorter basic training period than sailplane pilots with few restrictions. Is this group looking for a sport with an extended training period with an instructor looking over their shoulder?

The pictures accompanying this rant are there for a reason. The pilot in most of the shots hang gliding shots had a total of zero (0) hours dual instruction before going solo and no radio.

And the trike pilot had less than 8 hours dual instruction and no certificate of any sort.

That's not to say that this is or was a good way of doing things. Probably it was a very bad way, but that's the way it was. Even now, most people flying flexwing gliders have perhaps one or two dual instruction flights at the most and the rest is done, initially at low altitude, by radio.

I was talking about this with an older generation sailplane pilot from Queensland recently and he asked whether there was an instructor on site to supervise the day. He was a bit aghast to find that the answer was mostly "No". You found a hill, checked out the weather, the take off and the bomb out, and jumped off. Later on there was meant to be a safety officer on site, but I can't remember seeing one more than a few times.

Bear in mind that right now, there are several times more of them than us (PG and HG) and their safety record is at least as good as ours recently, if not better.

Pilots flying get used to taking responsibility for their own actions and decisions early on. Because most flexwings are quite easy and intuitive to fly, most early "training" is learning to read the conditions and the site.

So I was a bit surprised turn up at the strip one day and find that I could not fly my own glider without an independent operators rating. No, I was not pissed off because I can see the reasons why this is done… but will everyone accept this situation without feeling?

There's every chance that flexwing and RAA people coming to gliding will have hundreds of hours and thousands of flights and may find the prospect of an extended training syllabus off-putting.

Compared with some other clubs I have been to, LKSC has a relatively loose curriculum. I have never seen written down things like the number of hours you are expected to fly in a low performance single seater before you can progress to a higher performance aircraft. Or the number of hours you must fly aircraft dry before you are allowed to fly with water ballast.

This is both good and bad. It allows the flexibility to fast track someone with ability, the legendary natural flyer. But it may be frustrating for pilots who feel they are not progressing fast enough.

Endless training can be a turn-off to anyone. It's probably the last thing on the list for young people who have just got out of school or university and older men are notoriously grumpy and difficult to teach anything. Ask Macca or Jenny.

There's an excellent international gliding magazine called Cross Country. Sadly it's only for flexwings. Last month I bought a copy and it was packed with glossy pictures and interesting articles on topics like high altitude flight (>6000m) without oxygen, post frontal cloud streeting and GPS altitude errors. 10 years ago, Cross Country was mainly about hang gliding. This issue did not have one picture or story about hang gliders in it. All paragliders. Could sailplanes disappear off the map in another 10 years?

Overtraining is at least as bad as under-training. With the GPC we run the risk of not only putting new pilots off sailplanes, but training a group of pilots who are unable to make their own decisions.

Do we want the sport we love to become irrelevant?

Member Profile

Geoff Neely

Walter Horace (Wal) Stott
19 December 1926 – 13 August 2009

Those who like me, knew Wal for a short time only but found him a gentle soul are not surprised to find that he is remembered with affection by a great number of friends, flying colleagues and people who had worked with him. There was a big funeral in Armidale. Garry Speight, Trevor West and Todd Clark were there. John Hoye and I think, Todd Clark, visited Wal in his last days.

I think that even while we mourn a death we should celebrate a life for its endeavours and its achievements. A man's story should be told.

Wal Stott was an original member of Lake Keepit Soaring Club when that club was formed by amalgamation of the New England and Tamworth gliding clubs although it may be that Wal was inactive at that time and resumed instructing later. Until about three years ago Wal Stott and Lloyd Hodges kept their Ka6 at Lake Keepit and would come from their home town Armidale to fly here. Wal retired from flying in his 80th year.

Wal was taken ill at a Queensland competition about 18 months ago. His final illness was liver cancer. He died at home, aged 83, attended by his family and receiving old friends almost to the last.

This biography was put together at a family gathering after the funeral:

Wal was born on the 19th December 1926 at Rockdale in Sydney to Horace and Jessica Stott. His father was a returned serviceman from the famed Light Horse regiment, who gained carpentry skills to forge a life after war. Betty was born in 1922, Joan 1924, Wal himself in 1926. Frank followed in 1928 and Shirley in 1936.

Wal was born into a marvellous era that still had horse drawn vehicles used for some tasks, the first assembly lines of the model T Ford, saw man walk on the moon, emails beat snail mail, and recently his generation parades on the street with a mobile phone glued to their ears…or in Wally's case, his working ear.

Wal grew up in Sydney, had many boyhood experiences with his brother Frank which included marathon bike rides to the Blue Mountain and Kerosene powered cars, hiking down the Grose River for 80 kilometres only following the river.

Brothers and cousins could repair a bike tyre with grass, fish for food, garnish it with dried apricots, rewrite the scout manual, became a Scout Leader and Master.

Wal made many lasting friendships, learnt a trade and build a home in Padstow with June after they were married on the 18th November 1950 at the Methodist Church in Hurstville. Three of his children John, Robert and Margaret were born in Sydney & Wendy and Judith born in Armidale.

Wal met June (a clerk) at the Registrar General's Office, Queen's Square right in the heart of Sydney where they both worked. Wal was 15 when he went to work there as an apprentice (a 5 year printing and trades apprenticeship) in 1941 and finished working there in September 1957. He became a bookbinder by trade, recorded as having won the college medal for his year (1945) in the course, but he also absorbed a high level of skills, knowledge and proficiency from his carpenter father.

These skills were put to great use in later years building and extending family homes. Wal made a home in Mann Street, extended into the roof space to provide a teenage retreat and finally downsized to Dorothy Avenue as some fledglings left the nest. He also helped his son Rob build his home in Jewell Avenue. If Wal had three pieces of wood he would fashion them into a footstool. If he had 4 they would become a spare bed, a baby's cot, or an extension ladder provided there were 2 spare broom handles to comprise the rungs. If he didn't have the broom handles and couldn't swap a washing machine motor for them, then he'd have to make another step ladder instead.

He would shake his head when reminded that the newer generation would have thrown them away.

Wal commenced work at the University of New England on the 23rd September, 1957 and retired almost 30 years later. He set up the bindery there and also helped to set up the printery with Sid Mulvey. Wal also went to New Guinea as the consultant to set up a bindery in the University of Port Moresby in 1982. Most people retain vivid and colourful memories of overseas trips, Wal was no different, his lasting vision was red stained beetle nut lips. June accompanied him and was the centre of attention because of her fair hair and fair colouring.

While at UNE he also joined the Volunteer Fire Service, and spent 25 years on call. He received the National Medal for this service. It was not uncommon for him to leap out of bed in response to an urgent call and spend the next 5 minutes, trying to orientate and extricate himself from the clothes and coat hangers of the walk in wardrobe.

Wal had a great love of sport as we know with cricket, soccer and golf at the top of the list. In his middle years he coached local kids, refereed games and was the founding member of the east side soccer club in Armidale in 1962. His son Rob still has vivid memories of his dad in their old Humber, driving around East Armidale to collect all the members of the his team, including lots of Koori kids who excelled at soccer. Gliding was also a passion, and became a family activity with camping holidays at aerodromes all over the state. The Easter bunny found the kids where-ever they were, providing chocolates galore and lasting memories.

The grandchildren gained their first sporting experiences in the backyard, in true Australian tradition. John was the first soccer star. Jack, Matthew and Louise followed becoming soccer reps at higher levels while Liam and Leighton are in training. Vanessa broke from the code and took up netball. Eldon's interest in soccer was overtaken by music becoming proficient on the saxophone. John also played golf with his Pop in a Saturday competition until very recently.

Wal was also a very keen fisherman and was the founding member of the Old Fella's Fishing Club, which did an annual sojourn to Yamba each year. The group was composed of a bunch of retired friends from the University who all had tremendous fun with teams and fishing competitions. Wal often took out the prizes for the most fish caught. He was tirelessly patient and if there was a flathead within cooee, Wal would catch it. He took on a new persona, Commodore Walter Horatio Stott, with fun attire to match.

Wal achieved a very full life and influenced a great many people. He was a fair man, modest over his achievements and his most endearing trait was that he did not utter a judgemental comment against anyone. He was proud of his children and their achievements, he was proud of his grandchildren and greatly enjoyed the opportunity to have an influence in their lives as well. He was proud of his niece, Natasha Stott Despoja who was elected to the Senate in 1995 as the youngest woman, ever in the Australian Parliament, at the time. In return these people are exceptionally proud of him and will miss him greatly.

Wal died at home, surrounded by family, in the evening of August 13th, 2009, exactly 4 years and 2 days after his beloved wife June. They rest together in the Armidale Cemetery, along with their son John, who died at the tender age of 16.

Further tributes and reminiscences were contributed by friends and colleagues

When Brad Edwards began in 1965 Wal was CFI of New England Soaring Club at Armidale and active in maintenance and the general running of the club. Brad says Wal was an early but not original member of New England Soaring Club. One of the early instructors was John Crumpton who came from Inverell to instruct. The club had up to 60 members. They had a winch and aircraft included a Kookaburra and a Skylark 4.

Wal dropped out in about 1970 when the death of his 16 year old son John devastated the family. Some years later Brad persuaded Wal to come back. Brad says Wal taught his trainees to be competitive but safe.

David Goldsmith, who learnt to fly at New England Soaring Club in 1963 when Graham Halford was CFI, delivered a eulogy at the funeral. He says Wal enjoyed competitions, went there to have fun and did well. Ian Mc Phee says Wal once flew from Armidale to Gunnedah and Narrabri. At a State Competition he made two 300km flights on consecutive days – and won the competition.

McPhee says Wal's trainees included John Duffy (now at Byron), Bob Dunne, Brad Edwards, Peter Elliott (ex boss Superair), David Goldsmith (later became SAL B747 captain), Tim Hutchings (now at Mt Beauty) Tony and Bruce Johnson, Paul Lawless (Kingaroy), Ian McPhee, Maurice Pott, Dennis Stacey and Wayne Yoemans (flies Brad's planes).

Wal was on the staff of the first National Gliding School which developed the present Instructors' Handbook. Wal heard of a Ka6 for sale at a competition at Benalla and he bought it on the spot. Lloyd Hodges learnt to fly at Lake Keepit in about 1980 and eventually bought a share in the Ka6. Wal attended vintage rallies and the Ka6 won the Concours d'Elegance at Bordertown in 1996.

Acknowledgements

Wal's son Robert and his wife Judith provided material written by their son Jack Tyler-Stott (Police Prosecutor and Senior Leading Constable at the Downing Centre, Sydney) and Gary Gay, one of Wal's sons-in-law (Science Master at Taree High School). Reminiscences were provided by Lloyd Hodges, Brad Edwards, David Goldsmith and Ian McPhee.

Lake Keepit Morning Glory Expedition 2009

Justin Smith and Ken Flower in G109 VH-KFP

After some 2 months of planning Sunday 13th Sept 209 at 9.30 am we departed Lake Keepit for our trip. The glider had been prepared, maps and ERSA's purchased and many different routes considered.

Day 1 and it is St George for a re-fuel then on to Charlieville to meet Russell, Laura, Brian and Paul from Byron Gliding.

Day 2 saw us re-fuel plus have a Vice Regal lunch compliments of the Governor General and the RAAF in flight service at Winton (the birthplace of Quantas), then with the assistance of a healthy tail wind final glide into Burketown that night.

Each morning up at 5 am and glider ready by first light (6.14 am) contacting some convergence clouds but no real wave from a fast moving cloud system.

THEN "First light at Burketown and the Grob KFP is purring towards a thrilling sight to all glider pilots. Can this be the eventual dream realised 13 yrs after first coming to Burketown in 1996 when we waited in the itchy sandflats for 2 weeks with hang gliders ready and hitched to the trike awaiting the mythical Morning Glory? 2 weeks of nothing back then.

We can hardly believe our eyes as we take in the magnificent roll cloud approaching over the Gulf ocean. We had arrived 5 days earlier and even though we had seen morning clouds on the dawn horizon each one was just a teaser with decaying MG cloud stalling just short of Burketown. Gorgeous sunrises over cloud formations which provided little or no lift.

Finally this Sunday morning of 20 Sept 2009 we knew it was " on"! We whooped with delight as we encountered the first signs of the smooth real lift.. we were soon joined by the menagerie of Grobs, F200 (HB with Brian and Paul), Pik 20e (Geoff Pratt), Dimona, Trikes, hang gliders, Jabiru and even a Lancair and a helicopter "Red Bull" filming the hangies.

Geoff Pratt seems to have the gift of arriving in Burketown the day before the MG's arrive! (He'd flown 65 up until this season.) We all were very pleased have arrived yesterday. This was the 20th anniversary of gliding on the morning glory and we were privileged to have travelled up with the Guru of MG, Russ White along with Laura, a Uni student from Georgia, studying cloud formations on a travelling fellowship!

Also in our team Paul and Brian, veteran's of the MG from Byron, flying Macca's Motorfalk 2000 HB.

Our first real Glory developed into an experience of a lifetime flying for all of us lucky enough to be there on the day. Some 4 1/2 hrs later we returned to Burketown having covered well over 300 miles , doing several laps of the wave out to 105 miles up the coast. Almost to the NT border! This first MG was fascinating in that there were areas requiring some skill in bridging gaps , jumping to the next system via some high Lennies with lift well out in front and well above at 6000 ft.

Ken and I made it a policy from then on to enjoy breakfast on the glory. Taking only the best food in the form of Jatz biscuits and Nutella sandwiches as cabin service. We couldn't be so lucky, but sure enough Monday 21 Sept brought yet another magnificent MGlory, this time pushing through the fog in the early dawn, rolling up a carpet of mist like snow.

The cloud arriving very near Burketown as the sun tipped the horizon, we had the engine off within minutes and a Lancair carving ski-tracks in the snow-like slopes of cloud below. This Glory was followed closely by row after row of towering secondaries, with an amazing primary cloud stretching northwest over Sweers and Bentick Islands as far as the eye could see.

Feeling more experienced now, we put the pedal to the metal turning northwest after a 25 mile start south of BT, we raced the cloud in great strong smooth lift at speeds up to VNE of 130 Kts, for extended periods of time. Fortunately it went over Sweers, Bentick, Mornington Islands and then on the western end along the coast offshore.

We turned for home 9.30 am 150 miles from Burketown and again raced back home joining Geoff in the Pik north of Doomadgee and motoring the last 50 miles home. Lots of tales and lunches and rest-ups around the pool at Savannah, even Russell was getting excited and Laura had her " thesis " just about cooked.

The third MG arrived well up the coast some 60 nm from Burketown and we were the only addicts keen enough to chase it all the way to Flinders river near Karumba. We then had it all to ourselves, a relatively weaker system which we soared from end to end (about 30 miles) with thermals evident at each end.. It finally decayed 20 miles short of Burketown.

We thought we had been blessed and accepted that would probably be our lot (3 magnificent Glory flights all different, 3 days in a row is pretty lucky), but no, nature had an even bigger surprise in store.

Wednesday as dawn broke, the breeze picked up from the south and the Guru, Russel said we may as well go back to bed. "But what is that dark shape rapidly approaching from the SOUTH??

A flurry of rotor wind had all grabbing wings and hang gliders as the black primary rolled over us. We then beheld a magnificent secondary quickly following. As though a flock of waterbirds had been startled there were gliders and trikes taking off in an organized stampede.

We were usually one of the first off each morning but this time Grant's DG, Geoff's Pik and Brian and Paul in the HB beat us to it. Ken and I turned down wind from takeoff just as the secondary arrived, within 5 minutes we had switched off at 800 ft in smooth lift which took us all to over 7000 ft above the secondary with wave after wave following. We were fortunate to be able to use our height to follow the Pik and DG out to the primary losing 4000ft in the run.

Contacting the primary as it crossed to coast, we ran west along the primary as Geoff and Grant headed northeast. They laconically radioed that they thought another MG may be approaching over the sea from the north. By the time we had turned around we were greeted by a rare and exquisite site.

Climbing through 6000 to 9000 as the two Glories converged at 45 degrees. Geoff in the Pik had a Japanese documentary film camera on the Pik and caught some fantastic footage from 10,000 ft above this convergence. We all soared the decaying collisions of waves before running for home, island Hopping from Mornington , Allen island and onto the coast again.

As we motored back to BT we ran into the savage dust storms brought up from the MG and perhaps the remnants of the fronts battering lower QLD and NSW.

Ken made an excellent landing in dust and 25 knots on the cross strip and I ran the wing all the way back to tie down. Thanks to Grant for talking us home from his tied down DG!

To add icing to the cake we left for home at sunrise Thursday fearing headwinds. Climbing through 25 knots on the nose we were again lucky to find smooth air with no headwind all the way to refuel at Winton. Catching a great little thermal out of Winton we then had tailwinds all the way to Charleville for our overnight.

Friday morning out of Charleville Ken ndid some intelligent searching with the GPS upper winds and haze to again put us in a smooth pre-frontal trough of good air with 20 knots up the tail. Making Keepit before lunch, we turned the motor off just past Mount Kaputar and caught a few rough thermals for final glide home, just as a good Grob should arrive!

This was a trip of a lifetime and we would recommend that any keen pilots from Lake Keepit who want to go on such a trip should start planning for it. I hope we have a team from Keepit up there next year.

Justin and Ken

THE FLYING DOCTOR'S GUIDE TO COMMON MEDICAL DISORDERS.

Patient presentation: Wearing daggy clothes and a tiny floppy hat, too small to keep the sun off. Complains of a sudden onset of 'the world spinning around me' and a feeling of falling, especially common during annual check flights.

Flying Doctor's Diagnosis: This is vertigo.

It's very common and nothing to worry about, usually just a virus or brought on by the anxiety of a check flight. The treatment is to take Stemetil with fluids and rest with your eyes shut whenever it occurs.

The problem will stop as abruptly as it began, and is hardly ever recurrent - I've never had a complaint of it happening again. Even without the Stemetil it's a self-limiting problem and not unusual for the average anxious, decrepit ageing Jantar pilot to experience from time to time. Medicare card, please. *Kerching!*

A PRACTICAL MEDICAL HINT.

A three year old child had sniffed a coat button up its nostril (nasum) and the silly mother, in an attempt to remove it, had caused the button to be push further up the channel. I probed for the button with a pair of those nice long-nosed pliers which are so useful in Form 2 weeks without success until, through the din of the child's screaming, I thought of snuff.

As there was some at hand, I took a pinch of the snuff between thumb and forefinger and held it up to the child's nose. The subsequent violent sneezing caused the button to blow out and after wiping the snot off, it was returned to the grateful mother who was able to resew it onto the child's coat.

Such an incident may come under the observation of any parent, and if so, this method can be used to relieve the child when medical assistance is not at hand, without further payment. Always carry snuff. Medicare card, please. *Kerching!*

We are of course unable for ethical reasons to reveal that the real name of the "Flying Doctor" is really Alphonse de Gilles.

The Dust Devil Dash

BY KEEP SOARING'S ACE FOREIGN CORRESPONDENT, JIM STANIFORTH.

Since 1985, the Dust Devil Dash has been held in Southern California on the second Saturday in September. The initial race was from Crystalaire, in Pearblossom. Since 1986 the event has started at Mountain Valley Airport in Tehachapi.

The Dash is the only sailplane contest I know of where everyone lands out. The goal is to head in whichever direction you deem best, and fly as far as possible. Scoring is handicapped straight line distance from start to landing, using the Carl Herold handicap system. Distances are measured in Statute Miles, still the norm for comps in the USA.

Cruising the Palisades above Bishop, in the blue on Thursday. JS

In the old days, landings were verified by landing witnesses, and signed landing cards returned to the Competition Director from the nearest post office. Now all the distances are calculated from the igc files posted on the OLC. There's no scoring for speed.

The weather leading up to this year's Dash looked promising. On Thursday I flew a 570k O/R. That was just the first day of the cycle of good weather.

Normal cycles here run like a sawtooth wave: Good, better, best, rubbish! This cycle just had more moisture than normal.

On Friday I didn't really feel up to it but launched anyway. Went through the start and immediately got low over a dirt strip that nobody has looked at for a while. It looked good.

Stumbled into some lift and felt good to be getting going into improving conditions, but then I didn't notice an F-18 until it was almost on top of me! Not good. Later on, after cruising in some convergence up the Kern River Valley, it was time to leave the middle of the mountains. Barely made it to the Sierra Crest. OK, time to give up and turn home… After a quick visit to hikers on Mount Whitney! How unusual to land at 4PM.

Jim Payne flew an 800k cat's cradle, outlanding at Inyokern.

Saturday looked good but with a high chance of over-development. I wasn't prepared for the Dash and volunteered to crew for Thorsten Streppel, flying his LS-6a. Thorsten had never done a "straight out" task before. Because of my last-minute decision to crew, we didn't have his SPOT programmed to send text messages to my phone. It's impossible to use cell phones at normal cruise altitude, and once NE of Bishop there's poor phone coverage for much of the route on the ground.

Ground to air radio communication is dodgy, with mountain ranges getting in the way. Having text messages of your pilot's position as you try to follow would be fantastic.

There were 24 entrants in the Dust Devil Dash this year, even including one Australian!

Just a bit of OD on the Sierras near Big Pine. KMA

Morgan Sandercock from Hunter Valley was flying his Sparrowhawk. A total of five Sparrowhawks entered. Two pilots were doing not only their first comp of any kind, but also their first cross-country flight!

The weatherman at the briefing said the best weather was to the East, but hardly anybody was buying that, looking at the blue sky to the East and Cu appearing to the North.

Looking good on the Diamond Range near Eureka, Nevada. 5Z

All of the field but one went North up the Sierras, then NE into the Great Basin. Many flights went well into Nevada, and two into Idaho. The lone flight East was into Crystalaire by Johnathan Delbruck on his first XC. He did find some lift on the way, but not enough to reach the clouds further along.

The other first XC was Tony Davis who went North to Inyokern. They should each get their silver altitude, perhaps distance too.

Near Tonopah, looking into Area 51. 5Z

People who were well organized managed to launch right after briefing. My pilot must have employed the same techniques I tried the day before, and "spear chucked" into the Kern Valley, actually saving from below takeoff elevation (4220'). This cost some time, and put him at the rear of the pack looking at rain and lots of over-development.

Tom Serkowski turned back when on glide for Jackpot, Nevada to give his crew an easier retrieve. His comment for the next shot was "Why is the great soaring always in the restricted areas?

Doug "Hangman" Levy won on handicap. Well done, Hangman! He also won in 2004 and 2007. Yes, Doug started by flying hang gliders. He cruises between gravel lots, dry lakes, airports, sand pits and wide spots in the road and covers some serious distance. This ability to land almost anywhere even in "tiger country" is not figured into the 1-26 handicap. I heard his landing was amusing, runways being optional for Doug even on an airport.

Approaching Austin late in the day. KD

The top 12 flights in the World on 12 September were from Tehachapi: http://tinyurl.com/m2dlnu

All the flights from Mountain Valley Airport, scroll to 12 September: http://tinyurl.com/lxwhjm

The results of prior years of the Dash: http://www.socalsoaring.com/index.php?page=dustdevil#2008

Photo credits: JS Jim Staniforth, KMA Jerry Snedden, 5Z Tom Serkowski, KD Thorsten Streppel, V8 Don Briggs, HU Larry Tuohino

The drive home from Elko. HU

On the finishers list, you only count 23 pilots. Apparently Philippe Athuil, AS-H25Mi, had an emergency to deal with at work and flew home.

Philippe is perhaps describable as Inspector Clouseau, sans Cato. One day at Ely, Nevada he was about to launch solo in the 25 and he asked a few of us why nobody ever asked to get in the back seat.

I responded "because you're out of your mind." He said, very Clouseau, "I thought so", closed the canopy and took off.

Philippe at Ely asking about the empty rear seat. V8

Results for this comp are on the following page.

Free Distance Competitions.

The English pilot and world champion Philip Wills was a great believer in free distance flying. He felt strongly that the type of flying done in comps like the Dust Devils Dash was in the true spirit of gliding and brought back the fun to competitive flying.

"I recently wrote a book about gliding, titled "Free as a Bird". When I had finished it I realised that, over the past few years, the pressures of international competition were towards lessening the freedom and initiative of glider pilots. In modern championships the pilot's powers of deciding for himself when to take off, or when to start or exactly where to fly have been taken over by the organiser on the ground.

Types of flying requiring particular initiative and a particular range of skills were and are being reduced. The more adventurous and uncertain tasks are being dropped out. Even cloud-flying, with all its skill and beauty, is becoming a rarity.

The grid through which a glider pilot must pass in order to get into his country's world team is restricting entrants to an emphasis on a limited range of skills. Championship flying is becoming more mechanistic and less romantic. Luck is a dirty word.

We are not competing against modern Championship philosophy. Even ice-cream has more than one flavour. We are going to find out if a number of valuable enthusiasts prefer strawberry rather than vanilla." Philip Wills from "Free As a Bird".

Philip Wills instigated "Competition Enterprise" (www.comp-enterprise.com) as a way of promoting this idea. Competitions are run at various sites in the UK every two or three years with pilots landing all over England each day.

Obviously there are drawbacks. Some days the real winner is not known for until late, or until the following day. Retrieves can be long… which is also part of the tradition. Kitty Wills, Philip's better half, drove around 1160 miles over one Easter in the UK in a Vanguard towing a glider trailer. What a woman!

"You have just had a day of freedom "in excelsis" : yours has been the sky and all that therein is. It would seem in retrospect as harmless a glory as man could aspire to.

Free as a Bird will try to show how this freedom was won and retained and to foreshadow the work and struggle that lies ahead to maintain it.

For if it is taken for granted, it will, stage by stage, be worn away and, like the evening cumulus, will die."

Airport	Dist in Km	Pilot	Glider	CH handicap	Place
Burley, Idaho	920	Sean Franke	Nimbus 4D	0.776	3
Twin Falls, Idaho	888.4	Jim Payne	AS-W27	.8184 (wet)	2
Elko, Nevada	676.9	Larry Tuohino	PIK 20D	0.950	5
		Jerry Snedden	AS-W20	0.903	6
		Tom Serkowski	AS-H26E	0.843	7
Austin, Nevada	497.5	Doug Levy	SGS 1-26	1.650	1
		Mike Reid	H201	1.020	
		Kathy Fosha	H201	1.020	
		Tom Riley	ASC Spirit	0.942	
		Thorsten Streppel	LS-6	0.899	
Wine Glass Ranch, NV	425.9	Garry Dickson	SGS 1-26	1.650	4
Tonopah, Nevada	349.7	Sean Eckstein	H201	1.020	
Bishop, CA	252.7	George Powell	SGS 1-26	1.650	
		Greg Cole	Sparrowhawk	1.170	
		Morgan Sandercock	Sparrowhawk	1.170	
		Oscar Alonso	AS-W24	0.940	
		Bill Lanningham	AS-W24	0.940	
Independence, CA	191.4	Dave Bingham	Sparrowhawk	1.170	
Lone Pine, CA	168.7	Ian Cant	SGS 1-26	1.650	
Crystalaire, CA	87.1	Johnathan Delbruck	Sparrowhawk	1.170	
Inyokern, CA	82.1	Tony Davis	HP-11	1.090	
Returned to MVA	0	Ron Hodge	SGS 1-26	1.650	
		Patrick McLaughlin	Sparrowhawk	1.170	

NOVEMBER CLUB & SPORTS CLASS COMP

This will be the last newsletter update on the comps before it all happens.

We have a full house with current entries (handled by Peter Sheils) totalling 59 gliders - the max we can accept has been declared as 60.

We're still chasing tugs - we need at least six to handle this number of gliders, and preferably seven. The objective is to be able to launch the whole fleet in one hour - something which very few host clubs have ever achieved. Ron Cameron, tug-master for the comp is vigorously phoning around at the moment of writing, to ensure we can secure the needed tugs.

The other key to getting gliders launched in time is the number of energetic helpers prepared to assist with connecting up ropes to waiting gliders. This is where we need the support of club members, crew, and friends.

If you can assist with this, even a few days, that would be very much appreciated. Accommodation is available at the club for any club "workers".

Other arrangements are progressing - Christian Linnett has been providing his invaluable assistance, as usual, having lined up tents, cool rooms, ice chests for drinks (*chully buns if you are from across the water*), and also has organized construction of tables, so we can reduce some of the equipment hire charges.

Wendy Medlicott is planning menus for feeding 100 people every day - she'll be assisted by Marga Tilley, Carol Shorter and any other wives, girlfriends and boyfriends and club members willing to help.

Liquor licence is in hand, thanks to Ross Edwards - interesting that the Licensing Dept will only license mid strength beer these days for public events. Anyone with RSI (Responsible Service of Alcohol) certification will be appreciated to help out with the bar.

Trevor West has been preparing tie-down areas for visiting gliders and will be organising a weighing team to check glider weights. Turn points and Rules have been worked out and are being published this week and advised to all participants.

Jenny Ganderton, Contest Director, is busily studying the fine print to ensure the contestants are all treated fairly.

Chris Carr is working to prepare the scoring program so it works without hitch - we certainly don't want a repeat of the Queensland Comp experience where the latest version of the Seeyou program had a bug, and no scores were available to competitors until the completion of the comp.

We also need some attention to the airfield before the comp to level out some of the grassy bumps - a bit of rain, or even watering, is necessary, plus rolling. This is something any club members can help with at the club in the intervening few weeks.

And so it goes - a lot of preparation required. Hopefully we will present the club as efficient, organized and friendly and provided we get a reasonable share of classic Keepit good weather we should have a great comp.

The Club can benefit greatly from this event.

Dave Shorter.

For a full list of entries, please see the club website.

DO YOU NEED A HANGAR SPACE?

The LKSC Committee is seeking expressions of interest from members who wish to invest in a 1/4 share of a new hangar. The hangar proposed is the same as the last two built i.e. 18m x 24m, and is to be located uphill of the current two. We already have an approved DA and power/water to the site.

We currently have two parties who have noted their interest in taking up a space, and require two more in order to progress to construction. There will be 4 spaces in the hangar in total. Indicative costings are $20k for the hangar and an optional $5k for concrete floor.

A PRACTICAL MEDICAL HINT.

Pilots who wear eyeglasses or sunglasses who are troubled with excessive perspiration after they close the cockpit, should chalk the sides of the bridge of their nose before putting on their glasses.

The latter will then never slip, even in the warmest cockpit or the bumpiest take off. If the chalk shows and you feel this is embarrassing, use a stick of pink chalk which can be purchased from any art supplies shop. Medicare card, please. *Kerching!*

The Flying Doctor.

FORM 2 WEEK

The form 2 week, held in the last week of August was a conspicuous success. A lot of people were there and about 12 gliders were Form 2'd.

John Tresize was the coordinator and main technical organiser with Ray Tilley being the overseer. There were five inspectors who each had one or two "helpers" and these groups separated into two groups. The group in the tug hangar worked on the high-hours two seaters and did the hard yards in "Adventure Land". The other group moved off to Jenny's hangar where they established "Fantasy Land" and looked at the low hours and newer gliders and the single seaters.

Nothing can take away the fact that the Fantasy Land team had a lot further to travel to morning tea, lunch, afternoon tea and a quiet beer after work which gave them a good excuse for sleeping in. They put a lot of gliders through and the sound of happy workers and hammers ringing on fibreglass could be heard across the strip.

In fact the trip to and from their comfortable hangar got more arduous each day because with Wendy, Marga and Maria Hackett catering, there was plenty of food. And what you didn't eat that day, you were forced to eat the next day in addition the normal day's allowance.

The big excitement of the week was a medical emergency. Ray Tilley cut himself with his safety scissors and was rushed to waiting rooms all over the region… who turned him away. He finally returned to the club where Al Giles found a needle and thread and sewed Ray up in the hangar.

There is a technique you can use in waiting rooms to get seen immediately. Unfortunately it involves a lot of blood all over your clothes, a Morticia Adams paleness to the face and an vague attitude about the extent and nature of your injuries. It works a treat, but is hard to fake convincingly.

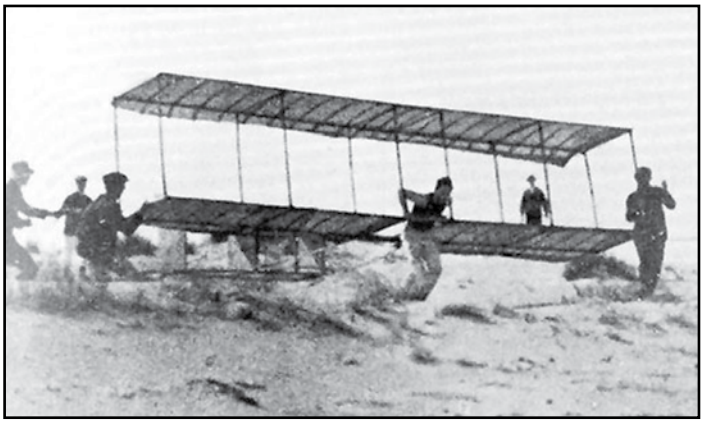
Fortunately the weather during the week was extraordinary. Days were warm enough to force most people into tee shirts and shorts… and the nights were alternately freezing and boiling (for August).

One of the good things about club members doing a Form 2 on gliders like the Puchatek and Grob Twin ll is that not only the Form 2 gets done, but a host of little things get fixed at the same time. Items like sewing new boots for control column bases, replacing all the release cables, panel beating and repainting the Puchatek undercarriage fairing, polishing canopies and renewing hold downs for the tie down kits in the luggage compartment.

The crack team of Ken, Garry and John T discus the effects of gravity on GFP's wing.

Of course there's a benefit for the club. To get all these gliders done by commercial operators would have cost around $10,000 and mean a lot of towing of gliders and trailers over the state.

After a week of hard slog, many of us were keen to get airborne… and were rewarded by rain on Friday night and almost all of Saturday. The weather cleared on Sunday and the wind dropped just as I was driving out. John Stewart and Christian were towed up by Jay Anderson from 27 and disappeared into the newly forming CUs.



Make Your Own Gliding Machine

A gliding machine is a motor-less aeroplane, or flying-machine, propelled by gravity and designed to carry a passenger through the air from a high point to a lower point some distance away. Flying in a glider is simply coasting down hill on the air, and is the most interesting and exciting sport imaginable. The style of glider described in this article is known as the "two-surface" or "double-decked" aeroplane, and is composed of two arched cloth surfaces placed one above the other.

In building a glider the wood material used should be straight-grained spruce, free from knots. First prepare from spruce planks the following strips of wood. Four long beams 3/4 in. thick, 1 1/4 in. wide and 20 ft. long; 12 cross- pieces 3/4 in. thick, 3/4 in. wide and 3 ft. long; 12 uprights 1/2 in. thick, l in. wide and 4 ft long; 41 strips for the bent ribs 3/16 in. thick, 1/2 in. wide and 4 ft. long; 2 arm sticks 1 in. thick , 2 in. wide and 3 ft. long; the rudder sticks 3/4 in. square and 8 ft long; several strips 1/2 in. by 3/4 in. for building the vertical and horizontal rudders.

Please use the picture on the front cover of this newsletter as a plan. Cover the page with greaseproof paper to avoid dirt and glue stains. The frames for the two main surfaces should be constructed first, by bolting the crosspieces to the long beams at the places shown by the dimensions in Fig. 1.

If 20-ft. lumber cannot be procured, use 10-ft. lengths and splice thorn, as shown in Fig. 3. All bolts used should be 1/8 in. in diameter and fitted with washers on both ends. Those frames formed by the crosspieces should as braced by diagonal wires as shown. All wiring is done with No. 16 piano Wire.

The 41 ribs may be nailed to the main frames on the upper side by using he flat-headed brads 7/8 in. Iong. Those ribs are spaced 1 ft. apart and extend ft. beyond the rear edges of the main frames, as shown in Fig. 1.

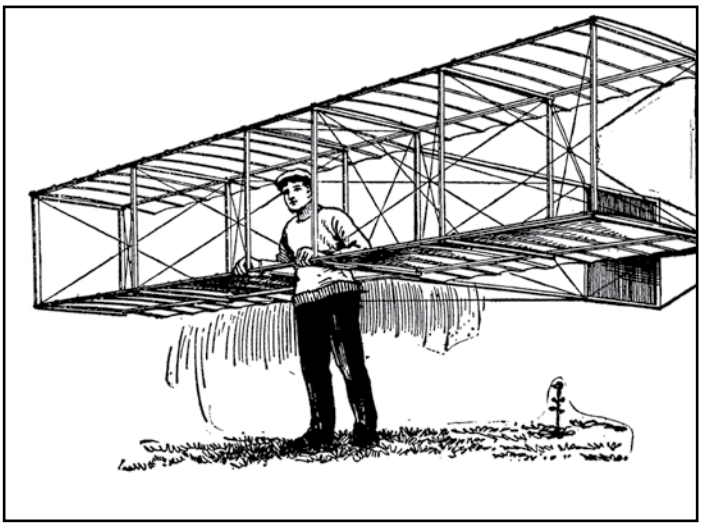
After nailing one end of a rib to the front long beam, the rib is arched by springing down the loose end and nailing to the rear beam. The ribs should have a curve as shown in Fig. 2, the amount of curvature being the same in all the ribs.

The frames of the main surfaces are now ready to be covered with cloth. Cambric or bleached muslin should be used for the covering, which is tacked to the front edge, stretched tightly over the bent ribs and fastened securely with tacks to the rear ends of the ribs. The cloth should also be glued to the ribs for safety. In the center of the lower plane surface there should be an opening 2 ft. wide and 4 ft. long for the body of the operator.

Place the two main surfaces 4 ft. apart and connect with the 12 uprights, placed in the corner of each crosspiece and beam. The uprights are fastened by bolting to the crosspieces, as shown in Fig. 2. The whole structure is made strong and rigid by bracing with diagonal wires, both laterally and longitudinally.

The vertical rudder is to keep the machine headed into the wind and is not movable. This rudder is made of cloth stretched over a light wooden frame, which is nailed to the rudder sticks connecting to the main frame.

The horizontal rudder is also made of cloth stretched over a light wooden frame, and arranged to intersect the vertical rudder at its centre. This rudder is held in position and strengthened by diagonal wires and guy wires.



The horizontal rudder is also immovable, and its function is to prevent the machine from diving, and also to keep it steady in its flight.

The rudders are fastened to the glider by the two rudder sticks, and these sticks are held rigid by diagonal wires and also by guy wires leading to the sides of the main frames as shown in Fig. 1. The two arm sticks should be spaced about 13 in. apart and bolted to the long beams in the center of the opening in the lower plane where the operator is to take his position.

The glider should be examined to see that the frame is not warped or twist The surfaces must be true or the machine will be hard to balance when flight. To make a glide, take the glider to the top of a hill, get in between arm sticks and lift the machine up until the arm sticks are under the arms as shown, run a few steps against the wind and leap from the ground.

You will find that the machine has a surprising amount of lift, and if the weight of your body is in the right place you will shooting down the hillside in free flight!

The landing is made by pushing weight of the body backwards. It will cause the glider to tip up in front, slacken speed and settle. The operator can then land safely and gently on their feet. Of course, the beginner should learn by taking short jumps, gradually increasing the distance as he gains skill and experience in balancing and landing.

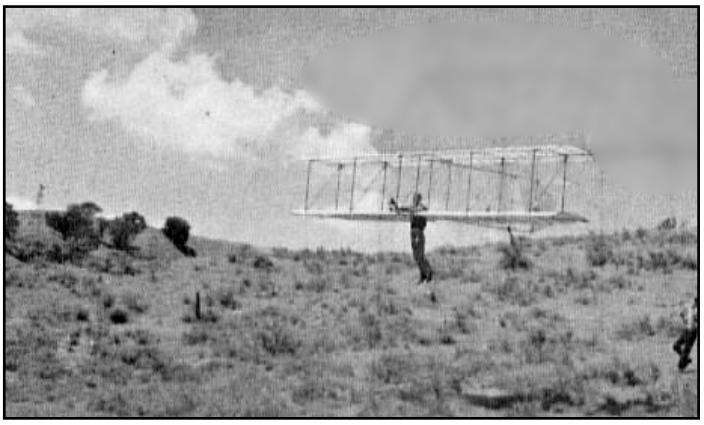
The proper position of the body slightly ahead of the centre of the planes, but this must be found by experience. The machine should not used in winds blowing faster than 15 miles an hour.

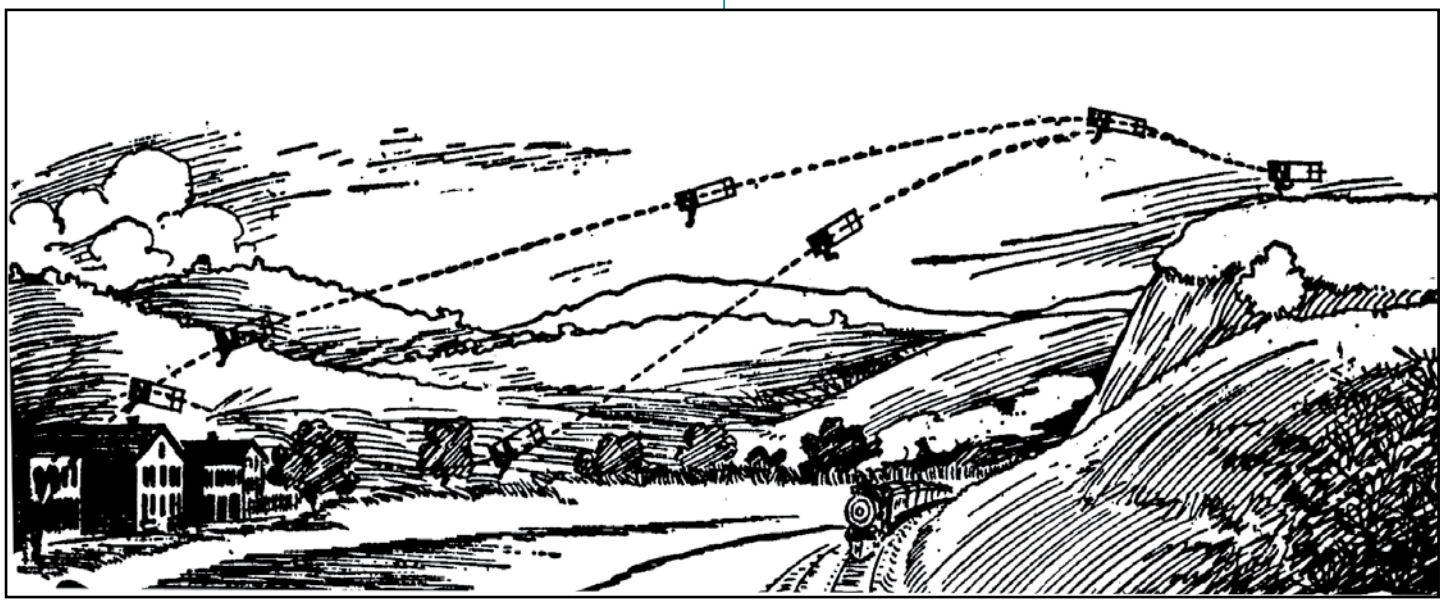
Glides are always made against the wind, and the balancing done by moving the legs. The higher the starting point the farther one may fly.

Great care should be exercised making landings, otherwise the operator for might suffer a sprained ankle or perhaps a broken limb.

The illustration shows two lines of flight from a hilltop, the glider travels on the upper line caused by the body of the operator taking a position a little back of the proper place, and on the lower line changes he changes his position from front to back while flying, which causes the dip the line.

The operator must leap as strongly as possible into the air to makes sure he does not fall underneath the train which runs along the track at the bottom of the chosen hill or fall into the fast flowing river beyond.





FOR SALE

1/3 syndicate share in Jantar Standard IZT hangared at Lake Keepit. Approximately 1600 hours airtime with about 1000 landings.

Good clean condition, microair radio, Borgelt instrumentation, canopy hinge. Well thought out trailer and all tow out gear.

Syndicate currently configured as allocated alternate weeks running from Thursday through to Wednesday. However syndicate members can fly anytime after ensuring slot owner is not using glider that day. Members pay 1/3 of ongoing expenses.

Selling because I simply don't get the time to fly the glider enough to make ownership worthwhile.

Syndicate share include 1/3 share in hangar space at Lake Keepit. Price negotiable. Please contact Paul Hunt on 0404 851 876 or paul.hunt@macquarie.com

Winning with Woitjec!

Keep Soaring is honoured to have the legendary Polish soaring champion Woitjec Bziktk writing for the newsletter. Countless are the numbers of members who have been imploring Woitjec for clues and tips to his enduring success in the air and on the ground.

BK of Benalla asks: Woitjec, What sort of weather do you like flying in best?

Woitjec: I love strong days where the ascending currents of warm air they want to tear away your wing and I love weak days when you they must try to strongly remain upward. I love all weather. Not, I do not love all weather. I hate the English weather.

DS of Walgett asks: What do you think of team flying? Does it work for you?

Woitjec: It is true that my compatriots and I do well with crew flies, but it is sometimes good to be silently. Sometimes, if my crew is flies, then I turn off the radio and I fly in the team of one.

A man cannot fly two gliders at the same time.

Well sometimes best to hear is the voices in your head. If they speak better than a team of voices then you kill the radio.

Remember, it is well said that the flight of a single kilometre begins with just one kilometre.

Wow! Thank's Woitjec! Can't wait until next month's tips! Woitjec's Gran's recipes have had to be held over due to lack of space. Watch for Gran's heavyweight pudding de Nöel in the next issue of Keep Soaring.

How I Was Flung Out of a Sailplane

By Rudi Patz

This flight was made in the "Cumulus", a "Professor" type sailplane, which was now standing in the hangars, and with which Peter Riedel had, a week previously, made his 100 mile flight from the Wasserkuppe to Plauen.

The weather appeared good, and almost a dead calm prevailed. An unbroken cloud-street stretched from South-West to North-East: a direct invitation for a cross-country soaring flight! But for us sailplane pilots that did not come into the question; there were twelve of us, and as we only had a few days left, landings away from the aerodrome were discouraged.

Riedel once more entrusted me with his beloved "Cumulus", and we prepared for the take-off. I had a brief struggle with the parachute harness, for I had never used a parachute before. But our good Chinese friend Sun, who understood all its intricacies, stowed me correctly into the cockpit.

Stamer, the flying instructor, tested the strength of the cord and safety-belt, and then we were off!. A last "thumbs up!" and all my attention was centred on keeping the correct height and distance from the towing-aeroplane "Flamingo". With a forward speed of 40 m.p.h. we climbed rapidly. At a height of 1,300 ft. Riedel gave the signal for me to release, and I disconnected myself from the "Flamingo", which proceeded to shoot down with lightning speed, leaving me, as a "beau-geste", a patch of turbulent air, to which the "Cumulus" reacted in a most unpleasant manner.

I steered towards Wiesbaden, gradually decelerating, until I reached the optimum flying speed of 28 m.p.h. The variometer indicated a lift of 1 ft./sec., which was presently confirmed by the altimeter. Over Wiesbaden I had already gained 300 ft., but I soon lost it; and however much I tapped the instruments to verify their reading, the machine continued to sink at the rate of 3 ft./sec.

I strove to locate a larger region of up-currents, and managed to maintain height. Once again I tapped the variometer, and the needle moved ever so slightly towards "Rise". That looked hopeful; soon it rose still further and eventually remained constant at between 2 and 3 ft/sec.

I was now 2,000 ft. above Wiesbaden, and everywhere people stood gazing up at me. I was in high spirits and continued flying towards those clouds denoting lift, which were still 1,000 ft. or so above me. Sometimes I lost height, and every now and again drops of rain tried to impede me; but I was set on winning the prize offered for a sustained flight of at least one hour over the town of Wiesbaden. Moreover, I was suddenly seized by an ambition to gain a height of 3,000 ft. above releasing-point.

I had now completed forty-five minutes over Wiesbaden, and was only worried by the rain approaching from the South-West over the Rhine. Air conditions became extremely unstable; nevertheless the lift increased, and sometimes I was rising at the rate of 6 ft./sec. The rain fell faster, and every now and again I was obliged to wipe away the drops from my goggles.

At last the required height was reached, the altimeter registered 4,500 ft., and my time was up, 55 mins. having elapsed since I released the cable. I was satisfied and ready to return to the aerodrome. It was high time too, for I was right under cloud-base and over the Rhine. The clouds were lowering rapidly, and I was anxious to avoid the turbulence inside the rain-clouds without blind-flying instruments.

However, I thought there should just be time for me to make one more circle over Wiesbaden. The "Cumulus" continued to rise; suddenly a few wisps of cloud swept past me, and the next moment I found myself in the midst of churning vapours! I pushed the stick forward to 40-45 m.p.h., but the plane rose precipitately. At 50 m.p.h. I gave it up; for in spite of everything I had risen to 5,500 ft.

Slowly, I pulled the stick back to 30 m.p.h and waited. I still hoped to come out of the side of the cloud, for I had been near the edge of the cloud-street. But the milky whiteness around me remained unchanged. I had no idea what position the plane was in. The variometer registered a lift of 10-12 ft. per sec., while the forward speed showed a tendency to increase.

Slowly I eased the stick back, but to no avail… 6,000, 6,500 ft. was indicated on the altimeter. There was nothing to do but wait. I knew that sooner or later I should lose control, and the plane would stall and probably spin.

6, 7,000 ft.! There was a sudden acceleration of speed: 40-50--55 m.p.h! Severe bumps hit the plane-60 m.p.h: the needle of the A.S.I. had reached its limit. Suddenly, a violent jerk! And I hit my head on the side of the cockpit! Another one! And I banged my head first on the back of the cockpit, then on the front! My left hand lost its grip, while my right was torn from the stick! I heard an ominous cracking and rending; then suddenly quietude prevailed…but I was alone!

Twin thoughts flashed through my mind: "The plane has fallen to bits-what will Peter Riedel say when he learns the unhappy fate of the 'Cumulus'?" I felt extremely thankful that I had a parachute with me, and I now waited for its opening jerk; but nothing happened!

"Torn off! Lost! 26 years old! 6,500 ft. up! There is nothing I can do!" Such were my vivid and disjointed thoughts as I fell through the air. All around me there was nothing but a pervading whiteness. A few feet away, some small object passed me on its headlong rush to earth… and there behind me on my straps was a brown parcel: the parachute! I drew it towards me, stuck it between my legs, and pulled the rip-cord, whereupon everything went again! "That's finished me!" I thought. But no! There was the cream-coloured canopy billowing above me: quite gently the parachute had opened, and I was saved!

Slowly, I swung to and fro, and as drops of rain fell on to the taut silk of the parachute I gradually recovered my composure. In my left hand I was still holding the handkerchief for wiping my goggles, but the goggles themselves were gone! I looked at my watch: 4.0 o'clock! "What will happen now?" I thought. "Will the up-currents be strong enough to keep me in the clouds?" It would not be impossible. When still in the sailplane I had been rising at the rate of 13 ft/sec., so that there must have been a lift of at least 16 ft/sec., which is equivalent to the sinking-speed of a parachute.

In a few moments a gap appeared in the clouds, and soon afterwards I found myself already beneath them, drifting over a wood. Behind me was Wiesbaden, where it was pouring with rain, while ahead stretched the first peaks of the Taunus Mountains. I wondered where we would find the wreckage of the "Cumulus"!

But what was that, hurtling down below there just above the forest? Doubtless a sailplane, can it be? Hardly possible, and yet? From my height of about 1,000 ft. I could hear it whistling through the air. Now it was perched on the tree-tops. It must be the "Cumulus"!

But how could I have been thrown out in such a manner? I had no more time for reflection, for I was rapidly approaching the earth. Making a quick survey of my position, I mentally noted the position of the "Cumulus", which was lying on the trees just before an "S" turn in the road through the forest leading to Wiesbaden. It seemed that I myself would land on the other side of it, further away from Wiesbaden on a meadow.

But no, the wind was too strong, so it would be the wood! I braced myself for the landing and at the last moment instinctively pulled myself up on the harness, full of optimism, with the idea of lessening the force of the impact. I do not expect it had the slightest effect, but on the other hand it did not do any harm! A branch hit me behind the ear, and I found myself lying on the top of a pine-tree Rustling softly, the parachute wrapped itself round the adjacent tree.

During the salvage of the plane the following day, the last riddle was solved: the pain in my arm and the fact that the parachute had failed to open. While subject to the violent disturbance in the cloud, I was probably thrown through the right-hand side of the cockpit, and in doing so had cut through a longeron and also the 2 mm. plywood covering. The rip-cord of the parachute (static type) which had been fastened to the plane then either got torn on a metal fitting or was sawn in two by a jagged edge of the torn plywood.

The cord-end that was torn off remained whole, so that the entire affair, which might have a sad ending, really seemed more like a fairy-tale than anything else. And to complete the story, I received 100 Marks for the first sustained flight of one hour over Wiesbaden.

Read the next issue of Keep Soaring to discover how Peter Riedel gets his own back on Rudi Patz for wrecking the Professor.

The picture of the Professor accompanying this article is from Martin Simon's addictive book: Sailplanes 1920-1945.

Hitting the Silk

October November 2009

I have never deployed a parachute in anger, and I know little or nothing about parachutes and their use. Some of the little that I know is written here. Much of it may be wrong but if it makes you think more about what most of us use as a seat cushion, then it's worthwhile.

Some years ago, a parachute clinic was held at the Moyes factory by a man called Angelo Crapanzano. Angelo designed the first pulled-down apex parachutes. A type which has been used for the last 30 years by all the world champion hang glider pilots. I went along to the clinic thinking it would be useful to know how to repack my own parachute. Firstly so I could get to know it better and second, because I could repack it more often.

I found that the clinic had little to do with parachute repacking and everything to do with parachute deployment. It began at 2 o'clock and five hours later, repacking had not yet been talked about. Several people had brought along video cameras and most ran out of tape long before the event ended at 12:30 that night. The following year, Angelo repeated the event to another packed house. Some time later, we produced a DVD which has been duplicated hundreds and hundreds of times.

Most of us cannot hope to know more than a fraction of what someone like Angelo. However, the more we do know, the better we are able to understand the importance of having a parachute and knowing about how to use it.

After doing the parachute deployment DVD, I got together with another HG pilot (a university professor) for a deployment and repack session. We swapped harnesses and hung off a roof beam and then went through the deployment procedure… or attempted to. I pulled and tugged at the handle on his parachute and try as I might, I could not deploy it. I thought the parachute was sewn into the bag! (It is not unknown for some pilots to use a beach towel instead of a parachute to pad out an empty harness in contests!

The Prof's comment was "It does not matter since I have absolutely no intention of using my parachute". Oddly, I think this attitude is common amongst us sailplane pilots.

Before looking at parachutes in sailplanes, a look at parachute deployment in other gliding activities is interesting.

Paraglider pilots will throw a reserve chute for practice. They will also deploy their chutes very low down because in most cases, they will be trying to re-inflate their paraglider until the last moment. There are several cases of pilots using their reserve parachutes more than once in a flight.

In this somewhat idealised view of things from a PA parachute manual, a pilot appears to have bailed out of a perfectly serviceable aircraft. This does not apply to us then!

You won't get a hang glider pilot throwing a backup parachute for practice. However lots of them have used a parachute. In fact in some aerobatic competitions, 10% or more of the pilots have thrown their chute in the one comp. And most survive. Angelo Crapanzano is aware of over 300 deployments of his parachutes with only one fatality caused by a pilot becoming disconnected from his broken glider and the parachute opening at a very high speed.

About half of these deployments were made below 300' and a quarter below 150'. In one case, a pilot was seen to fall behind a line of trees and his chute opened between tree top height and the ground.

Sailplane pilots are not so lucky. In fact, in the event of needing to use a parachute, *fully 50% of sailplane pilots will not get out of the aircraft*. That's a fairly scarey statistic and might explain why there is so little training in parachute deployment. And for those who do manage to get out of the cockpit, what happens afterwards is not often discussed and receives no formal training.

Speaking personally, I have never been shown anything about exiting a sailplane or parachute deployment in Australia. The first time I ever saw this happen was in France where a student pilot was shown not only how to put a parachute on, but how to use it! At the same club, many other safety procedures which we would regard as essential are not done.

Certainly, there are accidents in sailplanes where a parachute can't be used… stall-spin accidents at low level and collisions with the ground when slope soaring for example. *But we can and should try to increase the success rate of parachute deployment.*

So perhaps we do need to think a bit more about the business of parachutes. We need to consider why and when we might need to leave our glider and have a plan for doing this.

We should be doing an "exit check" in the same way as we routinely do a CHAOTIC and FUST check.

The sequence with a bail-out is Canopy, Belt, Bum, Cord. It is essential to regularly practice this as a sequence in every type of aircraft that you fly so you don't waste valuable time.

As they say, subtly, every aeroplane is different. (Bizarre ain't it!) Almost every type of sailplane has a different method of releasing the canopy, Many have different seat belt harness releases and the rip cord handles on parachutes can be in different places.

Every time you take off, and as soon as you are stabilised after take-off and have time to spare, practice your deployment sequence. Make sure you know where the canopy release is with your eyes closed. Reach out and touch it. Many handles are shape-coded so they have a unique feel compared with the canopy latch.

Identify the seat belt harness release, reach out and touch it. Look at the ripcord handle. Move your hand to the ripcord handle. Remember that in many cases you may be spinning or tumbling and it will be difficult to move your hands towards the ripcord handle without considerable effort. Difficult or maybe impossible.

It is essential to look and touch! A hang glider deployment will serve as an example. The celebrated Robbie Whittal deployment goes like this. Robbie was in an aerobatic championship above Monaco when he did a bad loop and had to throw his parachute. He grabbed at the deployment handle and tugged like mad… again and again. Some time later, puzzled by the non-appearance of a parachute, he looked down and saw he was tugging at his camera strap.

Get into a habit of practising bailing out. And hopefully you will never need to.

The most important thing about parachutes is to have one when you need it. If you fly without a parachute, then most of what follows will not be important to you.

The second most important thing, is that your parachute must work when you need it. And the third most important thing is that it must not deploy when you don't need it. This last point is not normally an issue except where static line or ballistic parachutes are used.

A parachute is designed to reduce the level of sh*t you are in from above your head, to just below your nose. But if it opens when you don't need it, then the level goes from zero to above your head in an instant. (See ballistic parachutes, below.)

When you open your parachute, the level will go from just above your head, to maybe eye level or maybe just below your nose. Make no mistake. Once your parachute is open and you are descending, a whole new world of fun has begun.

Most emergency parachutes will open. The failure rate of a skydiver's main chute is quite high because of its design and the way it is packed and repacked. However the failure rate of backup parachutes is very low.

A parachute which has not been recently repacked will most likely open OK, but it may take longer than a recently repacked canopy. The recommended repack time of emergency parachutes for hang and paragliders is three months. This is partly because these parachutes are subject to a harder life than sailplane parachutes and the frequency of use of these parachutes is higher. However the 6 month repack cycle of a sailplane parachute should be taken as the maximum if you get more than usually hot and sweaty in the cockpit or if a parachute ever gets wet through a spilt water bottle.

When your parachute needs a repack, it's a great time to get to know it better. Ask the rigger who is repacking your parachute, and either go and watch the repack, or carefuly examine your rig to see how the rip cord works and how it is packed. Make sure you have a nice bright canopy too… the last thing you want is to be camouflaged.

There is a right way to put on a parachute. The chest strap should be secured before the leg straps are done up. This should be routinely done so you make sure that the chest strap is actually done up and not forgotten about.

Before putting on your parachute, open the back flap to expose the rip cord cables. The cable ends should extend well through the grommet openings and be safetied. Check the rip cord handle. It should be securely fitted all the way into its pocket or elastic loop. Some pilots put a piece of coloured tape on the handle for rapid visual identification. Check for general integrity of the container.

The canopy should not be visible. If a round external spring loaded pilot chute is installed, make sure it is secure around its circumference.

Parachutes should never be left in a cockpit when a sailplane is hangared on in a trailer. They should be stored in a cool dry place. Nylon is degraded rapidly by UV light and although most sailplane parachute harnesses are made of reasonably thick material, why take the risk by leaving a parachute unnecessarily exposed to sunlight? Nylon also absorbs water and loses strength when wet. When yachting, most spinnakers fail when they first come out of the bag. Once the spinnaker dries out, it increases in strength by as much as 10%.

There are several main reasons why we might want to bail out.

Mid air collision with other aircraft or large birds. Probably the most likely event.
Failure of an essential control system of the sailplane.
Failure of the aircraft structure which renders it unsafe.
Fire. More likely to happen in self launching gliders.

If one of these events occurs, there's a wide range of possible outcomes. At one end, the sailplane is still flying and controllable but there is a significant doubt. An example of this is where a pilot had a mid-air collision but decided there was no damage. He landed and found that one entire half of his horizontal stabiliser had broken off. Probably this pilot should have elected to bail out.

Another example is where an aileron linkage has parted in flight or been incorrectly rigged. In one instance of this, the pilot never noticed until the aircraft had landed safely. In another, the pilot called for help from another pilot who flew over and saw the aileron flapping. In this case the pilot elected to bail out rather than risk landing the aircraft with only partial control.

In the "flyable" condition, the pilot should spend a moment considering the options.

Is the glider actually damaged?
Is the damage significant?
Is the terrain over which the aircraft is flying suitable for landing in a parachute and will this condition change?
Is there enough altitude for a successful parachute deployment?
In the case of a fire in an SLG, most engine compartments have a fire rating of perhaps 5 minutes before the fire will spread and perhaps damage control linkages. In this case, is the glider low enough to land safely or high enough to allow for a successful bail-out?
Remember, it is going to take a significant time to lose height, get the glider in landing configuration and set up for a landing.

At the opposite end of the range of possibilities, when the sailplane is obviously in unflyable condition, an immediate and rapid bail-out must be done. Regrettably, when a glider is damaged this badly, the chances are that not will there be little time to think about the options but the glider may also be very difficult to get out of.

Gliders are slippery by design and will accelerate rapidly into a spin, spiral dive or some other uncontrolled manoeuvre. If significant parts of the wing or tailplane are lost in a collision, the resulting motion may be violent and chaotic. G forces may build very rapidly so that a pilot does not have the physical strength to push out of the cockpit or they just black out.

If there is the slightest hint that the glider is unflyable, then immediate and rapid exit is the only option… and this should be planned for and rehearsed as far as possible!

The sequence is Canopy, Belt, Bum, Cord.

Canopies are fastened and jettisoned in many ways depending on whether they are front, rear or side hinging. The canopy jettison lever is coloured red, but almost every glider manufacturer has a different idea about what shape, size and position these levers should be in.

Jettisoning the canopy may not be straightforward. You may have to pull levers using enough force to break safety wire connections. Most manufacturers recommend testing the canopy release mechanism every 3 months during the DI, so this is a good opportunity to practice. (If you fly your own glider *without* a parachute, then you don't need to worry about this stuff. You can safely wire the canopy jettison levers closed because you are not going to need them.)

Regrettably, having released the canopy, it will probably fly back in the slipstream and bean you. This happens enough that in Germany, Prof. Roeger of the Aachen University invented a simple hook-shaped pin located at the back edge of the canopy which solves this problem.

If you have a Roeger hook fitted, the front of the canopy should lift in the slipstream and then pivot around the pin before flying off backwards. All new German gliders have a Roeger hook fitted, and most older gliders can have them retrofitted.

If your glider has a single canopy jettison handle, you should shield your face as you pull the lever with your other arm, especially if you do not have a Roeger hook fitted.

If you need to pull two levers, lower your head as much as possible when jettisoning the canopy. Use this head-down time to look at the seat belt harness release.

There's no guarantee that the canopy will fly off by itself. The pilot should be prepared to push hard upwards against the acrylic to force the canopy off the cockpit. Once the canopy has been released, things inside the cockpit may get fairly chaotic because of the force of the slipstream.

Next, release the set belt harness.

Don't just feel for the harness release, look at it before operating! If you are lucky, the harness will release easily and you can climb out of the glider. Assuming the glider is flying straight and level at the time.

Most likely the glider will be doing anything other than flying straight and level and you will release the harness and find it difficult or close to impossible to push or pull yourself up and out of the cockpit. If the glider has entered a spiral dive, the G force may quickly and easily exceed 2 Gs. That's only the G force in a 60º bank and it's going to double your body weight.

It's probably not possible to simulate this in an actual glider cockpit, but next time you are at the club, lie down on your back on the ground and get a friend of similar size to lie down on top of you. (Let people know what you are doing first!) Now, put your hands down on the ground either side of you and try and push the two of you up far enough to clear a notional cockpit side.

Many pilots who have had to exit a glider have found it very hard and it may take several attempts and require almost superhuman strength. Don't give up! The chaotic motion of the sailplane may mean that the next time you try, you will succeed.

The pilot and writer Jochen Ewald has frequently commented on the need for small bumps or hollows to be put in a cockpit floor to give a pilot a place to dig their heels in and lever themselves up. Probably this is something which can be easily retrofitted to glider cockpits.

If the sailplane you are flying is an SLG, this whole procedure may have to be modified. If the engine is extended or running, if at all possible, it should be stopped and retracted before bailing out. Use the emergency or manual override to retract the engine. If the propellor is still turning, don't wait, it will stop when it hits the engine bay doors. Hopefully the manual retract switch is self latching, so as soon as you have thrown the switch to start the retraction, you can get on with the rest of the bail-out process.

As soon as you are clear of the cockpit, pull the rip cord and you have survived!

Well no… it is not so easy and you are by no means safe yet. A lot of things can go wrong at this stage, if they have not already done so.

You may get the seat belt harness and parachute harness tangled up.
There may be all sorts of hang-ups when exiting the cockpit caused by water drinking tubes, "pilot relief" tubes, oxygen and headphones. The results of having an external catheter hook up inside the cockpit scarcely bear thinking about.
You may get your feet caught in the pedals. If you are lucky, you'll only lose a shoe.
You may have your parachute done up too loose and break an arm when the chute opens.

But let's say that you get out safely and it is time to pull your parachute rip cord. Look at the rip cord handle, reach out quickly with both hands if possible. If you can only get one hand on the rip cord handle, your other hand can be used to stabilise the hand on the rip cord. The rip cord should then be firmly pulled all the way out with a circular motion across the body.

Practice looking relaxed while you pull the rip cord.

Possibly the biggest impediment to pulling the rip cord is going to be tumbling and the second, the violence of the airflow. If you start to tumble, then G forces may build up so fast that you are unable to bring your arms back in towards your body to pull the rip cord.

If you are tumbling, then probably getting into a face forward, spread-eagle position like a sky-diver will stabilise the tumbling and allow you to reach the rip cord.

Most of us are going to pull the cord as soon as we possibly can but if you have the presence of mind and a lot of altitude, it's recommended that you delay your parachute opening by 5 seconds or so to clear the plane.

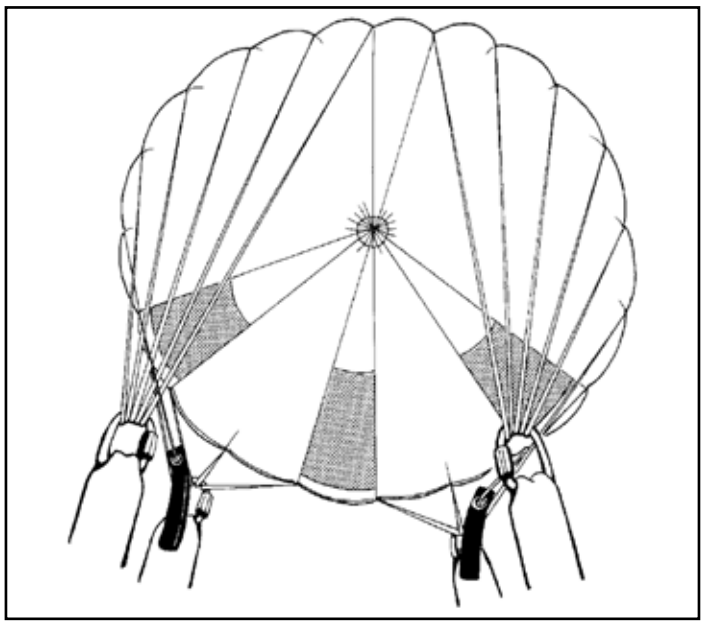
The chances of your canopy not opening are very small. If the parachute does not open cleanly, then fight it! There are some "interesting" videos around on the internet taken by sky divers who have had a partial opening failure of their parachutes pulling on the bridle and lines to get the canopy to fully open.

There are instances, especially in other forms of gliding, where the pilot and parachute will fall at the same speed in a nice stable configuration. The parachute is contained in a deployment bag which will not open until the parachute is at the full extent of the bridle. So the pilot must pull the bridle back in and throw the bag downwards hard to extend the lines.

Suspended in your parachute, and quietly descending, you may have a moment to consider your next options.

Where are you going to land? It is well worth avoiding power lines, roads, trees, buildings, water and downwind landings.

I only know one person to have deployed a parachute at a height. Two weeks afterwards, he was still very quiet indeed. There's a lot to think about on the way down and not a lot you can do about it unless you act decisively and act early.



Most emergency parachutes can be steered… but not all. Typically, the parachute will have vents towards the rear of the parachute and can be steered by pulling on the two webbing handles attached to the risers, or pulling on the rear risers themselves. The handles have to be pulled firmly down to chest level. The parachute will continue to turn until the steering line is released and take about 3 seconds to stabilise.

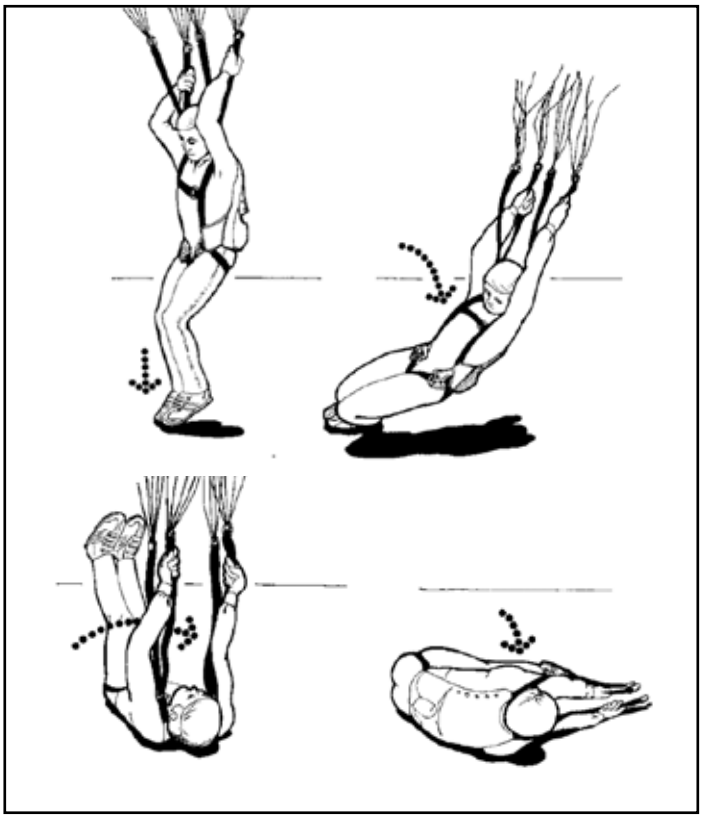
Remember, when the parachute is being steered or turning, the descent speed and forwards speed both increase, so get your steering done early.

If you have the chance look for a landing spot, look for it downwind and turn back into the wind for your final approach.

Look down to determine if you are drifting forward or backward. Your landing spot will be somewhere between a 45' to 60' angle as you look forward and down. The landing spot should appear to remain stationary as you descend. Do this early to avoid steering turns at a low altitude.

Lock your legs together from thighs to ankles. Bend your knees slightly forward and

Brace yourself as if you were to jump off a 2 metre high platform. Turn your body slightly sideways and roll along your side to absorb the landing shock.



The parachute may remain inflated after landing, if winds are greater than 10kts. If you are being dragged across the ground by high winds, roll onto your back. The backpack will provide some protection from abrasion. Reach up and grab one of the lower rigging lines of the parachute and pull down hand over hand until the canopy is distorted enough to collapse.

If you are landing in water, turn the parachute to face into wind to land as you would for a normal landing. Facing into wind is absolutely necessary for all water landings.

Release the chest strap as you descend under the parachute. This will save time in the water.

Be aware that if you land in water facing into wind, you may be towed across the water on your back (face up) if the wind strength is high.

If you land facing down wind, you will enter the water face down and may be dragged under.

After landing in the water, release both leg strap snaps. Discard the parachute and swim away. Always swim up-wind and up-current away from the parachute to avoid entanglement. Once it's water logged, the parachute will sink!

If there are power lines in the vicinity, steer away from them downwind. If you are unable to avoid power lines, push your feet firmly together, turn your head to the side and try not to touch more than one line.

If you find yourself suspended above the ground, make sure power has been disconnected before a rescue attempt is made. There are several instances of rescuers being electrocuted trying to save someone from power lines while the person hanging from the power lines survived.

Unless you are sure that the power has been disconnected, don't let anyone near you. Remember that most high voltage lines will have a circuit breaker that will automatically attempt to reconnect the power a number of times.

Always steer the parachute to avoid trees. If a tree landing is unavoidable, place your feet and knees firmly together, tuck your elbows into your stomach, protect your face with your hands. Place your chin on your chest and hold on. Once you are in the trees, you can either use your parachute lines to lower yourself to the ground, or better, to tie yourself to the tree until help arrives.

As a side note, many hang glider and paraglider pilots carry a roll of dental floss in their harnesses which is strong enough to be user to raise a rope from the ground.

IMPROVING THE ODDS

Assuming you have a parachute, it is repacked regularly and you know how to get out of your aircraft, there are several things you can do to improve the odds of bailing out successfully.

Practice
Mental rehearsal
Static line parachutes
NOAH
Aircraft Rescue Systems and Ballistic Parachutes

Obviously the first thing is to practice. You can do this in at least two ways. One is to rehearse the bail-out routine in the cockpit of any aircraft that you fly. Use a check list such as CBBC, look, touch and think.

Mental rehearsal or visualisation is a great technique. Almost all athletes use mental rehearsal before they perform. Visualisation is a very powerful tool and there is plenty of evidence to suggest that techniques like this can make a really significant difference in the physical world. You can do this almost anywhere, not just in bed or sitting down. I was undergoing a regular and painful dental procedure (is there any other sort?) and I found lying in the chair and visualising winch launch emergencies was a great way to put my mind somewhere else.

If you do visualisation well, you may find yourself breaking into a sweat or your pulse racing. This is probably a good thing since regular exposure to the bail-out situation or the idea of it can remove the panic factor… after all, some people jump out of aeroplanes just for fun!

Static line parachutes. A static line parachute can be opened in two ways. One is using the rip cord as normal. The other way is to have a static line on your parachute which is attached to a strong point on the glider. Most gliders have these already fitted, but it's fairly easy to install one or to connect to an existing structure.

Using a static line parachute should completely eliminate one part of the deployment procedure. And it should work even if you cannot get a hand on the rip cord. If the static line system fails for some reason, you will know pretty soon and can fall back on pulling the rip cord.

There are a few possible disadvantages. One is that the static line gets tangled around your arm or neck as you leave the glider.

Another is that the deployment sequence will start as soon as the end of the static line is reached (<> 6 metres). Another is some more thought is required when getting out of the sailplane after a normal landing. Personally, I think the benefits far outweigh the risks and have a static line fitted to my parachute.

Automatic Bail-Out Systems. DG sailplanes invented the NOAH automatic bail-out system and have made it available to other manufacturers. It can be fitted to any new sailplane and retro-fitted to many existing ones.

Essentially, NOAH is an airbag system which inflates and raises the pilot to the level of the cockpit side in about a second, allowing the pilot to just roll out instead of climb out.

On a glider fitted with a NOAH system, the pilot jettisons the canopy as normal, and then pulls on a toggle to activate the NOAH system. This not only inflates the air bag but also releases the seat belt automatically. It is impossible to deploy the NOAH system until the canopy has been jettisoned.

Even though the NOAH system has interlocks to prevent the inadvertent deployment of the air bag, tests have shown that if the air bag does inflate when the seat belt is still done up, all the pilot gets is a good squeeze for 2 seconds or so until the porosity of the air bag lets the air escape and reduces the pressure.

In a glider fitted with NOAH and a static line parachute, the exit sequence is hopefully reduced to two actions. Jettison the canopy and pull on the NOAH operating toggle. Easy.

Ballistic Aircraft Rescue Systems. Remember important point three? A parachute should never deploy unless you need it.

A ballistic parachute system is normally used to parachute down the entire aircraft and pilot. The attraction is obvious. One pull on the actuating lever and a rocket or spring fires line out of the aircraft which deploys a drogue chute and then a full size parachute. The pilot has the protection of the cockpit, perhaps a modern reinforced safety cockpit to rely on and hopefully both aircraft and pilot are saved.

The arguments against ballistic parachute systems are however considerable. Expense, size and weight, slow deployment, height required, unwanted deployments and uncontrolled descents are the main ones.

A ballistic system, because it supports the entire glider and pilot, must withstand a much greater opening shock and be able to support at least four times the weight of a conventional personal parachute. This means that ballistic systems are large, heavy and quite expensive compared with a system like NOAH. In fact, where they can be fitted to sailplanes, they normally fit into the space where a self launching or sustainer motor might be fitted, so normally you cannot fit a motor *and* a ballistic parachute. Ultralight sailplanes may be an exception to this.

Ballistic parachutes are much more expensive than a NOAH system. Perhaps 5 times the price.

I have flown with a spring deployed ballistic parachute for some time and it did make me nervous. However the incidences of unwanted deployment are low. BRS have installed over 30,000 systems in sport and defence applications which must be some testimonial.

Once a ballistic parachute system has been deployed, the pilot becomes a passenger and lands where luck and the weather take them. This is not an ideal situation by any means.

And a ballistic parachute can still fail to operate as expected. Last year, while flying the US made Sparrowhawk ultralight sailplane, the pilot inadvertently exceeded VNE… the ASI was defective… and a wing broke off. He deployed the ballistic parachute which was fitted to the test aircraft. It must have opened successfully, but at a higher speed than expected because the next thing the pilot knew was that he was ejected, complete with seat pan, through the nose of the aircraft. Oddly the test pilot had chosen to wear a conventional parachute which worked fine.

In Germany and possibly other EU countries, it is mandatory for aircraft such as ultralights to be fitted with a complete aircraft rescue system. The German regulations for maximum opening time at a specific speed and weight.

Because payload, operating speed, opening shock and opening distance constraints are in opposition, it is virtually impossible to have a short opening distance and a low opening shock. Your body will withstand a 20G opening shock, because it is applied for a very short time. Designing an airframe to withstand this shock loading is complex, heavy and expensive.

In practice, the opening distance of these rescue systems appears to be shifted upwards by 80-120 metres compared with a conventional human operated parachute. That is, a ballistic parachute takes longer to open, and therefore the minimum deployment height is higher.

It is possible that because most conventional sailplanes are certified aircraft, that we will escape the regulations which are applied to ultralights. Making complete aircraft recovery systems mandatory for sailplanes in Germany could significantly affect sailplane design and performance in the near future.

THE RIGHT GEAR FOR YOU.

The US are currently changing their military parachutes. Soldiers are carrying more gear so their parachutes have to be made larger. Oddly, the new version cannot be steered, perhaps this is to optimise the sink rate.

Parachutes have to be loaded correctly so they descend at the right speed to work properly. When people like sky divers and paraglider pilots throw a back-up parachute while their main chute is up, the area increases, but the sink rate is higher, not lower.

The size of parachute you carry really should be a function of your age as well as your weight! How fast do you want to fall, and how quickly do you want the chute to open? We all want the fastest opening possible, but fast opening means a small area chute. While a 20 year old may be able to jump down from a 3-4 metre high wall without injury, a 50 year old cannot expect to do this without being hurt.

In fact, this is one reason why the idea of doing parachute practice jumps may not be so good for many pilots. The chances are that some injury is going to result in any case, so why bother?

We are not interested in the opening time of a parachute. We are interested in distance. If you are 50 metres above the ground, you don't care if your parachute opens in one or two or three seconds, you care that it opens in 45 metres or 55 metres. The opening distance, all things being equal, is a function of the size of the parachute. A small parachute will open in a shorter distance than a large one.

Sailplane pilots need a parachute which is rated to open at high speed. This is quite different to a hang glider pilot who will deploy a parachute at a low descent speed. A parachute which is deployed at high speed has to be strong to withstand the opening shock. Sometimes the opening sequence is staged or delayed to reduce the opening shock at high speed which has the undesirable affect of increasing the opening distance.

The opening distance is almost precisely a function of the opening time squared, i.e. doubling the opening time requires basically 4x the opening distance. A human operated parachute may open in 2.5 - 3 seconds, a ballistic parachute is required in Germany to operate in 4.5 seconds… although designers think that 5 seconds is more practical. So if you are ridge soaring or flying in the mountains, don't rely on your ballistic parachute!

It is possible to improve (i.e. reduce) the sink-rate for a parachute of a given size by designing it with the highest possible aerodynamic drag coefficient. However, to obtain a better sink-rate for the same pilot weight on the same model parachute, the only possibility is to use a larger size parachute.

A seemingly obvious choice made by many, however, a larger size requires a greater opening distance, more weight, more volume, greater encumbrance to extract from the container and a higher price. A larger size of the same design has longer lines and requires a larger volume of air for inflation: at high speed the vertical opening distance required by a parachute is related to the square root of the surface area (doubling the surface area increases 1.41 times the opening distance).

The controversy over sink-rate is essentially a philosophical problem: Alain Zoller - Swiss Federation test pilot - with considerable experience deploying parachutes in simulated accidents, prefers a good sink-rate, while Andy Hediger - renowned Paratech test pilot - who has performed at least 5 deployments in real accidents, prefers flying with a parachute which opens fast. To allow everyone to decide for themselves, pilots must be clearly informed what sink-rate they will get with their weight on a particular make and model of parachute, very carefully remembering that what is acceptable for a young karate champion would be totally inappropriate for an elderly pilot in average physical condition.

PRIMARY SAFETY

There is absolutely no doubt that primary safety is better than secondary safety. If you don't get yourself into a position where you will need to deploy a parachute, then you will not need to worry about whether your parachute will open. Primary safety should *always* be our priority over secondary safety. In almost all instances, having to bail out of a glider can be avoided.

Mid-air collisions suggest that at least one person was not keeping a proper look out.
Control failures suggest that servicing, rigging and DI-ing was not done properly.
Structural failures due to over stressing the aircraft are rare, and in many cases have elements of pilot error.

Perhaps the Professor it right from the start. We should all make sure that we have *absolutely no need to throw a parachute!*

The text of this article comes from a variety of sources including Angelo Crapanzano of Metamorfosi, the PA (Parachutes Australia) manual for the slimpack emergency parachute, DG Flugzuegbau, Drop Zone and others.

Lake Keepit Soaring Club Inc

Airfield and Clubhouse: Keepit Dam via Tamworth NSW
Mail address: 234 Keepit Dam Road, Keepit 2340
Phone: 02 6769 7514
Email: enquiries@keepitsoaring.com
Internet: www.keepitsoaring.com

LKSC Contact Details 2009

Manager	Jenny Ganderton	02 6769 7514	manager@keepitsoaring.com
President	Tim Carr	02 9801 7979	president@keepitsoaring.com
Vice President	Ron Cameron	02 6721 0081	rfcameron@bigpond.com
Secretary	Wendy Medlicott	02 4365 3626	secretary@keepitsoaring.com
Treasurer	Dave Shorter	02 6656 1979	treasurer@keepitsoaring.com
Chief Flying Instructor	Ken Flower	02 6761 3816	cfi@keepitsoaring.com
Committee Members:	John Clark	02 9450 0800	johnc@aeronaut.org
	Todd Clark	02 6766 2995	toddclark@hotmail.com
	Vic Hatfield	02 6765 7050	vicandlynn@bigpond.com
Chief Pilot	Dennis Stacey	02 6760 8538	hastingsair@bigpond.com
Airworthiness Officer	John Trezise	02 9858 5950	trezco@ozemail.com.au
Tugmaster	Phil Anderton	02 6785 2764	tugmaster@keepitsoaring.com
Membership Secretary	Ian Sawell	02 9896 4961	membership@keepitsoaring.com
Webmaster	John Clark	02 9997 2842	webmaster@keepitsoaring.com
Bookings Manager	Stephen Black	0405 636 956	bookings@keepitsoaring.com
Newsletter Editor	John Clark	02 9450 0800	editor@keepitsoaring.com

Coming Events 2009

2-5 October	4 day Cross Country Weekend (Oct long w/e)	Wendy Medlicott
23-25 October	Kentucky Camp	Bruce Taylor
6-20 November	National Sports & Club Class Championships	Dave Shorter
7-12 December	Keepit Safari	Ian Barraclough

Tug Pilot & Instructor Contact Details 2009

Name	Home	Work	Mobile
Jay Anderson	02 9571 9592	02 9221 4938	0418 676 696
Phil Anderton	02 6785 2764		0427 493 107
Ian Barraclough	02 9948 7866		0428 410 010
Andrew Brumby			0404 043 386
Tim Carr	02 9801 7979		0414 405 544
Bruce Clark	02 4955 5041		0414 545 278
Ron Cameron	02 6721 0081	0428 659 637	0428 659 637
Rob de Jarlais	02 4677 1926		
Tony Esler	07 3350 5858	07 3881 2615	0412 770 526
Ken Flower	02 6761 3816		0406 716 574
Bill Gleeson			0408 443 009
Vic Hatfield	02 6765 7050	02 6766 9655	
John Hoye	02 6767 1033		0427 505 233
Matthew Minter	02 6785 7399	02 6742 3998	0427 455 119
Geoff Neely	02 6769 7514		0419 563 233
Peter Sheils	02 6762 1377		
Greg Smith			
Nick Singer	02 4365 5485		02 4384 2101
Garry Speight	02 6785 1880		
Dennis Stacey	02 6584 3747		0407 006 292
Gerhard Stuck	02 9982 5248		0428 300 370
Charlie Szpitalak	02 6777 2154	02 6777 2040	
Dave Turner	02 9489 0841	02 9620 0893	0425 269 210
Darian Thom			0407 269 210

Keep Soaring is the official organ of Lake Keepit Soaring Club Inc.
Airfield and Clubhouse: Keepit Dam via Tamworth NSW Mail address: 234 Keepit Dam Road, Lake Keepit 2340
Phone: 02 6769 7514 Fax: 02 6769 7640 Email: enquiries@keepitsoaring.com Internet: www.keepitsoaring.com

Instructor & Tug Pilot Roster October 2009

Day	Date	Instructor	Tug Pilot
Sat	1st	Allan Buttenshaw	Phil Anderton
Sun	2nd	Peter Sheils	Phil Anderton
Sat	10th	Tim Carr	Garry Speight
Sun	11th	Garry Speight	Ken Flower
Sat	17th	Gerhard Stuck	Darian Thom
Sun	18th	Gerhard Stuck	Darian Thom
Sat	24th	Dave Turner	Jay Anderson
Sun	25th	Nick Singer	Geoff Neely
Sat	31st	Vic Hatfield	Phil Anderton
Sun	1st	Peter Sheils	G Smith/ Charlie Szpitalak

Instructor & Tug Pilot Roster November 2009

Day	Date	Instructor	Tug Pilot
Sat	7th	Tim Carr	Phil Anderton
Sun	8th	Garry Speight	Charlie Szpitalak
Sat	14th	Comps	Comps
Sun	15th	Comps	Comps
Sat	21st	Dave Turner	Jay Anderson
Sun	22nd	Nick Singer	Geoff Neely
Sat	28th	Dave Turner	Darian Thom
Sun	29th	Nick Singer	Darian Thom

Instructors are rostered by Peter Sheils and Tug Pilots are rostered by Phil Anderton.

You are responsible for finding your own replacements if it turns out you can not make your rostered day. Keep the Club Manager and Peter or Phil up to date with any change you make. When arranging your replacement remember that Level 1 Instructors must ensure that the Tug Pilot is a Level 2 or 3 Instructor.

Car Pooling: There is a Yahoo chat and message group (not officially sanctioned by the Club) for Club members. To join, either visit the chat group web page at :

http://groups.yahoo.com/group/lksc or email pjanderton@optusnet.com.au with your details and he will fix it.

For member's contact details, see the Member's Downloads pages on the club web site

Keep Soaring is the official organ of Lake Keepit Soaring Club Inc.
Airfield and Clubhouse: Keepit Dam via Tamworth NSW Mail address: 234 Keepit Dam Road, Lake Keepit 2340
Phone: 02 6769 7514 Fax: 02 6769 7640 Email: enquiries@keepitsoaring.com Internet: www.keepitsoaring.com