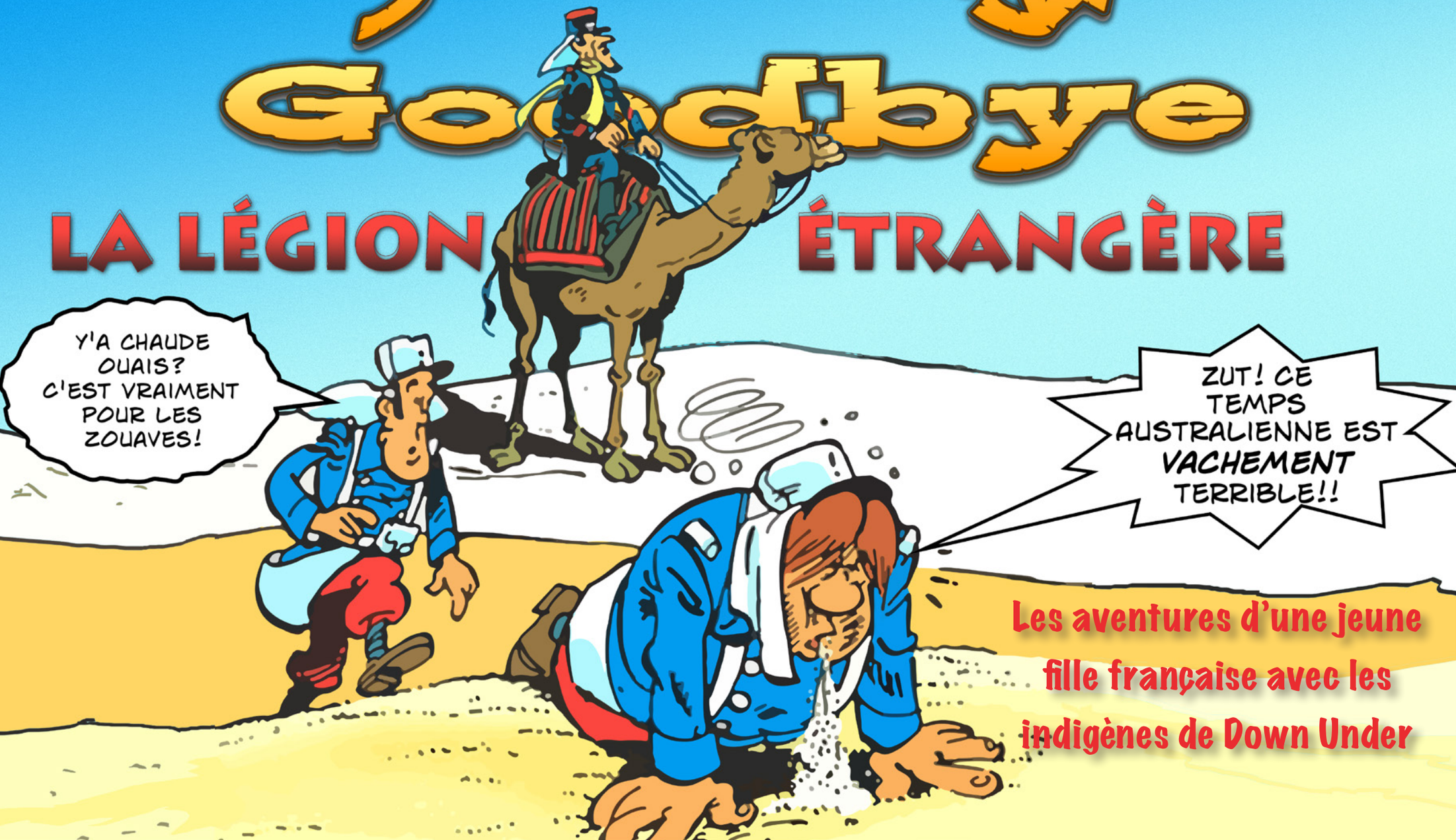
Johnny Goodbye

Torride aventure des colonies!

LA LÉGION ÉTRANGÈRE



Les aventures d'une jeune fille française avec les indigènes de Down Under

I've been away… and now I am back. I'd like to thank those of you who offered to look after things in the event that I did not return. Principally Harry Potts. While others (you know who you are) offered to take care of my glider, hangar, guitars and so on if I was lost at sea, only Harry Potts offered to take care of the most important thing.

More than most of us, Harry would be aware of the risks involved in crossing the Atlantic in a small boat and his offer was generous. So I'm sad in a way to let Harry know that I am back and I won't be taking him up on his offer to look after Geraldine.

Unlikely as it seems, I do run out of excuses for the non-appearance or late appearance of this newsletter. A few hours ago with little more rubbish to lay out, all that was left was to scribble a few notes to head the publication and the difficult job of working out a list of new excuses and then praise the lord! A low save! Apparently I don't need any excuse.

I was rung by the ex-club manager, now president Ian Downes (see his Presidential Letter later on) and ex-club president, now treasurer Chris "pass me another Magnum" Bowman.

They were in a car speeding to the airport with a brown paper bag full of club funds to spend on a "fact-finding" gliding tour of Japan. That's the place up north full of glider pilots who can think of nothing better than to come to Australia for a fly, but never mind that.

The Dodgy Duo claim the reason for the call was not to gloat but to ask me to "hold the presses because they were going to fax back some of their scribblings about flying in Japan to paper over the loss of club funds" and that's why they'd not sent in reports.

Excuses, I've heard a few but never so many as from these word-shy blokes. Anyway, I had already made up their contributions after their non-appearance in March.

All I can say is that I need something to fill the next issue but I won't be holding my breath for their contribution!

By now, many of you will have seen our long awaited new mid-week manager, Val Phillips. This picture may not be of her.

Since I have been out of the country for what seems like a year, I have not had the pleasure of meeting Val though we have emailed each other. Newsletters need pictures and I have none of Val, so this shot of a typical Pommie Sheila will have to do until I get a real picture for here and the website.

I'm sure Val will have her weak points (if anyone knows any, can they let me know back channel?) but the manager's blog is not one of them. If you want to know what's going on at the club, check out the manager's blog at:

http://www.keepitsoaring.com/LKSC/index.php/about/this-week-at-lksc

It's the top menu under About… on the club website.

While I was away, I had the chance to sail in the Bucket Regatta which is a superyacht regatta held annually in St Barths. Theses days the word "superyacht" seems to get bandied around every time some rich bastard ends up before ICAC. Let, me tell you, their boats are just moderately big compared with the things at the Bucket Regatta where most of the serious boats were well over 150' long.

I don't know what the combined weight of most sailing fleets is but one of the superyachts at St Barths lost more weight of its keel (32 tons) than the combined weight of the fleet that crosses most starting lines!

You'll be happy to know that this boat went considerably faster without the extra lead.

The thing in the picture below is the lifting keel mechanism of one of these boats. With the keel fully up, the boat draws around 3 metres and when fully lowered, around 9 metres. I'm not good at guessing these things but I'd imagine that this tackle would cost at least 4 Stemmes.

When you look around boats like this which vary from the frankly vulgar to the sublime, phrases like conspicuous consumption and vive la guillotine spring to mind. However when I look at the extraordinary engineering

and the exquisite detailing of some of the interiors, I'm in a sense grateful that someone is being paid to do work of this quality. Hopefully, in a century or so, there will be classic yachts such as these being admired by future generations, just as we admire the J and K boats of the '20s.

It's a while since I was sailing and while working on the boat and visiting yacht chandlers for fittings I was struck by how good we have got it in gliding, how cheap it is to run and maintain even the most complex glider compared with a boat, especially one of these monsters.

Below decks on one of these superyachts was a computer screen logging dozens of faults on of pieces of gear from the engine room fan to the backup refrigeration generator's fuel pump. Compared with that, faults in gliders are almost nothing.

Maintenance week is coming up. If you are crawling into the confines of a tight fuselage to remove the nose release from a glider that some German "designer" has fitted in a way that defies annual maintenance, take a moment to think of doing this in a boat, in rough weather at sea in a bilge reeking of diesel and consider yourself lucky!

Support your local miller!

The community of LKSC bakers (and there are a few of them!) are fortunate to have one of Australia's best flour mills right on their doorstep.

Demeter Farm Mill flour comes from the Wholegrain Milling Company at 17-21 Borthistle Road Gunnedah NSW 2380.

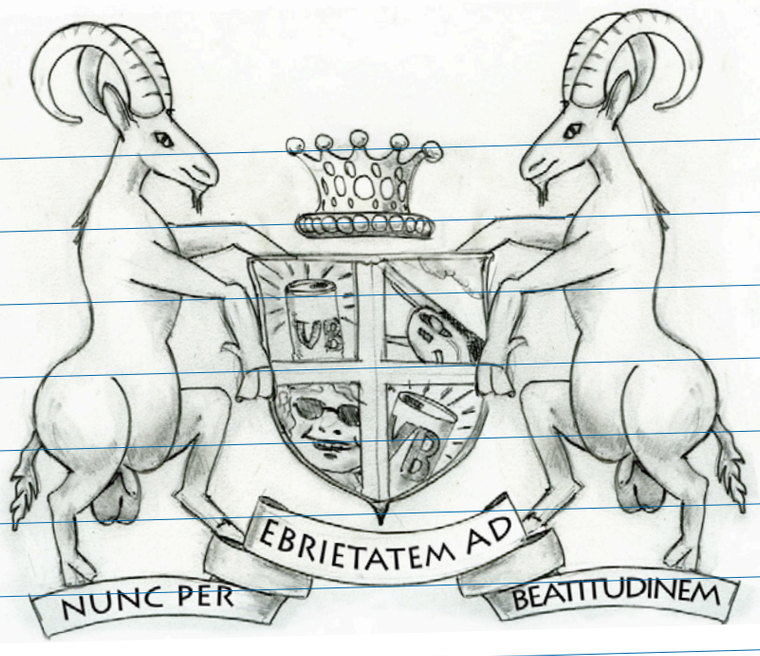
A good range of organic bakers flour as well as grains and muesli can be bought from the mill in 1, 5 and 10 kg bags.

FROM THE OFFICE OF THE PRESIDENT

He's gone and done it this time!

What I asked for was some sort of nice looking presidential letterhead...

What he gave me is what he called a Goat of ARms with two randy old goats (He siad they were goats which were prepared to be randy but were in fact not) I hope people won't confuse me with some other great aussies currently in strife in the UK.



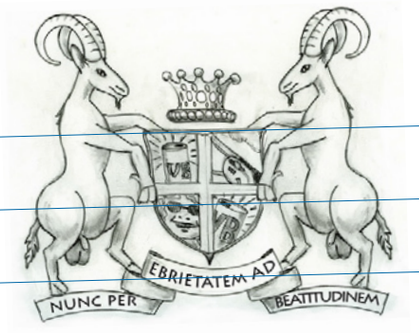
Talking of pommies, we've got our own one here now.. Her Valship.

She's taken over my job as manager and now I am free to concentrate on the difficult task of being presidential which ain't that easy. Just ask the monkey with the big ears!

ANyway, things are going along swummingly I and can relax with a beer in my hand at the club with one sheila doing the work, and at home with another. (that's not her in the goat of arms is it?) Cheeky bugger!

Actually, it's not yet brass monkeys here and colonel Garry says it won't get that cold for another month based on the last century's records which he's kept.

We're having his 100th birthday or something like that up at the Dircks in a month. Garry has typically underestimated the number of friends he's got and agreed to shout everone dinner' I'm signed up already' Twice'



After that... what's on...

I used to have a good system, writing everything down on the back of my hand but now, er indoors, makes me wash them and I lose me plans'

Ah' Maintenance week' I like that because I get the chance to eat properly without being spied on by the authorities.

And then' The high point of the year' Annual fright reviews where I get the my own back on certain people.

Wait a mo.... Am I allowed to do AFRs as pressie? I'm allowed a presidential pardon, why not an execution?

I'll get back to youse soon on that.. and more.

Tata. Ian D.

Small but perfectly formed: The Gulgong Mini Safari

Al Giles

The Gulgong mini safari was not too gruesome - we got around and back. Saturday started blue, a bit stable and of course headwind to the first stop, Gulgong. 30km out of Keepit I was grovelling low and thinking about starting the donk, multiple times in fact but some scrap of lift to 4000' QNH always came along at the crucial moment. While there's lift there's hope.

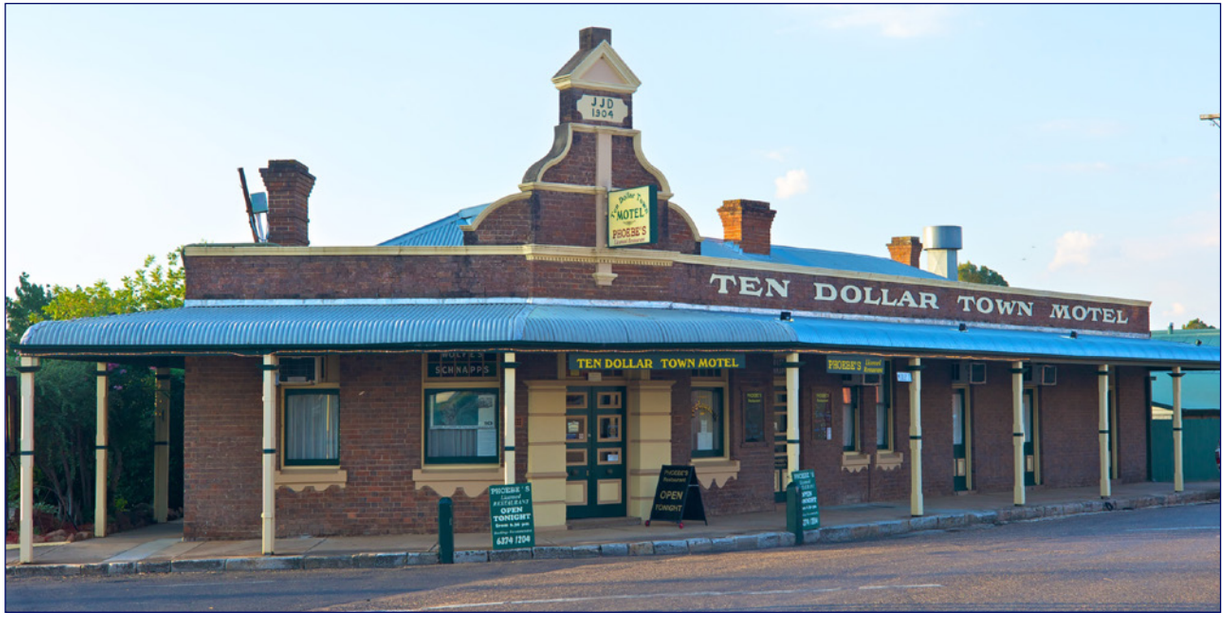
For some reason it seemed to happen most off the irrigated flats. The Liverpool range started to pop CU and these had good climbs to base of 6000' under them so it was cruisy from there to Gulgong via Coolah. The others all took a more westerly line at first and that may have slowed them down a bit.

At Gulgong, Ian Harris gave us a great welcome and we hangared the single-seaters and tied down the twins. The subtle art of hangar packing is not one we get much practice at in YKEP.

Geraldine was riding shotgun in the Land Rover and ferried us to the motel at Gulgong, which was slightly idiosyncratic, not at all like us, and certainly they were large and comfortable rooms.

Dinner at the pub down the road from where Henry Lawson was born (in a tent on the goldfields) was excellent and you can get a good red anywhere in Oz these days. The local pilots joined us and Ned Kelly's younger brother Steve described landing a Storch in a storm on the truck park of the Marulan weigh station.

He did a low pass, yelling out of the open window at the people below and then landed with the help of a couple of truckies holding down the wing. Being a Storch, this was probably at zero knots ground speed. He then refuelling at the servo but was told he could not by the local cops.



In a master stroke of intelligence over authority, he replied in a commanding voice that as the operator of an Australian registered aircraft, he could take off where he wanted and they were required to help him… and so it happened.

Next morning was Australia Day and carrying on the proud tradition of bush idiosyncrasy, the big breakfast at the cafe was well provisioned and tasty - the lass running it was clearly going to have a bit of fun for Oz Day, and so did we.

Back at the airstrip, it was of course blue but for once it was tailwind to Narromine; just as well, it came in handy. About midday wisps started to appear on top of the haze domes and Dave Shorter in the JS1 took a winch launch to 2000' AGL, after the usual cable break that comes with wire.

Dave stayed up so we bravely followed (the other four gliders were self-launching).

We worked our way from wisp to wisp and haze dome to haze dome, with the odd dive through solid sink between.

After sneering at Sierra India's 2kt climb I got a close look at Dubbo airport which fortunately was pretty quiet for Oz Day but somehow found something to stop the vario shrieking in fear.

Ross and Ray in the Nimbus decided just to motor 30km until they had final glide, which was more or less the measure of things - and you'd think it would've been OZ' day.

Naturally as we approached Narromine the air improved steadily and the true enthusiasts, John in the DG and Dave in the JS1, flew on to Tooraweena and return.

The rest of us said 'nyah', and headed for the bar, bearing in mind Banjo Paterson's warning about Narromine, 'City of Dreadful Thirst':

"But when you see those clouds about – like this one over here –
All white and frothy at the top, just like a pint of beer,
It's time to go and have a drink, for if that cloud should burst
You'd find the drink would all be gone, for that's a cloud of thirst!"

The Narromine Sunday night barbie with Arnie Hartley officiating is legendary and we did it justice, along with twenty Czech pilots and crew, some of whose girlfriends were determined to get as extensive a tan as the Narromine constabulary would allow.

The accommodation on field at Narromine has aviation-themed rooms - I had Mustang, Geoff and Ian were in Catalina, John and Geraldine I think in Tiger Moth and so on. The Czech pilots were a bit dour but we all spoke soaring and besides, their iPads on videocall showed their homeland under snow and ice so they were happy to be there at Narromine.

Next day was (surprise surprise) blue and a bit stable, and headwind home but we had to be off early because the forecast southerly coming over the Liverpools would kill the lift near Keepit later in the day.

At midday Dave and I were the first off of twenty-odd and pair-flew to stay up in little scraps of lift, joined by a couple of Czechs, so we made a tight little gaggle.

They headed south, we headed north, with bubbles to 4kt going to 4000' QNH and Dave and I taking turns to lead out but never far apart.

He missed a climb and I headed solo for some ragged little CU near the Warrumbungles, which had 8kt to 8000' base, and then to the Bungles themselves, which had well-formed CU over the top, as well as being speccy.

Heading east to Keepit was just joining the dots, although the dots were few and far between, but I fell asleep before Gunnedah as the blue southerly intruded and flew into the lee of the hills which almost put me on the deck with sustained sink of 10kt before I woke up, dived out onto the flats and found something uppity. Wouldn't think an ex-hangy would fall for that one eh?

Dave didn't make that error and passed me at this point, topping up in the 9kt house thermal on the Carrolls to overfly Keepit to Manilla and back but I just lobbed back into the strip. SI and OZ weren't far behind and I think John must have been sightseeing around the Warrumbungles because he lobbed in a little later.

Not a bad few days, some absorbing and occasionally challenging flying and a bit of fun touring the colonies. Australia Day breakfast in Gulgong (the town on the old ten dollar note) was great. One of the local motels is still called the Ten Dollar Motel, which is a real disappointment to those checking out, and Gulgong is a historical straggle of old stone houses along goldfields roads.

So we missed Joy's de-wogging procedure in Tamworth (she'll show you the scar if you ask nicely) and the Bushwackers but found something to wave the flag about.

Of course, as always, a huge thanks to Ian Barraclough for masterminding the safari and Geraldine for almost everything else.

Al.

Narromine, City of Dreadful Thirst

The stranger came from Narromine and made his little joke;
"They say we folks in Narromine are narrow-minded folk.
But all the smartest men down here are puzzled to define
A kind of new phenomenon that came to Narromine.

"Last summer up in Narromine 'twas gettin' rather warm –
Two hundred in the water-bag, and lookin' like a storm –
We all were in the private bar, the coolest place in town,
When out across the stretch of plain a cloud came rollin' down.

"We don't respect the clouds up there, they fill us with disgust,
They mostly bring a Bogan shower – three raindrops and some dust;
But each man, simultaneous-like, to each man said, 'I think
That cloud suggests it's up to us to have another drink!'

"There's clouds of rain and clouds of dust – we'd heard of them before,
And sometimes in the daily press we read of 'clouds of war':
But – if this ain't the gospel truth I hope that I may burst –
That cloud that came to Narromine was just a cloud of thirst.

"It wasn't like a common cloud, 'twas more a sort of haze;
It settled down about the streets, and stopped for days and days;
And not a drop of dew could fall, and not a sunbeam shine
To pierce that dismal sort of mist that hung on Narromine.

"Oh, Lord! we had a dreadful time beneath that cloud of thirst!
We all chucked up our daily work and went upon the burst.
The very blacks about the town, that used to cadge for grub,
They made an organized attack and tried to loot the pub.

"We couldn't leave the private bar no matter how we tried;
Shearers and squatters, union men and blacklegs side by side
Were drinkin' there and dursn't move, for each was sure, he said,
Before he'd get a half a mile the thirst would strike him dead!

"We drank until the drink gave out; we searched from room to room,
And round the pub, like drunken ghosts, went howling through the gloom.
The shearers found some kerosene and settled down again,
But all the squatter chaps and I, we staggered to the train.

"And once outside the cloud of thirst we felt as right as pie,
But while we stopped about the town we had to drink or die.
I hear today it's safe enough; I'm going back to work
Because they say the cloud of thirst has shifted on to Bourke.

"But when you see those clouds about – like this one over here –
All white and frothy at the top, just like a pint of beer,
It's time to go and have a drink, for if that cloud should burst
You'd find the drink would all be gone, for that's a cloud of thirst!"

We stood the man from Narromine a pint of half-and-half;
He drank it off without a gasp in one tremendous quaff;
"I joined some friends last night," he said, "in what they called a spree;
But after Narromine 'twas just a holiday to me."

And now beyond the Western Range, where sunset skies are red,
And clouds of dust, and clouds of thirst, go drifting overhead,
The railway-train is taking back, along the Western Line,
That narrow-minded person on his road to Narromine.

Close encounters of a Farming Kind

It's funny how the first thermal you catch can affect your whole day, positively or not. Leaving Gulgong, I hit a good one low down, hooked into it and started the motor shut-down procedure. For once, we were on Safari without fuel and tail or wing dollies. It's possible to launch on well under 2 litres if you get something good right off launch.

In fairly short order, I was up to 6,000' and surprised to see that Al, Geoff and Ian were well below. They'd decided it was just a whispy 4,000' day and almost given up. There was traffic going into Dubbo and for once, their transmissions were clear and to the point… fair enough since there were five of us and only one of them!

Dave Shorter and I decided that the short leg to Narromine was a hop to short… fair enough if you've had the hassle of a wire launch. We tracked to Gilgandra and then Tooraweena where I got low and caught a boomer of a thermal up to 7,500' and learned a bad lesson.

The following day, four of us queued up on the cross strip at Narromine while Dave got an aerotow from the main strip. I haven't experienced a strip with such a busy and mixed lot of traffic. We spent ages pushing gliders on and off the strip for taxiing aircraft.

The drawback of a steerable tailwheel and an unassisted wing-down takeoff is that you get to run the wings of everyone else and take off late! That's the main reason I was playing catch-up all the way back to Keepit. The other once is this.

As I approached Tooraweena, I was getting low again but knew exactly where that boomer was going to be coming from after previous day. At this stage, it was largely blue but there were some perfect little CU marking the tops of the Warrumbungles, some 5 km and 7000' away from me but exerting a powerful pull. So I didn't slow down but, like Geoff Sim and Lord Nelson, went straight at it. Of course there was no thermal… And I looked wide and hard.

While snaking around I noticed a tractor ploughing a field. It would put me out of range of the Tooraweena strip but it was a tractor! Hans Killer, Belascone, Kawa, they all swear by tractors as thermal triggers, so off I went. Of course there was no thermal…

However, While snaking around I noticed a second tractor ploughing a field a kilometre away. The fields were all good for out-landings so I went straight at it.

The wind-o-meter was giving some nonsense readings at that stage so I did not trust the wind direction as a guide to where to search. The dust plume from the previous tractor had risen nicely and then sunk down as soon as I approached it… and so did the dust plume from this second tractor.

However, While snaking around I had noticed an third tractor… surely these pundits could not be wrong three times in a row? I was now down considerably lower than my normal engine starting height. I'd got headphones on and was all set to slow down and pull flaps ready for the press of shame.

I looked at this wretched tractor and thought, what do these Europeans know about Australian conditions? I've never heard them mention feed lots and garbage dumps which are the most reliable sources of thermals here… so I banked away and just aimed at the nearest group of farm buildings, snaked around and found 2 knots. This became 3, then 4 and finally, I climbed away in better than five, all the way to 6,000'.

Oh, the blessed relief of cool air and altitude! By this time those ingrates, fellow Safarians whose wings I had so dutifully run, would be almost back at the strip. Those puffy white CU were tantalisingly close over the Warrumbungles and I was sure that Geraldine, plodding along in the heritage Land Vehicle would not be missing me yet, so I went for a fly.

The Warrumbungles are a great set of rocks and I have not yet found a good day for hanging around the Warrumbungles. The previous time I had been there, they were not, being covered in dense smoke from bushfires before Christmas. The time before that was on Jim Staniforth's 500km task and there was no time to hang around then either.

I did not hang around long, I promise but I did get a stiff telling off from the Authorities when I landed an hour after the others. I'd like to go back and have a good scratch around the Warrumbungles next season. Let me know if you're up for it!

John Clark

Pictures top left. A cloud! Over the Siding Springs Observatory. Bottom left, isn't that Gilgandra again?

Le Fabuleux Destin d'Elodie Poulain

C'EST MOI! ELODIE.
AND THIS IS MY HISTOIRE! I WILL WRITE IN ENGLISH FOR YOU BECAUSE NOW I AM PERFECT IN ENGLISH... EVEN IF HE IS NOT AS BEAUTIFUL AS MY BELLE FRANÇAISE!

WHEN I WAS TRÉS PETITE, MY FAVOURITE COMIC WAS ***JOHNNY GOODBYE*** AND I AD A DREAM.
I WANT TO BE A LÉGIONAIRE!
OF COURSE IT IS THE DREAM OF EVERY FRENCH PERSON TO JOIN THE LÉGION AND TEACH THE WORLD TO BE FRANÇAISE.

I DREAMED I WOULD BE CARRIED THROUGH THE JUNGLE LIKE TINTIN, SURROUNDED BY MY FAITHFUL DARKIE COMPANIONS AND MILOU MY CHIEN BRINGING CIVILISATION AND GASTRONOMIE TO ALL WHO COULD AFFORD IT.
AH! THE DREAMS OF A YOUNG FILLE!

LÉGIONNAIRE, TU ES A VOLUNTEER, SERVING LA FRANCE WITH HONNEUR ET FIDÉLITÉ.

DISCIPLINE AND FRIENDSHIP ARE YOUR STRENGTHS. COURAGE ET LA LOYAUTÉ TES VERTUS! YOUR CARAVAN IS ALWAYS CLEAN AND TIDY AND YOUR LANDINGS EXCELLENT!

YOU ARE SOLDAT D'ÉLITE WHO IS RIGOROUS WITH HERSELF. YOU CONSIDER YOUR TUG AS YOUR MOST PRECIOUS POSSESSION.

LA MISSION EST SACRÉE!

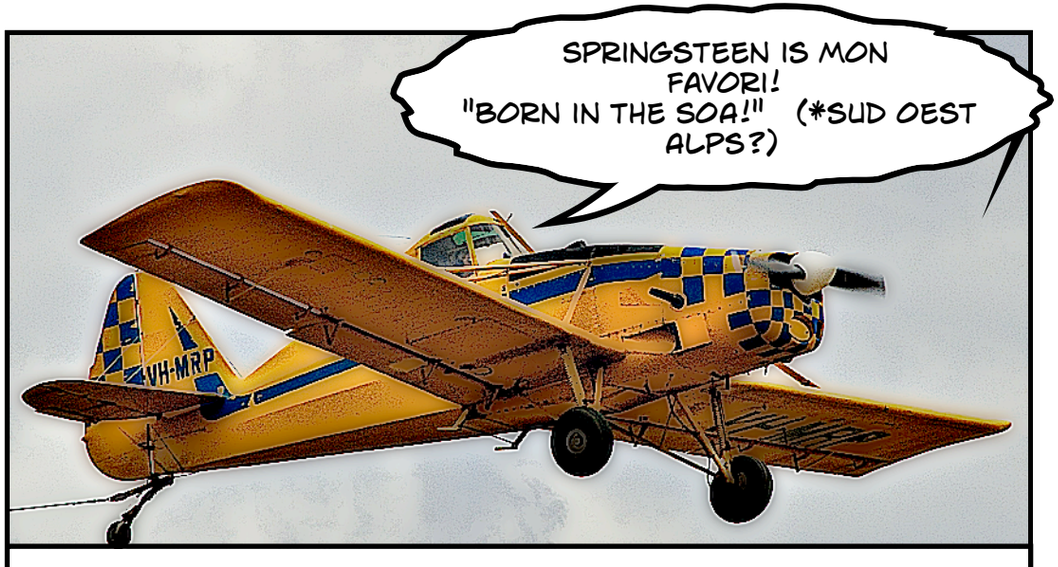
IT IS CARRIED OUT UNTIL THE END, IF NEEDS BE, AT THE RISK OF YOUR OWN LIFE.

BUT THEN I DISCOVER THAT IL N'Y A AUCUNE FILLES IN THE LÉGION ÉTRANGÈRE!
THEN I DISCOVER THAT JOHNNY GOODBYE IS WRITTEN BY A BELGE!
THEN I DISCOVER THAT HERGÉ WHO WRITE TINTIN IS ALSO BELGE! LES ÉSCALES TOMBÈRENT DE MES YEUX.

SO! I DECIDE TO RUN AWAY TO THE LAND OF THE KANGAROO AND MAKE A NEW LIFE WITH THE NATIVES!

HERE I AM WITH ONE CALLED JOY. SHE WAS A ROSBIF BUT NOW SHE IS NATIVE BUT STILL SPEAKS LIKE LA REINE D'ANGLETERRE SO I UNDERSTAND ER. THE OTHER NATIVE SPEAK AN ARGOT WHICH IS IMPOSSIBLE!

ZIS IS THE USBAND OF JOY, LE GRAND PATRON. ZIS IS WHAT HE THINKS IS THE "FRENCH KISS". IT'S A GOOD THING THEY DON'T TRY TO MAKE BÉBÉS!
I MUST DO WHAT HE SAYS BUT OF COURSE I CANNOT UNDERSTAND HIM SO I MUST SMILE AND SAY D'ACCORD A LOT. TOUT LE MONDE SAYS THAT EE IS A SOUTHERNER.



WHEN I FLY, I TRY NOT TO MISS LA BELLE FRANCE... HER FOOD, HIS WINE AND HIS CHEESE... SO I SING MY CHANSONS FAVORI.

NON, RIEN
DE RIEN
NON, JE NE REGRETTE RIEN
NI LE BIEN QU'ON M'A FAIT
NI LE MAL TOUT ÇA M'EST
BIEN ÉGAL

YOU SEE I FLY IN ALL WEATHERS.

ÇA PLANE POUR MOI
ÇA PLANE POUR MOI
ÇA PLANE POUR MOI MOI MOI MOI MOI
ÇA PLANE POUR MOI
HOU! HOU! HOU! HOU!
ÇA PLANE POUR MOI

C'EST UN HISTOIRE TRAGIQUE THAT PLASTIC BERTRAND IS BELGE BUT EE DID NOT SING ÇA PLANE POUR MOI ANYWAY. ME, I PREFER THE OTHER JOHNNY...

JOHNNY HALLIDAY.

HE IS THE PLUS GRAND ROCK STAR DU MONDE!

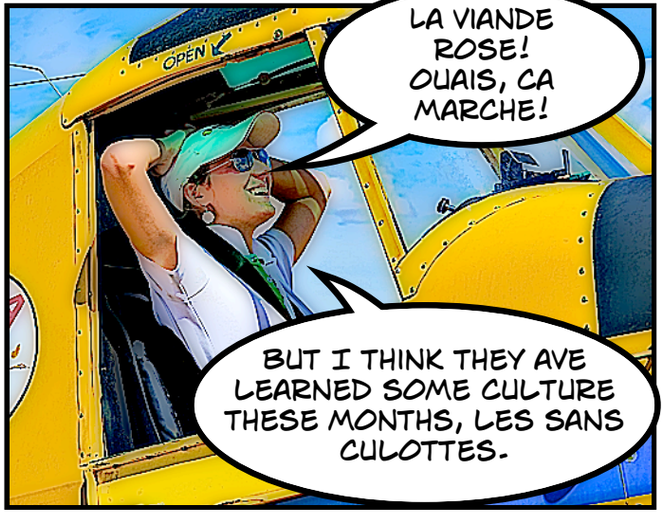
IT IS ALSO UN HISTOIRE TRAGIQUE THAT JOHNNY HALLIDAY IS ALSO BELGE SO I DO NOT SING HIS SONGS... I SING MY OLD LÉGIONNAIRE SONGS!

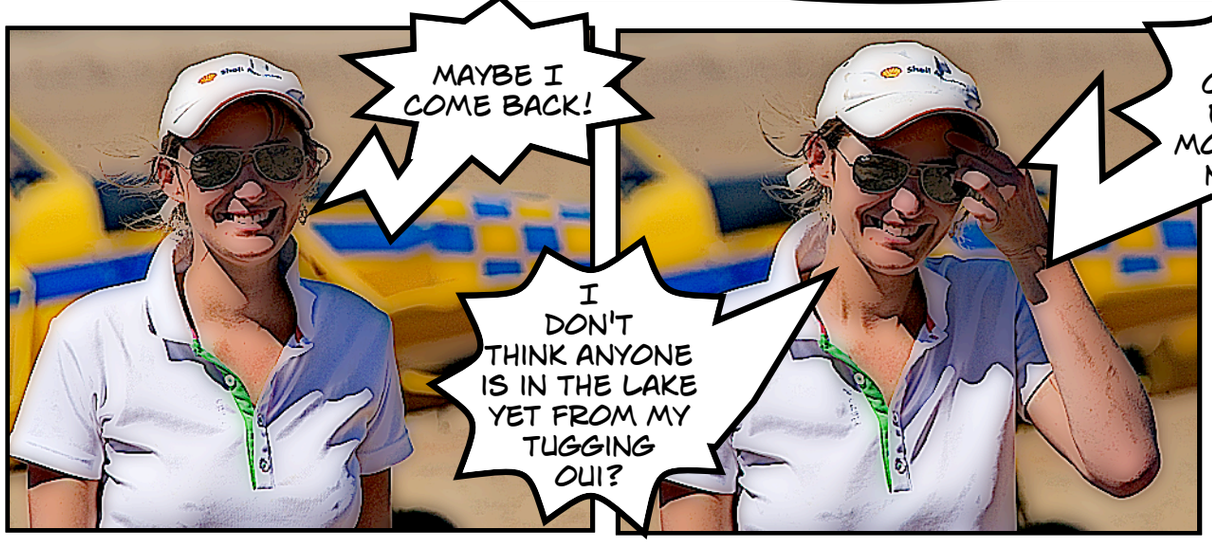
TIENS, VOILÀ DU BOUDIN, VOILÀ DU BOUDIN, VOILÀ DU BOUDIN
POUR LES ALSACIENS, LES SUISSES ET LES LORRAINS,
POUR LES BELGES, IL N'Y EN A PLUS. POUR LES BELGES,
IL N'Y EN A PLUS. CE SONT DES TIRES-AU-CUL;

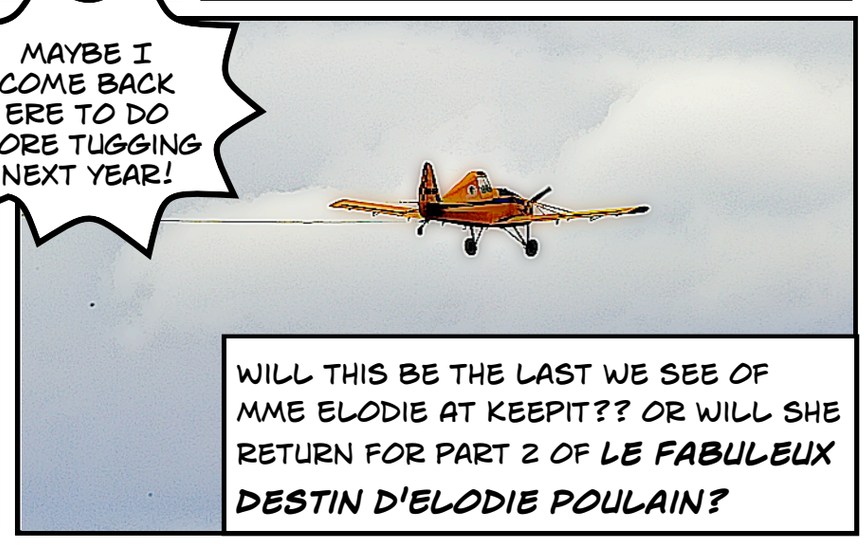
OUAIS, C'EST HARD YAKKA BEING A TUGGEUR!

I DO NOT TRUST THIS MAN WITH THE CAMERA. HE DRINKS WINE WITH ICE. AND HE IS ***A PERSON OF BAD CHARACTER!***

THE JAMBON DOES NOT TASTE OF JAMBON AND MON DIEU! THE FROMAGE!! CHARLES DE GAULLE HAS SAID "*OW CAN YOU TRUST A COUNTRY WITH ONLY TWO CHEESE?*" BUT I THINK THEY HAVE FOUR. THE SOFT, THE HARD, THE STRONG AND THE LIGHT.







The 2014 Keepit Regatta

The 2014 edition of the LKSC regatta was a very successful event. The place was packed, there were three or four tug's worth of gliders and a full complement of people for dinner every night. The weather was great, even when it was not. G Dale seemed to win most days but Soaring Spot lists Steve Hedley, Dave Shorter and Andrew Georgeson as first, second and third in a very mixed, mixed class.

I have no idea why I get to write up these events other than because nobody else seems to. I'm sure you don't expect much sense from me on comps. The problem with my doing is that I once heard Jenny Ganderton complain about a 300 km task because it wasted a 500 km day. Since then I have tried to fly the day rather than tasks and while I flew the regatta tasks, I "finished" at 8,000' on most days and looked for more fun.

So these notes include what was fun over the regatta and may not include a winner and all the rest of the losers… you know who you are!

Pest of the Regatta Award.

Bloody Morgan Bloody Sandercock gets this, and deserves it. First, for showing off. He grabbed the tail boom of his Sparrowhawk, tucked it under his arm and then walked with it out to the launch point each day. I have seen people with model aeroplanes show more respect to their aircraft. Apparently he would occasionally lift the entire glider up in the air to show everyone how strong he was.

I walked around it at one time while Morgan was away (so he could not see and gloat.) I have to admit that it looked well made and well finished compared with say the Silent which looks fairly rough. However, it did not have winglets. I understand this is important, mainly from a looks point of view.

The second reason that Morgan gets this award is that like fleas, he were always with us. It did not matter how far or how fast or how high you flew, you'd join a thermal and always find Morgan was already in it. At one stage I was low down at the fracking corner of the Pillaga and needed something good, but there was Morgan. The problem as I saw it was that Morgan was going to come screaming up from below and all the proper gliders would have to bail out.

Fortunately, it did not happen like that and God favoured the German glider makers. It was one of those thermals you get occasionally where you might be just a hundred metres or so from someone else and you get a boomer and they don't… even though in this


The Mistress

case there were several gliders in the same thermal. It was a boomer. The average was only 11.3 but there were peaks of over 14 according to SeeYou and until Morgan confirmed that I out climbed him, nobody would believed it.

I'll still give him the pest award though. It's nice to get something in a comp. Later in the week, Morgan gave a very interesting presentation on the Perlan Project. You can donate here: http://www.perlanproject.org/donate/ Maybe Morgan can get some winglets for his glider!

Task setting complaints award.

As usual the task setting by Dave Shorter and Tim Carr was chaotic and everyone complained. Well, Mad Bob Dircks complained, but loudly enough to make up for everyone else. See below.

Sit Down Comedy Award.

This went to Dave Shorter for his weather briefing on Friday. The day was appalling… grey, cloud at 1000' AGL, rainy, windy and all that stuff. So Dave set an task of about 250 km and finished with the words "It's not the best of days but I'm sure you guys have got what it takes." I can't remember anything else Dave said about this brave task because he was drowned out by gales of raucous and derisive laughter.

When that died down, a lone and insistent voice kept saying… "But I want to fly a task. Are you going to set it or not? I'm up for it!" Bob D of course.


LS4


OZ
Nimbus 2R

Best Flight Award

I thought that there were a couple of flights deserving awards. Oddly, they were both on crappy days. On Wednesday the task was Narrabri, Mullaley, Ranagari. There was a high, dense cloud cover but a strong line of CU over the range up to Kaputar. Most of us flew up the ranges and turned at Kaputar tower or just before. This was very exciting because the tower was almost in the cloud. Jenny forced Ian Barraclough to fly directly to Mullaley which they succeeded in doing (not hindered by their 25 metre span…) while the rest of us plugged on down the ranges again and there, at the end of the Kevlins, we sat like kids afraid to get into the sea when it's cold, too nervous to make the jump to Mullaley.

Fair enough. There was a huge gap before anything like a cloud under the overcast. Then came what was one of the highlights of the regatta. We all flew out in the smoothest of air until we hit the circle near Gunnedah. A few like Tim Carr, had the span to turn and head back to the hills while almost everyone else (about 47 of them from memory) went to the same thermal near the dome south of Gunnedah. What a disciplined bunch of thermallers. As someone said, it looked like Marble Arch.

Friday was washed out but on Saturday, there was a patch of sun on the strip and massive overdevelopment all around. Probably egged on by Bob D, Dave shorter set a task. It was a run task to Manilla, Rangarai and Gunnedah for 90 minutes. Assuming you made it to cloud base, there was little to prevent you staying there if you cruised along at min sink speed.

The clouds grew blacker and coalesced until there was no sun on the ground. But there was lift under the clouds and those of us who had stayed up at Keepit for the dinner on Saturday night enjoyed a fabulous flight and flew around the triangle until we'd had enough. Huge fun!

Brown Trousers Award.

Well, this has to go to G Dale. He gave one of his normal interesting and informative talks most mornings but he gets the award for his tale about parachuting out of his glider after a mid-air. See later on in this issue for another mention of that and parachuting and brown trousers in general.

Stand Up Comedy Award.

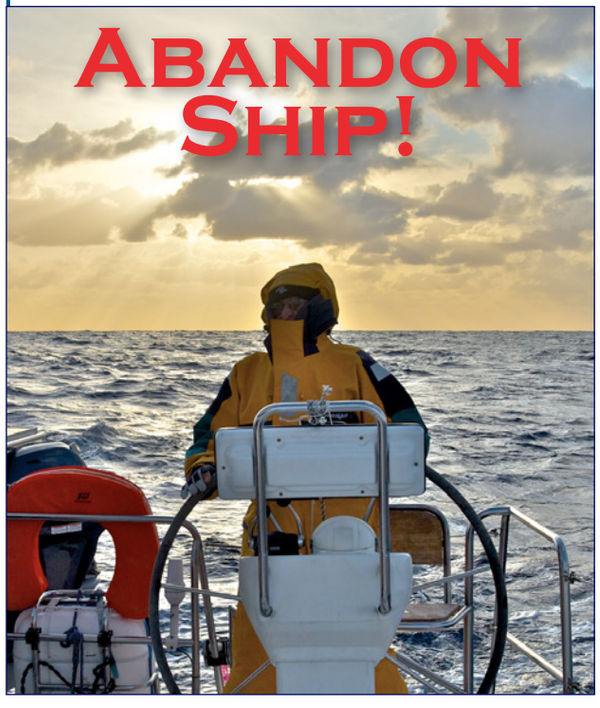
This has to go to Garry Speight. A text of his routine, sorry, his talk follows. To get the effect, you have to imagine Garry in full cross-colonel mode, telling off a group of air cadets. He gave them the talk a month or so earlier and afterwards, the cadets were too scared to ask a single question. Respect for the Colonel! He had all of us in stitches!

The regatta was, as usual, very well run. Joy fed us most nights and we finished up in fine style at Jan Dircks' where Steve Hedley was taught to cook a third dish at Julie's request. I can't wait to try it!

Next year's regatta is the last week of February.


Duo Discus XT

Abandon Ship!



Last month, I crossed the Atlantic… well most of it, on a small boat. I did an extensive amount of research and preparation for this crossing, most of it in the 5 days before getting on a plane for the Caribbean to join the boat.

As I got my ancient oilskins, life jacket and packets of expired sea sickness tablets out of the shed I remembered that there had been a few things I really did not look forward to while being cold, wet and frightened on a small boat at sea.

Example: I do not like the thought of falling overboard at night while on watch alone. Yes, things have come along since I was last offshore. The nav system on our boat actually had a mechanism which detected when someone was outside the perimeter of the boat and would get the autopilot to do some programmed manoeuvre, such as do a U turn.

Presumably the rest of the crew would wake up when all hell broke loose as the boat gybed or whatever, but in our case the thing was broken so we would never have had the chance to find out.

Another interesting change was life jackets. They're now called Personal Floatation Devices presumably because so many life jackets failed to save anyone's life. My wife and I had proper German automatically inflating life jackets and harnesses which at the time were illegal because they did not conform to the Australian standard which said you life jacket had to be made of Kapok and sink within 8 hours to avoid the expense of long SARs.

My old PFD is again illegal. This time because people have got so fat that they need more flotation to roll them face up. They still drown though because most PDFs are not fitted with a hood, unlike mine. I took the old one. It's got a whistle too.

While swimming around the boat in the warm and clear waters of the Caribbean, I noticed two hatches under the boat. It took a few minutes for the penny to drop… they were escape hatches so when the boat flipped upside down, you could get out. Hmmmm.

A week or so into the crossing, I got a little more nervous when the other guy on my watch showed me the cracks which had started appearing in the boat. After that, when I got into my bunk at night, I made sure that a torch, a lifejacket and harness and a GPS tracker were close enough to grab. But it wasn't a Spot that I had in my grab bag.

I have owned a Spot Messenger since 2009 and used it fairly extensively on Safaris. The Spot is waterproof and presumably would allow me to set off an SOS when I fell overboard. Of course, nobody on the boat could receive this message but hopefully the authorities would know where to pick up my body.

Leaving a wife and a business for any length of time is tricky but to be incommunicado for perhaps a month is stretching things. Sure, not speaking for a month could be a great thing to put my wife in touch with her true feelings, but then there was no way I could give her an ETA so she could get on a plane, fly over and express these feelings… assuming they were positive.

We'd hired sat phones for the last gliding safari and within limits, they worked OK. What surprised me was how cheap they were to run. In fact, very little more expensive than using Telstra's global roaming. Perhaps hiring or even buying a sat phone was an option for this trip? I researched various phones and networks and being a long term Spot user, had a close look at their sat phone offering the Spot Global Sat Phone.

Like mobile phone coverage, sat phone coverage varies enormously. Because telecommunication satellites are stationary, many networks are not global, they are aimed at the land masses they serve. Thuraya for example does not work in North America or the Atlantic.

What about the Spot phone? Well according to their own website, it 'works around the world, including virtually all of the continental United States, Canada, Mexico, Europe and Australia…"

Virtually Global? That's the crunch isn't it. Virtually water-tight. Virtually air-tight. It's not very convincing if really water-tight is what you need. And on closer investigation, virtually has some pretty big holes in it, especially in the mid-Atlantic.

Reviews of things like the Spot on the internet can be very misleading. "I just got this device out of the box, switched it on and it works. Five stars!" "I used this device on a recent trip to the shops and it worked great! Five stars!" "Without going into history of their defective satellites, I had maintained a Globalstar (SPOT) phone for years in case the service improved. They just finished their "second generation" network and their phones are still virtually unusable. One star!" (It's impossible to give a zero star rating.)

Of the above reviews, only the last one is real. In fact the more I looked at Spot in general, the less I liked the idea of relying on their phone or even my Messenger. Spot uses the Globalstar network and in fact, they are one and the same thing. Google Globalstar and you won't find very many positive reviews, mainly talk about satellites breaking down and network problems.

However, a Messenger is a different beast to a sat phone. It's only trying to send one tiny digital message and it will continue to try until a connection is made. This is a lot less of a challenge than a phone call. So while their sat phone does not appear to work very well at all, the Spot Messenger works a great deal better and has been a runaway success in sales and rescue terms. So much so that Globalstar have rebranded themselves as Spot.

That being said, anyone who has tried to set up and use a Spot Messenger will know that they are nowhere near 100% reliable nor particularly easy to use. What about the Spot Connect? This is a little device which links with your mobile phone and allows you to send messages. So perhaps it combines the success of the Spot Messenger with the usefulness of being able to send a proper text message. I researched that. And I bought something else.

What I got was a Delorme InReach SE which they call a Satellite Communicator. Like the Spot, the InReach SE is a tracking device and SOS device able to send messages but one key difference is that the InReach can receive messages as well… so it is a two-way communicator. It's a little more expensive than either the Spot Messenger or the Spot Connect but the InReach does far far more than either. And it works.

The InReach uses the Iridium satellite network which is the only truly global satellite network. It works everywhere, like nothing else does. Anyone who has struggled to get their Spot to connect or who wonders about dropouts in their tracks might think about that. If you really need to send an SOS, you really want it to get out!

Because of the design of the Spot, it's fairly picky about how you position it when in use. Most glider pilots wear it on their shoulder, pointing upwards. Almost anywhere else is unreliable. The InReach has a stub aerial and is very much less picky about where it is mounted. It works indoors and inside cars and boats far better than the Spot.

When it is working, the Spot Messenger uses an array of blinking status LEDs to let you know. LEDs are mostly OK, though impossible to see in sunlight. Most users have had problems with some of the operations on the Spot and in most competitions where they are used, there are a few traces missing on any day. To be fair, this has improved as people work out how to use the Spot though a set of LEDs are always going to be less useful than a proper display. If you use a Spot, can you remember how a low battery warning is displayed? And how long will it work after the low battery warning is displayed?

The InReach full colour display gives it a huge advantage over the LEDs on the Spot. In just the case of battery level, you can see a percentage charge. When the battery is below 20% you get a warning with a suggestion that you turn off tracking in case you need to send an SOS. The batteries are rechargeable via a USB cable… albeit a nasty micro USB cable and you're told how long it will take to fully charge.

The battery life of both is 100 hours but in practice you are unlikely to get 100 hours of flying use from a Spot battery since you'll often forget to turn it off because you can't see the LEDs in sunlight. With the price of lithium AAA cells, that's an annoying mistake.

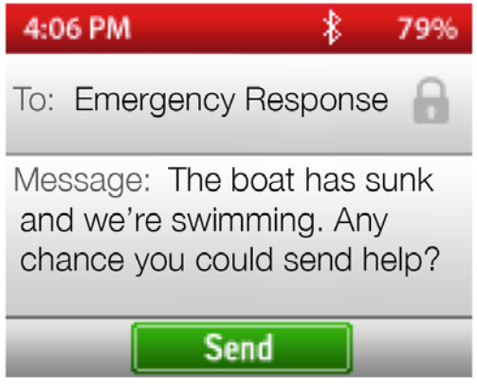
My Spot Messenger took some days to set up and a number of frustrating and annoying calls to tech support in somewhere like Botswana. The main problem was how to enter a non-US phone number in any of the contact fields on the website. This has probably improved now, but setting up and changing things on the findmespot.com website is still not great.

The InReach took ten minutes to set up from filling in the account details on the website to getting a confirmation on the InReach screen that everything was working.

Both the Spot and InReach can send out three types of messages at the press of a button, but when the InReach is connected to a phone or tablet, it can send out dozens of different prerecorded messages. With both devices, the text of these messages needs to be set up in advance on a web site.

However the big advantage of the InReach when it comes to sending a message is that you can type anything you want on the device and send it. Not only that, you can receive replies via satellite. With a couple of button presses, you can read out your lat and long, speed and altitude and send this data to an email address or phone.

If you need to send an SOS, the InReach is more flexible too. Along with the SOS, you can send an optional text message describing what's going on.



The InReach then shows a 20 second count-down so you can cancel a mistaken SOS call. And with Iridium, there's a better chance of the SOS getting through.

Here's what our own Jim S said after a recent flight: "Looking at yesterday's SPOT versus APRS tracks, the APRS did not find a digipeater until off tow and lost the last uplink prior to landing because there are mountains in the way. A similar blackout occurs with smart phone connectivity, but at altitude. Meanwhile SPOT didn't give any position reports for about two hours of the flight."

"Having used all of these devices, the DeLorme InReach has proven itself superior, so I will switch at the end of my next SPOT contract. When whatever you're using doesn't work at a crucial time, it would have been worth the investment. Otherwise why would we buy a FLARM or parachute?"

Over the weeks when I used the InReach every day, I rarely touched the device to send a message. Instead I used their Earthmate app on an iPad (there's also an Android version.)

I connected an iPad via Bluetooth to the InReach, sent and received messages and checked status and the tracking display on the big screen because it is so much easier. Apart from having a larger, more usable keyboard, on an iPhone or iPad, you can view messages as a full thread which is useful since sometime long messages are broken into smaller ones and some punctuation characters get garbled.

It's really Earthmate that allows you to use the full features of the InReach. While you can enter messages on the InReach, it's far easier to control with an iOS or Android device.

Both the Spot Messenger and the InReach do tracking, the InReach at variable intervals. The Spot track is displayed on their website for 7 days. Unlucky if you're away for more than that because the early tracks will have expired before you return.

On an iPad, you view the track over a map and can click on a paypoint and see all the relevant data: Lat, long, alitude, speed, info like the names of roads or towns and the text of any attached messages.

The InReach tracks are displayed on the internet for a long time and you can download them in a KML or GPX file format.

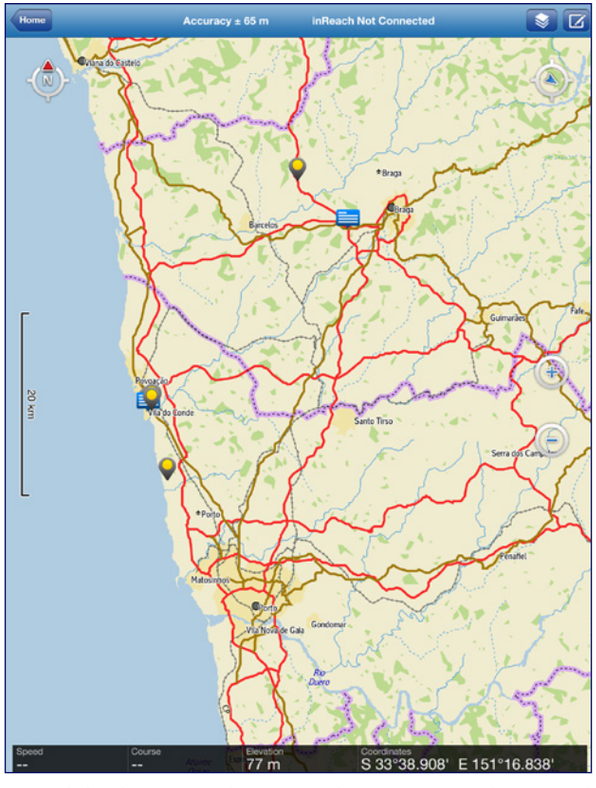
With both Spot and InReach, your location, messages and message content can be viewed in a shared page and connected to Facefriend and Twatter if that's what you do. Earthmate seems to store your tracks for ages on an iPad.

You can download a wide range of good maps with Earthmate and use them offline whether an InReach is connected or not. That's a great feature. Yes, you have to remember to download maps before you get out of internet range but it's easy and once they're downloaded, maps can be used anywhere without needing a connection to the InReach or the internet.

The InReach costs more to buy than the Spot. The subscription costs per year are more too (more in Australia than in the USA or Europe which is something you might want to look at if you have an alternative address).

However with the InReach, you can change the plan you're using by the month to vary the cost and service features depending on the season.

Bear in mind that when villains like Telstra can charge 75 cents per SMS in many countries, the InReach may be a cheap option if you use it outside Australia.



While the InReach my not be an essential piece of kit for a lot of gliding, especially if you never outland, with the dodgy phone coverage we have in the bush, it could certainly save you a lot of bother to be able to tell at least someone where you were and it could be a life-saver.

For an event like a Safari, where you were going to be out of range of mobile phones, an InReach is a very powerful, confidence inspiring device and well worth the price of admission.

That Kiwi Who Can Thermal a Fart

I was in Sisteron, France a few years ago and mentioned to a visitor from the UK that I flew at Keepit. He said "Isn't that where that Kiwi who can thermal a fart comes from?"I wracked my brains trying to think of a Kiwi at Keepit in 2008.

Agan, there are not many people who can thermal a fart… who could it be? Then I remembered that Garry Speight, like our Split Enz, had once been a Kiwi and of course, Garry *can* thermal a fart. At the least, he'll wear himself out trying.

Anyone who was at Garry's talk on MacCready Theory and Iconoclasm (see the following pages) could have little doubt that Garry is not only humorous but sharp as a tack. I was going to add that Garry is as stubborn as a goat but that's not really true. He analyses a problem into the ground before making up his mind, but he's open to new information and may reassess a problem and change his mind again.

It was a shock then to hear that Garry had decided not going to continue as an instructor.

I have decided not to continue in my role as a gliding instructor.

I came to this decision as a result of an incident on Friday. While driving in Manilla's main street, I failed to give way to traffic on my right as I turned left. Although the other car must have been in plain view, I did not see it even when the driver tooted. I have tried to analyse the cause of these incidents, using a textbook and the internet. I do not see a single cause, but I think this sentence from a paper about driving for the elderly covers it:

"Driving requires a variety of high-level cognitive skills, including memory, visual processing, attention, and executive skills." I may now be weak in all these skills.

Now that I am aware of the problem, I do not think I should continue instructing "even for one last day", or pending a check flight. I should make a clean break now.

The question of coaching is tricky. One could argue that it would be safe for me to coach pilots who are capable of taking command. I doubt that: those with the confidence to take over need little coaching from me.

It's difficult to argue with Garry (at any time) since he does tend to think things through with remarkable thoroughness, however if everyone who had an incident in traffic gave up driving, then there would be few of us who would get past our learner plates, let alone out of our teens as a car driver.

One could also argue that since in some countries, you can fly a glider at 14 while you cannot drive a car on public roads until you are 17, that gliding requires less in the way of cognitive skills than driving.

So far as coaching goes, I doubt that many of us would state categorically that we'd have the confidence that having taken over from Garry, we'd do a better job.

The human eye when connected to any brain is regrettably at second class instrument. If both of your eyes don't see the same image, your brain may simply blot out what it does not see twice. At any age. The increasingly large size of 'A' pillars in cars means that many objects such as pedestrians, cyclists and motorbikes are blocked out completely during some manoeuvres.

And another thing… "elderly". I read a book in which the carpenter on one of Captain Cook's voyages was described as "the elderly Mr. Clark". He was 42. Garry can hardly be described as elderly!

Of course it's Garry's decision. Absolutely, whenever flying or for that matter sailing or riding a motorbike a with passenger one cannot be too careful. However, I cannot help thinking that one swallow does not make a summer.

John Clark

Fly Fast and Stay High with the Threshold Theorem

By Garry Speight

I presented this iconoclastic material at Joeyglide, 11/12/12. The title was "Accepting and Rejecting Lift". Those talented young pilots thought my talk was a complete waste of their time. How about you?

At all times you must know what lift is the weakest lift that you will accept.

The weakest lift that you will accept is an important idea. Platypus (Mike Bird) called it MAIROC: Minimum Acceptable Instantaneous (i.e. known right now) Rate Of Climb. The Armchair Pilot (Anthony Edwards, Professor of statistics) called it:

CROC: Critical Rate Of Climb.

You should always use CROC in MacCready Theory.

The Speed to Fly (MacCready) Theorem is hardly ever written down. Here it is:

If a glider is to be flown around a course as quickly as possible by circling in thermal lift and gliding between thermals, then the best speed to glide depends on (a) the glider performance polar, (b) the rate of climb in thermals, (c) the lift and sink found during the glide. The best speed to glide is faster with higher performance, with higher thermal rate of climb, and with heavier sink.

Paul MacCready won a World Championship by using the MacCready Ring, which is an analogue computer he invented to make practical in-flight use of this theorem that was discovered by others.

The MacCready Ring has a pointer that should be set to the thermal rate of climb, *but the actual rate of climb is not known until after the event.* To avoid getting too low, it pays to set the pointer to the weakest lift that you will accept (CROC).

Anthony Edwards proved the Threshold Theorem.

The Threshold Theorem.

It pays to accept lift above the CROC and to reject lift below it.

There are logical rules for deciding when to accept and reject thermals, that is to say, when to stop to circle in a thermal, and when to leave it. I developed a rule for leaving a thermal, based on work by Litt and Sander who used a model with thermals of known strength:

When thermalling, as soon as it becomes possible to reach either a stronger thermal or the finish line by cruising towards it with a ring setting equal to the present rate of climb, leave the thermal and cruise at that ring setting.

Since we do not know the position or strength of thermals, we must cautiously assess the risks. I proposed that "possible to reach a stronger thermal" should become "almost certain that one can reach a stronger thermal".

Again, since we may meet a stronger thermal at any moment, rather than "cruise at that ring setting" (forever?) we should "fly to that ring setting" with the intention to circle any time a stronger thermal is met.

The rule for real soaring becomes:

When thermalling, as soon as it becomes almost certain that one can reach either a stronger thermal or the finish line by cruising towards it with a ring setting equal to the present rate of climb, leave the thermal and fly to that ring setting. (Includes "Garry Speight's Rule.")

As it stands, this rule would cause a heavy mental load. It implies that you must constantly review many urgent decisions. This is not the case if you stick to the basic rule:

At all times you must know what lift is the weakest lift that you will accept (CROC).

Then, decisions become automatic. The time to leave a thermal is simply the moment when the rate of climb falls below the CROC and the time to accept a thermal is the moment when the rate of climb rises above the CROC. Your task is to choose the CROC so that you can be almost certain of finding a thermal as strong as your chosen CROC.

The CROC goes up with height above the ground.

Everyone knows that the MacCready Ring setting goes up with thermal strength. Few take to heart Anthony Edwards' advice in "A Stochastic Cross Country" (1963) that *the setting must be reduced if the strong thermal is out of reach.*

At a great height the CROC may be set high for three reasons: big days have strong thermals, running out of height is not yet a problem, and there is a lot of range to choose the strongest of the thermals. Down near circuit height the CROC must be set low: nearly all thermals are weak down there, there is no height to be wasted, and any lift at all is worth taking.

For a given glider/pilot performance in ordinary Australian soaring weather, it is possible to work out a curve relating CROC to height so that, no matter what the height, one can still be almost certain (say 99.5% certain) of finding a thermal stronger than the CROC.

A rough rule-of-thumb for Standard Class gliders is:

CROC in knots equals height in thousands of feet minus two.

Late in the day, when the thermals are further apart:

CROC in knots equals height in thousands of feet minus three.

For Lake Keepit, where most landing areas are near one thousand feet altitude, add that thousand, so the CROC for a given altitude is one knot lower.

Setting the CROC just one knot higher than usual is quite risky.

Garry Speight
Lake Keepit
February 2014.

Let's be Iconoclastic!

Icons to be torn down, smashed and burnt!

Deciding when to take a thermal is something that winners do naturally. It cannot be taught.

Everyone can learn it.

No-one has ever studied when to take a thermal and when to leave it.

Some very bright people have studied it for generations.

The MacCready ring just advises the most efficient speed to fly.

The ring reminds you of the weakest lift you will accept.

Set the ring to the strength of the next thermal.

Nonsense! Do you have a crystal ball?

Set the ring much lower than the lift you intend to use.

Set the ring at the weakest lift you intend to use.

For good measure, here is another icon to smash:

Water ballast lets you cruise faster.

Water ballast keeps you from getting low.

Garry Speight
Lake Keepit
February 2014.

A Grand Day Out

A few years ago, on a typically bleak and cold English summer's day, a group us was out walking somewhere near Shropshire which is nearer to Wales than most places, as a precursor to spending the rest of the day in the pub. When we reached the top of the ridge, where the rain was almost horizontal, we sheltered behind the rocky outcrop aptly named the Devil's Chair and gazed out across the valley.

On the other side, there was a long smooth ridge which looked just the place to jump off in a hang glider. "Well they do," said one of the locals. "That's the Long Mynd." Most people who have read about gliding in the UK would have heard about the Long Mynd. One of its claims to fame is that it's one of the few, if only places where you can launch in the "classic" manner… a bungee launch. And that's something we all should try isn't it?

So when my wife and I had some work in the midlands, we contacted the Midland Gliding Club who are on the top of the Long Mynd and made an arrangement to come up and have a fly.

The whole experience was a bit of a swindle really. The gale force westerlies, solid with rain and sleet which one expects in the UK in early summer, completely failed to blow. Instead, it was one of the most perfect days that I can remember anywhere.

The sun was warm and the sky was a clear blue with perfect CU beginning to form towards the middle of the day. Of course, this did mean no bungee launches because you need a fairly stiff westerly on the face for a bungee.

We'd decided to park the van at the bottom of the hill on the east side of Long Mynd and ride mountain bikes up to the top. On the way, we were treated to some blissful scenes of a perfect English countryside basking in the sunlight of a summer's day. I felt cheated. Like Albert (of Lion fame) on his visit to the seaside… "No shipwrecks and nobody drownded. In fact nothing to laugh at at all."

A side-effect of this biking plan was that I turned up at the launch-point wearing lycra. This is not a great look really, on anyone. I don't think even cyclists trust other cyclists wearing lycra. I changed shorts and put on a woolie so I looked more like one of them.

The airstrip is large and covers much of the undulating hill top. The rest of the ridge is covered with bracken and would probably be as safe to land in as a paddock full of canola. Not nice, but probably not dangerous. There appeared to be as many landing areas as at Keepit. They're all over the place which makes getting your head around the site fairly hard.

The airstrip does not appear to be fenced and instead of kangaroos to keep the grass short, they use sheep which seem do a much better job because it is smooth and green like a billiard table. I forgot to ask if the summer tuggies were allowed to catch and eat the odd one to supplement their meagre pay.

Apart from sheep, the club shares the hill with several other life forms including paragliders and hang gliders. This does make things interesting.

While having a sandwich, we watched a number of paragliders launch off the front of the ridge and join a big gaggle drifting up and back across the strip. Any aircraft on finals would hopefully have been well below the paragliders but all the same, an interesting environment.

Being up in the midlands, you'd expect the locals to talk… well, midlands. Perhaps it was because they detected the strains of an untrustworthy southerner in my accent… I'd only twice been north of London before being transported to Australia… that they put on an English which was clearly understandable by foreigners.

We did feel a bit cheated by this and if I was on the club committee, I'd suggest that they got members to talk with a bit more 'ee by gum' in front of visitors if they want to get a bit more passing tourist trade.

We did get a bit of local colour though. Shirley (we think) asked my wife Geraldine if she was going to have a fly. When Geraldine said no, but she had thought about learning, Shirley said "It's not that hard" and went into an odd sort of dance… the dance of the student pilot, learning the left stick, left foot shuffle.

It's funny how unnatural this looks when seen out of the cockpit compared with left foot, right arm as in dancing or marching. Perhaps my brother would make a natural pilot. He was asked to leave the cadets because he always swung out his left arm in time with his left foot.

Shirley then told us about a woman who she had been instructing who practiced on her husband. She got him to lie on his back and sat on top of him. She grabbed hold of his stick thrust it left and right while pushing her left and right legs out. What an obedient sort of husband!

Shirley took me around the club and showed me the bungee rope (thick as her bra straps she claimed) in the hangar where a T21 side-by-side open cockpit trainer hangs from the roof and the concrete pads or notches on the front of the slope where they rest the nose wheel or skids of gliders when bungee launching.

Although they do aerotow at the Mynd, it's mainly winch launching and they are very efficient at it, with a launch every two and half minutes if they need. The winch appeared to be a purpose built Skylaunch winch but there's a secondary winch at the launch point for retrieving the wire. This was something new for me.

As soon as the glider releases and the winch wire is seen to fall away, a secondary winch at the launch point begins to winch the wire out of the sky and it is very quickly back at the launch point, only a few metres away from the next glider in line.

The retrieve winch operator sits behind a large wire safety screen where he or she can oversee launches and keep the flight log if required. Apparently, they only lose 100' of height by having the retrieve winch

and in terms of man-power, is no more labour intensive than a retrieve vehicle but a lot faster to turn around a launch.

I'm not a big fan of winching and although I have a winch endorsement, my own glider deliberately has no winch hook. I've read the BGA safe winch launching manuals and seen the frankly terrifying animations of a glider cart-wheeling after a wing drop. It's said that this is more likely in the UK than in Australia because of our sparse dry grass but the grass at Long Mynd was as short as a sheep could crop it.

Anyway, when I got my turn to fly, I declined to fly the take-off. This turned out to be a very good thing. Yes, it is a while since I winch launched and that was on Keepit's anaemic old winch. All that being said, I was totally unprepared for this launch.

A K-21 is not the lightest of gliders but when the "All Out" signal was given, the acceleration was absolutely breathtaking. In every sense. I believe that when I was able to suck in a breath, all I could say was "Holy mother of god! Jesus wept!" Or similar. Australians are notoriously devout.

The closest experience I've had to this is the Tower of Terror ride on the Gold Coast which goes from 0 to 160 kph in seven seconds using a 2.2 megawatt linear motor. I can heartily recommend a winch behind a Skylaunch if you get the chance. It may not pull the 4.5 Gs of the Tower of Terror but it's very close. The ride may cost a little more but lasts a lot longer!

So what about the flight? Well… as I said to Paul the instructor shortly before we landed, I had an 11 knot thermal this year. We tend to get used to real kick in the pants style thermals don't we? And when they're much less, we fly right through.

OK, I'll admit to being more or less lost on the ridge. Picture it: There's a big ridge below you with the wind on the face. Superimposed on this possible lift are thermals… you can see clouds forming above. Somewhere in front of you in the cockpit is a vario which occasionally makes unfamiliar weak burbles and there's an equally unfamiliar altimeter which is lying.

But you don't really need an altimeter do you? Stick your head out of the window and look. The ground is 2500' below, no problem! No, not *that* window, Oh Jesus, the ground is right up level with us! That's the trouble with ridge flying for the uninitiated, in this case, me. The ground isn't flat any more.

The other excitement is that you've got to remember the rules about other traffic on the ridge. Give way to the right and all that. I've flown hundreds of hours on busy ridges in a hang glider but… this is *really* busy.

Not only are there three or four other sailplanes to watch out for, there are also a handful of hang gliders and rigid wings. These need a careful look out because they are no easier to see than a sailplane at your level.

And then there are more than a few dopes on ropes. Did I say that! Wash my mouth out with soap and water! The problem with these folk, who have every bit as much right to use the airspace as we do, is that they do take up rather a lot of it compared with us and the HGs but they are so slow that they appear, like barrage balloons, to be completely stationary.

Anyway, we poodled around in what Paul, the instructor, claimed was lift. We circled in some bits and did figure of eights in other bits while I felt as if I had never flown a sailplane before. (I think this is also how I fly in AFRs.) Finally Paul said we were getting a bit low and should land though I felt we were no lower than we'd been for half the flight which was nearly ground level. I declined to fly the landing.

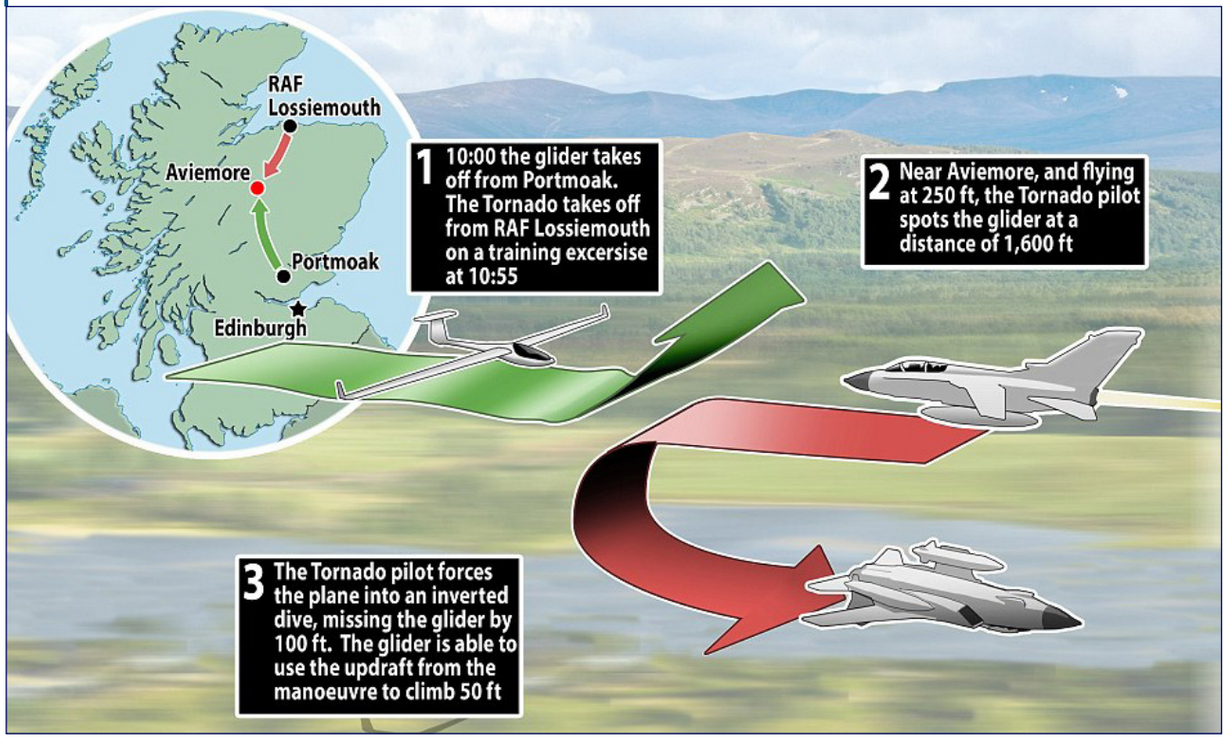
On the way back down to the van, my bicycle chain broke. This meant I had to push the thing all of 20 metres since it was seriously downhill all the way. Then off to an pub for a proper beer. You either like English beer or you don't. I'm well and truly in the former category! Anyway, we had to because the club is *sponsored by a brewery. How did they manage that!*

It was a grand day out. Cracking weather. A nice ride up and back and a great fly. Friendly people at the club and a few memorable stories. And cheap flying too. As their website says:

"Unlike the majority of UK gliding clubs, the Midland Gliding Club operate as a members' collective; our members pay for the upkeep of the club's gliders through an annual flying fee and can fly them as much as they like, subject to experience and availability, for no additional flying charge except for launch fees." That sounds a bit like communism doesn't it?

Midland Gliding Club
Long Mynd, Shropshire. 01588 650206
www.longmynd.com

If you get a chance to visit Long Mynd, do have a go and see if you can raise their expectations of LKSC fliers. They're a seven day a week operation from March to October.



Alerted See & Avoid

A Wizz Air A320-200 with 162 passengers and 6 crew came within 0.02 nm horizontally and 400 ft vertically of a tug/glider combination in Germany[1]. The transponder used by the tug/glider combination resulted in a TCAS Resolution Advisory generated by the airliner and evasive action being taken, resulting in all aircraft landing safely.

A Ryanair B737-800 with 108 passengers and 6 crew passed within 600 ft horizontally and 100 ft vertically of an unknown glider in Germany[2]. Due to the glider not being transponder equipped, neither ATC nor the pilots were given any warning of its existence.

In February 2013, an aeromedical B200 King Air while passing 5 nm north of Benalla airport came within critical proximity (same altitude & 70 metres laterally) of an unidentified glider[3]. The glider did not appear on the King Air's TCAS system nor were any broadcasts heard on the area ATC frequency.

"Numerous limitations, including those of the human visual system, the demands of cockpit tasks, and various physical and enviro nmental conditions combine to make see-and-avoid an uncertain method of traffic separation."[4]

At 10,000 ft, a transport category aircraft that has slowed to 250 kts Indicated Airspeed (300 kts True Airspeed) and a sailplane gliding at 80 kts IAS (96 kts TAS) have a closure rate of over 733 kph. That's over 12 km a minute! If you consider the barely noticeable head-on profile of a glider, from what distance are we likely to be visible? 2-3 km? If we're lucky!

That's 10-15 seconds. It's accepted that it takes an average pilot 2-3 seconds to accommodate to a stimulus. That leaves only 9-10 seconds to recognise the object as an aircraft, recognise the collision, overcome shock/surprise, decide on a course of action, disconnect the autopilot, make the required control inputs and wait for the 7,000 to 58,000 kg aeroplane[5] to respond.

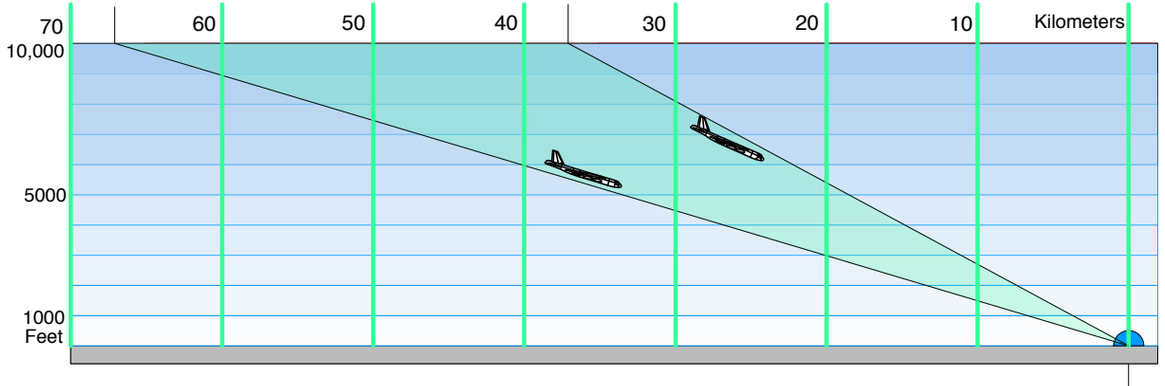
The FAA quotes that 12.5 seconds are required for this process to occur[6]. And this assumes you were heads up and eyes focused when the clock started!

Whilst it sounds like the odds are against us, there's no need to buy space in the GFA Classifieds just yet. The effectiveness of a visual search increase by a factor of EIGHT with a traffic alert; being given a 'heads up' if you will. This can come from maintaining a listening watch / making broadcasts, receiving alerts from air traffic control or for suitably equipped aircraft, Airborne Collision Avoidance Systems (ACAS/TCAS) warnings.

LISTENING WATCH/BROADCASTS.

Having stopped flying commercially in Australia some time ago, I asked some friends who fly a spectrum of high performance aircraft into uncontrolled aerodromes around the country to share their glider awareness, speed and altitude profiles[7]. For context, Narrabri alone has Saab 340 and Metro 23 turboprops, BAe-146 jets and an armada of twin-engine charter aircraft operating in and out regularly on BNE & SYD tracks.

	Qantas B737-800	QantasLink B717	Skippers Dash 8	Cobhams Dash 8	Virgin E190
Passing 10,000ft	46-55km, 250kt	65km away, 250kts	55-65km, 230kts	37-46km, 235kts	67km, 250kts
Approaching the circuit	210kts from 28km	210kts at 4,000ft	230kts to 13km	Slowing fm 19km	Slowing fm 38km
Joining the circuit	Overhead at 2,000ft		180kts	150kts	180kts, slowing
Glider awareness	Will bcst on glider freq if known ops	Never transmit	Never transmit	Definitely transmit	Rarely transmit



These profiles can be amalgamated into the following summary:

High performance turbine aircraft will descend through 10,00 ft between 37 & 67 km away and 230 & 250 kts. They'll approach the circuit between 210 and 230 kts and either overfly at 2,000 ft AGL or manoeuvre for a straight in approach, being established on final by 5 nm.

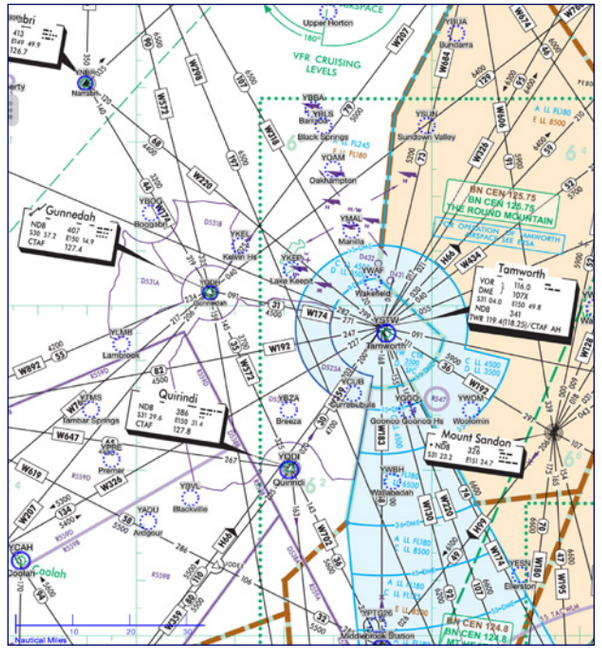
Manoeuvring for an instrument approach will normally be limited to a 10 nm radius of the aerodrome and they will rarely transmit on glider frequencies. **Therefore, it could be suggested to monitor a CTAF frequency within 20 km and 3,000 ft of an aerodrome being served by these aircraft and the Area frequency at other times.**

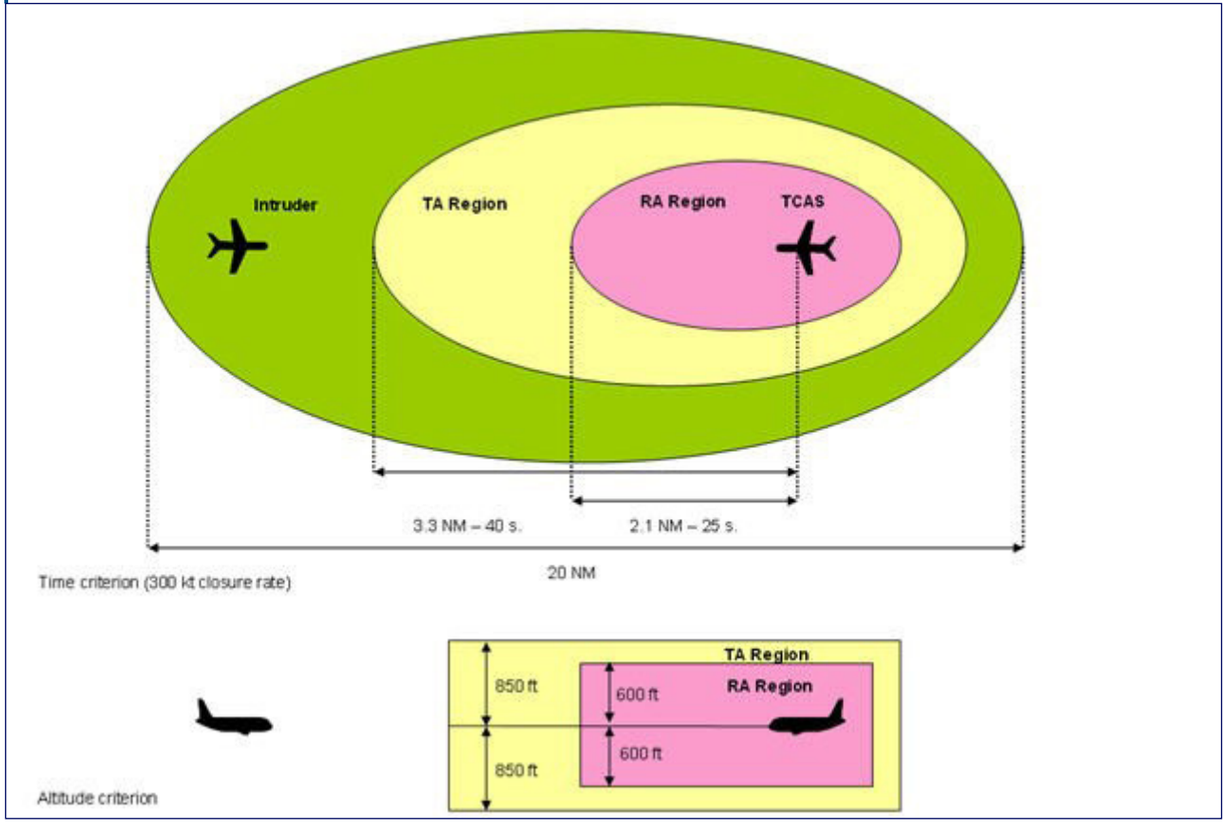
Using the KISS principle for the cockpit, we can distil their descent profile into the following rule of thumb: Divide your distance from the airfield in km by 6 (or nm by 3) to get their approximate altitude (AGL) in 1000's of feet.

AIR TRAFFIC CONTROL (ATC).

Glider pilots are entitled airspaces users with not only a legal but a common sense/self preservation requirement to avoid collision. We are not just encouraged but duty bound to make any radio calls necessary to achieve that end. Thus, ATC is our best ally.

Any EnRoute Chart (ERC), Visual Navigation Chart (VNC) or Visual Terminal Chart (VTC) will provide the relevant ATC frequency for your area of operation.





Having trouble getting hold of a chart? Ask a powered pilot friend with OzRunways to take a screen shot of the section you want and email it to you. 15 seconds – done.

In communicating with ATC, the name is the callsign to use, the frequency a line below and the geographic location of the transmitter (for info only) listed below that. In the attached ERC Low for Keepit, the relevant callsign/frequency is BN CEN ("Brisbane Centre") 127.1 and the transmitter happens to be on Mt Dowe.

You can give yourself as traffic on this frequency (to the controller or directly to the inbound aircraft), request known traffic inbound to your location, get an updated QNH and during the Grand Finals, they'll often pass you the footy score. They're there to ensure you and every other entitled airspace user remains safe.

Does your radio have a frequency monitor function? Why not set it to monitor the area frequency next flight. When no calls are being made on your primary frequency (122.5/7/9?), you'll hear the broadcasts made on your standby (BN CTR).

Although standardised phraseology has evolved for efficient and unambiguous communication, the need for understanding trumps all else. Translation: if you need to speak plain English, do so!

I have never met a farmer who did not want to leave the land better than he found it,

And I have never met a miner who did.

Æschylus 525 BCE – 456 BCE

Big Coal has always been as skilled at propaganda as it is at mining. Like the tobacco industry before it, its success depends on keeping people stupid.

ACAS.

Since Jan 2000, Airborne Collison Avoidance Systems (ACAS) have been required to be fitted to Australian aircraft with more than 10 passenger seats or a maximum takeoff weight in excess of 10,000 kg.

ACAS uses transponder broadcasts to display proximate aircraft, issue traffic alerts and generates resolutions advisories - shouting "Climb! Climb!" or the opposite and displays the required rate of climb/ descent to avoid collision.

Only aircraft squawking a transponder code in 'ALT' mode are visible to ACAS and they appear colour and shape coded, in bearings relative to the aircraft, giving difference in altitude in hundreds of feet and direction of vertical motion (climbing or descending).

The blue diamond on the left side of the displayed image depicts an aircraft that is 1,200 ft below and climbing. This is how transponder equipped aircraft appear to an ACAS equipped aircraft:

Modern transponders are now small, miserly in their current consumption (0.28-0.34A) and good value for money – about the cost of a parachute.

To quote what Jim Staniforth paraphrased on this subject "If you think safety is expensive, try the cost of an accident".

So we've discussed the limitations of "see and avoid" and learnt how we can improve our chances of seeing and being seen through the use of the radio and transponders resulting in 'alerted see & avoid'.

IN SUMMARY:

- Aircraft travel at too high a speed for unalerted see and avoid to provide adequate and reliable traffic separation. Radio calls, a listening watch, ATC and transponders/PowerFlarm for alerted see and avoid increase your chances eight fold.

- When in proximity to aerodromes, monitor the CTAF and make broadcasts where appropriate.

- Away from aerodromes and unless PowerFlarm equipped, the only alert you'll receive for inbound traffic is by monitoring the Area frequency (Brisbane Centre / Melbourne Centre).

- The pilots you talk to have all reported "Downstream touch and go", got their call signs confused and pushed the PTT instead of the P/A button. Basically, they're human and there's precious little you can say on the radio that will trump their own embarrassing moments. Speak as plainly as you need to, to get your message across.

- No matter what gadgets and electronic wizardry you have fitted to your glider, the only one that will allow them to see you is a transponder.

For the final word, I'd like to quote a Qantas 737 Captain that shared the operating profile outlined above:

"I can understand how hesitant [glider pilots] may be, talking to a big jet but we're honestly more than happy to have a chat with them using plain English rather than have them feel intimidated, clam up and be invisible!"

Casey Jay Lewis

References:

1: http://avherald.com/h?article=46d5627a&opt=0

2: http://avherald.com/h?article=4652db3a&opt=0

3: http://atsb.gov.au/publications/investigation_reports/2013/aair/ao-2013-032.aspx

4: Limitations of the See and Avoid Principle – ATSB Research Report. http://www.atsb.gov.au/media/4050593/limit_see_avoid.pdf

5: Maximum landing weights of a Metro 23 & Boeing 737

6: Pilots Role in Collision Avoidance – FAA http://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/23090

7: The information given is the opinion of the individual and not their employer

Hitting the Silk

Parts of this article were previously published in Keep Soaring, however it has been revised after G Dales anus-clenching talk about his experiences in bailing out after a mid-air during an English competition in 2012.

G described the experience as "intense"… but believes that parachutes are part of gliding and everyone, whether training or breaking records should wear one.

"I remember stabilising the glider after the aircraft touched and thinking I could maybe fly away, but then the thing went right out of control."

He jettisoned the canopy and harness and was thrown out of the glider which was nose-down.

"I looked down to my left and I could see the glider upside down and quite close, but then I realised it was falling faster than I was."

Most of us wear parachutes but few of us have ever been shown how to wear them, how to bail of a glider or how to fly a parachute, let alone to land in one.

"I saw the woods and the railway line and the main road, so I had to learn to fly the 'chute pretty quickly."

"Apparently when I was lying in the field some member of the public turned me over and put me in the recovery position, which might have saved my life because I was coughing and choking."

Parachutes

Wearing parachutes in gliders is not mandatory in Australia but most of us wear them. That's a good start but you need to know how to operate a parachute before using one! 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. There are several cases of pilots using their reserve parachutes more than once in a flight.

Hang glider pilots will not open their parachute for fun, however lots of them have used a parachute and in the large majority of cases, the pilots have survived.

Sailplane pilots are not so lucky. Fully 50% of sailplane pilots will not get out of the aircraft to have a chance to deploy a parachute. That's a fairly frightening statistic and might explain why there is so little training in parachute deployment.

Parachutes will deploy at a remarkably low altitude. There are 'chutes certified to deploy below 67 metres. Several glider pilots claim that their chutes successfully opened well below 300 metres. The biggest problem is getting out of the sailplane.

G Dale says that we should consider parachutes and the risk of bailing out as part of gliding, think about it more, and rehearse an "exit check" in the same way as we routinely do a CHAOTIC and FUST check.

Rehearsing a bail-out

The sequence with a bail-out is Canopy, Belt, Bum, Cord. It is essential to 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. 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 canopy jettison handles are shape coded so they have a unique feel compared with the canopy latch.

Identify the seat bet 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.

When skydiving, you may be told to get stabilised before pulling the ripcord but when bailing out of a glider, it's recommended that you pull the cord immediately, before any tumbling makes this difficult or 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, which did not slow his descent.

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 do 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.

A parachute is designed to reduce the level of ordure you are in from above your head, to just below your nose. Most emergency parachutes will open. The failure rate of a skydiver's main chute is relatively high because of its design and the way it is packed and repacked. However the failure rate of backup parachutes is very low.

Parachute repacking

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 is 6 months. 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 gets wet through a spilt water bottle.

Wearing a parachute

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 done as a routine so the chest strap is always done up first and not forgotten.

Before putting on your parachute, open the back flap a little 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 the 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. 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%.

In this somewhat idealised view of things from a PA parachute manual, a pilot appears to have bailed out of a perfectly serviceable aircraft.

When to bail out

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

- After a mid air collision with an aircraft or large bird. Probably the most likely event.
- Failure of an essential control system of the sailplane.
- Failure of the aircraft structure which renders it unsafe.
- Smoke or fire. More likely in self launching gliders.

If one of these events occurs, there are many possible outcomes. At one end of the spectrum, the glider is obviously unflyable and at the other end, the glider 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 side of his horizontal stabiliser had broken off.

The glider may be controllable but it's suspected that something is seriously wrong… for example that the tail dolly has been left on or an aileron linkage has parted in flight or that the glider has been incorrectly rigged.

In one instance of aileron disconnection, the pilot never noticed until the aircraft had landed. 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 a "flyable" but doubtful condition, the pilot should spend a moment considering the options.

Is the glider really damaged? If a collision impact is not visible from the cockpit, it's safer to bail out than run the risk of staying in the glider. If the impact area is visible, for example on a wing, then it might be possible to remain with the glider.

Is the damage significant? A bird strike may cause damage but probably not of the same magnitude as a collision with another aircraft.

Is the terrain over which the aircraft is flying suitable for landing in a parachute? 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?

At the opposite end of the range of possibilities, the sailplane is obviously in unflyable condition and immediate and rapid bail-out is the only option. Regrettably, when a glider is damaged this badly, the chances are that not only is this decision time unnecessary, but the immediate problem is how to get out of the glider.

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 bailout sequence

The sequence is Controls, Canopy, Belt, Bum, Cord.

Controls. The first thing to do is to stabilise the glider if possible and open the airbrakes to slow it down. A Piggot hook is useful here because it allows the airbrakes to be locked open as well as preventing them opening when not required.

Gliders are slippery by design and will accelerate rapidly into a spin, spiral dive or some uncontrolled manoeuvre. Opening the airbrakes will slow the glider down and give you a little longer to get out.

If significant parts of the wing are lost in a collision, the resulting motion may be chaotic. G forces may build very rapidly so that a pilot does not have the physical strength to push out of the cockpit or is in danger of blacking out so it is essential to act fast.

If the controls are working well enough to stabilise the glider, do this now. It will make getting out a lot easier.

Once the canopy is released, you can then push the stick forwards and try to outside loop or bunt the glider. If the elevator or tail boom is broken, the glider will probably nose over into an outside loop by itself, however this is good for a fast exit.

Canopy. Glider 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 the shape, size and position of these levers.

Jettisoning the canopy may not be straightforward. You may have to pull levers using enough force to break safety wire connections. (If you fly a 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.)

Having released the canopy, it may fly back in the slipstream and bean you. This happens enough times that Prof. Roeger of the Aachen University in Germany 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 and then pivot around the pin before flying off. Most new gliders have a Roeger hook fitted, and most older gliders can have them retrofitted.

If your glider has a single canopy jettison handle locate and hold the lever, lean forwards as much as possible and shield your face with one arm as you pull the lever with your other arm.

Many gliders have a headrest attached to the canopy. Leaning forwards will minimise the risk of being hit by the headrest as the canopy flips up. If you need to pull two levers, just lower your head as much as possible when jettisoning the canopy.

Use this head-down time to locate 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.

If it's at all possible, push forwards on the stick and pitch or roll the glider inverted.

Belt. Release the set belt harness. Don't just feel for the harness release, look at it before operating!

Bum. If you are lucky, the harness releases easily and you will be thrown out of the glider. Most likely you will release the harness and find it difficult to lever yourself up and out of the cockpit. If the glider has entered a spiral dive, the G force may quickly and easily exceed 2 G. That's going to double your body weight.

Why not lie down on your back 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 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 this 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 late pilot and writer Jochen Ewald frequently commented on the need for small bumps or hollow purchases to be put in a cockpit floor to allow a pilot to dig their heels in and lever themselves out.

If the sailplane is an SLG and the engine is extended or running, this whole procedure may have to be modified because the engine 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 worry, it will stop when it hits the engine bay doors. Hopefully the manual retract switch is latching, so as soon as you have started the retraction process, you can get on with the rest of the bail-out process.

Cord. As soon as you have got clear of the cockpit, pull the rip cord and you have survived! Of course, it is not so easy and you are by no means safe yet.

The ripcord

Pull your parachute rip cord. Look for and locate the rip cord handle, grab it 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.

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, 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 so pull the cord as soon as you can after exiting the glider.

If you are tumbling and cannot reach the handle, then get into a face forward, spread-eagle position like a sky-diver to stabilise the tumbling and allow you to reach the rip cord.

Practice looking relaxed while you pull the rip cord.

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 inflate.

Suspended in your parachute, and quietly descending, you're probably elated that you have survived but take 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.

Steering a parachute

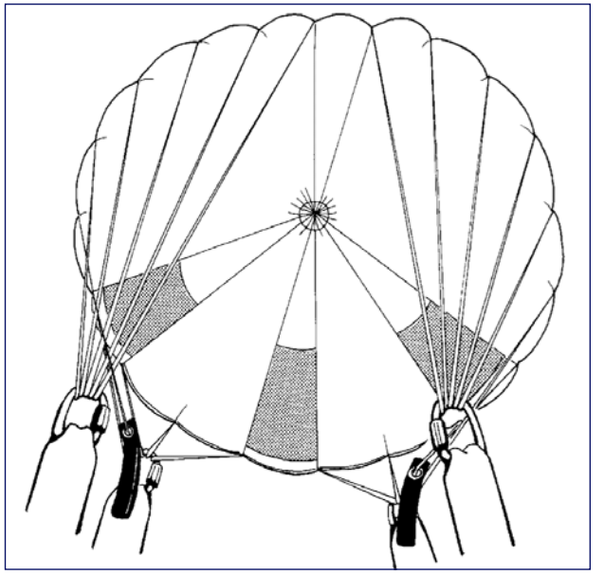
Most emergency parachutes can be steered. The parachute's instruction manual should have details on this.

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 and forward speed both increase, so get your steering done early.

Look down to determine if you are drifting forward or backward. If you have the chance look for a landing spot, look for it downwind and turn back into the wind for your final approach.



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. Steer early to avoid turns at low altitude.

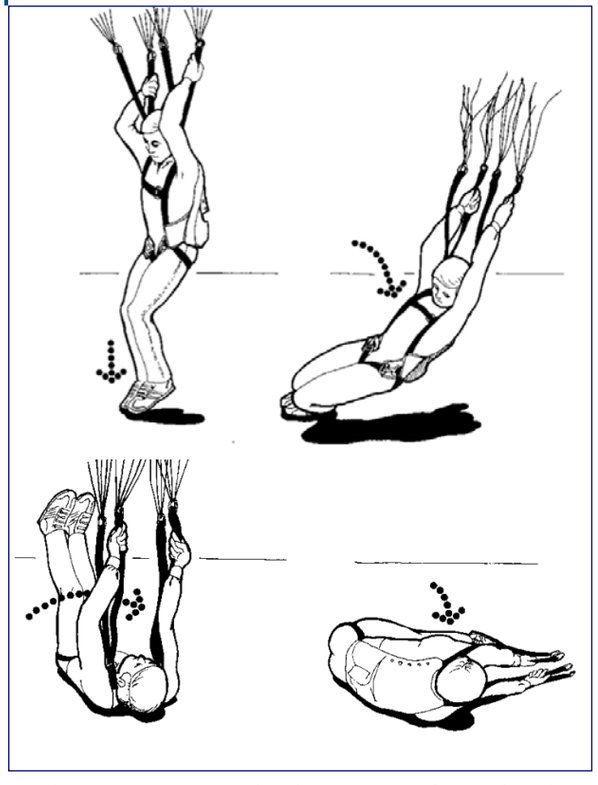
Landing in a parachute

Before landing, 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. As you hit the ground, 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 10 kt. If you are being dragged across the ground by high winds, roll onto your back. The parachute container 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 going to land in water, release the chest strap as you descend under the parachute. This will save time in the 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.

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 head up wind and up current away from the parachute to avoid entanglement. Once it's water logged, the parachute will sink.

If there are any 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 connect with live cables and find yourself suspended above the ground, make sure power has been disconnected before a rescue attempt is made. This may take hours.

There are several instances of rescuers being electrocuted trying to save someone from power lines while the person hanging from the power lines survives. Unless you are sure that the power has been disconnected, don't let anyone on the ground come 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.

Many hang glider and paraglider pilots carry a roll of dental floss in their harnesses which is strong enough to be used to raise a rope from the ground.

Parachute options

For most people, the options to improve your chances of a successful bailout are limited to rehearsals, but here are some other things to consider.

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 attach the static line on the parachute to a strong point on the glider. Most gliders have a strong point 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 you as you leave the glider. Another is that the deployment sequence will start as soon as the end of the static line is reached.

If you have a static line, more thought is required when getting out of a glider after landing to avoid extending the static line but it's about six metres long and the Velcro enclosure makes a noise when the line is pulled out making this only an inconvenience.

NOAH.

DG sailplanes invented the NOAH system and have made it available to other manufacturers. It can be fitted to any new sailplane and retrofitted to many existing ones.

Essentially, NOAH is an air-bag system which rapidly inflates, raising the pilot to the level of the

cockpit side in about a second and 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 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 even 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.

Ballistic Parachutes

A ballistic parachute system is normally used to parachute down an 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 which pulls out a full size parachute. The pilot has the protection of the cockpit, perhaps a modern reinforced safety cockpit, to absorb the landing impact and hopefully both aircraft and pilot are saved.

The arguments against ballistic parachute systems are however considerable. Expense, size and weight and unwanted deployments and uncontrolled descents being 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 you cannot fit a motor and a ballistic parachute.

Ballistic parachutes are much more expensive than a NOAH system.

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.

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 are such that the aircraft mass and structural complexity is significantly increased.

Because of the size, weight, operating speed and opening shock and opening time constraints are in opposition, it is virtually impossible to have a short opening distance and a low opening shock. In practice, the opening distance 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.

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.

The opening distance is almost precisely a function of the opening time squared, i.e. doubling the opening time requires basically 4 times 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!

The size of parachute you carry really should be a function of your age. How fast do you want to fall, and how quickly do you want the chute to open? We all want the fastest opening times 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?