



Soaring **AUSTRALIA**

November 2004



Soaring in Spain



**Outbacks in
the Outback**



**We've got it Covered
in the Whitsundays**

November 2004

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John Barnes in his IS29d2 over the Central
Queensland Gliding Club near Rockhampton
Photo: Peter Pledger

Soaring AUSTRALIA



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FLYING BALI

Mark Fennell

BALI IS A STUPID PLACE TO VISIT IF YOU ARE TRYING TO GIVE UP SMOKING...

I was two weeks into my new found resolve and fighting hard the cravings. I was ready to tear the cigarette out of the mouth of any smoking passer-by and suck it greedily into my lungs. My body and brain were having ideological differences; the brain touting wise words of health and happiness, and my body just going gimme gimme gimme. It was war.

Bali is six hours from Sydney, Garuda Air. Some movie played on a monitor I had to strain to see, and with the red cathode ray on the blink. Dum de dee, killing time. If I was allowed to take a knife onto the plane I would have whittled, maybe created a little elephant or something.

Denpasar airport. The cattle stampede of passport stamping, luggage, sticky heat and then out into the throng... A gaggle of sign waving, squawking, shouting and madly gesturing Balinese transit operators mugging you as you exit.

And all with cigarettes in mouth, the sweet scent of nicotine and cloves filling the air. I was gagging for one. I found my ride, and we travelled into Kuta, tourist HQ where I checked in, dumped my stuff and took a few moments to chill out.

There is a smell that I associate with third world countries; it's a blend of traffic fumes, overworked sewers, incense and cigarette smoke. It conjures up images of frantic traffic, alien cultures, bustle and chaos. Bali smells like that. I love it.

I had my first taste of Kuta touts. Every third person grabbing at you in manic fashion, "Watches", "DVDs", "Sunglasses, I do you cheap price", "T-shirts", "You want massage...?", "You want woman?", "Transport?", "Taksi?", "Hashish, marijuana?", and my favourite, always said with a sly grin and a leer, "You want jiggy jig?" It's incessant, it doesn't stop, it makes your head want to explode, and some tourists just can't handle it and fly off the handle.

I always enjoyed the "You want woman?" calls. I'd give them a smile, pull 'em close, and ask them in the hushed sly tone...

"You have woman, big one, fat one, who

– Land of beer, sun, surf and intestinal turmoil...



With a due south wind on a special day you can fly to the epic Bali cliffs, and perhaps beyond to catch a glimpse of the Uluwatu Temple

is really old with no teeth...?" It stumped them every time. It was great.

Kuta has a crazy night life. It is a beach Babylon. Cheap beer, Arak (the local fire-water), loads of clubs and armies of travellers (mostly Aussies) out for a good time. It makes for a place of great hedonism. Seminyak had me hooked on the first night. I was out with the boys, covered head to toe in nicotine patches, sucking down dollar bir bintangs, and politely declining the advances of the local working girls. It was great. A Sydney girl approached one of us (our instructor, Lee Scott, if I was to name names...) "What are you drinking?" she asked. The victim replied, "I don't drink". "I look better after a couple of drinks," she added. Shudder. He proceeded to inform her that he was married with four children. I couldn't resist and piped up with, "At least you know he's virile." He ran in terror.

The next morning hurt.

When travelling to a new country I always find it important to introduce the local micro-organisms into my body gradually. I like to consider my intestinal tract a place of great multiculturalism, having many unique communities of microbes happily living there, from Turkish to Indian. I love Indonesian food; this place is a gastronomic heaven, the home to beef satay, beef rendang, nasi goreng and a whole host of other delicious treats.

I started my eating in grand style and took on the beef rendang. Succulent chunks of beef, cooked slowly in coconut milk with herbs, spices and chilli. It was delicious. That



Flying over seaweed farms

Below: Local seaweed farmer huts at the bomb-out





Bir Bintang, the ever reliable icy cold companion



A typical coastal village

night the Balinese bacteria had a party. Some might describe it as an all out riot, Rodney King style, in my lower intestines.

Hotels always have a habit of pristine white sheets, starched to within an inch of their life, and tucked in so tight that one needs a crowbar to prise oneself into bed.

Sometime in the middle of the night I woke. I can only imagine the look of shock, panic and sudden realisation that must have flashed across my eyes. I had seconds, perhaps less, before my intestinal rioters broke through the barricades. I struggled frantically



On a lucky day you can see the Uluwatu Temple while soaring. On a not so lucky day you bomb out in the middle of nowhere...

against the super tight bed sheeting, thrashing and twisting in terror trying to get out. I nearly made it; I was so close...

I couldn't make eye contact with the room cleaners for the rest of my time in that hotel.

Satay beef is a dangerous addiction. The presentation was fantastic with the little skewers of charcoal-grilled beef lying seductively on their own little terracotta barbecues, little charcoal embers keeping them hot. Delicious. So many times I would look at the menu, see the mixed green salad and think, 'How healthy that would be... and good for my body!' A waitress would come, "Can I take your order, sir?" "Why yes," and with my finger firmly pointing at the salad option on the menu I would calmly say, "Beef satay, please"... My own body, betraying me.

I went to Bali for the paragliding, and heading down with the rest of the group on the tour we navigated our way through Balinese traffic, swarms of motor scooters like angry locusts, bemos and little trucks without any regard for lanes, life or limb hurtling along at breakneck speed. The law of the horn is strong here. Toot for 'I have right of way' is the ethos.

'Bali cliffs' is a beautiful ridge overlooking epic surf and industrious seaweed farms of local villages on the shallow reef, working hard to keep the skin of Japanese cosmetic users supple and clear.

The flying here is wonderful: coastal air, warm, hours can be spent, the photos tell it all, locals to pack up a glider, carry it up the hill should one land on the beach, serve icy cold beers or cook up some gourmet treats. Yeah, this is the life, and I get to work on my tan as well. Flying over temples, along

to the big cliffs, and beyond to the end of the island are magic experiences, though for some (cough, look at feet) resulting in remote beach landings, hikes up said bloody big cliffs and paying some non-English speaking farmer to take you back...

The flying was not without incidents, and there are some lessons to be learnt. First lesson, talk to local pilots, operators, instructors. Make sure someone knows you are there, who you are, your skill level, etc. Two: have a radio. Three: have good insurance. Four: know your ability and fly within it (eg: if you can't top land, don't). Five: follow these guidelines. As I said, they are lessons, and some learn the hard way (cough, look at feet).

The first incident happened early in our flying tour. A solo pilot turned up to fly, though failed to make his presence known to anyone. Taking off and flying around, I didn't pay much attention to him until I saw him coming in over the launch. He was very high, with his brakes pulled down VERY deep (this is VERY bad), his wing practically stalling, and his height an easy 30m high. He dug one down a little deeper, my thoughts being he was about to pull some radical acro manoeuvre to land. He spun quickly, a dramatic 180°, that's when I heard him cry, "What's happening..." Oh no, he's no acro pilot.

He spiralled out of control into the ground. I ducked as his spinning body nearly took my head off. He hit the ground with a thump, and the sound of cracking. He was seriously stuffed up. People came over, an ambulance was called. It took a long time to arrive; all we could do was not let him move and keep him shaded. A broken femur, pelvis, four ribs, shoulder and back. He'll be out for a while; I hope that none of it is permanent.



Totally zen rice paddies with Ganung Agung in the background

Photos: Mark Fennell

I have been looking for some life direction for a while; the feeling of total uselessness as I stood at his feet was a pretty good inspiration to investigate a medical career. It's pretty hard to ignore a 'sign from above'.

As more pilots arrived the ridge started to get more hectic than Heathrow in a hail-storm. I took the opportunity to explore the island. Incidentally, I did hear of another solo pilot, turning up, not making his presence known and flying the ridge. Caught in some bad air he was forced down, onto a tiny beach between two massive rock faces. No radio, no phone. Lucky other pilots flying over spotted him. He spent the night there before being winched out the next day by the Indonesian Army. He left his wing there, his flying days over.

I rented a motorbike (okay, a scooter) and explored the island. Riding one of those things is an extreme sport in itself, especially when one gets lost in the capital, Denpasar.



Below: Seaweed farms

Above: Flying past launch



I found my way to Ubud, a little tourist trap with lots of handicrafts, but surrounded by amazing rice paddies in layered terraces up and down the hills.

I find something totally Zen in rice paddies – the green, water trickling, wind blowing – it's like the ultimate in feng shui. I just chilled there for a while. I'm sure I could make a great meditation retreat there, charge rich middle-aged women extortionate amounts of money to sit in a little hut in the middle of nowhere and not speak for 10 days. That's a great business plan.

I made my way to Padangbai, a beautiful little beach town. Room and breakfast: \$6. Lobster every night for dinner: \$3. The atmosphere: priceless. Oh yeah. The diving here is fantastic, with easy access to the wreck of the USS Liberty at Tulumben, and the magnificent drift dives of Nusa Penida, hurtling over sponge gardens and vibrant coral in a five to six knot current just centimetres above the incredible landscape. Wonderful.

A few days of bliss, before a few more days of flying, my last day spent shopping and filling my luggage up with all sorts of pointless, but fun, wooden knick knacks.

I boarded the plane, took far too many sleeping pills, watched 10 minutes of Peter Pan and then my next memory is of throwing off my doona cover in my own bed. SWEET! I checked, all my stuff was there, except for the BB guns that I tried to smuggle in. I have no idea how I got through customs, or home for that matter. Damn, I love autopilot.

Bali rocks.



Do YOU Rely On Your Flight Computer? Think Again!

Martin Feeg and Kevin Wilson

AS AN EARLY SOLO PILOT, GLIDING CAN BE A LOT OF FUN TOOLING AROUND THE LOCAL GLIDING CLUB ON A SUNDAY. THE AIRFIELD IS KNOWN, THE ANGLE TO THE AIRFIELD IS PRETTY EASY TO JUDGE AND THERE IS LITTLE SCOPE FOR ERROR. AFTER ALL, OUR INSTRUCTOR MADE SURE WE WERE COMPETENT ENOUGH TO MODIFY THE CIRCUIT IF WE, OR THE WEATHER, DIDN'T GET IT QUITE RIGHT.

As our flight training progresses however, our early solo pilots become interested in furthering their flying by participating in simple cross-country challenges starting at around 50km and then increasing their distance. It is at this stage that some early solo/cross-country pilots start reading wonderful articles on glide computers that reduce workload and determine if we can make a certain airfield/goal without further thermals.

So if you're thinking about purchasing a glide computer based on the 'glossies', then it's time you also make sure you read the following article that puts glide computers into perspective.

Martin Feeg takes up the story:

"Recently I came across the following paragraph which has been aimed at showing off the advantages of having a glide computer. Let's have a look at the text and examine what is being said.

...Headwinds can be tricky at different altitudes. Visually, a pilot may think he can make it back to the airstrip. By having the air data computed through the flight computer, the pilot will know that they have strayed outside of glide range to the airfield. This adds an extra layer of protection to the pilot and the glider. This is especially useful for cross-country flights as long final glides can be computed accurately and serves to lessen the stress of final glides that end five kilometres short of the field!..."

Please let me firstly point out I am a great believer in glide computers and they do a magnificent job in reducing cockpit workload. However, you have to be critical with the device, as its calculations are made on a variety of assumptions. Of course these calculations are done every so often... usually several times per minute.

Assumption 1:

The current weather situation will continue until the goal is achieved

Assumption 2:

The goal will be reached in direct flight.



Martin Feeg

Assumption 3:

No obstacle will hinder the flight to goal (goal could be a turnpoint, a waypoint or an airfield, outlanding field, etc.).

Let me give you an example of the early years. Numerous glider pilots of high experience with top aircraft and equipment were found dead after crashing into mountainsides in the Alps. An analysis of those accidents found that all of these crashes happened late in the afternoon – most likely at final glide stage. The pilot probably had no more options other than to continue gliding on and on and hope that he would get out of the hostile rocks before running out of altitude. Additionally, in a neighbouring valley an airstrip or outlanding strip would have been in glide range, if it hadn't been for the impenetrable mountain.

What had happened? These pilots submerged below the ridge-top far away from home believing that the glide computer was telling them that the airfield was well within glide range. At the same time, they didn't take terrain into account. A safe way home would have only been possible by jumping through a gap some dozen kilometres ahead. Yet, the glide path, without topping up,

didn't allow for such a crossing. At this stage the pilot believed the computer readout "plenty of reserve altitude" and continued, most likely knowing about the critical gap. Substantial time later, and considerably lower, the error became obvious as the gap was looming too high. Yet, the glide-range according to the computer allowed for a substantial detour. At this point, with very careful operations they might have had the chance of getting away, either by gaining altitude or by landing without sacrificing the glider in a "Mayday spot". Blinded by the readings they continued to unavoidable death.

The colleague writing the above reported lines is about to make the same mistake.

Even 10 years on and several generations of glide computers later, they still calculate with assumptions. Firstly, there are no obstacles in the glide-path (see note 1). Secondly the glide-path is in a straight line between waypoints. Third the conditions recorded to date won't change.

Let's look at his wording more closely and create a hypothetical condition. We have got a 180-degree headwind at our present altitude. The computer does assume the wind is neither changing direction nor speed, the calculated reading shall be: Glide path is zero to runway flying precisely with calculated speed.

Scenario 1:

The lower we get the lower the wind speed. Subsequently we end up with excess altitude as the wind is not pushing us "backwards" as much.

Scenario 2:

The lower we get the wind is swinging away from its direction at altitude, subsequently we end up with excess altitude as a lesser component of the wind pushing us "backwards".

Scenario 3:

We fly slower, than the computer wants us, to preserve altitude, yet the readings become steadily more negative. We subsequently undershoot the runway by outlanding.

The reason? Flying too slow for the conditions and the wind had more time to push us “backwards”. However, going faster than computed, the drag penalty of the glider would have provoked an outlanding.

Scenario 4:

Wind is blowing as assumed all the way down. But we deviate substantially to a ridge not more than 30-degree off the perpendicular to the wind direction. We make it home with plenty of altitude. Reason being, even though the first part of the route was still substantially shorter than direct to the airfield, the second part of the route found us in ridgelift which stretched the glide ratio more than enough.

Scenario 5:

Think of micro rising or sinking of the air mass you are gliding through. This will influence either having plenty of altitude at arrival or early outlanding. Or even more influential would be heftier vertical movements of the air in the vicinity of a storm for example. You can see it and take it into account, but your glide computer won't.

These mind games can be played on for ever and ever and I think you get the message. Things can deteriorate or improve.

SUMMARY

Glide computers calculate in straight lines, assuming things will continue unchanged based on their last recordings until such time the goal is achieved. Changes in your arrival altitude reflect recordings they have just been, but never things that will happen.

Finally, let me give you a story of one of my flights.

I was coming home to my German site after a 550km task with declared turnpoints. The second leg had atrocious weather for me and I got to the second turnpoint way too late. The third leg was a leg back home, so every kilometre flown was less retrieve. Clouds decayed at low altitude, but an overcasting patch high above moved in.

Sixty kilometres from home I was pretty much down to circuit altitude at another site knowing our tug pilot would pick me up there. As the sun just started to shine onto the opposite slopes of the valley I decided to venture there instead of pulling the airbrakes for a straight in. At these slopes I first found zero sink, which developed into a decent thermal. Just when I had topped up 1,500 metres at ground level the switch was flicked and the thermal was gone. Zero glide to runway home at best glide. Knowing the area very well I tried to stay as much as possible over terrain favourable for late thermals, however I only had slightly increased sink. Thirty kilometres from home I again had the chance to land at a site. At this stage, accord-



ing to the computer, I wouldn't make it home, but I had plenty of altitude to our emergency field at the bottom of the escarpment. Making my own calculation I had the chance of wasting twice as much altitude over the next 30km than I had lost over the previous and still make it to the emergency field.

So I continued, but watching my glide computer for making use of a second option; turning at the critical point and returning through the same air mass to the site I was just overflying. Else, a real paddock landing was possible nearly every half kilometre. While I continued, things turned more hopeful and it was no question I would get to our emergency field.

One kilometre from home I still couldn't make it home, computer and eyesight agreed. Brain said: “Deviate and fly along the escarpment, it is facing west, energy might be stored

there.” At all times I could have safely banked for the emergency field, however, in no time I had enough altitude to make it home and so I did, not with much to spare, but all the time safe.

Conscious decisionmaking with plenty of options was the key to success.

Thank you for continuing through all the story telling, may it help you fly further and safer.



Note 1: The latest version of WinPilot from Sierra Skyware takes terrain into account, but still computes via static conditions that have just occurred.

Martin Feeg: Martin is a competition pilot with over 900 hours, having flown a collection of more than 20 different gliders throughout all classes. He has over nine years of competition experience and has flown an average of two competitions per year in both Germany and Australia.

Martin is also a close friend of Herbert Zimmel (recent winner of the European comps) with a friendship spanning over 25 years. Both Martin and Herbert started gliding in 1992 in the same club and have spent more than 600 hours of training together.

From his German Club Walldürn he bought a Ventus cT.

Since 1994, Martin has clocked up over five 500km flights each year with his longest flight so far in excess of 700km (declared). He has flown over very diverse terrain such as Ireland, Germany, the European Alps, Slovakia and Australia.



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SAILPLANES ON PARADE

Gary Crowley

WE HAVE ALL HEARD IT BEFORE: "HOW DO YOU GET YOUNG PEOPLE INTO GLIDING"?

OR "HOW COME JUST ABOUT EVERYONE AROUND HERE IS EITHER BALD OR REALLY GREY"?

That second question was actually asked of me by a 14-year-old girl, the fact that she asked it at all was because an attempt was being made to address the first question.

That girl was part of a group of Australian Air Force Cadets participating in Air Experience Flights provided by the Victorian Motorless Flight Group at Bacchus Marsh, just outside Melbourne in Victoria. Enabling her to be able to have that flight took a lot of effort by many people across a two-year time scale.

Air Force Cadets generally enjoy good access to gliding right around Australia – the glaring exception was Victoria where cadet gliding was dormant for several years. Attempts to address this had been made, but always faltered, until the committee of VMFG, ably steered by George Bindley, its then President, decided to do something about it.

The Air Force places stringent demands on who can, or cannot, take a cadet flying and it meant filling out onerous paperwork to have VMFG instructors cleared to fly cadets. Months passed, but the paperwork only trickled in and few instructors were approved initially. The scheme looked like faltering again but George kept putting a positive spin on cadet gliding wherever the opportunity arose. Gradually, every so slowly, more instructors joined in a more cadets started gliding. By the start of 2004 the scheme was ready to take another step forward.

Each year the Air Force Cadets stage a full parade at Point Cook on the historic original parade ground dating back to 1913.

To enhance the parade, VFMG offered to place its aircraft there for all to see and enquire about. This was no mean feat and required a sizeable team of VFMG members to give up their day and be involved.

Enter next the GFA via the good offices of Terry Cubley, resulting in the donation of a stylish trophy, and, a junior membership of GFA for 12 months. Naming the trophy was easy; and so evolved the 'Bindley Award for the Best Achievement in Gliding for No 4 Wing' – No 4 wing being the Victorian contingent of the Australian Air Force Cadets.

Finally the day of the parade arrived and, mercifully, the late autumn weather was kind for flying. Just before 9:00am the unmistakable sound of VH-TNC, the Pawnee tug, became ever louder and hundreds of inquisitive young eyes turned skywards for their first glimpse of gliding – up close and personal.

Gracefully VH-VRD, the new and very sophisticated Duo Discus, cast off right over Point Cook, orbiting for all to see before an elegant touchdown. Then it was the turn of another vital element in VFMG's training fleet, the Grob 109 motorglider VH-GUM. Many cadets were fascinated to realise that this aircraft can operate normally without needing engine power at all times.

Once on the ground, the aircraft had to be manhandled for more that 300m, over gutters, around posts, past cars and over a low fence that almost, but not quite, got to sample the under section of its wings. The 20m wing span of the Duo Discus represented quite a challenge to negotiate around obstacles and if you want to assess your fit-

ness try hauling, shoving, pushing, a Pawnee across thick wet grass! It won't want to move!

After that it was off to morning tea then taking turns to answer any questions about gliding and the aircraft on display. One question, combined statement, regarding the Duo Discus took a little thought to answer. A bright-eyed cadet, who probably hadn't yet had his 13th birthday, asked "*Gee, that looks like it must have been a pretty big kit, did you build it yourself?*"

A question like that simply oozes potential; the right answer just might 'hook' him into gliding for the rest of his life. What would your answer be?

And so the day was, the rain did vest itself upon us, but only intermittently, and over 1,000 young men and women marched right past our gliding fleet – what were they thinking?

The Bindley Award Trophy sparkled in the intermittent sunshine and the Reviewing officer, and Air Vice-Marshall, expressed his support for the concept of having VFMG's aircraft there for all to see.

The only damper on the day was that Grant Mockunas, the recipient cadet for this new award, couldn't attend the parade. An unrelenting employer refused him any time off to receive his award – an unfortunate aspect perhaps of the times we live in.

By 3:30pm it was time to wrestle all the aircraft off the parade ground and on to the airfield for departure. This went smoothly.

So how would VFMG assess such a day? Doubtless it could be seen as very expensive: three aircraft lost to the club for an entire day, and the cost of staging them to and





from Point Cook. It could be seen as a costly loss.

Fortunately, VFMG's committee is much more far-sighted and a day like this is measure in future potential – not just in dollars and cents.

Will it be repeated? Certainly! The RAAF want us back again and those who participated enjoyed the day. We might need to brush-up on answers to the type of kits you buy to build your own Duo Discus!

A vote of thanks belongs to so many. It would prove a lengthy list to include them

all, however, for their contribution to the day itself, a huge 'thank you' to the following people:

VFMG personnel – George Bindley, Alan Patching, Gary Allbut, David Howse and Rohan White.

Australian Air Force Cadets' staff – Wing Commander John Schurink, Squadron Leader John Gibbs, Flight Lieutenant Steve Pepper, Squadron Leader Mark Lavery, Flying Officer Gary Crowley, and a special vote of thanks to Warrant Officer Ray

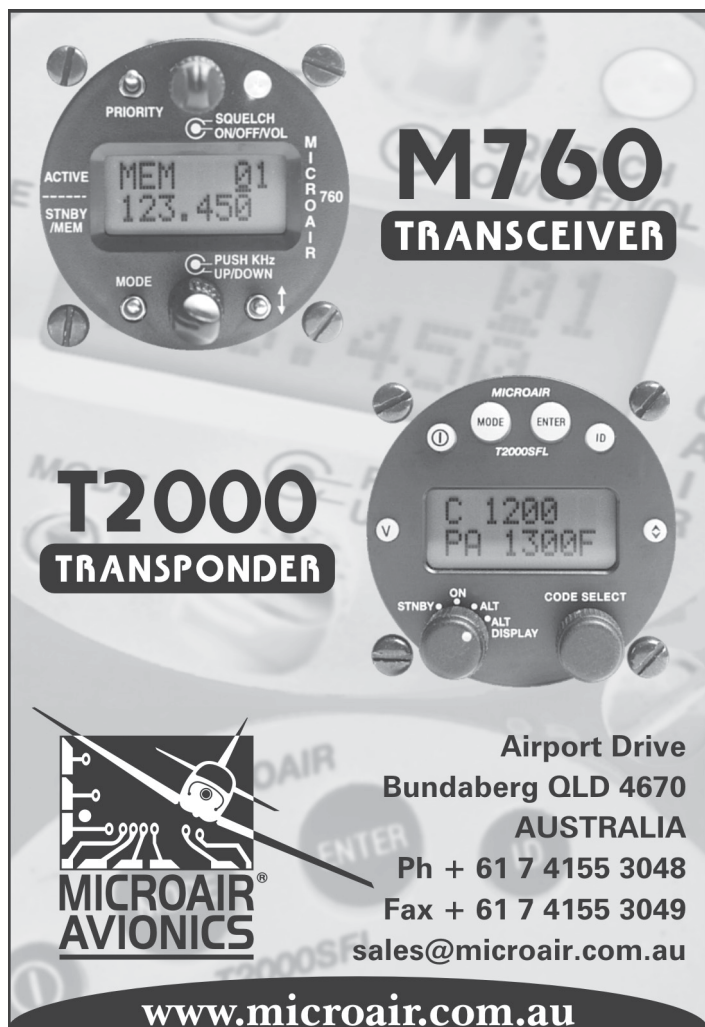
Photos: Gary Crowley

Bolton for approving and supporting the use of the Point Cook parade ground.

VFMG aircrew for the day – Alan Payne, Duo Discus; Ian Patching, Duo Discus; Greg Wanless, Grob 109 and Max Callingham, Pawnee tug.

GFA – Terry Cubley and Ian Grant.

And, to my wife Merran, who kept all the refreshments coming throughout the day.

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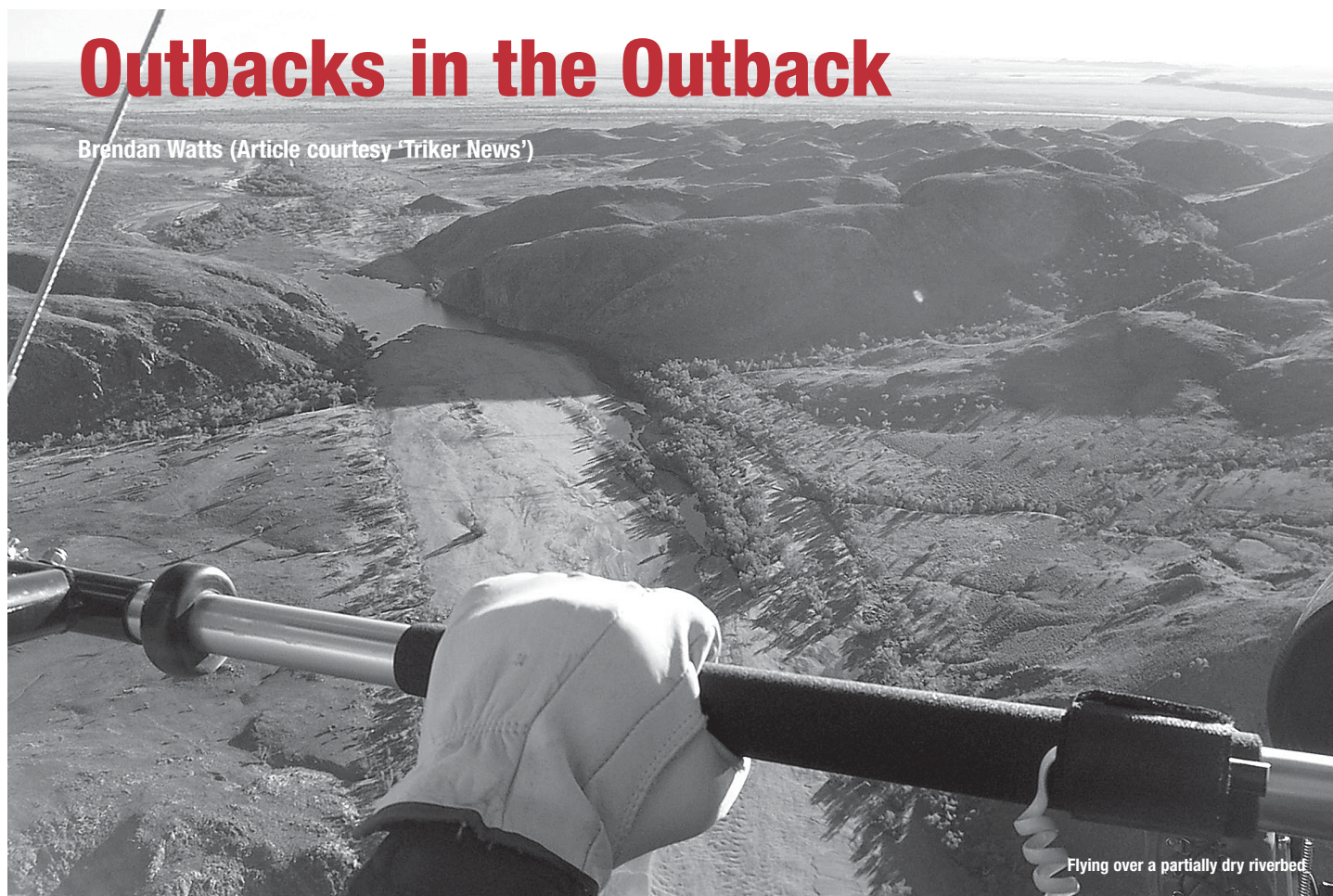
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Outbacks in the Outback

Brendan Watts (Article courtesy 'Triker News')



Flying over a partially dry riverbed

WHEN I FIRST HEARD THE NAME MARBLE BAR, I, ALONG WITH A FEW OTHERS, THOUGHT IT WAS OBVIOUSLY A TAVERN, OR MAYBE WE JUST HOPED IT WAS A TAVERN. AS IT TURNS OUT, MARBLE BAR IS A TINY LITTLE TOWN WAY OUT IN THE MIDDLE OF... WELL, NOWHERE I GUESS. IT'S DEFINITELY IN THE OUTBACK. MY TRUSTY GARMIN 12 TELLS ME IT'S 768 NAUTICAL MILES NORTH-NORTH-EAST OF BUNBURY AND 237 NAUTICAL MILES SOUTH-SOUTH-WEST OF BROOME. IT DOESN'T GET MUCH MORE OUTBACK THAN THAT.

I had been invited to travel to Marble Bar to teach Gerald Dick to fly his shiny new Airborne Outback. I would stay as a guest of Gerald and his lovely wife, Ingrid, at their caravan park, and we would operate from the local airstrip.

I thought, "Mmmm... another adventure about to unfold." I said to myself, "Self, it's a tough job, but someone has to do it. When do I leave?"

June was the chosen month for departure and that's when I had a call from Jim Polinelli: "Hey fella, want some company? I've got nothing on for the next 35 years or so".

So Jim and I came up with a plan. We'd leave for Marble Bar on the same day and meet up at chosen waypoints (aviation term for pubs). First stop: Payne's Find, where we'd have to camp out. Then onto Newman the next day where we would stay the night



Station owner Maurie Stubbs

Photos: Courtesy Brendan Watts



The town of Marble Bar

with new club member Ric (another Jacks please) Mepham. We had not met Ric, but I was delivering his “new” secondhand Outback which he had purchased from me over the internet. Ric now informed me that he had a 12-day break coming up and would love to slide up to Marble Bar and start his training. *“Not a problem,”* I said, *“the more the merrier.”* *“Great,”* said Ric, *“I’ll bring the Jacks!”*

The South West Microlight Club grapevine was obviously working well, as the next phone call was from Jamie Bywaters from Kalannie. Jamie also owns a new Outback and was halfway through his training for licence. *“How you going, Brendan?”* says Jamie. *“Mind if I join you up there?”* *“Feel free Jamie, the more the merrier.”* *“Great, see you in a couple of days.”*

Ring, ring... ring, ring...

“Brendan speaking.”

“Hey man, how are you? Greg Gomulski here.” *“Hi Greg, what’s happening?”*

“I hear you’re off to Marble Bar. Mind if I come up with my trike to finish my licence?”

“Not at all Greg. Come on up. The more the merrier!”

So that week there were five trikes in Marble Bar, and the weather allowed the guys to fly on a daily basis – both morning and afternoon.

Soon after arriving, both Jamie and Greg completed their first solos. Then, while I concentrated on training Gerald and Ric, Greg, Jamie and Jim (already a licensed pilot) got some great flying around some of Australia’s most amazing countryside. There are the historic mine sites to fly over, and the gorges are just amazing. If you are lucky enough to be flying when the sun is in the

Right: New pilot Gerald Dick cooks up some snags

right place, the colours that bounce off the red rocks are truly unbelievable. I was flying one evening when this happened and I found myself just staring across the flat lands at the most blood-red reflections as the sun bounced its rays off the rock formations.

After gaining permission, we found the low-level flying on the stations was second-to-none, with winding riverbeds going for miles. Altitude is only adjusted depending on the height the roos are jumping. In all my travels I have never before been two feet above wild dingoes... and there were plenty of them around.

Marble Bar is 135 nautical miles to the north of Newman, or, if you are coming from Port Hedland, then it is 83 nautical miles to the south-east (a two-hour drive) through some breathtaking countryside. The town relies on tourist trade and holds the record as the hottest town in Australia.




Student pilot Ric Mepham confronts a python



Gerald and Ingrid assure me they won’t be there at the hottest time of the year to find out how hot it can get, as they plan to take their Outback and head south for some coastal flying.

Well done to all the guys who travelled that distance to gain their licences. If that’s not dedication, then show me what is.

The company was great, the flying was great, and a big thank you to Gerald and Ingrid for keeping us out of trouble and putting us up at the park.

Safe flying guys, and remember... keep the pointy end to the front. 



A 98-wheeler roadtrain on the Port Hedland – Marble Bar

Leave a Deposit For Your Shopping Dolly

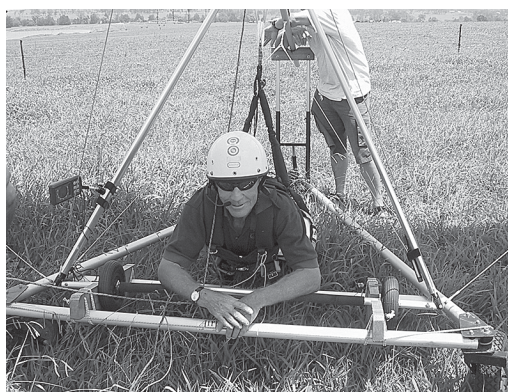
John Selby

A PICTURE'S WORTH A THOUSAND WORDS

My conscience gets heavier as I get closer to the summer season. Tell me off for not writing this article as soon as I got home from that hairy experience in Gloucester (NSW)! The topic is serious enough that, by now, the problem should be fixed rather than just discussed.

Our aerotowing course in October last year had been such a buzz, that I wanted to tow again. Lee Scott and Jason Turner were able to assemble, again at Gloucester, a little group of seasoned international cross-country pilots last December, so that I was able to tag along with them.

Despite the rather fast tug, my confidence in towing had grown since October. However the second last tow of the day went wrong. It could have gone horribly wrong. Confucius say, *"A picture is worth a thousand words"*, so I want you to have a look at the picture sequence that follows, to show you what it was all about.



Photos: Serge Mainente

WHAT HAPPENED?

I can see you smirk: *"Another one who didn't check his VB rope before he took off!"* Not so simple! The take-off took its course according to the book. We all had been told not to let any radio wires or VB string get in the

way of the dolly on take-off. I remember asking in the October course how safe the dangling harness strings were in relation to getting caught on the dolly, and one of the most experienced cross-country pilots explained that the headwind on take-off and the centre-position of the harness on the

dolly would prevent the harness strings from being caught around the dolly's wooden glider supports.

Well, guess what? As I always had done, I pushed slightly against the base bar of my Airborne Shark 144 as the dolly sharply accelerated over the ground. As a result of the slight headwind, marginally crossed from the right, the lift-off was almost immediate. Just about then, I heard an unusual loud click under the left side of the A-frame. I was startled enough to think, *"You can't look down now!"* Nobody looks anywhere but at the tug at this critical phase of keeping the wings level while close to the ground, then pulling the bar in aggressively to keep low enough for the tug to take off.

Then, 'ah so!', the dolly was hanging from my harness! I tried to shake it off. No luck! I decided to gain time to think about my options by letting Lee tow me to the normal pin-off height and then glide down, talking on the radio, when Jason called me in his cool, calm and collected voice, suggesting to pin off and land.

I was at a comfortable height, with still stacks of room ahead of me to land on the runway, to set up a sound landing, had it not been for this damned dolly dangling below me. Taking Jason's advice, I pinned off, causing a sudden trim change to the glider, that in turn caused the dangling dolly to move, so that I was pulled to the right. I learnt immediately that I had to stop my load from swaying and decided to level the wings in my new direction, rather than turn back on course over the runway, which could have meant more swaying. Besides, flying straight had other advantages: it put me squarely into the headwind, which meant the lowest landing speed possible, and the grass ahead of me looked softer than on the runway. I never had any doubt that I would clear the fence between the runway and the paddock.

Then came the agonising wait for the fateful sharp pull that was going to ram the glider's nose into the ground. I had no doubt that the dolly would get caught on the ground when I was still three or four metres high. I gripped the uprights as high as I could and slowed the glider down, risking a stall, just the way any instructor would tell you not to land. I planned to throw up the A-frame like a madman as soon as I felt a pull, and drop from whatever height I was at that point. Needless to say I was shit-scared. I listened for the dolly to touch the ground but could not hear anything over the (albeit rather weak) wind noise. Two metres above the ground – still no pull! Gosh – I found myself on the ground, on my feet, no nose-in! I gently put the glider down and looked



around: the dolly stood behind me on its wheels as if somebody had lined it up for me.

The relief was palpable, and I had an idea it was not just mine. My mates must have felt the same way when they quipped: "You should take the trolley with you every time. You land so much better with it than without."

SO WHAT?

Although Jason told me that I wasn't exactly Robinson Crusoe, taking a dolly to the air, I didn't feel any easier about the event. Talking about being Robinson Crusoe, I suspect that Serge was, who took the pictures. The series of snaps shown above must be unique for such an incident. I feel deeply indebted to Serge Mainente, hang glider pilot and Moyes representative in Tahiti, for letting me use his material.

Perhaps I am a wuss and a coward, but I can't help thinking that the lack of damage and/or injuries was due to sheer, pure luck. Not even the harness was damaged from the weight of the dolly.

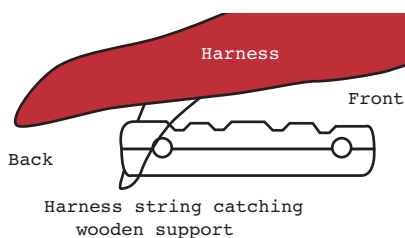
What would have happened if I had flown a topless glider that wouldn't have been as forgiving on landing as a Shark?. What if there had been no headwind? What if the dolly had pulled me to the left instead of the right when I pinned off? Most disturbingly and very likely, what if the dolly had not landed in its upright position?

We all know that the harness strings are exposed on take off so that the dolly design is not safe as long as the strings can catch the back of the wooden supports which are visible in the first picture of the sequence.

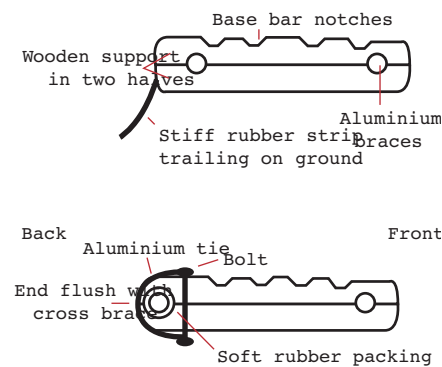
WE FIX!

The following sketch shows what causes the dolly to get hooked to fly off with the pilot.

There is a relatively simple way of solving the problem for dollies that are already in service: a stiff rubber strip (perhaps cut from a tyre) should be screwed on to the back face of the wooden glider supports, so that one end points to ground. The piece should be about three centimetres longer than just touching the ground because it must bend backwards, dragging over the ground as the dolly moves forward (see following sketch). This will prevent the strings from sliding under the rear protrusion of the wooden supports.



For the manufacturers, I suggest a more elegant solution. The back of the wooden supports must be so shaped that they cannot act as a hook for the strings. This implies a re-shaping of the rear portion of the wooden supports. Instead of letting them protrude over the rear aluminium cross-brace, they should end flush with the cross-brace (see following sketch). This is achieved by running an aluminium tie from the undersurface of the wooden support, around the aluminium cross-brace over the top surface of the wooden support. The tie is held in place with a bolt that runs through a drill-hole in the wooden support. Soft rubber-packing should be put around the rear aluminium cross-brace, so that the wooden support cannot shift sideways along the cross-brace after installation.



CONCLUSION

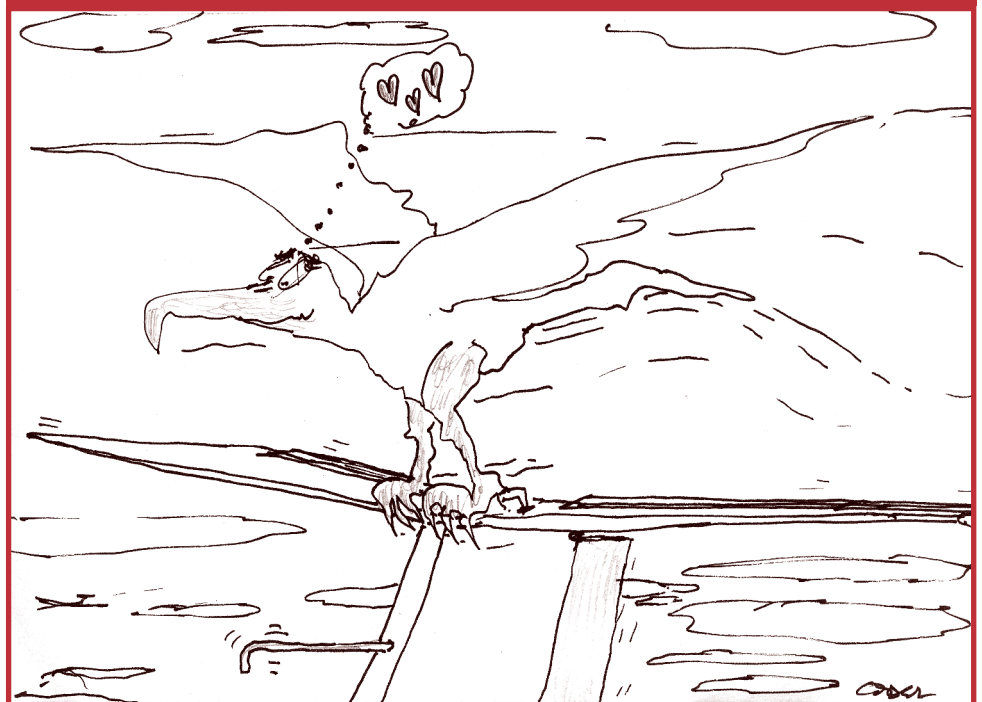
I would hate to see this article dusting up in every manufacturers' and flying schools' drawers without anything being done to correct this safety problem. The issue becomes more important as more and more instructors use towing for teaching novices hang gliding.



General Manager Note:

John brings up a good safety point here. While there is normally little potential for the dolly to become captured by the pilot's harness, there is the chance that it can happen (as John attests by his experience). Pre-flight checks of equipment are always essential and should never be taken lightly. This situation may have been avoided with a more thorough pre-flight check. These words from the HGFA tow manual (page 26) say it all: "Dolly launches and platform launches require an additional pre-flight check to ensure that all harness and glider ropes are located to prevent them snagging on the dolly." While not denying that there is potential for better design in the dolly itself, perhaps improvement can also be made to the checklist and procedures to follow the checklist in pre-flight preparation by those undertaking these operations.

CARTOON BY CODEZ



Club Class World Gliding Championships

Terry Cubley

THE WORLD GLIDING CHAMPIONSHIPS IN CLUB CLASS WERE HELD AT ELVERUM, NORWAY DURING JUNE THIS YEAR. AUSTRALIA WAS REPRESENTED BY THREE PILOTS, TERRY CUBLEY, PETER BUSKENS AND PHIL RITCHIE WITH TEAM MANAGER DAVID WILSON.

The end result was undoubtedly the worst placing by an Australian team for many years. The flying was also under the worst conditions and least number of flying days seen at a world competition for many years. Only five contest days, with three of these heavily devalued meaning that the competition was effectively less than four days long.

An early outlanding in weak/low climbs over the Norwegian hills on day one, an airspace infringement on day two, and an outlanding accident in thunderstorm conditions over virtually unlandable terrain on day three took care of our three pilots.

However, there are a number of observations and experiences that are worth commenting on as they will be relevant for future Australian teams in world championships.



WORLD COMPS SITE: FIRST CLASS FACILITIES

Elverum is the national gliding centre for Norway. It has one long, mostly grass, airstrip which can easily land eight gliders abreast. With the preferred approach being a straight-in landing, there were often three to eight gliders landing in quite close formation as one of the gaggles came home together.

The competitions were well-prepared, with great facilities for briefing and overall administration. The competition organisation lacked in some critical areas, in particular with meteorological information/briefing and task setting. Their met man had a heart attack only a couple of weeks before the competition which made it difficult for

them. The actual information available was very poor, really just relying on web-based charts and a Swedish computer model to predict thermals.

A temperature trace wasn't taken until well into the competition after David Wilson convinced them that it added some value, but even then it wasn't interpreted well. The task setter was an experienced competition pilot from the area who was able to add some good local knowledge, but he seemed to work quite independently of the weather forecast and set the task based on his own views of the type of day that may eventuate.

Unfortunately he was keen to send us to the more interesting areas of the task area and did so, even on days when the weather was definitely not going to be good enough. One day we were sent to the north-west even though cloud base was only going to be just above the hilltops with possible thunderstorms to add to the excitement. In the end, the organisers got it right and re-set the task to the south out on the grid.

On the day when nearly all of the fleet outlanded, and Phil had his accident, we were sent to the north-west even though thunderstorms were predicted – this time the task wasn't changed and we ended up with quite a difficult situation – low, in virtually unlandable terrain.

TASK AREA

Norway consists basically of extensive forests and lakes (I have never seen so much water on supposedly dry land in all my life) with many rivers and low mountains. There is a lot of farming (Government subsidies to encourage people to stay out of the cities) along the rivers and this provides quite good landing opportunities over much of the task area.

We were given a good briefing on the landable (and unlandable) areas prior to the first competition days. Over much of the area, provided that you remained in gliding range of the main valleys, there were places to land. On a couple of days this proved a

bit of a challenge and ended up costing me dearly on the first competition day when I had to glide away from the turnpoint to clear the hills and get to a landing paddock.

WEATHER

- 12/21 Soaring days over our stay
- Three not used (recovery day after arrival, ceremonial, early cancellation)
- One used but unsafe to do so
- One competition day when the whole field outlanded
- Three days devalued
- Four to six practice days soarable
- Should have been there the week before

The coldest and wettest June for many years impacted the contest area, and in fact much of Europe had the worst gliding conditions for many years early on in the season. Maximum temperatures of 13 to 15°C, with generally weak climbs and low cloud bases. We were treated to a couple of quite good days, not as strong as Oz but regular clouds made them quite fast. Just not enough of them.

THE AIRCRAFT AND PILOTS

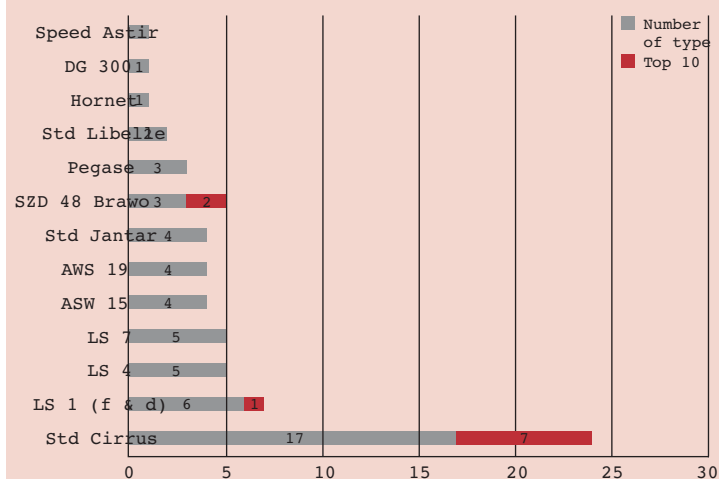
Glider types

The Standard Cirrus was the most popular type at Elverum. It has a good handicap in Europe, the same as the standard Libelle and ASW15b. Only one had winglets, and even though there is no handicap penalty for winglets in the competition, pilots were not tempted to attach them to the Cirrus, which I guess suggests that they don't add a lot of value.

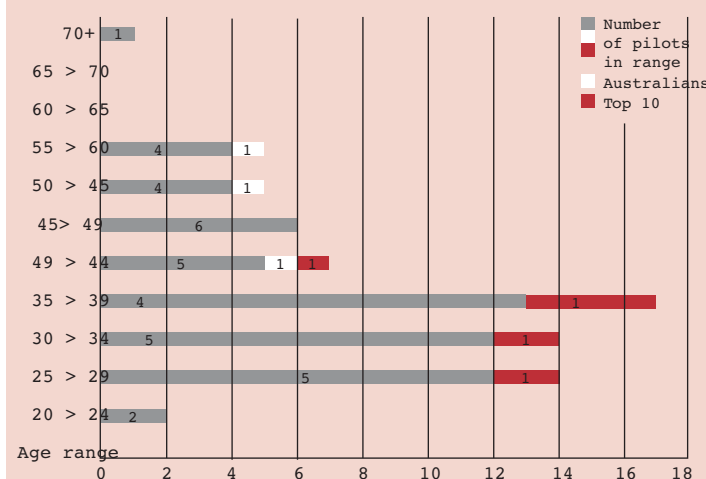
I also noticed that none of the Jantars had winglets either, and when I questioned one of the pilots he claimed that they did not make any improvements to the Jantar – this is completely contrary to my own experience. It would be good to hear any other views on this.

The Brawo looks like a Jantar, but has a different wing section – suited for weaker weather. A bigger wing area and lower

Glider Types



Pilot Age Profile



weight certainly helped in the weak conditions that we had. Only two flew and they came first and third, but this was more to do with good flying by the Polish pilots. I understand that there were only three manufactured and one of these has been broken, so they are not available even if you wanted one.

The LS4/LS7 were also quite popular. Certainly the LS7 with LS8 winglets appears to go quite well. The LS4 is a little disadvantaged by handicap but this should be corrected with the next handicap list. They did quite well on days when a long glide helped to get to the next climb.

The use of turbulator tapes was quite interesting. From my own experience, I had a Cirrus with a fixed stabiliser instead of the all-flying tail, and initially the rudder was very ineffective. Once I placed some zigzag tape about two centimetres in front of the rudder seals the rudder started to work and the glider was co-ordinated again. The older cirrus doesn't seem to need this as much, but feedback was that there is even a small improvement in handling with the older model. A couple of pilots had zigzag tape under the wings of their Cirrus', approximately one-third of the chord from the trailing edge. The figures seem to indicate that it should help but only two gliders had it so there appears to be some dispute over the effectiveness.

The two French Cirrus's looked great, very well prepared and well finished. The British Cirrus's were almost as good looking. The majority of others were just 'normal' looking gliders, with very little effort made to modify them. Obviously they were well-sealed and looked clean, with a good surface finish.

My own Cirrus was well-sealed but had quite a rough wing – a lot of fine cracks

along the leading edge and front half of the wing. Some fine sanding removed most of the roughness and the glider seemed to perform as good as the others after this. Obviously, if you can take your own glider with you it makes some difference, at least you can prepare the glider properly beforehand.

With my weight in the glider I was heavier than many other, which helped a little with the glide, but was a penalty in the weaker thermals. In Europe there is no handicap penalty for being overweight, but of course you cannot change the weight from that proven at the start of the event.

The organisers went a long way to ensure that people were not loading up with weight to get super heavy. I am a little biased on this point, but I do believe that giving a handicap penalty for being heavy is not justified. Yes, the heavy glider does have a small advantage in great conditions but really suffers when it turns weak. By giving a handicap penalty, you cop the disadvantage when it is weak (and the disadvantage is actually increased) but don't get any advantage when it is strong.

Glider preparation

This took a long time. Radios were a major issue for the whole practice week – we just couldn't communicate effectively; This was 90% fixed by the first contest day, thanks to some great work by Arnie Hartley.

Peter and Phil lost a couple of practice days through replacing all of the instruments in their gliders. This is a good idea in theory, but we need to allow more time and arrive a number of days earlier in order to achieve this.

I elected to just use the instruments in the glider, apart from the altimeter and Simon Brown's Cambridge logger. They

worked quite well, although I didn't have the software to load turnpoints, etc, into the Colibri glide computer, but I was able to put sufficient in by hand to make it workable. This was certainly less than ideal and provided a number of days of chasing round and getting very frustrated. In the end, it worked okay but the information I had was less than ideal. I never could get the palm pilot working, an older software version meant that there was no help available on site. These are important for flying with airspace restrictions, and we need to develop these skills in Australia.

The pilots

Age of participants. Club class appears to be favoured by many of the younger pilots. A number were ex-junior competitors and champions. I assume that this is an indication of the cost issues around the world, and also an indicator of the very strong junior movements in many of these countries.

The graph shows the age profile. As you can see, the majority of pilots are in their 20s and 30s.

GOVERNMENT FUNDING

The French pilots had been practicing for the previous two months, and the Czechs and British had flown in at least one other competition immediately prior to the event. The Czechs receive significant Government support, and the British have been able to arrange major sponsors.

It has been a long time since Australia received any Government funding for our international teams. We are competing against countries with significant levels of funding and sponsorship. I think that it is time we made some serious approaches

to Government for our fair share of the sporting-funding pie.

Opportunities for sponsorship require an extended period of discussions, obviously we will need a small group to lead this approach.

PREPARATION

We made a major effort in terms of team preparation and the development of team flying. Six of us attended coaching with Brian Spreckley in December, five of the six then flew in partnership at Waikerie, and three of this group then flew together in the world competition. Peter and I were able to fly together at Bacchus Marsh and also at Benalla. Whilst we did a lot this was not much compared to other teams.

Our selection cycle seems to be out of phase – we need more than five months to prepare properly. The squad concept helps with this but needs development

TEAM FLYING

In retrospect, having heard how the Brits worked together, we are only now at level one team flying. Yes, we can fly together okay, although it was harder to stay together because there were more gaggles going past and so it was harder to catch your partner.

The better teams still managed this much better. They obviously worked much harder at staying together, whereas I think we became carried away in keeping up with the main groups rather than flying faster as a small group. Also, it was apparent that the good teams were actually discussing options, routes, climbs, weather ahead of themselves in addition to what they were currently getting. As a single pilot you think through a whole range of options, and decisions – the trick is now to do this out aloud and compare these views with your team mates, coming to a combined decision. A lot of work is still needed.

An important consideration is that equipment works and gives compatible information

- *Radios were a problem initially*
- *Varios also important – need to believe team members reports*
- *We had the opportunity to use the new (Australian made) Tasman vario “eyes up” display, a great innovation. I particularly liked the averager readout. As we all used the same instrument it meant that we were able to confidently compare rates of climb*

plan a circuit and land from a lower height, then it is possible to glide a lot further to find a thermal, increasing your chance of staying up. If your skill and experience requires that you be at the circuit at 1,500ft then you wouldn't have been able to fly many of the tasks in Norway at all – the high ground would have meant that you couldn't even try to get to the next thermal.

Once you fly at these lower margins then if something goes horribly wrong (rain, downdrafts, etc) then you have a problem. In Australia this just means that you land out when you really shouldn't be, in Norway you may be in an area with little opportunity for landing.

This was basically the situation that Phil ended up in. We were 'forced' into an area with minimal landing options and when the weather went horribly wrong Phil had little option to rescue the situation. I ended up selecting a rough-looking clearing which then turned out to be a smooth swamp. A good landing but a classic retrieve story (thanks Andrew and Nick).

The critical point is to not be lulled into stretching the boundaries too far in the name of competition – this can be a trap. There are a number of instances over the years where I have fallen for this but was lucky not to have bad luck. I don't believe that you have to fly in a dangerous or risky manner in order to succeed in competition, but you must be careful not to lose sight of the real purpose and take that too tight a decision.

SAFETY

Is it dangerous? People often interpret our comments as showing that you need to fly dangerously in order to do well in competition. This is far from the truth, and the vast majority of pilots are extremely safe pilots.

In order to improve performance you do need to understand your own capabilities and be prepared to use the full range of situations. We are not taking safety risks, but we all end up taking tactical risks, stretching the limits. For example: If you have a good understanding of your glide angle, and an ability to select a field and

SAFETY BRIEFINGS

A fresh and effective safety briefing process was used (nothing especially new about the material but it was presented in a very simple and effective manner). We have permission to use this material, which was developed by Sakka, a Swedish aviation safety professional actively involved in the gliding movement. If you look at the world comps web page [www.wgc2004.no] and seek out the safety briefing material you will be able to view each of these presentations.

Sakka also had some “new” thinking about the considerations and approach to safety management. (setting rules, learning from events).



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An Unexpected Tug Upset

Alan Patching

SOME MONTHS AGO THREE EXPERIENCED PILOTS WERE INVOLVED IN AN EXERCISE WHICH RESULTED IN THE TUG BEING UPSET, FORTUNATELY AT 3,000FT AGL SO WE ALL SURVIVED TO TELL THE TALE.

The glider pilots were oblivious to the event while there was one very disturbed tug pilot. The scenario was an experienced gliding instructor making the second flight of an annual check with me in the Puchacz being towed by an experienced tug pilot in s Pawnee, who is also an NGS Instructor.

During the second part of the tow the glider pilot had some difficulty keeping in high tow and caused me to comment at one stage. The tug pilot had also been aware, but was not concerned as many pilots had got as high during launch at Porepunkah.

My view of the tug from the rear seat was not ideal as I was rather buried, not having moved the seat back before launching. Upon receipt of the wing wave-off the pilot pulled the release but I was unsure that the rope had gone and immediately asked, "Has the rope gone?" As he started to reply I felt the glider being pulled and we all released at this stage – me, the front pilot and the tug pilot.

We did not see the tug again until it was on downwind and had not heard any readable transmissions on the radio – later the radio was found to be not set correctly.

We continued with the remainder of the check ride and on landing were met by a querulous tug pilot and an interested ground crew who had observed the upset.

The tug had been in normal flying attitude with progressive back stick applied to compensate for the rising glider. At the instant the tug pilot decided to release, the Pawnee rapidly rotated nose down in to a vertical attitude and the engine stopped. This occurred in what seemed to be a split second. An estimated 500ft lost in recovery. This loss in height was confirmed by the ground observers! Had this occurred during take-off the outcome would have been disastrous.

The glider release from the tug occurred with a loud bang as the rope released under tension, however, there was no difficulty in releasing. The weak link did not fail. The only warning was the increasing stick back pressure.

WHY DID IT HAPPEN?

Subsequent discussions and research revealed the following:

1. All pilots involved were aware that the tow position was not ideal but had flown in similar circumstances in the past.

2. At least two of them had had tug pilots descend while still connected on a number of occasions, with no dire results.
3. Frank Irving had published a paper some years ago, *Technical Soaring Vol. 10 No. 2, April 1986*, when tug upsets had resulted in a number of fatal accidents. This paper showed that it only needed an upwards angle of 15 degrees in the towrope to stall the tailplane of a climbing Pawnee.

All very interesting, but still no answer to the question of why three of us allowed it to happen.

Then I read an article in the RAAF aviation safety magazine, *Spotlight 0203*, by an Instructor who when checking a pilot found themselves spinning in a twin-engined aeroplane. The analysis concluded that there had not been a complete situational awareness analysis done by the Instructor, ie: taking events one step further or having two wrong actions follow each other.

I believe that this happened to cause our upset. The following is not in order of importance – because all are significant.

- a) The tug pilot had never been upset before and hence did not know the limit to allow the glider to rise in the mirror.
- b) The Tug pilot's expectation of an upset, based on previously published articles, was a zooming climb followed by a pitch pole rotation of the tug. Reality was a very rapid rotation, which occurred in an instant. The engine faulted due to the speed of rotation! Refer to article on Tug Upsets in the 1987 Aviation Safety Digest on Gliding.
- c) I had experienced tugs being as low when they had descended before the glider had

released without any drama

– but of course the tug elevator was not in a climb attitude.

- d) The release on the Puchacz has never been difficult to operate and hence not releasing was not in either glider pilot's thoughts.

LESSONS LEARNT FROM THIS UPSET:

1. Always assume that things will go wrong – for example I should have pulled the release as soon I suspected that it had not been operated correctly.
2. A tug upset takes place very quickly – it is a sudden dramatic event with no warning.
3. If the glider seems to be high – release it – because there is no second chance.
4. Only low tow should be used for take-offs. A simple evaluation of energy available shows that there is no advantage using high tow for the combination of tug and glider and tests during WW2 in Germany proved beyond doubt that low tow is more efficient and more stable- see reports by Schlicting.




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The Way It Was

Pat Finch

THUMBING THROUGH SOME OLD PAPERS THE OTHER DAY, I CAME ACROSS AN ARTICLE I HAD WRITTEN FOR THE SOUTH AUSTRALIAN HANG GLIDER MONTHLY NEWS SHEET CALLED ICARUS. THAT WAS BACK IN 1975, AND THE ICARUS STILL EXISTS. THE STUFF I WROTE ABOUT MAY BE OF INTEREST TO OLD MEMBERS AND OTHER READERS, SO PERHAPS IT'S WORTH REGURGITATING. I'VE ADDED THE ODD EXTRA COMMENT IN [SQUARE BRACKETS]. THIS ARTICLE IS OF HISTORICAL INTEREST ONLY, NO PRACTICAL VALUE INTENDED. SO HERE GOES...

I remember when an aeroplane that visited my home town in the middle of WA landed in the main street and taxied up to my father's garage to be serviced and hangared for the night. That's going back a bit! For 38 years there was an aeroplane in the family. Unfortunately I left home at the age of nine and didn't get much value out of them.

But that background must have had some bearing on my interminable dabbling in flying machines. The details of early tries are vague. The first one I remember consisted of several packing cases stacked on top of one another, the top one having corrugated protrusions roughly in the plan form of a wing and tail. Flying speed was zero, but you could have disastrous crashes if you manoeuvred too violently!

Rubber driven model planes filled my youthful period and after that the WWII planes were studied with interest. The end of the war brought the Tiger Moth to the aero clubs and for a time I enjoyed powered flying with the odd jaunt in a primary glider. But marriage and the "bread line" put a stop to that for the next 20 or so years.

For a time during that period I satisfied the craving by being involved in the preparation and firing of rockets for the Weapons Research Establishment. The only physical flying was as a passenger, up and down between Adelaide and Woomera.

Still I yearned for some sort of gentle flight. I read up on airships and autogyros, and kept every article on manned powered flight. I considered sailplanes, parachutes, flying saucers, vertiplanes. But for some strange reason never investigated kites towed behind boats. While Bill Moyes and company were doing something about the Rogallo idea, I was ignorant and just fiddled.

Then one day I read about some Californian uni students doing limited flights with nothing more than a few alu-

minium tubes and some polythene sheet, and that 'did it'! Right away I got some aluminium tube and a bit of polythene and some radiator hose clips, lashed up a good imitation of the picture in the article, and borrowed a gentle slope from a farmer. By running down this slope at great speed I rose upon the air.... about a foot. By that time I was puffed out, and anyway quite a few of the radiator hose clips had broken, so I went home to reconsider, and that's how it started...

That was about 1968. From then on it was always nagging. Change the fittings, devise a way of fastening polythene to aluminium tube, search for info on NASA Rogallo wind tunnel tests. Make all the models of the various configurations that come to mind. Scrap the whole thing and try a new approach. All the time the bits of aluminium and polythene are getting more and more tatty as they are used and reused.

[Francis Rogallo and his wife invented a simple kid's kite made out of three sticks and a sheet of plastic. He demonstrated that this thing could be made to glide quite gently. NASA took the idea up as a possible means of recovering rockets returning from space. They did wind tunnel research to evaluate it, but finally dropped the whole thing. However, the likes of John Dickenson, Bill Moyes and others saw the potential for an easier way of getting airborne.]

Gradually as time went by there were more and more articles about people successfully flying these things, and I was still on the ground. The sensible thing to do was to write away to someone who had been successful and get some real information on how to do it. I have never been known to be sensible, therefore I was determined to 'do it myself'. So I was still on the ground.

Oh, I had my moments. Even the early ones produced a few hops. The parallel bar ones that I had first tried used to get up a few feet, and would have been okay if the

slopes used had been steeper. In the early tries I endeavoured to get off in still air by running full tilt down a slope which was just a bit better than four or five to one as my models indicated should be enough. But apart from getting a few hops and very tired, I gained nothing.

Then a friend of mine suggested a large hill with a very nice rounded top of considerable size, which seemed steeper towards the end of the useful part, but I didn't take much notice of that as there was enough for my purposes at the top. I ran down the slope doing my usual little hops and trying to feel the trim. I was doing a bit better than previous trials, when I came to the more steeply sloping part. Here a strong breeze came upwards, and almost instantly I found myself 30ft above the ground. It was then that I got a full view of the rest of the hill. Below me 500ft was a seemingly impenetrable pine forest and beyond that the city of Adelaide. It dawned on me that I did not have the necessary experience to cope with the situation. I did a rather natural thing. I tried to back off. This resulted in my sliding backwards down the parallel bars as far as possible, thus producing a very tail heavy condition and a stall, followed by a tail slide, which flared out nicely at ground level!

[At this point a bit of explanation might help. The parallel bar type hang glider is the one in the accompanying photo. The structure is pretty obvious. The two tubes going from the leading edges down to the little wheels at the back give the glider its name. These parallel bars, with the help of his arm pits, support the pilot. The exact position of the hang point is anybody's guess and a bit of trial and error. Apart from the above mentioned university students and myself, I doubt if any more existed. However, what was for a short while called the "trapeze type" is the one you see all the time in this magazine. This control system was invented



Photo: Sam Cheshire

Ceiling height

by an Australian engineer called John Dickenson who never got the credit due to him. It started off just hanging the pilot vertically, to sitting him on a swing seat, to holding him in a harness in a prone position as we see world wide today.]

So I tried a valley on the other side of the hill. Here there was no wind and I had to run fast, which is easier to do with parallel bars than a trapeze type set up. I was soon airborne and about 10ft up, when there loomed largely a very tall black stump of a burned out tree. At this point I discovered a fact. Two facts, in fact. Control was very poor, and collision would be inevitable. So I abandoned ship. With an initial speed of about 20mph at 10ft above a hill with a slope of around 30 degrees, one travels some 40ft before touching down. By then the forward speed is considerably increased. A sort of miracle allowed me to remain on my feet for the next 70 yards that it took to regain my balance. Those who witnessed the incident claim that I hold the world record (unbeatable) for the 70 yards sprint. My legs seemed to rotate around their hip joints,

thus avoiding the reciprocating motion commonly used in running.

A few more trials indicated that control in all three axes was minimal. In no wind conditions, that I seemed to be stuck with, take off required either great height or great speed. I concluded that what I needed was a very large kite with a resulting low wing loading and consequent low flying speed. This would allow take off at the very easy jog of a middle aged man. It had to have more control as well.

Work began with a series of models to find out what things could be used to produce control. Impatience dictated that the models be quick to build, and the result was rather crude with poor repeatability. However some facts were brought to light. I plumped for one that said that the keel when bent one way or the other will vary the direction of flight.

So I built a kite with some 300ft² of sail area. It had a seat and two levers which, when operated, moved the rear half of the keel, which was articulated at a point just behind the spreader bar connection. I can't remem-

ber now how it worked. The controls were heavy, but not half as heavy as that damned kite! It was barely possible to run with it and use the controls. I had a short flight in a stiff wind being towed by my young son Bill. There was not enough time during that flight to assess the effectiveness of the control system. It could have been quite good for all I know. But I didn't care. There seemed to be more hope for the next one I had in mind. This had a set of flaps running from the rear of the keel to the tips of the leading edges.

I had finally given up the idea of ever being able to run with the thing. So I rigged up a tricycle undercart with two rear wheels driven by pedals, and two control levers independently operating things I called "elevons".

With great determination I hauled this lot up a "smooth slope" with only six inch boulders on it, and pedalled down again as soon as I had got my breath back.

I did this many times until the pedalling apparatus fell to pieces. As it didn't seem to have contributed much to the forward speed, I continued without it. At last it took off, and rose steeply until it was at an angle of



about 45 degrees, then it stopped and retraced its path back to the ground. From this I concluded that it was tail heavy. So I tied my tool box to the apex with a bit of rope. The next try was lovely! It responded gently to the controls, rose gently and wafted along in still air at a leisurely 10 to 15mph. It flew like a feather and I was ecstatic! It flew like a feather and seemed to belie the fact that it weighed about 70-80lb [30-40kg].

The joy derived from experiencing such exquisite flight was offset by the breathlessness and pounding heart that preceded each flight. But a mind full of dreams is somewhat remote and has little regard for its ancillary equipment. I pressed on with the next thought, which was that there couldn't be much power required to keep this one in the air. I borrowed an old worn out lawn mower motor from a mate, resurrected it a bit, and added a propeller to the crank shaft. The prop was made out of the remaining bits of aluminium irrigation pipe used for the kite, flattened to a rough aerofoil shape and brazed to an aluminium hub. Balance was ignored and the whole mess was arranged in a prominent position on the tricycle undercarriage. It now weighed more like 90 to 100lb.

More hauling up the hill, and then down assisted by the mower motor. The throttle was set before each flight because it lacked any control, and it remained in that position until vibration shifted it. So the duration of each flight related to the length of time that the throttle took to come unstuck and close.

After several flights I considered that the machine had demonstrated that with as little as one horsepower, it could remain in level flight at about 15mph. It was indeed a very gentle flight and just about the ultimate in "low and slow" [*the name of a hang gliding magazine in those days*].

Reading articles about others getting good flights with the Rogallo thing niggled me. So I started again. First I made a Rogallo with parallel bars which had arm rests that pivoted and in turn controlled elevons. It was tail heavy and only responded in strong winds. I never managed to get it off the ground. It seemed all my efforts were too heavy. The next one had to be light. A parallel bar wing weighing about 30lb was good for short hops, and had all the original problems along with a new one, not strong enough. During the last flight the spreader bar collapsed and resulted in having an eyebrow stitched up. Now I knew the structural limits fairly well, as well as the extent of human frailty.

Slowly I gave in to the trapeze concept. The next was a sort of hybrid. It was basically the same as the trapeze version, except the A-frame had no base bar, an inverted V really. It was made very strong to take the load from the flying wires. The bottom ends had handles above which were pockets for the forearm. There was no harness. You poked your arms in to the pockets and grabbed the handles. This way you could carry the whole thing and fight against the wind while on the ground. Once in the air you were really no better off than with the parallel bars. Control was limited to weight shift of the legs mainly and you needed arms of a gorilla. Besides with your arms in those pockets you were in a good position to break them sooner or later. I finally had to admit defeat and be practical.

At last I made a trapeze type! It folded from the top of the A-frame and was heavy and clumsy. It had a standard parachute harness that had to be the heaviest harness ever. By this time I had been "found out". Someone had heard that I was fooling around with these kite things and came to see me. He was Dave Waring-Smith, one of the leading members of SAHGA today [*"today" being 1975 when I wrote this piece, remember; he later became an airline pilot*]. I ventured out to fly this one at a site nominated by Dave. As everyone knows, sites have a habit of not quite coming up to expectations. This day we tried several before deciding on a low sand hill. There was a 25kt wind blowing and the first flight lasted about 6ft. The next ended up in the all too familiar pilot looping over the A-frame and collapse of the king post. Dave never thought much of my efforts after that.

Still dreaming, I thought there must be a way of getting off the ground in a nice area, without being hurled off a cliff or dragged up out of the water. Why not tie a rope to a stake in the ground, hook it to the glider and wait for a good breeze? No sooner said than done. I selected a clear paddock free of onlookers, stones, trees, cows or sheep, drove a stake in the dirt, hooked up and waited. I waited and waited. It became a daily routine. Each afternoon I would go out and do penance to the wind. Sometimes son Bill would come, but the wind never did. Then one day we went out and through the usual routine with the now expected result. Fed up I asked Bill to pull up the stake. Just as he was about to do so I felt a gust and yelled "stop". He turned to see why and found me 40ft up looking alarmed. I was flying, but not in control. I applied the bar to my stomach, but I was still going up. Quite suddenly it reached zenith and for a moment stopped.

Just as suddenly it made a steep decent. I suspect the sail was inside out. I landed heavily on both heels on hard ground. For a time I was in agony, but soon my heels were numb. So I set up again and again got off the ground. The glider got side on to the wind and began to oscillate from side to side with me making large pendulum swings. Fortunately the wind dropped a bit and I slithered sideways to earth. The next gust took me straight up again. This time I let it go, and when it reached the top I tried to keep it there. The ride was very satisfactory, and I stayed there until the wind dropped and I made a perfect touch down. The next two months I spent walking on the balls of my feet, my heels being too sore. Some day I'll give that another go [*I never did*].

My son Bill decided that hang gliding as he had seen it was not for him. He was more interested in land yachting. After much coaxing I built one for him. I have never been as successful at producing a hang glider as I was making a land yacht. He has had a lot of fun with it. [*My son went on to become the national champion in land yachting, and represented Australia in Ireland, England, Belgium, New Zealand and USA. He has built well over 100 land yachts in a number of different designs, one an attempt at the world speed record.*]

One day Dave Waring-Smith rang me and told me about this bloke called Peter Prussner [*an early manufacturer*] he had met at the Waikerie gliding competitions. He had a glider that really worked. I grilled him for all the information he could give me. His description was sadly lacking dimensionally. I made a kite from his description. It was virtually a standard 16ft Rogallo, but to make it as light as I was told, it had to have spinnaker cloth for the sail and the tubing diameters seemed a bit small.

As fate would have it, just after finishing it, Peter Prussner offered the SA enthusiasts the chance to meet the Victorian group at Warnambool. I managed to get the family into a caravan and headed for Warnambool. That was how I finally found out how it was done. I was the only one from SA that had a glider, and it flew reasonably well, but not for long. A Victorian landed on top of it and damaged it. The dimensions I was given were much smaller than the Victorian machines. They were also about 60% heavier.

[*Well, the article rambles on a lot longer than that, but I think that is enough. After we got back to Adelaide, David found some more people who were also interested and arranged a meeting at his place. That meeting was the first meeting of what became the SAHGA (South Australian Hang Gliding Association).*]



HGFA News

HGFA Editor's Choice

Sheer jealousy made choosing a winner harder this month... There seem to be far too many pilots having far too much fun out there... More than their fair share, that's for sure... Hedy Schindler travels around Australia at her leisure having the time of her life (Hedy Down Under). Mark Fennell cruises off to places exotic (Flying Bali – Land of beer, sun, surf and intestinal turmoil). Then there's Brendan Watts who makes a living taking his trike to exciting destinations (Outbacks in the Outback), while the Whitsundays gang don't seem to work at all, engaging in flying fun of all descriptions, year in year out (We've Got It Covered). I need to seriously reassess my life.

Although I was tempted to award this month's \$100 prize to Pat Finch, simply for surviving his extraordinary and fascinating learning curve (The Way It Was), I couldn't go past the skillful writing of Mark Fennell, who was able to offset the jealousy his article inspired by making me laugh – lots.

Richard Lockhart, HGFA sub-editor, ph: 0418 130354, <flytation@iprimus.com.au>

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6th	Jon Durand Snr	- Litespeed S 5
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Pepe Gresa with Peter Chapman

Soaring in Spain

Peter Chapman

I HAVE HAD SPAIN ON MY LIST OF COUNTRIES I WOULD LIKE TO GLIDE IN BECAUSE IT IS RATED IN THE TOP FIVE OF GREAT SOARING COUNTRIES.

Having flown in the New Zealand Alps and Hawaii, Spain seemed be a good contrast to my home club of Southern Cross in Sydney, so, when planning our annual holiday I “googled” around and found that there was a Nimbus 4DM, owned and flown by Pepe Gresa. The aircraft was available for familiarisation flights operating from Fuentemilanos airfield near Segovia which is about 90 minutes from Madrid.

Pepe's friend Ingo Renner (Australia's four-time world gliding champion) has flown from Fuentemilanos for many summers so, after some email correspondence, I booked Monday 12 July as my day. Now, since gliding is a weather-dependant sport, this was always a risky thing but Pepe was booked the following three days on a course and there is a limit as to how long my wife could occupy herself at the delightful ancient Spanish town of Segovia with its 1200AD castle, late Gothic-style Cathedral and 100AD Roman Aqueduct.

Since Spain was in the grip of a heat-wave, the day was around 35°C, with a low inversion and blue so Pepe wasn't hopeful of a long flight. I was just keen to get up and, hopefully, get a couple of hours to enjoy the Nimbus's 60:1 glide angle, perhaps contact

the well known Guadarrama Sierra's convergence line and do some local ridge soaring.

Pepe gave me a thorough briefing for my front seat position for things I might need to do if we had an engine failure on launch and for landing before launching about 1:30pm. The engine was reasonably quiet as we motored up to 1,000m above ground (Europe is metric!), switched off and headed for the nearby ridge. We shared the flying but Pepe was much more effective at using the weak thermals. I found the 26.5m wing span tricky to read because as it does so much flexing it is hard to read what is wing movement and what is weak thermal. Also because it has a long fuselage with my front seat yaw string so well forward of the glider's centre of gravity, you need to have a lot of top rudder to keep the glider clean in the turns. I was not used to the degree of top rudder required for the Nimbus which was further compounded by the large bank Pepe was using in the weak thermals. Pepe was a patient teacher while I slowly adjusted to having the yaw string pointing about 30 degrees up when steeply banked. This apparently large yaw string angle must also be caused by the wind flow distortion over the canopy when steeply banked.

The mountain range is about 20km from the airfield and runs north-east for about 80km with heights of about 3,000ft above the valley floor. Fortunately the wind was generally north-west so the ridge was working. Pepe was able to run the Nimbus up the ridge by carefully finding the best lift line and keeping at least one wing in it. Occasionally we would hit a chimney where the thermals from the valley floor had converged close to ridge height due to the shape of the mountain so we could make a good height gain. Pepe's thermalling technique was to bank hard in the surge and sideslip into the thermal. It was very effective but requires good energy in the thermal and he would bank even more in the strong surges to stop the nose rising. It was very informative to observe how Pepe flew his glider. He has owned the Nimbus for seven years and has done three 1,000km flights in it: two in Australia and one in Spain. He has only used his engine about twice to get home. Pepe regularly takes the Nimbus to Tocumwal for the summer months to do courses and cross-country training. He thinks that Australia does produce good 1,000km days but they are for shorter periods, whereas in Spain the favourable weather systems for great flights last for longer periods. Pepe knows of a period in Spain where five 1,000km undeclared flights were flown in five days and not in an open class glider. The big wingspan gives you a wider area to sample the air conditions so for that reason it is important to fly very straight so you can read the air mass and fly the rising air. With the wider span, a thermal at the wing tip is easier to read so the glider can be constantly turned towards the rising tip to further stretch the glide angle.

Pepe had a number of height and ridge condition milestones we needed to achieve to keep the flight going. As these were being achieved we left the ridge and climbed to just over 3,000m into a blue sky. Pepe was



Nearly launch time



Photos: Peter Chapman

Segovia

on the lookout for any signs of the convergence of the north-westerly air mass meeting an easterly air mass. It was working that day but barely marked by the tiniest bits of scrappy cloud that appeared and disappeared very quickly. Pepe worked these telltale signs well and we cruised on to reach the town of Soria, about 200km north-east of the airfield. The day was now decaying so we picked our way back to the ridge, after some long steady cruises at around 120km/h for 40 minutes without a climb but with a glide angle of just under zero sink. The wind hadn't changed direction or strength much from our trip up so we were able to ridge soar back home. Pepe did some good soaring passes over Segovia so I could get some final

Ridge soaring

video and in just under five hours we were back on the ground.

I thoroughly enjoyed the flight, got some great shots of classic ridge soaring over closed ski fields, condor nests and ancient Spanish towns, and I learnt a bit more about ridge soaring, flying convergence lines and flying open class gliders. Pepe gave me a log of the flight, two videos of spectacular footage of him soaring in the French Alps and a CD of a lot of great still shots, including some of me flying the Nimbus. I would thoroughly recommend a flight with Pepe, either in Spain or when he next brings the Nimbus to NSW. His email address is <condor@grn.es>.

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GFA Annual Council Meeting

GFA President Bob Hall

This year's AGM/ACM saw the much-discussed changes implemented to everyone's satisfaction. The last raft of changes, aimed at improving the efficiency of the ACM itself, were implemented and this allowed the meeting to finish the routine business on the Saturday, leaving all Sunday for more relaxed discussion of the budget and current policy issues. As the Executive in general, and myself in particular, have been attempting to achieve agreement on such changes for some years this is a very pleasing outcome.

Operation of the Board

As most of you will know, the GFA Council has been reformed into a Board consisting of one representative from each region and the Executive. This change has two very significant outcomes.

The smaller size of this management group results in a much more effective management process. The success of this year's ACM has confirmed the improved efficiency – if this was needed. The only potential disadvantage of this change is that the reduced numbers limit the range of involvement and opportunity for input and discussion by members in general. This

discussion needs now to occur in the regions in State Association meetings and this makes these regional meetings an important part of the overall process.

Accordingly, it is very fortunate that the State Associations seem to have had a new lease of life. Western Australia and South Australia have always functioned well. Over the last year or so both Queensland and Victoria/Tasmania regions have seen a rejuvenation of their State Associations, with New South Wales as the last region also showing promising signs this year.

The details of this revised management structure are described in the ACM papers for those interested.

Discussion at the ACM centred around the management processes to be used by the Board. It was agreed that because of the reduced numbers of Board members involved all Board members should be required to bring to the Board meetings the views of all, or any significant grouping within their electorate, whether or not the individual Board members agrees with that proposal. There should be free and open discussion within the Board leading to a decision in the best interests of the GFA. Board members will then be responsible for communicating that decision and the reasons for that decision to their region.

It is expected by all that there will be a degree of cabinet government such that all Board members will be expected to support the consensus decision of the Board.

Marketing and Development Committee

Formation of the much-discussed Marketing and Development Committee (the MAD Committee) was also finalised at this meeting. This committee will become a full department with the same status as the other departments (Operations, Airworthiness and Sporting). The Head of this committee will be a member of the Executive and the committee will have one representative from each region with up to three additional members chosen because of particular talent and or interest. Terry Cubley will continue to provide part-time paid support.

The newly formed committee will re-examine the current development plan and revise this as appropriate. The current emphasis on assisting clubs to do what they already do, but better, will be retained. Some emphasis will now be placed on centralised action, particularly of promotion. In the meantime, Terry will continue to pursue the existing program introducing each regional representative to this approach.

It goes without saying that this initiative is very important to the GFA but, like coaching, it will take time and effort to put in place. This will only be successful if it gets the full support of all involved.

Insurance

Our current insurance policies were re-examined. This process was greatly assisted by the excellent report by our insurance officer Bryan Blackburn. His report has always been one of the better ones prepared for the ACM – but this year he excelled himself. All with an interest should read this report.

In addition, Wayne Cotter from OAMPS was kind enough to attend the ACM and provide us with a briefing from the insurer's point of view.

The GFA has avoided the very substantial increases in insurance costs which have occurred in other aviation sports. Wayne made it clear that the changes to legislation have not made, and will not make, significant inroads into insurance costs until this altered legislation has begun to have



Bob Hall

effect on claims' outcomes. This will take some years.

The GFA has avoided this increase for two reasons. Firstly, because of the combined efforts of Sporting and Operations in limiting our accident rate and hence claim rates and secondly because of the GFA insurance scheme and careful targeting of our policies to need.

As Bryan's report makes clear, insurance cover by the GFA includes two important policies. The first is the Broad Based Liability policy (BBL) which provides very broad cover up to \$250,000. This is a catch all, first line policy which realistically provides cover for small claims and the cost of litigation for larger claims only. The big advantage of this policy is its unlimited breadth.

The second arm is the Contingent Liability policy (CL) which covers our essential volunteers including but not limited to, instructors, airworthiness inspectors, coaches etc. for up to \$5 million. This is very important cover and is only affordable because of the essential absence of claims. We must keep it this way. If we do not, this cover will become unaffordable. This policy is called the 'contingent liability policy' as it is expected that this be a last line of defence and that clubs and private owners should carry their own separate cover. The BBL is not sufficient. It is essential that we protect these policies with appropriate individual policies as they are very important to our operation.

It is also essential that GFA members support the GFA scheme as the underwriters look at the full scheme and we achieve significant cost advantages because the scheme brings with it most of the insurance business involving GFA members.

There was further discussion regarding compulsory insurance for GFA-endorsed competitions. This requirement is essential because of the need to protect the combined BBL and CL policies and is targeted to gliders attending GFA-endorsed events. Because regattas such as the Narromine Cup Week are expected to become GFA-endorsed events, this targeting will include the vast majority of gliders which are used for significant cross-country. We could have made the requirement general and then provided an exemption for gliders which are not used in this manner. The vintage glider movement includes members who own multiple gliders which are only flown locally. Fairness would have required an exemption for such cases. It was much easier to impose the coverage in a positive sense by making it mandatory for gliders attending

GFA-endorsed competitions rather than trying to define criteria for an exemption.

Airspace Issues

All will know of the proposals by Airservices to roll back last year's Stage 2b changes. This proposal by Airservices is to be regretted. I will not try to detail the issues here as the matter is still very fluid. However, it is important that all understand that the processes used by Airservices worked to prevent discussion or consultation on the need for such changes. If these processes were allowed to stand this would mean that a regulator could avoid the need to justify a requirement on safety grounds and to explain those safety grounds so that all can understand the need for the requirement. Further, in this specific instance, the roll back will remove the risk management basis for this airspace by removing the all-important targeting of protection to need. The proposals would put in place a higher level of protection (Class C airspace) in the steps down to a Class D tower airspace where even Airservices' own figures show the hazard is much lower than (insignificant?) that in the Class D terminal region. It is this targeting of protection to the area of need which delivers the superior safety outcomes inherent in the US NAS. These changes will either achieve nothing or probably reduce safety.

After considerable pressure from the Minister's office, CASA and Sport aviation and AOPA Airservices made the analysis used by them to justify this proposed roll back available. Examination of this analysis

by an independent expert contracted by CASA shows what we had determined for ourselves – that the analysis was flawed and could not be relied on to justify this roll back. Actions is being taken by Dick Smith and supported by ASAC (Australian Sport Aviation Confederation) to have the process delayed while a proper analysis of this airspace can be carried out and all can be confident that the airspace system finally implemented

is justified, will deliver superior safety outcomes and has the confidence of all. I am involved in the ASAC action representing ASAC which in turn represents all sport aviation including the GFA.

The approach taken by ASAC was discussed with the Board, a number of questions answered and the approach then received the strong consensus support of the full Board.

Regulatory Review

We are making very good progress finalising the new proposed regulations. I expect that these will be completed in the near future. However, we still have some difference of opinion as to how compliance will be ensured. We will continue to negotiate this matter with CASA. I will provide more details as soon as these are available.



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HEDY DOWN UNDER

Hedy Schindler



ONCE UPON A TIME A NICE LITTLE SHY SWISS GIRL DECIDED TO DISCOVER THE WORLD. ACTUALLY, LITTLE IS ALMOST RIGHT; NICE DEPENDS ON MY MOOD; SHY, USUALLY NOT. I JUST THOUGHT THAT SOUNDED LIKE A GOOD OPENING FOR A TRAVEL STORY, WHERE I LEAVE TINY LITTLE SWITZERLAND TO TRAVEL AROUND THE WORLD, AND FIND MYSELF SPENDING MUCH OF MY TIME PARAGLIDING IN AUSTRALIA...

I arrived in Sydney in January this year, without any real plans about what to see or where to go. So I just followed my travel instincts and found myself heading to Katoomba in the Blue Mountains. There I met an American guy, Steven, and we drove together inland towards Dubbo. Here the flying story starts, as in the hostel was a guy wearing a paragliding shirt, so I asked him about flying sites in Australia. He got his licence in New Zealand, but he told us that a few hours away near Tamworth was a place called Manilla...

Steven and I soon found ourselves in a cabin at Godfrey's place. An Austrian girl gave us a ride up Mt Borah for our first contact with paragliding in Australia. I found it very impressive. Although I'm an alpine pilot and what they call a mountain in Australia

we'd call a big hill, I soon realised that wind conditions here are much different to Switzerland – strong wind conditions almost all the time. And the view from Mt Borah was just amazing – so flat all around. For me as a mountain kid I'm not used to seeing so far. Usually at home there will be a (real) mountain blocking the view and stealing the sun.

I also realised that the most dangerous adventure is not the flying, it is the ride up the hills! I am a spoiled Swiss girl; many of our flying sites have some sort of public transport, a cable car or such, and most of the time there'll be a restaurant on top! So parawaiting can be very comfortable. That was one thing I missed in Australia – restaurants on top of the hills. But at least there are sometimes kangaroos on the hill, for

entertainment. Unfortunately I wasn't able to stay at Manilla long, and didn't get to fly.

We met a Spanish girl who was training for a competition. She told us about the comp in Bright due to be held in a couple of weeks. At this point I wasn't really interested in going to a comp, but after travelling one more week, and being stranded in Lennox Heads, Steven reminded me of the possibility of going. I thought, I won't have the chance again, so I shouldn't miss out.

Steven gave me a ride to Sydney where I ended up in a youth hostel. I stayed overnight, while organising my trip to Bright. I booked in at the Bright Backpackers, luckily getting the last free bed – they were fully booked with comp pilots. I also organised some official instruction with Alpine Para-

gliding, in order to help convert my Swiss paragliding training to an Australian license.

Early next morning I caught the train to Wangaratta. Getting off the train I met three Japanese pilots who'd come directly from Japan. They'd spent a night on the plane and another one on the train. We knew that the next public bus to Bright was 3pm, but weren't looking forward to waiting so long. So we talked to other bus drivers, and they offered us a ride at 11am with a school bus. Pretty nice, these Aussie bus drivers! We arrived in Bright at lunchtime.

I shared a room with five comp pilots, and was busy the first day converting my training at the beginner's course. After practice launches from the exercise hill we went flying from Mystic. It was to be my first flight in Australia, and I remember I was very nervous because I had no idea what to expect of the air. But it was a late afternoon flight, so was pretty mellow. I had a nice short flight and a good landing. After a few flights they told me that I should study for the theory test because my flying was good enough for an Australian restricted pilot licence.

I hit the workbook, but found it difficult studying in my second language of English rather than my native Swiss. And I didn't have an aviation dictionary, so sometimes I couldn't even translate the question; I had to guess what it might be.

The competition got under way, interrupting my studies with the school. I got a job as a "launch nazi" timing pilots on launch (the right job for a neutral Swiss girl), and went on retrieve with one of the drivers. I got to see lots of the area, so it was a kind of sightseeing for me.

I remember at the comp eating the Australian national symbols for the first time in my life – emu and kangaroo – and I think on a couple of nights I got pissed (if the hang-over in the morning was anything to go by).

After a week the comp was finished and all the pilots left the hostel. Most of them

headed for Manilla and the next comp. I had to stay and learn the theory for my licence, and after studying like crazy got my licence. I organised for the paperwork to be sent to Dave's address in Perth – he'd been one of my roommates at the backpackers and had become a good friend and mentor. Then I was off to Manilla too, as I actually missed the pilots and I liked the competition atmosphere very much. Arriving at the campground with so many familiar faces was like coming home again. The only thing I didn't like about my stay in Manilla were the cockatoos – such a loud noise so early in the morning!

I again joined Lloyd on his retrieve driver job, so I got to see lots of the area picking up lost pilots. With rain forecast for the last two days I decided to stay at the pub. There I ran into the WA team again, Dave and company. I promised them I'd visit Perth, at least to pick up my licence. I had lots of fun at the pub every night, sometimes maybe too much fun. The days went quickly and the comp came to an end, seeing the pilots disappear once more. I took the bus to Tamworth, stayed overnight, and got information on trains to Perth.

The Indian Pacific leaves from Sydney, first stop Broken Hill. There I stayed three days, renting a car on the second day. A French girl and an American guy joined me for a visit to White Cliffs, an opal mining town. Kind of a surreal area, like giant mice have dug up the soil. Everywhere is nowhere. We discovered some other places around Broken Hill. We had fun and saw all the tourist things there.

I continued my trip to Adelaide, a city I found boring – I don't know why, I just did. I rang Dave and complained. I am very annoying when I am bored; I rang all my friends or sent SMS or emails. He gave me a couple of phone numbers of pilots and told me to ring them. So I did. First I called Kym, who came after work for dinner. We



talked about paragliding the whole night. It was during the week, so no flying, just paratalking. It was great to talk to another pilot about common interests. After almost a week being bored in Adelaide, the scheduled Thursday train to Kalgoorlie finally rolled out of town, with me on it.

I really wanted to go to Kalgoorlie, because I like the name. I of course had the address of the Dust Devils, the hang gliding club there. I rang them, and friendly like Aussie pilots are, they picked me up for a weekend of flying (six pilots, one a paraglider the rest hangies). I was wondering where they would go flying, because there is not even a hill around big enough to fly from (except of course the "super pit", the big mine, but it's not yet open for flying!). We drove to a dry lake about 30 minutes out of town. I liked the region, the typical red soil of Australia, some bushes and a big blue sky. I still had no idea how they would fly. The





hang glider pilots explained how towing works, something I had no idea about. I watched carefully, imagining what it must be like to fly over such flat paddocks. Must be amazing. But at the same time I thought it must be very hard to learn. I had no idea that I would soon do my own tow endorse-

Photos: Courtesy Hedy Schindler

ment! We had a great day by the lake; a good barbie and even a car crash at the end. What more do you need?

The next day I had a sightseeing tour with the son of a pilot. I got to know a little about mining in Kalgoorlie. This is totally new for me, as we don't have any mining in Switzerland (just the money of mining companies in our banks). I spent three or four days in Kalgoorlie and loved it. But I had an appointment in Perth, so left with the next Indian Pacific. One more night on the train.

Arriving in Perth the next morning, one of the WA pilots picked me up at the train station and took me to Dave's home. I got the keys from Dave's neighbour, because he was working up north for the next three weeks. He'd organised for his friends to pick me up for flying the next day. I rented equipment from Jiri's paragliding school. Thanks to Rod, Bill and Jiri I learnt how to tow. This was a new experience for me; amazing to fly over flat land for the first time – it was gorgeous. I can't describe the feeling quite right – it's pretty hard – but pilots know what I mean.

Three days later the boys picked me up again for towing at another site, then an early evening flight at Bakewell. The magic air at Bakewell was on. This also happened to be my first sunset flight. To see the sunset during a flight gave me a feeling of freedom and of being one with the hill. It was a very good flying day, and ended with a barbie at Rod's place.

A week later Dave was back. We went flying at The Range, a very stony place with a reputation. I am not used to flying that close to the ground, especially when the ground is that rocky. I launched and flew awhile very concentrated. When I got tired I top landed. I landed okay, but some strong wind afterwards dragged me back a bit by my glider. I felt my ankle hit a stone, which wasn't well protected by the normal boots I was wearing. It swelled up, and a day later was blue all over. For the next two and a half weeks I was not able to fly! I ordered proper flying boots from Godfrey.

Dave organised a trip down south. I joined the pilots with a camera, taking some nice shots of fifteen paraglider pilots soaring at the beach. My ankle was still too sore to fly, but I enjoyed being part of it without flying. Dave also showed me around the area, so I got an idea what the south of WA is like.

When we got back to Perth there was a problem other than my swollen ankle: I couldn't rent equipment from Jiri anymore

because he was in Europe. Dave knew someone who could sell me a small glider plus harness and helmet, but she wanted cash and I couldn't get enough out of my credit cards. So I had to call mom to ask if she'd put the money in my account. After waiting three days, my mom finally owned paragliding equipment. Isn't she great? In the meantime my boots arrived from Godfrey, and my ankle was beginning to be an ankle again. I was airworthy again, and ready to get out there.


Dave was working, so I went flying with the other boys from Cloudbase Paragliding Club whenever it was on, towing or hill flying.

As Dave was working up north in Karratha again, he invited me for a fly at Table Mountain. I was really looking forward to seeing a bit more of WA, so I booked the two hour flight.

Dave picked me up at the airport and we drove out of town towards Table Mountain. It was kind of weird, totally different to anything I have seen before, big hills just made from loose red rocks, like a giant was playing with them. Just rocks, spinifex and railway tracks snaking through this Pilbara region.

We got to Table Mountain and started the drive up. During that ride I was thinking, no way will I fly from here, it scared me. But the thought of driving the car down scared me too. I was trapped. We got to the top and Dave went to the launch, which just looked like all the other stony places to me. I waited a while, still thinking I wouldn't be able to fly. Dave suggested I set up my glider, and if I was still too afraid I could pack up again. As scared as I was, I also wanted to fly from such a unique place. By the time I set up I was ready to launch. Dave helped me have an alpine launch, then he launched and we flew together for almost an hour. It was the most impressive flight I have ever had. Over the top of Table Mountain we could see Harding Dam, a blue lake in the middle of nowhere, surrounded by red rocky hills and green dots of spinifex. It was the most amazing place I have ever flown, and the impressions will stay in my memory forever!

I always knew that it would eventually come time for me to leave Australia and all my new friends. That made me very sad, and it still does even months later. I just had such a great time, the best ever.

I boarded the plane to Los Angeles almost with reluctance, but of course there were more flying adventures to be had, more friends to meet, and a couple of surprises as well... But that's another story... 

Letters to the Editors



September Issue

The September issue of Soaring Australia looked GREAT! What an interesting mix of styles and crafts. What really popped my eyes was the "Paranglider". Wow. And I thought it couldn't be done!

Well, the "Paranglider" took me by surprise... not unlike an upturned garden rake in the face. As hang gliders slowly morph more and more into re-invented personal sailplanes again... paragliders get battens, huh? Well, I never thought I'd see the day...

What "Fun"... (oh yeah, that's a hang glider devolving back into a nice slow easy to fly hang glider... I wonder when they'll take the bones out of it?).

Jules Makk

World Comps

Our sailing teams did very poorly at the recent Olympics. Why was this so, and in any case, what is that to do with gliding?

Most of the sailing competitors practiced on Sydney Harbour and certain other similar

venues, with strong winds being the norm. In Athens, on the other hand, conditions were mostly light and variable and the Australians were all at sea, so to speak.

In gliding too, we have our problems. Generally, our pilots do reasonably well on strong thermal days but tend to do poorly when confronted with other types of lift and terrain totally unlike what they have been used to here.

Mostly, practice seems to be in booming conditions over flat lands, conditions not often found in many parts of the world. Another problem (which does appear to have been recognised here at last) is the lack of experience in pair flying, which has been developed to a fine art, particularly in Britain.

What's the answer? I believe that any Australian team assigned to an overseas competition should be practicing in an area

with multiple types of lift available and over terrain other than flat lands.

Here at Bunyan (Cooma) we have conventional thermals, but also encounter lee wave lift, shear line lift, convergence zones, hill lift and even the occasional shear wave lift. I am not necessarily suggesting that practice should be there but certainly, there should be thought given to the venue for practice, and also for domestic competitions, in order to give our pilots a wider range of tools and experience in handling different types of gliding environments such as are common to other continents and countries.

Let's give it a go!

John White, Canberra

De Aar Hotting Up

Just a quick note to let readers know that the first 100km+ flights and many personal bests have already been flown here in De Aar, South Africa... and summer has only just started! We are expecting an awesome summer season. Groups have already booked from Finland, Austria, Czech, Germany, England and France, as well as some localsof course. Come and join us!

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SPORTAVIA - the soaring centre

new, exciting developments

There have been changes at Sportavia. Richard Cawsey, who many of you would know as an enthusiastic customer and since 2002 a part owner, is taking a higher profile in the growth and enhancement of Sportavia. This has allowed George Schuit to return to Europe. Ritz has just arrived back for the new big season.

Our biggest news is the arrival of Tove and Grant Heaney to the Sportavia Team. Many will know Tove and Grant from their extraordinary efforts in the Hang Gliding world. Not only do they have a very keen interest in soaring sports and competition they are passionate about the development of new soaring enthusiasts. Tove will be running all of Sportavia's operations with Grant overseeing our flying operations.

All of us at Sportavia are focused on making Sportavia into the leading soaring sports aviation resort in the world, earning the title of: SPORTAVIA - THE SOARING CENTRE

We are absolutely committed to providing our customers with:

- The friendliest, and most efficient gliding resort experience - GLOBALLY.
- A professional team of instructors, engineers and ground support staff to heighten your soaring experience.
- The highest quality and most professionally maintained gliding fleet at competitive prices.
- A strong focus on developing our sport with a focus on instruction and coaching for all levels of pilots. We are introducing programmes during the April to October period aimed at increasing the profile of our sport, encouraging newcomers to the experience and underpin the future of our sport.
- A Resort conveniently located in the centre of the action that all the family (not just us the gliding nuts) can enjoy.
- A quality Australian hospitality program. Our new hospitality management team will ensure:
 - your stay in the Sky Inn is comfortable;
 - the Bomber Bar and Grill will offer a range of excellent local wines and produce in an affordable creative menu format; making sure the sun never sets on the fun times; and
 - we will be introducing a range of activities to ensure those that do not want to soar have a wide range of fun things to do and see.

All our changes are aimed at improving the experience that you, your family and your friends experience at Sportavia.

We look forward to welcoming those that know the thrill of flying at Sportavia and showing our friends-to-be how great the Murray River region and why Sportavia is the best place to realise your soaring dreams.

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LOVE AFFAIR WITH AN UGLY LADY

The Piper Pawnee – Part 2

David Francis (Canberra Gliding Club)

STARTUP

Let's start this plane. The fuel is permanently on, although on the starboard cockpit side is a wire loop that the pilot can pull to turn it off. It is really an emergency fuel valve only, and a visit to the workshop is required to re-set it. This is a working plane, so non-essential items receive no maintenance. The venturi-powered turn and bank has long since died, and the primer lines were cut and crimped many years ago. So the start procedure is: set trim and all switches to off, cowl flap open, stand on the brakes, left magneto on, master on, call "Clear prop", hit the starter button and, while the engine cranks, pump the throttle once for each of the six cylinders, set at idle and wait for it to fire. The stick is unattended and flops around during this two-handed procedure.

The starter starts with a solid thump as the contactor fires, the prop turns slowly, and the engine fires up with a throaty rumble and a noisy clatter from all the aluminium panels oil-canning, and cables and fittings rattling in sympathy. Oil pressure hesitates and then rises steadily to something better than the 25psi minimum for idle. Switch on the alternator, avionics master and the strobe beacon, and let the engine warm.

Once the oil temperature exceeds 75°F, we can exceed 1,000rpm and gently increase power to taxi. Once the oil temperature is well over 75°F and cylinder head temperature is over 200 we can exercise the engine enough to do a run-up to 1,800rpm for the magneto and carby heat checks. Pre-take off checks can now be completed (I use the old mnemonic TMPFISCH – who can crack that code?)

We taxi to the glider launch-point using grass to avoid dragging the tow rope over abrasive bitumen, if there is any. The view is good. The tailwheel is small and sends sharp little jolts up your spine as it finds tussocks and rabbit holes. In light winds the rudder and its spring connection to the steerable tailwheel is sufficient for directional control, but for decent turns and in any sort of wind rudder has to be reinforced with sensible use of differential brakes. One failed brake causes inadequate steering authority, and is regarded as a no-go item.

AEROTOW LAUNCH

We arrive at the glider launch point and the

glider crew are on board doing their checks. We taxi across the bows of the glider and go beyond it, turn and come back to the glider centreline and park at 45 degrees across it. This manoeuvre lays out the tow rope in front of the glider and minimises the retrieve effort for the ground crew who get to push gliders around all day. I stop at 45 degrees to runway heading so I can see the glider preparations and keep an eye on any aircraft on short final behind us.

While waiting for the glider I run through the risks on take off. The glider will lift off and maintain an altitude of about three feet behind the tug. The tug tail will then come up, and liftoff will occur at 60kt. Early students have poor station keeping skills. If they go much higher than the top of the tug's fin you risk prop strike and nosing over at speed. Dumping the glider just as soon as you sense you lack pitch authority is the only way to survive. If there is a crosswind early students tend to drift off downwind, which drags the tug tail the same way and lots of rudder is needed to keep straight. Again if you sense there is a lack of rudder authority and you are heading off the runway a very quick pull on the rope release lever is the only solution.

Glider canopy closed, time to go. Straighten up on runway heading looking for the forward signaller on the runway edge. We do have a mirror on the port strut but its useless on the ground due to vibration. Forward signaller gives me the underarm swing meaning take up the slack. Things start happening quickly now. Stick back, start to taxi forward, check for clear runway and any conflicting traffic, make short departure call, rope tight, the plane jerks to a halt, overarm wave from the signaller, apply full power with progressive throttle movement, look for oil pressure coming up, look for at least 2,250 static rpm, ease the stick forward, tail comes up, feel the glider moving around because it is already airborne, use elevator to keep the nose from dropping. Approaching 60kt check oil and revs apply firm pressure to rotate. Keep the nose low to accelerate to the minimum safe tow speed of 65kt (70 for more slippery single-seat gliders), positively raise the nose to climb attitude, expect a trim change as the glider transitions from being directly behind to low tow just below the prop wash. Back pressure on the stick eases as the glider arrives in low tow, where

the trim is pre-set. Approaching the upwind runway threshold means landing ahead on the strip is no longer an option, so check the oil pressure (still over red line), its still not up to full operating temperature, CHT is now approaching normal climb temperature of 40°F, revs are now up to 2,400 to 2,450 at this speed.

GOING UPHILL

Turn into wind and keep the glider close to the strip until over 1,000ft agl so it has safe options if the rope breaks, then turn upwind looking for thermals. In still air we expect 700ft/min with a two-seater on the back, so if we see 1,000ft/min or more sustained I hook into a turn at about 15 degrees of bank to thermal the combination. If I have a choice I do right turns in the thermal. This is because at top of climb the separation procedure after the glider releases the tow rope is that the glider turns right while the tug goes left. So right turns mean the glider gets to stay in the thermal I have found for him.

So how do I find thermals? This is the first flight of the day so there are no circling gliders to mark them. So I look for our local Wedgetail eagles, a fluffy cumulus, or try any contrasting land feature – the gravel quarry just south of the strip, the north facing side of the hill just behind the hangar. Anything that is likely to heat up faster than the grassy sheep paddocks. Searching for a moving column of warm air that you cannot see is the challenge in gliding. A tug pilot who is not a current glider pilot is as useful as nav lights on a glider.

The first turn into a thermal rarely results in finding the centre. Sure enough the VSI drops off to 200ft/min, so I continue the turn till the lift is encountered again, then straighten up, pause and resume the turn. I have just shifted our circle towards where I think the thermal is. As I manoeuvre the student at the end of the rope loses station and I feel it as tugs on the tail, uncommanded yaw and pitch that I counter with firm use of stick and rudder to stay in balanced flight. It is hard work for any glider pilot to stay in station in the turbulence of even moderate thermals.

At about 2,200 agl this early thermal peters out so I straighten up and fly upwind to give the glider pilot a break. Check oil pressure, now below the red line as the oil

temperature is now in the green, CHT is around a safe 40°F and steady. Look for other traffic and feel the strain of Pawnee Knee, the result of constantly holding on right rudder in the climb to counter the torque of 235 bellowing horses up front. Approaching 3,000 agl I clear the airspace for glider release. Just over the target height, the tug lets go and I feel the twitch.

DOWNHILL DASH

This is the fun bit – a two minute dash downhill with no adult supervision.

Now things get very busy again – check the glider is turning right in the mirror, lower the nose and start the left turn, reduce power to 2,300rpm, shut the cowl flap, roll the trim forward one full turn, reduce power now to 2,000rpm and trim for 105kt in the descent. All the while looking for other traffic including the glider just released. The view is spectacular with the long sloping nose well below the horizon. Check CHT, that's the critical one on the way downhill. It should stabilise at 34°F. The ears pop in protest at descent of 1,500 to 2,000ft/min. Check windsock, plan the circuit in 3D with a constant descent to 500ft at the base turn. On downwind make a radio call, clear the airspace again and make the down wind leg tight to finish with the wing tip on the threshold at 500ft, reduce power to 1,500rpm, raise the nose to level flight, pause, roll into a curved base and pull it tight to use induced drag to kill the 105kt to my personal flap extension speed of 70kt. As it slows in the turn roll in lots of nose-up trim. Pull full flaps as I roll onto final at around 450ft and stabilise at 65kt. The runway is clear, half way down final open the cowl flap so I don't cook the engine if I have to go around.

Approaching the flare look well ahead, apply back stick and when the rate of descent is zero reduce any residual power and feel the whole plane go floppy as it slows with no prop wash over the tail feathers. Now it's a case of using angle of bank to counter any crosswind, rudder to keep straight, and back stick to keep it flying till it quits in the three point attitude and rumbles onto the runway. Quickly grab the flap handle and retract the flaps to get my hand back on the throttle smartly. There is an old saying in tail draggers, on the ground you are either at walking pace or at flying speed, anything in between is rather uncontrollable.

Sure enough a nice touchdown is followed by bucking and kicking across the tussocks and rabbit holes with lots of rattle and clatter. Full back stick to keep her on the ground, for to lift the tail at this speed is to invite strong weathercock into wind and off the runway. When below around 40kt she is

slow enough that most of the weight is on the wheels sufficient that moderate braking won't cause a skid on the grass. Brakes are far better at stabilising the yaw than rudder. Once at walking pace come off the brakes and taxi as usual, but get the checks out of the way while taxiing to the launch point. That little tail wheel is really sending sharp little shocks up my spine as it goes over the tussocks. Lay the rope out before the next glider ready to repeat the process another 10 to 15 times during the day.

PAWNEE PERSONALITY

Working planes like a tug are infrequently available for training so its rare to go off and try evolutions like stalls. About once a year an opportunity arises. The clean stall is harmless. She slows steadily, gets all mushy, shakes a little bit and elegantly bows her head at the break. No problem, no roll, just a pussycat.

For something different I set up a descent in approach configuration, about 1,200rpm, full flap and 65kt, reduce power to idle and let is slow to about 55 still in descent. Sharply apply aft stick and the nose comes up but the plane keeps going straight down. The stall is instant, has no warning and she tries to roll on her back. Hmmm. Pussycats can bite.

That big engine makes her a heavy plane with lots of inertia. It has to be handled carefully with gentle use of power and elevator when landing.

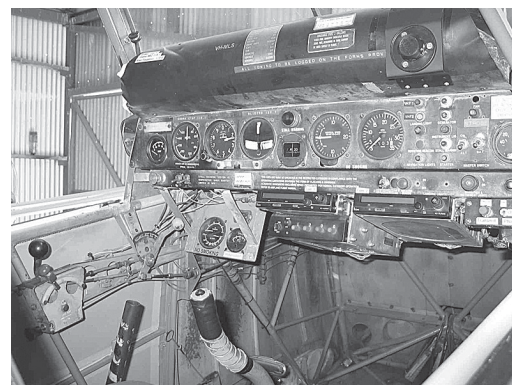
Tugging is hard work. Thermalling the combination always involves battling turbulence in the lift and an extra good lookout is needed because thermals tend to be occupied by other gliders or eagles. On descent through thermals on rough days having marginal lateral stability means it is not uncommon to slam your head against the cockpit side. Rapid descent gives me a headache. Add the headache to Pawnee Knee and you feel well rounded. Why do I do it – easy, it's a challenge.

The Pawnee is a lovely pilots' plane – simple, rugged and great fun.

MANAGING MONEY

Planes run on money. This one burns 66 litres per hour of towing and does around six 2,000ft tows per hour, and costs around \$200 per hour to run. If this tug goes U/S there are lots of tears because 18 resident gliders are grounded (four are club planes, the balance are privately owned by club members). So our maintenance is good and we watch our costs very closely because this one plane can send the whole club broke very quickly. The tug is roughly 50% of the club cost and income.

An engine overhaul of a six cylinder demands a budget of around \$40,000 every



Pawnee cockpit

2,000 hours. Two thirds to three quarters of this is for the engine overhaul and the balance is for engine removal and replacement, and the concurrent work that is planned around the engine removal. Replacing the exhaust, overhauling magnetos, welding defects in the engine mount, repairs to cracked cowls, overhauling brakes, shockies and bungees are typical tasks.

Every 15 to 20 years or so this always hangared plane needs a re-bag. A typical cost is around \$15,000, with the same again for emergent work. When the wings and fuselage are exposed corrosion and cracking will be found and must be budgeted for and fixed. Yes, old planes do give fiscal shocks to owners.

Modifications can be expensive, and it's better to get it right once when building it than modifying later. After a string of electrical problems we decided to cure them by replacing the generator with a cheap \$250 alternator. We received a bill for around \$1500 for the alternator installation. This is because the different drive belt demanded a new crush plate behind the prop that cost \$700, add a new regulator, and the rest went on labour to make a variety of support brackets, wiring harnesses, etc. This is a typical cost pattern with modifications once system interdependencies are taken into account.

Originally our Pawnee had no cowl flap. Descent was a prolonged and noisy affair at 2,300rpm and maybe 700ft/min. For a cost of around \$4,000 we installed a cowl flap and come down now at 2,000rpm and 1,500 to 2,000ft/min. This shaves 30 to 50 seconds off a tow and paid for itself in just 18 months. A very good investment.

In the days when avgas cost much more than mogas we looked at a mogas conversion. However mogas is incompatible with the fibreglass fuel tank and this, combined with worries about variable quality mogas at high density altitudes meant we judged it to be an unsound investment. This was probably a wise judgement.

These financial lessons can never be forgotten. Good corporate memory is important to good financial modelling. Good

financial modelling is essential to safety, because maintenance minimised is a clear risk to operational standards. Yes, accountants are important to pilots.

WHY?

Why have I been tugging, additional to gliding, for 25 years? It's not the pay, which is nil. Volunteers only.

I tug because it's a challenge. There is not much navigation in it, most ops are within sight of the strip. As a tuggie I do need to fly for the person on the other end of the rope, to find lift and use it to maximise climb and leave the glider in it, and return to the strip as quickly as possible. I need to develop an exceptional lookout for other traffic and big birds, and with a landing every six minutes I become very good at stick and rudder. The club is expert at high altitude flying in mountain waves which means tug take off and landing in high winds, separated by trips through the rotor.

We soar all year round and learn to deal with thunderstorms (give them a miss), sleet, rain and cloud. I have to develop a good weather eye to read the sky to put the glider in all three forms of lift we use, sea breeze ridge lift, thermals and mountain wave. As long as I do these things well, glider pilots say thank you and pay the bill. Heaven.

PIPER PA25 – 235

Engine	Lycoming 0540-B2B5 or B2C5
Max rpm	2,575
Static rpm	2,350 but not less than 2,252
Propeller	Hartzell aluminium fixed pitch, min diameter 82.3in, max 84in
V _{ne}	135kt
V _{no}	108kt Max cruise speed
V _n	104kt Max manoeuvring
V _{fe}	9kt Max flap extension
Max gross weight	2,900lb
Max cargo	1,200lb
Fuel	42 USG (143L) usable 2USG unusable fuel
Flaps	Two positions Maximum 57 degrees
Max crosswind	15kt
Max oil temp	245°F, 118°C
Max CHT	500°F, 260°C
Oil Pressure	60-90lb/in ²
Min oil press airborne	60lb psi
Min at idle	25psi
Stall clean	55kt
Stall full flaps	54kt
Take-off safety speed	67kt



FINDING GOOD THERMALS

Bruce Taylor – GFA National Coach

SUMMER IS SHAPING UP TO BE A BUSY TIME, WITH COACHING EVENTS ORGANISED RIGHT ACROSS THE COUNTRY. MAKE SURE YOU KEEP AN EYE ON THE GFA WEB SITE FOR DETAILS, UNDER THE SPORT/COACHING LINK. I HAVE A FEELING WE ARE IN FOR A GOOD SOARING SEASON TOO, WITH SOME GREAT DAYS ALREADY PASSED.

This month I have an article about finding and using the best thermals. I think we all know that this is one of the “secrets”, but not an easy one to teach.

FINDING (GOOD!) THERMALS

So, we know that the greatest improvement in our achieved cross-country speed will come from increasing our average rate of climb, but how can we work towards that aim? In reality, once a thermal has been found and centred, most pilots will climb at around the same rate, and (contrary to popular belief) most gliders are reasonably similar in performance. So what is it that the fast pilots are doing that the others are not? What are they looking for, and what techniques are they using to help find these stronger thermals? This is an area that is particularly difficult to teach, as it is almost impossible to analyse exactly what the decisions are that are taking place in the mind of the successful pilot at these most critical times.

Maintain a positive outlook. Be positive about finding the next thermal, and be positive about it being a good one. This will help if you are getting slightly low, in preventing going into total wimp mode too early, and it will help with being more selective in the thermal you next choose to use. However, the most important thing about staying positive is that it will ensure that you maintain a systematic approach to your thermal search. Avoid waffling; aim directly for your next chosen lift area possibility and go there.

Keep a constantly running record of the previous 15 to 20 minutes history in your

mind. Where have you been finding the last few thermals? Have they been of similar strength to those previous? Is the countryside you are flying over changing? Does the weather ahead look like that behind? Be constantly inquisitive. Why does the sky ahead look better or worse? Exactly where are the better thermals coming from? Is it from tree lines, big paddocks, broken ground, scrub or crops?

These records will help you to decide where to track next, and how fast to go there. If the sky ahead is pumping and the last couple of climbs have been 10-knotters, then perhaps the stick can go forward. If the countryside ahead looks different and the sky has softened, then tread a little more cautiously. If what you have been doing for the last 20 minutes is not resulting in finding good thermals, THEN DO SOMETHING DIFFERENT. Start looking in places that you have previously ignored.

The thought processes and decision-making should be happening continuously. There is no time to switch off when flying cross-country, and I think that a number of pilots do not realise how much hard work is involved in doing it well. The graceful movements of our gliders belie the continuous high workload going on in the cockpit. Being relaxed is essential, but this certainly doesn't mean that your mind has come to a halt. Staying relaxed will help good information gathering and will avoid rushed decisionmaking, as well as aiding physical and mental stamina. This state of comfortable relaxation whilst maintaining a high workload is the subject of another article, but suffice to say you should put effort into physi-

cally relaxing your body while flying, and in keeping nutrition and hydration levels up.

So, some of the groundwork is done and we have placed our glider in a likely search area. Now where are those good thermals? Pay attention to your external environment. Watch the clouds closely, and I do mean closely. Really look at them. Where are the bases most solid? Where is all the activity at cloud base? If you are very high, you may notice tendrils of cloud hanging out of the base ("daggage" as a French friend so fondly calls it!). If you are lower, this may refract light and appear as a lighter area in the cloud base when viewed from underneath. When you do find a good climb, study the cloud above very carefully as you ascend, and note your position in relation to the cloud. Usually this will remain the same for most of the day, as will any shear levels. This information can be very useful in locating good climbs later in the flight.

So what if there are no clouds? Usually to simply fly along and hope for good fortune will not provide the best results, though there are some days when this certainly works. Look for irregularities in the ground below, and always take note of where the thermals are coming from when you find them. People often underestimate the distance a thermal will drift during its life cycle, even in a light breeze. Of course the lower you are the more attention you will need to pay to the ground below.

Probably the greatest factor in successfully finding good climbs is using the "feel" of your glider to best effect. Being familiar with your own glider is vital, as is a basic understanding of thermal structure. This understanding does not need to be too technical, but it is useful to know what a typical airflow pattern around a thermal is likely to be and, more importantly, what this airflow will feel and sound like from inside your cockpit. The sink surrounding a lift area will feel dead and heavy. As you progress closer to the lift you will pass through the turbulent zone where there is some strong shear happening between the sink and the lift. This area will feel bubbly, with a transition from a down indication to up. Shortly after this turbulence you will feel a strong, smooth surge as you enter the main laminar flow of the thermal core. Inside the cockpit this will sound quieter and the controls will feel to be "biting" and working well, as the airflow over them is smooth and organised.

Obviously, these indications will only occur as described if you manage to fly directly into the centre of the thermal, which might happen once a year! What is really

important is to recognise quickly where you are in relation to the good bit by feeling the characteristics of the air you are in. We all know that we need to turn towards the rising wing, but sometimes if you only hit the outer part of a thermal you may not get a good indication of which way to turn. Don't hold the stick too firmly, don't have the vario turned up too loud so that it is impossible to hear the airflow around the cockpit, and look up and outside. Look, listen and FEEL. This is not easy and takes some time and dedication to master, but any effort you put in here will be rewarded.

For example, if the day is providing consistent eight-knot climbs, and having flown under a promising fresh cumulus, you are rewarded with an erratic six knots that feels rather bubbly. The astute pilot will realise that indeed there is a good climb quite close, but that they are currently positioned in the shear layer on the edge of the thermal core. They will recognise, by carefully paying attention to the feel of the different parcels of air as they circle, in which direction they must move to find the best lift. This may be just a moment of smooth air to centre towards, or a section of the turn that is more turbulent, to move away from. This is not easy... it is something that takes a very subtle feel and very intense concentration, but we can all learn to do it. Another good hint is a nearby glider going up faster... Don't become so engrossed in your own efforts that you stop looking out! Remember we are looking for that smooth, laminar core that gives a big push from below.

Fly safely



Bruce Taylor

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We've Got it Covered in the Whitsundays

Julia Hands

AIRSPORTS IN THE WHITSUNDAYS WILL OCCUR NO MATTER WHAT THE WIND CONDITIONS – WE'VE GOT IT COVERED.



Paramotors and trikes for those nil wind days

No more “parawaiting” if the wind is too strong. No more “hanging” about if it’s too light. Most of us are now “multiwingwil”.

Last October we headed down to Rainbow for a week. The weather was kind, so those that could fly did so, and those that couldn’t learned. We had a great time and headed for home to play on our local sites at Conway Beach. However, there wasn’t much wind for a while and we got to thinking, what can you fly in nil/light wind, a paramotor or a trike?

By March we were ready for another holiday, so we set off for the comps at Manilla. However, there was an ulterior motive – to get Willie at Sky Ranch to teach us to fly trikes (we got our paramotor endorsement last year with Godfrey).

In the still air of dawn we could be seen doing touch and go circuits with Willie again and again and again, till we got it right. Then, after breakfast, up Mt Borah for a day of free-flying, achieving some respectable distances.

Then, at dusk, back out to Sky Ranch to continue the trike lessons till dark. We agreed a rosie day would have been to free-fly from Borah to Sky Ranch in time for our lessons, but that was not to be, as the wind blew the other way.

Home to the Whitsundays with our stable of paragliders, paramotors and trikes, ready for action on Conway or Midgepoint Beaches. However, the wind was not strong and seemed to blow for months. We got to thinking, what can you fly in strong conditions? A kite. So we went out



First trike flight – Ian and John at Midgepoint Beach



Julie kite buggying at Little Conway Beach



Kite flying

and bought four-line kites, buggies and mountainboards to ride. Our kites range from two to seven metres.

Now we reckon we have every wind condition covered. In nil/light wind we'll fly paramotors and trikes. In moderate wind we'll fly paragliders and hang gliders. In strong wind the kites and buggies come out. We even have a plan for cyclones – we'll watch videos on all the above sports till the power goes off, then we'll drink rum!

As I said, I think we've got it covered.



John paramotoring at Midgepoint Beach



Paragliding at Big Conway Beach

Photos: Courtesy Julia Hands

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CALL ME SHERLOCK

Taff

IT'S NOT OFTEN YOU'RE A WITNESS TO A MURDER,
EVEN IN MY LINE OF WORK.

It had started out as a nice day on the beach, just me, the missus, and the kids. We'd been swimming for a while, the kids lapping up the opportunity to get in the sea. Coming from inland it's a rare treat for them. We were sat at the southern end of the beach, just where the sand ends and the huge steep grassy hill starts. We were watching some hang glider pilots above the cliff. Three of them there were, their triangular sails sweeping a vivid streak through the air, then stopping still as if pinned against the sky. Always facing out to the sea. Occasionally one would swoop right out to sea, daring to pit the pilot's luck against the wind and fate, then rushing back to the updraft of the cliff. One of them, a bright blue kite with a red slash along the edge of the wing, was particularly bold charging far out, then scooting back, cutting it fine each time. He seemed to be revelling in the challenge.

My boy, Dan, was entranced by them. Kept nagging me and insisting he wanted a go. In the end I gave in. *"Come on then, Dan, you little git, let's go see what the score is."* I knew there was no way he'd get to go up in one, he's only nine. But truth be told I quite fancied the idea of flying one myself, and wanted to ask the score about getting lessons. We jumped into the car and drove for what seemed like forever up and around the back of the hill, before seeing the farm gate and track that led to the top. I found a notice that said all pilots had to be licensed and members of the local club to use the site. I pointed it out to Dan to soften the blow of him not being able to take a runner off the top of the cliff today.

We got to where the pilots were landed, all three of them chewing the fat. They were a friendly enough bunch, two lads in their early 30s and a fella in his mid to late 50s. The old guy, fellow by the name of Neil, talked Dan through all the kit, and gave him a brief chat about flying in general. He had Dan in the palm of his hand. It turns out he and the other guys, his two sons, run the local hang gliding school. His patter was charming Dan's pants off. He came across as a bit full of himself to me, but the kid liked it, so what the hell. He gave me a card, nice flashy number, with 'Neil Shepard School of

Hang Gliding' and a list of his achievements on it. He told me all about getting licensed, how much the kit cost (sodding fortune) and let me know that he would do me a deal on lessons if I bought a glider off him.

Then one of the younger guys chips in, *"Let's get up, the wind's dying off, could be our last chance today."* Then he gives the older bloke a bit of eyeball, comes on quite a bit strong I thought, *"No more pushing it out for you dad, you old fart. Stick in to shore. You're not the hotshot pilot of yesterday, you're getting a bit dozy in your old age."* He seemed to be deliberately needling the older guy.

Dan and me stood back and watched them going through their preparation, me trying to remember what the old guy had said about the kit, and chatting with Dan about it all. Just as the old guy was getting ready to shoot off the younger of the two lads runs up to him and tops up his drinks backpack, I think they're called a camelback or something. *"Here you go dad, been thirsty work today,"* he said. They were all ready, the old geezer's new looking kite making the other two look shabby. They all took off at just about the same time, and soared up above.

We watched all three of them till they started doing the pushing it out to sea bit. They dipped below the headland most of the time while doing this. It's a good 300m to the sea from up there, and Dan was getting too close to the edge for my tastes. So we, or rather I, decided to get back to the beach. I was starting to get worried that the wife would have given up on us, thinking us gone for good, and may have eaten all the sarnies.

We wound our way back, quicker now we knew the way to go. As we rounded the final corner, just down towards where we'd left the girls waiting, we saw the kite we now knew was Neil's, glide out into the sky, way out to sea. *"He's going too far dad, far too far!"* shouted Dan. *"He'll never get back from there!"* I thought at first Dan was exaggerating, but the glider just kept on going, on and on. I had my mobile in the car and got straight onto the services. Called for a lifeboat, but there's no inshore boat on this bit of coast. Dan was crying his eyes out by this time, poor sod. He was just repeating,

"Neil... Neil... Neil", as if trying to call him back to shore. But by now the glider had hit the sea, too far out for us to see exactly where, or what was happening. Just then Dan glanced left and pointed at something moving fast out to sea from the beach, a jet-ski.

There was nothing I could do but watch for now, that and keep notes. I'm an habitual note writer, comes with the territory I suppose.

The jet-ski had stopped a fair way out. We still couldn't see what was happening. After fifteen minutes one of the local area cars turns up, with a thick looking wooden-top in it. I gave him a rundown of what I'd seen so far, and he told me that they had an "all boats" alert out, and there was a fishing boat coming from the harbour on the other side of the hill. Just as he said that it stove into view around the headland, making good speed. I told the woodentop, or PC Conyers to be more precise, to get himself up the top of the hill and pull in the other two pilots if he wanted a good collar on his record. He pulled one of the most dim faces it's ever been my misfortune to witness, so I showed him my warrant card and told him to piss off sharpish. *"What's the charge, Guv?"* he asked, still looking as bright as a nine watt bulb. *"Conspiracy to commit a crime, either attempted or actual murder, depending on how bad the guy out there is."*

I got Dan back to the wife, and gave her my apologies. I let her know that, even though it's my weekend off, I'd gone and got myself involved again. To take some of the heat off me, I told her that Dan had just had the shittiest day of his young life and needed some TLC. Being the darling she is she took it all in her stride, and told me to go and do whatever I had to, and to try and be back before midnight. I couldn't help think I'd just got myself on short rations for the rest of the month.

I drove to the harbour. After about 40 minutes the boat pulled in, the hang glider stuck incongruously on the deck like a dead lorikeet. A cylinder of tarp, like a rolled up carpet, was laid out against the gunnels of the boat. No prizes for guessing what was under there. I was just about to jump down onto the boat when a hand restrained me. *"You always a ghoul, or you just trying it to add some novelty to the holiday?"* Coppers' wit never varies, though to give him his due his delivery was good. So the warrant card got another airing. Young DC this guy, DC Craig, fresh out of probation, fast tracker by the look of him, wanting to make his mark. So I gave him what I knew so far, before we jumped down into the boat. DC Craig went and spoke to the boat owner and the jet-

skier. I took a look at Neil.

Just as I thought. No marks for originality, boys.

I spoke with DC Craig. Apparently PC Conyers had caught the two lads making a hasty job of packing up. They told him they were rushing over to see what they could do to help. They had reacted badly when he told them he was arresting them. The youngest one had thrown a punch at him. Funnily enough, and for all his dim looks, PC Conyers is the local force's self-defence instructor, and a karate champ to boot – you just never know, do you? The lad was now safely cuffed, slightly bleeding, and he and his brother were on their way to a cell back at the local nick.

So I got DC Craig to one side. *"I can't get involved, I'm a material witness, so here's all that you didn't hear off me. When they do the PM tomorrow, make sure the surgeon's not pissed, and make sure he gets a toxicology test for cyanide and all other poisons done. Get both of them two swabbed down when you get back. Make sure all their kit gets a good going over, and sweep the fields up there for any medicine bottles or the like."* He was scribbling furiously now. *"Go over the books for the flying school, see who owns it, what it owes, and what's down the pan if it goes tits up. Get in touch with all the pupils who've trained there over the last year, see what they have to say about the whole set up. Check with other flying schools and get their rep. Check who they owe money to, and how much they were getting leaned on."* Not only was he scribbling, he was nodding like one of those toy dogs in a car back window. *"Get a full family breakdown, and interview every local family member, boozing buddy, neighbour, and anyone with any connection to them."*

"Jesus Guv, what if it turns out he had a heart attack? I'm going to look a right plonker! I'll end up back with the woodentops before you can say 'big screw-up'." He looked me in the eye when he said that; fair play to him, he may go places. *"Gary,"* I used his first name for the first time, giving him a little leeway, *"I've seen more poisonings over the past 30 years than you've had canteen meals."* He had the decency to give me a grin for such an obvious lie. *"Don't give me the beady eye, you can call me Sherlock if you want to, but let's just say that once you're a copper you get a nose for these things. I've been a copper for over 30 years, I'm a good Chief Constable, and if you keep your gob shut and your ears open you may learn something."* He straightened up after the words 'Chief Constable', finally remembering who I was, and how miserable I could make his life if he didn't behave.

"Here's what you're going to find. The old

man was a big hotshot pilot, one of the sons said as much. He got the school going on the strength of his name. His name now means bugger all to the upcoming generation, he's history. He still likes the high life though, he was flying the flash new kite, the sons were on old ones. His card that he gave to me has loads about him, and very little about the school on it. The two sons are breaking their balls trying to make a go of it, but all he wants to do is fly. I'll bet you next month's wages that the two lads have everything they own, probably including a mortgage on their homes that's up to the hilt, riding on the school. When you talk to ex-pupils they'll tell you that the old man talked a lot, but it was the two boys that did all the work." He was looking a bit gobsmacked now. *"One of the two lads has a temper on him, it's the other one you want to look out for though, he's the planner. He's the one who will have got the poison. They were hoping that he'd drink the stuff, and hit the sea dead. That thing would sink like a lead brick. By the time they got him off the bottom, what with the currents and tidal flow around here, and the fishes having him for breakfast, dinner and tea, he'd be in no fit state to test properly, they'd be in the clear. 'Old man, pushing it on, heart attack.' They were just bang out of luck with that jet-ski."* He'd stopped scribbling now. *"Okay, just for the final coupe de grace, check all their insurance policies. There'll be one, probably the most recent, which pays out handsomely, and doesn't excluded these very circumstances. Ask them why, but more importantly how the hell, they got that."*

He had the decency to drop me back to the cabin we were renting; I'd like to have seen him try to get out of it. He had a beer with me and the wife.

Six months later and the case opened and shut on the same day, the elder lad pleaded guilty, the younger to conspiracy. They got twenty plus years each. I met up with DC Craig at the courts; I had a favour to ask. He was like a puppy with a new toy, couldn't do enough for me. The case had got him big brownie points with his boss, and as Jim, his boss, was an old mate of mine, I didn't mind the two of them getting the glory. So I got taken down to the holding cells. The brothers were in separate cells, both of them had that stunned *"what just happened to my life?"* look on their faces.

I gave both of them the same message. *"I don't mind what you do to your own family, but I reckon you've put my lad off flying for life. That's bang out of order, the kid was in love with the idea of it, and you robbed him of it, you bastards. You don't do that to my family."*

I think the message got through. 



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– Part 3

Martin Feeg

PART THREE IS ABOUT PANIC PREPARATIONS, ONLY THERE IS NO PANIC, BUT EXCITEMENT AS EVERYTHING IS SO WELL PREPARED. YOUR GLIDER IS PAWING WITH THE HOOVES, THE TUG PILOT AS WELL AS THE OFFICIAL OBSERVER IS HYPED WITH EXCITEMENT AND THEY CAN'T TALK OF ANYTHING ELSE...

Okay, okay, maybe you are right and things are slightly different. Probably I am a dreamer, but you can live your dreams – if you want to.

Fact: it is summer now, and any day can be the big day. So in this article we are talking of the brief period of five days in the run up to such a big day.

First of all please let me advise – quite often you will be prepared for seemingly nothing and a few times you will launch to achieve the big task, but you won't make it.

Don't allow such learning to become a disappointment, regard it as repeated final rehearsals.

Look, if you haven't achieved your task, but all the rest was really on the spot you and your support crew can be proud of themselves. Now you know you just have to repeat what you did, and you are on top of your equipment. At the same time, you should ask why you couldn't get precisely to where you wanted – was it the weather, bad tasksetting, trying to achieve more than your skills are up to, has your average speed been too slow, why has it been too slow... Questions after questions and the more you answer the more you profit.

Back to the "Before the task" preparations. I said it is approximately a five-day period. The weather is now more important than anything. If the five day forecast says no, then you can relax and may concentrate on anything else but gliding. However, if it looks like a yes, then you should alert your tuggie and your O/O – choose your wording carefully, according to the run-up time and the seriousness of the weather pattern. The earlier you are in your carrier as a meteorologist the less reluctant you should be to calling it a day. At the same time, it is not necessary for you to get started in the middle of the night. To understand what I am trying to say, read the articles from Klaus Ohlmann and the Mountain Wave Project [www.ifos.de/mwp]. In his league every minute is precious.

The weather is even more important for you. Your body has to be in optimal condition for the big task. These last five days are essential for stocking up body fluids, getting enough sleep into the system and alcohol is going to be a NO!. Also try to avoid any stress. No need to say; the closer the day the more important not to lax. Don't forget your equipment.

Everything ready and packed, have a box or bag with all your equipment for any, and in particular THE, soaring day. And don't forget to charge your batteries, even the mobile, no use of the toys if they don't have power. Have sunscreen, glasses, hat, shoes, trousers, shirt, fleecy-lined jacket, barograph, photo, logger, PDA, maps... ready and packed. You might ask now: fleecy-lined jacket – it's going to be warm out there. Yes, and what about the night, when you wait for your retrieve crew? This is another point I have to cover eventually – your emergency kit (extra food, liquid, torch, tie-down gear, etc.) While you are doing all the packing, weather checking and pouring water into you don't forget the car; wiper wash water, oil, petrol, tyre pressure... After all is it available or is your wife/kids using it?

So, there is a bit a fine-tuning necessary over the last few days. Use your brains, your expertise and ask others about their experience. Looking down the path of history, my kit changed over the years. A few things I can't miss today I wouldn't even have considered way back then. These three articles are far from complete and no matter how careful I would be they never will. I just wanted to open your eyes and make you aware that gliding starts way before the arrival on the airfield. In fact it never stops, there is always talk with other companions and literature to read. Just look, listen and make your own thoughts.

My wife is laughing at me, when I stare at clouds while we have a romantic barbecue evening at the beach. Don't get me wrong, she is important to me, after all, without her silent help, I wouldn't be where I am. A BIG THANK YOU to all those partners out there!



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US Nationals 2004 – An all Schleicher Affair!

All Open Class positions on the podium were taken by Schleicher pilots.

Dick Butler wins in his ASW 22 BL, 68 points ahead of Ron Tabery, also in an ASW 22. Ray Gimney follows in third place with an ASH 25.

Rick Indrebo is the new 18M US champion with his 15M ASW 27 B.

Congratulations to all pilots!

Kookaburra Gliders

Photographs of Kookaburra gliders on open trailers being towed by FX or FJ Holdens are being sought. The photographs will be copied and promptly returned where requested. Any additional information such as when and where the photos were taken, any history on the Kookaburra and/or Holden motor vehicle would be greatly appreciated. If you are able to assist please contact Mr G Crowley, PO Box 459, Sunbury, Victoria 3429.



GFA Badges & Certificates

FAI BADGE CLAIMS

September 2004

A CERTIFICATE

Howell, Adam David	11008	Beverley SS
Crabb, Darran Keith	11011	SA Air TC

A AND B CERTIFICATES

Valler, Michaela Mary	11013	Darling Downs SC
Colwell, Matthew Bruce	11016	Balaklava GC

B CERTIFICATE

Wilksch, Thomas	11003	Adelaide Uni
Tyler, Mark Adrian	11007	Adelaide Uni
Howell, Adam David	11008	Beverley SS

A B AND C CERTIFICATES

Etherington, Victor J	11008	Sunraysia GC
Izatt, Robert	11010	Boonah GC
Menzies, Andrew Stuart	11012	Balaklava GC
Rado, Keiron	11014	Kingaroy GC
Jorgensen-Day, Sean M	11017	Adelaide SC
Peterson, Colin Wayne	11018	Wagga Wagga GC
Reitsma, David	11019	Nth Queensland GC

C CERTIFICATE

Broug, Matthew Nicholas	10879	Central Coast
Allen, Sarah Julie	11000	Adelaide Uni
Cannon, Brendon	10983	Kingaroy GC
Feeney, John	10948	Boonah GC
Wilksch, Thomas C	11003	Adelaide Uni

SILVER C

Kirkham, William	4544	Sthn Cross GC
Valler, Gregory Oliver	4545	Darling Downs SC
Downes, Ian Alexander	4546	V.M.F.G.
Hofmeister, Hugh Brian	4547	Darling Downs SC

GOLD C

Feeg, Martin	1592	Sthn Cross GC
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DIAMOND GOAL

Kirkham, William	Southern Cross GC
Feeg, Martin	Southern Cross GC
Downes, Ian Alexander	V.M.F.G.

600KM DISTANCE

Feeg, Martin	Southern Cross GC
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Claims for all badges and certificates to:
FAI Certificates Officer Beryl Hartley
PO Box 275, Narromine NSW 2821
Ph: 02 6889 2733 (w), 02 6889 1250 (h)
Fax: 02 6889 2933,
Email <hartley@avionics.com.au>.

Decentralised Competition entries to:
Chris Stephens
PO Box W48 Wanniasa ACT 2903
Ph: 02 6231 4121,
Email <poboxw48@dynamite.com.au>.



GLIDER TRAILER BRAKES

Dick Johnson – Dallas, Texas

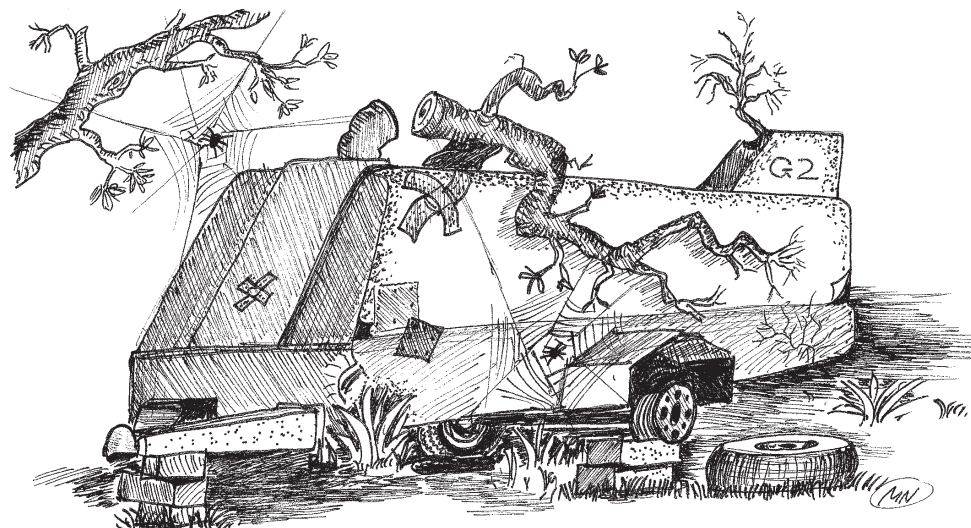
I HAVE OBSERVED RECENTLY THAT WHILE MOST GLIDER PILOTS WORK HARD TO KEEP THEIR SAILPLANES IN GOOD CONDITION, THEY OFTEN BADLY NEGLECT MAINTAINING THEIR TRAILER BRAKE SYSTEMS.

That is not only illegal when being towed by most mid-sized automobiles (check your auto's operation handbook tailoring restrictions), but it can easily result in unnecessary road accidents.

Almost all modern glider trailers come equipped with a telescoping tongue that automatically apply its surge brakes when an aft force is applied to the trailer coupling ball. The telescoping tongues are equipped with grease fittings that should be serviced every year to keep the hitch's sliding action free. However, that alone does not ensure that the brakes will work.

Most glider trailers are equipped with simple and old fashion mechanically operated brake systems that work fine when properly maintained. During braking, the aft motion of the hitch forces a brake actuation rod under the trailer to tighten, and thereby to actuate both trailer wheel brakes simultaneously.

The common problem there is that the length of the brake actuation rod needs to



Sketch: Mike Nelmes

be shortened a bit each year or so to make up for the wear on the brake shoes. There is a turnbuckle on the actuation rod under the trailer and ahead of the axle where that needs to be accomplished. These simple mechanical trailer brakes are not self-adjusting, as they are with modern automobiles. If one

does not tighten the brake rod periodically, the full travel of the sliding hitch coupling will be insufficient to operate the trailer wheel brakes.

While you are working under the trailer, oil the metal parts to keep them from rusting. Ordinary motor oil works fine there.



HGFA General Manager's Report



A month now into the job and a most fascinating time to say the least. There is much happening in the sport aviation arena at present, much that may not have been so previously apparent to many reading this article.

Civil Aviation Regulatory Reforms

Civil Aviation Regulations are gradually being replaced by the Civil Aviation Safety Regulations 1998 (CASR). The full transition from the existing CAR (and CAO's) to CASR will take some years yet, but already there are many new regulations in force. Until now the sport aviation sector has been of less priority, but is now under review and we should soon see the new drafts being posted out by CASA.

CASR is made up of several Parts. A full listing of these Parts can be viewed at the following website: [www.casa.gov.au/avreg/rules/1998casr/index.htm]. There are also new definitions that we will need to adjust to under this reform, namely that of Australian Aircraft. Effective from 7 September 2004, hang gliders, paragliders, microlights, powered hang gliders, powered paragliders and other sport aviation craft will fall under this new definition. This does have implications for us to consider and we are in review of those implications.

Other important aspects of the aviation changes include the concept of the Parallel Path Principle. Essentially this means that there must always exist an alternative to gaining access to licensing and certification of aircraft. This provides the potential for users to become licensed in the future other than through the HGFA or indeed any of the other aviation bodies. It also provides possibility for current organisations to look into providing other licence and certification services if they deem it in their interest to

do so and are able to acquire the requisite approval to do so from CASA.

There are three main areas of recent discussion in regard to reform that affect our area of activities:

1. *Light Sport Aircraft – a new addition to the aircraft certification criteria designed to cover those craft that have previously not had a home in the regulatory framework. Essentially this means home built microlights or other small manufactured aircraft governed within certain weight and performance limitations.*
2. *Part 149 deals with Recreational Aviation Administration Organisations or RAAO's. Who can be such an organisation and how they must operate. It demands standards for management as well as operations and provides accountability for the section of aviation that they administer on behalf of CASA.*
3. *Part 103 consolidates the rules applying to people who carry out recreational aviation private flight operations, maintenance, and training for recreational aviation in the following kinds of aircraft:*
 - * *Gliders (includes hang gliders/paragliders and powered versions thereof)*
 - * *Manned balloons and hot-air airships*
 - * *Rotorcraft administered by a recreational aviation administration organisation*
 - * *Ultralight aeroplanes administered by a recreational aviation administration organisation*

New Enforcement Penalties

Other Parts of the new regulations include Part 13 which deals with enforcement and the introduction of penalties which, for the larger part, will involve fines for breach of regulations. Penalties will be imposed for any requirement that is stated as a 'Must do' in the operations of aviation aircraft. Penalties will apply to the RAAO's as well as the individual under the regulations.

CASA Website

Needless to say the above represents a very brief introduction to the current reforms. You are advised very strongly to take a wander through the CASA website and gain a fuller understanding of the changes being brought about by these reforms. I will endeavour to improve our information dispersal of these changes, but your own investigation is strongly recommended. Please take a visit to [<http://rrp.casa.gov.au/>].

Clubs and General Membership

Clubs are an important part of our self regulation system. Clubs work with the assistance of volunteers who give up much of their personal time to ensure continued access to the sites from which we fly. This is often thankless work that is unseen by the majority of us that take to the air at these sites. More and more clubs are being demanded by local councils and other authorities to provide greater assurance of controls in their access privileges to these sites. The climate of the day is turning toward regulation. The days of free access are fast becoming a thing of the past. We can assist to maintain the privilege of site access only by joining together and presenting a common front to these bodies through club representation. Individual pilots that refuse any association with the local clubs or show contempt for local procedures developed by the clubs threaten our privilege of access.

While not currently an obligation enforced by the HGFA Operations Manual, members of the HGFA are requested to become members of the local club that has control of the local site and to actively assist in preserving the sport through compliance with local procedures. As a member of the HGFA you are obliged to accept and abide by the local procedures and to conduct your operations in a manner that supports the sport and its organisations. Clubs can also give back to their members in ways as outlined below.

Parachute Repack Assistance from the NSWHGPA A parachute is a crucial part of our flying equipment and needs a regular touch of T.L.C. The NSW Association would like, on a trial basis, to offer clubs within NSW the opportunity of having their members' chutes repacked for the up-coming season at about half the price it usually costs.

For accounting purposes the Association would need to have the name, address and HGFA number of the club member so that the club can be reimbursed \$15 for every chute repacked by their recognised professional. For further details on this offer please contact Steve Hocking (02) 93274025.

Personal Injury Assistance

Members of the NSW.HGPA are covered for personal injury and are entitled, or their next-of-kin are entitled, to claim a benefit from the NSW State Government's Sporting Injuries Insurance Scheme for serious and permanently disabling injury sustained in a

hang gliding accident provided they comply with the following simple requirements:

- i) *they are current members of the HGFA and reside in NSW*
- ii) *their State fee has been directed to the NSW.HGPA*
- iii) *they are currently registered as members of a Club affiliated to the NSW.HGPA (which pays the insurance premiums)*
- iv) *they are participating in a competition, or training or practicing for a competition, be it a Club or a World's, authorised by the Club*
- v) *you are not flying alone or for commercial purposes An essential ingredient of the Scheme is that the person injured was registered as a member of a Club affiliated to the NSW.HGPA at the time of the accident.*

Unfortunately, many members have overlooked this in the past. It costs no more to be covered by the Scheme once these simple conditions are met, and the cover is in addition to any other the member might have. Interstate and overseas pilots may benefit from this cover under similar conditions – but with at least a Short Term Membership of the HGFA and of an NSW.HGPA affiliated Club, and the payment of \$15 to the NSW Sporting Injuries Insurance Scheme to cover the insurance premium.

Conargo

The permit to access stock routes around the Conargo Shire expires on 30 September. Geoff Corby from Rural Lands has requested to know if there is anyone wanting to make an extension for access over the next month. Geoff has been informed that the Melbourne HGC will not be making use of the area, but if others are intending to access the area please contact Geoff before doing so. Geoff is contactable on (03) 5881 1055. Confirmation to access the area will then either be granted or denied depending on the Ranger's judgment of grass crops in the area.

Incidents/Accidents

No 1

Pilot: Restricted PG
Experience: <5 hours
Glider: DHV 1/2
Pilot injury: Nil
Glider damage: Nil
Location: Coastal soaring site
Conditions: 6 -8kt at time of take off freshening during flight

Description:

Pilot had just completed Restricted rating and was flying with other more experienced pilots. Winds were light and favourable on take off, but increased slowly during the flight. Original landing zone became unsuitable for landing due to the increased wind. Pilot was instructed to remain in the air while others landed so as to assist on the ground. During this time the wind freshened and started to push the pilot back behind the ridge. Descent occurred behind the ridge with no damage to pilot, glider or property.

Comments:

Pilot was inexperienced but flying with more experienced pilots. Taking lead from the more experienced pilots this pilot stayed aloft a little too long and became victim to the slower performance of the glider in respect to the freshening breeze. While no injury or damage resulted from this flight, it is worth noting that the lesser experienced pilot may be lured into thinking they are okay while more experienced pilots continue to fly. Pilots with low air hours need to be aware that they can fall victim to this kind of situation merely because of faith they have that they can do as others do. For the experienced pilot, you are mimicked often by the lesser experienced. If you are able to advise on changing conditions through radio contact then the earlier this advice can be passed on the better it may be for those lesser experienced.

No 2

Pilot: Intermediate PG
Experience: 150+ hrs (18 hrs last 90 days)
Glider: DHV 2
Pilot injury: Nil
Glider damage: Nil
Location: Coastal soaring site
Conditions: 6-8kt at time of take off, freshening during flight

Description:

Winds were light during the morning, gradually increasing during the afternoon. Several flights had been made with top landings earlier. Cloud formations down the coast were giving indication of a developing front, but build up had been gradual and similar to the preceding day when nothing had eventuated. Pilot launched with intent to make a quick final flight. Penetration into wind was still good, although lift was

increasing more rapidly away from hill.

Clouds became quickly darker indicating rapid development of an approaching front. Pilot commenced spiralling to lose altitude, stabilising after approximately 12 turns. Lift remained strong and penetration into wind was no longer possible. Alternative landing site was available downwind. While continuing to head into wind with big ears and full speed bar the paraglider was manoeuvred using weightshift toward land and over the upwind end of the chosen landing area. Landing was successfully achieved, albeit with the wind pushing the pilot backward and requiring rapid deflation of the wing so as not to be dragged. Several other paragliders were caught by the sudden increase in wind and a number of them landed successfully in different locations. Two pilots, both of relative inexperience, were not so able to pilot their craft to a safe landing.

Comments:

Signs were apparent that a front was developing along the coast. Generally it is fairly predictable on the timing of when the front will arrive due to the freshening wind and developing clouds. This instance however did not offer such clear warnings. The water surface remained relatively smooth giving no indication that the winds would be so strong. The clouds were developed in street formation further south of the area where pilots were flying. The change was rapid when it came. Caution is always needed in such conditions and the best advice is to avoid flying whenever such conditions present themselves. Equally important though is the ability to apply rapid descent manoeuvres when needed and to always be planning and revising your landing options during the flight. The practice of skills that enable you to pilot your craft down, such as spirals and B-line stalls, are essential skills to master and have confidence in performing. This applies to inland flying as much as it does to coastal soaring.



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Did He Say Solo?!

Mike Nelmes

GLIDER PILOTS: CAST YOUR MIND BACK TO YOUR FIRST SOLO FLIGHT. THE NERVES, FOR SOME A FEW DOUBTS PERHAPS; AND THEN THE SENSE OF UNREALITY AND EUPHORIA WHEN IT'S OVER AND YOU'VE HAD TIME FOR IT TO SINK IN – “DID I REALLY JUST DO THAT?”

Like most of the general population, I hadn't pondered much on what it must be like to take an aircraft up on your own for the first time. Partly because it wasn't something I seriously expected I would ever find myself doing, and partly because I thought, well, an aircraft pretty well flies itself, doesn't it? Particularly a glider. I knew plenty of pilots, as I've worked with (old) aircraft for much of my working life – from the ground. One would logically assume that all these people had, at one point, gone through the solo experience – but I couldn't recall any of them telling me about it. Perhaps they had and it just didn't mean enough at the time to register. Anyway, all in all, there couldn't be that much to it.

And then the cold, hard truth was revealed.

(To anyone about to take the plunge: don't be put off by 'the cold, hard truth'. Mine was a very positive experience – but it did take perseverance. As they say, if it was easy you wouldn't bother. And for those who've read umpteen 'first solo' accounts, feel free to skip this one; mine must be a fairly typical experience. For those leaving now: it does have a happy ending!)

It all began when I got a year-long job contract in Narromine. In the weeks before moving, I read up about the town. The Shire Council website hailed it as Australia's premier gliding destination, and the gliding photos caught my interest. The more I pondered this news, the more I wanted to try it out. I never like to pass up an opportunity.

On arrival I found that I worked in the same building as the local gliding clubhouse – the Orana Soaring Club, now known as the Narromine Gliding club – and got to meet its members (and a great bunch they turned out to be). It transpired that it was Narromine Cup Week, and on the first day I found myself in the right-hand seat of a Cessna 180 with Nick the tug pilot, camera in hand to get some aerial snaps of the event. We did an early morning photo flight before the gliders were airborne.

Back on the ground, the gliders were lined up like cabs at Piccadilly Circus, if you'll excuse the cliché, with one going up every few minutes. It was a sight to behold for the first time – and so was the picture of half a dozen thermalling gliders forming a lazy circle overhead.

It would have been a week or so later when I first climbed into a glider cockpit – the club's Twin Astir in which I would do all my training. My impressions of that flight with Chris from Canberra are still vivid. The headlong, barrelling rush along the ground, made more alarming by being unreasonably close to it. The loud, sharp 'snap' of cable release. The rush of air, even with the vent closed, which in my previous flying had always been drowned out by engine noise. And the view through that huge, unobstructed canopy – all the way to the Warrumbungle Mountains. (On later flights I became more used to it, and was more intent on finding my house to see if the dog was in the yard). Then, the landing – the unnatural plunge towards the ground, as if you're on 45-degree downhill rails and the brakes have failed.

So, through the summer I wiped the sweat from my brow on those 45-degree days, and learned to fly. Somewhere along the way someone said, “You'll remember your first solo for the rest of your life.” It hardly registered – that was way off in the future.

I get the impression that we get spoiled with the conditions at Narromine. Few powered aircraft around, so I never had to change course for another aircraft – a complication I was glad to be able to do without for a while. Predictable weather, no hills to run into, and only four kilometres from my house to the aerodrome.

By the time Keith (one of my instructors) and his partner, Anne, headed off overseas, I had over 20 flights logged. “You'll have gone solo by the time we get back”, were Keith's parting words. “Just stay off those computer flight simulators – they make you fly like a fighter pilot.” Yeah, yeah.

I could feel the butterflies building up already – I knew it was getting close now. Maybe the weather would take a turn for the worse, and I'd be given a few weeks' reprieve. It wasn't to be. The weekends were fine, and I spent the next couple of Sundays doing short hops to fine-tune my take offs and landings. My confidence went up and down. I had trouble finding an unfamiliar landing strip during one disconcerting flight. But, as they say, you learn the most from your mistakes, and I was consciously working on my tendency to overcorrect.

I'd made three flights one Saturday, all without assistance from Kenny Mac, my instructor that day. When the glider had stopped rolling, we sat and discussed the flight. Then: “You okay for a solo?” (What did he just say?)

I'm about to ask, when in the periphery of rearward vision I see his canopy open, and out he climbs. Did I actually say yes? Richard in the tug is waiting, engine running. I look over my shoulder – no Kenny Mac. Now, that doesn't look right at all – check again. Empty. It's like you're a passenger in a car, and you look across at the driver's seat – and there's no-one there. It suddenly hits me that I'm the driver. The fact that I have been the driver for some time now isn't of much comfort. “Just remember it'll lift off a little earlier without the extra weight”, he calls out as his quickly diminishing figure heads back to the piecart.

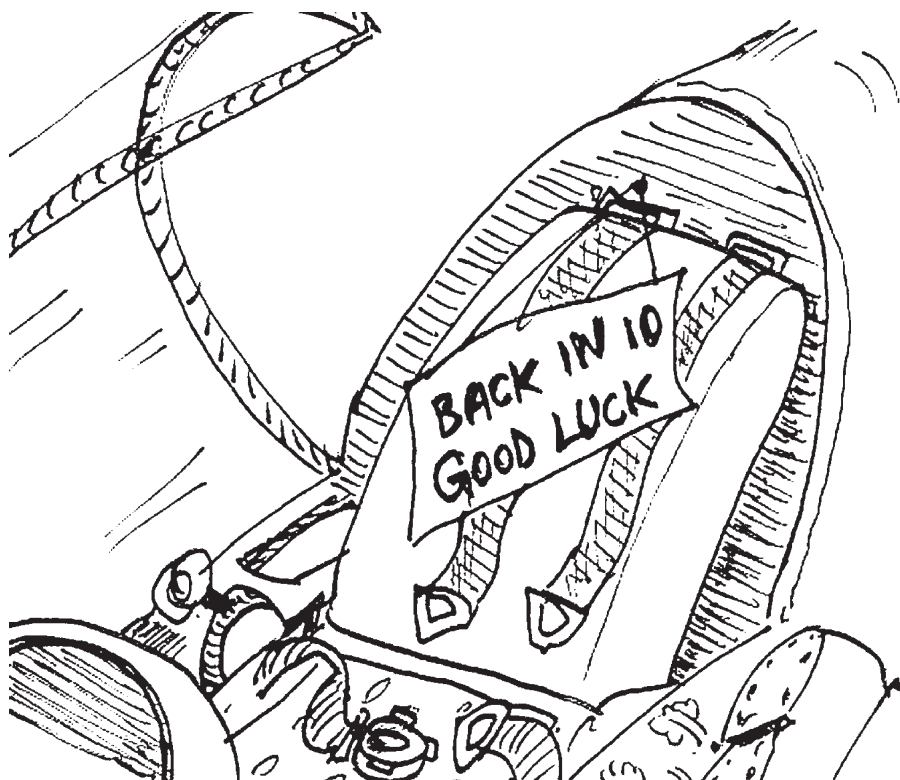
I'd been warned about this. It's clearly a cunning plan designed to allow no opportunity for escape. The phrase rings in my head as the tug's engine revs:

You'll remember your first solo for the rest of your life.

Longer than 20 minutes, I trust?

Alright. Enough with the negative vibes, as Oddball was wont to say in Kelly's Heroes. Kenny wouldn't send me up if he didn't think I was ready – or so a wise man once said (Gavin, font of all aerial wisdom. It must be true). And it makes perfect sense. A couple of deep breaths, then hook on. Re-do your checks: Harness tight. Airbrakes locked in. No flaps fitted. Wing man present. A glance at the windsock. Runway and airspace clear. Emergency landing options ahead. Canopy locked. Rear canopy locked. Trim set forward for take off. Altimeter set. Battery and radio on. Undercarriage lever locked. Controls working freely. Thumb up. Go.

The main thing I'm dreading is a wing dip, as I'd overcorrected one time it touched the ground, and had ended up oscillating side to side a couple of times. It dips somewhat this time, but I'm ready for it. We're up, and I'm mildly euphoric after a hassle-free take off and can loosen my Tarzan-grip



Sketch: Michael Nelmes

the Twin Astir that has brought me down in one piece. Next thing I know, I'm shaking hands with the landlubbers who also happen to be my mentors. If only Lyndell, my late wife, could have been there too.

So, that was it. Later I asked Kenny Mac if he'd noticed my early flare, and of course he had. But my second solo landing was better; in fact he gave me 10/10. That night it was my bar-shout at the club dinner, and I didn't mind a bit.

That's where things stand now. I can only admire the skill and patience of my instructors. It was one life's real achievements, and of course, it's true – I won't forget it. And this, I'm told, is just the beginning. But for the moment, diamond height, silver distance and such things are as remote to me as soloing was a few months ago.



Sub-editor's note: Keith and Anne were travelling between Iringa and Mbeya, Tanzania, when they received an SMS from KennyMac telling of Michael's first solo – they celebrated that night with Kilimanjaro lager!

on the stick. I consciously relax a bit and sink back in the seat. The second-worst part is over, at least. I haven't had any trouble lately with aerotows, and I settle into a nice smooth ascent, carefully following the tug as it gently turns left.

I glance back and forth from tug plane to altimeter – 2,000ft: I pull the release, and I'm away and banking right. Release check: no flaps; raise undercarriage; speed 55kt; trim back a bit. What do I do now? Stooze around for a while, or start heading back? I decide to head for a dark brown field to see if there's any lift; there's not. From then on, it's just turns while I gradually lose altitude.

Getting near 1,000ft agl now, and it's time to join the circuit. It's my favourite landing strip – easy to find, and there are clear landmarks at the turning points. Checks and radio call. *"All stations Narromine, this is glider Oscar Charlie downwind for runway 22 grass right, undercarriage is down and locked. All stations Narromine."*

My voice wasn't shaking, was it? Sounded calm?

This is it – the key is to make a good circuit. Over the river I make the baseleg turn. Muscles tighten again. Wait for it, a bit longer... runway lining up... final turn. There's not much choice now, I'm going to come in one way or another! Airbrakes out, then in a little as I decide it was a bit early. I fleetingly recall that the GFA basic gliding manual has 128 pages, and wonder if I'm supposed to have them all in my head at this moment. No, just speed and aiming point, as Arnie had repeated – they're the main things now. Course correction – I'm a bit left. That's better, now back to the descent.

November 2004

Check ASI – still at 60kt. That'll be my last glance down, as the ground is looming. Aiming point's coming up a bit fast, so I pull the airbrakes in a tad. I'm still left a little, but nothing's in the way so I'll keep that track.

Eyes on the horizon; it's level. I pass the aiming point, and the ground seems to be coming up somewhat faster than it should. *"Don't fiddle with the airbrakes at the last minute"*, I'd been told – so I bring the stick back instead. A bit too early. The glider slows noticeably, hangs for a bit, then touches. Slightly harder than I'd have liked, but no bounce, and no real jolt. Brakes full on, keep the wings level, some right rudder or you'll end up on the tarmac... and stop.

I sit there for a minute or two, just taking in the momentous occasion, and thinking through what I've been doing for the last 15 minutes. I unclutch my sweaty hand from the stick and wipe it. I climb out and stand there, looking at

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Contact: Dieter Stuempfl

Contact Addresses

GFA

NSW Gliding Association (NSWGA)

Australian Air League

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Australian Soaring Centre

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Bathurst Soaring Club

PO Box 1682, Bathurst NSW 2795.

Byron Power Gliding Club

PO Box 815, Byron Bay NSW 2481,
02 66847627, 0428 847642.

Byron Soaring Centre & Aeroclub

PO Box 549, Byron Bay NSW 2481
02 66844244.

Canberra Gliding Club

PO Box 1130, Canberra City ACT 2601,
02 64523994, 0428 523994.

Central Coast Soaring Club

PO Box 1323, Gosford South NSW 2250, 02 49772740.

Cudgegong Soaring Pty Ltd

PO Box 352, Frenchs Forest NSW 1640,
02 94522777, 02 94530777.

Forbes Soaring & Aero Club

PO Box 267, Forbes NSW 2871,
02 68523845.

Goulburn Gliding Group

57 Munro Rd, Queanbeyan NSW 2620.

Grafton Gliding Club

16 Fuller St, Mullaway NSW 2456,
Sec: Bob King, 02 66541638 (h), 040 388551, <kingb@coffscs.nsw.edu.au>.

Greenethorpe Gliding Club

Weerona Young Rd, Grenfell NSW 2810,
02 63431375, 02 63431375.

Harden Gliding Club

78 Badenoch Crs., Evatt ACT 2617, 02 62585554, 02 62578280, 0418 670291,
[users.bigpond.com/richard.hart/hgc/default.html], Sec: Richard Hart 02 62585554.

Hunter Valley Gliding Club

PO Box 9, Newcastle NSW 2300.

Kentucky Flying Club

The Hill, Kentucky NSW 2354.

Lake Keepit Soaring Club

PO Box 1525, South Tarnworth NSW 2340,
02 67697514, 02 67697640.

Leeton Gliding Club

PO Box 607, Leeton NSW 2705, 02 69536970.

Narromine Gliding Club

PO Box 240, Narromine NSW 2821,
02 68891229, 02 68892733.

NSW AIRTG Gliding Club

41 Simpson Ave, Forest Hill NSW 2651,
02 69227526.

NSW Police Gliding Club

27 Bourne St, Wentworth Falls NSW 2782,
0427 592744.

RAAF Richmond Gliding Club

RAAF Base, Richmond NSW 2755.

RAAF Williamstown Gliding Club

c/o Mr AJ Lee, 10 Federation Dr., Medowie NSW 2318.

Royal Australian Naval Gliding Association

PO Box A37, Naval Air Base, Nowra NSW 2540.

Scout Association NSW Gliding

Dr Reg Mitchell, 15 Harrison Ave, Eastwood NSW 2122, 02 93519660, 02 93519540.

Soar Narromine Pty Ltd

PO Box 56, Narromine NSW 2821,
02 68891856, 02 68892488.

Southern Cross Gliding Club

PO Box 132, Camden NSW 2570,
02 46558882.

Sportavia Soaring

PO Box 78, Tocumwal NSW 2714, 03 58742063.

Summerland Gliding Club

PO Box 820, Lismore NSW 2480, Sec: David Wright, 02 6621 6495 (w), <wrights@norcom.au>

Sydney Gliding Inc. (Concordia GC)

PO Box 633, Camden NSW 2570, 0412 145144.

Temora Gliding Club

PO Box 206, Temora NSW 2666, 02 69772733.

Wagga Wagga Gliding Club

25 Beauty Point Ave, Wagga Wagga NSW 2650, 0427 205624.

Wee Waa Gliding Club

(formerly Warrumbungle Gliding Club)
PO Box 586, Wee Waa NSW 2388,
02 67954333.

Queensland Soaring Association (QSA)

Boonah Gliding Club

PO Box 107, Boonah QLD 4310, 07 54632630.

Bundaberg Soaring Club

PO Box 211, Bundaberg QLD 4670,
07 41553158.

Caboolture Gliding Club

PO Box 920, Caboolture QLD 4510,
0418 713903.

Central Queensland Gliding Club

PO Box 953, Rockhampton QLD 4700,
07 49371381.

Darling Downs Soaring Club

PO Box 584, Toowoomba QLD 4350,
07 46637140.

Gympie Gliding Club

PO Box 103, Gympie QLD 4570, 07 54867247.

Kingaroy Soaring Club

PO Box 91, Kingaroy QLD 4610, 07 41622191.

Moura Gliding Club

PO Box 92, Moura QLD 4718, 07 49973265.

North Queensland Soaring Centre

PO Box 1743, Aitkenville QLD 4814.

No. 229 Squadron Australian

Air Force Cadets

3 Hedlow Court, Carindale QLD 4152,
07 33989745, 0148 984752.

Southern Downs Aero & Soaring Club

PO Box 144, Warwick QLD 4370,
07 38923473.

Tarwan Soaring

PO Box 34, Wandoan QLD 4419, 07 46274080.

SA Gliding Association (SAGA)

Adelaide Hills Soaring Group

PO Box 1, Bridgewater SA 5155.

Adelaide Soaring Club

PO Box 94, Gawler SA 5118, 08 85221877,
08 85223177.

Adelaide Uni Gliding Club Inc., Adelaide

Uni Sports Association

The University of Adelaide, SA 5005,
08 88262203.

Alice Springs Gliding Club

PO Box 356, Alice Springs NT 0871,
08 89526384.

Balaklava Gliding Club

PO Box 257, Balaklava SA 5461,
08 88645062.

Barossa Valley Gliding Club

PO Box 123, Stonefield via Truro SA 5356,
08 85640240.

Bordertown Keith Gliding Club

PO Box 377, Bordertown SA 5268.

Gawler Gliding Club

PO Box 135, Cockatoo Valley SA 5351.

Millicent Gliding Club

PO Box 194, Millicent SA 5280.

Murray Bridge Gliding Club

PO Box 1277, Victor Harbor SA 5211.

Northern Australian Gliding Club

PO Box 38889, Winnellie NT 0821.

Port Augusta Gliding Club

PO Box 272, Port Augusta SA 5700,
08 86436228.

Renmark Gliding Club

PO Box 450, Renmark SA 5341,
ph/fax 08 85951422, mob 0417890215.

SA AIRTG Gliding Club

PO Box 2000, Salisbury SA 5108.

Scout Gliding Club

22 Burford Crescent, Redwood Park SA 5097.

Waikerie Gliding Club

PO Box 320, Waikerie SA 5330, 08 8541 2644, 08 85412761.

Whyalla Gliding Club (and VSA)

PO Box 556, Whyalla SA 5600, 08 8640 4432, 0413 127825.

Victorian Soaring Association (VSA)

Albury Corowa Gliding Club

PO Box 620, Wodonga VIC 3689.

Beaufort Gliding Club

116 Tennyson St, Elwood VIC 3184.

Bendigo Gliding Club

62 Lawson St, Bendigo VIC 3550.

Corangamite Soaring Club

Kurweeton, Derrinallum VIC 3325.

Geelong Gliding Club

PO Box 197, Bacchus Marsh VIC 3340.

Gliding Club of Northern Tasmania

58 Hales Street, Wynyard TAS 7325,
03 64422108.

Gliding Club of Victoria

PO Box 46, Benalla VIC 3672, 03 5762 1058, 03 57625599.

Grampians Soaring Club

PO Box 468, Ararat VIC 3377, 03 53524938.

Latrobe Valley Gliding Club

PO Box 625, Morwell VIC 3840.

Mangalore Gliding Club

PO Box 80, Avenel VIC 3664.

Mount Beauty Gliding Club

44 Roper St, Mount Beauty VIC 3699.

Murray Valley Soaring Club Ltd

PO Box 403, Corowa NSW 2646.

RAAF East Sale Gliding Club

c/o Gary Mason, 9 Weir St, Sale VIC 3850.

Soaring Club of Tasmania

c/o Bruce Thompson, 34 Clinton Rd, Geilston Bay TAS 7015, 03 62552191 (h), 03 62252561 (CFI).

South Gippsland Gliding Club

PO Box 475, Leongatha VIC 3953.

Southern Riverina Gliding Club

PO Box 78, Tocumwal NSW 2714,
03 58742063, 03 58742705.

Stawell Gliding Club

20 Jones St, Stawell VIC 3380, 03 53582713.

Sunraysia Gliding Club

PO Box 647, Mildura VIC 3500.

Swan Hill Gliding Club

PO Box 160, Nyah VIC 3594.

Tumbarumba Gliding Club

Mundaroo, Tumbarumba NSW 2653.

Victorian Motorless Flight Group

(Operates out of Baccus Marsh aerodrome)
GPO Box 1096J, Melbourne VIC 3001, 0402 281928, 03 98486473.

Wimmera Soaring Club

PO Box 158, Horsham VIC 3402.

WA Gliding Association (WAGA)

Beverley Soaring Society

PO Box 136, Beverley WA 6304, 0407 385361.

Gliding Club of Western Australia

356 Abernethy Rd, Cloverdale WA 6105,
08 92774148, 0409 683159, 08 96351023.

Morawa Flying Club

PO Box 276, Morawa WA 6623.

Narrogin Gliding Club

PO Box 232, Narrogin WA 6312, 0407 088314 or 08 98811795 (weekends).

Stirlings Gliding Club

c/o Post Office, Lower King WA 6330.

WA Squadron Australian Air Force Cadets

Headquarters, RAAF Base, Pearce, Bullsbrook WA 6084, 08 95717800,
08 95717877.

HGFA

All correspondence, including changes of address, membership renewals, short term memberships, rating forms and other administrative matters should be sent to:

HGFA National Office

PO Box 157, Hallidays Point NSW 2430. Ph: 02 6559 2713, fax: 02 6559 3830, <office@hgfa.asn.au>.

HGFA General Manager

Chris Fogg, PO Box 258, Helensburgh NSW 2508, ph/fax 02 4294 9300, 0417 766356, <general.manager@hgfa.asn.au>.

Information about site ratings, sites and other local matters, contact the appropriate State associations, region or club.

Board Members

Pres: Rohan Holtkamp RMB 236B Western Highway, Trawalla VIC 3373, ph/fax: 03 53492845, 0409 678734, <President@hgfa.asn.au>.

Vice-Pres: Rohan Grant 188 Bathurst St, Hobart TAS 7000, 03 62334405 (h), fax: 03 62243598, <Rohan.Grant@hgfa.asn.au>.

Sec: Carla Pierce 33 Edmonds St, Diamond Creek VIC 3089 Ph: 0407 788710, <Secretary@hgfa.asn.au>.

Trs: Stewart Dennis PO Box 118, Dickson ACT 2602, ph/fax 02 62470008, 0429 158721, <Treasurer@hgfa.asn.au>.

Board Members:

Hakim Mentès 16/59 Riversdale Rd, Hawthorn VIC 3122, 0412 617216, <Hakim.Mentes@hgfa.asn.au>.

Bill Moyes 173 Bronte St, Waverley NSW 2024, 02 93875114, fax: 02 93693342, <Bill.Moyes@hgfa.asn.au>.

Andrew Polidano PO Box 1903, Byron Bay NSW 2481, 0428 666843, <Andrew.Polidano@hgfa.asn.au>.

Kathy Little (formerly Robinson) Lot 108, Pinjarra Rd, Ravenswood WA 6208, 08 9537 6204, <Kathy.Robinson@hgfa.asn.au>.

Mark Thompson 40 Hovia Terrace, Kensington WA 6151, 08 94912417 (w), 0428 729028, <Mark.Thompson@hgfa.asn.au>.

Microflight Public Relations

Paul Haines ph/fax: 02 42941031.

GFA MEMBERSHIP FEES 2003-2004

Membership:	Normal	Family
NSW/WA/QLD	\$175	\$139
Victoria	\$176	\$140
South Australia	\$179	\$143

Student membership:	Full	Family
NSW/WA/QLD	\$108	\$72
Victoria	\$109	\$73
South Australia	\$112	\$76

Short-term membership:	1 Month*	3 Month*
NSW/WA/QLD/VIC	\$48	\$60
South Australia	\$57	\$69

States & Regions

ACTHGA

PO Box 3496, Manuka ACT 2603; Pres: Steve Foggett 0417 313589, <sfoggett@hotmail.com.au>; Sec: Mark Elston 0428 480820, <mark.elston@defence.gov.au>; Trs: Tony Davidson 0500 883322, <td@silktel.com>; Committee members: Michael Porter, Sascha Moroney, Craig Donnell, Tim Grabovszky; SSO: Peter Bowyer 0412 486114. Meetings 3rd Mon/month 7:30pm Yamba Sports Club, Phillip.

Hang Gliding Association of WA

PO Box 82, South Perth WA 6151; <hang_gliding_association_wa@hotmail.com>. Admin: Rick Williams, <hang_gliding@dodo.com.au>; HG Rep: Gavin Nichols, <gknichol@tpg.com.au>; PG Rep: Mike Duffy, <MikeDuffy@graduate.uwa.edu.au>; Trike/HGFA Rep: Keith Lush, <keith.lush@iinet.net.au>

NSW Hang Gliding Association

Sec: Steve Hocking, 19 Gladswood Gardens, Double Bay NSW 2028, ph/fax: 02 9327 4025, <nswhga@s054.aone.net.au>.

North Queensland Hang Gliding Association

12 Van Eldik Ave, Andergrove QLD 4740; Pres: Graeme Beplate 07 49552913, fax: 07 49555122, <sitework@mackay.net.au>; Sec: Ron Huxhagen 07 49552913.

Queensland HG Association

Pres: Greg Hollands <greg.s.hollands@transport.qld.gov.au>, PO Box 61, Canungra Qld 4275 07 38448566.

South Australian HG Association

1 Sturt St, Adelaide SA 5000, ph: 08 8410 1391, fax: 08 82117115; Pres: Stuart McClure 08 82973452 (h), <stuart.mcclure@csiro.au>; Sec: Mark Tyminski 0411 414 816, <marknjn@senet.com.au>; Trs: Robert Woodward 08 82977532 (h), <rob_woodward@alternaterepositioning.com>.

Tasmanian HG & PG Association

19 Christella Rd, Kingston TAS 7050, [www.thpa.net]; Pres: Anthony Mountain (Sth HG pilot) 0407 299011, <president@thpa.net>; Sec/Trs: Mico Skoklevski (Sth HG pilot) 0418 398624, <secretary@thpa.net>; PG contact: Rob Steane (Sth PG pilot) 0418 146137, <paraglide.info@thpa.net>, Bill Brooks (Nth PG pilot & HG info) 0409 411791, <northern@thpa.net>.

Victorian HG and PG Association

PO Box 157 Northcote VIC 3070, [www.vhpa.org.au]. Pres: Carolyn Dennis; Sec: Steve Norman; Trs: Lisa Charleston; SSO: Rob Van Der Klooster 03 52223019 (h). Site weather-boxes: Three Sisters 0409 864700, Buck-land Ridge 0407 356295, Mt Buffalo 03 57501515, Ben More 0417 112062.

Clubs

New South Wales

Blue Mountains HG Club Inc.

Pres: Peter Burkitt 0418 435204, <pburkitt@ozemail.com.au>; Sec: Jim Grant 02 47588625; Trs: Allan Bush 02 47738037, <fairallan@pnc.com.au>; SSO: Dave Petrie 02 47871610, <petrie@lisp.com.au>; Allan Bush 02 47738037, <fairallan@pnc.com.au>; Newsletter: Alan Bond 02 98995351, <skybond@primus.com.au>. Meetings: 3rd Wed/month, 7:30pm, Blue Cattle Dog Tavern, Mamre Rd, St Clair.

Byron Bay HG Club – see Northern Rivers Hang Gliding and Paragliding Club

Dusty Demons Hang Gliding Club

30 Dumaresq St, Dickson ACT 2602. Pres: Scott Hannaford 0417 272498, <shannaford@canberratimes.com.au>; Trs: Dan Watters 0410 347801, <daniel.watters@csiro.au>; Sec: Andrew Barnes 0416 020588, <andrew@dustydemons.com>; SSO: Grant Heaney 02 48494516, 0419 681212, <grant@hustydemons.com>; Editor: Kath Kelly 02 64561590, 0427 220764, <phase9@snowy.net.au>.

Hunter Skysailors

Pres: David Holgate 0410 112381, <david.holgate@hotmail.com>; V-Pres: Meg Butler

0408 446358; SSO: James Thompson 0418 686199, <james.b.t@hunterlink.net.au>.

Meetings: last Tue/month 7pm, Hexham Bowling Club.

Illawarra Hang Gliding Club Inc.

27a Paterson Rd, Coalcliff NSW 2508. Pres: Frank Chetcuti 0418 252221 <chetcuti1@bigpond.com>; Sec: John Parsons; SSO: Tim Causer 0418 433665 <timcau@ozemail.com.au>.

Kosciusko Alpine Paragliding Club

[www.homestead.com/kapc]; Pres: James Rylie 02 62359120, <rymicalago@netspeed.com.au>; Sec: Alex Johnson 0411 748713.

Manilla SkySailors Club Inc.

PO Box 1, Manilla 2346, [www.FlyManilla.com]. Pres: Brian Shepard 0401627830; V-Pres: Suzy Smith 02 6785 6545; Sec/Trs: JJ Bastion 0427 161504; SSO (HG): Patrick Lenders 02 67783484; SSO (PG): Godfrey Wenness 02 67856545, SSO (Towing): Rhett Rockman 0428 428962; Trikes: Will Ewig 02 67697771.

Mid North Coast HGPG Club

Pres: Nigel Lelean 0419 442597, <ilean@smarchat.net.au>; SSO: Jason Turner 0419 997196, <jasonflys@hotmail.com>.

Newcastle Hang Gliding Club

PO Box 64 Broadmeadow NSW 2292; [www.nhgc.asn.au], <fly@nhgc.asn.au>. Pres: Mick Walmsley 0425 735784; V-Pres: Glenn Selmes 0425 275549; Sec: Matt Olive 02 49423131; Trs: Tash McClellan 0428 278 867; SSOs: Al Giles 02 49430674, John O'Donohue 02 49549084, Tony Barton 0412 607815. Meetings: Last Wed/month 7:30pm Souths Leagues Club.

Northern Beaches HG Club

Pres: Steve Phillips 0408 662608, <stephenphillips@optusnet.com.au>; Trs: Jim Gaal 0414 799822, <jimg@acay.com.au>; Sec: Owen Pearce 02 99133547; SSO (HG): Glen Salmon 02 99180091; Wayne Fitzgerald 02 99827094; SSO (PG): Wayne Fitzgerald 02 99827094. Meetings: 1st Tue/month, 7pm, Mona Vale Bowling Club.

Northern Rivers HG and PG Club

PO Box 126, Byron Bay NSW 2481, [http://bbhgc.tripod.com/]. Pres: Eddie Gray 02 66841795, <edgrey@linknet.com.au>; Vice-Pres: Maggie Clark 0404 263524; Sec: Mick Mackender 0414 867820.

Stanwell Park HG and PG Club

PO Box 258 Helensburgh NSW 2508; Pres: Chris Fogg 0412 904800, <fogg@idx.com.au>; Trs: Adrian Le Gras; Sec: Scott Zwanenbeek <scottz@internode.on.net>; SSO: Tony Armstrong <tony@hangglideoz.com.au>, 02 42949999.

Victoria

Dynasoarers Hang Gliding Club

Pres: Darren Brown 03 93971233 (w), fax: 03 93974566, <dbrown@bmlegal.com.au>; Sec: Dale Appleton 0408 382635; Trs: Greg Holt 0418 516058; SSO: Rob Van Der Klooster 03 52223019, 0408 335559; Publicity Officer: Harry Buckle 03 52214544, <monument@pipeline.com.au>. Meetings: 1st Fri/month, venue see: [vhpa.org.au/dynal].

Melbourne Hang Gliding Club Inc.

PO Box 8057, Camberwell North VIC 3124; [www.hgfa.asn.au/~melbourne/], <melbourne@hgfa.asn.au>. Pres: Hugh Alexander 03 97101214 (h), 0417 355578, <wurundjeri.lane@bigpond.com>; Sec/VHPA rep: Steven Ross 0410 600595, <stevenc@pchelpathome.com.au>; Trs: Leif Gorander 03 97080136 (h); 0407 540502, <leif.gorander@varianinc.com>; SSO: Peter Batchelor 03 97353095 (h), <pbatch@netspace.net.au>. Meetings: 3rd Wed/month at 6:30pm at the Palace Hotel, 893 Burke Rd, Camberwell.

North East Victoria HG Club Inc.

[www.hgfa.asn.au]. Pres: Paul Harrison 0428 356239, <snowyck@netc.net.au>; Sec: Brian Webb 0417 530972, <brianwebb@bigpond.com>; Trs: Isla Christian; Web: Barb Scott 0408 844224; Meetings: Check [www.hgfa.asn.au/~nevghc/].

ALL CLUBS PLEASE CHECK DETAILS IN THIS SECTION CAREFULLY

Could all Clubs please ensure they maintain the correct and current details of their Executive Committees and contacts here in the magazine. Specific attention is directed to the listing of SSOs and SOs for the Clubs. Please ALL CLUBS and nominated Senior SOs and SOs confirm ALL SSO and SO appointments with the HGFA Office <office@hgfa.asn.au> to ensure that those holding these appointments have it listed on the Membership Database and can receive notices and correspondence as required. Appointment of these officers is required to be endorsed by Clubs in writing on the appropriate forms. Sometime in the future if confirmation is not received, those listed in the Database where no current forms or confirmation is held, the appointment will be taken as having expired.

General Manager, HGFA

Sky High Paragliding Club

[www.skyhighparagliding.org]; Pres: Colin Page 0411 555128; V-Pres: John Styles <jdstyles@hotmail.com>; Trs: Clinton Arnall 0415 229315, [membership@www.skyhighparagliding.org]; Sec: Georgia Buckingham <secretary@www.skyhighparagliding.org>; Web: Tony Tidswell <webmaster@www.skyhighparagliding.org>; APN Editor: Julie Sheard 0425 717944 <editor@www.skyhighparagliding.org>; SSOs: Kevin Gingell-Kent, Alister Johnson, Adam Neinkemper. Meetings: 1st Wed/mth 8pm, Retreat Hotel, 226 Nicholson St, Abbotsford.

Southern Microlight Club

[http://home.vicnet.net.au/~stclub/]. Pres: Kel Glare 03 94395920 (h), 0421 060706; V-Pres: Mark Howard 03 97511480; Sec: Dianne Pierpoint 03 9735278; 0429 938426. Newsletter: Barry Wood <jbwood@bigpond.net.au>, Michael Rose <mrose3@bigpond.net.au>. Meetings: 2nd Tue/month 8pm, The Manningham Club, 1 Thompsons Rd, Bulleen.

Western Victorian Hang Gliding Club

PO Box 92, Beaufort VIC 3373, [www.vhpa.org/vwhgc]. Pres: Glenn Bachelor 0419 324 730, <GlennB@pocketmail.com.au>; V-Pres: Mark O'Keefe 0412 473724, <mokeefe@bigpond.net.au>; Trs: Stuart Coad 0408 524862, <scoad@edlyn.com.au>; Sec: Lisa Miller, 0407 319397, <lisam130@hotmail.com>; Web/Database: Damian Georgiou 0413 677090, <damian@bachomp.net>; SSO: Rohan Holtkamp 0409 678734, <dynamic@netconnect.com.au>; Paul Rundell 0418 348948. Meetings: Last Sat/month, The Beaufort Hotel, Beaufort.

Queensland

Cairns Hang Gliding Club

Pres: Russell Krautz <krautzrl@yahoo.com.au>; V-Pres: Joe Reyes 07 40555553, <reyes@ledanet.com.au>; Sec: Lance Keough 07 40912117, 31 Holm St, Atherton QLD 4883; Trs: Nev Akers

07 40532586, <nevjoy@ozemail.com.au>.

Canungra Hang Gliding Club Inc.

PO Box 41, Canungra QLD 4275; [www.chgc.asn.au]. Pres: Brandon O'Donnell 07 33999850 (h), 0416 089889, <olofly_@hotmail.com>; V-Pres: Raphael Mackay 07 55345190; Sec: Col Hjortshoj 07 55437248 (h), 0429 312067, <col61@gil.com.au>; SSO (PG): Rob Wilton 0418 732325, <robertmarie.wilton@bigpond.com>; SSO (HG): Ken Hill 07 55435631, 0418 188655, <kenhill@iprimus.com.au>.

Central Queensland Skyriders Inc.

915 Yeppeon Rd Iron Pot Qld 4701. Pres: Bob Pizzey 07 49387607; Sec: Grant Suthers 07 49361790; SSO: Alister Dixon 49861984; Towing Bilola: Paul Barry 07 49922865, <prbarr@tpg.com.au>.

Conondale Cross-Country Flyers Inc.

Pres: Peter Buch 07 54949615, <buchy9@bigpond.com>; V-Pres/SSO (PG): Graham Sutherland 07 54935882, <grahamsu@mail.cth.com.au>; Sec: Sue Buch, 343 Commissioners Flat Rd, Peachester QLD 4519, 07 54949579; Trs: Kim Hodson, 16 Gizeh St, Enoggera QLD 4051, 07 33541910; SSO (HG): Russell Groves 07 54450084.

Dalby Hang Gliding Club

27 Van Gogh Pl., Mackenzie QLD 4152, [www.hgfa.asn.au/~dhgc]; Pres: Daron Hodder 0413 515160, <daron@powerup.com.au>; Sec: Rod Flockhart 07 32193442, 0412 882639, <flockhartrod@hotmail.com>; SSO: Jason Reid 0418 771400; Trs: Cameron McNeill 07 38913457.

Sunshine Coast Hang Gliding Club

PO Box 227, Rainbow Beach QLD 4581; <intheair@ozemail.com.au>. Pres: Mark Savage 07 54416423, <marksavage@dart.net.au>; Sec/SSO (PG): Jean-Luc Lejaille, 0418 754157, <rainbow_flyer@hotmail.com.au>; Trs: Michael Powell, 07 54425568

SSO (HG): David Cookman 07 54498573.

Whitsundays HG Club

Pres: Graham Lee 07 49546726, <gdsrlee@hotmail.com>; Sec/Trs: Ron Huxhagen 07 49552913, fax: 07 49555122, <sitework@mackay.net.au>

Northern Territory

Alice Springs HG and PG Club

Pres: Ricky Jones 08 89551088, 0402 805 099, <paragliding02@austarnet.com.au>. Please contact for paramotoring, PG ridge soaring & thermal flying.

Western Australia

Albany HG & PG Club

Pres: R D Jones, 1/14 Lyndavale Dr, Alice Springs NT 0870, 08 89551088, 0402 805099; SSO: Simon Shuttleworth 0427 950556; Sec: John Middleweek 08 98412096, fax: 08 98412096.

Cloudbase Paragliding Club Inc.

334 Belmont Ave Kewdale WA 6105. Mes-sagebank 08 94875253; Pres: Wesley Zadanowicz, 08 92493707, 0411 185091, <president@cloudbase.asn.au>. V-Pres: Nigel Sparg, 08 93049785, 0427 476629, <vice_president@cloudbase.asn.au>. Trs: Colin Brown, 08 94594594, 0407 700378, <treasurer@cloudbase.asn.au>. Sec: Ian Threlfo, 08 94177952, 0407 089101, <secretary@cloudbase.asn.au>. Committee members <committee@cloudbase.asn.au>; Colin Asplin (08 92774191, 0409 050370), Mike Allen (0408 947048), Mark Wild (0411 423923), David Morgan (08 93590390, 0418 908625). Meetings: 2nd Tue/month 8pm, Rosie O'Grady's Pub, South Perth.

Goldfields Dust Devils Inc.

9 Broadarrow Rd, Kalgoorlie WA 6430. Pres: Murray Wood 08 90215771, <dustdevils@hgfa.asn.au>; Sec: Peter Cepuritis 08 9022 2084, <pcepuritis@kal.snowdenwa.com>; Trs: Richard Breyley 08 90227684, <Richard.Breyley@harmonygold.com.au>; SSO: Mark Stokoe 08 90911297, <Mark.Stokoe@health.wa.gov.au>.

Hill Flyers Club Inc

<hillflyers@dodo.com.au>; Pres/SSO: Rick Williams 08 92943962, 0427 057961; Sec/Trs: Dave Longman 08 93859469

Meetings: Last Tues/Month, 7:30pm, Venue: Rosie O'Grady's Pub, South Perth.

South West Microlight Club

Pres: Brian Watts 0407 552362; V-Pres: Don Wilson 08 97641007; Sec: Paul Coffey 08 97251161; CF: Brendan Watts 0408 949004.

Western Soarers

<wshgc@hgfa.asn.au>, PO Box 483, Mt Hawthorn WA 6915, [www.iinet.net.au/wshgc/]. Pres: Mirek Generowicz 0427 778 280, <mgenerow@bigpond.net.au>; V-Pres: Mark Wild 08 94098581, <mark@gastech.com.au>; Sec: Ben Griffith 08 94724068, <benandrobym@aardvark.net.au>; Trs: Sun Nickerson 0401 135042, <Sunny@iinet.net.au>; SSO (HG): Shaun Wallace 0411 885178, <swallace@iprimus.com.au>; SSO (PG): Jules Sanderson 0405 089709, <airoz@speedlink.com.au>. Meetings: Last Tues/month, 7.30pm, Rosie O'Grady's Pub, South Perth.

Soaring Calendar

AUSTRALIA

Sunraysia GC – 50 Years

30 October – 2 November 2004

To celebrate 50 years from its formation in 1954, the club is running a back-to event over the Melbourne Cup weekend. We invite past members and others who may like to re-visit the past and help celebrate the future. A low-key competition is being planned, vintage gliders welcome. Social activities, dinner, novelty prizes for the most outrageous retrieve story and so on. Contact David Nugent for further information on 03 5024 5865 or visit the website [www.vicnet.net.au/~gliding].

Vic Spring Comp 2004

Round 1: Bright, 30 October – 2 November (Melbourne Cup weekend)

Round 2: Beaufort, 13-14 November Round 3: Beaufort, 27-28 November

Victoria. This event is a low cost, informal, fun event designed to get people into the hills at the start of spring and to give novice pilots a feel of flying in a comp environment without the pressures associated with flying a real comp. For details visit [www.vvhgc.com/] or contact <agnorman@netspace.net.au>.

Gliding 75th Anniversary

6-7 November 2004

Pallamanna aerodrome, Murray Bridge, SA. Glider static display and demonstration flying, celebrating the 75th anniversary of gliding as an organised sport. See [www.aus-soaring.on.net/saga/index.html]. Contact: Emilis Prelgauskas, <emilis@lm.net.au>.

Stanwell Park Festival of Flight – Fancy Dress Fly-in – 13 November 2004

Stanwell Park, NSW Come and join the Stanwell Park HG and PG Club for a day of fun flying and a fancy dress competition to celebrate the annual Festival of Flight. Open to all HG and PG pilots. Dress up! Hire a superman suit or create your own outrageous costume. Prizes awarded in various categories. See [www.flystanwell.com] or contact Tony Sandeberg on 0413 593054 for further details and an entry form. Hope to see you there!

Gathering of the Moths Fly-in

20-21 November 2004

Mt Beauty, VIC. 'BIG' 10th Anniversary get-together! Flyers of all denominations are invited to fly the sheltered Kiewa Valley at the foot of the picturesque Victorian Alps. Range of accommodation available. Contacts: Mark Ghirardello (03 5754 4572 or 0409 544572) and Don Pollock (03 5754 1301 or 0407 093054).

Narromine Cup Week

21-27 November 2004

Silver C to 1,000km. All welcome. Ph: Beryl or Arnie Hartley on 02 6889 2733 for enquiries.

Gulgong Classic 2004

22-27 November 2004

Gulgong, NSW. Practice days: 16/17 October and Sunday 21 November. Comp to be held in the same format as previous two years. This year will be a six-day event. Your \$350 entry fee includes competition entry, T-shirt, presentation dinner, airstrip usage fees and hangarage and all tows on competition days (pay

per tow on practice day). Strictly limited to 50 aerotow rated entrants.

Due to the complexity and cost of organising tows, a late fee of \$50 for entries received after 30 September applies. Enquiries to <fly@gulgongclassic.com> or ph: 02 49423131 or 0412 423 133. Comp details, on line info and rego available at [www.gulgongclassic.com]. Comp factors are: AA, 5km, 70km, 10% GPS mandatory, virtual starts and goals.

Australian Junior Gliding Championships

5-11 December 2004

Temora, NSW. Please note the above change to the previously advertised contest dates. Practice will be held on 4 December.

Australian Open HG Championship

28 December 2004 – 3 January 2005

Deniliquin/Conargo, NSW. One day short to allow for pilots going to the worlds. Entry fee: \$190. Open AAA, Kingpost AA and Floater A, Sub Classes. Also open to Class 2, Class 5 and PGs. Aerotow or ground tow. Four pilots will secure your ground towing strip. Special welcome to new competition pilots, regardless of the glider they fly! Come to the comp that gives you a great chance of making goal! Fly with the champions, compete against your peers. All tow and retrieve cars needs to have comprehensive or third party property insurance. All tow and retrieve cars need to have an approved fire extinguisher; if not you will get disqualified from the comp. You can buy an extinguisher at the comp (cost \$55)/ For entry or enquiry please contact Tove: 0419 681 212, <chggpc@goulburn.net.au>, or go to [www.Taragoflightpark.com.au].

Great Eastern Fly-in

30 December 2004 – 2 January 2005

Evans Head Memorial Aerodrome, Northern NSW. All aviators, their aircraft and families are invited to this historic WWII aerodrome for New Year fun, flying, sun and surf. No rego or landing fees, onsite camping, food, aviation businesses; microlight, ultralight, GA, warbird, vintage and model aircraft; motor gliders, gyros and more! ALL WELCOME. Air Displays, Adventure Flights and New Years Eve Drome Party. The perfect way to see in the New Year! Sponsored and supported by: Evans Head Memorial Aerodrome Committee, Richmond Valley Council and Recreational Aviation Australia. Contact: Gai Taylor 02 6621 5592 or <gai@i-byte.com.au>.

2005 World Hang Gliding Championships

4-19 January 2005

Hay, NSW. Dynamic Flight, in conjunction with the Hay Shire, are presenting the World HG Championships 2005. Practice days: 4th and 5th. Registration, Grand Parade, team photos and Welcoming Party on the 6th. First comp day: 7th, last comp day: 19th with closing ceremony and party. For initial enquiries email <dynamic@netconnect.com.au>. CIVL has allowed each country to enter six-person teams. Each country can enter more than one team! All team members must qualify by having finished in the top 66% of a Cat 2 (Hay Pre-worlds, Bogong Cup, etc) comp since 2001. Come on Aussie pilots, this is your chance to fly with the world's best!

Vintage Gliders Australia Annual Rally 2005

8-15 January 2005

Bordertown. Arrangements have commenced for our Annual Rally. Although much planning is still to be done, the organisers expect to be able to provide: camping and bunkhouse accommodation on the field, meals, winch, and possibly aerotows. No extra hangarage will be available. Further information is expected by the next issue of the VGA Newsletter, Vintage Times. Already expressions of interest have been received from operators in Victoria of an ES52 Shortwing, ES60 Boomerang, ES57 Kingfisher, Ka6 and Ka4. No doubt many more will join in the fun. For further information and to offer assistance please contact Ian Patching on 03 9438 3510.

2005 National Club Class Competition

9-21 January 2005

Waikerie Aerodrome, SA. Practice day on Monday 9 January. Contact: <john.hudson@santos.com> or <hudson@senet.com.au>; ph: 08 82247784 or 08 8272 5929.

Corryong Cup 2005

9-15 January 2005

Corryong, VIC. Registration/practice day: 8th, comp start: 9th with registration in the morning. Come to the best FUN comp of the year. Mt Elliot, Corryong, is one of the most reliable and spectacular flying sights in the Eastern highlands. It's a hill launch set at the base of the Australian Alps on the border between Vic and NSW. Tasks are generally between 50-100km, with up to four turnpoints set to make pick-ups easy. This year the comp will again be scored on a handicap basis according to glider type and flying experience, so everyone who enters has a chance of taking out the top prizes. This year prizes will be awarded for the first three positions as well as a prize for the best placed veteran and most improved newcomer to competitions. Also, the first placed team will receive the Corryong mugs. Day prizes given out each day. You must have an intermediate rating (preferably with inland experience), UHF radio and parachute. Camera optional (data back not required); this year scoring will be with GPS or camera, whichever you prefer. This is still the cheapest comp in the HG calendar at only \$100 if you register before 30 Nov 2004 (\$130 thereafter). Cheques made out to Blue Mountains Hang Gliding Club. Included in this fee is comp entry, T-shirt, film for turnpoints, colour topo map of the area and a presentation dinner. Places are limited so don't miss out. Register now with: The Blue Mountains Hang Gliding Club, Steve Bell, PO Box 110 Woonona, NSW 2517. Ph: 0412 686812 or email <spb@1earth.net>.

Bogong Cup HG Championship

22-29 January 2005

Mt Beauty, VIC. AAA Sanction, entry \$195. Practise day/registration: 21st. Open, Kingpost, Floater & Female categories. Strictly 70 places. Min rating Int. Website [www.hgfa.asn.au/Competition/Bogong/index.html]. For more info see the website or contact Carol Binder <binder_carol@hotmail.com>, 03 57501507 or 0417 311360.

Classifieds

Horsham Week

5-11 February 2005

Horsham aerodrome. Contact Peter Buskens
<pbuskens@melbpc.org.au>.

Bright Paragliding Open

19-27 February 2005

Bright, VIC. Sanction AAA, FAI Cat 2. Postal address:
PO Box 238, Bright VIC Australia. For more details
visit [www.alpineinfotech.com.au/
BrightPGComp2005/].

OVERSEAS

Para Pro Rally NZ

18 February – 5 March 2005

Rotorua, New Zealand. New Zealand will host an exciting international paramotoring rally from Rotorua to Queenstown. The 16 day, 14 task rally is being promoted internationally as "The Paramotor Event of the Year". The course starts in Rotorua – the geyser and thermal area of NZ, and finishes at the action capital of the world – Queenstown. In between, the adventure will cover some of the world's most beautiful and breathtaking scenic areas. This will be one adventure you won't forget in a hurry. The Para Pro Rally of NZ is for all paramotor enthusiasts, from the recreational to the elite pilot. The flying adventure will provide: a realistic challenge, the opportunity to share ideas and experiences, seeing what's available on the paramotor scene and seeing NZ's unspoiled beauty from the air. The organisers will combine the rally with general sightseeing/activities that only NZ can offer, for example: jet boating, bungy, tramping, whale watch, fishing, dolphin swimming, geo thermal hot pools, golf, horse riding, sea kayaking, bungee jumping, etc. The rally will also include a number of cultural experiences. They include a traditional Maori hongi and welcome ceremony, an overnigher on a Maori Marae and a farm stay on a high country sheep station in the heart of the South Island. For more info see the website [www.parapro.co.nz].

IGC World Gliding Calendar

2007 and beyond

2007 WGC – Juniors, Bid selection 2005*

2007 WGC – Women's, Bid selection 2005*

2007 Alternative Events, Bid selection 2005*

2008 WGC – 15m/18m/Open, Bid selection 2005

2008 WGC – Std/Club/World, Bid selection 2005

2009 WGC – Juniors, Bid selection 2006

2009 WGC – Women's, Bid selection 2006

2009 Alternative Events, Bid selection 2006

2010 WGC – 15m/18m/Open, Bid selection 2007

2010 WGC – Std/Club/World, Bid selection 2007

* Sites for these WGC's will be selected in 2005. After 2005 sites for all WGC's will be selected three years prior to competition.

2011 WGC – Juniors, Bid selection 2008

2011 WGC – Women's, Bid selection 2008

2011 Alternative Events, Bid selection 2008

2012 WGC – 15m/18m/Open, Bid selection 2009

2012 WGC – Std/Club/World, Bid selection 2009

2013 WGC – Juniors, Bid selection 2010

2013 WGC – Women's, Bid Selection 2010

2013 Alternative Events, Bid Selection 2010

2014 WGC – 15m/18m/Open, Bid selection 2011

2014 WGC – Std/Club/World, Bid selection 2011

NOTE: This calendar is shown as running through 2014 for illustrative purposes only. The calendar and structure of the World Gliding Championships will continue on as shown after 2014 (until changed or modified by the IGC Plenum).

GFA

NOTICE TO ALL GFA ADVERTISERS

All advertisements and payments can be sent to:

The Gliding Federation of Australia/Advertising

130 Wirraway Road, Essendon Airport VIC 3041,

Ph: 0400 159325 Fax: 03 9379 5519.

Email: <frowe@optusnet.com.au>

Advertisements may be emailed in high resolution (300dpi at 100% size) using TIF or EPS formats. Photographs may be provided in either photo print or slides. Disk photographs are not suitable. Photographs, slides or disks may be returned. Please include a self-addressed and stamped envelope for the return of any promotional material.

All GFA advertisements must be paid for prior to publication.

(Payment by cheque, money order or credit card). Don't forget Classifieds deadline is the 25th of the month, for publication five weeks hence.

Single-seater Sailplanes

ASTIR CS 2,100 hrs, basic instruments, B10, 360ch radio, new canopy, enclosed trailer, groundhandling gear, GC, \$20,000 ono.

Ph: Trevor 0419 577782.

ASW19B, excellent cond, good encl. trailer & fittings, covers, tow-out gear, winglets, tinted canopy, instruments. Very attractive package. Genuine reason for sale. \$30,000. Ph: Haidyn Dunn 03 51431773.

BG12A. Excellent cond, rebuilt 30-year survey. Form 2 available. 31:1 LD. Open trailer, hangared Central Coast. All offers considered. Ph: Peter 02 65536095.

COBRA 15, GJS, 15m. Very complete package, recently refinished, fully sealed with good tow-out gear, no-lift rigging equipment, full set of covers, manuals & spares. Ph: Eugene Blunt 02 60254436, <deird@optusnet.com.au>.

DIAMANT 16.5m, parachute, Garmin 12 GPS, handling equip, encl. metal trailer, VGC, covers, basic instruments & radio. \$12,250 or reasonable offer. Forced sale. Ph: Tom Bird 08 89521417.

HORNET, GEZ, top cond, no trailer. For details ph: Jim Barton 03 93094412.

JUNIOR, SZD-51-1, 15m, based at Benalla & always hangared. VGC. Aerobatic. Delightful handling. Offers invited. Ph: Stu 0428 191079.

K6e, SSR. Based in Gulgong NSW, enclosed trailer, \$8,500 ono. Ph: John 07 49756613 (evenings).

LS4A HDK. Proven Nationals performer, never damaged, refinished, excellent cond, tail tank, Cambridge L-Nav & electric audio vario, PZL vario, 720ch radio, 1,900 hrs, encl. metal Thompson trailer with VG fittings, easy 2-person rig, tow-out gear. Ph: Frank Turner 07 32318888 (w), 07 33783302 (h), 0419 702416 (m), <fturner@thymac.com.au>.

PILATUS B4 PC11 AF, VH-GJV. Excellent cond, 2,231 hrs with fresh 30-year survey completed by T&J Sailplanes. Cambridge vario, oxygen system, towing gear & registered enclosed trailer.

It has a blue tinted canopy & is ideal for early cross-country, wave or aerobatics. \$18,000.

Ph: Ken 02 43242483 or 0403 844504.

PW-5 world class glider (ZAW), Basic instruments with Becker 720ch radio, PZL & Borgelt vario, with audio & averager, complete Mountain High Oxy set (new), never used. Wired for GPS, double canopy cover. Tow-out gear, also strong metal encl. trailer, with new towbar. New Form 2 from Oct 04. This glider has held 4 world records, (incl. 500 triangles), & has numerous national records. Price: \$25,000, delivered anywhere in Australia. Ph: Keith Willis 8753

2306 (evenings) or <gliderkeith@bigpond.com>.

PW-5 world class glider. TT 90 hrs, as new, fully equipped, incl. parachute. Custom-built fully encl. trailer. Ph: 02 62901338.

STD CIRRUSS, GOW. Mechanical vario & Borgelt B20, 21, 25, vario/glide computer. Microair radio & basic instruments. Registered & encl. trailer, tow-out gear. Replogle baro & graph papers. Wing covers, parachute, Apollo GPS & chargers, 2 batteries. New Form 2. Vacant

hangar may

be rented from Gympie SC. \$23,000 obo. Ph: P. Sanger 07 54922271 or H. Hilton 07 54927179.

STD JANTAR SZD41A, TT 1,746 hrs, radio, nose & belly hooks, modified canopy, encl. trailer & two-out gear. New wing dust covers. Ph: John 03 93282536, <johnrobinsons@bigpond.com>.

STD LIBELLE, GBN. Good clean glider & c/w encl. light-weight trailer & electric instruments. Being sold to make way for a higher performance glider in the club fleet. \$18,000. Ph: Armin Kruger 02 95892222, 0421 681905, <kruisa@ozemail.com.au>.

STD LIBELLE 201B. Flies well, good appearance. Fitted with a GPS, Joey & Dittel radio. Encl. trailer & tow-out gear. New dust covers (wings, canopy & tailplane). Ph: John 03 93282536, <johnrobinson@bigpond.com>.

Two-seater Sailplanes

BERGFALKE II GKZ. In VG cond. throughout, new Form 2, basic instruments, open trailer, 1-piece canopy. Great training aircraft. Have fun flying a true classic. \$15,000 ono. Ph: 02 66847572.

JANUS B sailplane, c/w instrumentation. 18m span, 38:1 excellence. Fully refinished by Luciani. Full details available on inquiry to VMFG John Fawcett 03 94847453 or Roger Druce 03 94398947, <rogdruce@optusnet.com.au>.

K13, GSL. Based in Gulgong NSW, \$25,000 ono. Ph: John 07 49756613 (evenings).

TWIN ASTIR x 2. Due to fleet re-structuring Waikerie Gliding Club offers for sale: IKO – Immaculate cond, 6,500 hrs, B20, 21, 25, tow-out gear, trailer, \$55,000. IKU – 10,800 hrs, B20, 21, 25, tow-out gear, trailer, fresh Form 2, previous holder of 2 national speed records, ideal for training or XC flying, \$25,000. Ph/fax: 08 82725929.

Self Launching/Motor Gliders

DG500M, XQA. Excellent cond, 560 hrs, 42 engine hrs, 'compact' encl. trailer, tow-out gear, steerable nose wheel, tinted canopy, water ballast, automatic engine retraction. Ph: John Moore 07 32636618.

GROB G109B, HNK. 2,500 hrs. Owned by Flinders University & operated as atmospheric research aircraft. Excellent cond, never damaged, always hangared, extremely reliable. Many spare parts incl. spare propeller. Excellent avionics incl. two radios, Garmin 150 GPS & transponder. Night-VFR equipped. All modifications to the aircraft are certified by Grob, GFA & CASA, but can be removed & the aircraft can be operated as a normal motorglider under GFA. For further details, contact Jorg Hacker 0418 857115 or <Jorg.Hacker@flinders.edu.au>.

NIMBUS 3T, 25.5m span, 60:1 performance with sustainer engine. Genuine 1,000km machine. Refinished, always hangared, full competition panel & seals, Mountain High oxygen system, Komet trailer, etc. Price negotiable. Ph: Shaun 0407 042468, <shaun_driscoll@roadshow.com.au>.

Wanted

OPEN CLASS 17-18m GLIDER. Eg: Ventus, DG 202/17, LS6/8. Will consider DG 400. Private Buyer. Ph: 03 93767210.

RIGHT WING, FOR HORNET 206, structurally in good cond, minor defects to coating acceptable. Advise, price asked, Model & serial nr & location to <raul@diego.com.au>.

SINGLE-SEATER ballasted fibreglass with a cockpit load of 100kg or greater. Contact: Gliding Club of WA C/- <derry@primus.com.au>, ph/fax: 08 93873654.

General

AVTEC AVIATION. Repairs & Maintenance F.R.P. Ph: Roger Bond 07 33894843.

SEGELFLUG BILDKALENDER – the original German Soaring Calendar. Available again from Mike Cleaver. Ph: 0412 980886 or <wombat@netspeed.com> for price. "Junior" desk calendar also available separately at \$15 plus postage.

Classifieds

SOARING FLIGHT SIMULATOR PC v4. The best gliding simulator in the world. Buy online from [www.GlidingShop.com] with orders shipped worldwide. Free demo download available. All updates free of charge. Enquiries to: <sfs@glidingshop.com>.

Instruments & Equipment

CAMBRIDGE 302 vario & logger is again available from the rebirthed Cambridge. Also 302A logger & 303 display. Also ask about XCom & Microair radios which are both available. Tyres, wingstands, micro-phones. <iankmcphee@bigpond.com>, Box 657 Byron Bay NSW 2481, ph: 02 66847642.

CANOPIES: Kestrel Fr, & Motor Falke, IS28 canopy, 2-piece type (new), offers invited. Also IS28 complete but damaged. Ph: Stu 0428 191079.

DISCOUNTED CAMBRIDGE 302 vario/logger/final glide systems. State of the art available for more than 15% off advertised price on demonstrator models. That is \$3,650 for an entire 302/303 system! Can also be connected to iPaq for moving map display. Plus plenty of Maxi Gap tape in stock for \$15/roll. Ph: Bruce 02 67720508, <brucetaylor10@bigpond.com.au>.

NEW CANOPIES: Dimona H36 \$2,970, Grob twin rear \$1,650, Std Libelle \$1,650, LS \$1,980. GST incl. Windows & vents available. Aviation Acrylic Mouldings Pty Ltd email: <aamoulds@senet.com.au>. Ph: Ian or Cecilia Linke 08 82513780.

Gliding Publications

AIRBORNE MAGAZINE: Covering all facets of Australian & New Zealand modelling. The best value modelling magazine. Now \$60pa for six issues. Plans & other special books available. PO Box 30, Tullamarine, VIC 3043.

AUSTRALIAN HOMEBUILT SAILPLANE ASSOCIATION: James Garay, 3 Magnolia Ave, Kings Park VIC 3021. Ph: 03 93673694, [www.geocities.com/capecanaveral/hangar/3510].

FREE FLIGHT: Bi-monthly journal of the Soaring Association of Canada. A lively record of the Canadian soaring scene & relevant international news & articles. \$US26 for one year, \$47 for two years, \$65 for three years. 107-1025 Richmond Rd Ottawa, Ontario K2B 8G8 Canada, email: <sac@sac.ca>.

NZ GLIDING KIWI: Official magazine of Gliding New Zealand. Edited by John Roake. Read world-wide with a great reputation for being first with the news. A\$52 pa. Personal cheques or credit cards accepted. Write:

NZ Gliding Kiwi, 79 Fifth Avenue, Tauranga, New Zealand. Email: <gk@johnroake.com>.

SAILPLANE & GLIDING: The only authoritative British magazine devoted entirely to gliding. 52 A4 pages of fascinating material & pictures with colour. Available from the British Gliding Association, Kimberley House, Vaughan Way, Leicester, England. Annual subscription for six copies £17.50.

SAILPLANE BUILDER: Monthly magazine of the Sailplane Homebuilders Association. \$US29 (airmail \$US46) to 21100 Angel St, Tehachapi, CA 93561 USA.

SOARING: Official monthly journal of the Soaring Society of America Incl., PO Box 2100, Hobbs, NM 88241 USA. Foreign subscription rates (annually): \$US43 surface delivery; \$US68 premium delivery. TECHNICAL SOARING/OSTIV: Quarterly publication of SSA containing OSTIV & other technical papers. Annual subscription: 70DM. OSTIV c/- DFVLR, D82234 Wessling, Germany.

HGFA

Classifieds are free of charge to HGFA members up to a maximum of 40 words. One classified per person per issue will be accepted.

Classifieds are to be delivered to the HGFA office for membership verification/payment by email <office@hgfa.asn.au>, fax: 02 65593830 or post: PO Box 157, Hallidays Point NSW 2340. The deadline is 25th of the month, for publication five weeks hence. Submitted classifieds will run for one issue. For consecutive publication, re-submission of the classified must be made, no advance bookings. When submitting a classified remember to include your contact details (for prospective buyers), your HGFA membership number (for verification) and the State under which you would like the classified placed. (Note that the above does not apply to commercial operators. Instructors may place multiple classified entries, but will be charged at usual advertising rates.)

All aircraft should be suitable for the intended use; this includes the skill level required for the specific aircraft being reflective of the Pilot's actual Rating & experience. All members must adhere to the maintenance requirements as contained in section 9 of the Operations Manual & as provided by manufacturers. Secondhand equipment should always be inspected by an independent person, an Instructor wherever possible. Advice should be sort as to the cond, airworthiness & suitability of the aircraft. It should include examination of maintenance logs for the aircraft. It is unethical & a legally volatile situation for individuals to provide aircraft which are unsuitable for the skill level of the pilot, or aircraft that are unairworthy in any way.

Hang Gliders & Equipment

NEW SOUTH WALES

AIRBORNE CLIMAX C2 13 adv, in top cond, first to fly will buy, \$5,200 ono. Ph: 0425 304624; 02 49582255.

AIRBORNE CLIMAX C2 13 adv, white/yellow US, only flown for 3 hrs, reluctant sale due to no time, \$6,200. Skyline Zero Drag Racer harness, suit 160-170cm, same hrs, \$1,500. Both in brand new cond. Urgent sale. Ph: 0419 413741 (w); 02 97927172 (h).

AIRBORNE SHARK 144 adv, red/white/blue, 20 hrs since factory inspection, PC, \$3,400 ono. Fun 190 nov, yellow/blue/white, PC, 70 hrs from new, matching Aussieskins prone harness, \$3,990 ono. Vario with Garmin GPS & mount, \$650 ono. Lazer full-face helmet with intercom, \$185 ono. Ph: 0427 730741 (Coffs Harbour).

AIRBORNE STING 2 140 XC (with VG system) int, EC, only 10 hrs flying time, mint/lilac, \$3,000. Ph: Sonja 02 49547811 (w); 02 49466720 (h); 0412 523740.

AIRBORNE STING 154 int, orange, purple & white, 90hrs, VG, speedbar, flared uprights, EC, with Stealth 2 harness, orange-grey and black, suit 165-175cm, near new condition, \$3000. Will separate. Ph 0410 568335; 02 42858984.

AIRBORNE STING 175 XC int, blue/grey US,

original DTs, EC, incl. 2 spare DTs, XC glider bag, \$3,300. Ph: 0419 441904.

MOYES LITESPORT 5 adv, late 2003 model, as new, Mylar MS, grey/orange US, \$5,450. Ph: 02 95254961; 0408 262585.

MOYES LITESPORT 149 adv, EC, only 50 hrs, \$4,500 ono. Photos at [www.southernmsw.com.au/hang.htm]. Ph: Peter 02 44786062.

MOYES XTRALITE 127 (yes, 127) adv, flies really well (good sink rate & glide – a hot, small glider), small A-frame, for small pilot, orange/purple, plenty of life left in sail, dacron LE. Make me an offer. Ph: Maggie 02 66858768; 0409 611845.

SWAP Airborne Sting 154 (with VG, good cond) for a Fun 190 or 220. I'm too heavy for a Sting 154. C/w new side wires & recent Airborne airworthiness inspection. Ph: Nick 0412 440207.

ACT

MOYES FLEX HARNESS to suit 195cm height, \$450. Moyes helmet (L), \$80. Hi Energy Quantum chute, \$400. Renschler Sol5 Vario, \$330. Total price for all, \$1,100. Ph: Hamish 0421 058017.

MOYES XT 165 int, yellow/white, GC, 100 hrs, \$850. Ph: Danny 0427 771910.

VICTORIA

AIRBORNE FUN 160 nov, lavender /fluoro yellow, EC, approx 35 hrs airtime, suit pilot hook-in weight 50-75kg, incl 2 spare DTs, \$2700 ono. Must sell. Ph: Jo or Andy 0422 233911; 03 97282652; <treetops@smatchat.net.au>.

MOYES SUPER XTRALITE SX5 adv. Less than 80 hrs, all but 3 inland, in spotless cond. Very striking colour scheme of fluoro red/fluoro green/fluoro yellow (email for pictures). Feels & flies very confidently & lands brilliantly. Asking price \$1,600 ono. Perfect kite for someone getting into performance equipment to go to the next level in their flying. C/w all original documentation & 2 DTs. Ph: 0428 255 375; <peterd@labtam.com.au>. Looking forward to your call.

MOYES SX 3 adv, Power Rib, purple/fluoro yellow US, VGC, \$1,000 ono. Roof racks, suit Subaru L series sportswagon, \$75. Ph: Mark 0408 801 356; 03 92080566.

MOYES XT 165 int, \$800. Tandem HG nov, \$1,600. Tow trailer, \$1,500. Harness, \$300. Radio 5w, \$200. Moyes Mars 150 nov, \$500. Ph: Kate 03 52612895; 0402 029457.

QUEENSLAND

AIRBORNE CLIMAX C2 14 adv, 80 hrs, VGC, yellow/purple, must sell \$4,500. Ph: Dave 0419 446199 (Bris).

EXPLORER motor harness for HG, very reliable motor, always starts easily, 2 fuel tanks, folding carbon prop. I'm 190cm/87kg & this harness is uncomfortably small for me. \$3,100. Ph: John 0417 607191.

HARNESS, VGC, Skyline Flight Gear, suit pilot 5'10" to 6'1", slider type with recently repacked chute, \$650. Ph: 07 3802 2333; 0422 571253.

MOYES LITESPEED 5 adv, blue/yellow, low hrs, immaculate cond, \$5,500 ono. Ph: 07 3800 2760; 0408 457159.

MOYES XT PRO 165 int, VGC, great colours, fluoro orange LE, blue/green US, rubber-backed faired DT's, speedbar, scrim LE with mylars, complete with owner's manual and batten profile, \$900. Also, Skyline harness with chute, VGC, black slider type, suit 5'10" - 6'1" pilot, made in Germany, \$830. Ph: 0422 571 253; 07 3802 2333 (h).

POWER LITE powered HG in EC with new pro-peller. 75 hrs flying time, CFX-5 wing in great cond, \$6,000 ono. Ph: Greg 0412 000797.

SKYLINE HARNESS, black colour, slider type, changes hang position on a slide bar, centre zip with adjustable shoulder straps, suit 5'10" to 6'1" pilot, c/w recently repacked chute, VGC, \$750. Ph: 07 38022333; 0422 571253.

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WINDTECH AMBER DHV 1-2, 85-105kg, white/red, 100 hrs, top cond, porosity tested over 400 sec, \$1,500 with harness & air bag. Ph: Peter 0410 466518; 02 95483124.

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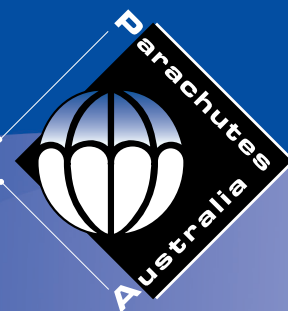
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