

FEBRUARY 2002

Gliding Australian SKY SAILOR

In this Issue:



The Patch



Manilla Musings



Kangaroo in Austria

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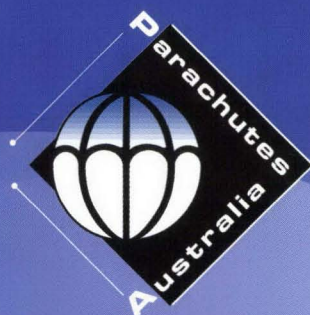
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Combining Coastal and Inland Flying

PETER BOLTON

At last, I've had another one of those great flights which keep me keen throughout dull times! The day was Saturday, 24 November, and the (launch) site was Sellicks cliffs. The forecast was uninspiring to most, with a few showers and fairly strong north-west winds forecast. The barometric pressure was low, which augured well for instability. There were grey skies and the actual wind direction on the coast that morning was west-north-west, at about 20kt. The wind was pretty good for the Sellicks cliffs, which face west and are 200-300ft asl.

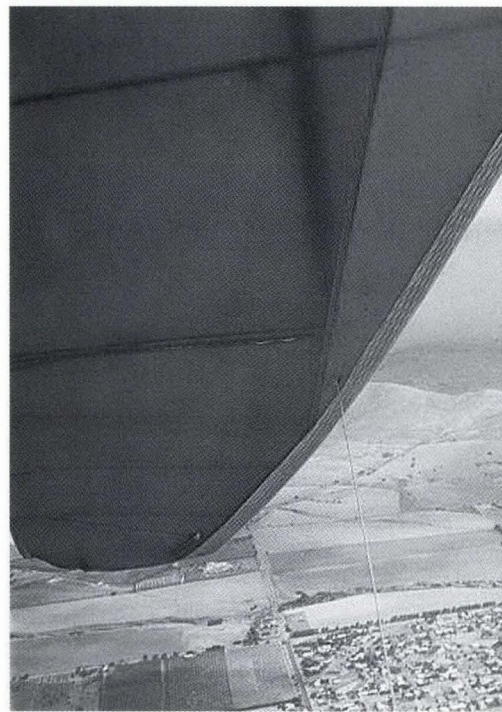
As I drove to Sellicks, I came across Stuart McC who was on his way to Myponga Cliffs. As I got to the cliffs it was about 25kt – a bit stronger than I like to set up or launch in alone – so I was glad when Steve Papai arrived. We set up as eternal optimists and, as usual, as soon as mine was done, the heavens opened! Steve and I sat out the squall/horizontal rain, then dried our hang gliders off after it stopped. The wind had moderated to about 20kt west-north-west on launch.

Steve took off first and I followed, just after Stuart and Helen arrived at Sellicks (by car, at about 3pm). We stooged around on the ridge for a while, but then another squall approached. Steve landed down by the boat ramp, but I went to the north-west-facing corner bowl near

Myponga launch hoping the squall would dissipate before it arrived. This it did, so I stayed where I was and found some seemingly endless lift!

I reached about 1,500ft asl in the corner bowl, before heading north along the beach. There seemed to be a dark convergence line in the cloud above me. Happily for me, the “endless” lift continued as I headed north and I passed the boat ramp at over 2,000ft. Poor Steve was packing up down there and watching it all...

I continued north over Silver Sands, reaching 3,000ft and thinking there were now quite a few possibilities for the flight. Steve was on the radio asking what my intentions were. I knew he'd previously got away from here in



convergence and made it about 20km inland. I wasn't sure if this was on the cards for me, as I was already above base, up the side of this dark, uninviting cloud, and looking downwind inland all showed overcast skies. So I continued north, trying to ride this thing to some clearer weather.

The crosswind at altitude was quite strong and I soon found myself about one kilometre inland, but I thought I could continue this “coast run” (as done on previous occasions by Brent Telford and Richard Murray). I gradually lost the lift and got down to below 2,000ft near Aldinga. I put this down to pub suck, as the Aldinga Pub looked good for an outlanding.

I was over a big blue hardware warehouse building, when I unexpectedly found a smooth, well-formed thermal. I worked this, and it took me across South Road. I radioed Steve, who had kindly agreed to retrieve me, and told him that the Mt Terrible ridge was looking like my next port of call. I made it to the ridge, which didn't seem to be soarable (at my height, anyway) in the now westerly wind. I had some weak lift, so I stayed in it and drifted over the



Sellicks convergence



Aldinga from three grand





Sellicks convergence

Photos: Peter Bolton

back of Mt Terrible (to the east). The lift didn't last long once I was over the back and the air soon became really rough and landing options soon became much fewer as I had less ground clearance than before.

I decided to land in the last big, clear paddock, where an uphill into wind landing was possible. This involved burning off 500ft. I tried to call Steve to inform him of my intentions, but no reply. I landed there safely and found out the road name from a couple who stopped – Range Road West.

Thanks to mobile phones, Steve managed to find me and took me back to Sellicks, where it was still on (only a few degrees wind direction change from before). Dave and Richard were just setting up. Steve and I headed back to town, home in time for tea then out for drinks afterwards!

Thanks go to Steve Papai – the man who pioneered a flight of this type in the area and chased me on the ground on the day. It's something I've never done before, but would love to do again.



Steve Pap flying Sellicks

February 2002

Confession of a Novice Pilot

GEOFF SEXTON

He slowly took his helmet off, looked at it, hesitated for a few seconds, then threw it as hard as he could across the paddock while shouting, "Stupid F***** idiot!"

Shocked, I immediately assumed he was talking to me. I tried to think, was I packing up where he wanted to land, had I stuffed him around during my short ridge soar? After all, this was my first unsupervised flight and I was feeling a little self-conscious.

I'd seen him commence the usual S-turns on approach, smooth flat arcs, which led him towards the end of the paddock where I was packing my wing. A small bubble of lift gave him some unwanted height, but he countered by taking the last turn a little deeper and made his final glide so that his feet touched the ground not five feet from where I was standing. It was perfect! I knew him. He was an advanced pilot, and until I'd seen how far he could toss a helmet I'd assumed he was an amiable enough person.

What was in front of me now made me nervous. He muttered a bit more, then looked up and yelled "You can't be f***** serious!" I looked up as well, as you do when somebody does it first, and I saw them. Three small wings circling in a thermal. They must have been at around 4,000ft. It now became obvious what was bugging him and my immediate thought was, "Gees, what a grouch. If I ever act like that just because my friends were doing well and I wasn't, I'll give the sport away."

Fortunately, I didn't say that out loud. I had a lot to learn both about the sport and my competitive urges.

As I accumulated flying hours I met a few more novice pilots and we tended to fly together a lot. As a result we became a little competitive. Competitive in just about everything. The highest flight of the day, the most flights, the most top landings, the closest top landing to "the tree", etc, etc.

Then one day it happened. A thermal came through the ridge which got us to heights we had never achieved before and we could see "over the back". Although we chickened out that day, the imagination ran wild. The excuses for not going for it centred around the lack of instruments. So, it became an arms race to buy the necessary stuff, in case we were ever in a position to do it again; the radios, varios, even GPS's for some. I even know of someone who bought a "POD" to "anchor" his array.

Inevitably the suggestion was made to start a "Novice Competition". Pretty hopeful, really, because most of us had only been in one thermal. Then, almost on cue, on one of the first weekends of the competition four of us got away for our first XC. What followed was intense rivalry. Close tabs were kept on the main players. Frequent phone calls and emails ensured nobody slipped away mid-week unnoticed. Books on weather and thermalling were read. Advanced pilots were unexpectedly invited to dinner to be "pumped for information". They were also followed on the hill, their every move studied and imitated. They suited up, we suited up. They got ready to launch, we got ready to launch. They flew to the right, we flew to the right. We still do that (I wonder if it bugs them?).

Then the day arrived. Three of us got up and the excitement was reflected in the high pitched voices on the radio as we got higher and higher. I imagined that the lift was weakening, and instead of staying around a little longer to make sure, I looked towards the west and took off. The others lingered before heading out and had the advantage of around 500ft on me. I soon realised I wasn't going very far. I looked for the others and saw they were going to make it to the next ridge, while I was going to bomb out in the nearest field. I should have been concentrating on the landing; instead I was already getting agitated. I landed, looked up, saw my buddies at 4,500ft and shouted, "You stupid f***** idiot!" as the helmet sailed through the air.



Convergence Tips

GRAHAM SUTHERLAND

Convergences are a lot more common than most people realise. The most difficult thing about learning to use convergences is firstly to realise that you are in one or near one. Many times I have been on the ground reviewing a flight with some interesting lift when it has hit me that it was convergence, and I stupidly flew out of it!

The second most difficult thing about using convergences is to be able to stay in it.

This is because the edges of a convergence are often not obvious. If there is a cloud street or cloud wall then the visual cues make it much easier. Convergences can often be non-straight, disjointed and broken up as well. Having an idea of the type of convergence and how it is likely to behave is also useful. For example, sea-breeze is cooler and heavier than the inland air and so will run up valleys faster than it will go over hills. So the convergence will vary as a consequence.

Convergences can be big or small, obvious or invisible, smooth or rough. They can occur anywhere that there is a meeting of slightly different winds. Everyone knows how much the wind can change when you drive a few kilometres between sites. The wind need only be a few degrees different in direction or a few knots stronger and there may be a convergence somewhere in between. The most obvious sign of a convergence is a cloud street, but there are blue convergences too. Convergences can form streets, or can be localised. They can be rooted in one spot due to terrain etc or can move.

In general, moving convergences move more slowly than the wind that is feeding them. That is, a sea-breeze will flow inland to the convergence, then go up and tend to circulate back towards the coast at altitude. Convergence cloud streets can be at any angle to the wind, depending on how the air masses are meeting. Sometimes keeping a track of your ground speed by GPS can tell you when you are entering into a different air mass with different wind speed and direction. Convergence cloud can also often line up with the wind and it can be a "chicken and egg" scenario (ie, is the slight change in wind direction on either side of the street the cause of the street, or is it caused by the insuck into the street?).

The easiest type of convergence to recognise is when you see cu's with different cloud-base heights close together. When the two

different air masses have different temperature and humidity, base is at a different height. sea-breeze convergences can look like this. Usually the best place to be is under the higher cloud-base right beside a cloud with low cloudbase. This can be very spectacular, flying beside a vertical wall of cloud.

The classic idea of a convergence is a large elongated area of gentle lift. This type of convergence is less common in the areas where I fly. Even this type of convergence can be difficult to find the edges of, as the lift can drop off so slowly at the edges that you may not know which way to fly to get back into the stronger part. Any thermal activity or other turbulence makes it more difficult to locate the edges. In the absence of cloud, I find that flying in a zigzag path from edge to opposite edge gives me some feel as to where the convergence actually is and decreases my chances of losing it. If you just fly straight in the direction that you think the convergence is going, you may not be able to tell the difference between the convergence getting weaker or whether you are flying out of it. Then you don't know which way to turn to get back into it.

I more commonly encounter convergences that are areas of enhanced thermal activity. For example, the most common type of sea-breeze convergence that I encounter has thermals getting stronger as I approach the sea-breeze from inland. Then sometimes there is a narrow area where I am flying in zeros or maybe 1m/s up with thermals in it. Occasionally I get strong localised lift and turbulence. Then the thermals just stop when I am a few kilometres past the front of the sea-breeze on the ground. Finding the edges of this type of convergence is difficult as there is often sink in between the thermals. With these types of convergences it seems best to hop from cloud to cloud if there are any, otherwise I try to understand where the convergence is likely to be and fly a large zigzag course to suit. They often still beat me and I lose it, but I have fun trying.

Also bear in mind that convergences can lean over if the temperature of the two air masses is different. That is, you can fall out the bottom of a convergence. If you fall out the bottom of a sea-breeze convergence and into the sea breeze below, fly inland to try to find it again.

You need to keep an open mind and feel out what the air is doing. Sometimes it can do weird and wonderful things. If you are too hooked on a mental image of what you think is going on, you can fly right past or through useful lift. If you encounter unusual lift, stop, explore it, and you might learn something and have a magical flight as well.


Here are a few examples of some of the out of the ordinary convergences I have encountered:

- 1) *A mild southerly change convergence that broke up into some localised waves: I got up as a low, dark and elongated base approached and stuck with it. However this wave began to dissipate after a new one formed some kilometres back upwind. I left it too late to punch back up headwind to the next wave and decked it due to the small clearance between cloudbase and the plateau I was over.*
- 2) *A sea-breeze convergence where there was more lift down low in the sea-breeze than there was in the inland air (normally there is more lift in the inland air that is being pushed up as the sea breeze slides under it). I even saw a fire inland of the front, where the smoke was rising as it approached the front, then was thrown onto the ground when it hit the front. Whenever I flew too far inland I hit sink. This day when I landed I noticed that the sea-breeze wasn't cool like it usually is.*
- 3) *At Rainbow Beach a convergence often forms out near the Pyramid dune and goes diagonally back inland away from both coasts. This is caused by the sea-breeze being slightly different directions on the northerly coast to what it is on the easterly coast. Where the two sea-breezes meet there is often a cloud street that can stay most of the day, but I think it is better in the mornings when the sea-breeze is still picking up. I have been into this convergence a few times, and have found up to 4m/sec of lift. Out at the Pyramid and under the cloud street between the two beaches, I recently hit a thermal that took me straight to cloudbase at two to three metres per second. The thermal was as strong and every bit as rough as what you would encounter inland. I wasn't pushing the limits on safety because I was always within glide of a safe landing on the eastern beach, even though the climb out was over tiger country. This then set me up for a nice flight at cloudbase under and beside the street, over mostly flat ground and then flying down the eastern beach.*

We have been flying Rainbow since the early seventies, unaware that there can be an elevator to cloudbase out on the edge of where is reachable. If you're afraid of bombing out,

you're much less likely to find and learn from such magical things. What a thrill it was to arrive at the Pyramid just 20m off the beach, wave at the people on the beach, make a few passes on the north-west face to scratch up and get above the top, then to go around to the north-east face and climb out in the elevator. This adds a completely new dimension to coastal flying. I don't know how often this

elevator is there and just how often it is reachable, but it sure will be fun finding out.

If anyone else has enough experience flying convergences to be able to add to or dispute any of this, I for one would like to read about it or talk to them. There is too much to learn for one person to be able to discover it all. If we pool our knowledge we can all benefit. To me this sharing and pooling of knowledge is what Skysailor should be all about. 

Frank Fontayne 'mosquitoes'...



Photos: Frank Fontayne

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Development of Soaring

TERRY CUBLEY,
GFA Development Officer

In discussions with a number of clubs we have identified some typical membership groups that the clubs work with. Different clubs seem to be able to cater for specific types of members – that is, they can cater for the needs of certain groups of people.

Some of the small country clubs require their members to turn up very frequently and to share the big workload – instructing, committee, duty pilot, maintenance, airfield maintenance, work on the winch, etc. Members of these clubs can often feel quite negative towards new members who can only turn up for half a day every few weeks and seem to show no interest in taking on some other role in the club. Most of these people who do become members will leave in a fairly short time.

Other (usually larger) clubs may have a large number of members with different needs and there may be some tendency for cliques to form which can make social life fairly difficult.

Each club needs to carefully analyse which member groups it can accommodate, and what it will need to do if it is to cater for a broader type of member. Discussing this with the current membership and looking at the advantages that a broader membership can create, and maybe what the future of the club will be if a change is not made, may help the club to actively promote to a particular target audience.

As an example, the Grampians Club at

Ararat in Victoria has recently had a number of women members join. These members are around 50 years old, kids have left home and now they suddenly find themselves with some time, a little bit of extra cash and the need to do something different. They are very valuable members, very committed with some excellent skills to add to the club. The club is having to make sure that it can cater for their specific needs and as a result the number of people in this group is growing.

The following is a list of some of the attributes of some of the more typical member groups. It is a mistake to try and group everyone into a specific 'box' because everyone is different and individual needs can vary, but it does give us a chance to see what type of member we can attract and which ones we decide that we just cannot cater for.

It is important for clubs to realise the types of member that they cannot cater for and if there are other clubs that can better handle the needs of some individuals. It is better for a club to advise a prospective member to travel to another club that can cater for their needs rather than to lose them from the sport altogether.

Some typical membership groups:

	Traditional	Professionals (Family group)	Middle-aged women	Retirees	Youth
Type of experience wanted:	involvement, shared experience	achievement oriented, success, variety of experience, no additional demands, shared with partner, social outlet	company, social contact, looking for a challenge, excitement	involvement, shared experience	social interaction, excitement, freedom
Commitment given:	time, hard workers, skilled, lives for the sport	interest, excitement, flying, dollars	self-confident, time	time, skilled, variety of activities	excitement, enthusiasm
Limits to involvement:	possibly dollars, getting tired, lack of enthusiasm	time	not mechanically inclined	possibly dollars, possibly physical activity	time limited, possibly dollars, lack of other young people
Demands on club:	maintain status quo, demand equal commitment from others, old values which must be upheld	service mentality, low pressure, quick progress situation – training course, likely to train/fly independently may be difficult to keep within their capabilities	must feel to be making progress during training, involve with social events, make training fun, not just hard work, steer away from domestic chores, involve in airworthiness and ops duties	may be demanding to instruct, maybe prefer mid-week operation, no politics	want to get solo in two days, expect energy, innovation from instructors
What they offer:	broad interest, many tasks	difficult to instruct, lower frequency of attendance, excitement, active flying, dollars, competitive role with each other, potential long term members	financial security, resourceful	good social skills, intelligent, mid-week operation	fresh ideas, enthusiasm

Send me a summary of other groups that your club caters for, or those for which you just cannot provide. Are there any cartoonists out

there? Send me a drawing of your view of some of our typical members <cubley@netconnect.vcom.au>.

The Longest Day

RALPH HENDERSON

The longest day of the year came
a week early for some Darling
Downs' Soaring Club members
on Saturday, 15 December 2001.

It began with a very successful dawn launch, the first for four years I am told. Two tow planes, four two-seater gliders and one two-seater motor glider were all launched before official sunrise.

The alarms went off at 4am, a quick check of the overcast sky and the decision was made to go!

Gliders out, batteries, parachutes, DIs started. Tugs out. All the pilots were up, but not enough people to help with the launch. Back through the bunkhouse, lights on, lots of noise and my personal popularity was at an all time high; but we had enough 'volunteers' to help with the launch.

Long and short ropes were quickly shackled, laid out and taken to the launch point.

First off was the DG 500, GUE, flown by Martyn Pike and Brian McKenzie at 4:40am. GUE was to be the camera and video ship for the launch.

Next off was the Pawnee flown by Des Cramer then the Blanik, piloted by Sara Tromp and Colin McInnes, and a Puchacz flown by Dave Ferguson and Mike Codling, at 4:45am.

They were followed at 4:50am by Brian Rolfe and Phil Hutchison in the second Puchacz and David McManus and Chez Hall in the Grob.

Launching in zero wind conditions, with wet grass, the Cessna take-off roll was long and slow, and a cheer went up as the combination passed safely over the far threshold.

Both combinations towed to 5,000ft above ground before releasing. Brian in GUE captured it all on video.

The tugs soon returned to earth and the gliders slowly descended and landed half an hour later. Commemorative photos were taken and every pilot was happy and smiling.

Yes, the early start was worth it.

Thanks to David McManus who this year took over from Russell Bennett as dawn launch organiser. Special praise for Des Cramer and Dave Ferguson who drove from Dalby and

Jimbour respectively to be on the field by 4am, after getting up around 3am.

And thanks to the ground crew who did not fly, but made it possible, Craig Jordan, Tony Cavanna, Dennis Maddocks, Stuart Naylor, Mike Salter and probably some others that I didn't see in the dark. We couldn't have done it without our visiting RAGSA friends.

Thank you to all who participated. It was great to see some of our younger and newer members participating in this event, as well as our visitors. Also good to see the organiser's baton passed on to a younger member.

After breakfast, with the gliders and tugs on the strip and ready for flying, the day's flying commenced.

It wasn't much of a day but there were about 55 launches. Probably not a record but a lot of launches all the same. Thanks to Alf Garrone who towed single-handed for most of the day after Tony and Des went off home to get some sleep. John Knox arrived later and helped out. Alan Midwood did a great job as duty pilot, organising the days flying and recording all the flights. Tony, David, Mike, Peter and Shane shared the instructing duties.

Highlight of the morning was Sarah, Mick Boyden's daughter, having her first solo glider flight.

It started raining late in the day to bring a premature end to the day's gliding. The rain also forced Santa to arrive by Cessna this year.

After a few drinks, the Christmas dinner began. Superbly catered once again, the dinner was enjoyed by 67 members, family and friends.

After dinner there were a few speeches to mark the end of the 2001 Warrego Wander expedition.

Mick Boyden presented the club with another beautiful tapestry made by his wife Jay, who was present this year.

The contributions of those club members who had worked so hard to make the expedition successful were noted and thanked by acclamation. Each of the 18 visiting pilots' achievements were noted and each was presented with a bottle of DDSC/RAFGSA commemorative port by our patron Dennis McCaffrey.

The two Royal Navy pilots entertained us all and then presented the club with a commemorative flag.

The senior officer on the expedition, Mike Salter, then thanked the club for its hospitality, and announced that DDSC would allocate some of the revenue from the expedition to its

Youth Development Fund, to help encourage young pilots participate in the sport of soaring.

The official part of the evening over, the drinks continued long into the night, till what time I'm not sure. But soon after midnight I realised that the reason I was feeling tired was probably because I had been up since 4am. I would have had a sleep in the afternoon but it's pretty hard to sleep when a tug goes past the bunkroom every few minutes.

It was a long day. A highly successful and very enjoyable day. Thank you to all of you who contributed to its success.

Terry Cubley:

This club flew an average of 400 hours in each of its club gliders last year (plus heaps in private gliders). How many other clubs can match this level of utilisation? How would your club's bank balance look if it was doing this much flying? Is it simply a case of great weather in southern Queensland or are they doing something to encourage their members to be active?

GLIDING FEDERATION OF AUSTRALIA

Airworthiness Inspection

FORM 2 NOTICE

- ☐ A Form 2 inspection is due
Cheque for \$137* is enclosed
- ☐ A 20, 30 yearly, etc is due
Cheque for \$302* is enclosed
with copy of aircraft log book
- ☐ An initial C of A inspection
and initial registration is due
Cheque for \$511* is enclosed
(tick appropriate box)
on the following aircraft:

TYPE.....

VH

Please forward relevant airworthiness documents to:

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..... Postcode

* prices include GST

Forward to:

GFA Secretariat, 130 Wirraway Road,
Essendon Airport VIC 3041



Another Type of Iron Thermal

DAVE BOULTER

"Phil, I'm leaving Gilgandra from about 8,000ft, heading back on track to Narromine." I was in the Jantar, VH-IZU: it was Tuesday, 27 November 2001. A number of Southern Cross Gliding Club members were at Narromine for the annual Narromine Cup Week, hosted by the Orana Soaring Club. The weather had been good. The day has been great, so far...

Thermals made it around 10,000ft that day in some places. Conditions on the way from Narromine to Gilgandra had been good, but not great. We were getting blue thermals on the way up and in the hills south-east of Gilgandra cu's were forming.

At Balladoran, about 15km south of Gilgandra on the Newell Highway, there was a huge paddock which I flew towards hoping to get some lift. I was at 6,000ft, approaching the bottom of my comfortable glide band and wanted it to work. Don Palmer and Phil Endicott were slightly north of there under forming cu's and getting to 8,000ft.

Sure enough, just over the paddock and a little downwind of it, a bumper thermal was pumping. You never get sick of these Narromine grinders. They fight with you to keep you out and you fight back to get into them – banking, trying to bend the glider like a banana to keep inside their narrow cores. Four to seven knots on the averager and a screaming vario, God, I love gliding like this.

At close to 8,000ft I left this as the other guys were calling the straggler up to them so we could head back towards Narromine and out to Warren, maybe. I got into Gilgandra with 7,500ft on board, went around the silo taking photos, then headed a bit further north



to meet Phil under another huge cloud. Phil was actually in the next cloud north, even bigger, when I made the call at the beginning of the story. Don was already heading south again, but he was further east over the small hills and in where the clouds were marking thermals. He was slowing a bit and waiting. I thought I could get ahead and not be the straggler for once, so set off.

That was my first mistake.

On track ahead of me was blue sky. But it was blue on the way up, so why am I worried. As I headed towards Balladoran again, and the huge paddock, I did not get many bumps of substantial strength; nothing for me to really turn in. Regardless of this I pushed on.

That was my second mistake.

As I got over the paddock and slightly downwind, it started to tease me. I had huge lift on one wing, turned quickly, then large sink. Searching again showed similar in other directions. At this point I should have left and headed over towards Don, but something kept on saying it was my flying not the thermals that had gone to pieces.

That was my third mistake.

Very shortly I was low. Don asked if I had a glide back to Gilgandra airfield? No I did not. *"How you going Dave?"* said Don. *"I'm a bit white-knuckled now Don."* Very soon I had three paddocks picked out, as I was around 2,500ft above ground. I had plenty of time to perform the paddock checks and was convinced that any of the three were good. They were recently cut (the day before) wheat with short stubble.

Narromine Cup Week co-ordinator Chris Stephens



PHOTOS: JAY ANDERSON

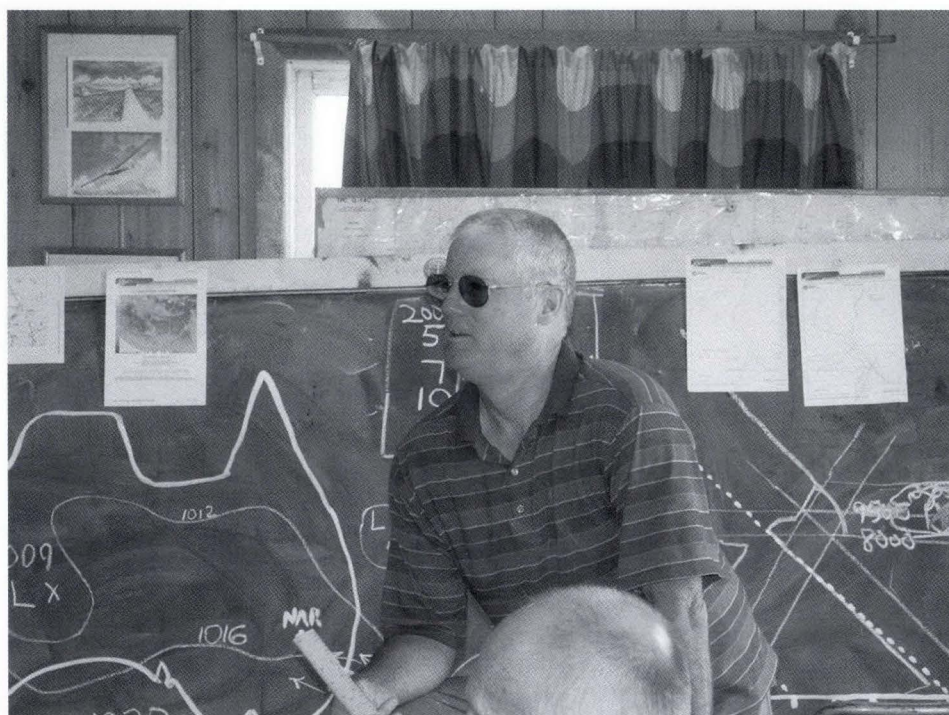
◀ Dave's crew, Don Palmer and Eddie Kropkowski

At 2,000ft agl, I was convinced I was heading in so headed over the next paddock to join for a circuit, etc. I did my FUST and kept my eye on the angles to my selected paddock and the option next door. All was great – I called on the radio that I was outlanding and Don replied. I then flew over the top of a farmer who was cutting a paddock across the road from mine in his huge header, still around 2,000ft agl. I got strong lift over the top of him so decided I could still turn as I had at least 500ft up my sleeve to join circuit for a nice 1,000ft agl circuit to the paddock. Slowly, gently I turned and gained height – 50, 100, 200, 500ft. *"I think I am going to get away from here."* I called on the radio again saying I was possibly getting away. The farmer kept moving and I followed my circle, centering just downwind from him as the broken thermal gathered strength in its disorganised cores.

"Oh blast, the farmer has stopped his header." As I circled I see him exit the machine and look up at me. *"Get back in!"*, I screamed. But still he just stands there looking at me. Things are not so good now. The lift is changing; I can't seem to centre again in the disorganised mess.

Break off time, I have plenty of height and actually burn some off over the farmer before heading downwind and finally into a perfect landing (if I may say so myself). The paddock was aligned into wind, right next to the main road and big enough to land a 747 in. The stubble was a little higher than I expected but no dramas.

Met man Phil Endicott – 'always ready for a paddock party'



Kangaroo in Austria



DAVID HUMPHREY

After my little trip up to the north-west of Australia it was time for something new. As I had some time off work (unemployed) maybe I could bend the credit card a little more...

Inge, a German pilot now living in Adelaide, made me an offer too good to pass up. She was planning on going back to her homeland for a holiday and then to go flying in the Dolomites. I was unsure about getting on a

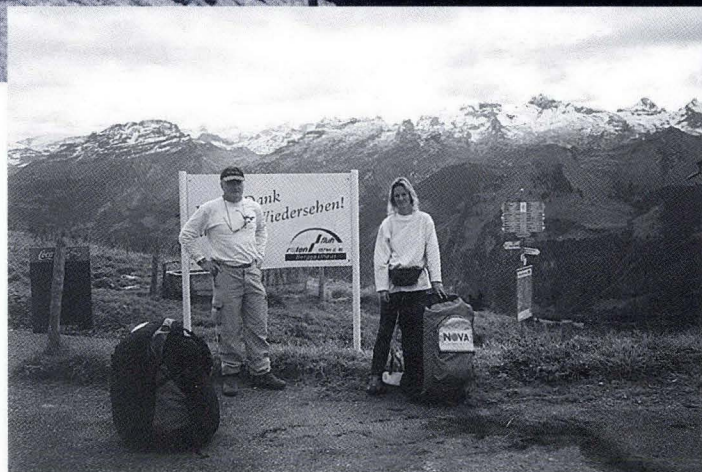
return flight right up until the day before I left. Then the world went mad and I was unsure about getting on a plane at all.

Singapore Airlines, no problem, didn't even hassle me about my 35kg of luggage. I meet up with Inge in Singapore then it was onto Frankfurt. We arrived to a cold and wet 15°C; not a good start. After a couple of days of walking in the rain we borrowed a car from Inge's brother and were off down the Autobahn. There is something scarier than Volvo drivers wearing hats. We made it to Salzburg in one piece and by now I had learnt

that the window winder did not change the gears. It was still raining, so we played tourists while staying at a friend's place at the base of a very nice snow-topped mountain.

Finally it was time to move on as the weather was on the improve. Four hours on the road saw us in Westendorf (Austria) on the first flyable day they had had in three weeks. So it was straight up the hill and we found a place between the snow to take off without too much running. For the next few days we enjoyed the luxury of our B&B being right next to the cable car. However, as a mad cow festival descended on the village, we moved on towards our goal.

We arrived in Campitello (Italy) to overcast skies and some amazing mountains disappearing into the clouds. We also found a couple of gliders in the sky that made it all the more amazing. Not knowing the place we followed



▲▲ Campitello, Dolomites

▲ Dave and Inge at Rotenfluh, Switzerland

▲ Inzing, Austria

Photos: Dave Humphrey



Westendorf, Austria



▲ Rottenfluh, Switzerland

▼ Canaze, Dolomites



them to the landing paddock (off course, right next to the cable car). Meeting the locals thus, we were on our way up an hour later – to hell with finding a place to stay.

Launch was at 2,200m. It was a patch with no snow, as it was too steep for snow to stick. I stepped off the hill with my heart doing a few extra beats into some nice smooth lift. There were only two other pilots in the sky so it was a bit of a guessing game. I worked my way up a sheer rock face to 2,500m and wondered how much lift was in the clouds. I was not planning to find out, however, as my hands were freezing – my gloves were not up to the task. So I headed out into the valley and followed a local into land at the carpark of the Sports Hotel where we ended up staying. Maybe he was on a commission? What a great day.

The following morning we thought we'd take a rest from flying and go for a drive (what you do when it's raining!). We found our way down to the famous Bolzano and spent the night at Tilly's. The next day we could only look but not touch as Mother Nature was still a little unhappy. So back to Campitello and clearing skies. It seemed like the word was out as a lot more pilots were in town. Off the hill and into a nice climb with a bunch of autobahn pilots. This was okay, but the three


white hang gliders in the same thermal next to a snow-covered mountain were not for me. I chickened out and joined a couple of Swiss pilots for the next two hours who knew their way around the valley.

The next day we were going to move on as the forecast was not that great, but it was good to see the weather people get it wrong over here sometimes as well. It was the best day. We had the biggest crowd on launch so far, but it was a little breezy for some. My kind of conditions. Off and into some nice lift that turned into 7m/sec and was a little scary. Climbed out to 3,700m and above all the snow. There was very little cloud and it was amazing. Fear is great for the cold and my hands were fine. I followed a couple of locals on the grand tour over some of the most spectacular mountains that I had ever seen from the air. I dreamt well that night.

Mother Nature again become moody so we headed back into Austria. After getting lost looking for a place to stay we struck it lucky. We ended up in a little village called Inzing that just happened to be having their end of season fly-in and BBQ. Another 2,000m launch, but no cable car. Try to imagine being in the Borah Basher for 45 minutes when the road is bad. Then a 30 minute walk. Great take-off though, grass everywhere and not a

tree to be seen. This place is close to Innsbruck and airspace, so is a little restricted. The cops turned up in the middle of it all and wanted to shut us down because someone had strayed into airspace. But it ended up being a couple more for the BBQ – it all worked out and they let us carry on and everyone got off the hill.

From there it was on to Switzerland, and we all know about the hills in that place. It was really just a social visit to Marc Schmidlin in Salter, but we lucked in again and got to fly the local site. However, time was getting away from us and the weather fading, so back to playing on the autobahn and to Frankfurt. A little over 3,000km and only one mishap with an Italian truck on a little backstreet. The result of that being a big black tyre mark on the front fender and nearly a change of pants. We played tourists for a couple of days, then I was back on the plane before the war started.

Overall, the weather was not that great, but we got lucky and had some good flying at some amazing sites. My thanks go to Inge for the invite, and for putting up with my driving and not yelling too much when I drove on the wrong side. If you want to know more, get a passport and a credit card as you will need it and go. I am now looking forward to the hot dusty paddocks and summer of home. 



Campitello, Dolomites



Westendorf, Austria

The Patch

KEITH LUSH

Sand Patch... Not a very inspiring name. It sort of conjures up a desolate dune somewhere in the middle of nowhere. Maybe a place where you wouldn't be surprised to find a regional prison but not much else of note. But nothing could be further from the truth and Sand Patch, in Albany Western Australia, is on the way to joining Stanwell as one of the most well-known sites for hang gliding in this country. Despite the regional prison.

Facing the great Southern Ocean, that mass of water revered and respected by round the world ocean racing yachtsman, the location has been a favourite haunt of hang glider pilots for nearly 30 years. With silky smooth breezes and kilometres of awe inspiring coastal scenery, the site is one of our jewels in the crown for the Albany region in Western Australia. Height gains from ridge lift allows you to easily climb 1,000ft above launch and on a real good day, pilots have been known to go 'over the back' to land by the yacht club in King George Sound, which forms the harbour that dominates that part of the region.

I've seen schools of dolphins frolicking in the waves, huge whales heaving out of the water and the odd ocean going freighter plugging its way into a sou'westerly on its way into the great Australian bight as I have flown the cliffs along this site. We often fly over tourist attractions like The Blow Holes, Natural Bridge and The Gap, which have been bringing people to the area for over a hundred years. It is always a buzz to see their heads swivel around and the camera's come out as people realise there's even more to see if they just look up.

From 1,000ft you can look out under one wing across the southern ocean knowing that the south pole is the next land fall, and then



Flying near the windfarm at Albany

look out under the other wing to see the port City of Albany sparkling in the sunshine.

But what now makes this site even more unique are twelve of the largest wind powered turbines in the world. Standing 120m from the base of each tower to the tip of their blades (each blade as big as a 747 wing), these massive structures are drawing global attention to the purest form of sustainable power generation available today, and at the same time, the purest form of flight.

Western Power Corporation, the company responsible for power generation in Western Australia, completed the multi million dollar project this year, and at the same time, gave Albany a much anticipated tourist boost. As part of the project, they have developed great visitor facilities allowing thousands of people daily to climb to the top of the lookout hills and view the awe inspiring site.

And right before their eyes they will be able to observe hang gliders and paragliders close up, almost like they were up there with us. How WA hang gliding managed to achieve such a great result at Sand Patch, and also gain sizeable sponsorship from Western Power along the way, is an inspiring story of persistence and teamwork. Plus a fair degree of good old fashioned luck.

It started in September 1998 when a couple of pilots on the HGAWA committee decided that it was time we established formal recognition of our activities at the site. While Albany had acknowledged our presence over the years, we had never really formalised this, and pressure on our sites from other legitimate users was building. By doing this we believed we could secure our tenure there, and at the same time hopefully initiate much needed maintenance on the very eroded 4WD tracks that fed this specific area. And you never know, if we could manage it okay, we might even develop the area with a decent set-up and launch.

We arranged a hang gliding trip for the long weekend in September '98, after arranging a formal meeting for the Tuesday with the Executive Director of Development Services in the newly established City of Albany offices. I can't remember how good the flying was, but



I kind of remember using a bushy tea tree to flare into as opposed to overshooting a top landing and heading to the beach on the final flight of the trip before we scrubbed up for our meeting.

The City was very receptive to our approach, as we established our history at the site then outlined how we wanted to work with them to help secure our tenure there in a way that complimented other legitimate users of the site. We referred to our track record in the area with Shelley Beach and CALM, then uttered the magic words, "we have some funds". That instantly raised our credibility a notch or two higher. Everything was going well.

It was about then that we were asked, almost casually, if we were aware of the wind generation farm feasibility study being conducted at Sand Patch, and were we on Western Power's list of interested parties? You can imagine the double takes on our faces when that bit of information was dropped in our laps.

So we thanked the City, and in the four-and-a-half hour drive back to Perth, rearranged our priorities and planned our strategy.

The next three years unfolded into a series of submissions, meetings at Western Power's offices in Perth, meetings on site in Albany, more submissions and constant liaisons with multiple interested authorities. You see, while it was Western Power who were building the turbine farm, the land was actually the responsibility of the City of Albany, but the Department of Conservation and Land Management (CALM) had the task of preserving the environment. So we had to make sure we established good and professional relationships with all of them. I can't emphasise enough just how important it is to build rapport with the right people from the outset. All of them.

Right at the beginning of this period a bit of luck came our way. One of the two hangies was on his flight home from a business trip in Melbourne and got into conversation, as you do, with the guy in the seat alongside. After exchanging a bit of small talk it got around to what lines of business they were in. To the surprise of the hangie, the gent said... "I'm the

Director of the Renewable Energy Division of Western Power. "Oh", said the hangie, "then you'd know all about the wind farm feasibility study at Sand Patch, wouldn't you?" Needless to say, the hangie worked at that coincidence for all it was worth since this guy was the boss of the overall project manager and you'd have to jump through countless hoops just to get a two minute phone conversation with someone at this guy's level in Western Power. Now while this might not have been a significant factor in the final result, it went a long way to establishing at a very high level in Western Power that the hang gliding association in WA was a responsible, organised and well represented group.

So we managed to satisfy Western Power that we could safely co-exist on the site so long as we could be permitted to develop certain facilities. After more meetings, a chat with Craig Worth (then the Operations Manager of HGFA) and CASA and CALM and City of Albany and also pilots who frequent the site, we submitted an outline of how we could maintain our operation there to the satisfaction of the Corporation.

There would, of course, be costs involved beyond our original budget, and we would need to raise the necessary dollars to help us with what was expected to be a considerable outlay. This would be beyond any assistance the wind farm project manager might be able to extract out of his budget to help us, but we would appreciate any help we could get.

They accepted our proposal and our budget estimate and came back with the offer of \$10,000 assistance, which we gratefully banked earlier this year.

So with the help of the Albany Hang Gliding Club, the Sand Patch flying site project is nearing completion. CALM have developed an extension to the Bibbleman Track, which is a 'bush walk' that starts in Perth and wends its way south to Albany and beyond. That's a heck-of-a walk... It is envisaged that our site works will blend in with and enhance that small section of the track so that walkers will be able to sit a safe distance away from launch and watch us fly. The Sand Patch part of the Bibbleman Track is the only thing between us and the Southern Ocean and is yet another attraction for anyone visiting Albany.

Those turbines sure dominate the area, and Albany will never look the same again. It is to a lot of people a blot on Albany's beautiful landscape and they remain passionately opposed to them, but you cannot deny the many positives that go with them. From nearly 20km out of town, as soon as you see the hills on your run into Albany, there is something different to see on the horizon. The main street of the city, much like any other coastal resort location, offers shops, restaurants and pubs to draw you in. Now all eyes are drawn across the bay.

Tens of thousands of tourists will visit the area annually and will be attracted to the

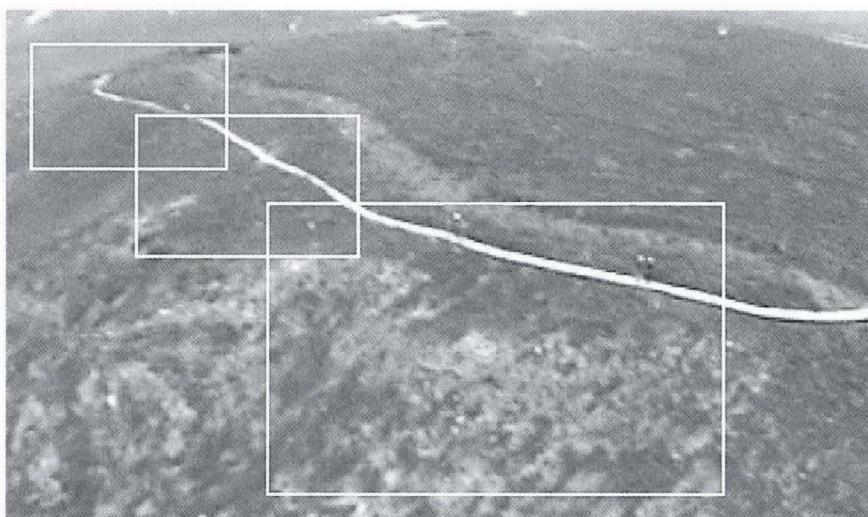
turbines which act like huge sign posts guiding them to a piece of coast they would never have otherwise seen. They will drive out to the visitors' area and walk up the lookout hill overlooking turbine 1. Once there they will gaze along the line of huge towers that provide nearly 80% of the region's power needs without burning any fossil fuels. As they take it all in they might see walkers on the Bibbleman Track stopping to watch a group of people setting something colourful up a short distance along the coast. Then as they watch, right before their eyes, hang gliders and paragliders will launch off a ramp and fly past at eye level to disappear along the coast, only to reappear and land back at the same spot later.

Launch and landing facilities, not readily accessible to the public but in full view of the lookouts, have been developed in such a way that tourists will be able to look down on launch and watch with complete safety, but still be close enough to clearly see what's happening.

The potential for our sport is enormous, limited only by our imagination, and it is now up to us to build from here. We recognise that this development has the potential to give hang gliding the best possible exposure we could have hoped for. The WA Hang Gliding Association, now known as WA Air Sports (WAASp), have a plan to build from this fantastic result and hopefully provide a facility for all pilots to enjoy for decades to come. We originally set our goals to maintain our tenure at this site and soon realised we needed to project beyond that. Now we need to set greater goals way beyond that in an attempt to bring more people into our sport and make it better for everyone.

Whenever the Albany Tourist Bureau or local business wants to promote the area they will inevitably feature the Sand Patch wind farm and there, out in front, will be a paraglider or hang glider. This attraction draws long term interest from around the world. Television cameras, post cards, documentary makers and holiday promotions will showcase 'The Patch'. And we'll be there.

Photos: Mike Annear <mannear@inet.net.au>
(Mike is a professional photographer and these pictures are "grabs" from his DV camera - hence the lower resolution.)





The Development of the Modern Standard Class Sailplane

The events leading to the formation of the Standard Class (originally called the Restricted Class) are somewhat clouded with the passing of the years. However based on the best available sources (Piero Morelli, Ian Strachan, Martin Simons and others) the following chronology is as close to the truth as possible. The first date that the concept of a Restricted Class (later becoming the Standard Class) was discussed by the Commission Internationale de Vol a Voile (CIVV) was at a meeting in Paris, France, in February 1957. A design competition was devised and at the World Gliding Championship (WGC) in Lezno, Poland, was the first Standard Class competition. Adam Witek flying a Mucha Standard won it. During this competition the Organisation Scientifique et Technique du Vol a Voile (OSTIV) jury inspected and flew the various entries, with the ASK6 winning the design competition. Note: The ASK6 was variously called K6, Ka6, Schleicher K6, Ka6br, Ka6cr, etc, and the only certain thing is that over 4,000 were built. There were later designs, in particular the Polish Foka series that outperformed the ASK6, but none ever achieved its popularity.

RON BAKER, QUEENSLAND

Authors Note: There are obvious gaps in this article, and in writing it, if I have missed your favourite glider, then I apologise. It was extremely difficult to know more what to leave out, than what to put in.

The design rules were quite simple. In essence they were, Span 15m, no flaps or other camber altering devices, Terminal Velocity limiting airbrakes, a fixed undercarriage, no jettisonable ballast, no radio and no two-seaters.

The modern Standard Class sailplane came into existence with the advent of Glass Reinforced Plastics (GRP). The first production GRP sailplane to fly in a competition was the Bolkow Phoebus A. The Phoebus was a development of the FS24 Phoenix, the first "Plastic

Sailplane." A Phoebus flew in a competition in 1965, but I am uncertain if this was a WGC Standard Class event. First flown in 1967 (?) and utilising GRP, the Glasflugel Standard Libelle H201, a development of the "Open Libelle", rapidly became "THE" glider in Standard Class competitions. For low-time pilots, the first off-field landing was somewhat daunting, with the small air brakes. Speed control being vital! A long-forgotten fact is that early Standard Libelles had a fixed undercarriage, as did the Slingsby Dart 15. The Dart 15 was a composite construction, largely of wood, but with a GRP nose. When retracting undercarriages were eventually allowed, both types were retrofitted with retracting undercarriages.

First flown in 1967 and also in GRP came the LS1c. Helmut Reichmann won the WGC Standard Class at Marfa, Texas, USA in 1970

in an LS1. The LS1 was followed in 1968 by the ASW15, again in GRP, however the Standard Libelle continued to maintain its popularity. I think over 600 were built. GRP was by now the established material for building sailplanes, except in America where metal was still used. "Carbon Fibre" and "Kevlar" are now commonly used in conjunction with GRP for various structural reasons.

With the advent of the Schempp-Hirth Standard Cirrus in 1969, the Libelle had its first real contender. The somewhat larger cockpit made life in the air more comfortable for those carrying a few extra pounds/kilos. Also, the Cirrus was able to carry considerable amounts of water ballast. LS1 pilots may dispute this, but I think the Cirrus was more popular.

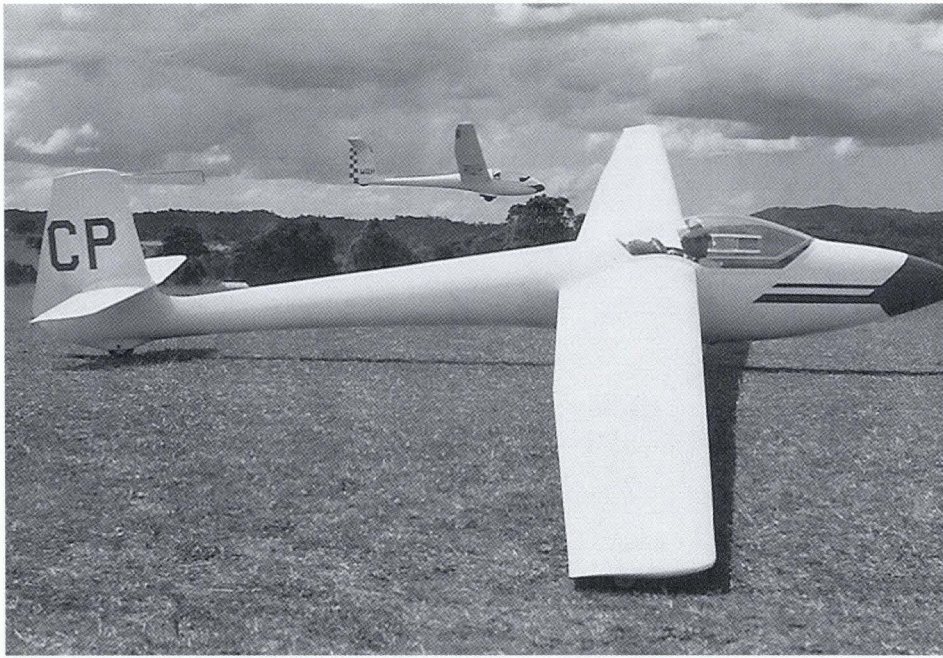
The Polish appeared on the scene in 1972 with the SZD (open) Jantar 19m sailplane, but by 1974 this became the Jantar Standard 1. This sailplane made its debut at the 1974 WGC at Waikerie, Australia where it came in third. It was only 59 points behind the winner, Helmut Reichmann, in the only LS2 ever built. The Jantar Standard 1 became the Jantar Standard 2 in 1978 (?). There were several design changes. Principally, the fuselage was shortened and the wings were very slightly swept forward. The reasoning here was to move the centre of lift forward to match the new CG position. Another modification was to increase the amount of water ballast. This increase gave a wing loading over 50kg/m². Note: This caused Rolladen-Schneider to upgrade the LS4 to the LS4a.

The Jantar Standard 3 appeared in 1983 with the wings now being in the shoulder position. Any Jantar flown by an aggressive pilot is a glider to be reckoned with!

There was then a quiet period until 1974 when the LS1c re-appeared as the LS1f, and Glaser-Dirks appeared with the DG 100. Also appearing in 1974 came the Glasflugel Hornet.

The Hornet featured basically the same wing as the Standard Libelle, but with excitingly different, rotating trailing edge, airbrakes. With these new airbrakes, off-field landings became something less than the daunting Standard Libelle off-field landing.

Around the mid-70s, Schreder in the USA introduced 90 degree flap airbrakes. The LS2 and the Finnish-built Eri Pik 20 carried this a stage further with full span ailerons. I think it was Ingo Renner's WGC 1976 win in the Pik 20 that caused a re-think of the rules and the 15 Metre Class was born. But that is another story.

Standard Libelle


1975 saw the arrival of the ASW19, a Standard Class sister ship of the 15 Metre Class ASW20. Arguably, the ASW19 and ASW20 are the two most beautiful gliders ever built. Another quiet period came and lasted until 1980 when the LS4 became the LS 4a. At first sight the LS 4a is rather plain, but its performance in the air is spectacular. Of note is the fact that testing by RH Johnson in the US revealed a very low L/D of around 37.5:1. The ensuing controversy resulted in Dick Johnson re-testing, but with another LS4a. The result was an L/D of 40:1, and everybody was happy!

It was 1983 when the DG 300 arrived on the scene with its controversial "blown" wing using a pneumatic system. The idea was to use a pitot to feed air into a channel built inside of the wing, and allowing this air to escape through many spanwise spaced very small holes in the lower surface. This was used in place of the more accepted ZZ turbulator tape to control the laminar flow.

Around 1981/1982 Wil Schuemann in America was experimenting with the wing plan-form of an ASW12. This particular glider had its span reduced from 18m to 15m. Not unnaturally, it didn't perform like a glider designed specifically for the 15 Metre Class. Trial and error and a little theory found that by sweeping the leading edge back in stages the airflow over the wing was improved. The results were published in 'Soaring' in 1983.

Schempp-Hirth caught on to this idea, and in 1985 released the Discus. The Discus was a spectacular success, and quickly became the new Libelle. Of interest, the DG 300 had its trailing edge swept forward in stages, the exact opposite to Wil Schuemann's findings, and that adopted by Schempp-Hirth for the Discus. Dick Johnson reported the L/D of the Discus at 42.5:1. It was also reported that the

performance of the Discus was complimented by its docile handling. I am uncertain of the date, but from memory, around the early or mid 1980s Centaire (?) produced the "Pegase" which was a modified ASW19. Centaire had been building the ASW19 under license, but were prevented from modifying it, hence a decision to produce their own sailplane.

This was the first production sailplane to offer winglets. Advertisements in 'Soaring' showed computer-generated illustrations of pressure distribution over the Pegase. Since then, and in no small way due to the work of Peter Masak, winglets have become more acceptable. Early winglets showed unacceptable losses at high speeds however this has now been over come.

There was another quiet period until 1987 when Schleicher released the ASW24. The ASW24 featured an entirely new "low drag" airfoil for the tailplane. Gone was the fully symmetrical airfoils commonly used and, based on research by Althaus, Kombi-type turbulators were used over the tailplane/elevator hinge line. Reports in 'Technical Soaring' showed how computers were used to design the wing/fuselage junction. The ASW24 was not the success it had been hoped for: the airfoil chosen for the wing proving prone to separation in turbulent conditions. Later winglets provided some assistance with the climb performance.

The ASW24 was followed in 1988 by the LS7. The LS7 appeared to be a spectacular sailplane, but rumours got out that it didn't climb too well. Soon the LS7 started to sport winglets; also the factory modified the tip by curving it upwards. My understanding was that the original tip design had caused the loss of climbing performance. Reports also suggested that airfoil was not entirely optimal.

Schempp-Hirth responded to the challenge of the ASW24 and LS7 with the Discus 2. Apart from refining the multi-stage sweepback of the leading edge, the wing now features polyhedral. The original wing had two changes in dihedral, but after the first 70 or so there was only one change in dihedral. The Discus 2 can also carry more ballast, and thus achieve the highest known wing loading, at 52.5kg/m² without compromising the maximum JAR limited AUW of 525kg. During 1988 SZD released its SZD 55. Not a further upgrade of the Jantar series, but an entirely new design. The wing of the SZD 55 features what appears to be a continually curved leading edge. Pilot reports indicated that it was felt to be a quite competitive sailplane. Dick Johnson reported in his flight testing an L/D of 43:1. Rolladen-Schneider countered with the LS 8, which was released in March 1994, and featured, curved upward tips similar to those fitted to the late production LS7. L/D was reported at 43:1, though Johnson reported 42:1. Then Schleicher released the ASW28 in early 2000, with a reported L/D of 45:1. I have not been able to trace a Johnson report to confirm this. Both the LS8 and the ASW28 seem to show a change of design philosophy, with a greater emphasis on climbing ability over pure L/D. It should be noted that both these sailplanes are offered with alternative tips that increase the span to 18m, thus making them competitive in the new 18 Metre Class competitions. Lurking in the background is the gull-winged "Albatros" currently being built by Streifeneder. The gull wing was much in evidence in the early days of soaring, with the Minimoa being a prime example. Like all fashions, the gull wing layout is now back in favour. Apart from getting the wing higher, it is also possible to reduce the interference drag where the wing and fuselage join. Apart from the gull wing, the tips are curved upwards, and the wing is in five pieces. Glaser Dirks have the DG 700 in the design stage, but are not currently proceeding with it. There is also a design from one of the German universities that features a slightly swept back wing (not the SB13 flying wing). I believe the sweep back is around eight degrees (the Discus is actually swept back four degrees).

With the rise in the number of self-launching sailplanes, and the introduction of the 18 Metre Class, interest by manufacturers in Standard Class seems to have declined. The development costs for a completely new design being exorbitant!

It would be remiss of me not to mention the American "Genesis" sailplane. The Genesis was almost entirely computer designed. At first dismissed as an oddity, it is now gaining accep-



ASW28

tance. For those not familiar with the Genesis, it features forward swept wing with a reflex airfoil. The fuselage is abnormally short, with a tall swept back fin and rudder. Mounted at the top of the fin is a "flipper". This is best described as a small all-flying surface hinged at its leading edge, and is more of a trimming device. Basic stability comes from the reduced pitching moment of the reflex airfoil. The L/D of the Genesis is reported as being around 43-44:1. One peculiarity reported, is that there seemed to be an airflow breakaway over the wing-root fillets. A pilot reported that he had used a length of ZZ turbulator tape to overcome this breakaway. It has also been reported that the Genesis is doing well in some competitions, but it remains to be seen if it will ever make it in the big league of world championship flying. The most important developments that have come about in Standard Class, are the increases in L/D (always a good selling point!), plus the fact that this is at a higher speed. Also the L/D at very high speeds is now so high that earlier designs just disappear downwards when trying to keep up. Allied to this is the ability to climb while carrying enormous amounts of ballast.



The future development of the Standard Class sailplane, not withstanding the Genesis and Albatross, is going to be one of steady refinement of accepted design principles. That is, unless there is some real breakthrough in aerodynamics. However there are rumours that there are moves to amalgamate the Standard Class and 15 Metre Class due to the, now, very small difference in performance.

The sources of the information used in preparing this article are too many and varied to list individually, but my thanks go to all those who responded to my many pleas for help and/or information. The internet was an additional source of much information. My special thanks go to those unsung people who, largely using their own time, provide such a useful service to the gliding community. ✈

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GFA Soaring Calendar

Gulgong Regatta

2-9 March 2002

All classes, gliders and pilots handicapped. Multiple pilots welcome. Camping space available on airfield and plenty of accommodation in Gulgong. Enquiries to Christine Meertens ph: 02 9452 2777, fax: 02 9453 0777, email: <hkmxor@msn.com.au>.

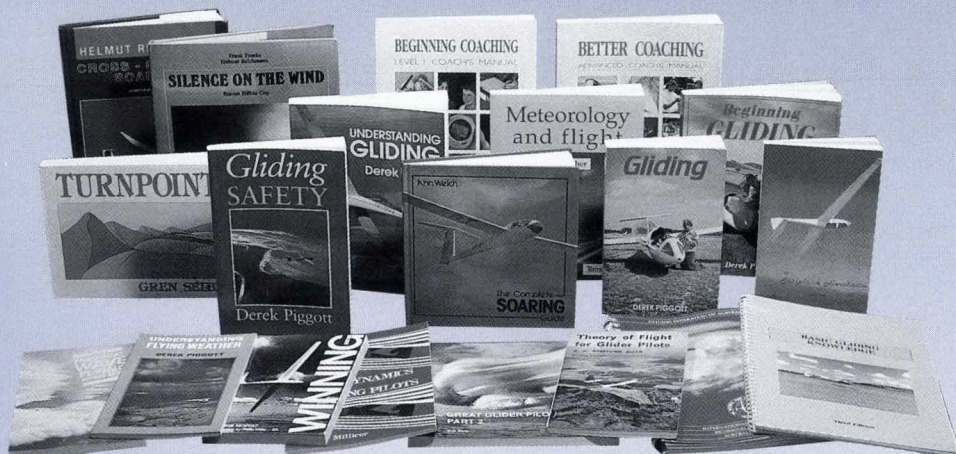
Victorian Soaring Association State Competition

9-16 March 2002

Bendigo Gliding Club, Bendigo-Pyramid Hill Road, Raywood. Contest Director: Colin Campbell.

Camping is available on the field with showers and kitchen facilities. Food will be catered for by the club.

For further details contact Colin on 03 5435 3340, email: <colinc@origin.net.au> or Phil on 03 5435 3625, email: <libelle@impulse.net.au>.



THE GLIDING FEDERATION OF AUSTRALIA

Please note: all prices include GST

Books

A Glider Pilot Bold – Wally Kahn	\$49.50
Aerodynamics for Soaring Pilots – Millicer	\$33.00
Aerotowing Manual	\$22.00
Airways and Radio Procedures – GFA	\$5.50
Basic Gliding Knowledge – GFA	\$22.00
(\$16.50 each for 10 copies or more – postage not included)	
Basic Sailplane Engineering	\$35.20
Beginning Coaching Level 1	
– Australian Coaching Council	\$30.25
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Beginning Gliding – Derek Piggott (2nd Ed.)	\$49.50
Beginning Gliding – Derek Piggott (3rd Ed.)	\$49.50
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– Maurie Bradney	\$16.50
Flying Faster and Further (Part 2)	
– Maurie Bradney	\$16.50
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GFA Instructor's Handbook	\$35.20
GFA Manual of Standard Procedures	
(Part 3) – Airworthiness	\$11.00
GFA Manual of Standard Procedures	
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Modern Elementary Gliding – BGA	\$18.50

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The Modern Soaring Dictionary	
– Roake & Phillips	\$11.00
Turnpoints – Gren Seibels	\$52.25
Understanding Gliding –	
Derek Piggott (3rd Ed.)	\$55.00
Ventus B Maintenance Manual	\$11.00
Weight and Balance Notes	\$13.20
Winch Launching Manual	\$22.00

Videos

Champions of the Wave – NZ Video	\$55.00
Let's Go Gliding – Lake Keepit Video	\$30.80
The Daily Inspector – Video	\$42.90
Wind-Born – A Journey into Flight	
– NZ Video	\$55.00
Zulu Romeo Good Start – Video	\$38.50

Accessories

Aircraft Log Book	\$35.20
BGA Sticker	\$1.10
Bumper Sticker (Glider Pilots do it quietly)	\$4.40
Bumper Sticker (I'd rather be Soaring)	\$4.40
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GFA Metal Clasp	\$8.25
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GFA Tie (Big red glider on blue background)	\$19.25
GFA Transfer	\$1.10
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Pilot Training Record	\$3.85
Tost Rings	\$49.50

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(payable by new owner)	\$27.50
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year survey	\$302.00
Total fee for Initial Form 2 inspection &	
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"How to form a Gliding Club" leaflet	No Charge

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Slope Soaring

JOHN WHITE, *RTO(Sports) NSW(S)*

Slope soaring, or ridge flying, seems to be becoming more popular in Australia. Some clubs already have a home ridge while others have discovered sites available nearby for use, particularly in winter, when other soaring conditions might be a bit thin on the ground, so to speak.

Slope soaring needs a completely different suite of skills compared with thermalling and has very different hazards as well.

First to the rules. Number one is 'don't hit the hill!' More about this later. Another rule you need to know is to turn right if meeting another glider head on. This may be difficult if you have the hill on your right, so it behoves the pilot with the hill on his left to give plenty of room to gliders coming from the opposite direction. Overtaking must be on the inside of the overtaken glider to avoid the possibility of the other glider turning away from the hill (ie, towards you) just as you are about to pass him! Look out is, if anything, even more important when slope soaring. Another glider can easily suddenly appear out of nowhere!

Okay, so much for traffic rules. Now what can go wrong? The answer is plenty! It all looks so peaceful, and indeed it usually is, but things can go wrong in a hurry. Obviously, to slope soar, you must have two ingredients – a slope and a wind blowing in towards the hill. Equally obviously, if the wind drops, the lift stops. It can also stop with a slight change of wind direction (10 degrees is enough for Canberra Club's resident hill to stop working) with potentially very embarrassing effects. The lift can also be 'turned off' if an inversion forms – the wind will just slide over the inversion, resulting in a complete collapse of the lift

system. Other factors leading to a cessation of lift are thermal dumping (downdraughts downwind of a thermal), lee wave upwind or even shear line lift or convergence.

If the lift does stop suddenly, you can be left in a difficult position as the sink rate of the glider can bring you into contact with the hill very quickly.

Now for the flying bit. It is advisable to maintain a reasonable speed – at least 15kt over stall speed – in order to be able to manoeuvre to avoid another sailplane or whatever. Also wind shear can catch you out. The type and size of vegetation controls the amount of wind shear, which can be very marked when the hill is covered in scrub. One important by-product of wind shear on a hill, is the tendency to roll the glider into the hill, with more lift being generated by the into wind wing. Another reason to keep the speed up!

Where should you be in relation to the hill? Depending on the wind shear factor and the strength of the lift, a couple of wing spans

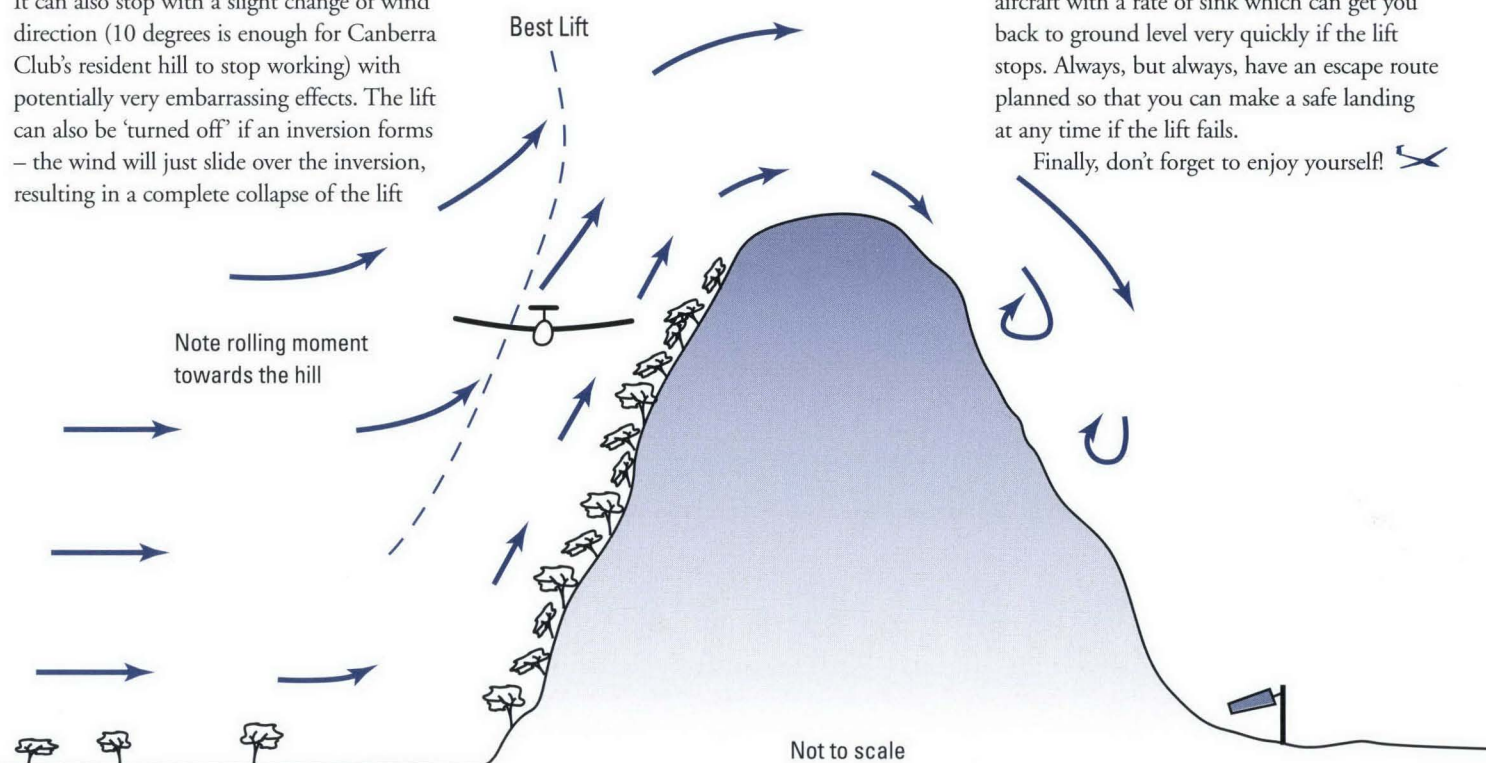
should be okay but there may be times when you need to get a bit closer than this. If you do, use the greatest caution. In the south of France many pilots have been killed getting too close to the mountain. As you (hopefully) climb to be level with the summit, what do you do then? Whatever you do, don't go behind the ridgeline! The sink can be just as strong as the lift and can catch you out in seconds. Your climb rate on the windward face was the sum of the ridge lift, less your normal sink rate for your chosen airspeed. On the lee side, your sink rate will be the ridge sink plus the glider sink rate and can extend to very close to the ground. To the observer, the sink rate on the lee side will appear to be markedly stronger than the lift on the slope. It's very easy to get sucked in (literally).

Generally, the best lift is a little further out than when you were climbing the ridge lower down – the optimum position can fairly easily be determined by nosing out from the ridge and noting your rate of climb – if it improves, keep going – if not, drop back a bit.

Possibility of a thermal? To catch a thermal from ridge lift, you need to look ahead for signs of a thermal developing. Look for other gliders thermalling upwind, birds thermalling, rising dust and so on. Then position yourself on the ridge to take best advantage of it and go out (upwind) to meet it, with the option of falling back to the ridge at a safe altitude if it fails to materialise. If you do catch it, work it as efficiently as possible in order to get clear of the ridge well before the possibility of drifting back behind the ridge.

Now for the biggest danger of all! Complacency! With the easy lift of slope soaring it is easy to forget that you are in an aircraft with a rate of sink which can get you back to ground level very quickly if the lift stops. Always, but always, have an escape route planned so that you can make a safe landing at any time if the lift fails.

Finally, don't forget to enjoy yourself! ✈



The Best Gliding Clubs in Australia:

A visit to Balaklava

TERRY CUBLEY,
GFA Development Officer

Given the regular positive comments about this club, I took the opportunity to pay a visit when in Adelaide conducting a workshop for SAGA.

I arrived on the Saturday evening just as flying finished. About 20 people were present, all active with end of day activities. It reminded me of my own club 20 years ago with the enthusiasm and commitment displayed. There was a formal de-briefing of the day's operations using a formal checksheet. The social activity was very pleasant and relaxed. Most people went home early, but about eight of us stayed and were able to get a great meal cooked by the President and his wife.

The club is doing some excellent things. Principally, it is interested in people and in providing a nice atmosphere. Members are keen to go flying and everyone joins in. The small things make a big difference.

The club has some natural attributes. It is only one-and-a-half hours from Adelaide, it owns its airstrip, has great weather, great gliders (two ASK21s have been bought over the past three years) and a winch operation reduces costs.

Some of the positive things

- *Members were very good at meeting and looking after people. I did not announce my experience or role but was approached by a number of members to welcome me and see if they could help me.*
- *Everyone I met was keen to fly and to get involved*
- *Very relaxed approach. Everyone worked well together, all had a common goal of getting the aircraft into the air.*
- *Good signage to show danger areas, welcoming signs, etc.*
- *Water container in pie cart for member and passenger use.*
- *Involved passengers in the activity rather than shout at them and tell them what to do.*
- *A range of simple booklets was readily available – new member information, copy of constitution, visiting pilots information and a winch driver training record.*

- *The club owns two winches, one registered for expeditions*
- *The President and others do a lot of work (President spent the day mowing grass).*
- *Offer a couple of packages for training. Juniors – Three-month membership and 50 flights for \$350 (currently have two juniors doing this). Adults – same deal but \$650.*
- *One of the ASK21s is aimed for cross-country training (registration VH- BXC).*
- *Meal provided in clubhouse during committee meetings and instructor meetings plus other social events.*

There are obviously areas where the club can improve even further and members are keen to identify these opportunities.

There needs to be some thought on how the club can cater for the new type of member (more money, less time) who is starting to make enquiries to take up the sport. This would be quite a culture change as currently all members spend a lot of time and energy working at the club. Coping with a new type of member could be an issue.

The club is already miles out in front of many other clubs and has a lot to offer. Despite this, membership numbers are not increasing and participation in a combined promotion strategy may be of greatest value. The club needs to decide if it is interested in encouraging a membership increase and how big this should be.

Feedback from clubs

In response to my request from clubs to tell me what they are doing, I have received comments form a number. Some of these are shown here.

Southern Cross Gliding Club (Camden)

Dave Boulter has written to me to tell me about the new Marketing Plan being developed for the club. This is still work in progress and, of course, will change over time. Hopefully it will be placed on the club's web page or on the GFA web page so that other clubs can benefit from the hard work.

Dave writes: "What I have found is that we have a million ideas, but we never fully execute. It is far better to have achievable goals and focused actions then measure how we go against those actions in moving to meet the goals." (see comments in the January edition of AG/SS on measures).

"The plan is designed with SWOT analysis, situational awareness and all the other good things that Marketing Plans should have.

SCGC operates in a marketplace that competes for people's leisure time and the

recreational dollar. This marketplace is extremely competitive, with a diverse range of products on offer. The customer is also complex in that there are differing needs to be fulfilled.

SCGC products are combinations of equipment hire, instruction and air experience flights. These cover most of the products.

Specifically this club provides:

- *Glider flights to the public. These allow anybody to become a short-term member of the GFA and undertake minimal instruction in flying a glider.*
- *Charter flights to the public.*
- *Instruction.*
- *Post-solo instruction and flying.*
- *Cross-country flying. SCGC has limited cross-country flying opportunities from Camden. Training and better opportunities are offered a couple of times each year. The main event being the annual Christmas camp."*

Albury Corowa Gliding Club

Dianne Charge, who is a member of the Albury Corowa Gliding Club "Promotions Committee", has written to let me know that the club is actively promoting itself in order to increase membership. She comments that "The club structure is reliant upon voluntary participation in launching and maintenance activities, both of which require time before and after flying. Thus we are not able to offer much to people who have to travel long distances (and therefore cannot put in the required time) however we would like to engage in exchange visits."

This is a very clear decision on the limits required of new members of their club, it suits the current culture of the club. The concept of providing opportunities for people from other clubs to visit and experience the fantastic conditions at Corowa is great for our sport. The local club earns some income, develops a good name, supports the local town and GFA members have the opportunity to experience new and interesting soaring.

Ximango for sale

I had a phone call from an independent operator who was trying to sell a Ximango recently. Something like two-thirds of the phone calls were from hang glider and paraglider pilots who had an interest in moving into the independence that this sort of powered sailplane can offer. Ultimately it was sold to a paraglider pilot who will undoubtedly have a great time soaring and touring this aircraft.

This is a good indication of the interest across the soaring sports and why we need to maintain the strong relationship. The ex-secretary of my own club is now an active member of the Melbourne Paragliding Club showing that the movement and interest is in all directions. ✕



World Gliding Championship 2001

— Mafikeng, South Africa

Oscar Goudriaan soared into sporting history by becoming the first South African to win a World Gliding Championship title. He clinched the Open Class title at the 27th World Gliding Championships in Mafikeng, South Africa in a field consisting of 71 competitors from 21 countries. The championship ended on 31 January.

The 15 Metre Class was won by Verner Meuser of Germany while Laurent Aboulin of France took the Standard Class. The championships, held on the African continent for the first time got off to a dramatic start on 18 December when 61 of the 71 competitors were forced to outland during storms in the area.

Australia was represented by Ingo Renner and Lars Zehnder in Open Class, Graham Parker in 15m Class and Tom Claffey, Standard Class. Highest placed was Ingo who came in eighth in his class, followed by Tom, placed 10th in Standard Class. Graham and Lars were placed 14th and 17th respectively in their classes.

Awards

Standard Class

Gold Medal and Cup	Laurent Aboulin, France
Silver Medal	Michael Young, Great Britain
Bronze Medal	Jean-Marc Caillard, France
FAI Diploma	John Coutts, New Zealand
	Andrew Davis, Great Britain
	Richardo Brigliadori, Italy
	Makoto Ichikawa, Japan
	Baer Salen, Netherlands
	Paul Crabb, Ireland

15 Metre Class

Gold Medal and Cup	Werner Meuser, Germany
Silver Medal	Steven Raimond, Netherlands
Bronze Medal	Janusz Centka, Poland
FAI Diploma	Gary Ittner, USA
	Axel Horn, Germany
	Frederic Hoyeau, France
	Henri Romeijn, Netherlands

Open Class

Gold Medal and Cup	Oscar Goudriaan, South Africa
Silver Medal	Michael Sommer, Germany
Bronze Medal	Alberto Kanuth, Brazil
FAI Diploma	Laurens Goudriaan, South Africa
	Holger Karow, Germany
	Tassilo Bode, Germany
	Eric Napoleon, France

World Soaring Cup

1st Team	New Zealand
2nd Team	France
3rd Team	Great Britain

15 Metre Class — Overall Results

Place	Points	Rego	Pilot	Country	Glider	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
1	8,867	WM	W. Meuser	D	Ventus 2ax	797	869	678	995	1,000	997	1,000	717	904	910
2	8,779	1R	S. Raimond	NL	ASW27	861	990	909	969	851	944	872	779	869	735
3	8,619	VP	J. Centka	POL	ASW27	749	904	796	747	809	880	855	983	973	923
4	8,599	P7	G. Ittner	USA	Ventus C	1,000	947	804	733	789	1,000	998	774	1,000	554
5	8,467	EX	A. Horn	D	Ventus 2ax	847	872	640	745	790	983	979	714	950	947
6	8,405	EW	F. Hoyeau	F	Ventus 2a	678	887	933	734	907	767	814	904	904	877
7	8,309	ACH	H. Romeijn	NL	Ventus2b	827	959	892	967	869	931	852	419	876	717
8	8,221	VS	S. Ghiorzo	I	Ventus 2a	837	972	872	1,000	967	966	892	411	902	402
9	8,203	5A	H. Bredahl	DK	Ventus 2a	522	876	704	982	987	958	916	429	881	948
10	8,148	721	E. Johnston	GB	LS6	679	949	789	741	859	936	771	852	590	982
11	8,103	2T	M. Holliday	RSA	ASW27	672	1,000	644	970	751	814	728	924	956	644
12	8,038	EQ	J. Henry	F	Ventus 2a	663	887	899	723	934	802	999	784	821	526
13	7,992	AL	A. Lehto	FIN	Ventus 2a	850	789	709	680	796	962	767	1,000	677	762
14	7,918	IT	G. Parker	AUS	ASW27	531	921	759	694	955	895	770	582	923	888
15	7,784	KS	K. Striedieck	USA	ASW27	352	999	1,000	758	896	989	914	612	927	337
16	7,697	1	J. Wills	GB	LS6	866	962	615	985	858	397	935	791	845	443
17	7,645	17	V. Sabeckis	LIT	Lak 17a	623	797	924	763	807	858	754	536	829	754
18	6,903	LEO	L. Brigliadori	I	ASW27	635	315	831	667	941	879	646	687	919	383
19	6,824	JK	J. Kolasinski	POL	Ventus 2ct	366	728	649	720	813	853	668	813	740	474
20	6,426	GU	P. Progin	CH	Dg 800	516	247	589	738	827	811	476	689	775	758
21	5,934	JCB	A. Binks	KEN	LS6	593	374	820	707	163	754	600	613	795	515
22	1,611	02	F. De Klerk	RSA	ASW27	656	955	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF

Standard Class – Overall Results

Place	Points	Rego	Pilot	Country	Glider	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
1	8,609	DA	L. Aboulin	F	Discus 2	1,000	832	1,000	55	934	1,000	939	896	955	998
2	8,596	57	M. Young	GB	LS8	891	852	846	679	724	960	907	944	931	862
3	8,592	EF	J-M. Caillard	F	Discus 2	714	793	983	609	862	974	939	806	912	1,000
4	8,455	232	J. Coutts	NZL	LS8	957	845	935	607	909	907	1,000	514	979	802
5	8,215	80	A. Davis	GB	Discus 2	900	887	689	324	733	946	985	1,000	936	815
6	8,153	LB	R. Briigliadori	I	Discus 2	779	884	766	541	896	861	837	887	913	789
7	7,989	X1	M. Ichikawa	JPN	LS8	735	857	844	595	885	905	934	587	856	791
8	7,808	SB	B. Selen	NL	LS8	968	677	921	619	713	866	940	592	969	543
9	7,793	C64	P. Crabb	IRL	LS8	841	818	687	612	663	868	777	803	858	866
10	7,650	UG	T. Claffey	AUS	LS8	921	808	920	606	516	675	906	573	900	825
11	7,611	C65	S. Crabb	IRL	LS8	777	813	786	629	523	815	758	808	852	850
12	7,555	JS	J. Sorri	FIN	Discus 2b	894	705	703	0	965	944	776	834	920	814
13	7,539	DJ	D. Jacobs	USA	LS8	358	833	812	262	983	872	969	571	1,000	879
14	7,516	MK	M. Kuittinen	FIN	Discus 2	931	692	929	452	285	789	920	813	913	792
15	7,381	D2	E. Borgmann	NL	Discus 2	914	786	797	619	646	856	924	603	893	343
16	7,296	W3	J (C) Garner	USA	Discus 2	804	798	804	427	520	869	950	521	783	820
17	7,143	T1	M. Delfabro	ARG	LS8	844	579	777	339	564	812	746	873	959	650
18	7,097	Y4	R. Schramme	D	Discus 2	832	747	824	661	100	847	735	602	919	830
19	6,865	28	T. Gostner	I	ASW 28	737	740	383	618	592	734	561	862	850	788
20	6,830	K1	D. Kramer	C	LS8	225	786	984	63	875	925	678	507	950	837
21	6,605	EO	U. Edslev	DK	LS8	937	596	994	629	283	795	577	643	848	303
22	6,410	Y1	P. Fischer	D	Discus 2	648	737	697	657	296	828	743	579	959	266
23	6,401	H8	D. Heiriss	RSA	LS8	791	567	625	241	801	174	818	855	730	799
24	6,219	B1	W. Gabler	BRA	Discus B	723	756	751	63	876	754	826	706	289	475
25	5,692	98	W. Mirasso	ARG	LS4	548	474	656	319	494	465	722	561	893	560
26	5,485	B2	C. Junqueira	BRA	Discus B	786	519	734	114	276	634	740	606	829	247
27	5,389	IE	E. Inaebnit	CH	Discus B	837	308	705	101	516	609	545	651	854	263
28	5,050	X32	S. Olivier	RSA	LS8	602	363	350	126	656	738	425	716	381	693

Open Class – Overall Results

Place	Points	Rego	Pilot	Country	Glider	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
1	8,625	AS	O. Goudriaan	RSA	ASW22ble	420	983	802	838	1,000	925	932	961	855	909
2	8,509	22	M. Sommer	D	ASW22ble	335	962	934	797	904	955	965	840	904	913
3	8,414	TM	A. Kunath	BRA	Nimbus 4	510	907	815	924	874	773	903	862	875	971
4	8,341	HM	L. Goudriaan	RSA	ASW22ble	269	980	801	840	868	988	890	1,000	795	910
5	8,325	X	H. Karow	D	Nimbus 4m	339	960	887	1,000	901	929	968	831	777	733
6	8,293	VB	T. Bode	D	ASW22ble	345	962	926	628	903	945	956	840	885	903
7	8,262	EC	E. Napoleon	F	Nimbus 4t	385	946	896	776	863	1,000	847	835	876	838
8	8,209	FM	I. Renner	AUS	ASH25e	360	869	864	856	874	806	834	938	1,000	808
9	8,121	N1	P. Harvey	GB	Nimbus 4t	311	867	1,000	821	871	997	994	880	887	493
10	7,846	IQ	D. Schmid/A. Keller	CH	ASH25	378	977	936	797	713	879	910	687	811	758
11	7,842	7V	R. Gimney	USA	ASW22ble	416	1,000	883	607	781	962	880	681	816	816
12	7,822	E2	R. Cheetham	GB	ASW22 BI	336	885	975	824	810	879	1,000	771	920	422
13	7,816	HW	J. Payne	USA	Nimbus 4	440	950	821	797	828	896	866	687	802	729
14	7,271	JB	R. Schild	CH	Nimbus 4t	376	939	916	607	732	964	916	798	721	302
15	7,078	RG	J-E. Rouaux	F	Nimbus 4m	245	819	866	523	862	576	843	810	723	811
16	6,692	4M	A. Andersen	DK	Nimbus 4m	233	817	830	612	884	93	731	652	813	327
17	6,611	XY	L. Zehnder	AUS	Nimbus 4dm	201	818	829	624	781	707	744	751	662	494
18	6,531	X3	L. Urbani/M. Umberto	I	Nimbus 4d	253	926	803	592	223	836	754	752	659	733
19	6,433	162	P. Stouffs	B	ASH25	444	322	832	624	602	804	727	600	688	790
20	4,759	HS	U. Paolillo	I	Nimbus 3	277	782	631	573	315	786	480	359	344	212

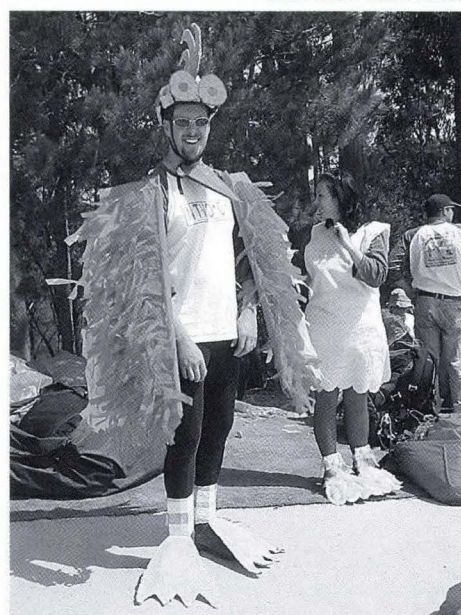
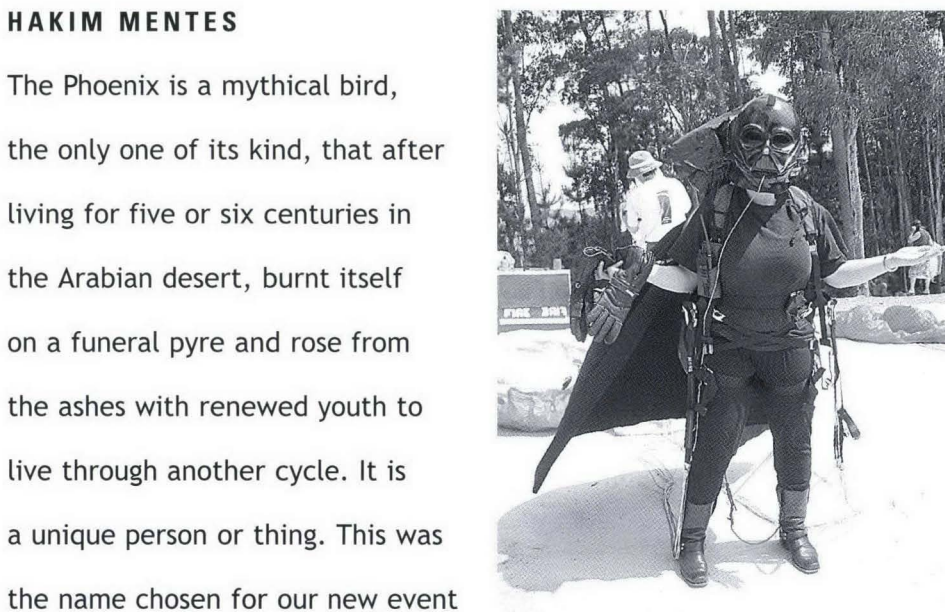
Phoenix Cup – Paragliding in Masquerade



▲▲ Photos: Yonca Ariner

HAKIM MENTES

The Phoenix is a mythical bird, the only one of its kind, that after living for five or six centuries in the Arabian desert, burnt itself on a funeral pyre and rose from the ashes with renewed youth to live through another cycle. It is a unique person or thing. This was the name chosen for our new event – Paragliding in Masquerade.



▲▲ Photos: Sue Wheelhouse

Preparation for the event took many long months, including a lot of convincing of pilots to come up with a costume design, as well as visits to the township of Bright to chase sponsors and legal issues. The end result was well worth the effort. Our preparation was so thorough that even Mother Nature felt obliged to cooperate.

Many keen pilots turned up Friday afternoon for final preparation. Saturday saw station wagons carrying unusual objects through the streets of Bright. Secrecy was paramount and pilots were so tight lipped about their costumes that some did not record their costumes onto the registration forms, which would give our commentator, Geoff White, a challenge as he attempted to describe various unusual objects coming in to land.

First things first though, and Not The Vic Open 2001 started Saturday morning with a spot landing competition. Gary Clarkson won

the event with a stylish landing. The day continued with a cross-country task. The novice task was to Porepunkah airstrip, and the open class task was the airstrip and return to the landing paddock. Tim Winter won the novice task with flying colours, and Alister Johnson was the open class winner. Style award of the day went to John Style for his bum landing onto the dirt road leading up to launch. The event happened in front of my very eyes. He landed in an up hill direction straight in front of the vehicle I was driving.

Sunday morning the weather showed all the indications for a perfect XC day, but we had a bigger plan – The Phoenix Cup. The event preparation started early in the morning with fencing off the landing area, building sun shades for the judges using old paragliders, firing up the BBQ and setting up a public announcement (PA) system. While those preparations were under progress, a slalom racing event in the landing paddock was being conducted. Pilots had to run through several gates with their glider inflated – a great ground handling skills show. Half a dozen pilots success-

fully managed completing the whole course. I was not sure whether this was due to improved ground handling skills of the pilots, or Richard setting up the course to his liking.

At two o'clock, pilots were busy trying to get into their costumes at launch. The landing paddock was in a festive atmosphere – hundreds of people with their picnic baskets, kids, dogs in costume, music pumping out of the PA system and plenty of sun. I was nervously waiting for the jury members to turn up. They did not, and we were running out of time. I grabbed the nearest three spectators, and conscripted them into the jury panel. Before they knew what was happening, I had briefly explained the rules to them and left them. I hoped they wouldn't run away.

At three o'clock we were still waiting for pilots to take off. Geoff White was doing an excellent job behind the microphone keeping spectators entertained and giving information about paragliding. Soon after three o'clock the first pilot showed up in the sky, closely followed by the other 23 pilots in their colourful costumes. The costumes and performances of

e and Not The Vic Open 2001

the pilots were far beyond our wildest expectations – they were fantastic.

Most pilots managed landing in full costume, but some were not that lucky. Nobody was sure whether it was part of the act when the pilot of the 'Save the Whales' costume dropped the two massive inflated whales into the creek. Or perhaps the whales had escaped?

After all the pilots had landed safely, they paraded in front of the jury for final assessment (some pilots had landed miles away so the jury did not have a chance to assess their costumes).

The last event of the day was the dash for cash competition. In this event, pilots were asked to race against each other to grab the prize that was waiting 100 metres away. Pilots had to wear their costume and carry their glider. It was very entertaining to see 20 plus pilots in big costumes converging on a point. This event rendered most of the costumes unusable for future events!

The winner of the Phoenix Cup in his 'On Fire' costume was Owen Jourdian. Owen's success did not come only from the costume design, but from his careful planning of the whole act. On his landing approach in his fire truck costume, smoke flares were thrown and he landed with sirens wailing. It was impressive. The second place went to Phil Savory for his Octopus costume. An another impressive costume with a lot of attention to detail. The costume was a loooong one. There were three third place getters: Gary Clarkson, Ross Lupton and Julia Shear in Flintstones, Easter Santa and Which Witch costumes respectively. There were so many great costumes that making a selection was a very difficult task for the jury. The day ended at Wandi Pub, leisurely sitting in the garden and listening to the band playing while eating dinner.

Not The Vic Open continued on Monday with balloon (condoms actually) dropping.

▼ Photo: Barbara Scott



February 2002

Pilots were asked to hit a target on the ground with water filled condoms while flying over it. The most challenging part of the event for me was to purchase four dozen condoms from the supermarket early in the morning. You don't leave a good impression with the person behind the counter. Greg Payet won the event by hitting the target. The accuracy of pilots is getting better and better each year, therefore sitting on the target is no longer the safest place in the landing paddock! Carolyn was so focused on hitting the target that she almost ended up in trees. Owen showed us what happens if you spiral down while holding a water filled condom with your teeth.

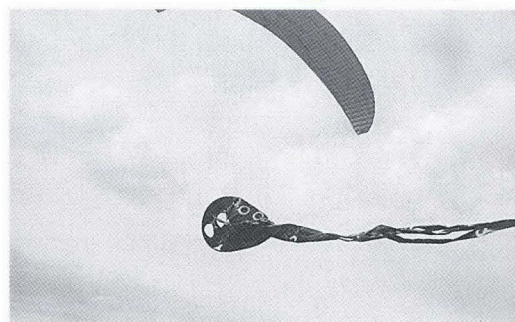
The afternoon's XC task was cancelled due to an expected cold front, so pilots went free flying till it started raining. Because of the deteriorating weather conditions we decided to close the event one day early, and the closing ceremony was held at the Outdoor Inn on Monday evening.

The winner of the NTVO was Zoltan Toth, followed by Alister Johnson and Gary Clarkson in equal second, and Carolyn Dennis in third place. Owen Jourdian, the winner of the Phoenix Cup, got \$300 cash, two nights accommodation at Wandi Pub, a tandem XC flight with Alpine Paragliding and a pack of beer. The second place getter, Phil Savory, won \$100 cash, lunch at Jackie's Tearooms and a pack of beer. Each third place getter (Gary Clarkson, Ross Lupton and Julia Shear) got \$20 cash and a pack of beer.

The event went very well and the pilots who did not come up with a costume regretted their decision. Many pilots have already started talking about what to wear at next year's event. The whole event was captured on video, and the cassettes will soon be available for sale at \$25. If anybody is interested in purchasing the video please contact Skyhigh Paragliding Club,



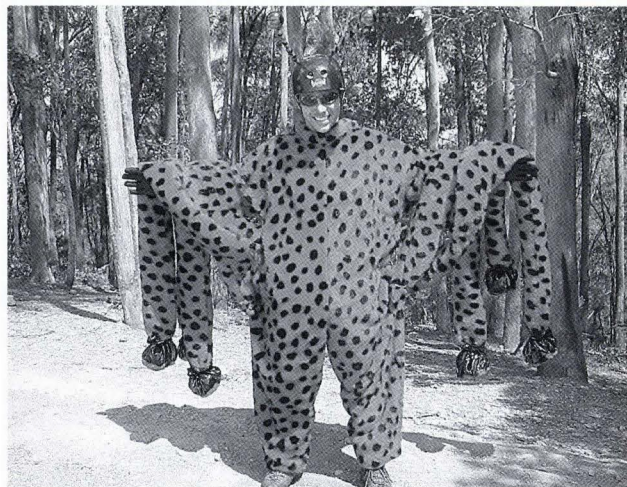
▲ Photo: Tim Winter



▲ Photo: Tim Winter



▲ Photos: Sue Wheelhouse



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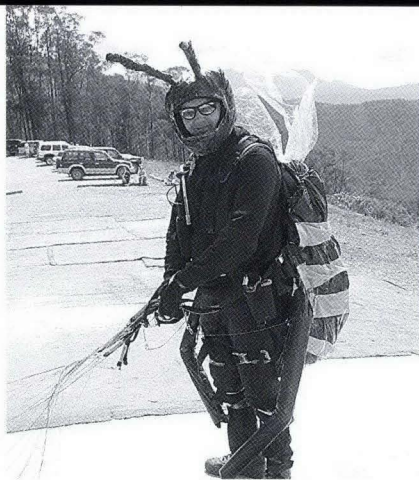


Photo: Sue Wheelhouse

either using our email address <skyhigh@vhpa.org.au> or our postal address, PO Box 441, Kew VIC 3101.

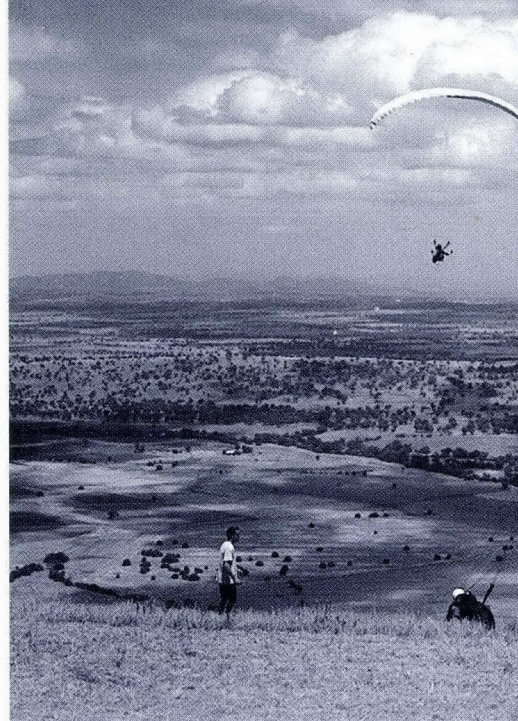
Given the success of this first event, we comfortably predict that the next one will be far bigger. To make the next event even better, we need a lot of assistance, lots of entrants and also need people to make the event happen. We owe a lot of thanks to Malcolm Marker and Georgia for putting their hands up to organise this year's event. They did an excellent job and have established a solid foundation for future success. There are also many other individuals who helped greatly this year. Thanks go to Geoff White, Karl Texler, Malcolm, Jamie Harrington, Owen Jourdian, Selin Menten, Yonca Ariner, the jury members, and many others who I may have missed. We also give thanks to our sponsors: Wandi Pub, Outdoor Inn, Bright Hikers, Alpine Paragliding, Australian Paragliding Centre, Cozy Kangaroo, IGA Supermarket, Jackie's Tearooms, HGFA, and Better Rentals.



The Phoenix Cup entrants were:

Pilot	Costume
Carolyn Dennis	Darth Vader
Zoltan Toth	IT
Owen Jourdian	On Fire
Malcolm Marker	The Cock Who Eats Too Much Chilli
David Frecheville	Tin Man
Duncan Caswell	Happy Camper
Antje Daehler	Edelweiss
Greg Payet	King Kong
Phil Savory	Octopus
Georgia Buckinham	Chicken Run
Tom Textler	Ooops! Wrong Sport
Christian Doblin	Flying Bathtub
Stuart Banks	Bumble Bee
Rick Keating	Save The Whales
Gary Clarkson	Fred Flintstone
Julie Sheard	Which Witch
Barbara Scott	Bedouin Barb
Steve Meagher	Crash Test
Ross Lupton	Easter Santa
Darren Gaunt	Rainbow
John Adulton	Cats on Hats
Annie Adulton	Cats on Hats
Colin Page	Lady Bug

Manilla M



BOB PRATT

The month of June finds me kicking

Broome WA. A delightful area, but n

My thoughts drift back to Manilla, r

and expectations of improving my f

new and old friends, and soaking up

This ambience is evident the moment you arrive in Manilla, a town the product of agricultural booms and busts. Pilots are now contributing to the district's economy and are well rewarded with old fashioned hospitality, especially international pilots who receive, as a bonus to great flying, a window on Aussie culture outside the cities.

Godfrey Wenness, with amazing composure and friendliness, has created a flying mecca for paragliding pilots. He answers on a daily basis all manner of repetitious "Why is it so" questions, in several languages with equal respect for a two hour novice or world class pilot. Not to mention the logistics of making things happen for pilots by liaising with business people, farmers, tourist operators, CASA, HGFA and manufacturers of equipment. Without neon lights or fanciful advertising, things such as accommodation, catering and transport all fall into place no matter

usings



back at Cable Beach,
paragliding.

lling the excitement

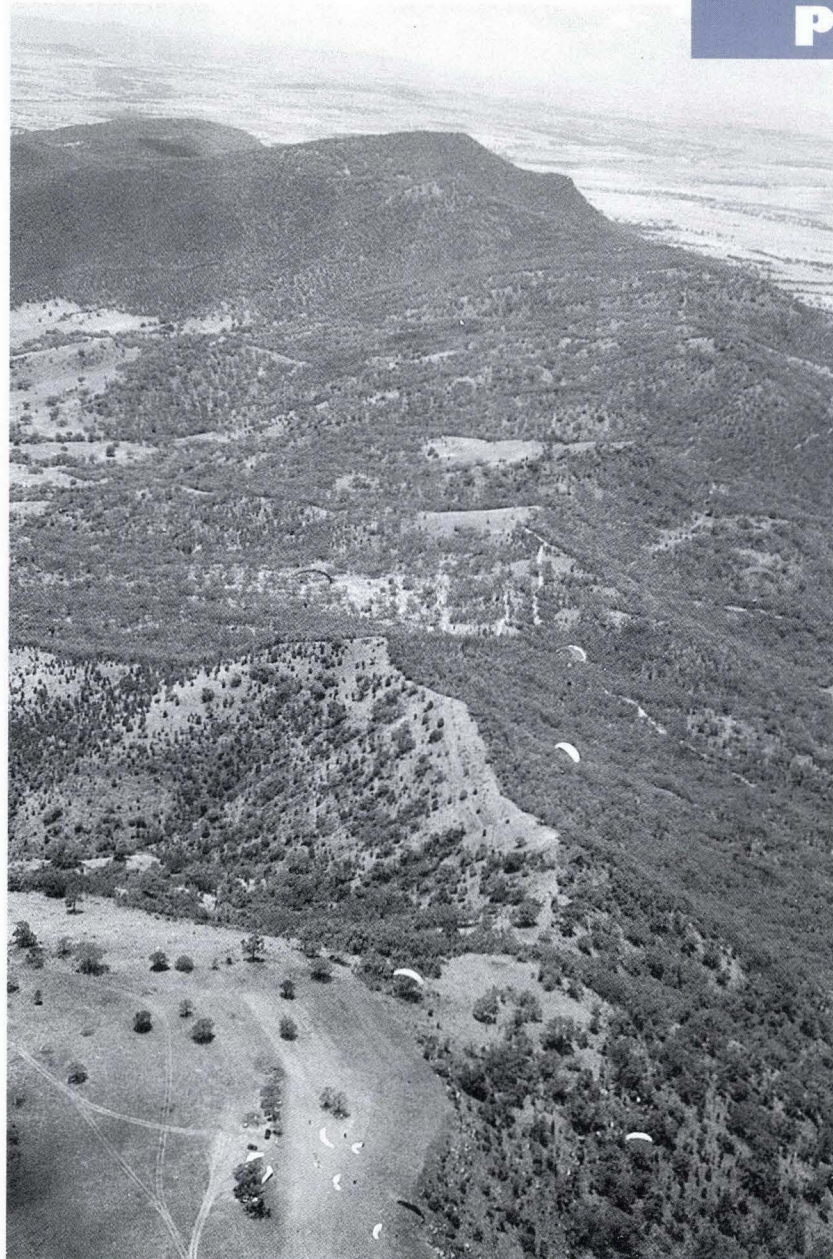
g skills, meeting

e unique atmosphere.

▲ On launch
Gaggle above Mt Borah ►

if there are 10 or 200 pilots in town. I personally thank Godfrey and other instructors and pilots who have contributed to making my flying safe and enjoyable.

Apart from awesome flights no reminiscence would be complete without mentioning the 'Borah Basher'. Pilots must ask themselves "How good can it get?" when they finally cram in the Basher for a memorable trip up the hill. A tenacious piece of equipment that grinds laboriously up the taxing hill with eager-to-fly pilots; sweating



Paragliding

◀ A beckoning hill line


bodies, dust, hands with a vice like grip on anything that feels secure enough to dampen the slow jolting ride.

On arrival at launch a deceptive visual panorama is a surprise, as is the dust when pilots lay out their pristine latest model wings. With the easy part over it's time for a commitment to fly, with groups of pilots procrastinating about when to fly. The stalling is generally increased with inexperience, highlighted in a statement by accomplished pilot Enda Murphy, "Go now, Bob, because they don't know what they are looking at."

My buddy Richard launched and flew his first XC. I dilly-dallied and the day was blown out. Such is the intricacy of our sport, even before we launch ourselves into what most people see as a void.

Godfrey Wenness is one pilot who has conquered this void, and many pilots from near and far seek to emulate his achievements. He has put Manilla on the map as a world class

XC site. In fact, an internationally experienced pilot commented that it is the only place in the world where the public and pilots' first question is, "How far did you fly today?", such is the site's renown for its reliable XC potential.

I am still dreaming of my big XC next season. If it happens for me, great; if not, I will enjoy the laid back atmosphere, camaraderie, cold beers, and an astounding mix of characters from both Australia and overseas. 

PHOTOS: BOB PRATT



▲ The Borah Basher ascends



Come And Get It Back Trophy

The "Come And Get It Back" game now has a web site sponsored by the Hang Gliding Federation of Australia. There you can enter your strip, see which other airstrips are in range, check the status of other participant's trophies and update your own. All requirements and details of the game are on the site. The more airstrips that participate the more fun, and it's free so join in now. You don't have to have web access to participate. Just ask someone who has access to copy the details.

The site is at [http://prideaux-design-co.com.au/cagib_pdc/].

Garry Fimeri, CAGIB Moderator

Club News

Sydney Paragliding Club, NSW

We only meet four times per year but have an email system set up to let each other know what we are doing flight-wise. The advantage of this is that we can join in with other pilots and take advantage of their site knowledge, etc. resulting in more flying. Our club will be organising trips away and you're welcome to join us for our mutual benefit.

We can be contacted, and you can join the club at [www.sydneyparagliding.com]. Or phone Paul Cox on (02) 9557 1185 or email <mark@sydneyparagliding.com>. Our next meeting date will be notified by email.

We have had several reports of some truly exceptional days' flying at Stanwell recently, with two such days described as being "10's". There have been many flights north, and a few south past Brokers Nose, just before Mt Keira at Wollongong.

Enda had one of his most interesting and enjoyable flights at Stanwell for quite a while. He flew down the coast hoping to make use of the great conditions to do a 100km out and return, but on arriving at Brokers Nose the cloudbase was dropping onto the hill tops so he couldn't fly behind Keira (which is what you must do to fly past it). He was forced back towards Stanwell.

I (Dave Fowler) had my best flight since a heavy landing seven months ago hurt my ankle and legs. Cooks Terrace put on some perfect wind for a long afternoon boat around. I ventured south into the beach bowl and got stuck in there for about an hour. I made a few cautious attempts to get past the compression zone at either end, but in each case decided "safe" was better than "adventurous" until I had more time to discuss the conditions and method with the locals. In each attempt I tried to get lots of height then charge at the headlands, and in each case lost too much height to feel safe and did a quick U-turn and tail-winded it back to ridge lift. I finally decided that a landing on

the beach was my only way down. Came in with Big Ears, cautious about landing on the sun-bathers and running out of beach before I ran out of sky, for a comfortable landing near the carpark. In later discussion I found out (as I suspected) that the trick is to go out over the sea well away from the headland, then turn parallel to the beach to fly in front of the headland so that we don't get held back by the compression. Good theory, but how far out, etc. is still not clear, so I'll stay with caution till it is.

Dave Fowler

Product News

Hornet SP

Newly designed especially for Serial Class and competition pilots. A perfect glider for those of you who want a little more from your glider, but want to remain in the safety of DHV2. Why not have fun while flying comps?

During the development of the SP, the goals were to have a glider that was competitive with DHV2-3 and competition gliders yet stay within the bounds of safety (DHV2), and be above the best with glide ratio, speed and climb rate. We believe that not only have we achieved our goals, but gone way beyond them. A staggering 56km/h, a glide ratio with double figures, and top of the stack all await you with the Hornet SP. Photos can be found at [www.dhv.de].

Technical Facts	S	M	L
Weight Range (kg)	60-85	80-105	100-130
Area (m²)	24	26,2	28,4
Area projected (m²)	21,3	23,26	25,18
Span (m)	10,94	11,4	11,85
Aspect Ratio	5,74	5,74	5,74
Cells (St.)	59	59	59
Certificate (DHV)	2 GH	2 GH	2 GH

FAI News

FAI World Record Claim

FAI has received the following Class O (Hang Gliders and Paragliders) record claim:

Sub-class O-3 (Paragliders) – Feminine
Claim number 7155:

Type of record: Straight distance to declared goal
Course/location: Quixada – Poranga (Brazil)
Pilot: Louise Crandal (Denmark)
Paraglider: Gin Gliders Boomerang S
Date: 28/11/2001
Current record: 166km (20/07/95, Kat Thurston, UK)

The details shown are provisional.

FAI World Record Ratifications

FAI has ratified the following Class O (Hang Gliders) world records:

Sub-class O-1 (HG with a rigid primary structure/controlled by weightshift) – General
Claim number 7051:

Type of record: Straight distance

Course/location: Zapata, TX (USA)

Performance: 700.6km

Pilot: Manfred Ruhmer (Austria)

Hang glider: Laminar MRx

Date: 17/7/2001

Previous record: 495km (01.07.94, Larry Tudor, USA)

Claim number 7052:

Type of record: Straight distance

Course/location: Zapata, TX (USA)

Performance: 655km – *Pilot:* Davis Straub (USA)

Hang glider: Air Atos 145 – *Date:* 18/7/2001

Previous record: 559.7km (10/8/00, D. Straub, USA)

Claim number 7077:

Type of record: Straight distance to declared goal

Course/location: Zapata, TX (USA) – Rocksprings, TX (USA)

Performance: 354.6km – *Pilot:* David Glover (USA)

Hang glider: Air Atos 145 – *Date:* 28/7/2001

Previous record: 316.7km (20/7/00, David H.

Sharp, USA)

Claim number 6984:

Type of record: Speed over a 25km triangle

Course/location: Wallaby Ranch, FL (USA)

Performance: 50.4km/h – *Pilot:* Davis Straub (USA)

Hang glider: Air Atos 145 – *Date:* 20/5/2001

Previous record: 26.72km/h (1/7/96, Stewart Midwinter, Canada)

Claim number 6983:

Type of record: Speed over a 50km triangle

Course/location: Wallaby Ranch, FL (USA)

Performance: 40.8km/h – *Pilot:* Davis Straub (USA)

Hang glider: Air Atos 145 – *Date:* 17/5/2001

Previous record: 23.91km/h (7/7/96, Stewart Midwinter, Canada)

FAI congratulates the pilots on their splendid achievements.

World Pilot Ranking Update

Hang Gliding

The Canungra Classic is the only competition to be added. Deleted are the 2000 Brazilian Nationals, Wallaby '00, Atlantic Coast '00, Japanese Nationals '00 and the Spanish Open '00.

Manfred Ruhmer (AUT) remains unassailable in 1st, but Oleg Bondarchuk (UKR) slips to 6th. Robert Reisinger (AUT) maintains his move upwards to 2nd (from 3rd), with Gerolf Heinrichs (AUT) up one place to 3rd (from 4th). Josef Zweckmayer (AUT) and Gordon Rigg (GB) are equal 4th. Unchanged remain Mario Alonzi (FRA) in 7th, Jean-François Gérard (FRA) in 8th, Richard Walbec (FRA) in 9th and Carlos Schmitz finally makes the top 10 in 10th place (from 11th).

In the team competitions, FRA takes 1st from AUT (2nd) while GBR keeps 3rd place.

Paragliding

The paragliding rankings see many competitions deleted: 2000 German Open, Pre-PWC Austria, Pre-PWC Greece, Pan American 2000, Slovenian Open, OstTirol Open, PWC Brazil and the Manila Open. Only two competitions were added: British Champs St André and Canungra 2001.

Steve Cox (SUI) maintains 1st overall, 26 points clear of 2nd. Joos Achim (GER) slides to 7th. Christian Tamegger (AUT) and Kaspar Henny (SUI) move up to equal 2nd, Tsuji Tsuyoshi (JPN) and Hans Bollinger (SUI) are equal 4th. Patrick Berod regains 6th place, whilst Martin Brunn (AUT) and Jean-Marc Caron (FRA) stay equal 8th and Jimmy Pacher 10th.

Louise Crandal (DEN) keeps her lead of the female rankings, in 38th place. Numbers of pilots keep increasing with 875 in the PG rankings.

The top three countries remain the same, SUI, FRA and AUT, but JPN overtakes GER for 4th place and GBR regains 6th place from DEN.

Results not yet received (and therefore not included in WPRS yet) the Korean HG and PG Champs, Canarias, Buenos Aires Flatlander.

Full details of the rankings (PG and HG) can be found on the World Pilot Ranking System web site [www.fai.org/hang_glider/rankings/].

Paragliding Accuracy

Accuracy results include the 2001 Yugoslavian Open. The 2000 Slovenian Open was deleted.

The top 10 pilots are all from Slovenia. Simeon Klokocovnik retains top place, Matjaz Feraric jumps from 4th to 2nd, Matjaz Sluga slips a place to 3rd and Franc Unuk leaps four places to 4th. Jurij Vertacnik slips two places to 5th and David Sluga drops a position to 6th. Tomaz Gorisek, Tone Svoljsak and Damjan Pregelj stay in 7th, 8th and 10th respectively, while Joze Senica falls from 5th to 9th.

In the team scores, SLO maintain their dominance, way ahead of GBR in 2nd and NED in 3rd.

Forthcoming Competitions

Forthcoming hang gliding competitions that qualify for WPRS points are:

Category 2: Australian Nationals, Hay; Bogong Cup, Australia; Zicosur, Chile; Flytec Championships, USA; Canadian Championships; Millau Classic, France.

Category 1: European Championships.

Forthcoming paragliding competitions that qualify for WPRS points are:

Category 2: Australian Nationals; Venezuelan Open; Colombian Championships; PWC Mexico; Zicosur Chile; Il Real Minas, Ladares; Manilla Open, Australia; Canadian Championships; PWC Monte Cornizzola, Italy; Portugese Open; Pre-PWC Portugal; PWC Morzine, France; PWC Turkey; PWC Mung Yeong.

Category 1: European Championships.

Details of these competitions can be found on the CIVL web page: [<http://events.fai.org/hgpg/civil-calendar.asp>].

Any queries regarding the World Pilot Ranking Scheme should be sent to Paula Bowyer, email: <paula@fai.org>. Full details of the rankings can be found on the FAI/CIVL web site at [www.fai.org/hang_glider/rankings/].

Review: Two-stroke Aircraft Engines – A Beginner's Guide

REVIEWED BY JOHN REYNOLDSON

Two-stroke engines are the most popular engines for ultralight aircraft thanks to their good power-to-weight ratios. In principle, a two-stroke is a very simple mechanism, so maybe the main reason they seem to have such a bad reputation for reliability is that they get worked so hard in our little planes. Perhaps if most pilots understood them better and knew the danger signs, that knowledge might help prevent the occasional "golden silence".

To help fill the holes in our understanding of the two-stroke, Alan Lyall, an aircraft mechanic from the UK has self-published a slim booklet introducing the basics of two-stroke engine technology.

Don't expect this book to occupy too many fireside nights. It's aptly subtitled "A beginners guide", and has no pretensions to being a reference work that you'll keep on going back to. Nevertheless, it does a pretty good job, covering the basic principles of two-stroke engines and the ancillary systems. Anyone new to the world of two-strokes should come away with a good grounding in all the basics – or at least know all the right words to use!

Lyall describes the two-stroke process well and provides good summaries of the functions and failure modes of most of the other components. The descriptions are let down somewhat by the diagrams. There are not enough (only four), and the quality of these is fairly poor. In part this is because the book is personally published by Lyall himself. The text and diagrams appear to be colour and black and white photocopies of PC printer output. The colour pictures have not come out well. Apparently he hopes to approach a publisher should there be enough demand worldwide.

However, in order to attract worldwide custom, he is likely to have to expand the book substantially as well as reduce the significant amount of material specific to the British microlight certification and inspection programs.

As it stands, the book represents a good introduction to two-strokes. It's certainly suitable for someone who just wants to know about the system as a whole. However, I would have thought that much of the material covered is probably taught by most thorough microlight instructors as a matter of course, and many other more general texts used as microlight training guides usually contain an adequate amount of information on the two-stroke for most beginner pilots.

If you want to know more about the black arts of timing, carburation, exhaust systems, engine mounting and electrical systems, you will need to seek the information elsewhere. Rotax users, for example, are well served by the series of articles by Mike Stratman, "Care and feeding of the Rotax Engine", republished in the rear of the California Power Systems catalogue. The market is also crying out for something dealing in detail with the Solo 210, very popular on powered paramotors and nano-light trikes.

In the vicinity of \$30 (including postage from the UK) it is difficult to justify an investment in this book. Much the same information is available elsewhere in more generalised training manuals, and if you already have some grounding in the subject, it's definitely not worth it.

This is not to say that the author does not know his subject, or that it is not well written. To the contrary, it reads well and even has moments of humour to break the flow a little.

Should the author find the time to add more diagrams and expand on some of the sections, he may find more of a market.

"Two Stroke Aircraft Engines – A Beginners Guide" by Alan Lyall is available for UK£12.50 including postage and packing direct from the author by cheque or money order. Email: <alan@thehangar89.fsnet.co.uk>.



South Australian State Gliding Championship

EMILIS PRELGAUSKAS, *Contest Director*

PHOTOS: GEOFF NEELY

The 2001/2 State Gliding championship for South Australia was held at Waikerie aerodrome alongside the Waikerie International Soaring Centre. The on-site facilities there were used, with the organisation assembled between local people and members from other clubs in the region. The venue was set between 1 and 7 December to precede the cross-country course arrangements at the same site. This timing also brought the state contest into line with other state and national events over the summer period. The full bookings list for the Waikerie performance week to follow on from this contest augers well for entry to the State championship in coming years.

Sponsorship

The event was sponsored by Agile Communications, a South Australian emergent carrier building its network from the ground up. This includes a network project in the Riverland task area.

Everyone received complimentary corporate shirts as well as pilot packs, prizes, and replica trophies.

As noted below, the contest received enquiries from other potential sponsors for future years.

Lead up

The week preceding the contest was characterised by improving late spring weather.

International visitors on site during those days were consistently flying cross-country up to 300km each day. Two sailplanes competing in the state contest were flown to Waikerie during that week. The last day of November saw scattered cu with climbs to 7,000ft.

Riders and mounts

A dozen entrants gathered with sailplanes between PW5 (1.18 handicap) to ASH25 (0.80 handicap). Clubs represented included Adelaide, Adelaide Hills, Adelaide University, Balaklava, Bordertown, Whyalla and Waikerie. Other local pilots flew some days hors concours. (see also the 'usual suspects list' below).

Format

The combined POST format used in the contest reacted to the absence of enough distinct individual FAI class entries to be tasked that way. This reinforces a trend in South Australia continuing from previous years which is at odds with a differing strong vocal point of view. The entrants' daily scores were extracted to differentiate between Handicap (Open/15m)

Class and Sports Class entries (handicap >1.00) where tasks permitted.

Geoff Neely (Ops Director) also undertook the press release role, resulting in mobile phone interviews being conducted on the grid on some days, and a useful amount of local and regional newspaper and radio press about gliding. Television found the flying day not to suit their network daily timeline.

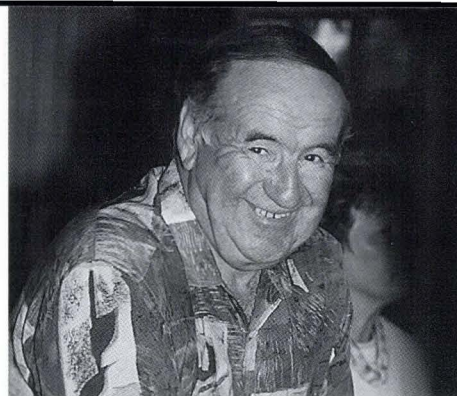
Contest weather

Consistent with long-established contest traditions from all around the world, the opening of the contest saw the good weather end with high cirrus moving in from the west.

This was forecast to arrive in the task area during the late afternoon of Friday, 1 December, however it actually spread across the airfield during morning briefing. The contest throughout the seven days was characterised by trough lines crossing the contest area, with repeated high cloud, strong winds and cool temperatures. Thermals were narrow and sharp edged; everyone complained about the impossibility to centre.

A number of pilots in single and multi-seat gliders suffered from motion sickness on one day or another.

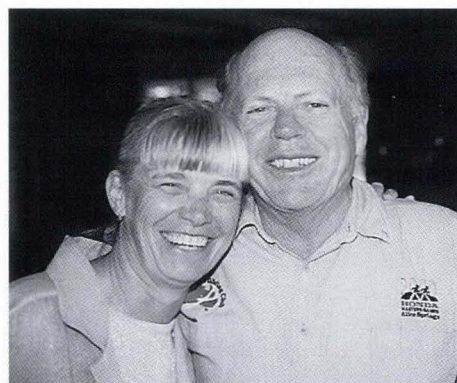
Nevertheless, on 1 December the field marshalled, with organisers and pilots keen to get the Day One voodoo out of the way. This approach to tasking continued to be used throughout the contest; tasksetting even when the situation looked hopeless, marshalling in readiness, and making every effort with sniffer or short task time to get a day in. The result was a large number of contest days flown with devalued score range. The effect of this was to compress placing points so that no one day score dominated the contest aggregate results. Although the scores looked odd that way, with



'Mr World Class', Keith Willis of the Bordertown-Keith Gliding Club won the Bond trophy for Sports Class handicap. Keith has set a number of World Class and Australian records. He says he worked hard in strong winds to even get to the start point!



Philip Ritchie, who won the 15m handicap trophy, with 'wonder crew' Lyn



Cathy and Bruce Tuncks. Adelaide Soaring Club member Bruce Tuncks found his venerable mosquito flew fast, as always. He won the 15m Class trophy. The big smiles came when they realised this was their wedding anniversary



Crystal and Bernard Eckey. Bernard, of the Balaklava Gliding Club, flew his ASH25P in the one-class competition and received the 'Advertiser' trophy for the highest speed, along with the Open Class trophy



John Hudson's daily buffet. Known for his diners at Balaklava Gliding Club, John cooked for the house. The baby girl under the Adidas shirt was delivered the next week

points change seeming to bear no direct correlation with actual distance flown, or with handicap distance flown, the other result was positive in that five of the seven days were flown. Four days were scoreable in Handicap and three in Sports.

The combat

On Day 1 this extended to the fleet making every effort to remain airborne as short convective puffs occurred with each thinning in the overcast. Three sailplanes exited the local area (One Handicap, two Sports); others were shot down as conditions went stable locally.

Peter Robinson (Nimbus 2) achieved 90km in the overcast conditions, Crag Vinall (Hornet) achieved 39km, and Andrew Wright (Cirrus) 11km using local turnpoints. All came home.

Even though not scoreable as a contest day, the flights were meritorious efforts in the available convection, rewarded at next morning's briefing with local wine produce. (Banrock Station wines, not a sponsor this year, but a possibility for the future).

A trough line moved through the following day and the fleet was grounded in wild weather. Excursions included to the above potential sponsor's Wine and Wetland Centre at Kingston-on-Murray (which has the Contest Director's hand visible in it with renewable energy, water and waste re-use systems in the 'ecologically sustainable' wine-tasting building).

Day 2 arrived with strong southerly winds and overcast conditions. The fleet marshalled to a given late time for a short task. Between the grit of the organisers, pilots and the weather-gods opening a sliver of sky south from the airfield, a contest day was scored.

High winds made Sports Class distances impracticable. The day winner in Handicap was Bernhard Eckey (ASH25) ahead of Phil Ritchie (DG200).

Aggregate points were devalued by the short task and limited number of finishers. This set a trend for the whole contest, with short tasks to use the small weather windows except for one underset day. The contest director was the only one to land out on this day (and the whole contest).

December 4th started with an overcast sky but less wind. Similar tasking turned out to be underset when the sky cleared to 3/8 cu at 5,000ft, slowly going blue late in the day.

All pilots completed tasks, with best speeds being in the 105 to 122km/h range, all gliders flown dry. Bruce Tuncks (Mosquito) headed the list ahead of Bernhard Eckey and Phil Ritchie amongst the club pilots. Keith Willis (PW5) kept the assembly waiting for his logger by climbing away after finish to soar for several more hours. This followed the trend he set earlier that week by remaining airborne until 8pm, missing the on-field evening BBQ. He placed second behind Craig Vinall and ahead of Peter Coleman (Hornet) in Sports.

Wednesday was the marshal's day. All pilots towed to the grid to watch the sniffer (DG200) February 2002

stay airborne in the blue for an hour-and-a-half without reaching 3,000ft until cirrus covered the locale; and then tow back to the tie-down or head to a hangar or trailer with thunderstorms predicted. This day offsets the lack of a 'tug benefit day' with few outlandings in the conservative tasking of this contest. (This reflects the contest director attending with a sailplane without a trailer.)

Thursday began after rain in total overcast conditions. As it broke to scattered cu, the wind came up to 25kt, and areas overdeveloped in parts of the task area. A noon marshal and one-and-a-half task saw everyone under way. Bernhard Eckey went furthest in Handicap Class (222km) ahead of Bruce Tuncks and Peter Robinson. Peter Coleman took the Hornet furthest in Sports, Andrew Wright second, through to Keith Willis (PW5) managing to come home against the wind but with large diversions without turnpoint to legitimise the distance flown. (Keith's daily prize was one of Craig's long distance golf balls found 'freshly picked') on the airfield that morning.)

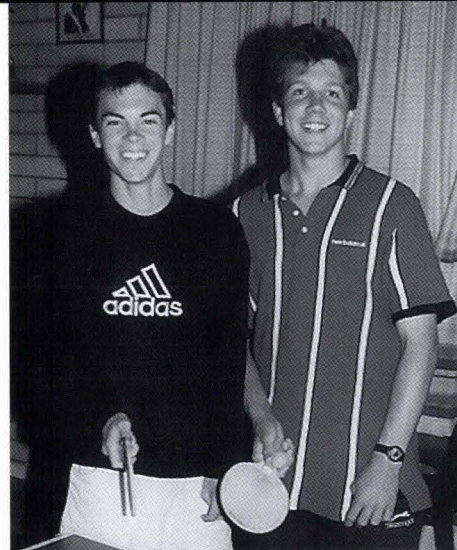
The last day Friday saw everyone keen to get the most out of the contest. A noon start and three-hour task were set into a moderate southerly with scattered cu expected to cycle until late. So, of course, it rained in part of the contest area, the wind increased, and areas cycled to dead overcast. Some pilots came home early while some hung in there out in the contest area to avoid another devalued day.

Bruce Tuncks headed Handicap both outright and on handicap, Bernhard Eckey, then Phil Ritchie. Keith Willis on handicap came in ahead of Peter Coleman.

The usual suspects: Bruce Tuncks, Mosquito, Adelaide Soaring Club; Peter Coleman, Hornet, Adelaide Soaring Club; Andrew Wright, Cirrus, Adelaide Soaring Club and 'Met Man'; Phil Ritchie, DG200, Adelaide Soaring Club; Emilis Prelgauskas, IS32, Adelaide Hills and Contest Director; Catherine Conway, Ventus 16.6, Adelaide Uni and RTO/S SA; Bernhard Eckey and others, ASH25, Balaklava Gliding Club; Keith Willis, PW5, Bordertown; Peter Robinson, Nimbus 2, Whyalla; Craig Vinnall, Hornet, Waikerie.

Others: Ground volunteers from Adelaide Uni, Renmark, Waikerie including Elvin, Matt, Brett, Silvia, the Huson family in the kitchen, Maurie Bradney scoring, Mike, John Hudson, and Peter Siddall towing.

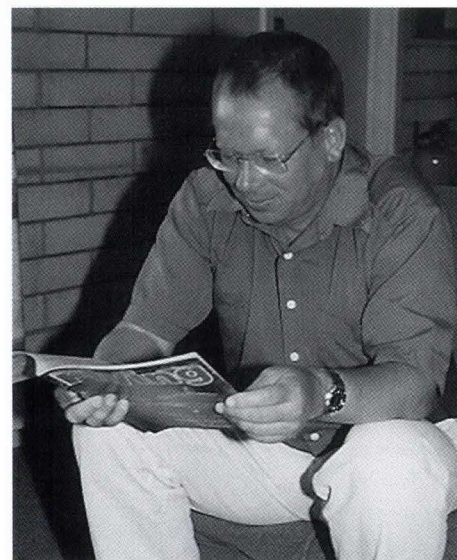
Pilot	Scores	Aggregate days >			
B. Eckey	2,546	567	556	674	747
B. Tuncks	2,343	425	633	285	1000
P. Ritchie	2,146	444	541	458	701
C. Conway	2,078	425	507	460	685
P. Robinson	2,035	425	449	475	684
E. Prelgauskas	1,469	172	415	378	503
A. Hudson		dnc	458	339	556
K. Willis	1,187	399	285	503	
P. Coleman	1,157	295	358	503	
A. Wright	779	267	354	157	
C. Vinall		dnc	440	dnc	dnc



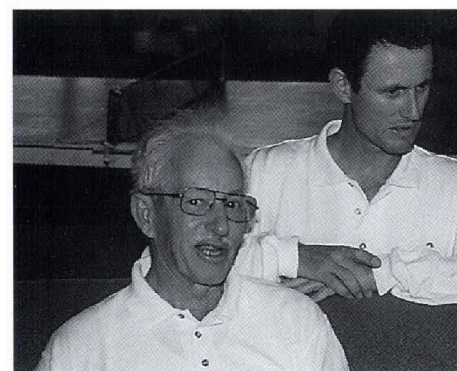
Year 11 students Mat and Brett who solo at Adelaide Soaring Club ran about the field all week, and still had energy left over



Emilis Prelgauskas, Competition Director, and Maurie Bradney, scorer



Waikerie tug pilot for the season was Canadian-born Mike Brett



Adelaide Soaring Club members Peter Coleman and Andrew Wright. Andrew gave the daily weather briefing and was presented with a chamois to help him wash his glider five times a day. Peter won the Sports Class



Why pull a perfectly good aircraft to bits?

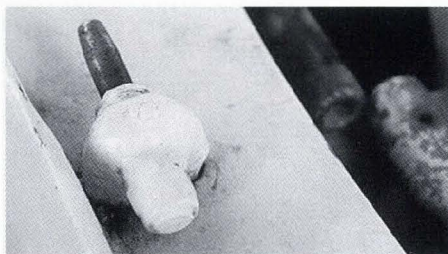
Our Super Arrow Golf Golf Oscar has just had its Form 2 performed (flying time, etc, 1,300 hours and 1,800 launches); so components/fittings/brackets were still fresh in my memory. No, that AD couldn't refer to these brackets, it's nothing like that; it must mean somewhere else. (AD560 – cracking in the tailplane brackets.) Another check, another prod, another thought. The AD shows two pieces of sheet metal, and a 'rib' on the top around the mounting hole. So what are they talking about? Okay! These must be the brackets, so how do they come out? I asked Redmond if he had intimate knowledge of Super Arrow construction; (he's the 'wood man'). He only confirmed that indeed they were the brackets, but no, he couldn't remember exactly... A phone call to Mike put me in contact with the instigator of the AD.

I spoke to Bill and learnt that his 30-yearly on his club's Super Arrow showed this problem. I explained my proposed procedure of trepanning a semicircular extension to the existing bracket hole to take out just sufficient ply from the back of the brackets so they could drop through into the fuselage and be retrieved through the elevator actuating slot. I was told, "Go for it; don't bother to tape up the holes as you are only extending the holes slightly." More contemplation. I needed to be sure I would not upset the semi-monocoque's integrity by cutting out too much ply.

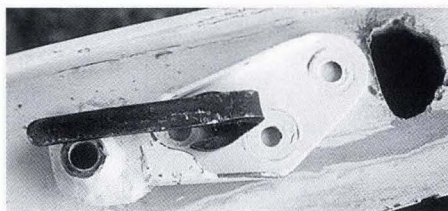
Under the watchful eye of Philip (he has to sign out the paperwork) I ground out sufficient ply to get the brackets out. Three nuts and bolt either side had to be removed. But first, access was needed. Removing the two nuts and bolts joining the elevator actuating rod to the elevator actuating yoke, and removing the lower nut and bolt at the trapezoidal pivot, in the inspection hole above the rear wheel, allowed the yoke to be move out of the way. At least I could now get a hand almost into the actuating slot in the fuselage, but I couldn't see, or move my hand!

About three hours later (with the hangar roof flapping; it probably stayed suspended up... alright, I cursed a little!) five of the bolts were out, but... the last bolt took all of next day to remove! Special spanners needed to be made/modified to get into this area. A short-

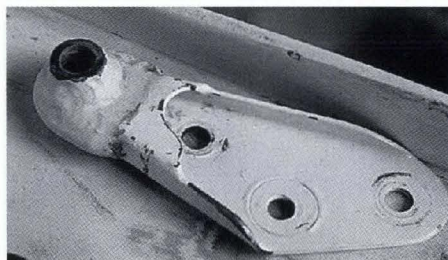
ened 11mm tube spanner with a short lever (a cut down six inch nail), and an 11mm spanner bent 180 degrees were the tools to use. The tube spanner was used between pointer and index fingers, with the pointer pushing on the tube's end and the other turning the lever, at less than one-quarter turn, and the tube needing to be taken off the nut and repositioned; it took time!



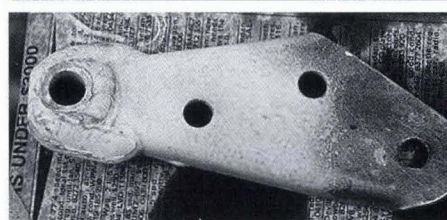
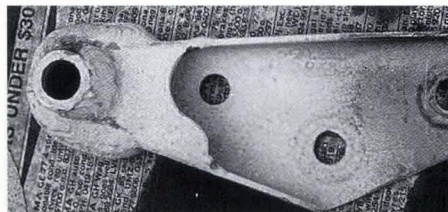
The bracket top before removal – the bit that hooks onto the tailplane



The brackets out – trepanned holes – one modified spanner



A 'normal' bracket ie, not one modified with strengtheners



Brackets with developer – note dye shows incomplete paint removal – no cracks

JOHN INGRAM

Because it may not be a perfectly good aircraft. So an AD560 was put onto it.

As I can't sign out dye penetrant checking I needed to do the test with Philip. No problems (no cracking) were found, but since the brackets were out we decided an X-ray might be helpful. As I was going to Parafield anyway, I asked Aero Services (hangar 169) what they thought we should do. "X-rays need interpreting. You would be much better to get them Magnetic Particle Inspected, it's cheaper and easier." So a trip to Rossair got them put through the test while I watched. No problems in the MPI test. (Having a happy Philip helps.)

If there was evidence of cracking there should have been 'crow feeting' around the top bolthole, and cracking on the turned up edges of the sheet metal; or some weld-induced fatigue, but none was found.

The ply had been smoothed, chamfered, and painted before the newly-painted brackets replaced. Now, how tight must these nuts be made? And something like, "Why are there washers on some bolts and not on others?" Because there are three lengths of the bolts; the long ones have two washers and the short ones have only one washer. That threw me for a while. The tailplane aligned correctly; nothing was adverse.

Redmond Quinn, AUGC – wood & fabric – major repairs – surveys

Mike Valentine, STO/A

Philip Beale, BVGC – surveys

Bill Hughes, Bendigo Gliding Club – major repairs – surveys

On 23 December 2001

Golf Golf Oscar flew for 48 minutes.

We stalled with a nose up attitude and dipped down gracefully, we threw a left spin, we threw a right spin, with normal recoveries, and had a run up to 100kt; all normal. (At 5,500ft wind appeared to be around 40+kt.

As I was doing a 747 approach on a hangar flight I said, "Oh bother!", or words to that effect when with quarter air brakes a thermal took me from a few feet off the deck (about rounding out time) to probably well over 100ft. Why couldn't I have that five minutes before!?



A painting by George Buzuleac of
Christopher's prototype Boomerang

Oh — to be Elsewhere

CHRISTOPHER McDONNELL — *through the aus-soaring site*

I was sitting in my office a couple of months ago when I noticed out the window that it was the first barely decent day of summer we had had in South Australia. Some stanzas of a poem learnt in my school days came to mind:

*I am sitting in my dingy little office, where a stingy
Ray of sunlight struggles feebly down between the houses tall,
And the foetid air and gritty of the dusty, dirty city
Through the open window floating, spreads its foulness over all.*

*And in place of lowing cattle, I can hear the fiendish rattle
Of the tramways and the buses making hurry down the street,
And the language uninviting of the gutter children fighting,
Comes fitfully and faintly through the ceaseless tramp of feet.*

*And the hurrying people daunt me, and their pallid faces haunt me
As they shoulder one another in their rush and nervous haste,
With their eager eyes and greedy, and their stunted forms and weedy,
For townfolk have no time to grow, they have no time to waste.'*

I remembered that the IS 32 was being flown to Waikerie for the South Australian State Gliding Championships, so I rang the pilot on his mobile thinking to myself:

*'And I somehow fancy that I'd like to change with Clancy,
Like to take a turn at droving where the seasons come and go,
While he faced the round eternal of the cashbook and the journal —
But I doubt he'd suit the office, Clancy, of "The Overflow".'*

He answered his mobile, a communication that did not fit the description (and I think the same was written in a thumbnail dipped in tar) and advised that he had landed at Waikerie after a marginal but pleasant flight.

I went back to my work thinking:

*'In my wild erratic fancy visions come to me of Clancy
Gone a-droving "down the Cooper" where the western drovers go;
As the stock are slowly stringing, Clancy rides behind them singing,
For the drover's life has pleasures that the townfolk never know.
(Apologies to A B "Banjo" Paterson)*



The Flying Bug

DAVE TONKS

I'm sitting in the lounge watching television. I tend to do a lot of that at the moment, for reasons that will become obvious as you read on. On the TV there's a story about some Aussie speed skaters who have just won the comp that will enable them to compete in the upcoming Winter Games – they're ecstatic. Then the commentator starts talking about one of the team members fighting back from injury to achieve this goal – we then see a shot of a group of speed skaters crashing into a wall at high speed, and are told that this particular skater suffered 150 stitches (watch those blades!) and several cracked/fractured vertebrae in his neck. Ouch.

For a lot of people, that kind of 'little misadventure' would have ended their interest in whatever they were involved in.

However, there are a lot of people out there who refuse to let anything get in the way of their dreams – and from recent observations, I would have to say that free-flyers are right up there at the top of the list.

Okay, by now you've probably guessed that I've suffered my own 'little misadventure', and of course you are right (my second, actually). The first resulted in a minor fracture to my C6 vertebrae (scary place to have an injury) and was the end result of bad decision-making processes. I was flying my paraglider with a group of more experienced guys and they all top landed, something I had never done at this site. The bomb-out at that site happens to be a very long drive down the mountain (and back), so I attempted to top land – on the third attempt I crashed heavily into the vertical face of the hill just below the shelf at the bottom of the launch.

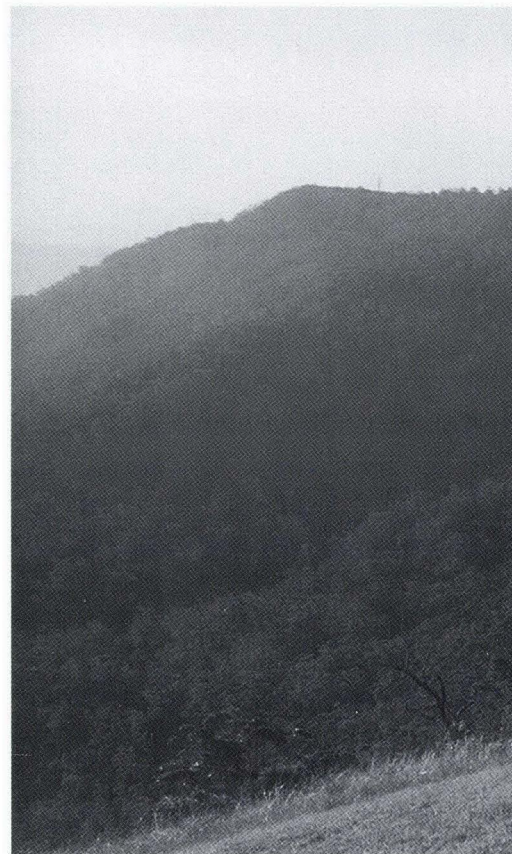
Number Two was a little different. This time (same launch site) the conditions were a bit bouncy and I was a little more nervous than usual. Some people say that free-flying is a high adrenaline pastime – me, I get all my adrenaline boost from the time I strap my harness on to the moment my boots leave the ground. My first attempt resulted in my canopy coming back down to the side (inverted) before I could get it up over my head. In the process of setting up for my next

launch, I failed to check the alignment of the lines – the next time I brought the glider up over my head, it looked fine, so I turned to launch. Instead of 'opening up' the lines in the turn, I put another 180 degree twist in them, and before I had a chance to do anything a gust picked me up off the hill.

My recollection of the event is a bit strange, but I'm told the whole thing took about five seconds. The glider flew straight out from the hill, went into a nice little 180 to the right, and I hit hard with no control over the glider whatsoever (probably at about 50km/h). I do remember seeing a little bit of height about half way through the 'flight' and thought about my reserve, but by the time I reached down for the handle I was toes-up in the grass. Andrew Horchner was the first there (I could hear him yelling behind me as I lifted off) and he immediately asked me whether I was okay, or was it 000 time? I replied, *"Mate, it's definitely 000 time, I think I've broken both legs"*.

Luckily for me there was a doctor and nurse watching the take offs, and with heaps of guys/gals supporting, comforting, shading and reassuring me, I was in fantastic hands. At one stage Andrew was supporting my head in his lap and I realised I had dribbled on his jeans, so I apologised. Someone nearby commented that I had planned the whole thing just to get my head in Andrew's lap – don't you just love the sense of humour of free-flyers?

Off to the Gold Coast hospital by ambulance (with the same two Ambo's that had



Dave launches at Mt Tamborine

attended Adrian's accident the day before, only he got a helicopter ride 'cause he's special') and when I wake up from the surgery I'm told Adrian is in the bed opposite. I'm given the news that, a) I'm a very lucky boy (I knew that) and b) everything below the knee on my right leg is 'shattered'. Later I find out that my left ankle (you know, the one I need to get around on) is badly sprained, blown up like a balloon and all the colours of the rainbow. Next day I hear that Graham (stiffy driver) is in another ward; he hit powerlines and has broken his bad ankle (again). Not wanting to miss the action, Graham arranges a transfer to our ward, and free-flyers then take up 50% of the ward, a sobering sight for visiting pilots – one was heard to say, *"thank God the weekend is over, I'm not sure how many beds they have in this hospital."*

Don't get me wrong – this situation certainly isn't typical of free-flying! Of all the hundreds of flights across the country – every weekend, every month, every year – the vast majority are incident free. We just happened to have a 'statistically rich' weekend that weekend.

Adrian's accident the day before was just bad luck. I was driving for him because it was a bit too bouncy for me on the Saturday, and I had followed him first into the Flying Fox Valley and then into the O'Reilly's Valley. He eventually ran out of 'up' and as I came around a corner onto a straight stretch I could see he was set up for a perfect approach into a nice big paddock. I pulled up near some horses that were near the fence in the paddock and radioed



▲ Dave just after launch at Scotsmans

▼ Training at Flying Fox

PHOTOS: SUE TONKS

Adrian to let him know about the horses and the powerlines. As he got lower the wind started picking up and it quickly became obvious he was not going to make the big paddock, but instead was on final for a row of trees separating that paddock from a smaller one closer to him. Knowing he wasn't going to make the big paddock, he started doing S-turns to get into the small paddock, and at about 50ft he got whacked by turbulence from the row of trees. I heard the impact (from at least 50m away) and was surprised to find him conscious (but quite distressed and in a lot of pain). His (lower) back injury is healing nicely; one badly compressed vertebra, and another lucky boy.

The point of all the above is that the human spirit is spectacular when it comes to going back to what you love doing, no matter what. Lying in bed having a whinge to Phil Hystek (ex-instructor, now mentor and the man I owe so much) he tells me that I'm lucky – in one of his accidents, he was flat on his back and unable to move for six weeks! And the stories just keep coming in – broken arms, legs, backs, ankles, you name it. The parade of free-flyers regaling me with stories of serious injuries makes me feel like I've just stubbed my toe!

So, like all good problem-solvers, I analyse the situation and ask the question – in this case, why do so many free-flyers go back after serious injury? The answer, my dear Watson, is elementary – it's just too good to miss out on. And "too good" is a very poor description of what it is like to experience free-flying. You



stand there at launch looking out at a panorama, where most people just think they're at a nice lookout – but not you. You know the 'lookout' is the starting point for another magnificent adventure, one where, depending on a combination of skill, luck, weather and equipment, the possibilities are endless. What will it be today? A ridge-soar for a couple of hours, with the Great Dividing Range to the

west and the Gold Coast high-rise to the east, followed by a nice little top-land in the paddock across the road from launch? Or cross-country, chasing every little bit of rising air, watching the clouds like a hawk, thermalling with wedge-tails and landing who knows where? Flying like a bird, literally. Unbelievable.

No wonder we can't keep away.



Electrikery

Part 7: Radio Transceivers

NED McINTOSH

As far as receiving goes, the task is essentially the reverse. Incoming radio waves induce tiny voltages in the antenna. These are fed down the coaxial cable to the "front-end" of the receiver, amplified, then converted into a lower frequency, further amplified, after which the audio is recovered and passed through an audio amplifier so there is sufficient power to drive the headset speakers. In addition, a tuning section ensures that radio energy is transmitted (or received) only on the frequency selected via your tuning mechanism, be it thumbwheel switches, a knob or keypad.

Modulation (and the reverse, de-modulation) is the key to how our radios work. It can be defined as the process whereby intelligence (e.g. your speech) is impressed onto the carrier wave, which is simply a constant energy radio wave on the desired frequency. Aviation radios modulate by varying the amplitude of the carrier wave in sympathy with the speech. For this reason, the technique is called Amplitude Modulation or AM (also known as Ancient Modulation because it was the first technique to be developed). An alternative is Frequency Modulation, or FM, which varies the frequency of the carrier wave in sympathy with the audio. The diagram below illustrates the difference.

The usual method of modulating an AM wave requires a fair amount of audio power, so inside the transceiver there will be an audio

That little Icom handheld aviation transceiver clipped onto your trike instrument panel or centre console is quite a sophisticated device, but it's task is a simple one. To transmit, it takes your voice via the microphone, uses the audio signal to modulate a radio carrier-wave at a given frequency and amplifies this via a power-amplifier stage to deliver radio energy to the antenna, which then radiates this energy as a form of electromagnetic radiation.

amplifier, usually a single integrated circuit. This takes microphone signal and beefs it up so it is strong enough to modulate the carrier. The carrier itself is produced from a reference signal (usually from a high-stability crystal oscillator) which is amplified then multiplied (doubled, tripled, perhaps doubled again, then mixed) to produce the carrier-wave. The modulator circuits impress the audio signal onto this carrier wave. The output of this stage is filtered (to remove any unwanted products) and passed to the RF power amplifier stage(s) after which it is a radio signal healthy enough to be sent to the antenna. As you may gather, it is a complex process. Now you know a great deal more about your radio than the average pilot does!

Receiving a signal is more or less the reverse. An incoming radio signal causes minute voltages to be induced in the antenna, a few microvolts perhaps at best. This is fed to the front-end, a very sensitive RF amplifier, in which it is amplified by a considerable factor, after which it passes to a "mixer" stage where it is combined with a signal from the Local Oscillator (LO), usually subtracting one from the other. This is called "heterodyning".

The result is an "Intermediate Frequency" (IF) which is considerably lower and therefore a great deal easier to further amplify prior to the process of de-modulation. Many receivers do this process twice, using two different IFs for technical reasons. The second IF is usually

about 450-455 Kilohertz. After further amplification in "the IF strip", the signal meets the "detector", where the audio signal is recovered. Often this is achieved by a diode and capacitor which turns the IF into an audio signal (low frequency AC) and filters off the radio portion (VHF AC).

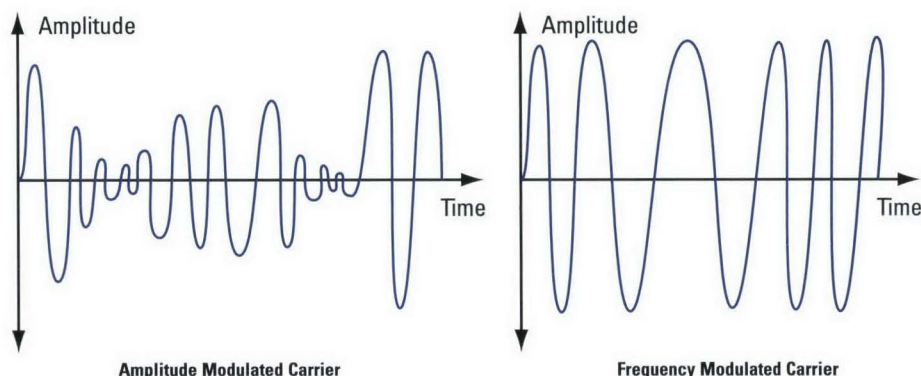
Naturally the receiver has to be turned off when the transmitter section is operating, otherwise the strong signal would damage the highly sensitive front-end. Some transceivers use a transmit-receive relay, others use solid-state devices called PIN diodes to achieve this. Both work well although PIN diode switching can be a bit lossy which can affect receiver sensitivity in poorly designed equipment. Relays can break down, resulting in either a very dead receiver or an inability to transmit.

Now we have an audio signal again (remember, it's still AC), but it is very weak and requires quite a bit of amplification to drive the headset speakers. Most transceivers use the same audio amplifier they used for the modulator, making one component work on both transmit and receive (keeps the number of parts to a minimum). After passing through this it is fed to the headset speakers via the appropriate socket and plug.

Tuning the transmitter and receiver is achieved by a process called "Frequency Synthesis". For the transmitter a reference signal from a crystal oscillator is used in conjunction with a Voltage Controlled Oscillator or VCO. The VCO changes frequency according to the voltage supplied to it by a "Programmable Divider" which is controlled by the tuning knob or buttons. This results in two (or more) different radio signals being available to use in the Synthesiser which is basically a complex mixer with filters and amplifiers on its output. In this way a carrier wave is produced, ready to be modulated before going to the transmitter power amplifier stage(s).

Receiver tuning is achieved by varying the local oscillator frequency because the IF is fixed – this is necessary for efficient amplification

Amplitude Modulation and Frequency Modulation



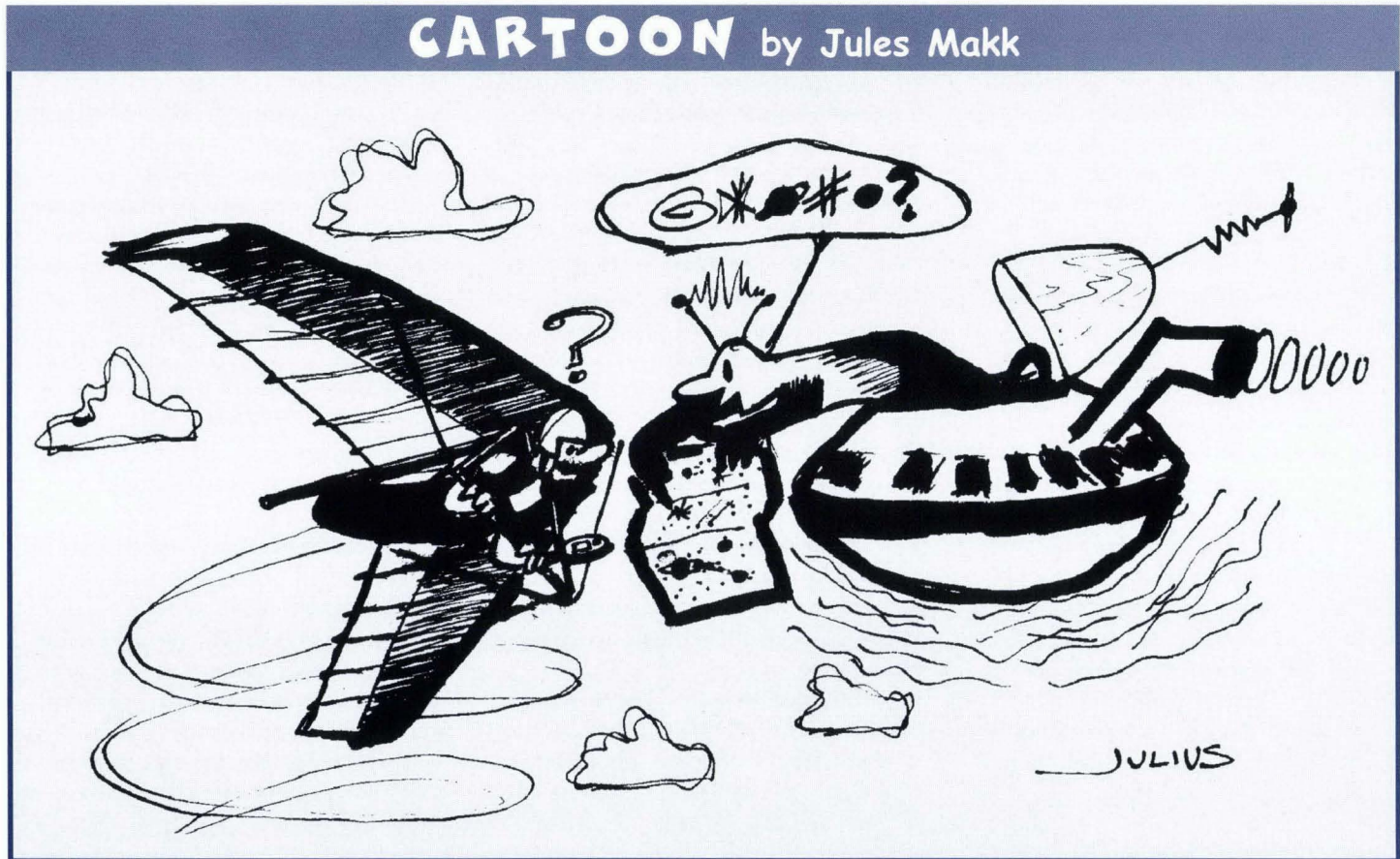
and filtering of the incoming signal. The IF strip has a very narrow “bandwidth” and achieves massive amounts of amplification, but to do this it must work on one single frequency only, hence the requirement to vary the LO in order to tune the receiver to incoming radio signals.

Frequency synthesis is at the heart of all modern transceivers, but thirty years or so ago there were many VHF transceivers which were “crystal-locked” – that is for every channel or frequency they required two crystals; one for transmit and one for receive. Frequency synthesis has rendered them obsolete. The reference oscillators used in frequency synthesisers are very reliable, due to the use of a “Phase-Locked Loop” in conjunction with a very high-stability crystal oscillator. The PLL tracks the frequency of the oscillator and adjusts the oscillator biasing voltage to maintain an exact frequency. This results in very accurate generation of the desired transmit/receive frequency.

So, that’s basically how those little hand-held airband transceivers we have in our trikes work. Next article is a quick fault-finding guide. I hope you never need to use it, but it’s handy information to know anyway. Until then – “Fly the Wing!”



Making the most of the hot weather – flying is fun!
(Ray Taylor and his fiancée Karen flying over Strathalbyn Airfield, SA.)
Photo: Ray Taylor



Melbourne Hang Gliding Club

– Communications and the Skills Base

SCOTT BARRETT

The Melbourne Hang Gliding Club (MHGC) has been actively promoting and invigorating pilot networking and involvement in club activities. Our club has been through great change recently with efforts in self promotion, marketing, communications and pilot development initiatives. We have a rapidly growing club and a shift was required in the focus of club services.

Last month I reported on the success of the MHGC skills based flying day. In this article I would like to describe how and why these events are taking place, how important they are to the club's success and describe how we have set up better pilot networking to encourage participation.

With all of the great sites available to the MHGC within reach of a day trip, the concept is to have people expect to fly at one of our novice sites the weekend after the club meeting (where possible). We analyse the weather and organise a meeting place; you as a participant get there and fly.

Some weather guessing data is presented at the meeting and our forecast of activities provided on the night of the meeting. This is confirmed via either receiving an email, SMS, or by the participant calling the organiser for the day.

Particular effort is made to organise activities on the weekend following the meeting – this is our skills based flying day, varied to suit the particular day and site. A further aim of this organised event is to get pilots networking;

to get pilots developing groups to fly with and encourage club camaraderie, to fly in the company of experienced pilots and learn from them.

Our Skills Based Club Flying day is different to any other weekend because we aim to provide:

- *Weather analysis, performed at the meeting.*
- *Closer to the day an appropriate site chosen for the day's activities, picking the flying conditions so you know when and where to fly.*
- *Common meeting place with an opportunity to car pool.*
- *An introduction to sites.*
- *Video launch and landing (great for the next meeting).*
- *Helping pilots to progress through the rating check off.*
- *Keeping the flying safe.*
- *If necessary and possible a backup activity planned.*
- *Debrief (as a social function, pub stop, etc).*

A good opportunity to find out what you want to know by asking questions. Get feedback on technique, learn more about local site thermal triggers, weather knowledge, get tips on items such as basic thermal structure, thermal identification and things that interest you.

To expand on the last point, a debrief with more experienced pilot(s) squeezes more educational value out of the airtime that you have just had and gives you something to watch for the next time. Debriefing without structure works well; if you don't know what you don't know, you don't know what questions to ask. Group discussions enable effective learning by stumbling across gems of information. The conversation is always focussed on whatever interests the particular group.

We use three methods of communication to advertise and coordinate our flying activities. Our frequent flier list has people who are in the know generally making the decisions on where to go, that can be contacted to give an idea of what is going on. Mobile telephone text messaging (SMS) and email has been setup with messages sent from an email to multiple subscribers. Members can be invited to activities wherever they are.

Here is what happens on our email and SMS systems:

- *Email addresses and phone numbers are collected with memberships. The cost of*

receiving SMS is prepaid with memberships if the member chooses to participate.

- *Weather is analysed and discussed by a couple of experienced pilots.*
- *Subscribers are given pre warning of flying potential. Firstly by sending (on Friday night) a probability of flying activities for the following weekend and likely site.*
- *A confirmation of activities on the flying day morning, naming a flying site we will attend, a meeting place, a time and contact details of an attending experienced pilot.*

One beneficial and motivating thing is if people don't attend they have got the messages anyway and know they are missing out and may make the effort next time. It has benefits of saving individuals making many calls to find a flying partner and is quite invasive on the subscribers. Flying participation is on the rise and we have been functioning well in our cooperative efforts. SMS subscriptions have been on the increase and subscribers have renewed by pre paying the next round of calls.

Having such success with mobile phone SMS communications, I recommend it to other clubs. It is easy to set up and we have set it up as a pre paid member service that did not cost the club (from the point of view of the treasurer) anything. The members without access to email before and after working hours are covered by this service. Many use both SMS and email.

The mobile telephone text messaging service has been set up through Telstra. Email is sent through our account with the desired information to be conveyed. Calls are made through a distribution list (of paid up subscribers). The result is 20+ people personally invited instantly without multiple calls being made – easy. A similar SMS group service is available through Street Data; you can find them on the web. We found Telstra to be cheaper at the time.

Our email group has been set up through Yahoo Groups. This has been used to send the same information as sent on SMS, but has the advantage of being able to include isobaric charts and forecasts as added niceties. This helps inexperienced pilots learn to pick sites given a forecast.

There are a number of reasons why this has worked so well for us. One is that it is very easy

Flying Day

for a subscriber to organise getting out for a fly, the organisation and behind the scenes phone calls (between a couple of experienced pilots) is made before broadcasts are made. For the subscriber, it is not a task to make multiple calls to get organised.

Hang gliding is very different to joining a tennis club and turning up every weekend for a game. The flying is done from any number of locations. Will the weather be suitable? Where could you fly? Is there anyone to go with? People have difficulty with short notice and don't have the experience to know when coming weather has flying potential. For some people it becomes easier to plan something else.

Our longer standing club members consist of diehards (all respect to you guys, I just mean that you are rare and motivated, I'm one of them too) that have clawed through the early stages of their flying with dogged persistence. With the personalities that we encourage, we are certainly not a representation of a cross section of society. It is obvious that clubs do work and pilots have success in coming through the ranks. It is fair to say that most starters drop out early. As a sport we have been losing pilots through our high turnover, the "big black membership hole" is one that few survive. We believe we are on the right track to correcting that. Many people come through schools and further pilot development becomes the responsibility or an opportunity for the clubs.

Many pilots are not capable of setting into the club culture in order to succeed. In our club, the old guard has one in five members that were tutored by advanced pilots. Approximately four out of five have gained experience as novices banding together into their own self-supporting group, obviously some of the original starters made it to become the experienced pilots that they are. One reason why novice grouping may occur is the difficulty perceived in breaking into a pre existing and long standing group that is self sufficient, works smoothly together and are unrestricted in their ability to fly at sites and in conditions inappropriate for novices. There is however a lot of help available to novices that often goes unused.

If you are a low airtime pilot here are some ways to help yourself through the critical first ten hours. Identify some competent pilots in your club (if you are not in a club join one)

then sell yourself, show you are keen, accept invites to go flying, make enquires as to what pilots are doing on the coming weekend. You will learn quickly if you fly with someone better than you. Offer to drive if only an advanced site is "on". Become part of the group. Commit yourself to going for a fly if the weather is "on" at short notice. Facilitate some communications as recommended previously, it will make it that bit easier for you and your fellow pilots.

If you remember one thing from this article, even without club services mentioned here, always remember that there is always a group of pilots who are in a long standing group who effectively network. They function with or without you, advanced pilots are going flying if you want to go or not, so invite yourself. They are a wealth of information ready to be made use of. Most will be happy to help, particularly if you can contribute as a member of the team.

CARTOON by Jules Makk



"I'm tellin' ya' Bob, it just reached out an' grabbed me!"

In the Melbourne Hang Gliding Club we are going out of our way to let novices know that we are happy to help and we are following through with that. It has been successful and I hope that further articles will follow to illustrate the success of our functions. We are trying to bridge the gaps, make the clique groups easier to enter and the culture easier to fit into. We are going out of our way let you know that we are happy to help and make functioning as a new and active member a bit easier. Given the feedback and our new membership demographic, it is working.

The Melbourne Hang Gliding Club (formerly the Eastern Hang Gliding Club Victoria) is keen to hear from anyone interested in joining our activities. We are advertised in the HGFA Club Contacts. Or check out our web site at www.vhpa.org.au/melbourne/.



Membership Issues

► In his article in the December issue of SS/AG, Terry Cubley makes some very good observations and presents some interesting results of his surveys of GFA membership issues. He also asks for comments from HGFA members, so here goes:

1. I must say I'm surprised (although in other ways NOT surprised) that GFA membership is under 2,500. When I first got into hang gliding in 1976, I seem to recall that GFA numbers were around 5,000-6,000. Some of the reasons I am not surprised have been mentioned in Terry's article and by others – cost, convenience, accessibility, competition from other, new forms of leisure/adventure sports, etc.
2. Going back about 15 years and again, 10 years ago, before the introduction of trikes and paragliders respectively, it seemed to some (many?) that hang gliding was in danger of stagnating (or was in fact already declining). Strangely enough, many 'pure' hang glider pilots felt threatened by these new forms of flying and wanted to keep the newcomers out of 'our' organisation. Fortunately, common sense prevailed and HGFA has undoubtedly been strengthened by the involvement of trikes and paragliders. Also, the opportunities for getting more flying time (or different flying experiences) have been expanded by pilots 'crossing over' either on an occasional basis or an 'as well as' basis. For example, some pilots fly paragliders on the coast and hang gliders inland; other fly hang gliders on the coast and fly trikes (as tug pilots) inland.
3. Perhaps what I am coming to is that the likelihood of encouraging large numbers of completely ab initio pilots to join a GFA club and learn to fly a glider (and thereby help support the 'system'), is pretty remote. On the other hand, the HGFA membership represents up to 3,500 potential 'members' for GFA clubs. These are people who are already into soaring aviation and in many cases, may be interested in exploring a new form of flying. Of course, very few will be in the class of Tomas Suchanek, and many may not wish to fly 'real' gliders at all; however, it may be beneficial for the GFA to market itself to a ready made 'market'.

This may sound as if I'm wanting to revisit the amalgamation proposal. However, formal amalgamation is not essential. What I believe would be desirable would be for gliding clubs to hold 'get to know you days' (for want of a better title) to which all HGFA members – especially those within say, two hours drive – would be invited. (I assume HGFA office may be able to help with the HGFA database of names and addresses.)

38 Australian Gliding • Skysailor

Some of the outcomes of such gatherings may include:

- *GFA members meeting HGFA members who genuinely wish to learn to fly sailplanes – either exclusively or in addition to HG/PG;*
- *Younger or less affluent GFA members learning about hang and paragliders, and possibly wanting to get into a sport (not necessarily exclusively) where owning your own aircraft is the norm rather than the exception;*
- *Clubs which do not have aerotow facilities making contact with a qualified tug (trike) pilot – who in turn gets to do some 'paid' flying;*
- *Possibility of hang gliding clubs using gliding strips for towing, and being able to leave tow-cars and/or HG winches in the gliding club hangers/sheds;*
- *Greater opportunities for social and educational interaction.*

You might say that there's no reason HGFA members can't (as things are at present), wander into a gliding club and say, "Hi I'm Joe, a hang glider pilot and I'm thinking about getting into sailplanes." However, for many HG/PG pilots there is perceived to be a degree of antipathy (if not hostility) from some quarters of the gliding fraternity and this would definitely have to be addressed. Also, HG/PG/trike pilots are just like most people when it comes to stepping out of their 'comfort zone' – there's strength in numbers. In other words, if half a dozen of their mates went to a gliding club 'open day', they'd be more likely to go along too.

Terry, back to you!

Martyn Yeomans

How Airplanes Really Fly

► Referring to John Lever's letter in the December issue, I disagree with John Lever's contention that the 'How Airplanes Really Fly' article got it wrong with the statement "For every action there is an equal and opposite reaction (Third law) eg, an object sitting on the table exerts a force on the table and the table puts an equal and opposite force on the object to hold it up." John says this is a special case of first law where balanced forces (weight and upthrust) result in zero motion. This is so if you are examining the forces on the mass or forces on the table, but doesn't cover the interaction between the two which is what the example refers to. To back his case John states "For imagine if the table was not strong enough to hold the weight of the object and the object

fell to the ground where it rested" In this case you would use Newton's second law ($F=ma$) to analyse what was happening with object and table but the interaction between the two still follows third law and the original statement still applies, ie, the force from the object onto table is equal and opposite to the force from table to object. These forces will be less than the weight of the object which is why it's falling, but there is no mention of weight in the original statement so it's still correct (except maybe the "to hold it up", but even then the table is still partly holding up the object).

Colin Jeffery (Colin is a lecturer in Physics and Mechanics at Chisholm Institute)

Thanks

► I'd just like to thank Bill and Steve for getting me in the air again after 20 years. It's wonderful to be part of the sport once again. I was lucky enough to get to Canungra and Forbes last year as a spectator, I had a great time. Can't wait until I can compete and have some fun. Also thanks to Tony Armstrong for the rating, and everyone else that has helped me on the hills. So anyway, thanks to Bill and Steve.

Wayne Allchin



Wayne Allchin, flying at Stanwell Park
Photo: Wayne Allchin

The Water Tank Model

► The December issue of AG/SS featured a very good article by Terry Cubley, GFA's new development officer. Let me affirm how pleased I am that this problem of development is finally being tackled in a professional manner – high time indeed, and more power to his elbow. I am responding to his request for some feedback, and if in the course of doing so some of my ideas differ a bit from his, that does not mean I do not fully support what he is doing.

The Water Tank model is often used to describe processes which involve inflows and outflows, for instance the behaviour of a car battery (alternator charge and load), or accounting processes (revenue and expenditure affect-

ing the balance sheet). The model is useful for tracking quantitative changes and effects, and often provides an easily understood picture, which is less difficult to grasp than the raw numbers. It does this job well enough, but it tells us little about qualitative matters. It will not tell you whether your battery provided current for headlights, radio or airconditioning, nor will it tell you by itself what you spent your money on, or where the revenue came from. You have to get down to the nitty-gritty and start analysing, if you want to extract this knowledge – the raw numbers will not give it you.

This knowledge is important. It is the key to action and management. It will indicate what to do (if you analyse correctly), while the model only tells you that something has to be done.

Terry understands this well enough. He looked at membership trends, membership composition and similar matters then offered the conclusion that activity levels in clubs relate directly to increase or decrease of membership. I have some doubts about this – it needs proof. A club which is not doing much will certainly not attract members, and probably lose them too – I do not dispute that. But the reverse does not follow – some of our highly active clubs also suffered, and over the last few years just kept stable. The general pattern was a radical loss of GFA members from the 1980s until the last four of five years, when things levelled out. Twenty years ago we had good, bad and indifferent clubs just as we have at present – there is no great difference there, in fact we have better and more attractive aircraft now. And yet, we had over 4,000 GFA members then, while the membership is at a much lower figure at this time. Clearly, there are other factors influencing the picture as well. What's more, this pattern of decline over some 20 years is world-wide. If club performance is to be accepted as the cause, it would follow that gliding organisations have become less efficient or attractive all over the world, compared to what they were in the 80s – an unlikely scenario.

As gliding experienced growth until the 80s, inflows must have exceeded outflows then. The decline since, until recently, must have had the opposite situation – outflows exceeding inflows. It is sensible to have a closer look at both parameters.

Outflows are varied. People grow old, become unfit, have financial and family problems, progress to professional flying, change their outlook and interests, become impatient with slow progress, feel neglected in their club, discover that flying is not for them – in short, there is a variety of reasons why they abandon gliding. Obviously not all of these factors are controllable. No amount of effort by clubs or development officers can stop us from growing

old or sick. It follows that outflows can only be slowed, not eliminated. Improvements in club behaviour and presentation alone can only retard the process of losing members, not stop it. The Water Tank model shows you that you need inflows to counteract the outflows just to stay on an even keel, let alone to increase. You have to look outwards as well as inwards.

Terry's article deals at length with the outflows, and I have no argument with that at all. But he says, and I quote: "...this, combined with positive approaches and clear goals, along with good promotion, results in an increased influx of members." Fine, but what about this promotion? Reducing the outflow alone will not even keep us where we are, we need inflow too, particularly if we want to get back to where we were 20 years ago.

In the "good" times, we recruited almost exclusively by word of mouth. I was involved with one of the successful, growing clubs during that time, and worked quite a bit in that area. Out of the joyflights, TIFs and passenger flights we recruited about one new member from 10 flights. Not all of the acquisitions proved permanent, but enough of them stayed to nourish the growth of the club. (I was one of them, adding gliding to flying light aircraft.)

That was 20 years ago. A new generation is now our recruiting ground. The changes during that time have been mentioned often enough – there is now a segmented market for sport aviation (ultralights, hang gliding, paragliding, etc.), people have less disposable time, are no longer quite so willing to engage in "hands on operation" as they once were, have more money and are consequently choosier and so on.

Where we once only had to share with light aircraft for recruits, we now have a much wider range of competition, as well as different expectations to contend with. In this, we are not alone – just look around you to see the battles for market share going on between oil companies, television stations, supermarkets and what have you. Millions are spent, not only on maintaining market shares, but also on tapping and developing new markets. As well, there is constant research into changing and adapting products and services to new needs. No longer do your clients seek you out – you have to look for them. If you want inflows, passive measures alone will not produce them. We will have to analyse and find out where our market is, how to reach it and adapt our "product" to changing expectations. And inflows are required, reducing outflows alone is not enough. It is only half the problem.

Rudi Salter



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Australia



Australian National Paragliding Open

16-23 February 2002

Bright, VIC. FAI Cat 2, HGFA sanction AAA. Entry fee: \$180 (\$40 discount if payment received before 1/1/02). Organiser: Karl Texler, ph: 03 57501733, fax: 03 57501153, email: <brightvt@netc.net.au>, web site [http://home.netc.net.au/~alpcomp/BrightOpen2002/].



NSW State Titles

16-23 February 2002

Mt Borah, Manilla, NSW. Contact: B.Olive 02 4921 3804 (w) or 02 4942 3131 (h); <William.Olive@hunter.health.nsw.gov.au>.



WA State Soaring Championships

23 February – 3 March 2002

Wyalkatchem, WA. (Monday, 4 March is a public holiday.) Premier event on the WA HG & PG calendar. Eight days of heart-thumping XC action.

See [www.iinet.net.au/~navi] or contact Gordon Marshall <gordo@hangglide.com.au>.



Manilla Paragliding Open

2-9 March 2002

Mt Borah, Manilla, NSW. Final rego: 1 March, 7pm Manilla Town Hall. CIVL/FAI Cat 2 (for WPRS) & HGFA AAA. Over \$5,000 in prizes. 125 pilots max. (& it will be full like the last four years). \$140 before 1 Jan, \$160 thereafter. Full online registration at [www.mss.org.au] from 1 October. Organiser: Godfrey Wenness, ph: 02 67856545; fax: 02 6785 6546; email: <skygodfrey@aol.com>. Sponsored by: Advance, Flytec, Hanwag, Garmin, Manilla Shire Council, Manilla RSL Club, Guardian Chemist Manilla, Ambleside B&B, Rivergums Caravan Park, Vic & Toms, Imperial Hotel & more.

Overseas



New Zealand Paragliding Nationals

2-9 February 2002

South Island, NZ. Wanaka sites, including Coronet Peak. Cost: NZ\$180 before 19 January, otherwise \$200, incl. maps, comp levy, films, BBQ, prizegiving dinner, prizes, limited transport. registration/briefing: Friday, 1 February. Organiser: Rob Darby, ph 025 220 1185 or 03 443 1680 or email: <lucky_montana@hotmail.com>.



2002 Flytec Championships

21-27 April 2002

Quest Air Soaring Centre, 6548 Groveland Airport Road, Groveland, Florida, 34736 USA. Ph: +352 429 0213, fax: +352 429 4846, web site [www.flytec.com]. USHGA Class A and CIVL/WPRS points meet. Entry fee: \$275 (\$325 within 30 days of the meet). Does not include towing. Meet Organisers: Steve Kroop and the Quest Air Family. Meet Director: David Glover. Safety Director: Russ Brown. Scorekeeper: David Glover. USHGA Meet Steward: John Borton. Awards and prizes: A minimum of US\$5,000 prize money will be split over at least 13 places throughout Class 1 and Class 2 based on registration. Mandatory Pilot Briefing: Saturday, 20 April 2002 5pm at Meet HQ.



Nova Fun & Fly-in Maninjau 2002

21 – 28 April 2002

Lake Maninjau, Sumatra, Indonesia. For those with a yen for something different & who wish a unique and memorable paragliding experience in a beautiful & tranquil part of West Sumatra. US\$300/person twin share, US\$175/single supplement. Includes 3-star resort hotel overlooking lake & close to launch, land transportation in flying area, transfer: airport-hotel-airport, dinner with cultural show, sightseeing for non-flying participants, video shooting for night time review. For more info visit [http://fliieg.com/indonesia/~sumatra] or [www.paragliding.indonesia.com] or email <anwisata@cbn.net.id> or <info@paragliding-indonesia.com> or call us at: +6221 8841915, fax: +6221 7970 924 or 8841915.

The Junior Coaching Camp

RODNEY WELLINGTON

The Narromine Junior Coaching Camp was an idea established by Miles Gore Brown, intending to bring together young glider pilots in Australia, giving a great chance to meet new people with a common interest and to learn more about cross-country flying. The camp was organised for one week commencing on 24 November at Narromine, NSW. This was an opportunity that I was not going to let pass, so with the full support from my home gliding clubs the Australian Air League and Bathurst Soaring Club I had everything organised. This included the clubs' Standard Libelle Bravo November. Furthermore the Uncle Foundation was kind enough to cover some of the cost involved in undertaking this training camp. For those of you who are unaware, the Uncle Foundation is basically a trust fund that was established to assist young pilots interested in cross-country soaring. Before the camp had even started I was amazed at the level of support and enthusiasm showed by everyone in getting young people flying.

After some final preparations at our home club at Bathurst, we were ready to travel to Narromine. Our small convey consisted of my gliding partner, Robert Bull, as well as Geoff Sweeney towing his glider and Richard Bull who was kind enough to tow our Libelle to Narromine.

Upon arriving at Narromine we were introduced to Bruce Campbell, who was to be our coach over the next week. The camp consisted of Nick Gilbert, Robert Bull and myself. A little disappointing in numbers, however this did not dampen our enthusiasm. We were still very keen to get flying.

Our first day started off with area checks in Orana Soaring Club's Twin Astir with Chris Stephens. This was a glider which Robert, Nick and myself had never flown before. Our first new experience of the camp. With checks completed Robert decided to go off exploring in our Libelle. Nick, however, chose to take advantage of Orana's LS4 and took to the sky. Another glider Nick had not yet flown.

Monday the 26th was our first day of cross-country training. Bruce flew his Discus Delta One and I flew the Libelle. This was the first time I had ever flown the Libelle with water, my next new experience. I knew I was going to have my work cut out to keep up with Bruce. Most early fibreglass gliders tend to sacrifice performance at the higher speed ranges. Our task for today was Nevertire then south to Albert and return to Narromine, almost 200km.

This seemed somewhat daunting to me, as I had never really been that far out before. However, before I knew it we were off tracking towards Nevertire along with Nick, who was flying Tom Claffey's Discus, partnered by Tom in his ASW 28.

All through the task Bruce continued to give me pointers in regards to thermalling, centering and cruising. I must admit you can't help but feel a little disappointed when you see a glider thermalling next to you with its air-brakes open, however Bruce assured me that it was just the performance of his Discus against my Libelle.

Tuesday was Robert's turn in the Libelle. With light winds from the south, and some small cu's off in the distance, Bruce elected to go south to Parkes, west to Condobolin and home. Nick also flew this track with Tom. Even though I was on the ground I listened in on what was happening with a handheld radio. Bruce's comments to Robert reflected those to me, clearly indicating the same flaws in our flying techniques.

The following day conditions seemed to be very inviting and similar to those of the previous day. I had elected to do the same task which Robert and Bruce had flown, Parkes-Condobolin-Narromine. However on this day Bruce sent me off on my own. Robert went off in an ASH 25 with John Buchanan, while Bruce and Nick flew the two Discus. The ASH 25 was made available to the coaching camp courtesy of Paul Mander, and our thanks go to him. I will admit that I was indeed quite nervous about heading off on my own, however soon enough I was on my way. Upon reaching Peak Hill to the south, I thought my flight was about to come to an abrupt end. Having established my outlanding paddock and informed Col Turner, who was in the same area, of my intentions I sat in the only lift I could find. Only a few knots, but at this height I was not going to be picky. After working this lift for what seemed like a lifetime I managed to dig myself out of the hole and get back on track. After this I elected to maintain a higher band in which to operate. All through the flight I tried to implement the teachings of Bruce, constantly asking myself which thermals to stay in, how the winds were affecting the thermals and electing appropriate cruising speeds.

Before long I was setting myself up for final glide. Seeing Narromine in the distance I felt relieved, yet overwhelmed by excitement that I had just completed my first 300km.

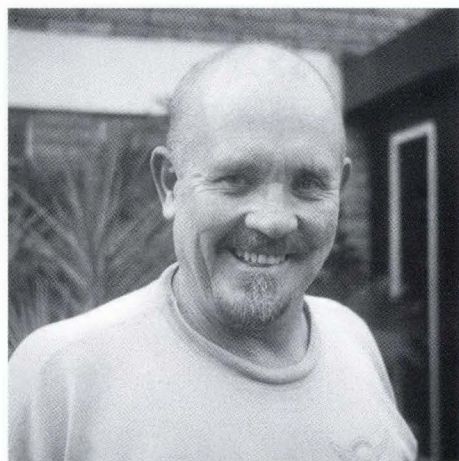
On Thursday 29th conditions seemed inviting. There were light winds from the north. Robert and Bruce had set their task for the day to Coonamble then south to Tichborne silo, just south of Parkes, and back to Narromine. Today was my turn in the ASH 25 with Bruce Taylor. We also elected to go north to Coonamble then take things as it came. I was amazed at how well the ASH performs. We tracked to Coonamble with very little effort, only stopping for a few thermals. Even so, it was not an easy day. On many occasions we passed other gliders that were scratching around near the ground. Thank goodness for the 25m wings I was sitting on – a big difference from the Libelle. With 40km to go until Coonamble I heard over the radio that Robert had elected to outland. We managed to reach Coonamble then decided to head home. All through the flight Bruce discussed cloud formations in regards to which clouds would be working and why.

Each evening Bruce Campbell gave very informative de-briefings. In analysing our flights and flying techniques Bruce established key areas to work on. I was amazed at how these techniques are adapted in cross-country flying and, furthermore, competition flying. Discussions covered a broad range of topics including thermalling, tracking, final glides and turning point techniques, to mention a few.

Although I learnt a lot in one week and experienced many new things, I do realise that I have only scratched the surface. There is still much to do and learn in gliding. As a result, I know I shall be returning to the next junior coaching week and I sincerely encourage other young pilots to get involved. It is truly worth it.

I also realise that it would not have been possible for me to attend without the help of many people. Firstly, Miles Gore-Brown and Bruce Campbell who organised the camp. Then the coaches, Bruce Campbell, Tom Claffey, Bruce Taylor and John Buchanan who went out of their way to be there and pass on their knowledge. Colin Vassarotti was always available for advice, direction, and his signature on the declaration form. Also club members who helped us, plus the Uncles Foundation and the GFA Sports Committee who supported us financially. In a way, all GFA members contributed to this event and I thank all of you. Without the help of all of the above, this camp would not have been possible, so I thank you for your enthusiasm and dedication in assisting younger pilots to fly cross-country. ✈

HGFA General Manager's Report



I trust you have all had plenty of safe and enjoyable flying over recent weeks. The hot conditions in NSW have led to some good flying, though sometimes dangerous weather.

Early reports from Davis Straub in Deniliquin have been of windy days and extreme conditions. An early casualty was Steve Moyes (undoubtedly one the best ever hang glider pilots). Steve had landed without problem and while he was on the ground a dust devil came through. He was seated on the ground with his legs over the control bar. The dust devil picked up the tail of the glider, rolled it over on the nose and threw Steve up into the air with his knees around the base tube. He caught his foot on the wire and as he went out he heard a pop, and was left hanging by one leg upside down. He was hanging from the control bar for five minutes with a broken leg. Sincere commiserations Steve.



Frank flies past the Olgas

Photos: Frank Fontayne

Insurance

Things on the insurance front are still looking bleak, with premiums sure to rise. This is despite a very good year as far as claims are concerned, much of which can be attributed to our instructors ensuring their training is carried out safely. Hopefully we can afford to cover insurance for our instructors from our 31 March renewal. We will know if this is possible within a few weeks of you receiving this magazine. I fear that if we cannot insure instructors we will lose many, and therefore many new members. This could likely result in a downward spiral in membership numbers and continued upward pressure on fees.

Membership Fees

Whilst talking membership fees, at their November meeting the HGFA Board considered several requests from members for discounted fees (one a pensioner, another an infrequent flyer and another spending a lot of each year overseas). After considerable discussion the Board agreed that discounting cannot be provided given the federation's difficult economic situation at present.

Fatal Accident

Sadly I report a fatality which occurred in central Victoria in early December. The following report was originally written by Rohan Holtkamp (with some minor editing from me).

"The fatality occurred as a result of a mid-air collision involving two intermediate hang gliders and pilots. They were thermalling at 4,500ft on an XC flight about 10km from launch paddock, during their second or third thermal into the flight. The higher pilot, with about 85 hours inland experience chose to turn in a different direction to the lower glider when he joined the thermal.

The lower pilot had 25 hours experience and had set the turn direction from 2,000ft lower.

The collision broke the side wire on the higher glider and damaged the top front rigging on the lower glider. Both gliders tumbled, the higher glider spun for some time upside-down, with the pilot lying on the sail, it then righted but folded in a positive configuration due to the severed side wire. The sink rate in this configuration was estimated at 130km/h.

The lower glider recovered after two revolutions due to the pilot holding onto the base bar firmly (elbow hooked over). He continued to fly and issue Mayday

and landed safely nearby. A doctor and a nurse were on site within several minutes of impact.

Both pilots chose not to fly with parachutes, even though advised to on several occasions by instructors and friends."

This is a fatality that could likely have been prevented had the pilot carried a reserve parachute, though there are no guarantees. I say this given a similar mid-air several years ago when the pilot that was killed was wearing two parachutes (one a hand deployed model and another ballistic 'chute). However in that instance the pilot was apparently knocked unconscious when the collision occurred.

Please do not think I am saying not to bother to carry a reserve parachute, personally I wouldn't fly without one and strongly recommend that all pilots carry a reserve that is of appropriate size and recently re-packed. To date carriage of a parachute has never been mandated by the HGFA, though it is recommended. The HGFA Operations Manual Section 6.4.1 paragraphs (d) and (e) state: A parachute shall be worn by each occupant of a hang glider or paraglider taking part in a HGFA recognised contest. The wearing of a parachute for all operations in excess of 300ft agl is recommended.

Recently the HGFA Safety & Operations Committee decided that all HGFA hang gliding and paragliding instructors providing tandem training flights must carry a reserve parachute of appropriate size for tandem operations. All HGFA instructors have been advised of this directive from the committee and the HGFA Ops Manual will soon be amended to include it.

It has not been mandated that student's under instruction carry a parachute when flying solo due to concerns of accidental deployment; though most schools incorporate training in the usage of reserves 'chutes into their training program.

The rationale behind the mandatory carriage of 'chute during a competition is obvious given the likelihood of crowding. Nevertheless, it is worth noting that overcrowding has not been a factor in the last four mid-airs in Australia that have resulted in a fatality. The three that have occurred inland have been when there has been only a couple of gliders in the near vicinity. In trying to explain this, I can only assume that the pilots have been less concerned about separation than they would have been in a crowded thermal.

In light of this accident, I will ask that the Safety & Ops Committee consider making reserve parachutes mandatory for all operations above 300ft.

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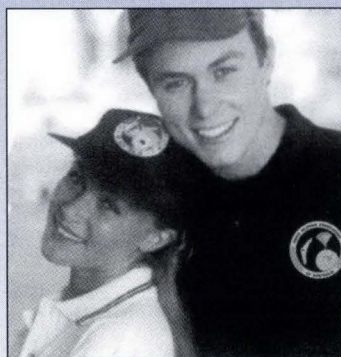
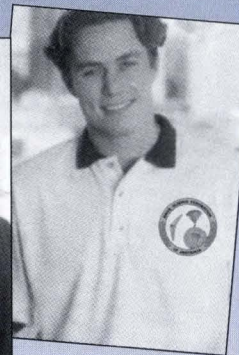
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Ph: 02 6231 4121

email [<poboxw48@dynamite.com.au>](mailto:poboxw48@dynamite.com.au)

FAI Report – September 2001

A Certificate

RADGE John Alderson	10579	RAAF Richmond
ROWE Jarod	10582	Narrogin

A and B Certificate

VITAGLIANO Anthony	10577	Gympie
THOMPSON Denis	10581	Lake Keepit
THOMSON Robert Wallace	10583	NSW AIR TC

C Certificate

GIERSCH Brian Maurice	10523	Central Coast
NELSON John William	10365	Southern Cross

A, B and C Certificate

ANDERSON Scott Stanley	10575	Tumbarumba
SQUIRES Vincent George	10576	VMFG
FREEMAN – SMITH Shane	10578	Bundaberg
SADLER Tony	10580	Boonah

Silver C

THOMAS Peter O C	4367	Darling Downs
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Diamond Distance

HAASE Roderick Graeme	Southern Downs
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Diamond Goal

HAASE Roderick Graeme	Southern Downs
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FAI Report December 2001

A Certificate

HANNAFORD Rebecah C	10614	SA Air TC
PLANT Matthew James	10616	Beverley

B Certificate

SLAS Justin Richard	10570	Beverley
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B and C Certificate

WILSON Timothy Xavier	10254	Lake Keepit
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C Certificate

VINCENT Geoffrey Edward	10585	Mangalore
COLLIER Brett Andrew	10537	Adelaide Uni
LEACH Jerry Wayne	10603	Byron Power
GODDEN Graham Russell	10492	Lake Keepit

A, B and C Certificate

HAINSWORTH Robert A	10612	Caboolture
JULIAN David Charles	10615	Byron Power
SMITH Steven	10617	Byron Power

Silver C

KULANDAISAMY Ashok K	4379	Riverina
SCHARTAU Philipp W	4380	Narrogin
ANDERSON Jay Outram	4381	Southern Cross
KING Raymond T	4382	Murray Bridge
THOMPSON Paul David	4383	Orana
SOLOMON Richard R	4384	Southern Cross
WELLINGTON Rodney	4385	Aust. Air League
STEHLI Helmut Philipp	4386	Lake Keepit

Gold Distance

SOLOMON Richard R	Southern Cross
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Gold C

EDWARDS Colin John	1545	Gympie
THOMPSON Paul David	1546	Orana

Diamond C

MADDOCKS Michael	Boonah
HEIN Klaus Peter	Bathurst



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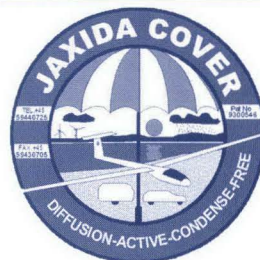
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Publications

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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>.

SOARING: Official monthly journal of the Soaring Society of America Inc, PO Box 2100, Hobbs, NM 88241 USA. Foreign subscription rates (annually): \$US43 surface delivery; \$US68 premium delivery.

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.

TECHNICAL SOARING/OSTIV: Quarterly publication of SSA containing OSTIV & other technical papers. Annual subscription: 70DM. OSTIV c/- DFVLR, D82234 Wessling, Germany.

GLIDING KIWI: Official bi-monthly publication of the New Zealand Gliding Association, edited by John Roake. Specialises in up-to-date overviews of the world soaring scene & Omarama the NZ base for many of the current World Records. \$A44 annually (Send A\$25 for 12 months back issues). New Zealand Gliding Kiwi, Private Bag, Tauranga, NZ.

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HGFA Addresses



Any change of club details MUST be sent to the HGFA office. The information will be updated in Skysailor only after notification has been received by the HGFA office.



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

Hang Gliding Federation of Australia

HGFA Office Manager: **Margaret Crane**
Administration: **Colleen Lacrosse**
& **Karina Thatcher**
PO Box 558, Tumut NSW 2720,
ph: 02 69472888, fax: 02 69474328,
<office@hgfa.asn.au>

Board Members:

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Michael Zupanc (Vice-President & CIVL Delegate) 6 Sibyl St, Southport QLD 4215, 07 55325895 (h), 0408 662328, <Vice_president@hgfa.asn.au>

John Reynoldson (Treasurer) 68 Teddington St, Hampton VIC 3188, 03 95970527, fax: 03 95981302, <John_Reynoldson@hgfa.asn.au>

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

Keith Lush 5 Fortune St, South Perth WA 6151, 08 9367 3479, 0418 534434, <keith.lush@hds.com>

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

Philip Pritchard PO Box 734, Beenleigh QLD 4207, 0418 761193, <Phil_Pritchard@hgfa.asn.au>

Brian Webb PO Box 238, Bright VIC 3741, 0417 530972, <alpcmp@netc.net.au>

Rob Woodward 38 Addison Rd, Black Forest SA 5035, 08 8232 5405, 0408 808436, fax: 08 82237345, <rob_woodward@ultimatepositioning.com.au>

General Manager & Operations Manager: Craig Worth PO Box 71, Hallidays Point NSW 2430, ph/fax: 02 65592713, 0418 657419, <general_manager@hgfa.asn.au>

Microlight Public Relations:

Paul Haines ph/fax: 02 42941031.

For information about site ratings, sites and other local matters, contact the appropriate state associations region or club.

States & Regions

ACTHGA

PO Box 3496, Manuka ACT 2603; Pres: Steve Foggett 0417 313 589 <sfoggett@dc.com>; Sec: Mark Elston 0428 480820 <Mark.Elston@defence.gov.au>; Trs: Tony Davidson 0500 883322 <td@silktel.com>; Committee Members: John Chapman, Michael Porter, Matt Davey, Brett Robinson; SSO Peter Bowyer 0412 486114. Meetings: 1st Tue/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: Richard Williams 08 92943962, 0427 057961, <rickandalice@hotmail.com>; HG Rep: Mike Thorn/Sam Blight 08 92988174, 0409 901500 & Steve Hoefs/Dave Wellington 08 93977250; PG Rep: Mike Duffy 08 93823036, 0417 923741, Dave Humphrey 08 95745440, 0418 954176; Trike/HGFA Rep: Keith Lush 08 93673479 (h), 08 93679066 (w).

NSW Hang Gliding Association

Sec: Steve Hocking, 19 Gladwood Gardens, Double Bay NSW 2028, ph/fax: 02 93274025, <nswhga@s054.aone.net.au>

North Queensland HG 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.

South East 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), 08 83038484 (w), <stuart.mcclure@csiro.au>; Sec: Mark Tyminski 0411 414 816, <marknjan@senet.com.au>; Trs: Robert Woodward 08 82977532 (h), 08 82325405 (w), <rob_woodward@alternatepositioning.com>

Tasmanian Hang Gliding Association PO Box 27, Rosny Park TAS 7018, [www.thga.net]; Pres: Anthony Mountain 0407 299011; Sec/Trs: Warren Judges 0419 175170.

Victorian HG and PG Association PO Box 400, Prahran VIC 3181, [www.vhpa.org.au/]. Pres: Geoff Tozer 03 97583250 (h), <gtozer@bigpond.com>; Sec: Adam Dixon 03 96895739 (h), <dna@smarthat.com.au>; SSO: Rob Van Der Klooster 03 52223019 (h). Site weatherboxes: Three Sisters 0409 864 700, Buckland Ridge 0407 356295, Mt Buffalo 03 57501515, Ben More 0417 112062.

Clubs

NEW SOUTH WALES

Blue Mountains Hang Gliding Club Inc Pres: Peter Burkitt 0418 435204, <artisan@sia.net.au>; Sec: Jim Grant 02 47588625; Trs: Allan Bush 02 47738037, <fairallan@pnc.com.au>; Newsletter: Alan Bond 02 98995351, <skybond@primus.com.au>; Site Development Officers: Paul Hunt 02 47881409, <phunt@macquarie.com.au> & Mark Madden 02 63612367. Meetings: 3rd Wed/month, 7:30pm, Blue Cattlelog Tavern, Mamre Rd, St Clair.

Byron Bay Hang Gliding Club Inc PO Box 1903, Byron Bay NSW 2481, [http://bbhg.tripod.com/]. Chairperson: Andrew Polidano 0428 666843, 02 66843510, <info@poliglides.com>; V-Pres: Brett Cook 02 66876907; Sec: Brian Rushton 0427 615950, <byronair@optusnet.com>; Trs: Brian Braby 02 66280983, <bbraby10@scu.edu.au>; SSO (HG): Brian Rushton 0427 615950; SSO (PG): Lindsay Wooten 02 66854551, 0427 210993. Meetings: 1st Wed/month 7pm, Byron Golf Club.

Hunter Skysailors

Pres: John Clifford 0438 302033; Sec: Neil Bright 0412 689067.

Illawarra Hang Gliding Club Inc

Pres: Mark Ryan 0412 424760; Sec: Tim Causier 02 42948110, <timcau@ozemail.com.au>; SSO: James Nathaniel 02 4262 7677, 0413 737077.

Kosciusko Alpine Paragliding Club

[www.homestead.com/kapc]; Pres: James Rylie 02 62359120, <rylicalago@netspeed.com.au>; V-Pres: Nigel Hack 02 64576452, <freexo@snowny.net.au>; Sec: Charles Palmer 02 62925664, <palmerc@charlespalmer.net>; SSO: Heinz Gloor 02 64567171.

Manilla SkySailors Club Inc

[www.mss.org.au]. Pres: Brian Shepherd 02 67852182; Sec/Trs: Felix Burkhard 02 67751050, <felixb@xyon.com.au>; SSO (HG): Patrick Lenders 02 67783484; SSO (PG): Godfrey Wenness 02 67856545, Trikes: Willy Ewig 02 67697771.

Mid North Coast Hang Gliding Association

Pres: Lee Scott 02 65565265; SSO: Dale Davis 02 65597716.

Newcastle Hang Gliding Club

PO Box 64 Broadmeadow NSW 2292; Pres: Mick Hurley <fly176@hotmail.com>, 02 49432903; Sec: Adam Donaldson <adnsic@rivernet.com.au>, 02 49472466; Trs: Brad Cootes <hugest@bigpond.com>, 02 49521428; SSO: Inland - Al Giles 02 49430674 & John O'Donohue 02 49549084,

Coastal - Scott Alder 02 49514581 & Jason Turner 0419 997196. Meetings: Last Wed/month, Souths Leagues Club.

Northern Beaches Hang Gliding Club Inc Pres: Mark Robertson 0427 702864, <Robbos71@hotmail.com>; V-Pres: Angus Evenden 02 99978777, 0416 205025, <creation@tpg.com.au>; Sec: Nils Molk 02 99382963; Trs: Jim Gaal 02 99977704, 0414 799822, <jimg@acay.com.au>; SSO: Mike Eggleton 02 94571127, Forrest Park 02 94502674, Glenn Salmon 02 99180091. Meetings: 1st Tue/month, 7pm, Mona Vale Bowling Club.

Stanwell Park HG and PG Club

PO Box 258 Helensburgh NSW 2508; Pres: Rod Johnson 02 8836 5069 (w), <rod.johnson@thempc.com.au>; Sec: Angela Johnson 02 42683748; Trs: Joe Fussell 02 42943942; Events Co-ord: Jules Sanderson 02 42943092; Site Manager: Steve Pick 02 42944195; SSO: Jamie Cannon 0410 686232, Steve Pick (PG) 02 42943072.

Sydney Paragliding Club

PO Box 225, Helensburgh NSW 2508, [www.sydneyparagliding.com/club/], <sydneyparaglidingclub@yahoo.com>. Pres: Enda Murphy 0412 445741. Meetings held every 3 months, Marrickville Bowling & Recreation Club Sydenham Rd, Marrickville. Next Meeting 6 December 2001.

QUEENSLAND

Cairns Hang Gliding Club

Pres: Bernie Zwalen 07 40965593, <zwalen@ledanet.com.au>; V-Pres: Joe Reyes 07 40555553, <creyes@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.triptera.com.au/canungra]. Pres: Jon Durand Snr <durand@ausinfo.com.au>, 07 55333596; V-Pres: John Ripley <rip_ripley@hotmail.com>, 07 32898275, 0417 507906; Sec: John Tree <jst@winshop.com.au>, 07 55354259, 0417 607191; Trs: Shirley Lake <chgtreas@mac.com>, 07 55434047; General Executive Member: Greg Hollands <greg.s.hollands@transport.qld.gov.au>, 07 32534239 (w), 07 38448566 (h); Newsletter Editor: Ros Taber <rostab@aol.com>, 07 33490393, 60 Wanda Rd, Mt Gravatt QLD 4122; SSO: Andrew Horchner <aafactor@qil.com.au>, 0412 807516.

Central Queensland Skyriders Inc

915 Yeppoon Rd, Iron Pt QLD 4701. Pres: Bob Pizzev 07 49387607; Sec: Grant Suthers 07 49361790; SSO: Geoff Craig 07 49923137, <gicraig@tpg.com.au>, Paul Barry 07 49922865, <prbarry@tpg.com.au>

Conondale Cross-Country Flyers Inc

Pres: Peter Buch 07 54949579, <buchy9@bigpond.com>; Vice-Pres/SSO (PG) & Local Flying Contact: 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) & Micro-light Flight Experience Instructor with Passenger & Tug Master Endorsements: Russel Groves 07 54450084.

Dalby Hang Gliding Club Inc

16 Lunga St, Carina QLD 4152; Pres: Bob Keen 07 46639770; Sec: Damien Gates (SSO) 07 39017401, 0417 766356, <texdoc@bigpond.com>; Trs: Jason Reid 07 33941129.

Sunshine Coast Hang Gliding Club

PO Box 227, Rainbow Beach QLD 4581; <intheair@ozemail.com.au>. Pres: Phil Lewis 07 54840464; Sec/SSO (PG): Jean-Luc Lejaille 0418 754157; Trs: Michael Powell 07 54425568; SSO (HG): David Cookman 07 54498573.

Townsville Hang Gliding Association Inc

Pres: Clint Smith 07 47747650; Sec: David McMahon, 07 4772 3858, PO Box 103, James Cook University, Townsville QLD 4811; Trs: Graeme Beplate 07 47732913; SSO: Graham Etherton 0427 837197.

Whitsundays Hang Gliding Club

Pres: David Nash 07 49531817; Sec: Ron Huxhagen 07 49552913, fax: 07 49555122, <sitework@mackay.net.au>; PG contact: Graeme Lee 07 49546726, <gdsrlee@hotmail.com>

VICTORIA

Dynasoarers Hang Gliding Club

Pres: Darren Brown 03 5222 8625; Sec: Tony Hughes 03 52437661; Trs: Greg Holt; SSO: Ted Remeika; Rob Van Der Klooster 03 5222 3019, <hrt@deakin.edu.au>; Meetings: 1st Fri/month, venue web site [vhpa.org.au/dyna].

Melbourne Hang Gliding Club Inc

Formerly Eastern HG Club, [www.vhpa.org.au/melbourne/], <melbourne@vhpa.org.au>. Pres: Andrew Medew 0413 433537; SSO: Geoff Tozer 03 97583250, Kevin Grosser 0419 022225. Meetings: 3rd Wed/month at 6:30pm at the Palace Hotel, 893 Burke Rd, Camberwell (opposite railway station).

North East Victoria Hang Gliding Club Inc

[www.home.aone.net.au/gilbert/nevch.htm] Pres: Horst Wimmer 03 57501075; Sec: Garrit Verway 03 57551074; Trs: John Coulton 0427 300656; SSO: Karl Texler 03 57501733. Meetings: 1st Thu/month, Alpine Hotel, Bright.

Sky High Paragliding Club

<skyhigh@vhpa.org.au>; Pres: Geoff Guest <gguest@fox.net.au>; V-Pres: John Styles <jdstyles@hotmail.com>; Sec: Zoltan Toth <fishhead@netspace.net.au>; Trs: Barbara Scott <bscott@primus.com.au>; Committee Members: Hakim Menten <hmenten@ozemail.com.au>, Jamie Harrington <jamie@sasprotocol.com.au>, Duncan Caswell <Duncan.Caswell@worley.com.au>, Sharon Gingell-Kent <gingellk@anz.com>. Meetings: 1st Wed/month 8pm, Retreat Hotel, 226 Nicholson St, Abbotsford.

Southern Microlight Club

Pres: Mark Howard 03 97511480, 0418 533731, fax 03 97511584; V-Pres: Kel Glare; Sec: Ben De Jong; Trs: Dianne Pierpoint. Meetings: 2nd Tue/month 8pm, various venues.

Western Victorian Hang Gliding Club

Pres: Stephen Norman 03 98536554, <ursula@starnet.com.au>; V-Pres: Glen Bachelor 0419 324730; Sec: Nathan Grieve 03 53673106, 0408 673102; <nathan_grieve@yahoo.com>; Trs: Phillip Campbell 03 53313812, 0419 302850, <campbell@giant.net.au>; SSO: Rohan Holtkamp 03 5349 2845. Meetings: Last Sat/month, The Golden Age Hotel, Beaufort.

WESTERN AUSTRALIA

Albany Hang Gliding Club

Pres & SSO: Simon Shuttleworth 0407 950536; Sec: John Middleweek 0417 412710, 08 9841 2096, fax: 08 98412096.

Cloudbase Paragliding Club Inc

Club message bank 08 94875253; [www.cygnum.uwa.edu.au/~madmike/paraglid.html]; <cloudbase@paragliding.org>; Pres: Dave Humphrey 08 95745440, 0418 954176, <paradive@avon.net.au>; Sec: Michael Duffy 08 93823036, 0417 923741 <madmike@cygnum.uwa.edu.au>. Meetings: 2nd Wed/month 8pm, Rosie O'Grady's Pub, South Perth.

Hill Flyers Club WA

Pres/SSO: Rick Williams 08 92943962, 0427 057961, <rickandalice@hotmail.com>; Sec/Trs: Dave Longman 08 93859469; Committee Member: Mike Thorn 08 92988174; 0409 901500. Meetings: Last Wed/month, 7:30pm, "Cascades" Bistro and Function Centre, 231 Guilford Rd, Maylands.

South West Microlight Club

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

Western Soarers Hang Gliding Club

<wshgc@hotmail.com>, PO Box 483, Mt Hawthorn WA 6915, [www.iinet.net.au/~navi]; Pres: Phil Wainwright <pwainwright@iqpc.net.au>; V-Pres: Daryl Speight 08 93568195, <Daryl.Speight@kbjv.com>; Sec: Geoff Smith 08 9223 2323, <geoff.smith@jhg.com.au>; Trs: Graeme Sharp 08 9445 7044, <GSharp@stothoare.com.au>; SSO: Mark Stokoe 08 9581 3572; Events & Promotion: Krista Gaunt 08 9348 4246, <Krista.Gaunt@woodside.com.au>. Meetings: 1st Wed/month 7:30pm, The Irish Club, 61 Townshend Rd, Subiaco.

GFA Clubs



NEW SOUTH WALES GLIDING ASSOCIATION (NSWGA)

Australian Air League

NSW Gliding Wing, 1 Perry Street, Kings Langley NSW 2147

Australian Soaring Centre

PO Box 1315, Byron Bay NSW 2481

Bathurst Soaring Club – PO Box 1682, Bathurst NSW 2795

Byron Power Gliding Club

PO Box 815, Byron Power NSW 2481, 02 66847627

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

Concordia Gliding Club

231 Stanmore Road, Stanmore NSW 2048, 0412 145144

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 Road, Queanbeyan NSW 2620

Grafton Gliding Club

11 Lighthouse Crescent, Emerald Beach NSW 2456,

02 66561979, 02 66561979, 0428 244614

Greenethorpe Gliding Club

Weerona Young Road, Grenfell NSW 2810, 02 63431375, 02 63431375

Harden Gliding Club

PO Box 24, Harden NSW 2587, 02 68862275, 02 68862275

Hunter Valley Gliding Club

PO Box 9, Newcastle NSW 2300

Kentucky Flying Club – The Hill, Kentucky NSW 2354

Lake Keepit Soaring Club

PO Box 152S, South Tamworth NSW 2340, 02 67697514, 02 67697640

Leeton Gliding Club

PO Box 607, Leeton NSW 2705

NSW AIRTC Gliding Club

41 Simpson Avenue, Forest Hill NSW 2651, 02 69227526

NSW Police Gliding Club

27 Bourne Street, Wentworth Falls NSW 2782, 0427 592744

Orana Soaring Club

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

RAAF Richmond Gliding Club

RAAF Base, Richmond NSW 2755

RAAF Williamtown Gliding Club

C/- Mr AJ Lee, 10 Federation Drive, 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 Avenue, 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

Temora Gliding Club

PO Box 206, Temora NSW 2666, 02 69772733

Wagga Wagga Gliding Club

25 Beauty Point Avenue, Wagga Wagga NSW 2650, 0427 205624

Warrumbungle Gliding Club

PO Box 586, Wee Waa, NSW 2388

QUEENSLAND SOARING ASSOCIATION (QSA)

Boonah Gliding Club – PO Box 107, Boonah QLD 4310

Bundaberg Soaring Club – PO Box 211, Bundaberg QLD 4670

Caboolture Gliding Club – PO Box 920, Caboolture QLD 4510

Central Qld Gliding Club

PO Box 953, Rockhampton QLD 4700

Darling Downs Soaring Club

PO Box 584, Toowoomba QLD 4350

Gympie Soaring Club – PO Box 103, Gympie QLD 4570

Kingaroy Soaring Club – PO Box 91, Kingaroy QLD 4610

SOUTH AUSTRALIAN 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 Incorporated,

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

Blanchetown Gliding Club

C/- 12 Altola Road, Modbury SA 5092

Bordertown Keith Gliding Club

PO Box 377, Bordertown SA 5268

Gawler Gliding Club

PO Box 135, Cockatoo Valley SA 5351

Lake Bonney Gliding Club

PO Box 243, Barmera SA 5345

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 AIRTC Gliding Club

PO Box 2000, Salisbury SA 5108

Waikerie Gliding Club

PO Box 320, Waikerie SA 5330, 08 85412644, 08 85412761

Whyalla & District Gliding Club

PO Box 556, Whyalla SA 5600, 08 86404432, 0413 127825

VICTORIAN SOARING ASSOCIATION (VSA)

Albury Corowa Gliding Club

PO Box 620, Wodonga VIC 3689

Beaufort Gliding Club

116 Tennyson Street, Elwood VIC 3184

Bendigo Gliding Club – 62 Lawson Street, 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

12 Delungra Road, Trevallyn TAS 7250, 03 6334 6594

Gliding Club of Victoria

PO Box 46, Benalla VIC 3672, 03 57621058, 03 57625599

Grampians Soaring Club

PO Box 468, Ararat VIC 3377, 0417 514438

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 Street, Mount Beauty VIC 3699

Murray Valley Soaring Club Ltd

PO Box 403, Corowa NSW 2646

RAAF East Sale Gliding Club

C/- Gary Mason, 9 Weir Street, Sale VIC 3850

Soaring Club of Tasmania – PO Box 24, Ross TAS 7209

South Gippsland Gliding Club

PO Box 475, Leongatha VIC 3953

Southern Riverina Gliding Club

PO Box 78, Tootumwal NSW 2714, 03 58742063, 03 58742705

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

GPO Box 1096J, Melbourne VIC 3001, 0402 281928, 03 9848 6473

Wimmera Soaring Club – PO Box 158, Horsham VIC 3402

WESTERN AUSTRALIA GLIDING ASSOCIATION (WAGA)

Beverley Soaring Society

PO Box 136, Beverley WA 6304, 0407 385361

Gliding Club of Western Australia

356 Abernethy Road, Cloverdale WA 6105, 08 96351023, 0417 992806, 08 96351023

Morawa Flying Club – PO Box 276, Morawa WA 6623

Mt Newman Gliding Club – PO Box 119, Newman WA 6753

Narrogin Gliding Club – PO Box 232, Narrogin WA 6312

Stirlings Gliding Club – C/- Post Office, Lower King WA 6330

WA Squadron Australian Air Force Cadets

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

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Congratulations Team Moyes at A.O.H.G.C 2002

AUSTRALIAN OPEN HANG GLIDING CHAMPIONSHIPS 2002

MOYES RESULTS

Open Class

2nd - Mike Barber - Litespeed 4

3rd - Gordon Rigg - Litespeed 4

4th - Jon Durand JNR

(Highest Placed Australian) - Litespeed 4

1st Woman - Tish the Flying Fish - Litespeed 3

Kingpost Class

1st - Tony Giamichelle - SX6

1st Woman - Kyoko Bower - SX3

Floater Class

1st - Alan Beavis - Ventura 190

1st Woman - Kathy Kelly - XT 145

1st B Grade - Matthew Bower - Xtralite 137

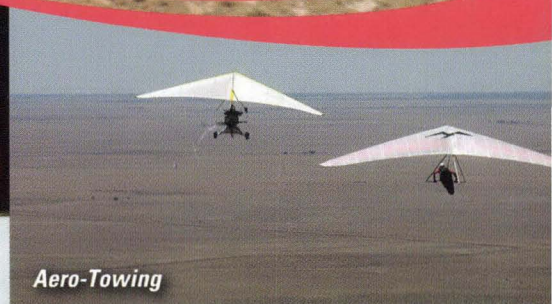
1st C Grade - Andrew Barnes - Sonic 165



Things that make you go Zoom...



Moyes prize winners. Back from left: Andrew Barnes, Alan Beavis, Gordon Rigg, Matthew Bower, Tony Giamichelle. Front from left: Mike Barber, Tish the Flying Fish, Kathy Kelly, Kyoko Bower



Aero-Towing



Approaching 'Dust-Devil'