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**In this Issue:**



**333 Week in WA**



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Queueing Up  
Photo: Ann Mitchell



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## PLEASE NOTE THE REVISED DEADLINE

The new deadline for articles, photos, news and display ad bookings is the 25th of each month, 5 weeks prior to publication.

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Photographs should be printed on glossy paper either in black and white or colour. Captions and photographer's name are needed. Please do not print on the back of photos.

Drawings, maps, cartoons, diagrams, etc. should be in black ink on white or transparent paper. Lettering may be pencilled lightly but clearly on the drawing, for typesetting.

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They are strictly the views of the contributor. Any GFA officer quoting his title will be responsible for submitting an official GFA article.

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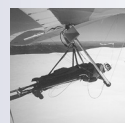
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# The Real Millennium Narromine Ca

## 11 to 19 November 2000

### It's on again – the popular Narromine Camp and Cup Week!

CHRIS STEPHENS

**T**he purpose of the camp is to provide organisation, infrastructure and peer group support for pilots who have come to Narromine to either achieve particular goals or improve their personal best performances. It is not important whether a pilot is chasing his/her five-hour duration, 500km distance or the prestigious Barron Hilton Cup. What is important is the environment of support and opportunity to perform that this camp provides to those who participate. A once only fee of \$20 (or less) is collected to cover temp trace flights during the seven days, using the GFA cusonde.

Narromine Aerodrome is of international aviation historical significance and has been used as an airport since 1920. It's literally true to say that for the best part of this century, pilots of many persuasions have come from all over the world, just to fly from Narromine. The town recognises the contribution that aviation has played in this district and, in keeping with its motto of "Narromine Flying Ahead", is keen to see continued promotion of sport aviation at Narromine airport. With that in mind, the town has sponsored a competition called the Narromine Cup, which is run in parallel with the Orana Soaring Club Personal Performance Camp.

#### Personal Performance Camp

Inspired by the Barron Hilton Cup encampment, which follows a similar format, our goal is to provide all the essential needs of individual pilots in an enjoyable atmosphere. A daily weather briefing, launches, help with retrieves, SAR watch, Official Observers, FAI and GFA Claim Forms, advice on requirements for badges, records, etc. all within a supportive and social environment.

Each evening, a meal will be provided in the Orana Clubroom. Also, on the final night an informal presentation evening will be held in combination with the Orana Soaring Club's annual presentation dinner. This year it will be on Saturday, 18 November at the airfield.

#### The Narromine Cup

The Narromine Cup started in November 1997 and is sponsored by the township. It is run in parallel with the Orana Soaring Club Personal Performance Camp.

##### The Narromine Cup rules are:

1. *Tasks are set by each pilot either individually or in cooperation, with the aim of striving for their personal best performance feasible on the day;*
2. *Tasks that can be flown include badge flights, record attempts, GFA Decentralised Cross Country Event (DCE) and Barron Hilton Cup (BHC) entries;*
3. *At the end of each day (or later if that's not possible) pilots complete a DCE entry form provided in the Orana clubroom and put it in the box on the club bar; and*
4. *The pilot with the highest score after application of the DCE handicap will win the day prize. The pilot with the best three flights over the camp/cup period wins the Narromine Cup.*

#### Claim forms and Documentation

FAI, GFA, DCE and BHC Claim Forms are available from the binder titled Soaring Forms, located on the club bar.

A copy of the Sporting Code, badge requirements, current Australian records, DCE and BHC rules and declaration details are also available.

Pilots are reminded of the need to provide the required proofs to their Official Observer, for both paper/film and datalogger claims.

#### Administration and Finance

Tows will be charged at \$28 per launch to 2,000ft. Extra height is per hundred feet.

All accounts must be settled by Sunday evening, 19 November.

FAI, GFA, DCE and BHC Claim Forms will be provided and any charges will be only the normal GFA ones.

All pilots must be GFA members and gliders must have a current Maintenance Release.

All pilots must meet the MOSP requirements for cross-country flight.

All pilots must read the attached Narromine Airfield Operational Procedures and Advice.

Please take note of the following contact phone numbers:

<i>Airborne Avionics</i>	
<i>Office</i>	<i>02 6889 2733 (bh)</i>
<i>Airfield Public Phone</i>	<i>02 6889 1211</i>
	<i>(let it ring out/keep trying)</i>
<i>Beryl Hartley's house</i>	<i>02 6889 1250 (ah)</i>
<i>Chris Stephens' mobile</i>	<i>0417 208 402</i>

#### Narromine Airfield Operational Procedures and Advice

##### 1. Vehicles on the Airfield:

- Use the perimeter roads at all times unless towing a glider to or from the operational areas. See the map outside the Orana office shelter for road and access locations, but note the detour around Runway 29).
- Keep vehicles clear of the operational tarmac during preparations for flight.
- Park well behind the orange (grass gliding strips) and/or white (sealed runways) gabble markers.

##### 2. Radio Procedure:

- Narromine CTAF is 126.7.
- All pilots are asked to observe the CTAF procedures, make an inbound call at 10km and on joining downwind in the circuit.
- Soar Narromine uses 122.5 as their chatter frequency when clear of the CTAF area.
- Remember the CTAF is not a chatter frequency.
- All other GFA frequencies are available for chatter.
- Narromine Cup ground will monitor the CTAF (126.7).
- Tugs will be on the CTAF while in the CTAF area, then switch to 122.7.
- Dubbo is an MBZ (5,000ft/15nm radius) frequency 134.0.

##### 3. Outlanding Advice:

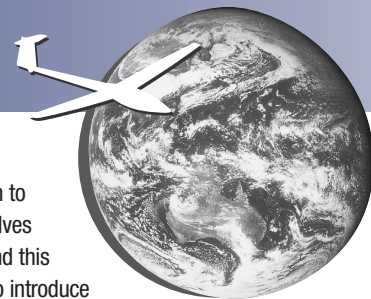
- Many crops have not yet been harvested.
- You will note the extensive cotton plantings in the district. Cotton is grown in very expensive laser-cut paddocks.
- Harvested paddocks are the best for outlanding but great care should be taken as most good paddocks were planted again this year.
- Powerlines are still the greatest danger when outlanding. Always ensure that you spot the power lines leading to houses and sheds. They will be there.
- Take vehicles into crop paddocks only as a last resort.



# mp and Cup

- Always ensure that gates are closed behind you.
  - Where possible get permission when entering property.
  - Aerotows may only be done with the approval of the farmer.
4. **SAR watch:**
- If without crew please advise the bookkeeper in the pie cart of your task for the day.
  - If you land-out make every effort to notify the club of your safe landing. Often mobile phones will work in paddocks.
  - Please have you crew advise the SAR bookkeeper should they leave to retrieve you.
  - Search and rescue procedures involving CASA must start one hour after last light.
5. **Aerotow Retrieves:**
- Aerotow retrieves can be requested by radio to Narromine Cup ground, telephone (see contact phone numbers) or in person.
  - The C 182 (BRA) is available for retrieves from airports and Orana cleared strips.
  - The C 180 (TDN) and Pawnees are available for paddock retrieves.
  - Pilots should give a detailed report on the conditions of their paddock when requesting an aerotow retrieve. If the tug decides not to attempt a landing on the basis of safety after being called out, the cost will normally still be charged to the glider pilot.
6. **Trailer park and glider tie-down:**
- Trailers should be parked within the fenced area on the eastern side of the tie-down area; over near the golf course.
  - Gliders should be tied down in tie-down areas on either side of the main taxiway using the cables.
  - Water taps are located throughout the tie-down area.
7. **Our workers:**
- Chris Stephens is the instructor in charge of the Narromine Camp and Cup Week.
  - Chris Stephens and Keith Dixon will run daily briefings and will carry out Narromine Cup Week scoring.
  - Anne Elliott will keep the day sheets and the SAR book, until handed-over to Chris Stephens.
  - A list of available Official Observers will be in the Orana clubroom.
  - Beryl Hartley and others will tend the bar and grill in the Orana clubroom each evening.
8. **Finally:**
- Courtesy costs little and makes everyone a winner.

## In the Circuit



### Local News

#### GFA membership survey results

The total number of surveys posted with July's AG/Skysailor was 2834.

Total replies received – 14.40%. A handful of late replies were included in the following:

1. *Do you wish to retain but improve the operation of the existing structure?* Yes/No  
Yes – 52%, No – 41.4%, Don't know – 6.6%
2. *Do you wish to have a single management group or separation of powers between implementation and policy?* Single/separate  
Single – 50.5%, Separate – 41.9%, Don't know – 7.6%
3. *Do you wish to have directly elected management?* Yes/No  
Yes – 65.4%, No – 27.7%, Don't know – 6.9%
4. *Do you wish a National or State based election?* National/State  
National – 43.4%, State – 50.5%, Don't know – 6.1%
5. *Do you wish a national electorate with a minimum of one serving member from each state?* Yes/No  
Yes – 70.6%, No – 20.8%, Don't know – 8.6%
6. *Do you oppose the plan to convert the GFA to the Associations Act as detailed in the AG and web articles?* Yes/No  
Yes – 16.4%, No – 69.1%, Don't know – 14.5%

It is interesting to note the return percentage is similar to that received from the HGFA election of officers. Upon checking with Victoria's governing body for associations, its advice is that for non-profit volunteer organisations such surveys, or indeed matters of election, average a return somewhere in the vicinity of 10-15%, making this survey result very normal.

Due to the closeness of several of the answers, no conclusion can be drawn as to the preference or inclination of members. However, on the surface it may be fair to note that there appears to be an indication of support to migrate from the Companies Act to the Associations Act and that any form of election for management of the new GFA should be by direct vote and comprise a National electorate, but with at least one representative from each region.

Council will consider the implications of the above results and formulate a plan to proceed to a next step, what ever that might be.

To those members who went to the trouble to provide additional thoughts and opinions, your views have been recorded and will be considered.

Any plan to migrate involves new rules and this is the time to introduce or modify any structure of management and election process.

Maurice Little

#### Amended version of Sporting Code available on FAI website

A fully amended version of the Sporting Code Section3, incorporating the amendments which will take effect on 1 October 2000 is now available on the FAI web site at [www.fai.org/sporting\_code/sc3.html].

This version is in pdf file format which requires the Adobe Acrobat Reader programme to extract. The pdf version has the font it was designed for, and pagination permanently fixed by the Acrobat programme, so should have all indexing and contents listing correct. It is designed for printing on both sides of the paper.

Available on the same address are an updated version of Annex A (with new links, the content is the same), and Annex B.

Also available for the first time is Annex C to Section 3 of the Sporting Code. This is the "Official Observer and Pilot Guide" which gives support and examples by which the letter and the spirit of the Sporting Code may be met.

The material in this Annex does not have the force of the rules in the Sporting Code, but is intended to assist in its understanding. The examples given show ways of achieving the controls and checks required in the Sporting Code, but these may not be the only methods that give acceptable results. It has been written to take account the amendments noted in AL1, so will be accurate from 1 October 2000, but much of the material can be helpful immediately.

Ross McIntyre,  
IGC Sporting Code specialist

### GFA Airworthiness Directives

#### AD 539 – Issue 1:

*Type affected:* LS8, Version LS8-18 only, all serial numbers with English manuals.

*Subject:* Maintenance manual amendments.

#### AD 540 – Issue 1:

*Type affected:* LS, version LS8a only, all serial numbers with English manuals.

*Subject:* Amendment to flight manual.

#### AD 541 – Issue 1

*Type affected:* All Slingsby T51 Darts with aluminium alloy (dural) spar booms.

*Subject:* Inspection for delamination.







# GST – Boosting sale of new gliders

BERNARD ECKEY

**It's all the fault of the government; the environment has been mucked up and the thermals aren't as good as they used to be.**

**W**ords to that extent were heard around our club not too long ago. I certainly won't buy into the argument but for the moment concentrate on matters clearly under the control of the government.

Let's start with the GST, or better still with sales tax. It used to be applied at a rate of 26.4% to any glider landed on our shores prior to 1 July 2000. New gliders do not come cheap but adding more than a quarter by the way of tax has, without doubt, been one of the reasons why gliding has been forced on the back foot in Australia.

Prior to the introduction of GST a new standard class glider was well in excess of \$100,000 by the time it lined up for its first flight in Australia. The same applied for new and modern all fibreglass trainers. Today the

same gliders are significantly cheaper. However, among all the doom and gloom surrounding gliding in Australia this bit of great news seems to be conveniently overlooked. In conjunction with a marked improvement in the exchange rate between the Aussie dollar and the Deutschmark new equipment has come down by a great margin compared to only a few years ago.

Sure inflation has taken its toll, but the fact remains that Aussie glider pilots now get change out of \$100,000 if they import a highly competitive and brand new standard class glider. An amount of almost \$20,000 can be saved compared to only a few years ago. That's a lot of money in anybody's language and very good news for the gliding movement as a whole. Of course the savings are even significantly higher for open class aircraft or for gliders with an engine.

What about duty? Well we can't blame the government for that either because there is no duty on gliders – just GST.

It has therefore not come as a surprise to insiders that a fair number of new gliders have recently been ordered by gliding clubs as well as private owners in Australia. The Schleicher agent alone is reporting the sale of five new gliders in less than a year. Before much longer, two new ASH 26E self-launching gliders with 18m wingspan will be added to the GFA register. Also, two ASW 28 (newest standard class glider) will be competing at the Australian national championship before much longer. Another ASK 21 trainer was ordered by the Balaklava Gliding Club and will already be in service by the time this article goes to press.

So let's leave all this dishing up of negative news to the tabloid press. Gliding in Australia is very much alive and just received a welcome shot in the arm by the government.

If only the government would stop interfering with our thermals.



The new ASW28 ▼





# Romeo November

## – The first 12 months

IAN PATCHING

**It is now 12 months since we returned the long-wing Kookaburra, VH-GRN, to operational status. Many years ago, Emilis Prelgauskas gave readers a 12-months review of the operation of his Kookaburra, VH-GLZ, so I think I may also indulge in a somewhat proud event to me and to thank the people who helped in its return to the air.**

**F**irstly a bit of history. The VMFG was so impressed with the performance of its first long-wing, VH-GRC, that in 1959, they ordered a second – GRN. It gave the club 12 years of service and was sold to the Roma Gliding Club in 1972. The aircraft then went through periods of activity and decline as club fortunes ebbed and flowed. After two further changes in ownership, it ended up with the Charleville Gliding Club in south-west Queensland. In 1988, the glider was thoroughly refurbished however, shortly after, the area was devastated by flood and then drought and the club went into recess. The long-wing was stored in its trailer in the hangar and remained there until purchased by the syndicate of myself, Geoff Hearn and Frank Smith in 1998.

When the VMFG celebrated its 50th anniversary in 1994, one of my jobs was to track down all the ex-VMFG gliders and ascertain their current status. It was then that I discovered GRN, along with ex-club owned short-wing GFE, were at Charleville.

Contact was made with a club member who very kindly sent photographs of the two aircraft. He also explained the predicament of the club and the unlikely change to the situation. I resolved at this time to keep an eye on the situation and to follow up the gliders.

A family holiday to Townsville in 1998 gave me my only chance to inspect the gliders so I organised a visit. The short-wing had gone but the long-wing was still there as well as an ES Ka6, VH-GRV, which has since been sold. Negotiations began with the custodians of the long-wing and I departed, still unsure of what would transpire.



Two weeks later, the deal was done and arrangements were made to transport the whole lot to Melbourne.

It's a long story so I'll keep it short. With the help of Alan and Lorna who picked the trailer up from Dubbo and secured the fuselage after it had smashed the tail plane, and from Des Aldridge at Finemores who transported the load from Gilgandra to Melbourne, VH-GRN arrived in early January 1999.

After a thorough inspection, then securing a fitting of a new tailplane and general repairs, the glider was test flown on 13 July 1999, after 10 years of sitting around.

To me, the return of GRN has been most satisfying. Members of the VMFG, old enough to remember, have enjoyed nostalgic flying, in most cases with affection. One of these people was Roger Druce who was able to recreate his first solo flight in GRN, 30 years and one week after the event.

GRN has been used for a variety of different tasks including kids' first flights – the staggered seating being an advantage here – to VSA instructor training. Another highlight was the trip to Ararat to help them celebrate their 30th anniversary. After a ferry tow from Bacchus Marsh, I released above the clouds about 40km

PHOTOS: IAN PATCHING



out of Ararat. Max Callingham, who was flying the tug, commented that the glider, with the clouds as a backdrop, was one of the most picturesque scenes he has ever seen. Arriving at Ararat, Bill Johnstone of the Geelong Gliding Club took the club's treasurer on a two-and-a-half hour tour of the Grampians.

A syndicate of Grampians club members have purchased the other ex-VMFG long-wing, GRC, and so for the first time in 28 years, the two gliders were together again.



On this visit, my son Tighe and I attempted Ararat – Bacchus Marsh and after a 90km struggle, no higher than 3,500ft, we ended up one paddock short of the Ballarat aerodrome, thus ensuring our first retrieve.

In November, GRN helped Edwin Shackleton of the UK, who is the Guinness Book of Records most prolific aircraft passenger, increase his tally to 691 different types of aircraft.

What followed was probably the most satisfying event for me. The South Gippsland Gliding Club has experienced a period of strong growth. This placed them a two-seater glider short so after some negotiations, GRN recommenced what it was originally intended to do, basic training. Club members have enjoyed having GRN on the line and new members have joined, preferring the seating arrangements to those of the K7.

Returning ES52 BII, VH-GRN, to service has been a most exciting and satisfying experience. The flying, the talking over of old memories, the sheer enjoyment of soaring the glider with friends and family, and its subsequent return to training operations has given me one of my best years in gliding yet.





## Editor's Word

**W**ith five fatalities it has been a tragic month for the HGFA. My heart cries for the families of the members involved, none more so than Sue Connor who was witness to her husband's accident. I cannot imagine how hard it was for her waiting at the scene for the ambulance, fearing the worst of fears, yet hoping against hope for something other. My very sincerest condolences to you, Sue, and all others affected by the accidents. From recent conversations I've had with various pilots I know we are shocked as a community.

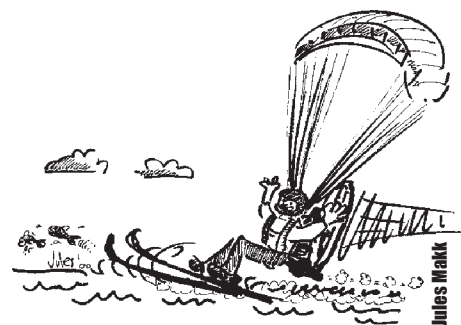
**Richard Lockhart, HGFA Sub-editor**

# Lake Eyre by Paramotor

JEFF HOFFMANN

**'You're not taking that are you?' came from the lady wife and ground crew.**

**A**t this point the back of the wagon was empty and I was wondering if I could fit a paramotor in and still have room for everything else. It seemed the best to dismantle the cage around the propeller and stow that in the bag with the canopy. When my flying machine was in it was time to see what else we had room for. A clear case of getting priorities right.



As it turned out, most things she wanted to take did fit in but we were full up. These were things like clean clothes in case we needed them (we were only going for five days) and our teenage daughter (who wanted to come but needed to bring enough music on cassettes and CD's for five days of 24 hours). We made a 3am start from Milbrulong in southern NSW, with 1,400 km to go to Woomera.

Overnight was at Wilmington in the Flinders Ranges. I checked out some of the scenery in the gorges but no flying. We were also too late into Woomera for flying. We were there to see our son who provides activities for the detainees at the camp. Many of these people have been deceived into believing that if they paid up to a people smuggler they could start a new life in our wonderful country. It is a difficult situation for them and for the government. There are no very good options, however compassionate we may feel.

The next day we were off to Lake Hart for a BBQ lunch. Lake Hart is a dry salt lake just off the Stuart Highway about 40 km north of Woomera. While the rest got the fire going and lamb chops on the griller, I checked out the lake bed and the wind. I am always a bit apprehensive about flying a new site, especially in such a remote area, but I was not going to miss the opportunity to fly over it and get a bird's eye view of the spectacular landscape around. There was a steady breeze coming in from the lake and I could see no reason not to fly.

It only took a few minutes to get ready. The railway to Alice Springs passes along the lake foreshore and it is a long way. I don't know what the crew thought when out of the scrub in front of them came a joker with a propeller on his back. It was the longest freight train I have ever seen. In no time I was off for a little run and fly away. It is a beautiful country with the typical colours of the Centre; red soil, green mulga scrub, blue hills and sky and the gleaming white of the salt lake stretching away to the horizon. Apart from being a great flight it did help vindicate the space I used up in the vehicle. My big worry had been that the weather would crack up and I would bring







▲ A local watches the sunrise and moonset with me

it home unflown. She would not say anything, but I would know what she was thinking.

That evening I frolicked around over Woomera and watched the sun go down from a great height. I did fly out towards the detention camp, but I am not sure about the legality of flying in the vicinity of a prison. It also seemed mean to fly over people who do not even have the freedom to walk where they want, let alone fly. I doubt I would get treated as well if I was an illegal immigrant or refugee in their country, but it is still sad.

The next day we were off for the main flying objective, Lake Eyre. It is a long, long way,

but I just love looking at that country. It has to be better than looking at houses and petrol stations along the coastal highways. The Oodnadatta track is a good gravel road and a few hours later we were at Lake Eyre. The lake is beautiful, the weather was perfect and I wasted no time in getting away. Funny enough, even out there I had the guy who is always there to ask what sort of a motor it is and how heavy it is. I think I will write it on the back of my helmet because he always seems to be there with the same questions.

I took four flights around the lake, staying within gliding distance of the shore. (The rule

PHOTOS COURTESY:  
JEFF HOFFMANN

is that if you land in deep water in a motor-paraglider you drown.) The water is shallow near the edge but it is bog on the bottom and so even if I did not drown I did not like the thought of a slug through the mud with 20 kg on my back and a wet glider. The last flight was to see the sun go down and the moon come up. It was a beautiful clear warm night and the eclipse was due to start. I could not wait up there for long enough to see it from above, more's the pity.

It was a crystal clear night with the lake about 100 m away, an eclipse on, a chorus of water birds on the lake and a bed of soft sand. A night to remember. It did get cold in the early hours when the land-breeze to the lake kicked in. That was a good reason to get up and kick the fire into action, put the billy on and watch the sun come up and the moon go down. On a mound above the camp a wedge-tailed eagle was doing the same thing. I could have flown in the morning but I was content to turn my head for home.

All flying is a buzz, but I do not think I will ever top the experience of paramotoring over Lake Eyre at sundown and landing for lamb chops grilled over a fire, the eclipse, the eagle and the magnificent scenery all the way. It is a big, wonderful country and we don't have the Taliban shooting at us. I am not complaining about the GST or anything else, I am just glad I am me and I live the way I do.



## FUNNY CAPTION COMPETITION



Photo courtesy:  
Mark Thompson

If you have a witty mind  
What funny caption can you find?  
Send to me your words with haste  
Especially if HGFA caps are to your taste!

Send your entries to:  
Richard Lockhart  
c/o Blackheath Post Office,  
Blackheath 2785 NSW  
or email <skysail@ozemail.com.au>  
by 25th October.

The winner will receive a HGFA cap.

*Note that the winner of the October Funny Caption Competition will be announced next month.*





## Ridge soaring snow-covered Mt Bogon

FRANK FONTYNE

Mt Bogong stands at 1,986m or just over 6,500ft. The area had significant snowfalls over winter and it had only been a week or two since it last snowed. There was still more than two metres of snow and it was a long way down from the peaks. Last year I did the same trip, but was hamstrung by early cloud forming and rough conditions. Also this year it was a snow bonanza compared to last year.

I had been planning a motorised flight over the snow for a while, but the difficulty is to find a day with clear weather, while there is still plenty of snow left, but not too cold, and it also had to be a day without work commitments! Quite often this time of year it can be clear in the morning, but cloud often develops over the mountain peaks.

So I took the gamble Saturday, 16 September and took off from Mt Beauty airstrip at 10:30am. It was another nil wind take off, that is so typical of the area this time of day. Strong controlled run on take off and followed the whole length of the runway out. The airstrip is at 1,100ft, so with the little 120cc motor





▲ Ridge soaring over Mt Bogong,  
the highest mountain in Victoria's alps  
◀ The ridge leading up to Mt Bogong

## g – at 7,600ft!

it was going to take a while to reach the Mt Bogong summit. I tried to find some thermals off the Tawonga ridge, but conditions were still too stable in the valley. So I used the Explorer motor flat out. The climb rate also slowly reduces as altitude is gained. At 3,500ft I crossed the valley over to the base of Mt Bogong where I started to encounter little bits of lift. The view from the snowline upwards was grand. There were still huge amounts of snow and the summit was still a long way up. I did a pass along the north side of Bogong at approximately 6,000ft. Passing this close to the snow was great.

The higher I got the more lift I encountered and the motor was idling most of the time. Long smooth fields of snow with cornices along some of the summit's edges. I did some very low passes over the smooth summit – fantastic fun! Some cross-country skiers were slowly making their way to the top and were studying me for a while. They were sinking deep into the snow with each step taken. I continued playing around the summit for about 20 minutes, during which the wind picked up and it became very soarable. I ridge soared up to about 7,600ft where it got too cold and also very windy – probably about 20-25kt. I pulled the bar in to lose height, warm up a little and hopefully escape the strong wind. Relieved at the wind losing strength with height, I slowed down. I did

a last low pass along the summit ridge and encountered some very local lifty patches at the junction of spurs and the main summit ridge. This made flying quite uncomfortable in front of the summit ridge. Being more than satisfied with the flying I had done I started to work my way into the headwind, which had already moderated. Back down at 6,000ft the wind eased further. I followed the Bogong ridge down and was back over the airstrip still at 5,000ft.

I had used only about four litres of fuel (out of nine) so far, and I was thinking of flying over to Mystic and Mt Buffalo and then back, but I'd had enough fun for one day! I landed back at the Mt Beauty airstrip into nil wind at 12:30pm in time for lunch. What a great flight!







# Commercialisation of Gliding

EMILIS PRELGAUSKAS

**It is an eye-opener to observe through the pages of Skysailor the parallel activities of newer aviation sports in comparison to the grandparent sport of gliding, and how such sports differently underpin their operations.**

**T**he notable difference is the willingness of participants in hang and para to evolve from ab-initio to seasoned flyer, and then onward into the commercial side of the sport. Either into the manufacture or retail of the sport hardware and peripherals, or more frequently into commercial schooling which underpins the sports' ability to grow new members.

In contrast, gliding has a tradition of minimum commercial activity. And what commercial operations there are, are geared to more than core introduction and tuition activities, to also embrace leaseback and hire for the seasoned flyer in upmarket equipment.

In that environment, there are more enquiries from junior commercial rated power pilots looking for paid employment as tug pilots to build their hours toward working for the airlines, than enquiries from people within the sport looking for paid employment. There is thus far less of sailplane pilots accumulating hours who then look to getting paid instructor or workshop positions than occurs in the newer sports.

The question that arises is – is this one of the barriers to the growth of gliding? Are we all nothing more than recreational pilots? Do we all see gliding purely from that perspective?

The marketplace, we believe, wants from gliding what it wants from

everything else – access to gliding now because I just thought of it, and I have the time (and the spare money) now.

We all know how poorly geared traditional amateur volunteer club-based gliding is to respond to that enquiry. Callers complain that clubs are un-contactable, don't even have an answering machine, and don't ring back. Clubs have primary responsibilities to their members to access the assets, and so are limited in their ability to say 'yes' to the outside enquirer.

The newer sports in contrast can, via commercial operators, respond now, and thereby bring some members, no matter how short term, into their sport.

There is a potential for something similar to occur in gliding. There are, as always, special aspects and barriers on the gliding side. To operate, it takes more than one person, or it takes an expensive motor glider. Thus the stand-by costs are high either in equipment or people terms, so lost time due to the great uncontrollable-weather – has a large impact on profit or loss. Where such a commercial initiative is driven by people rather than the club on a club site, the issues become how to fairly apportion access to equipment and economic return between the club and the entrepreneurs.

There have been stabs at this sort of activity. A club instructor faced with several keen pupils and insufficient weekend time has been known to 'hire' the club mid-week, and using the students as crew, conduct a training camp. This tends however to continue the amateur nature of things, and is an event rather than a commercial facility in place for the opportunity caller to draw on.

There are options for the entrepreneurial glider pilot looking to move into commercial activities. Some gliding operations today have evolved to be mainly private owner focussed rather than club-based. Site hire and equipment hire is a simpler and cleaner deal between entrepreneur and owner. The likelihood of conflict between operations is less.

There are disincentives to the entrepreneur. Particularly in the start up period, business will be sparse. It takes an advertising budget and elapsed time to get customer call rates and bookings up to profitable levels. There is the temptation to spread too broadly in the attempt to increase business. Rather than sticking to introductory and tuition, the workshop and hire and fly markets also beckon. The establishment costs in those additional markets however are very high.

There is potential benefit to gliding. That market segment who currently feel alienated could be served. These are the people who want their experience of gliding to be personalised rather than aligned with a club, either commercial or amateur. It could be a conduit to ease access to gliding for ostensibly the majority of society, albeit for the short term. It then becomes the task of established clubs and operators (possibly, by then, listed on the back page of AG/Skysailor) to lure continued involvement by offering all those other aspects of gliding not offered by the baseline tuition operator.

The start-up, of course, is all at the risk of such glider pilots who might see a commercial side to gliding.



## ROGUES GALLERY

Michael Doyle, newly-elected President of the Narrammine-based Orana Soaring Club with junior Vice-President Geoff Flood





# Gliding 1952 Style

## The way it was – Part 1

DOUG COLE

Having moved to Adelaide in my late teens, I was looking for new sporting interests to get my teeth into, and gliding was something I had not tried as yet. Flying without a motor was always going to be a bit of a challenge and lots of fun.

**M**y first introduction to gliding was on a pleasant Sunday morning in late 1952 at the airfield where the Adelaide Soaring Club is based. Two-seater gliders were fairly rare back in those days and all training was done in the 'Munn Falcon.' She was a barn door affair with a deep, high lift wing which gave lots of drag and no penetration – but on the right day she could soar with the best of them. Compared to our modern you-beaut glass birds you'd wonder how we ever learnt to fly in those days.

I didn't quite know what to expect on that first flight, as winch launching was the way you got into the sky back then and the falcon didn't mess around when it came to getting off the ground.

Pretty scary! That old bus could climb like you wouldn't believe on launch and if the winch driver got it right and the wind was okay, you'd

more often than not make it 1,800 ft. If I remember right, it only cost about 35 cents for a launch back then. Now that is cheap flying!

With a groan and some creaking we took up the slack and, without time to think, leapt into the air. The ground dropped away really fast and I soon realised that it was a whole new ball game I'd found. I got to like this gliding caper pretty fast.

With the usual training which we rookie pilots are put through, I finally got to go solo in the old bus after about 20 something flights and graduated onto the Grunau Baby II. I started to enjoy some good soaring flights in the following 12 months. Gawler was a good all-round site and thermals in the warmer months gave us plenty of good flying. It was far enough inland to utilise the conditions but close enough to Adelaide so you didn't have to drive all day to get there.

Gliding, being what it is, revolves around a real team effort, and you learnt the 'ins' and 'outs' needed to operate the club. You learnt how to repair gliders, build new gliders from scratch, and how to operate the winch. Add to this all the little things and you sure start to feel like one of the boys.

The Grunau Baby was great fun to fly and many a thermal was locked onto. Being an open cockpit glider, it was real 'seat of the pants' flying that gave great joy. The club built it just before I arrived and was a credit to the boys who put her together. I had a few little adventures with the Grunau Baby that included landing in the dark, dog-fighting hawks on the landing approach and formation flying with the wedge-tail eagles. Yeah – those were the days. And you should have seen the scratches on the Grunau's nose – those wretched hawks. ✂

*Editor's Note: Doug Cole is a member of VARMS and joined the VGA after flying in the K4 at the Eagle fundraising day at Bacchus March on the recommendation of Geoff Hearn. Part 2 of the article will be published in a later edition.*

## Stirring the Pudding

HANS GUT

I started gliding during 1944 in Germany, but only since I commenced instructing in 1987 did I come across a number of pilots who continuously move the controls around. This could be compared with stirring a pudding.

**I** guess this may have started when the student pilot nervously took the controls for the first time. This should have been stopped by the instructor before it became a habit. He or she should have demonstrated to the novice pilot that the glider is 'a stable platform' when trimmed out, and only needs some control inputs to change the direction or attitude of the aircraft, or to correct for a gust. The inputs should be gradual and only as large as necessary to get results.

Would you jerk the steering wheel when you cruise on the highway in your car? Too hasty and too large inputs only result in over-correction. Since the glider needs time to react because of its inertia, a short pause is required after each input. The same applies in a thermal. It is even more surprising when pilots with some years of gliding experience have still not kicked the bad habit.

It is a bad habit for three reasons. Firstly, it wears the control bearings and hence it increases maintenance cost for the aircraft; secondly, the pilot misses the 'feel' for the airflow around the aircraft, and as a result has difficulty centring or even finding a thermal; and thirdly, the airflow is unnecessarily disturbed, spoiling the performance and increasing the drag.

With the above problems in mind, it is certainly worthwhile to focus the attention on steady and calm control inputs. Excessive control deflections during the flare and touchdown stage of the landing are causing additional problems too, which can result in a heavy landing. ✂





# Another Kookaburra Restored – and another Hutter on the way too!

RAY ASH

After nearly two years of work by myself and John Fleming, VH-GLM, a short-wing Kookaburra, has been successfully test flown.

**T**he Kookaburra had been lying neglected in the back of a hangar for a number of years as it was due for a 40-yearly inspection and major overhaul. Its two owners could neither do the work for themselves nor afford to have it done. John and I offered to undertake the work for an equal share in its ownership if they paid for the cost of materials. This was agreed to, so the aircraft was completely stripped of fabric and paint. Numerous minor repairs were made to the structure; all metal fittings were removed, repainted and replaced; and the whole thing was covered with Ceconite fabric.

The aircraft had gained weight over the years so we removed every unnecessary item. The final weighing showed we had saved about 10kg.

I did the initial test flight which lasted over one-and-a-quarter hours, reaching 4,500ft.

John Fleming recently acquired the late Ron Meares' Hutter H17B which is basically new, although it was completed in 1990. It had only made a few aerotow flights for a total time of three hours before Ron became too ill to continue flying.

We made a few alterations around the cockpit to allow both John and I to fit into it more comfortably as Ron was a small person and had it fitted out to suit himself. At the time of writing we have only flown it a number of times by auto tow, so far only doing circuits from about 1,000ft, as it is midwinter. We are looking forward to better thermal conditions soon.

I have also started to restore another Hutter 17 that I have had stored in a trailer for several years. It was given to me by Guenther Bartasek who was moving house and no longer wanted it. I had no real plans to restore it until John got his Hutter so now we have decided to finish it.

I don't know its history, although I think it was brought back to Sydney from Tasmania by Michael Derek many years ago. He offered it to an airworthiness course as an exercise in restoration, hoping he would receive it back in flying condition. It didn't work out that way.

The course instructor (I can't recall who it was) decided to build a completely new wing for it so he set about dismantling the original wing. Members of the course actually built a complete set of new ribs plus new spars, but never got any further than this.

The owner had no knowledge of how to complete the project so it has passed through several hands since. Unfortunately in the process, some of the metal fittings have been lost but the rudder, fuselage and tailplane are very nearly finished and I will be starting on the assembly of the wings in the next month or so.

I know John is anxious for me to complete it in time for the rally at Bacchus Marsh but I can't see it happening. Maybe next year?

Does anyone know its history? The fuselage is painted red and this appears to be the original colour. The glider has a skid undercarriage, not a wheel. There were a couple of Hutters at Doonside and Fleurs around 1946 when we were flying our Primary. Norm Hyde, I believe, built one of the Hutters. I vaguely remember one of these going to Tasmania, so I don't know whether the one I have is his or not.

Oddly enough, it has the same modified torque tube with push rod elevator control that Don Wyllie's Hutter has so is it the other half of the pair of Hutters built in WA in 1949 called Sweetwings and Fleetwings? It would be a rare coincidence if they both ended up on the same airfield after all these years.



Photo: Ian Patching

## 'She flies again' – Hutter 17B

JOHN FLEMMING

**A**fter being built 10 years ago and only flown for a total of three hours and eleven minutes over seven flights during that time, I am proud to announce that my Hutter 17 B, VH-HNR, built and formerly owned by the late Ron Meares, flew again on Sunday, 16 July 2000 at the Cudgong Soaring Club site, Gulgong, NSW.

I actually had three short test flights, all launched by auto tow by my friend and mentor, Ray Ash. We used a short towline made up of three aerotow cables tied together. My wife, Sue, and son-in-law, Robert McWhinnie, kindly assisted as observer and wingman respectively. Keeping in mind the Hutter's theoretical L/D performance of 17:1, I found the glider a great little machine to fly and keenly anticipated more flights in the coming weeks.

The next Saturday was calm, clear and cold. With help from Ray, Sue and daughter Debbie, we achieved seven flights! On this occasion we used a longer towrope which allowed release at 1,000ft. Unfortunately, no thermal action was present so each of Ray's three flights and my four flights consisted of a few turns and the normal circuit.

At the Cudgong Soaring Club we have an impressive array of older gliders amongst the ranks of glass ships. There is one Primary, a Kingfisher, a Short Wing Kookaburra, one Ka8B and three Hutters. Can any other club boast three Hutters in their numbers? One Hutter is mine, the other belongs to Ray Ash and the third is ready to fly except the owner is a tad reluctant. Maybe he will be more enthused when our two Hutters are flying more regularly.





# A second ASK21 for Balaklava

## Gliding Club

JOHN CHEETHAM



In most medium-sized gliding clubs of around 80 members you could expect uproar if the executive was proposing to spend \$100,000 on a new two-seater. This, however, wasn't the case at the Balaklava Gliding Club's annual general meeting and when it came to the vote, after lengthy discussion, all hands went up in a unanimous decision to place an order for our second ASK 21. The newly elected treasurer, Bob Mules, only 15 minutes in the position now holds the spending record. We'll have to keep our eye on you Bob!

**W**hat a contrast to the AGM six years ago when the decision to purchase our first ASK 21 was made. The aircraft was significantly more expensive than quite a number of other two-seaters on the market at that time and not everyone was in favour of spending the extra money. Some members considered a cheaper aircraft would do the job as a short-term fix but in the end it was agreed the extra dollars made for a much better long-term solution. Back then, very few of our pilots had ever seen an ASK 21 let alone flown one. Today is a very different story. The aircraft is the most popular glider in the fleet and has logged some 3,660 flights in just five years of weekend operations.

Mutual flying has become very popular at Balaklava and cross-country coaching has been greatly improved, as the aircraft has a performance similar to our two Hornet single-seaters. The aircraft was successfully flown at the sports and two-seater Nationals at Renmark into third place and yours truly flew the ASK 21's first 500km flight in January this year, coached by none other than the great George Lee. There is no doubt that the aircraft has greatly contributed to the club's sound financial position and our ability to order our second ASK 21 in just five years.

With the sale of our Blanik, which had served the club well and helped train hundreds of pilots, the new ASK 21 will be set up mainly for cross-country training – something which

was only possible in the Blanik on rare occasions. Our Blanik was sold to a private owner and is now enjoying an easier life with part-time work in the eastern states.

Over the last few years a group of acrobatic enthusiasts have been sharpening their skills in the ASK 21 over Balaklava. These days the hangar flights are normally a display of these new skills to a neck-bending audience, inverted 360 degree turns, multiple rolls and a long list of other aerobatic manoeuvres have been mastered by several of our members. These flying skills were displayed at the popular Jamestown air show in October.

Despite the aircraft's busy flying schedule it still has an as new appearance, with the polyurethane finish applied by club members standing up extremely well to Australian conditions. The odd stone chip is inevitable; however, our airworthiness specialists are relieved that our ASK 21 will never require those hated and expensive gel-coat replacement jobs. In fact our Form 2 inspectors are amongst the greatest supporters of the ASK 21. There are no ADs and easy access to all control systems means a Form 2 inspection can be performed in approximately a day. Then it's back in the air, keeping club members happy and making money for Bob's next spending spree.

The ASK 21's reluctance to spin is well-known and is probably the main reason this great training aircraft is not as popular in Australia as it is in other parts of the world.

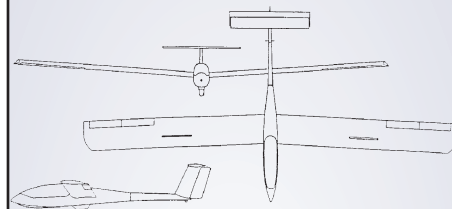
However, the problem has been overcome thanks to the efforts of some club members who have recently completed a spin kit. By the time this article goes to press we hope to have the spin kit certified – another ground-breaking effort by the Balaklava Gliding Club.

All our members are eagerly awaiting the arrival of our new ASK 21, VH-BXC, in time for the next soaring season and it should be in the skies over Balaklava early this month. The club would be proud to show any interested glider pilot our modern all fibreglass fleet; just drop in when you are in the area, buy me a beer, and we might let you fly one of our flagships.

**Balaklava Gliding Club's ASK21 on short final in the Flinders Ranges • Photo: John Cheetham**



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## About Reserves

AN INTERVIEW BY ANDREW KENNEDY

Reserve parachutes are a bit like any other kind of "life insurance", something most of us just don't want to bother about. We just buy it and hope to never see it out of the bag.

Another popular question would be about deployment times and the maximum descent rate for each model of canopy.

Our recommendations at present are a minimum of 20ft PDA (pulled down apex) canopy for lightweight pilots (up to 70kg).

24ft PDA for medium weight pilots (up to 100kg).

28ft PDA for tandem operations or heavier pilots (say over 100kg) and even for conservative pilots weighing 80kg upwards.

The 24ft PDA is the most popular canopy we manufacture and sell.

Tell me the pros and cons of a "pulled down apex" configuration, and could you explain in simple terms what it means, because a lot of our members are builders?

Very simply, the pulled down apex makes the canopy "think" that it's bigger than it actually is because the pulled down centre spreads the skirt or "peripheral band" to a larger diameter. The opening times are then remarkably reduced, because the relative surface area is increased.

After stories about "spinning gliders" winding chutes up to the point of "canopy collapse", do you think we should all be having swivels fitted to our bridles?

Although I don't have any statistics on this kind of deployment situation, it seems obvious that a swivel could alleviate the problem. To date I've fitted about nine swivels for hang glider pilots.

I have heard of one instance where the canopy and the glider were spinning in opposite directions after the glider "winged over" too much. At 10,000ft the two opposites really wound up the bridle. The pilot didn't have a swivel, what saved him was that he spun into some pine trees.

I know that our reserves are really there as life savers and that many canopies would allow us to hit very heavily without glider drag, but how often does a deployment result in a situation where there is no drag from the glider or in serious injury? (Almost never, I hope.) Is anybody keeping statistical data on this kind of thing? Barry, this might seem an odd question but I'm sure others must wonder about it. Again, I have heard over the bush telegraph of pilots not bothering to do a final check when they are on the ramp and after launch realising that

they are not hooked in. In one case the pilot had the presence of mind to throw the reserve which then dragged him off the bar.

One must be careful about the size of the parachute for the suspended load. From our observations of reserve sales, the most common parachute is the 24ft diameter. Depending on the suspended load, then the descent rate should only be about 18-20ft/sec.

As far as I know, nobody is keeping any historical data on hang glider deployments. Perhaps that should be the job of the HGFA?

Simulating a deployment situation for practice should be good for us, and from the write-ups by people in this situation, it must often be pretty extreme with huge G forces and disorientation likely factors. Do you have any words of wisdom for us to be better rehearsed for the day we need to "hit the silk"?

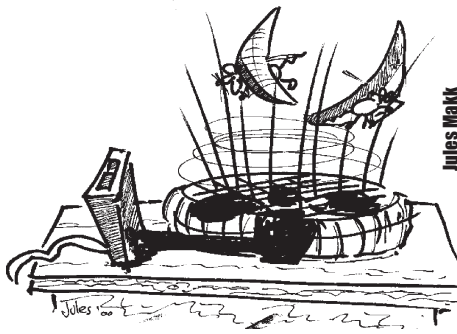
Yes, I do recommend practice deployments at any possible opportunity such as repack seminars and, as I mentioned earlier, in our loft we have a block and tackle set up so that pilots can simulate an emergency. It is relatively easy to do. Place a blind-fold on the pilot, lift the harness off the floor about 500mm and spin vigorously. If you can get the harness to be off-centre, even better. Another idea is to loosen the shoulder straps so that the reserve handle is not where it should be. Also try tucking the handle out of the way.

Barry, thanks for your insights on reserves. I hope we'll see you at Mt Tambourine before too long, and did I hear a whisper that Roochutes are developing a low drag hang gliding harness for the local market?

Yes, we are doing some development work, but it's on the backburner until my workload slackens.

Author's Note: There have been some stimulating articles in AG/Skysailor not too long ago concerning the pros and cons of bail-out, or total recovery systems in sailplanes in Germany. This appears to have been very valuable research and will undoubtedly reduce the number of fatalities from mid-air collisions once more sailplane pilots adopt suitable full recovery systems. I trust that this interview might spark some meaningful discussion (and improvement) on our hang gliding and paragliding recovery systems.





**R**oochutes Australia is a Brisbane-based firm manufacturing parachutes for all forms of sky sports including skydiving and hang/paragliding reserves.

I asked Barry Lewis, proprietor of Roochutes, a few questions which I thought others may be interested in.

*Barry, what got you involved in parachutes as a business?*

Well, I've been involved in the sport of skydiving since 1976, and after getting hooked on the sport I got involved in the manufacturing side sometime around 1977/78.

*Have you ever tried hang gliding, and if not, why not?*

I've been very busy and hey, yes, I would like to do a tandem one day just to experience it.

I'll be doing another 'repack day' seminar soon at Canungra, and you never know, I might try and work it in to take up one of the offers I've had while down there.

The good thing about a repack seminar is that the pilots can have a chance to simulate deployment while suspended and disorientated.

*Have you found anything interesting while doing repacks?*

At the last repack seminar there were two reserve parachutes discovered completely 'inside out' and documentation on repacks was generally lacking or non-existent.

*So when we've had a re-pack, the packing data card should possibly be visible like an oil change sticker as a gentle reminder?*

Yes. On request we will sew a clear pocket onto the harness carrybag to display the packing data card as a service.

*Maintenance for hang gliders is probably carried out much less frequently than recommended by the manufacturers, and I think most pilots feel that times listed for the replacement of, say, rigging cables, are extremely conservative. I'm sure nobody replaces cables after 100 hours. As far as repacking reserves goes, what is the current recommendation and how critical is it to adhere to it?*

At present the industry norm for skydiving reserve parachutes and pilot's emergency parachutes for repack cycles is six calendar months. That is regard-

less of whether the system has been up in the air or not. It is not just a case of repacking the parachute. The complete system must be inspected for any discrepancies. You never know when or what could get into the deployment bag between repacks. I've found a mud wasp nest in one reserve that was still inside the six month cycle.

*So for optimal safety it really is six months?*

Don't think of your reserve as a just a \$600 lump in your harness; it's something you should be familiar and comfortable with. We have a simulator arrangement for active deployment in the factory where pilots are welcome to practice.

*How many manufacturers of hang glider/paraglider reserve parachutes are there in Oz?*

We are actually the only one, to my knowledge. The other suppliers are resellers or importers of canopies made overseas.

*I'm quite surprised at that. I always had the feeling from names around the sport that there were others making reserves in Australia.*

*What advantages are there in a product manufactured here, apart from the obvious warm feelings about supporting our own industry?*

Well, there are so many answers to that it's hard to know where to begin. For example, the fabric we use is of such a high quality that in a shipment of 5,000 metres we would only reject one or two metres, and even then usually only related to visual defects rather than structural integrity. Plus, on the personal side, it is a lot easier to get me on the phone than, say, a company in France.

*So there is obviously some kind of quality control. Who do you have to answer to?*

CASA requires a procedures manual and "Quality Assurance" Program equal to ISO 9001 and ISO 9002 to be in place before granting approvals.

*So the process is government approved in a way. Do a lot of people from our sport ask you technical stuff and what are the most common questions?*

Well, it's mostly about the kind of fabric, where it is from and who it is made by. Firstly, it's what we call Mil-Spec, ie it's designed for the US military for life support systems and generically called F111 which denotes the following:

F = Fabric

1 = 1.1 ounces per square yard

Now, the more common name is "0-3 cfm" which denotes the amount of air that passes through the fabric under 11 inches of water. (I didn't design the tests!)

*What are other popular questions about reserves?*

The most commonly asked question is about the rated suspended load. Next would be where the actual fabric is manufactured, and the answer is South Africa, which has the reputation for the highest quality fabric.

## This may leave you speechless!



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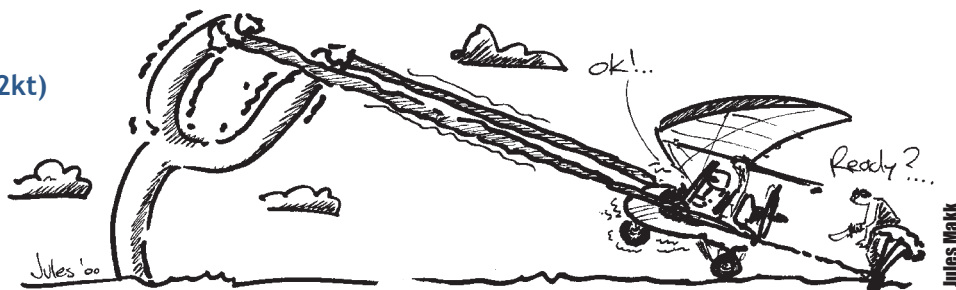
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## How to set Microlight Records

RICHARD MEREDITH-HARDY (Courtesy of Air Sports International)

Could you fly around a 50km triangle  
at an average speed of 132km/h (71.2kt)  
in a microlight solo, or 10km/h  
in a paramotor? If you can then  
you could claim a World Record.



From time to time pilots ring me up to say they have just done a World Record and how do they claim it? After a few simple questions it quickly becomes clear that they may indeed have done something of significance, but they have no chance of making a successful record claim. Why? Very simple: because they haven't read the rules. "What about a National Record then?" they ask. "It doesn't matter," I say, "the rules are the same, for the simple reason that before a claim for a World Record can be made it must have already been accepted as a National Record, and if the rules were more lenient for National Records then the situation could arise where a valid World claim might subsequently be denied for the simple reason that it did not beat a current National Record..."

### Read the rules!

So, before you do anything, get a copy of the rules. The rules are set by the Fédération Aéronautique Internationale (FAI), the world governing body for all things aeronautical. The rules for microlights, powered parachutes, paramotors and powered hang gliders are all embodied in the "FAI Sporting Code for Microlights" which is a combination of FAI Section 10 and the General Section. The 2000 editions are available from the FAI web site.

Both of these documents contain vital information about record attempts. Chapter 6 of the General Section (three pages) tells you about deadlines and how records should be administered. For records you should mostly be interested in Section 10, Chapters 1 (Definitions) and 3 (Records), and Annex 1, (more definitions).

### Essential preparation

Before you make your record attempt there are certain things you must do:

1. Get a FAI Licence for microlight aircraft.
2. Get your observers organised. Any record claim must have been overseen by a minimum of two accredited observers.

### Available records

Before you make any record attempt you need to be sure what you are trying to beat. Check out your existing National Records, the existing World Records, and any World Record claims pending ratification. It would be daft indeed to go to all the trouble of attempting a record only to find that someone has already done better (or worse, that the record doesn't exist).

Most people think of records as the "speed over a recognised course", things like "Land's End to John O'Groats" or "London to Sydney", but unlike all other powered aeroplane categories these don't exist for microlights. The only exception is a "Round the World" record, which will hopefully come into existence from January 2001. Neither do any of the more esoteric records such as "The greatest combined age of Pilot and Passenger" or anything "in an open cockpit" exist in any official form, though they are sometimes kept in an informal way.

The records that are available fall into three basic groups, Speed, Distance and Height. As from 1 January 2000, all available records are open to all types of microlights (PPG's were previously denied any speed records.). This means there are more than 200 different World Records for microlights. Check out Section 10 or the FAI web site for details.

### Attempting a record abroad

If you recall, World Records have to be National Records before they are accepted as a valid claim, and a National Record can only be claimed in the country in which it was done. You cannot do a flight in France, for example, and claim a UK National Record; your claim would have to go initially to the host country's Aero Club. This is likely of course, to make the whole process a lot more difficult, but it is not impossible.

It is also possible to claim records attempted during international flights. If you do intend

to do either of these however, get advice from your national organisation before you go. There are many extra questions which need to be asked, not least, "Is that country a current FAI member?" A surprising number fail to pay their subs to FAI and are therefore temporarily struck off the eligibility list!

### How to claim a record

So you've got your FAI license and your observers are raring to go. All you need now is the weather and you can attempt your record... The flight itself might be simple (or not so simple – it depends on what you are attempting) but your claim will fail unless you have put some thought into preparing the paperwork. The key thing to remember is:

**To succeed, your claim must be utterly and 100% convincing in every detail to someone you don't know, and doesn't know you, and whose job is to be highly sceptical, and indeed, in the case of a World Record claim, is probably a foreigner.**

This means your claim must answer every question that might be asked in great detail, from the simplest like:

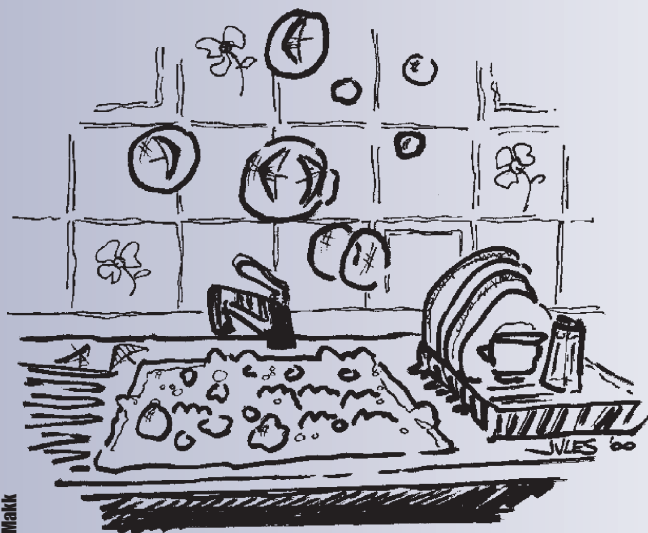
- "Was the aircraft a microlight of the declared Class – according to the FAI definition – at all times during the record attempt?" (Answer: Yes, because our claim includes observer endorsed evidence of the aircraft gross mass and photographs of the machine both before and after the attempt and a "minimum speed declaration".)
- To more complex record-specific questions like:
- "Was the distance flown measured as the length of the arc of the great circle at sea level?" (Answer: Yes, because we did not measure our claimed distance flown on a map, but include evidence proving the distance



## Thermal Tips

JASON TURNER

Learn how to see the air with vision,  
imagination and understanding.



Some just get lucky...

**T**ry counting (1... 2...3...4) and start to measure the size of the thermal. If you only count to 'one' and lose it, don't bother. It's broken up crap. Learn to recognise "fool's lift" and move on. If you make it to 'three', do something. It's a good one. A slow turn or reaction now will result in falling out of the lift, flying into sink and losing height quickly.

If you are losing too much height, turn away from the hill and head

towards the landing. If you leave the hill too low you will have no options left, only getting to your landing area without any height at all. However, with a bit of extra height to use, many pilots have been seen catching thermals from the landing paddocks and climbing back above launch height. It's much easier than climbing in gullies halfway up the face of a hill while only a few feet above trees and rocks. Leave that to the true diehards who have the experience and are aware of the risks.

If you are too close to the hill to safely complete a 360 degree turn, just link up a couple of short figure "8" turns in the lift (watch for traffic) until you have gained enough height to fly out from the hill and comfortably squeeze in a full 360. Don't muck around, get your weight forward and bank to stay inside the lift. Be aware of slipping turns and stalling. Co-ordinate your turn and let the bar return to trim. This will maximise your rate of climb and minimise your climbing time.

When low, look for signs of increased movement in the trees and bushes. If you hit lift and the wing starts to bank up, try and turn towards the high side of the wing.

When circling in lift, try to level up and slow down for a second while facing into the wind and this will reduce the chance of falling out of the back of the thermal. Be patient during slow or broken up climbs. At least you're maintaining height and not going down.

If the thermals are strong then hang on, keep control, try to relax, think clearly and plan ahead. Map out the size of the thermal and search for the strongest lift. If the lift is getting lighter, don't wait to fall over the edge, turn back and try to find the core. When you do find it, crank and bank baby.

Listen to what your vario is telling you, don't stare at it. Feel the lift.

Look around for other pilots and watch them climb or sink. Are they within easy glide and climbing faster than the lift you are in? How far could you glide if you lose the thermal now and where would you go?

Listen to the most experienced pilots, watch people fly, read some theory, and last of all, try to fly every day you possibly can.

*Author's note: The above is a guide only. The author accepts no responsibility for pilots bombing out.*

according to the FAI approved mathematical formula.)

Or

- "Was the route on this closed-circuit course pre-declared?"

(Answer: Yes, because our claim includes a paper with this declaration, dated, timed and countersigned by the official observers.)

Or

- "How do we know this barograph record is accurate?"

(Answer: Because the official observers noted the barograph serial number on the trace, dated, timed and countersigned it, and our evidence includes a valid calibration certificate and an observer's note that it was properly sealed before the attempt and was still sealed after the attempt.)

...and so on. In fact, anybody who has successfully made a record claim will tell you that it is the paperwork that is the difficult bit, not the flying, and time is not on your side: If you intend to claim a World Record, a written preliminary claim from the Aero Club of the country where the record was attempted must be received by FAI HQ in Switzerland within seven days of the attempt. Thereafter the record must be accepted as a National Record within 90 days, and the full dossier received by FAI within 120 days.

So, how can you make it easy for yourself? Back in 1991 I did no less than three World Record attempts in a day. What I did was read the rules very carefully and made up a series of forms for the observers. As far as I can remember there were 10 or 12 forms per attempt, which took the observers sequentially through all the requirements for each particular record and ensured nothing vital was forgotten in the heat of the moment. As each form was completed it was countersigned by each observer as a true record of events. This was later collated together with the barograph trace, maps, photos and other evidence and submitted in the full claim.

As a result I now have a nice "Diplome de Record" certificate on the wall signed by the Secretary General of the FAI and Prince Andrew, President of the Royal Aero Club. Amazingly, all of my three World Records still stand.

Anyone care to beat them?







# Battery Do's and Don'ts for sailplanes

LUKE DODD

One of the more annoying things in soaring is having an in-flight battery failure. Such a situation often forces you to abandon the flight and limp home without an audio vario, GPS and radio communications. Okay, we all carry maps for visual navigation, and most gliders have a mechanical vario, however the fact remains that it is still a situation we would rather avoid. Hopefully, this article will dispel a few myths and pass on some tips aimed at maximising the life and reliability of your glider's battery.

I will primarily discuss Sealed Lead Acid (SLA) batteries, as these are most commonly used. The main advantages of SLA's are that they are cheap, readily available and have high current capacities. As they are sealed there is no acidic electrolyte to leak into the aircraft and no maintenance is required such as topping up with distilled water. However, SLA's have different characteristics to the traditional lead acid battery found in most automobiles. This particularly relates to the method of charging the battery, as we shall see.

As pretty well all the instruments we are likely to use in a glider are designed to operate from a 12 Volt DC power source, batteries installed in gliders are 12V types. One important point at this stage – 12V batteries are effectively completely discharged (flat) when the output voltage drops to 10.5V. Most 12V aircraft instruments will shut down at this voltage (10.5V) and some at 11V.

When selecting a new SLA battery choose one with as high a current rating as possible. Commonly, one finds SLA's in the 5.7 to 7 Ampere per hour range, with the standard case dimensions used in gliders. The current rating is written on the side of the battery, something like 12V6.5A. The current rating is a measure of the amount of power the battery can deliver. For example a 5A/hr battery can deliver (theoretically) five-amps of current for one hour or one amp for five hours or 0.5A (500mA) for 10 hours and so on.

It is very helpful when planning battery installation to have some idea of how much power your instrumentation requires. I have measured the current drain for each instrument in my glider with a digital multimeter to give you some specific examples as a rough guide:

SN10 flight computer/variometer	140mA
Colibri datalogger	120mA
Icom A22 handheld (transmit)	1.0A
A22 (with 10-watt in line RF amplifier), transmit	2.7A
Icom A22 receive mode squelched	70mA
Icom A22 receiving	100mA

Current drain from the radio and audio variometers depends upon the volume setting of the audio output. The louder the volume the more power consumed. The above figures were measured with typical cockpit volume levels set. On average, my instruments use around 360mA. However, this doesn't factor radio transmitting power use, which varies from flight to flight. As a rough guide a 5.7A/hr battery should last around 10 hours.

As a slight diversion, I find the Icom A22 a very neat radio. I have boosted its output power with an in-line RF amplifier from approximately one to 10 Watts. This additional power is useful for distant outlanding calls etc. Something I have had to do a bit of recently! For gaggle flying I have installed a switch in the instrument panel to turn off the amp when greater transmitting power is not required. I know the theorists say that VHF radio comms is line of sight and output power is not critical in determining range, however, with the RF boost I can easily establish communications with the base station over 100km away. I can't do it without the amp. I guess the greater output power makes up for any deficiencies in the aerial tuning and/or design of both the transmitting and receiving stations.

The actual power we can draw out of a SLA is not as simple as described above. If we measure the time taken to discharge a 12V, 7A/hr SLA down to 11V under different loads, the situation becomes more complicated. At a

constant 1.4A/hr drain, the battery will discharge in only three hours delivering 4.2A, well below the rated capacity of seven amp/hr. However, with a current drain of 700mA (0.7A) the battery will discharge after nine hours delivering 6.3A! That's looking better.

So what can we learn from this? Well, the battery works more efficiently at a lower current drain or load.

The ability to deliver more power at lower current loads relates to the efficiency of the battery and its internal resistance. Internal resistance becomes significant at high current drain and a lot of power is lost in dissipated heat through the battery. Basically the battery's internal resistance adds to the load applied to the battery.

Obviously, the less current you consume from the battery the longer it will deliver power. It seems silly to state, but switch off any non-essential equipment, and use the radio as little as possible. If you are contemplating installing a new instrument, give consideration to the current load it will impose upon your battery.

Another important factor affecting the amount of power supplied by a battery, and hence how long it will drive your instruments, is the ambient temperature. Batteries perform best between 20-40°C. At 0°C the capacity is reduced by around 30%! It makes sense to thermally insulate your battery if possible. Those attending 'wave camps' should give thought to wrapping the glider's battery in a space blanket or such like. Even on a thermal day the adiabatic lapse rate can see the temperature fall considerably with height.

When selecting a new battery for your glider basically you get what you pay for. You can pick ones up at Dick Smith for around \$25, however they may be of suspect quality and reliability. Also, cheaper brands often exaggerate the current rating of their batteries as a selling point. You will probably find a 7A/hr 'unknown' brand will not perform as well as a 5.7A/hr quality SLA. Panasonic make a very good 12V7A SLA battery for \$33, and for a little more money the Rolls Royce brand is Sonnenschein at around \$45. The Sonnenschein is very rugged and designed to give long life. It is less affected by deep discharges which, as we shall see, can significantly reduce the life of a battery. These batteries are commonly used in motorised wheelchairs, golf buggies, etc and provide reliable service despite some pretty hard treatment. I know of one Sonnenschein battery used in a glider that lasted seven years!

## Charging and discharge considerations

Lead acid batteries do not like being discharged below 50% of their rated capacity. If you have a 7A/hr rated battery, regularly discharging



(using) more than 3.5A/hr will significantly reduce the life of the battery. Using 3.5A/hr on a long flight is pretty easy to do. You might say just install a larger capacity battery, however space and weight considerations often preclude this option in a glider. The standard battery case dimensions used in gliders is 64 x 94 x 150 mm, and 7A/hr is about the highest capacity you can get in this package.

The following service life figures are for a 12V7A/hr SLA battery discharged at 0.7A (700mA); If you only discharge (use) 30% of the battery's rated capacity, the battery will last for 1,200 cycles. The life of the battery drops to 400 cycles if you regularly discharge to 50% of capacity – thus a significant reduction in battery life. The situation gets worse if you use 100% of the battery's capacity; it will only be good for 200 cycles. A cycle for our purpose is effectively a glider flight (discharge) followed by battery re-charging. These figures also assume a quality battery and correct charging. Add a cheap battery, a bit of mistreatment and a poor quality charger to the equation and the battery life falls further.

One can see why it's wise to purchase the highest capacity battery that will fit in your battery compartment. Let's assume your equipment uses 600mA, and your battery is rated at five-amp/hrs. A six-hour flight will discharge 72% of the battery's capacity, whereas the same scenario will drain a 7A/hr battery to 50% capacity. The 7A/hr SLA is working less and will last a longer. However, just because the manufacturer writes 7A on the side of the battery doesn't mean it will deliver this in the real world.

One can also consider installing two batteries in the glider. If you have such a set-up don't switch batteries routinely during flight or from one flight to the next. Always let one battery do all the work and save the reserve for emergencies. Mike Borgelt gave me that tip and it has merit. I have a dual battery system in my glider, which consists of a 5.7 and 3A/hr Sonnenschein SLA's. The 3A/hr battery saves over one kilogram in weight compared to a 5.7A/hr battery and I have plenty of power available to cope with a very long flight or the unexpected failure.

If you're unfortunate enough to leave the master switch on at the end of the day, and completely discharge or flatten the battery, kiss it goodbye. The battery is basically useless and will never recover despite numerous attempts at re-charging. The battery may superficially appear to take some charge, however it won't perform under load and will fail in-flight. This is one of the main killers of club batteries. Someone invariably hangsars the glider leaving the battery on board, and forgetting to turn the master switch off in the process!

In addition to a total discharge (flattening), incorrect charging is the other common killer of SLA batteries. SLAs have very specific charging requirements. The constant current, lead acid charger you use for the car battery will kill a SLA battery almost immediately. SLA batteries need a voltage-limited charger with AC ripple below 20mV. Ripple refers to subtle variations in the voltage supplied to the battery by the charger. Excessive ripple will reduce battery life. Also the initial charging current supplied to the battery should not be greater than one-fifth of the battery's capacity. Charging initially at too high a current can damage a deeply discharged battery.

SLAs also like to be re-charged as soon as possible after use. Don't leave it until next week or the night before your next flight to recharge your flattened battery. It needs to be re-charged that night or the next day at the latest. Also, over winter, make sure your battery is stored fully charged and give it a top-up charge every month or so.

Finally, the other big killer of any re-chargeable battery, SLAs included, is over-charging. Over-charging is, basically, continuing to feed current into a battery after it has reached the fully-charged state. Once a battery has reached full capacity further charging starts to breakdown the electrolyte, damaging the battery irreversibly. The battery's temperature rises in the process. A warm battery 'on the charge' is not a good sign. Twelve-Volt SLA's are fully-charged when the voltage reaches 14.52V. At this stage the charging current should drop to a trickle.

You may already be familiar with the deleterious effects of over-charging. Do you recall the short life-span of the Nicad battery packs used in the early mobile phones? The phones were supplied with cheap chargers that basically destroyed the battery pack in quick time via overcharging. Also, the dreaded memory effect associated with Nicads is primarily due to incorrect over-charging.

To prevent over-charging, the battery must be disconnected from the charger when it is fully charged. How do you determine when a battery is fully charged? You can measure the battery's voltage whilst on charge, when the voltage reaches 14.52V it is fully charged. You can look for a slight rise in the battery's temperature or you can let an 'intelligent' charger worry about it. Such battery chargers stop the charging process when the battery is full and automatically switch to a trickle-charge mode. Trickle-charging is distinct from normal charging in that the current supplied to the battery is quite low. This maintains the battery in peak condition ready for use. Constant trickle charging at one-fifth of the battery's capacity does no harm and can in fact be beneficial. I won't go into a detailed discussion of charging currents

and methods of detecting the full charge state, its quite complex and best left to the experts.

The August '92 issue of Silicon Chip magazine details the construction of a simple SLA charger. The circuit is based on the Unitrode UC3906 chip and can be built quite easily. A kit based on this article can be purchased from Altronics for around \$30. This includes the printed circuit board and the components. However, you will need to add a 15-20V DC power supply to complete the charger. All up cost is around \$50 which is cheaper than commercial units of similar capability. This charger determines the battery's condition (level of discharge, etc) and supplies the appropriate current and voltage. It will automatically switch to trickle-charge mode when the battery has reached full charge.

Silicon Chip magazine has a number of interesting articles describing the construction of battery chargers, some quite advance. I refer you to their website for an index of such articles. Back issues are available at a reasonable price.

Altronics also stock a cheap SLA charger for \$30, which is an AC-DC power pack with a basic SLA charger circuit built-in. It will automatically switch to trickle charge mode when the battery is fully charged. Catalogue number is M8520; for this price it certainly won't have the advanced battery monitoring circuitry of the UC3906 charger and may not give you maximum battery life.

### In summary

1. *Use high a quality battery – a battery failure at 999km can reduce your quality of life if your logger doesn't have a back-up battery.*
2. *Re-charge your battery as soon as possible – that is, straight after your last flight.*
3. *Use the correct battery charger – that is, a charger specifically designed for the battery. Don't use the old lead acid charger on SLA batteries, it will destroy the SLA immediately.*
4. *Avoid running the battery completely flat – leaving your master switch on overnight spells dome for the battery. It will never recover!*
5. *If you have a two-battery installation always use the same battery, switch to the reserve only when needed.*
6. *Thermally insulate the battery – SLAs work best between 20-40°C.*

### Suppliers

**Altronics:** 174 Roe Street, Perth 6000,  
[www.altronics.com.au]; ph: 08 9328 1599;  
fax: 08 9328 4459.

Intelligent charger kit – K1685

**Silicon Chip magazine:** [www.siliconchip.com.au].







**Question:** I flew 500km in a two-seater with a friend who did not fly. Can I claim the flight as my diamond distance?

**Answer:** No.

**4.3 General conditions:** The pilot must be alone in the glider on each flight. A flight may count towards any badge or diamond for which it fulfils the conditions. Flights qualifying for badges shall be controlled in accordance with the requirements of this code.

**Question:** I flew a 500km triangle in a competition as a day task and did not make a written declaration and take a photograph of a declaration. Can I claim this flight as my diamond distance?

**Answer:** Yes.



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# The Sporting Code

BERYL HARTLEY

The soaring season is well under way and I am taking a lot of calls from members with queries on the sporting code. It seems an appropriate time to put in writing some tips for helping pilots and observers deal with common problems.

## 2.3.1.1 Valid Declaration for the flight:

If a flight declaration has been made and the pilot wishes to change this declaration, he may do so by making another at a later time. Only the last flight declaration will be valid for the flight concerned. Only one flight course may be declared for any flight, except under 2.3.1.3 below.

## 2.3.1.3 Flight declaration in competition:

For badge or record flights during centralised competitions, the official competition task will be taken as a flight declaration, except that if a competitor wishes to declare another task, a separate additional flight declaration (2.3.1) conforming to the IGC criteria must be made. For photographic evidence, a photograph of the official photo board giving the title of the event, the date and the glider contest number, will count as the declaration photo.

**Question:** I sent the film of my distance badge claim for developing and stated that it must be a single strip negative with the sequence of the flight, however it came back cut. Can I still use this as evidence of the flight?

**Answer:** Maybe.

**2.3.3.5.3 (d) After landing:** Following the landing, an OO shall take charge of the film and have it developed. Every effort is to be made to preserve the film in a continuous strip, but if a film is inadvertently cut or broken while out of control of the pilot (such as in an automatic developing machine, through folding during postal transmission, or other inadvertent damage), this shall not invalidate the flight performance if it is possible, by close examination, to ensure that any broken pieces belong to a continuous original length which otherwise complies with this code, and an OO describes the circumstances under which the film was broken or cut. (AL4)

**Question:** I flew a five hour duration and a 1,000m height gain 20 years ago and did not go gliding for 17 years. I am back! I flew a 50km distance last weekend; an I claim my Silver C and count the flights from 1980?

**Answer:** Yes

You sent the evidence of your flights to the certificate officer of 20 years ago and he noted the flights as accepted and filed your application form. Send all evidence of this flight along with your green gliding certificate book, completed claim form and payment of \$10 to the claims officer.

**Question:** I have a British Gliding Certificate and have been a resident of Australia for a year. I am now a member of an Australian club and the Gliding Federation of Australia. I want to claim the diamond distance I have recently flown in Australia. Can I have my British certificate accepted and noted on the Australian gliding certificate?

**Answer:** Yes.

**4.1 Status of badges:** The FAI badges are standards of achievement which do not require to be renewed. The qualifications are the same in every country.

**Question:** I completed a silver badge distance task of more than 50km. My barograph had not marked the flight but my club coach, who flew around the task with me in another aircraft, can verify that I did not land until returning to my start point.. Can I still claim the distance?

**Answer:** Maybe.

The Silver Badge is intended primarily to develop the self-reliance of the new soaring pilot. The distance flight should be flown without navigational or other assistance given over the radio (other than permission to land on an airfield) or help or guidance from another aircraft. Provide a statement from the coach.

**Question:** I am an Alaskan glider pilot visiting Australia. I have an official observer rating in my country. Can I act as an official observer for flights made in Australia?

**Answer:** No.

The NAC rule in Australia states that only those official observers who hold Australian Official Observer status are entitled to control and certificate flights of gliders and motor gliders in Australia. Visiting pilots who hold membership of the GFA are invited to apply for Australian Officer Observer status.





## Narromine Camp and Cup Week

11-19 November 2000

Contact Chris Stephens, mobile 0417 208402; email <poboxw48@dynamite.com.au>.

## Victorian Soaring Association Incorporated

### Amended Meeting Notice

16 November 2000 Executive meeting  
18 January 2001 Executive meeting  
22 February 2001 VSA Youth 2001  
19 April 2001 Executive meeting  
To be held at 329 Dorcas Street, South Melbourne

## Club Class Nationals

26 November - 9 December 2000

Benalla, VIC. Entry form and info available from the Gliding Club of Victoria web site [www.benalla-gliding.org].

## SAGA Teams Challenge

### and Basic Cross-Country Course

10-15 December 2000

Waikerie, SA. A week of "FUN" flying designed to get you flying further and faster. Friendly competition provides those who wish to learn from others the opportunity to fly with "the experts". Includes basic cross-country course for those with limited experience.

Please contact Andrew Wright 08 8303 4648 by 17 November 2000 to register your entry.

## NSW State Competition

### for FAI and Sports/Two-seaters

Practice day: 27 December 2000

Last competition day: 3 January 2001

Lake Keepit airfield, NSW. This should give you all plenty of time to get to Gawler. Celebrate the New Year at Lake Keepit.

For further information contact Wendy Medlicott, PO Box 541, Terrigal NSW 2260. Ph: 02 4365 3626, email <hwmedlicott@bigpond.com>.

## Inter-service Gliding Competition

27 December 2000 - 12 January 2001 (inclusive)

Leeton. Please nominate to service representatives: Navy - Paul Wetherspoon 02 6937 5665; Army - Brian Tucker 02 9282 6183; RAAF - Nathan Guinness 03 9256 3687.

## South Australian State Gliding Competition

2-6 January 2001

Hosted by the Balaklava Gliding Club. Details to be advised.

## Vintage Gliders Australia presents the

### 2001 Vintage Glider Rally

6-13 January 2001

Bacchus Marsh Airfield, VIC. Hangarage for 35-plus gliders, modern clubhouse facilities with clean amenities and bunkhouse, meals catered for at reasonable prices, aerotow and winch-launching available. Close to Melbourne, Geelong and Ballarat. Lots of family sightseeing and activities to do. Please contact the Chief Organiser, Ian Patching, 11 Sunnyside Crescent, Wattle Glen,

## GFA Badges & Certificates

### FAI Report 20 September 2000

#### A Certificate

McGUIRE Michael Joseph	10449 Byron Bay
ALLON Roger Milbank	10451 Hunter Valley
GRILLE Uwe A.W	10453 Byron Bay
McKINNON Rachael Michelle	10454 NSW Air TC

#### B Certificate

KUNST Belin Charles	10423 SDASC
---------------------	-------------

#### A, B and C Certificate

SHEMTOB Meir Richard	10450 Southern Cross
MOORE Stuart George	10452 Hunter Valley
SCHMIDT Gregory John	10455 Canberra

#### Silver C

RATTEN Stephen Garth	4330 Stn Riverina
COOL Darren Ross	4331 Geelong
SIDDALL Peter Russell	4332 Renmark
JOHNSON Scott	4333 Boonah

VIC 3096, ph: 03 9438 3510, email <irtkpatc@melbpc.org.au> for details on accommodation, hangarage and other information.

## Australian National Gliding Championships and Australian Grand Prix Championships

10-23 February 2001

Gulgong, NSW. Full details available on the GFA web site [www.gfa.org.au]. Enquiries to Christine Meertens, ph: 02 9452 2777, fax: 02 9453 0777, email <hkmxor@msn.com.au>.

## Diamond Height

BELLAIR John Terence

Geelong

## Diamond C

BELLAIR John Terence

6492/199 Geelong

Claims for all badges and certificates to:

FAI Certificates Officer:

Beryl Hartley

106 Meryula Street, Narromine NSW 2821

Ph: 02 6889 2733 (w), 02 6889 1250 (h)

Fax: 02 6889 2933

Email: hartley@avionics.com.au

Decentralised Competition entries to:

Chris Stephens

PO Box W48 Wanniasa ACT 2903

Ph: 02 6231 4121

Email: poboxw48@dynamite.com.au

## Horsham Week Annual Gliding Competition

3-10 February 2001 (inclusive)

Enjoy a great week of competition, ideal for early cross-country pilots through to champions. Verification will require GPS and dataloggers only. Sorry, no cameras. Prospective competitors and volunteers willing to assist with running the competition please call Max Hedt 03 5381 0844 or email <sschneider@onaustralia.com.au>



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# The Garden Shed

EMILIS PRELGAUSKAS

Gliding continues to hold bewilderment for the general public. When I mention that I tend to drive to the shed in my backyard these days, the audience's eyes glaze over. When we note that gliding is our pastime, the reaction continues to be as it was years ago – that must be nice for you, so quiet, peaceful, relaxing, so little workload and so suited to loners and hermits.

This has elements of misinformation of similar character arising in my workday world. I continue to be told how solar power is fine in the daytime, but won't run lights at night.

I guess the myths will continue to be repeated in perpetuity in line with the rules of narrative causality.

In the real world of course, we well know how team-based in nature gliding actually is. And that part of the satisfaction of a day's

cooperation is in mutual help freely given and reciprocated, which leads to a smooth gliding operation with a minimum of formal bossing about. This extends to all those peripheral supporting tasks that make gliding possible.

A hangar arrived in pieces. At its origins the landowners didn't want it on their land. The solution involved a change of owners and my agreement to it finding a site at my gliding field. The real world requires that such hangars are dismantled always into irregular, unstable and unmanageable pieces. So its move involved beyond the owners and people at my end, also a number of other non-combatants who provided the trailer, manpower and numerous props, slides, and levers before it finally lay in an untidy heap at its new resting place.

Sometimes the opportunity arises to involve the public. At the other end of the

property I have a project under way which we refer to as 'building A'. That is to distinguish it from the other sheds that run in sequence from C to K. The site is an abandoned quarry, so the structure, meant by the fabricator to be set out on a flat ground base, here has one side on the quarry base and the other up on the embankment. There is only so much that can be done with string lines and exploratory digs to find footing room amongst the boulders.

So we roped in a group passing by visiting my practice to hold and brace and align while club members got the first bays up. As the documentation details for the job consist of a single pencil sketch, everyone had to take on faith that the lines in the sand actually do represent the curved wall intersecting the curved roof.

It is an actualisation of the team nature of gliding that club members give a hand along with variable quality advice to effort that really has nothing to do with their personal gliding. And in this case to work where the outcome will only be recognisable on completion.

As a by-product, a few outsiders were able to see the camaraderie and collaboration that give gliding its character.



## LX20 FAI Datalogger, GPS Navigation & final glide computer.



The latest LX20 datalogger provides a moving map display in addition to enhanced navigational data and final glide calculator. The large screen provides the pilot with comprehensive information in large easy to read fonts. McCready setting, ballast and final glide altitude deficit are shown. Windspeed is displayed and wind direction indicated graphically with an arrow pointer. On task the LX20 gives audible and visual confirmation of turnpoint rounding and automatically cycles to the next turnpoint on task. The LX20 also shows comprehensive postflight statistics in graphical format. The large 60x40mm graphical display shows your track flown, the barograph trace and flight statistics. Does the job of a handheld GPS, Logger, and final glide computer. Demonstrator available.

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# Murphy strikes again!

**MIKE VALENTINE, Senior Technical Officer, Airworthiness**

## The problem

A report has been received recently which proves that our old friend Murphy is "alive and active", in the words of the inspector who submitted the report.

An H206 Hornet was taken out of service for complete refinishing of the wings and fuselage, together with fitting a one-piece canopy and winglets. When the work had been completed and all inspection stages carried out, the aircraft was returned to service.

It was immediately noticed that the aircraft's lateral handling and control on take-off was worse than before it went in for refinishing and modification. There were a number of ground loops and forced releases on aerotow take-off, even with experienced pilots. This was put down to the winglet blanketing the airflow over the into-wind aileron in crosswinds.

However, subsequent inspection showed that, with the stick in the central position, the outboard ends of both ailerons had their trailing edges about six to eight millimetres below the trailing edge of the wing itself. This is a significant amount and would have had the effect of producing "wash-in" (an effective increase in angle of attack at the wing tip), the very opposite of what is required for effective lateral control at low speeds.

The top surface of a Hornet aileron is flat and the undersurface is very slightly concave, ie it has a very small amount of under-camber. This is barely detectable, especially if a bit of waviness has crept in over the years. However, further investigation of this particular aircraft showed that the concavity was in fact on the top surface, leading to the eventual conclusion that the ailerons had been inadvertently exchanged left to right and as a consequence had been installed upside-down.

## The reasons for the problem

An analysis of how this came about was made by the inspector, with the following conclusions:

1. *At the refinishing stage, the manufacturer's identification placards on the ailerons were painted over. These placards are on the upper side of the aileron inboard ends on the flats ahead of the hinge line and they identify the ailerons as left or right. This was assessed as a failure of the quality system at the refinishing stage.*
2. *A check of the control system at the final assembly stage failed to detect the concave top surfaces of the ailerons or the amount by which*

*the outboard ends of the ailerons drooped below the trailing edge of the wing. Another failure of the quality system.*

3. *Upon returning the glider to service, the club also failed to detect these two problems and, furthermore, misinterpreted the reasons for the glider's delinquent behaviour on take-off.*

The foregoing conclusions show up failures in several stages of the quality assurance and inspection process. Each stage represents a small, and entirely understandable, human error, the accumulation of which caused a problem which could have been much more serious. Good fortune intervened to prevent an accident due to digging a wingtip into the ground and causing, at best, a groundloop or, at worst, a cartwheel. There are lessons in this for all of us.

## Recommendations

The inspector made the following recommendations if ailerons are removed:

1. *Ensure manufacturer's placards on the ailerons are readable. Mask the placards if the ailerons are to be refinished.*
2. *If you forget to mask them and they get painted over, check carefully before refitting them, to make sure which is which. Then identify the left one with a red paint spot and the right one with a green paint spot.*

## GFA action

This is not the first time that a Hornet has been involved in "wrong way round" incidents. A few years ago there was an accident where a Hornet pilot lost control on take-off and it was found that the aileron sense was reversed, ie left stick produced left aileron down and right aileron up, which of course results in roll to the right, quite a surprise on take-off. This was traced to installing the aileron drive gimbals inside the wings upside down after they had been removed during a Form 2 inspection.

Nor is the Hornet alone. The same thing had happened to a Standard Libelle some years previously (their control systems are similar) and that incident resulted in a GFA Airworthiness Directive (AD 460, Issue 2) to alert inspectors to the possibility of such things occurring.

It is the GFA's intention to add the most recent aileron problem to AD 460 to produce Issue 3, in the hope that this will at least alert inspectors and workshops to Murphy's latest antics.

## Further implications

It has already been mentioned that the Hornet is not alone in setting traps for young players. AD 460 has identified the following types from

the original Glasfluegel and Start+Flug series which are likely to be affected:

*H301 and H301B Libelle; H201 and H 201B Standard Libelle; H205 Club Libelle; H206 Hornet; H304; H401 Kestrel (also Slingsby T 59 Kestrel); H101 Salto.*

This identifies only one "family" of aircraft. Murphy is not particular about keeping things in the family and he will strike whenever a particular design or the inattention of an individual allows him to get a foot in the door.

## Comment

The inspector involved in the latest problem with the Hornet made the important point that the mistake of interchanging the ailerons was very easy to make. The same applied to the internal drive gimbals in the other incidents. This is the kind of thing that could happen to any one of us at any time.

## And finally

Having accepted our vulnerability and made a pact with ourselves never to drop our guard, we can feel confident that no control system problem would get past us.

But hang on a minute. Shortly after receipt of the latest aileron incident, the same inspector contacted GFA again, to say that he was in the process of updating the club's Hornet maintenance notes and he came across another case of Murphy striking the same type of glider several years ago, this time in the elevator circuit. His comments are quoted in full.

*"The Hornet elevator circuit has one possibility for incorrect re-assembly which can lead to less than the required amount of elevator travel. This would be a serious adverse result.*

*The elevator bellcrank on the port side of the undercarriage wheelbox has two arms of slightly different length standing off the central pivot shaft and located diametrically opposite one another. If the bellcrank is reinstalled upside down, and it certainly can be, then the elevator travel is reduced significantly below the specified amount. The elevator still works normally in terms of sense and appears to have substantial movement!*

*This deficiency in elevator travel is easily detected during annual inspection careful final checks of control travels if the reinstallation mistake has been made. The correct travels simply cannot be obtained with the bellcrank inverted. It was during such final checks on one occasion that the problem was found and subsequently traced to this bellcrank being inverted".*

Another item for AD 460. Another defeat for Murphy.





# 333 Week – 2000

‘BOMBER’ (FIRST PART)  
AND ‘FLATCH’ (SECOND PART)

This year the Western Soarers will once again try to crack the Western Australian State Record of 297km, which was set by Ray Chadwick back in February 1984 from Mt Bakewell in a *SkyTrek Probe*. Our goal is to fly 333km, hence the name of the week (has a better ring than 300 week). This year the 333 Week is scheduled to be run from 18 to 26 November (subject to final confirmation). We plan to have three tugs this year and places for 18 pilots. Nine of these places have already been taken, so be quick. Below is an account of last year’s 333 Week.



## Last Year

The club's first 333 Week was held during the week beginning Friday, 12 November through till Sunday, 21 November 1999 at Carter Farm south of Cunderdin. The idea of the week was to try and break the State Open Distance record of 297km. Whilst we didn't break the record, most pilots beat their personal bests in terms of flight duration and distance.

Jamie Oorshot drove the first half of the week and in return gained his aerotow endorsement. Shaun Wallace drove the rest of the week. Without both these individuals the week could not have happened.

## Day 1 – Goal: 190km to Lake Grace

The day was light and scary – the wind was blowing at any strength, in any given direction, at any time. The result was downtubes – two (Daz and I); nose in's – four; and belly landings – one.

The day started at 11 am with Flatch and Phil spending an hour over the paddock waiting for the day to get going. By 12 pm the thermal strength had increased to four up and the top of the thermals was 4,000ft. Shortly after Daz, Sam and I launched to chase Phil and Flatch.

Before I continue it is worth noting that Flatch had forgotten his boots and was flying in thongs and shorts. Obviously a bad place to land would be in canola stubble – more on this later.

The thermals were as rough as sand paper and the glides allowed you the opportunity to see how well you could hang on to the base bar.

We were heading south from a blue area to a band of west/east cloud, which cast a significant ground shadow. The aim was to get past this cloud band to the cu's beyond. Unfortunately the airmass was drifting in the same direction and nobody achieved it.

Phil and Flatch flew together to Quairading before Flatch bombed and Phil got back up from a low save. Flatch landed in a stubble canola paddock on his guts in shorts and thongs.

Sam, Daz and I were 30km behind but doing well. Again at Quairading Sam got low and had to land – but on his feet. Daz and I split up when Daz got low on a glide and missed the thermal.

By this time thermals were going to 7,000ft. Daz, Phil and I continued, all landing within minutes of each other at 5pm. I landed first, downwind and nosed in (110km); Phil landed next on his guts and was trapped behind his rear flying wires (115km); and Daz landed last and blew an upright (90km).

Phil was in the air for five-and-a-half hours – a personal best.

## Day 2 – Goal: 165km to Beacon

Jamie started his aerotowing today. He had three tows, one lock-out and got one-and-a-half hours above the paddock before 11 am.

The wind in the paddock was 5 km/h from the SW. We launched at 1:30 pm. Sam, Phil, Flatch and I spent about 40 minutes over the paddock waiting for conditions to improve before all leaving together.

We flew together until 30km north of Cunderdin, then Flatch and Sam got separated from us. Sam and Flatch flew and landed just south of Wylie (70km), with Flatch once again landing on his guts. By the time Phil and I had got to Korelocking the drift had strengthened from the west and the clouds north looked scary. We decided to abandon the task and head west. Daz, who was at Yorkakine, also decided the same. Daz landed shortly after (90km). Phil and I continued east with a final glide to Muckinbiden for 8,000ft, landing at 5pm after five hours in the air (140 km).

## Day 3 – Goal: Wongan Hills

We arose to rain at 7 am. The weather looked crap but got better through the morning. Whilst Daz was fixing a bent heart bolt the rest of us sat round and engaged in an extremely philosophical conversation.

◀ Jamie reaches for the skies



## 333 Week – 2000



With a weather briefing we set out to the paddock. Sam elected



▲ Who needs those dolly wheels in line?  
▲ Bomber ready for blast off

not to fly today despite having discovered a blue piece of foam to assist in his flight comfort. We launched at 12:30pm – Flatch first followed by Phil, Daz, myself then Jamie.

The sky was an interesting mix of blue and cu nim's. Base was at 5,000ft with the top of the cloud being 30,000ft. Flatch and Jamie bombed down the road and Phil landed north of Meckering. I flew most of the way to Meckering but decided I didn't like the look of the day and flew back to the paddock. Daz, with testicles like basket balls, flew through a scary sky to Goomalling.

### Day 4 – Goal: Wongan Hills

Today the climb rates were crap – as long as it was going up we were circling in it. The day started off completely overcast with base at 2,300ft. By 12pm the cloud was starting to break up and the ceiling rose. By 12:30pm we were all on our way from a gaggle over the paddock. Flatch, Phil and Sam had short flights, making 10 to 15km. Daz and I continued to circle in crap for about three hours. The best height was 5,000ft and we landed 24km short of goal. I beat Daz by a paddock.

### Day 5 – Goal: 100 Miles to Beacon

This was the best day of the week. We launched at 12pm, but in hind-sight could have been in the air at 10:30am. Climbs were good, 9 up going to 6,000ft. Flatch got unlucky and landed 50km down the road. The drift at the start of the day was north and got stronger from the north-east during the day. I scared myself, getting stuck in a cloud for 15 minutes and popping out at 8,000ft (way above cloudbase). Daz and Phil drifted too far off the course line and headed for open distance. I got to within 15km of goal, but on hearing Daz say he could make 200km I headed off downwind myself (stupid thing to do on reflection). Phil made the best decision and kept trucking to goal and made it. Sam made his best distance, landing 40km short of goal (125km). Phil Wainwright landed at Muckinbiden for the second time this week (142km). Daz landed north of Muckinbiden (176km). I made it to Bonnie Rock at 5:30pm at 6,000ft and had to land as you cannot fly any further north-east (190km).

### Day 6 – Goal: 100km to just North of Cleary

Today we were ground-towing, with Shaun "Yappa" Wallace (senior flight instructor) our tow/retrieve driver (much to his annoyance). You couldn't ask for a better driver! Daz had gone home, I didn't fly. Phil Wainwright was the only person to leave the paddock and made it 36km to land near Koorda. Sam towed but had a low weak link break and a hay stack landing. Phil Knight towed. Flatch busted a tip batten, then fixed it (thanks to the farmer dudes) and towed again. Sam towed again and had the best whip stall weak link break I have seen in a long time – he landed and packed up.

### Day 7 – Goal: 112km to Dalwalinu

Sam, Phil Wainwright and myself gave up (sick of flying) and went home. Flatch now takes over the writing...

The day started totally overcast with a south-east blowing at 10kt, so we decided to drive to Bakewell some one-and-a-half hours away from Wylie. I might remind pilots that to avoid driving great distances for nothing, ring the farmer prior to your departure. We, as advanced pilots, wouldn't forget to do a simple thing like that, would we?

As we drove to the hill the day was just getting better and better and the conversation was centred around "this could be the big day". When we finally arrived, the gate was locked – aaahhhh!

After driving the one-and-a-half hours back to the paddock I flew 108km (leaving the paddock at 3:30pm) and landed just short of goal at 6pm. Phil Knight flew 37km and novice, Gary Spranaitus (now why would he have the nickname "Sprained Anus"?), flew 25km.

### Day 8 – Goal: 230km to Three Springs

I flew 48km and Phil Knight needed a pee and landed next to a sign 'Public Conveniences' for 117km. This was the first day we had any trouble with traffic on the radio, with one farmer who was going to #@\$&%\$#@ us.

### Day 9 – Goal: 142km to Moora

Today I had a great flight, making goal. Phil flew 100km and Jamie Oorshot 67km. Small cu's with a rugged wind shear just under them, maximum height: 8,500ft agl.

### Summary

The week was great with most pilots clocking up 20 plus hours and flying personal bests for distance and time in the air.

We invite pilots to come and help us break the State record this year!





# Propeller Pitch – What is it?

JOHN REYNOLDSON

Once again there are lots of folks “rolling their own” lightweight, low horsepower power packs for hang gliders or paragliders. It’s like the early 1980’s all over again! And back then, as now, one of the hot topics was propellers! Here’s a quick primer on what’s meant by the “pitch” of a propeller, and a few extra words on props in general.

**T**here are two ways people talk about “pitch”. You’ll hear it expressed as either a distance or an angle.

## Pitch Expressed as a distance

When people talk about pitch as a distance, they’re talking about “helical pitch”. If a propeller has “constant helical pitch”, the angle of the propeller blade at each point along the blade is such that if you were screwing it into a semi-solid block of something (butter for example?), the whole propeller would move through the block at the same rate (and ruin all the butter).

The “pitch” of such a prop is given as the distance the prop would move along the hub axis in one revolution. If you think about it, this means that the angle of the blade to the plane of the prop is high at the hub, and lowers toward the tips. This angle at each point along the blade can easily be expressed as:

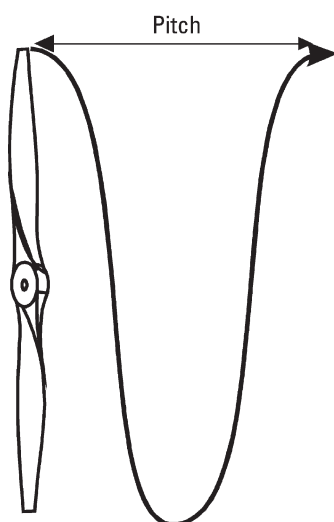
$$\text{Blade angle} = \text{ATAN}(\text{pitch}/2\pi * \text{radius})$$

– where pitch is the required pitch, and radius is the distance along the blade from the hub.

Don’t worry if you can’t do this in your head, because here’s an example.

Distance from hub (inches)	Blade angle (degrees)
24	9.0
22	9.8
20	10.8
18	12.0
16	13.4
14	15.3
12	17.7
10	20.9
8	25.5
6	32.5
4	43.7

This table shows the blade angle at various distances from the hub spindle for a 48 inch diameter prop with 24 inch pitch. The angle gets pretty big near the hub. It is (usually) impractical to build a perfectly helical



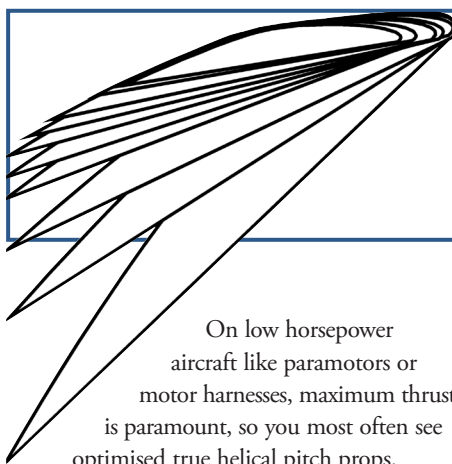
blade, because the blade angle gets too high near the hub for the material (usually wood) to sustain, and usually only the outer 60-70% of the prop is built to exact helical specs.

Fortunately, the section near the hub is a low contributor to overall thrust, though many manufacturers attempt to get the best contribution they can by increasing the chord there, particularly on composite props, where this is easier to do.

You can tell a true helical prop, because if you measure the blade angle along most of the span, you will get the same pitch value at each point using the formula:

$$\text{Pitch} = 2\pi * \text{radius-at-point} * \tan(\text{blade angle-at-point})$$

## Pitch expressed as an angle



On low horsepower aircraft like paramotors or motor harnesses, maximum thrust is paramount, so you most often see optimised true helical pitch props.

However, on some higher power machines (like most two-seater trikes) where a little inefficiency can be tolerated, you will often find adjustable props with compromise pitch systems. On these props, a nominal

amount of variation of twist is usually still built into the blade, but if you were to attempt to calculate the pitch by measuring blade angle at various radii, you would get gradually varying results along the span.

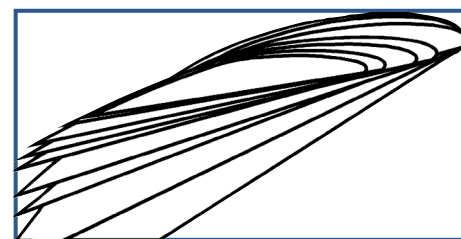
This type of blade generally has its pitch expressed in degrees, measured at the tip, because each part of the prop as a whole would not progress the same distance in a revolution if “screwing through a solid”.

So, if you’re trying to compare props, you need to determine not only the tip angle, but also a couple of angles along the span to see how close to helical pitch it is – and of course, tip angles cannot be compared unless the props have the same diameter, and in some cases, only if they’re the same brand (and sometimes, not even then).

## Other things that affect pitch and diameter...

**For efficiency, the bigger the diameter the better** – until the tips would be reaching close to the speed of sound at max revs. Practical considerations of available space and the effects of prop torque can further limit the practical diameter of a prop. (Paul McCready’s Gossamer Condor man powered aircraft had a 12ft prop!) Of course, engine off, a big prop is unfortunately a big drag bucket.

**An engine is said to be “over-propped”** when it can not reach full power/revs with a particular prop. This is usually a result of too much drag. Either the pitch is too high (ie: angle of attack of the blades too high), or the prop diameter is too great, or both.). The prop may also have a crap\* aerofoil.



**Lower pitch props with wider blades** are generally used to achieve performance in climb. A higher pitch blade is used for cruise efficiency. For low speed machines like paramotors, a prop really needs only to be optimised for climb performance. Hangmotors can afford a bit more diameter and will usually have less prop chord, but more diameter for the same HP engine.

*\*This is a technical term, best not explained here.*





## Thank You!

► It was Monday, 18 September and I was reminded via email to attend the monthly Victorian Hang Gliding and Paragliding Association meeting (I am the voluntary site development officer). I went along to report on recent communications between myself and the Victorian State Government.

However, just prior to commencing my verbal report the President of the association, Geoff Tozer, interrupted and presented me with a package on behalf of the Hang Gliding Federation of Australia. I was mildly concerned that the HGFA Board were setting me up for some more voluntary work, however I opened the package and was surprised to see the words "er Majesty Queen Eliz" visible through an Australia shaped cut-out on a very large card. Inside was a certificate complete with the Australian coat of arms. It read,

*"To William Mark Pike, Whereas Her Majesty Queen Elizabeth The Second, Queen of Australia, has instituted an Australian medal to commemorate, in the year 2000, Australian sporting achievement; I Do by this warrant award you the Australian Sports Medal."*

*Signed*

*Governor-General of Australia (Queen's representative) Sir William Deane and By His Excellency's Command, John Howard Prime Minister"*

The accompanying medal was suitably inscribed and came along with a miniature which I am told is used during formal balls whereas the full size medal is for parades.

I am most honoured to have received such an award, and would like to thank those whom I have worked and flown with within the HGFA during the past 10 years or so, particularly Ian Jarman, Paul Mollison, Craig Worth and Rob Van Der Klooster.

There have been many others that have performed a myriad of smaller voluntary tasks within their clubs or associations that may forever go unthanked, many of whom I have worked with. I could list many from Victoria alone: Tony Hughes, Lance Sheppard, John Twomey, Steve Trone, Geoff Coombes, Robin Gauld, Phil Campbell, Tim Howe, Steve Stricek, Wes Hill, Karl Texlar, Micheal Bruce, John Carter, Warwick Duncan, etc, etc... the list is long and continues throughout the country. On behalf of myself and all other pilots, knowing and unknowing of your work, thank you.

To all the members that believe they can truly contribute to the success of our sports, be it organising fly-ins, editing newsletters, opening sites, managing comps, dealing with local, state or national governments, or simply buddy to a novice, I say go for it, be successful and enjoy.

## Re: Peter Sheard's accident

► To Marin Danciu's question: I think the point of Peter Sheard's story is that experience may not save you if there is a malfunction in your brain hardware. Peter Sheard described being in an impaired mental state during that flight and he could only speculate as to the cause of his condition.

There are many possibilities. Who knows, maybe some sort of brain scan might, for example, have demonstrated a small stroke? I recall a broadly similar report in this magazine of a hang glider pilot who was observed flying erratically although he landed safely, and was found confused with no memory of the flight or subsequent events, no cause was discovered.

John Tree

## Classified rates

► In June of last year, GFA members were, along with HGFA members, asked to vote on an amalgamation of the two organisations. We were assured that this amalgamation was to have a foundation of equality and mutual benefit. This information was conveyed by means of Australian Gliding/Skysailor after the arbitrary decision to combine the magazines of the two bodies. Many still question the validity of that decision.

We now find that equality can be lopsided, particularly when it comes to Skysailor where HGFA members can have an advertisement published for no charge while GFA members have to pay for the same service.

Does this mean that GFA members are subsidising the HGFA? We were assured that

this was not going to happen in an amalgamation, despite the superior financial position of the GFA. It so appears that the 'NO' vote was appropriate.

Perhaps the disparity in the advertising rates is a symptom of the apathy of all levels of GFA membership with the executive reliant of that apathy.

There must be a valid reason for such decisions and an answer from those responsible is expected.

Tim Lacey, Secretary, Balaklava Gliding Club

*At first glance it may be seen that the situation is as you note, however the facts are different.*

*The GFA and the HGFA pay for the advertising pages that allow free advertising for its members, so, in fact, every member pays for the ads submitted by a few members.*

*The GFA policy has always been that those members who use the advertising facility should pay for the pages. I guess if all GFA members felt they would be happy to pay collectively for the GFA advertising pages then council would have to consider that, if it were put up as a change to the existing policy.*

Mrs Beryl Hartley, GFA President

*To avoid any further confusion on the above topic: The GFA and HGFA budgets (for the magazine and everything else) are totally separate. There is no subsidising of one organisation by the other. Each federation pays for their share of the production, printing and mailing, and invoices their own ads/classifieds each month.*

Richard Lockhart, HGFA Sub-editor

## Appeal to fellow pilots

► The tragic accident on 24 September 2000 at Stanwell Park prompts me to write this appeal.

As a hang glider pilot since 1976 who frequently flies at Stanwell Park, I have noticed lately a complete lack by some pilots to scan their immediate airspace before turning.

It can get very crowded at Bald Hill in light to medium southerly wind conditions.

**So all of us pilots:**

**Scan in all directions before doing any manoeuvre!**

To all the families involved, our deepest sympathy. Safe Flying,

Wolfgang Weissel and Family

## Apology

► In one of my recent articles (Skyhigh Millen-nium Cup – Apollo Bay) I inadvertently used photos taken by Jiri Stipek. I am deeply sorry for the mistake.

Hakim Mentès

To those that continually critique the performance of our valuable voluntary resources, take up the challenge. If it's not good enough for you, then join them to make it happen (and stop whingeing).

With thanks, Mark Pike

## Rylstone

► Trike pilots using Rylstone since Easter after using the new user pay system must be congratulated. Not only has the club use been paid, the clubhouse has never been kept so clean.

Bob Brierley and I have constructed a new hangar for gear storage and these will be usable when we have added doors. Thanks guys.

Bill Moyes

## Thirty Bloody Years

► Allan Beavis has two broken femurs due to a release failure when under tow. Last month Eva Menyhart was killed in Hungary for a release failure. What must it take to convince pilots to use a positive reachable release?

Bill Moyes



# Glider flight with Dave Ricketts

LEIGH CAMPBELL

It was a bit windy in town but there were some fine cumulus clouds above, so I headed out to Elliot Field glider base, Bundaberg.

Cliff Wallace was in charge for the day and, disappointingly, said that because there were no instructors available there was no flying for me that day. Strangely enough, I wasn't disappointed to hear this as the whole gliding concept is still rather overwhelming and there was plenty to look at on the ground anyway. They towed the Blanik and the single Astir down the runway while Cliff and I ran out the tow cables behind the 'ute with no clutch' and the Blanik was set up for a launch. Dave Ricketts set off to drive the winch and I sat in behind him as he changed the battery from the beaten-up tow truck, radioed he was ready and explained the controls to me.

Soon it was "take up slack – full power – full power" and the beast motor behind us wound the wire cable in fast. Way in the distance a little glider moved, took off and climbed rapidly above our heads. They popped the tow-line and Dave played the motor to bring the cable and parachute back to the winch. There was a lot of skill and knowledge to run the winch properly. Then Cliff took off in the single with another good launch and we watched them for a while, both climbing in thermals above us.

After about a half-hour of chin-wagging on the ground, the Blanik started its descent and Dave asked me if I wanted a ride. Well, yes I did, but it still scared the boots off me even after five flights.

We set up the Blanik, removing ballast, and I took up the front seat from where I had always flown. After a fair delay to sort out further dead batteries, winch drivers, and the landing of the single, we were ready.

"Take up slack – full power". We were off – a fairly gentle surge down the runway, flying up for a way before full climb; a few wobbles and shakes and then shuddering as we reach the top of the launch at 1,800ft. Even the release of the tow rope and the forward pitching to pick up speed were not as terrifying as before – maybe I'm getting used to something!

Dave headed off to some cloud – no lift there, so he turned and ran down hard to some ploughed fields. A few shakes indicated lift and he banked hard right, 30 to 40 degrees and held a tight turn, gaining a few hundred feet in half-a-dozen dizzy turns. "No, there's not enough lift here," he yelled, "I like it strong."

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So it was off to another cloud bank, about four kilometres away. He let it rip, 55 to 60kt and really nose down until the left wing flipped up hard. "Oops, there's a lift," he said, banking hard to the left, with strong G forces and a steep bank. He had found lift but it was rough and he turned tighter, occasionally flying out of lift and re-centring.

This is where the true art comes in. I could tell from the variometer that we were climbing and felt the booting lift kick from below, but I had no idea where the centre of it was. The whole plane was banked over 45 degrees, the horizon was whirling around, (I could look straight down to someone's swimming pool, and the altimeter was whirring up and up – 1,500ft, 2,500ft, 3,000ft and 4,000ft.

"There, you have a go Leigh," yelled Dave, "just keep it in this steady bank, nose not too high, about 42 to 45kt. We are going to hit off the dial lift soon; see that cloud bank above us?"

I kept the controls steady, banking less now as the lift vortex widened out but still leaping up 5,500ft and getting cool air inside.

"That's it – you're flying it man! It's like a horse. Make it do what you want. Pull it around and correct it, nose not too high. You're in the mile-high club now – 6,000ft," yelled Dave. "We're getting near that black cloud now, we'd better get clear of here. I have the controls. Six thousand three hundred feet and still climbing."

White fluffy cloud appeared all around us. Dave steered out of it into a clear area between two cloud streets.

"There we are. Have a fly again Leigh, over to that dark cloud about five kilometres away. Keep it straight and level, about 50kt," he yelled.

My ears were aching, my heart was racing and my hands were sticky from the sheer exhilaration of climbing to 6,000ft inside 10 minutes. It was unbelievable. We were in bright sunshine, the earth a mile below and streets of cloud all around. We could go anywhere we wanted. Wonderful, truly wonderful.

The radio crackled with the blurred distinctive Canadian drawl of Cliff from the ground. "What did he say? What did he say?" asked Dave. "he said, can you return the aircraft to the ground 'cos some others want a go," I repeated.

"Oh, good grief! We're at over 6,000ft and he wants us to come down again? I don't believe it,"

muttered Dave. "It will take up an hour to glide down there. Ah well, here we go then, the strip is right below us. Leigh, you push the stick forward and hold it at 75kt, while I pop the airbrakes."

We nosed forward, dropping fast, and then were jerked back by the airbrakes screaming behind us. I couldn't believe it – we were shooting straight down, suspended by the airbrakes with the altimeter winding backwards 5,000ft, 4,000ft, 3,000ft, 2,000ft. Now you could see detail of the roads, the landing strip, trees.

"Whoa up. That will do us," said Dave. "Just ease back a bit and we'll begin our downwind leg. I'll close the airbrakes." We slowed down and started gliding forward again. My ears were popping and jumping, my heart was shaking from the tremendous descent. What a drop.

"Okay, I have control," says Dave, as he went through his checklist for the landing, final steep turn, crosswind drift, air brakes on, dropping down fast, round out an gliding on to touch down, stick hard back and wheel brake on. What a flight. I was still up in the air, dodging around those fluffy clouds, feeling fee and flying high, exhilarated with overwhelming emotions. I can fly, I can fly. I think I'm hooked!



## 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:

.....

.....

.....Postcode .....

\* prices include GST

Forward to:

GFA Secretariat, 130 Wirraway Road,  
Essendon Airport 3041





# National Competition Committee News

MILES GORE-BROWN

For those who have been following the discussions on the NCC web site you will have noticed a reduction in the number of issues attracting attention. I suspect that this is due to the fact that many people have a lot more to do in their lives than spend day after day checking the latest. In addition, it seems that many of the issues raised at the Benalla pilots' meeting have been addressed; some in great detail while others only briefly. I am sure other issues will be raised either as a result of events from the coming soaring season or from issues still of current interest, such as the scoring system.

In this issue of NCC news I will not cover the issues discussed on the web site but I will cover the new changes to the FAI rules.

There have been many changes to the FAI rules, many editorial, new rule additions and some changes to current rules. Some rule changes require close attention, as there have been subtle changes. I will not cover each rule change, however I will detail the major changes. A detailed amendment list and explanation of all changes to the FAI rules can be found on the NCC page of the GFA web site. It should be noted that the FAI rule changes are not applicable to Club Class. The Club Class rules are yet to be finalised. Details of these will be covered at a later date.

Club Class pilots are reminded that cameras will not be supported in future Club Class Nationals. In addition to all IGC approved dataloggers, and Borgelt Joeys, Garmin GPS track logs are permitted for either primary or secondary verification in Club Class. The organisers at their discretion may accept other types of commercial data loggers, however it is recommended that competitors investigate whether other types will be supported prior to the competition.

## FAI rule changes

It should be noted that all reference to cameras has been removed from the rules. Cameras are no longer acceptable either as a primary or a secondary means of verification. Please note GPS equipment is mandatory for both primary and backup verification.

I would caution all readers that the rule changes detailed below are current at the time of writing and reference to the printed rules or the latest edition on the GFA web site should

be referred to for competition purposes. It is suggested that the following changes be read in conjunction with the new version of the rules that will be posted on the GFA and NCC web site in the near future. In order to get some idea of the changes you can also refer to the FAI rules version 02/00 of the FAI rules, which was the version used at the previous Benalla National championships.

I will detail the major rule changes by reference to the applicable paragraph number, the change made, followed by a brief explanation if and where necessary:

## Section 1, General Entry and Operational Rules

### Part A General rules

8.2 Improved words to emphasis the fact that glider tug take-off weight limits or operational limitations may restrict the launching of some gliders. This basically has been added to take into account the fact that glider tugs do have take-off weight limitations and depending on these limitations and factors such as the available runway length and atmospheric conditions, it may not be possible to launch certain gliders.

8.2.2 The take-off weight limit for Open Class shall be 750kg except that two seat self-launchers not carrying disposable water ballast may self-launch up to 850kg or their C of A weight, whichever is less.

In Section 8.2 there have been two major changes to the rules:

1. Two distinctively separate limits for two seat and single seat Open Class motor gliders
2. Exclusion of the provision for individual weight increase approvals over and above the C of A or Permit to Fly limit.

## Part B Entrance requirements

### Competition licences

10.1.(6) It cannot be guaranteed that competition licences can be obtained or renewed at the National Championships. It is the pilot's responsibility to make sure that their documentation is in order prior to arriving at the competition. However, if the organisers are in a position to carry out this function then there is nothing to stop them from doing so. It is no longer a requirement that this service is available at the competition. Pilots should make sure competition licences are valid before arriving at the competition.

### Verification equipment

- 12.2 Garmin GPS equipment may be used as back-up equipment. Commercial GPS equipment, other than that specifically mentioned, may be acceptable, however the acceptance of such equipment cannot be guaranteed. It is recommended that if pilots do not have the specifically mentioned equipment then they should contact the competition organisers to see if the equipment proposed to be used will be acceptable.
- 12.6 This is a new rule. It has been added to require that all GPS equipment which is used for flight navigation is securely fixed such that outside lookout is not compromised by the monitoring and/or operation of such equipment. This rule is no different to the previous requirement for fixed camera mounts.

## Part C Operational Rules

18.3A new rule has been added prohibiting individual clearances (into controlled airspace) requested by competitors for other than operational requirements or in the case of an emergency. Infringements of controlled airspace will be dealt with under rule 37.1.6. See also rule 27.1

This rule has been added to prohibit individual clearances being obtained to gain competitive advantage. However, individual clearances required for emergencies is obviously allowed. The reference to clearances for "operational reasons" is not to be interpreted as a relaxation of the controlled airspace restriction. Reference to "operational reasons" is included in the rule so that if a pilot finds himself/herself in controlled airspace, either accidentally or intentionally, then he is required by law to advise air traffic control, and obtain further clearance. However, pilots entering controlled airspace will be heavily penalised.

25.8 Handheld back-up GPS equipment, which if used for flight navigation, must be secured in compliance with rule 12.6. It must be pointed out that any GPS equipment that is used for either primary or back-up flight navigation must be securely mounted. Loose equipment is not acceptable for safety reasons.



- 29 In the radio preamble it is mentioned that the radio policy is to encourage individual competition and eliminate team flying.
- 29.2 It was decided that the common glider frequencies such as 122.9, 122.7 and 122.5 are usually very congested and may not be appropriate for competition use. As such, it has been added that these frequencies may not be available as the gaggle frequency.
- 29.11 A new rule has been added prohibiting the intentional blocking of communication on any frequency.
- 30.3 Re-wording to include clarification of order of accuracy for coordinates of turnpoints. Also improved wording to indicate that the organisers will "endeavour" to ensure that the coordinates (of turnpoints) match the "physical location" as closely as possible.
- 37.2 New penalty to cover rule 37.1.6 entry into controlled airspace. The penalty for entering controlled airspace will be deduction of total points gained on the competition day in question. Subsequent violations will result in disqualification from the remainder of the contest.

## Section 2, Scoring System

Along with many editorial changes the following are the only changes to the actual scoring system.

4. Speed points have been changed such that finishers with a speed less than 70% of the winners' speed will be scored having achieved 70% of the winners' speed. This has been changed from the current 65% to reduce the possibility of very slow finishers affecting the scores of outlanders.
- 12 Short task devaluation factor has been changed. The minimum task time has been reduced from three hours to two-and-a-half hours.

As can be seen from above there have been many changes to the FAI rules. The main changes have been editorial and related to the removal of cameras as a means of verification.

However, rule changes related to maximum take-off weights, flight into controlled airspace etc are new and deserve close attention. In addition, it should also be noted that the turnpoint sector for "fixed tasks" has been changed such that there is no penalty sector behind the turnpoint within the allowed 90-degree sector. Pilots can go as far behind (as long as the flight is within the allowed 90-degree sector) as necessary; there is no limit.

Next month I will address those issues raised as discussion topics at the last Benalla pilot meeting. I will endeavour to indicate the current status of some of these issues along with those issues that have been addressed by rule changes, etc.

Happy safe soaring



# The old Pawnee

*Re-printed courtesy of New Zealand Gliding Kiwi*

It was a small operation, a place where long retired pilots liked to hang out. They often came down to the hangar to fill in some time and annoy those who had a living to earn. They would hang around the tool bench, swap lies with each other and generally annoy the mechanics.

Out behind the repair shop sat an old Pawnee. It hadn't flown for so long that the birds had made it their home – it looked bedraggled and unquestionably un-airworthy.

The abject appearance of the pawnee led to a running controversy over several days. This controversy was between a mature, experienced, and confident but aging mechanic and a young, yet equally confident obnoxious apprentice mechanic. The battle was over whether the old Pawnee would ever run again. The old hand said he'd have it ready in a few days while the apprentice just slapped his legs and laughed.

The young apprentice thought that the best thing to do would be to jack up the canopy, roll a new plane under it and replace the canopy – and he said so. It became a great spectator sport for all the good ol' boys to go out to the hangar and start an argument between the two.

Finally, a lack period hit and the mechanics had time to devote to the old pawnee. They wheeled the plane into the hangar, which suddenly became the equal of the hottest TAB betting shop.

The first thing to go was the hopper. Slowly, all the unnecessary items were peeled from the old top dresser. Years of birds' calling cards and nestings were cleaned away. Next they poured a solvent into the cylinders and pulled the prop through a few times. While all this was going on, the apprentice was working his jaw and laughing at the entire idea. Nevertheless, the old mechanic quietly maintained his confidence throughout and kept the labour on the Pawnee organised. Unfortunately, as they later found out, some important items had been overlooked in the re-assembly of the formerly retired top dresser.

At last the great moment was at hand. The hangar was full of onlookers, bystanders, gawkers, and plain old knee slappers.

They backed the rebuilt future tow aircraft from the hangar and turned it 90 degrees from the door so the prop blast would be directed away from the shop. A few last insults were traded and the old mechanic started for the cockpit. The youngster had said he wasn't

going to climb up in the cockpit and waste his energy. He was sure nothing was going to happen. And with that he sauntered over to the wingtip nearest the door and leaned against the plane.

When the old mechanic hollered to "clear the prop" the believers backed away and the doubters sniggered and laughed. It wasn't long before it was apparent to everyone present that the entire area ought to be evacuated. In less than two revolutions the two propeller blades instantly chomped the wind and the engine was agonizing at the top of its manifolds. In their haste to complete the job on the top dresser, the throttle linkage had been assembled backwards. The throttle appearing to be idle was, in fact, at full power.

In a matter of seconds, huge grey-black clouds of smoke poured from the engine into the vacant compartment that had once held the hopper and then on into the cockpit. As the smoke oozed from the doors of the cockpit it was dispersed by the propeller's slipstream. The aircraft began to roll.

The young mechanic grabbed the left wing and held on. This little action was enough to make the Pawnee veer away from a new Cessna parked ahead and towards the metal shop building.

By chewing into the shop, the Pawnee managed to shear off an exposed water pipe. Water began gushing into the air like a Rotorua geyser.

The action from the cockpit was hilarious. The only noticeable reactions during the entire incident were the flailing arms of the old mechanic attempting to extricate himself from the smoke and the runaway airplane.

Finally, the aircraft completed its turn and began chomping big chunks out of the metal building. It ate its way down to the wing root and suddenly all became quiet.

Water was still cascading into the air as the smoke began to clear. The mechanic crawled down from the ruined Pawnee, now half buried into the side of the building. Without saying a word, he walked quickly around to the rear of the plane and positioned his eyes inches in front of the apprentice. The younger one stared wide-eyed into the old man's grimace, and could scarcely believe what he heard.

The old mechanic, seemingly unaffected by the last few seconds of drama, spat out these words into the young know-all's face – "See, I told ya it would start!"







## Notice to all Pilots

The HGFA office will close for the Christmas/New Year period at midday, 22 December 2000.

If you require anything at all to be returned to you by Friday, 22 December 2000, please forward all paperwork to the office by Friday, 15 December 2000.

Any paperwork received after this time will be processed in the new year.

This notice also applies to instructors requiring trainee membership forms.

The HGFA office will re-open on Tuesday, 2 January 2001.

Craig, Margaret, Colleen and Nicky wish everybody a safe and happy Christmas and New Year.

## National Hang Gliding Ladder Results

### Open Ladder

1	REBBECCHI Joel	1202.2
2	HOLTKAMP Rohan	1135.1
3	HEANEY Grant	1081.1
4	COOMBER Kraig	1077.5
5	DURAND John Jnr	1008.3
6	MOYES Stephen	915.3
7	JACKSON Mike	904.6
8	PATON Len	894.8
9	DURAND John Snr	815.0
10	HEANEY Tove	755.8
11	FREEMAN James	735.5
12	BEAVIS Alan	718.6
13	McLEOD Glen	671.3
14	SATCHELL Hugh	648.5
15	SCHROEDER Phil	633.3
16	GONSALVES Bernie	621.8
17	GIAMMICHELE Tony	601.9
18	PENNICUIKL Loyd	597.6
19	REDMAN Dave	588.6
20	STRICKLAND John	578.9

### Women's Ladder

1	HEANEY Tove	755.8
2	LAKE Shirley	403.8
3	BULL Neva	379.0
4	BINDER Carol	347.5
5	MAHER Debbie	219.1

### Racing Class Ladder

1	GONSALVES Bernie	621.8
2	GIAMMICHELE Tony	601.9
3	PENNICUIKL Loyd	597.6
4	REDMAN Dave	588.6
5	STRICKLAND John	578.9

### Sport Class Ladder

1	KEE Trevor	392.7
2	MOLLISON Paul	212.7
3	HEYMANS John	186.8
4	GRIEVE Nathan	90.0

### Intermediate Class

1	WILSON John	296.0
2		
2	WALLACE Shaun	233.4
3	TUNBRIDGE Cameron	213.9
4	GARDNER Don	168.5
5	GATES Damien	155.3

## HGFA Competition Manual

The 6th edition of the competition manual is now on the web. This is now the current competition manual. It can be found on the HGFA pages [www.hgfa.asn.au].

Michael Zupanc

## The Come And Get It Trophy

When last notified, the "Come and Get It" trophy was back at Tyabb after being collected by Jon Flynn.

The Trophy is sponsored by Tony and Therese Dennis to promote cross-country trike flying. The rules are:

1. It has to be picked up by trike.
2. The pilot who collects it must notify Tony Dennis at The Right Altitude (0418 574 068) of its new location and contact phone number.
3. Any pilot intending to collect the trophy must contact the present holder to arrange pick-up.
4. Once you have the trophy you can put your own placard on it in a similar colour and style as those already on the trophy.

## UP Vision – Unsafe?

It should be noted that the early UP Vision (large, medium or small sizes) from around 1994 have severe parachutal tendencies. Anyone having launch problems or inflation problems should contact either myself, Pete Bowyer, or Ted Jenkins, who can advise on these gliders. There is real potential for someone to be seriously hurt.

Lee Scott

## Advance Omega 5 wins PWC 2000 and European Championships 2000

After Kari Eisenhut's 1st place in the PWC '99 and the double in the 2000 European Championships in Garmisch (Kari Eisenhut and Steve Cox), the Advance team pilots confirmed that they are in good form by also taking the two first places of the 2000 Paragliding World Cup. Steve Cox was pipped at the post by only six points by team mate Andy Hediger after 15 tasks of the PWC Millennium Tour series. Nicole Nussbaum completed the Advance podium finish with her 3rd place in the female ranking.

The new Omega 5 high performance glider will be the result of this amazing competition success. To be released in the new year the Omega 5 will feature closed cell technology and less aspect ratio than its predecessor. Improved handling, glide, sink rate, and safety make the new Omega even easier to fly than the previous one despite a significant performance advantage.

For more info contact : Godfrey Wenness, ParaFunalia, ph: 02 67856545, email <SkyGodfrey@aol.com>.

### General Ranking PWC 2000

1	Andy Hediger	Advance Omega 5
2	Steve Cox	Advance Omega 5
3	Jimmy Pacher	Gin Boomerang

## Female Ranking

1	Louise Crandal	Gin Boomerang
2	Sandie Cochapain	Edel Millennium
3	Nicole Nussbaum	Advance Omega 5

## Club News

### Tasmania Hang Gliding Association

The annual AGM was a success and it was good to see so many active members willing to make the trek to Ross, share stories and progress the sport in Tasmania. Thank you to Brett Tooker in steering us so well over the last two years. We now have more members in Tasmania as well as some really awesome sites with safe launches and landings zones due to his hard work and direction.

We are having a flying weekend on the 24 and 25 November at Valleyfield. An opportunity to get together and post an XC flight or two in this year's Tassie Cross-Country Cup.

David Luttrell has put together a great web site about paragliding and hang gliding in Tassie. It certainly is impressive with a fair deal of creative flair being shown. David is looking for information and pictures to expand this website. The address is [www.users.bigpond.com/dave-n-nat].

Site development has been progressing well in Tasmania over the winter. Not much flying, so we might as well enjoy the drive and find new sites.

Rob Steane is working on Mt Direction. This site is likely to only suit PG's. Apparently Parks are putting together a management plan first for which we will need to submit volumes of information in order to get a mention and hopefully a new site.

Mount Wellington is approved. We need assistance in getting it up and running this summer for the trial period. What we lack is a fair bit of dosh for materials. Please let us know if you can lend a hand, make a donation or find us a sponsor.

Thanks to Gill for securing a new site at Kempton organised in record time. Should take a northerly around to the east. Ben and Wozza have pioneered it.

Spotter Award goes to Anthony Mountain for finding a new site up the Derwent Valley at Ouse. We are in the early stages of securing this site. The site takes north westerly, which is the most common prevailing wind. The few times we have flown the site it has produced excellent ridge lift with a number of strong thermals coming through in early spring. Even the wedge-tail eagles are friendly at this site. Good potential for XC from this site this summer.

See the Events Calendar for details of the inaugural Tasmanian State Competition to be held 26-28 January 2001.

Stephen Bayley, THGA Secretary



## Western Soarers Hang Gliding Club

As the weather begins to warm in the west, seemingly ordinary people have been feeling a strange pull. Like an unheard call to arms, they've begun to raise their eyes to the sky again and dream of being up, up and far away...

### Spring Thermalling Week

The annual Spring Thermalling Week at Wyal-katchem was run again this year, over the week of 30 September to 8 October. It was a great chance to shake off the cobwebs, sort out the gear, and delight in the lovely soft spring conditions in preparation for the summer flying season.

It was also a great opportunity for recent students to get to know some of the more experienced pilots who'd been in hibernation for the winter!

### Parachute Repack Night – 20 October

In order to encourage pilots to get serious about regular repacks, the club organised a parachute repack night. Pilots were hooked up, spun around and had the experience of trying to deploy their parachutes, before repacking them again.

### '333' Week – 17 to 26 November

After the success of the event last year, 333 Week will be run again in November. The purpose of the week is to attempt to break Western Australian records for open distance, out-and-returns and triangles (*See article this issue – Sub-ed*). So far 17 pilots and three tugs (and pilots) have been confirmed.

Current records are:

*Open Distance – 297km*

*Out and Return – 100km*

*Triangle – 140km (unconfirmed).*

### WA State Soaring Competitions, Wyalkatchem 2001 – 24 February to 5 March

After much debate about poor flying weather in previous years, extensive meteorological research and a comprehensive opinion poll, the dates for the WA State comps have been moved back to late February. This was to take advantage of lighter winds and better directions. All hang glider and paraglider pilots are welcome to compete again this year.

*24 February: Practise and registration day*

*25 February to 4 March: 8 competition rounds*

*5 March (Public holiday): Emergency round*

Krista

## Hill Flyers WA

It's been a slow start to the usual fantastic spring flying, with the nil wind stable days giving way to the start of a great season's flying, starting with great flying at Bakewell on the last Sunday in September. Many hang gliders and paragliders, enjoying a ride to cloudbase, and hours in the nice thermal conditions through the day, stayed around for second and third flights cruising to 1,000ft in silky late afternoon ridge lift. Some of us noticed Steve Duncan, after spending two hours in the air, waddle up to Lou's place, some 200 metres, still in his harness.

We saw Lou bending over Steve in various positions... and later found out Lou was attempting to undo his zipper! Much to Steve's relief...

Lou had produced a handy pair of pliers. Steve later shared the sky with other pilots for another hour in the silky smooth afternoon lift at Bakewell,

describing it as the smoothest air since flying Stanwell Park in '97. Peter, a German paraglider pilot, described it as the most enjoyable flying he has had in Australia and said it reminded him of flying smooth mountain air in the German Alps.

There will be more great flying over the coming months both on the hills and out at Wylie. Western Soarers are holding the 333 Week in November. The annual combined club Christmas function is also coming up on the second Thursday in December (14th) to be held at 'Cascades Bistro/Function Centre'. Always a great night, don't miss it. Further details in the next Skysailor and on our hotline.

See you in the air, Rick

## Product News

### SKYOUT – The Best of Jules Makk

After months of compiling all the best cartoons from a huge collection of funny stuff from over the years, you can now get all of them in a cartoon booklet I've put together called "SKYOUT".

It contains all the classics & your faves as well as some that have never been seen. Everything has been re-typeset and the pages are crammed full with 'toons. Also included are two A3 sized board games which are the funniest and looniest yet and guaranteed to get a lot of laughs. I'm proud to offer this compilation of about 280 cartoons and the games for the enjoyment of all.

Be sure to get your copy of this 'Collector's Edition' for your own – see ad on inside cover. I created a web site where you can preview SKYOUT along with a huge photo gallery at [www.bit.net.au/~skyout].

Cheers, Jules Makk

### Towing Foot Release

The Australian Paragliding Centre has developed a new foot release system for towing incorporating the brilliant tow release the Linkknife.

The release works under full tension as well as slack. The release easily cuts through any weaklink material that fits through the Linkknife. The bridle is manufactured from 5.5mm static line making it very durable and strong.

### Pro-Design Paragliders

The new Effect DHV 1 glider from Pro-Design is proving to be one of Australia's best selling beginner/intermediate gliders. Rated with speedbar at 51 km/h and DHV 1-2. An amazing glide comparable to that of some of the new DHV 2 gliders and a high degree of inbuilt passive safety. To top it off the glider also has beautiful light handling and very easy launch characteristics. The Effect has



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Top Speed 53 km/h

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## Joel Rebbechi

It is with my deepest regret that I inform you of the death of Joel Rebbechi on Sunday, 8 October.

Joel was preparing to launch as a strong southerly change was approaching to try to take advantage of the pre frontal converging air. Strong crosswinds of 20-30kt on Scenic Lookout in Newcastle required the assistance of three people to hold the glider down. Joel launched, his left wing rose rapidly and the glider ground looped into the car park. His death was instant.

Joel was an inspiration to us all with his enthusiastic approach to the sport he loved. Our deepest sympathy is felt for his family.

Regards, Rick Duncan

### Fragile Footsteps ...for Joel

we are fragile  
so very precariously alive  
balanced between a force unseen  
& the will to grow & thrive  
in moments of golden glory  
when we see that we survive

we bend ourselves against the wind  
& every step is strained  
conquering ground, taking pride  
in every stride that's gained  
leaving the impressions of a life  
from the footsteps that remained

gone, to a higher level  
that all of us aspire to  
here on the ground, we've found  
a wish to fly across the blue  
where, there awaits a pair  
of silver wings for me & you

I feel the loss of everyone  
I did or did not know  
for never can be foretold  
the time we have to go  
not to fear the moment near  
when we hear the maker's call  
pushing forth & reaching out to touch  
the greatest goal of all

however high, we fly the skies above  
here on the earth, we live our lives  
for love

My sincere sympathies to family & friends.

Jules Makk

9 October 2000



### New Airborne Climax

partial V-rib technology together with the new HR speed system. There are four different sizes available to cater for all weight ranges.

Pro-Design paragliders are the first to offer a 3-year 400-hour guarantee! Before you buy your next glider ask about the guarantee. All Pro-Design paragliders are manufactured to the highest possible level of quality.

To arrange a test fly simply call me at the Australian Paragliding Centre on 02 6226 8400.

Peter Bowyer, APC

### Solartime Counter now available in Oz

Moyes is the distributor for the new Solartime counter designed by Altime.

Solartime is a revolutionary product designed to log the flight time of your paraglider. The tiny Solartime counter utilises a photovoltaic cell and hour counter which is sewn or glued onto the upper glider surface.

After the paraglider is inflated, the cell is exposed to UV rays which start up the counter automatically. As soon as the glider is hauled down, the counter switches off. The Solartime counter can give you exact glider use to maintain a proper schedule of servicing and also serve as proof of airtime when reselling the glider.

For further info contact Moyes, ph: 02 9316 4644, fax: 02 9316 8488, email <moyes@moyes.com.au>.

Moyes Delta Gliders Pty Ltd

Kaspar Henny (SUI, 6th), Jimmy Pacher (ITA, 7th) and Stephan Stieglair (AUT, 9th) return to the top 10. Christian Tamegger (AUT) down to 8th and Andy Hediger (SUI) 10th.

The female rankings are headed now by Louise Crandal (DEN) following her good result in the European Championships (41st overall). Petra Krausova (CZE) and Andrea Joubert (RSA) are equal 2nd 66 points behind (82nd overall). Currently 681 pilots from 35 countries are ranked.

The first Precision PG World Championships sees Simeon Klokocovnik (SLO) head the rankings with 69 points, 9 points ahead of Sluga Matjaz (SLO) with Jurij Vertacnik (SLO) in 3rd place (55 points). There are now 66 pilots from five countries are ranked.

In the HG rankings there are no changes in the top 6 places: Oleg Bondarchuk (UKR, 1st), Richard Walbec (FRA, 2nd) Manfred Ruhmer (AUT, 3rd), Andre Wolf (BRA, 4th), Gordon Rigg (GBR, 5th) and Betinho Schmitz (BRA, 6th). Steve Cook (GBR) returns to the top 10 in 7th (from 20th), ahead of Ron Richardson (GBR, 8th from 15th). Mario Alonzi (FRA, 9th) and Nene Rotor (BRA, 10th) complete the top 10.

Françoise Moçellin (FRA) leads the female rankings (33rd overall). Kathleen Rigg (GBR, 39th overall) is 2nd and Kari Castle (USA, 69th overall) 3rd. There are 610 pilots ranked from 37 countries.

The US Nationals and the German Open have been added to Class 2. 1st and 2nd positions, David Sharp (USA) and Brian Porter (USA), remain the same. Christof Kratzner (GER) moves to 3rd (from 5th) displacing Marcus Hoffmann Guben (GER, 4th) Hansjoerg Truttmann (SUI, 5th) and Davis Straub (USA, 6th) by one place. Bernd Weber (GER) climbs to 7th (from 9th) while Diego Bussinger (SUI) and Johan Posch (AUT) drop one place each (now 8th and 9th). Toni Raumauf (AUT) moves up to 10th (from 11th).

Niki Hamilton (GBR) is the only female ranked (27th overall) in a total 44 pilots from 9 countries.

In PG country rankings Austria has taken the lead, France moves up to 2nd (from 5th) and Switzerland has dropped to 3rd. In HG country rankings Great Britain moves into the lead (from 3rd), Brazil maintains 2nd place and Austria moves up to 3rd (from 7th).

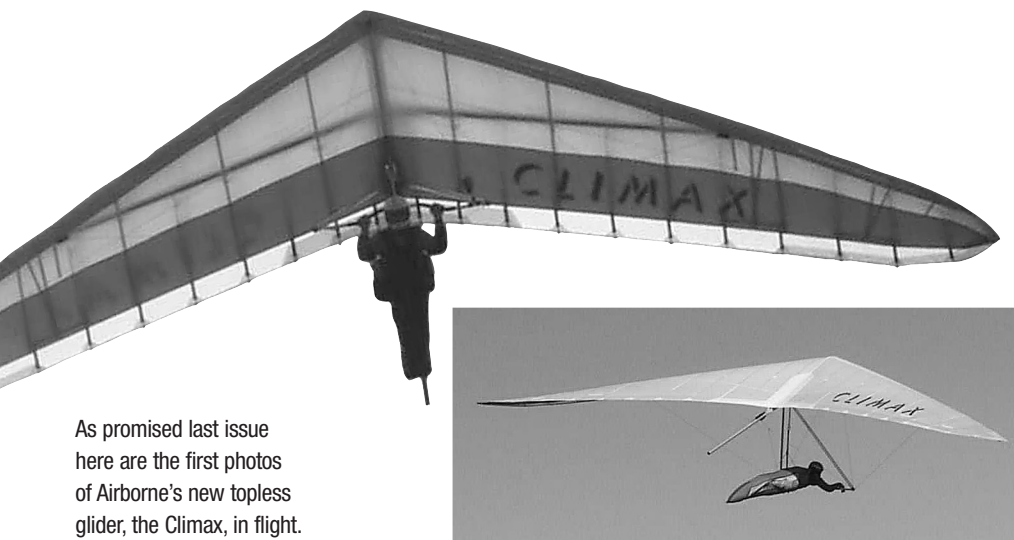
## FAI News

### World Pilot Rankings Update

The PG rankings have seen some big changes due to the addition of the European Championships, Finnish Open, Veltins Cup (Austria), Canadian Nationals, Zimbabwe Open and the PWC Mieussy (France). There has also been an amendment to the results of the South African PG Nationals due to one task being declared invalid.

Martin Brunn's (AUT) consistency has put him at the top of the PG rankings with 286 points, one point ahead of 2nd place Steve Cox (SUI). New European Champion Kari Eisenhut (SUI) has climbed to 3rd place ahead of Masataka Kawachi (JPN, 4th from 31st) one point ahead of team mate Tsuji Tsuyoshi (JPN, 5th).





As promised last issue here are the first photos of Airborne's new topless glider, the Climax, in flight.

Full details can be found on the FAI/CIVL web site at [www.fai.org/hang\_glider/rankings/].

### New Organisation Structure for FAI

The FAI General Conference held at Linköping, Sweden, on 28/29 September 2000 adopted sweeping changes in the management structure of the FAI. The previous 60-strong Council was replaced with immediate effect by an Executive Board with seven voting members. This will be better placed to take well-considered and timely executive decisions in an increasingly fast-moving business and media environment.

The new FAI President, Mr Wolfgang Weinreich, chairs the Board. Mr Weinreich is a former chief of the Lufthansa 747 fleet, and is currently President of the FAI's German member organisation, the Deutscher Aero Club, and of Europe Airsports, the Europe-wide organisation responsible for regulatory matters in sporting aviation. Mr Weinreich is a keen glider and power pilot. He succeeds Mr Eilif Ness (Norway) who has served as FAI President for the maximum term of six years.

The new Executive Directors are:

**Mr Alvaro De Orleans-Borbon** (who will take the chair in the absence of the President), a former FAI 1st Vice President, who represents Spain in the FAI. Originally educated as an electronic engineer, he has wide experience

as a company president and director and has a special interest in technical innovation. As a glider pilot, he has competed at national and international level for many years.

**Mr Robert Cliphsham**, a civil engineer from Toronto, Canada is the President and Chief Financial Officer of a civil engineering and land surveying company. A director of several aviation organisations and adjunct professor at the University of Toronto, he holds a commercial power pilot's licence.

**Mr Hirasawa**, an aeronautical engineer from Japan, was President of the JAMCO Corporation (aircraft maintenance and overhaul) and of the HSST Development Corporation

(electromagnetically levitated linear motor train). He was also a senior Vice-President and Board Member of Japan Airlines.

**Mr Koranda**, USA, the President and CEO of the National Aeronautic Association, the FAI's USA member organisation. A former Senior Vice-President of AOPA and Vice-President of the AOPA Air Safety Foundation, he has been involved in association management (profit and non-profit) for 23 years. Mr Koranda is an experienced landplane, seaplane and helicopter pilot.

**Mr Mazzola**, Switzerland, a mechanical engineer by training, is the owner of an engineering and machinery manufacturing company. He was President of the FAI General Aviation Commission and is an aeroplane, glider and helicopter pilot. He has represented FAI and general aviation's interests on airspace and regulatory matters in ICAO, ECAC and Eurocontrol.

**Mr Portmann**, General Secretary of the FNA, the French General Aviation Federation, since 1997, is also the President of the FAI General Aviation Commission. Formerly Chairman and CEO of several companies, he has a wide experience in business administration, management and finance. He is an active private pilot.

### Recent FAI Competition Results

Open European Microlight Championship  
19-27 August 2000 – Levroux, France

#### Final Results – Flexwing

Two-seater Class (WTS)	Solo Class (WSC)	Team
1 S. Elari/C. Almaric (FRA)	1 R. Keene (GBR)	1 France
2 T. Krolkowski/ J. Krolkowska (POL)	2 G. Rabnecz (HUN)	2 UK
3 N. Beale/ M. Hurtubise (GBR)	3 R. Rawes (GBR)	3 Poland

#### Final Results – Fixed Wing

Two-seater Class (FTS)	Solo Class (FSC)
1 P. Nogueroles/ J. Revert (ESP)	1 R. Proctor (GBR)
2 P. Bezdek/J. Lukes (CZR)	2 X. Langin (FRA)
3 L. Plassart/ C. Fabry (FRA)	3 D. Chevillet (FRA)

#### Powered PG Class (PPG)

Team
1 Daniel Martinez (ESP)
2 Thomas Keller (GER)
3 Ramon Morillas (ESP)
1 Spain
2 France
3 Czech Republic

The full results can be found at [http://events.fai.org/microlight/euro2000/].

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# Murphy's 88

MIKE DUFTY

From Friday night's forecast it sounded like Saturday would be a good day at Bakewell, and for once it wasn't wrong. This was probably due to Murphy's Law kicking in on Dave Humphrey's behalf — Dave's leg injuries from the week before had become infected and he was stuck in hospital, so there was bound to be some good flying weather.

**D**ennis, Jamie and I got out to launch relatively early. The York weather station was reporting gusts of up to 15kt, and there seemed to be quite a lot of wind on the ground. We decided it was worth a look even though it had been completely blown out on the hill last time the weather station was reporting 13kt. This time it was worth the trip up.

It was gusting to a bit over 15kt at times, but with nice lulls of 10kt or so in between. I went first, just after midday, and it seemed to be ridge soarable for a change. Even better was the fact you didn't need it because the thermals were coming through nicely. I got a nice 600ft/min climb up to about 1,000ft over the back before coming back to try to get away with Jamie and Dennis. They'd both launched by the time I got back to the ridge. I saw Dennis and an eagle catching what looked like a good thermal out towards Lou's place and flew in above them. We both got a couple of thousand feet above take-off, but I was a fair bit above Dennis. When the air started getting lumpy over the back Dennis fell out the bottom and dived off towards Ashleys to avoid rotor, while I was able to go the other way and find a new core.

Dennis seemed to be going down and Jamie was looking pretty low back in front of the ridge, so it looked like I was flying on my own again and I focused on the thermal, getting fairly slowly up to the airspace at 6,500ft. The cloud was still some height above me when the lift faded and I headed off towards Toodyay.



The latest in thermal detection electronics for paragliders

Photo: Ann Mitchell

It turns out Dennis wasn't going down. He got a low save over Ashleys from below take-off height, then flew across to a line of smoke from some burning-off. He was able to fly straight downwind in the smoke all the way to Northam in weak lift, then found a bit more lift and landed near the railway crossing on the way to Toodyay, about 30km out. He never got more than a couple of thousand feet above take-off the whole way.

Jamie had had a huge asymmetric on the hill and headed out front for a bit of height and safety. He also found a great thermal, and blasted straight up to cloudbase about the time Dennis had his low save. He ended up landing somewhere near where Dennis did, but probably sometime later since Jamie had to turn in the lift on his flight!

Dennis got an excellent lift from his landing spot right back up to his car on top of Bakewell, then came after me. Jamie walked all the way to Northam, got a lift halfway to York, walked for two-and-a-half hours, then finally got a lift into town, where he got to sit and wonder where Dennis and I had got to.

I headed along the line of hills west of the Northam Road, then cut across from Spencers Brook to Noondeening Hill, getting a thermal off about every second peak, but nothing right up to cloudbase, which would have been in airspace anyway. I went quite well to just past Noondeening then got nothing all the way down to Wally's place. I got a bump there at about 2,000ft agl, then lost another 500ft crossing the Avon River, but got a great thermal off Pat's place on the other side. That one took me back up to the airspace, where I lost it (*Sure you did — Sub-ed*). I headed off towards New Norcia, and under some clouds found what felt like a really strong core. It spat me out violently, but I managed to get the glider under control and come back for another go. I got

spat out again! This was about the worst air I have flown in. I was going weightless, then slingshotted upwards, flung to one side, then the other. After four or five attempts I decided it probably wasn't a thermal and flew away, soon finding some nice smooth lift elsewhere. (I checked my vario when I landed and the maximum rate of climb was 2,900ft/min (15m/s) and the maximum rate of descent was 2,100ft/min (10m/s) — the biggest readings my vario has ever shown.)

The climbs elsewhere were good and overall it was a great flying day. I carried on north along the old plains road, and got my best thermal of the day, right up to cloudbase at 9,000ft, right off the middle of a large patch of bush I had to cross. I was at the 75km mark and figured I should be able to glide to 100km from there with the tailwind I had, but it wasn't to be. I ran along a bit of a cloud street, but the initial buoyancy soon turned into sink, and the weak lift I finally got down low was drifting me further over the large patch of bush (Bindoon army training area). I eventually lost the lift and had to run upwind for the last kilometre to a safe landing outside the bush. I left my turn into wind until the last minute and still only made 88km (1km short of my personal best in Manilla, but 1km further than my previous best in WA). I'd landed just after 4pm after four hours in the air. I'm sure the 100 would have been possible with a little more luck at the end, or better planning to avoid getting stuck on the bush.

Dennis picked me up straight away and we headed back to York to fetch Jamie, but just missed him as his run of bad luck with lifts had run out and he'd just hitched a lift to Perth in a party bus full of young women with a fetish for Colombian paraglider pilots. We caught up with them but he refused to get out and join us.







**MARK PLENDERLIETH,**  
*HGFA Board Secretary*

**T**he Board met for the third and final time this year at the Tullamarine Motor Inn, Melbourne between 31 August and 2 September. And a hectic three days it was, with all the general business of a Board meeting being supplemented by proposals for a number of new and exciting projects. Details of these new projects will feature prominently in this section in the coming months.

Promotion of the sports administered by the organisation is a key element in our strategy to increase member numbers. Board member John Reynoldson has been co-ordinating the production of a special free-flying edition of the popular aviation magazine *Pacific Flyer*. This project is well advanced and the special edition is scheduled for publication by Christmas and should remain in newsagents for three months. This edition of the magazine will include articles about hang gliding, weightshift microlights and paragliding, contact details for all instructors and should provide an opportunity for schools to place advertisements. This project will certainly see information about HGFA disciplines widely disseminated throughout the country and comes at no cost to our organisation. Keep your eyes open for the special edition of *Pacific Flyer* coming to a newsagent near you at Christmas!


After a lot of discussion, changes have also been made to the procedures for the ratification of pilot certificate and endorsement applications. From now on all applications for restricted pilot certificates, instructor certificates, passenger carrying endorsements and tugmaster endorsements must be received by the HGFA Office prior to an applicant gaining the privileges of that certificate or endorsement. This change puts the onus on the pilot applying for the certificate or endorsement to ensure that the necessary paper work has been completed correctly and received by the HGFA office before the new privileges are validated.

Many of the new Board members have been actively soliciting input from the membership through club visits. Phil Pritchard reported that whilst visiting the various clubs in his area he has found that members greatly appreciate being able to discuss HGFA matters with a Board member. Unfortunately there are currently no Board members from either South Australia or Western Australia, so clubs in these states (as well as clubs in regional areas) are not benefiting from such visits. The organisation may need to allocate some funding to facilitate this endeavour, or take advantage of Board members visiting these areas for business or private reasons. In the meantime we are really keen to hear what clubs are doing and what you think about what we are up to. So why not

put all the Board members on your club newsletter mailing list, and at your next club or committee meeting why not spend 10 minutes making a list of things you think the Board needs to do to improve things in your area and then send it to us? The contact details of all Board members are available at the back of this magazine, and if you'd like something distributed to the entire Board just send it to the HGFA office.

Earlier in the year we received a request from a member to investigate the possibility of airlines classifying paragliders as sporting goods to facilitate travel and avoid excess baggage charges. Ian Jarman contacted Australian IATA members (Kendall Airlines and American Express Travel) and asked them whether IATA have a policy whereby certain sporting equipment is given excess baggage dispensation on all or any IATA member airlines. According to the people he spoke to, there is no such policy and each airline makes its own rules as to what is exempted from excess baggage charges. In fact they went further to say that such decisions are usually left to the duty manager on the day of the flight and this will often involve consideration of how far over the normal baggage allowance the combined weights for both personal and sporting equipment are and if the flight is fully laden or not.

Another important item on the agenda of the last Board meeting was renegotiation of the contracts of our full-time employees following the reorganisation necessitated by Ian Jarman's resignation. After a lengthy discussion the Board approved a one year contract for Craig Worth as General Manager on a salary of \$62,500 per annum. Margaret Crane was offered an ongoing contract as Office Manager at \$38,000 per annum. The increased remuneration is in recognition for the increased responsibility and workload in both positions brought about by not replacing the Executive Director. Both the General Manager and Office Manager will be assisted by casual and short-term contract staff. An important part of the new organisational structure are monthly project status reports. These reports have been initiated by Brian Webb and permit tracking of progress on various projects being undertaken by HGFA employees. These are a useful initiative given the geographical dispersion of the administration and certainly help Board members keep up to date with the day to day running of the organisation.

Finally for this month, some members have suggested the state and regional development "levy" was an inappropriate term given the proposed use of the funds generated. It was agreed that the term "state fee" would be more appropriate and the relevant paperwork will be changed before the next print run. 

## Australian Sports Medals – 2000

To commemorate Australian sporting achievement, the Australian Government has awarded Australian Sports Medals – 2000 to nominated sportsmen and women for their achievements in sport and sport administration.

Last year the HGFA Board were asked to nominate 15 past and present HGFA achievers for the Medals. After considerable deliberation, the Board determined that medals should be awarded to the following persons.

**For service to the National organisation:**

Paul Mollison, Rob Woodward, Mark Pike, Rohan Grant and Kieran Tapsell

**For service to their State organisations:**

Steve Hocking and Richard Nevins

**For service in establishing instructor and pilot training systems:**

Phil Pritchard, Brian Webb and Kevin Magennis

**For international achievement in their sport:**

Steve Moyes and Rick Duncan

**For achievement in setting World Records in their sport:**

Tove Heaney, Rohan Holtkamp and Godfrey Wenness.

I sincerely congratulate each of these recipients and thank them for their contributions to our sports and the Federation.

Craig Worth, HGFA General Manager

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# Top Landings at Stanwell Park

MARTYN YEOMANS

I certainly don't profess to be one of the 'gun' pilots flying at Stanwell Park, but I've always liked to top land there, so as to be able to have, say, three one hour flights on a good day, rather than one three hour flight and land on the beach.

*Sub-ed note: Although written from the point of view of a hang glider pilot, this article is of obvious relevance to both PG and HG pilots at Stanwell Park.*

In the days before rigid batten gliders, it was relatively easy to top land in just about any wind direction and (within reason) strength, especially after the cottage was demolished. The 'standard approach' was to fly over the point (heading SW) some way out towards the township of Stanwell Park, looking back over your right shoulder until you figured you were low enough to pull a long right hand turn, line up on the 'strip' and sink in. When the wind was more southerly, you had to come in below ridge height flying slightly down/crosswind, let the lift 'lift' you up over the edge and then quickly swing around back into the wind and sink in before you flew over the edge and back into the lift again.

As the era of rigid batten gliders, especially the early double surface gliders unfolded, it became harder and harder to land on top once the wind went anything south of true south east. The better penetration and higher flying speeds meant



you came rocketing in on the down/crosswind leg. Even if you judged it right and cranked

it around in time, you couldn't 'sink out' into the headwind and land before you flew over the edge. Also, with the bigger wing spans, if you didn't get it down at the low end of the 'strip' you risked snagging the bushes with your left wing or hanging your right tip over the edge where it might run into some lift which would tip you up and lead to a stack into the left.

As a consequence, some of the 'older' pilots (me included) gave up landing in all but the most benign easterly conditions, and most new pilots have never even tried top landing there. However, as the next generation of double surface gliders with plenty of VG came onto the scene, the ease of top landings was improved. Most, if not all, pilots landing on top still followed the 'standard' approach of losing height out away from the hill (over the 'valley') and making a right hand turn of about 180 degrees (or possibly two linked 90 degree turns) to line up with, and hopefully land on, the strip. For some reason which I can't now recall, about five years ago I tried a different approach and landing technique which I believe others may be interested in trying.

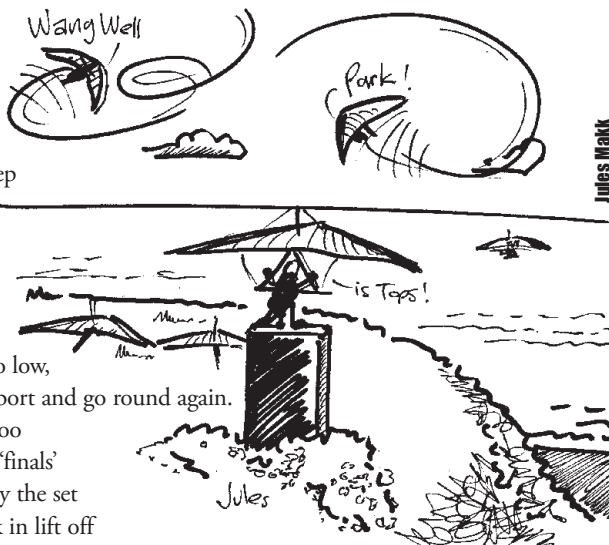
What I do is this:

- *Lose height (if necessary) east of/above the SE take-off 'point'.*
- *Once you're down to about 750-800ft asl, fly over the set up area, over the car park and above the road (ie NW of the monument). This should have you flying parallel to the LZ, towards the 'mansion' at the junction of Lawrence Hargreave Drive and Lady Wakehurst Drive.*
- *If you're still at, say, 750ft plus, continue past/over the microwave tower. If you're at 700-750ft, turn left inside the tower. Unless it's slightly SSE, you shouldn't be any lower than 700ft on this down/crosswind leg.*
- *Turn left (either inside the tower or roughly over the 'mansion'), all the time looking down/left at the strip. Again, depending on your height and the likely lift/sink factors, head out into the valley. If you've judged your height about right, this should only be a short 'base' leg.*
- *Turn left again and line up for the large cleared area at the extreme 'low' end of the strip. This may be either just about straight ahead or slightly left of 'upwind', in which case you will need to angle back into the hill. Remember to start pulling on more speed as you get closer to the hill, so as to counter wind gradient and/or turbulence.*
- *The object is to get yourself over the large(ish) open area with just enough height to make a small RH turn and fly up the slope to land. Where the wind is easterly, you will fly straight towards the monument - be prepared for a severe wind gradient. If the wind is more SSE, you'll need to turn a little more to the right to avoid having your right wing tipped up during those crucial last few metres. It is probably safer to run the landing out rather than do a big flare, which may put the nose back up into a faster airstream and get you off balance.*

In summary,

I find the advantages of this landing approach are that you can more easily keep the LZ in sight at all times; it seems easier to judge your height relative to the LZ and finally, if you're too high or too low, you can more readily abort and go round again. For example, if you're too high as you line up on 'finals' you basically just overfly the set up area and you're back in lift off the east face very quickly. If you're too low, you'll be aware of it when you're flying straight, rather than at the last moment as you come out of a 'blind' RH turn (as with the traditional approach). You can then simply fly around the line of the hill and back to the east face, or if necessary, head for the beach.

One warning: if you've never landed on top before, consult a local expert and secondly, do it initially only in ideal E to SE conditions.



Jules Matk

# Pilot Profile



Nev Akers

For those from the Queensland area Nev needs no introduction... perhaps this is why I wasn't given one for this profile! All I've been told is that 'Nev has been around for as long as the hills he flies from'. That's good enough for me... Sub-ed.

**Name:** Neville L. Akers

**Age:** Sixty-seven

**Flying hours:** 1,760

**Club:** Cairns HG Club

**Occupation:** I run a mechanics workshop, Nev Akers Autos

**Place of abode:** Cairns, Queensland

**Reason learnt to fly:** Always liked to fly. Had model planes in the early 50's for 20 years.

**Favourite flying moments:** Flying over 100km from Malborough to a coal mine. There was also a flight I had somewhere down south, during which I achieved a 14,000ft height gain.

**Favourite flying site:** Rex Lookout. It is close to home and can be very challenging, specially past Port Douglas towards Mossman and Daintree.

**Interests outside flying:** Fishing and travelling our great country.

**Career/life goals:** 54 years as a motor mechanic!

**Favourite non-flying moments (there must be some):**

Filling a boat full of fish. Turned out to be over 500lb of fish! Also, coming second out of 120 riders in a two day enduro at Wikpa. A lot of them were top Australian riders.

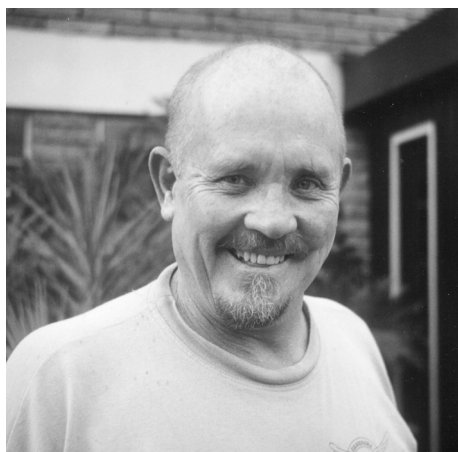
**Some of my material possessions include:** A great collection of gemstones.

**When asked by my spouse/partner whether flying or "the relationship" is more important I usually reply:**

I usually have allowed the time to do things with her and miss the flying, so I guess the relationship is more important.



# HGFA General Manager's Report



## Double Fatality at Stanwell Park

Two pilots were killed and a passenger seriously injured following a mid-air collision between a tandem hang glider and a paraglider at Bald Hill, Stanwell Park on 24 Sunday September. After the mid-air occurred at approximately 60ft above the front of the car park behind the take-off on the SE point, the two aircraft became entangled and fell into the car park. After around 15 minutes in the air the hang glider completed a 360-degree turn back over the hill and after levelling off, struck the paraglider that was making a pass above the car park. Who, if anyone, was at fault has not yet been established.

Reports are that the pilot and passenger of the hang glider fell onto the rear of a station wagon parked in the car park and bounced onto the asphalt pavement. The paraglider pilot apparently struck a concrete curb. Both pilots suffered major head injuries and neither could be revived. The female passenger of the hang glider, who was undertaking an introductory training flight, suffered serious leg injuries and minor head injuries. She remained conscious throughout and was transported to hospital by ambulance.

Conditions on the day were slightly variable, with a fluctuating 10-15 knot SSE wind picking up and easing at times. At the time of the accident the wind had eased slightly and it had become congested above launch, with a dozen or so gliders between 50-100ft above the hill.

The hang glider pilot was Glen Connor of Otford, owner/operator of "Skybound Hang Gliding School". Glen (known as "Chuck") had been a qualified hang gliding instructor since 1983 and had approximately 1,850 hours hang gliding experience, the majority of which were tandem. His wife Sue and brother Adrian were on the hill and witnessed the accident.

After over two years without a fatal accident, sadly I report four recent fatalities in our sports. As all three accidents are currently undergoing Coronal investigations, I can provide preliminary reports only.

The pilot of the paraglider was Vitali Kouznetsov, a Restricted Certificate holder who learnt to fly at Stanwell Park. He had gained between 50 and 100 hours experience over the past 20-month period, the majority of which were whilst flying at Stanwell Park.

## Hang Gliding Fatality

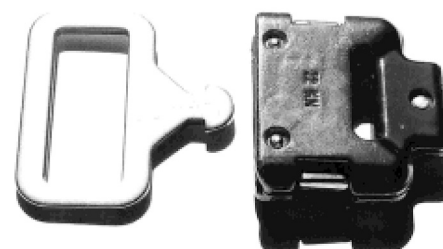
Newcastle pilot Peter O'Loughlin (known as Triple P) suffered fatal head injuries on landing following a car tow near Singleton on 17 September. Since losing all four limbs two-and-a-half years ago when he flew his hang glider into powerlines, Peter had longed to fly again. He bought a small glider and hounded his mates until they modified it to enable him to control it with his prosthetic arms. Despite being aware that he would have limited roll control due to his disability, Peter insisted on flying. He was first towed by hand, then tethered in wind, then towed with a payout winch on a car. On the day of the accident, a smooth steady breeze prevailed as two tows were successfully completed. The third and fatal tow resembled the second with a normal launch and climb to approximately 50ft agl, whereupon the glider yawed left slightly. The pilot failed to correct this and the observer at launch immediately called to stop the tow via radio. The tow car stopped immediately and in addition the winch observer cut the rope. At this stage, the glider had yawed approximately 20 degrees off the line of tow. However, despite the absence of tow force, the glider continued its left turn, to approximately 90 degrees off the line of tow, without apparent correction by the pilot. The glider then crossed the fence bordering the airstrip and struck the ground hard in a 15 degree bank with the left wingtip first, followed by the nose and then rolled over to upside down. The glider was seen to be flying normally until it struck the ground, other than in the apparent absence of corrective control by the pilot. Its airspeed was

adequate but not excessive; the glider was never locked out. Despite a doctor at the scene attending the pilot immediately he never regained consciousness.

Peter will be sadly missed by his many friends in Newcastle, he was amazingly positive despite his injuries. Those present said that Peter was happier after the first two tows than they had seen him since his previous accident.

## Microlight Fatality

A 61-year-old HGFA member from Brisbane, Allen Samson, was flying solo at Watts Bridge, west of the Queensland Sunshine Coast, on 12 August. He was seen climbing very steeply immediately after take-off. A number of gyrocopter pilots were present and the pilot was heard talking about the steep climb rate a trike can achieve. He held the aircraft on the runway as long as possible and put it into a very steep climb. At around 80ft agl the aircraft began to stall with one wing dropping slightly, then the other; the engine noise reduced markedly and the nose dropped, apparently from the pilot's input in pulling the nose down quickly. One wing dropped and the nose rotated rapidly, the aircraft completed a tumbling barrel roll, then righted momentarily and entered another, which was almost completed as the microlight hit the runway, with one wingtip and one side of the undercarriage impacting together. Allan died several hours later from injuries sustained.



## Safety Notice – Harness Buckles

This report is passed on from Angus Pinkerton, Chairman BHPA Flying and Safety Committee:

*A paraglider pilot recently reported having a quick-release buckle come undone in flight. Luckily he was able to land safely.*

*Our information is that a faulty batch of these buckles was produced some time ago. It is known that APCO and System X use these buckles, and it is possible that other manufacturers may have used them. Efforts have been made in the past to recall all affected products,*





Up, up and away with Jamie at the 333 Week in WA

Photo: Mark Thompson



Double Island Lagoon, the only westerly beach site on the east coast near Rainbow Beach

Photo: Jean-Luc Lejaille

*but this recent incident suggests that this has not been totally effective.*

If you have a buckle identical to the one illustrated in the photograph you should examine it very carefully to see if any combination of loading, twisting and pulling can make it disengage. With the buckle held in front of your chest, as it would be with a fastened paraglider harness chest strap, apply a considerable force trying to pull the male end out of the female. Whilst maintaining this loading, try to pivot the male end out of engagement, using up-and-down movements replicating the loading and movement on a paraglider chest strap when the pilot weight shifts. Try several times.

Any buckle that does come undone should be replaced before further flight. Consult the harness manufacturer about this.

Since the initial publication of this notice, further information has been received which suggests that the problem might not be related to the previous batch of known to be defective buckles. It is therefore suggested that pilots should perform the check described in the notice on all quick release buckles.

Fly safely,  
Craig Worth, *HGFA General Manager*

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Prices include GST



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- ◆ **\$5.50 HGFA Log Book\***

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## New South Wales

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CLASSIFIEDS ARE NOW FREE OF CHARGE to HGFA members up to a maximum of 40 words. One classified per person per issue will be accepted. Classifieds are to be delivered directly to the sub-editor, by email or post, not by phone. The deadline is 25th of the month, for publication five weeks hence. Submitted classifieds will run for one issue. For consecutive publication, re-submission of the classified must be made, no advance bookings.

When submitting a classified remember to include your contact details (for prospective buyers) and your HGFA membership number (for verification of membership). (Note that the above does not apply to commercial operators. Instructors may place multiple classified entries, but will be charged at usual advertising rates.)

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**Airborne Sting 154** nov/int, 30 hrs, \$1,700. Ph: Keith 0418 244 673; <kpisani@hotmail.com>.

**Explorer powered harness**, 4 mths old, 10 hrs airtime, blue/black, carbon fibre prop, electric kill switch, suit pilot 5'6-6'2" (adjustable foot pad), as new cond., can be seen flying, \$4,300 ono. Moyes Super Xtralite (SX) 164 adv, 3 yrs old, EC, new side wires, hang loop, \$2,600 ono. Ph: 0401 450569; 02 4953 4253.

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### Victoria

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## Australia

### Canungra Cup

4-11 November 2000

This year the Canungra club is pleased to invite PG pilots to participate in the inaugural Canungra Cup (Queensland State PG Championships). This event has been awarded AA sanction by the HGFA, Cat 2 status by CIVL & will be the first sanctioned paragliding event of the Australian season. All sites used in this event are accessible by 2WD. There will be prizes & trophies awarded in all categories. You will need: GPS (for flight verification), UHF radio, int rating, \$140 registration fee (\$170 after 30 September). For this you get access to the sites, maps, a T-shirt & a presentation dinner. For no extra charge we'll also throw in a bunch of national ladder points. For more info visit [http://home.iprimus.com.au/plenderleithm/canungra\_cup.htm] or email <canungracup@hotmail.com> or ph: Keith Allen 07 33782149 (fax: 07 3876 7988).

### Gillies Hang Gliding Competition

11-12 November 2000

Round 2 of the North QLD Championship (Eungella is Round 1). For more details contact Bernie Zwahlen <zwahlen@ledanet.com.au> or Ian Graham 07 40954466.

### 333 Week 2000

18-26 November 2000

Cunderdin, WA. It's on again: your chance to break the WA Open Distance State record of 297km. Places limited to 18 pilots with 9 places taken already. Venue: Carter Farm Cunderdin. Requirements: aerotow endorsement. Driver wanted. For further details please contact Mark Thompson ph: 08 9491 3076, 08 9368 4474, email <mark.thompson@team.telstra.com>.

### Rainbow Fly-In

25-26 November 2000

Fun comp for HG & PG, restricted to adv pilots. \$30 entry fee, trophies & prizes. \$15 optional Saturday night dinner. Presentation: Sunday 6pm. For more info email <intheair@ozemail.com.au>, ph 07 54863048 or 0418 754 157.

### Corryong Fly-in

26-30 December 2000

Illawarra Club will be holding the Xmas fly-in. All welcome. No entry fee. Free camping at Towong campsite. Meet at Elliot bomb-out Boxing Day. For more details contact Greg Smith, 0409 680589.

### WA State Soaring Competition 2001

Jan/Feb 2001 (dates to be finalised)

Open to all HG & PG pilots. Venue: Wylkatchem (200km NE of Perth). Ground & aerotowing based comp. Pilots to compete in the Open, Advanced, Intermediate & Novice Classes plus the coveted Teams Trophy. Main emphasis for the comp is fun & safety. Mandatory requirements: GPS/databack camera, parachute, tow endorsement & UHF radio. For further details contact

## Australia continued

Mark Thompson ph: 08 9491 3076, 08 9368 4474, email <mark.thompson@team.telstra.com>.

### Laurieton Fly-in

2-6 January 2001

Run by the Mid North Coast Club for nov to adv pilots. The fly-in will be open to both PG & HG pilots who want to get some airtime flying a range of sites incl. 2,000ft inland to 120ft coastal. Entry fee: \$40. All pilots just need airworthy gliders & radios. Prizes will be donated for all licence categories. Come & join the fun! Contact us for more details on 1800 063648.

### Australian Nationals

3-12 January 2001

Hay, NSW. Practice day & registration: 3 January at the New Crown Hotel/Motel, Hay, commencing at 7pm. Welcome briefing to take place at 9pm. Sanction AAA. GPS scoring will be used, therefore GPS mandatory (Garmin or Aircotec). Entry fee: \$180. Minimum 4 pilots per strip. Minimum pilot requirements: Restricted, tow endorsed, HGFA member. Other minimum requirements: airworthy hang glider/paraglider, parachute, instruments, tow gauge, rope, releases, driver. Entries close 24 December 2000 (information booklet will be sent upon receipt of entry fee) and should be sent to: Dynamic Flight Pty Ltd, RMB 236B, Trawalla VIC 3373. Email us for further info <dynamic@netconnect.com.au>.

### Corryong Cup

13-21 January 2001

Registration & practice day Saturday 13th. Registration & start day Sunday 14th. Last competition day Saturday 21th. Contact Steve Bell, ph: 02 42941268, email: <spbell@1earth.net>.

### 2001 - A Forbes Odyssey

14-21 January 2001

Practice day: 13 January. Presentation night: 21 January. Rating: AAA & FAI Sanctioned WPRS. This will be a Flatties with a difference: it will be an all aerotow meet. That is, we will supply the tows, you just have to show up with a glider, tow release & retrieve. Tow organiser: Bill Moyes (we will be very organised in the paddock!). Meet organiser: Vicki Cain (contact Moyes Gliders, ph: 02 93164644). Scorer & technical delegate: Tim Cummings (Designer of the GPS turnpoint verification programme). Goal marshal: Rob Van Der Klooster. Essentials: Aerotow endorsement, HGFA membership, GPS-Garmin or Aircotec. Entry fee: \$500 incl. unlimited tows, unlimited flying possibilities, presentation dinner. Last Forbes comp in '99 had 3 World Record days! \$100 deposit is required by 30 November to secure a spot and the balance at registration, send cheques payable to Forbes Flatlands 2001 and post to: Moyes Delta Gliders, 1144 Botany Rd, Botany NSW 2019 or register by email with credit card details at <moyes@moyes.com.au>.

## Australia continued

Please note the 30 November deadline for registration deposit, we need to confirm numbers to enable us to have sufficient tugs for the meet.

### Bogong Cup 2001

23 January - 2 February 2001

Registration day: 23 January. Last competition day: 2 February. Entry fee: \$150. Rating: AA plus FAI Cat 2. For more info contact Phil Lahiff 03 57544247, email <mountaincreek@netc.net.au> or visit [www.geocities.com/mountaincreek2000/index.html].

### Tasmanian State Competition

26-28 January 2001

Australia Day Weekend, January 2001 at Valleyfield. The Inaugural State Competition for PG & HG. To be held at Valleyfield. Guaranteed to be a fun competition. More info contact Stephen Bayley 0408 154156.

### Australian Paragliding Open 2001

3-10 February 2001 (not March as previously)

Manilla, NSW. Registration day: 2 February, Manilla Town Hall HQ. Sanction AA. Minimum pilot level: int with inland experience. The comp will be a CIVL Cat 2 & is the last one that has validity for WPRS rankings to assist with team sizes for the PG Worlds in Granada! Prizes worth over \$5,000! Entry fee: \$140 before 1 Jan (\$160 thereafter). Discount of \$40 for those who attended the Big Wet Manilla 2000 PG. For more details email <skygodfrey@aol.com>, ph: 02 67856545, fax: 02 67856546, or check out [www.mss.org.au].

### 2001 NSW HG State Titles

17-24 February 2001

A or AA grade. Registration: 16th and morning of 17 February, Imperial Hotel. Entry fee: \$120, incl. films, T-shirt & presentation dinner. Pilot requirement: adv rating or int with inland experience, UHF radio & parachute, GPS preferred, databack camera optional. Current HGFA rules & RACE scoring apply. Cheques payable to: NSW HG State Titles, 50 Park St. Charlestown NSW 2290. For more info contact Bill Olive ph 02 49213804 (w) or 02 49423131 (h); <BOLIVE@hahs.health.nsw.gov.au>.

## Overseas

### New Zealand Paragliding Competition

20-28 January 2001

Sites used will be Inwoods Lookout, Barnicoat & Takaka Hill. The cost will be NZ\$160 if received before 6/1/01, NZ\$180 thereafter. Incl: Comp levy, Tasman Club fee, Cat 2 FAI sanctioning, films, maps, T-shirt, BBQ & prizegiving meal. Transport will be organised at extra cost for those requiring it, but only with prior notice. Entries limited to 85, filled on a first come first served basis. For more information contact the organisers, Richard and Andrea Hadfield ph: 64 3 566 863, 64 21 400 295 (mob), email <rich\_hadfield@hotmail.com>.







## 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 (\$16.50 each for 10 copies or more – postage not included)	\$22.00
Basic Sailplane Engineering	\$35.20
Beginning Coaching Level 1 – Australian Coaching Council	\$30.25
Beginning Gliding – Derek Piggott (1st Ed.)	\$49.50
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Beginning Gliding – Derek Piggott (3rd Ed.)	\$49.50
Better Coaching – Advanced Coaching	\$35.75
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Blank Technical Manual	\$22.00
Cross Country Soaring – Helmut Reichmann	\$99.00
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Flying Faster & Further (Part 2) – Maurie Bradney	\$16.50
Flying Sailplanes – Helmut Reichmann	\$82.50
GFA Daily Inspector's Handbook	\$13.20
GFA Instructor's Handbook	\$35.20
GFA Manual of Standard Procedures (Part 3) – Airworthiness	\$11.00
GFA Manual of Standard Procedures (Part 4) – Sporting	\$11.00
GFA Operations Manual	\$19.25
Glass Fibre Repairs – Slingsby	\$22.00
Gliding – Derek Piggott (7th Edition)	\$71.50
Gliding Safety – Derek Piggott	\$60.50
Great Glider Pilots (Part 2) – Berg	\$71.50
IS29D Maintenance Manual	\$13.20
Limbach Workshop Manual	\$30.80
Meteorology Simplified – AOPA UK	\$7.15
Modern Elementary Gliding – BGA	\$18.50
Nimbus 3/24.5 Maintenance Manual	\$16.50
Pilatus B4 Maintenance Manual	\$16.50

Polish Woodwork Manual	\$16.50
Powered Sailplanes Manual	\$22.00
Practical Wave Flying – Mark Palmer	\$44.00
RF5 Maintenance Manual	\$19.80
Sailplane Aerobatics – Les Horvath	\$55.00
Sporting Coach Manual	\$16.50
Standard Repairs to Gliders – BGA	\$16.50
Stirling Range Wave Camp Manual	\$16.50
The Complete Soaring Guide – Welch	\$43.45
The Modern Soaring Dictionary – Roake & Phillips	\$11.00
Turnpoints – Gren Seibels	\$52.25
Understanding Flying Weather – Derek Piggott	\$30.25
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
Winning on the Wind – George Moffat	\$19.25

### 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
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Ads for AUSTRALIAN GLIDING can be placed with the GFA Advertising Contact  
Henk Meertens, PO Box 352, Frenchs Forest  
NSW 1640, Fax: 02 9453 0777,  
Email: <hkmxor@msn.com.au>.

## Sailplanes

### Single-Seaters

**SZD 55 XQT** less than 100 hrs, Cambridge L-Nav, Icom 20, covers, trailer, towing gear, parachute. All reasonable offers considered. Ph: Adam Malarz 02 6288 9683, mobile 0429 440 467, fax 02 6288 9641, email <amalarz@effect.net.au>.

**SZD 55** Current 15m World Record holder for 1,000km. Low hrs. Immac cond. Trailer, tow out gear, covers \$54,000 ono. Ph: 03 58821132, email <moroco@ozsky.net>.

**CIRRUS B VH GOU** 1/2 share, Benalla based. Instruments & chute new in last 4 yrs, wings just refinished, very good trailer, 1,700 hrs. Ph: Stu 03 9819 1079.

**LAK-12** Excellent condition, 400 hrs, built 1993. Enclosed trailer, Microair 760 radio & boom mike, Borgelt B40, B5 & B57, covers, new canopy, ground handling gear. High performance & docile handling \$40,000. Ph: 03 5443 1651 (w) or 03 5444 0720 (h).

**PHOEBUS C** Fibreglass, 17m with enclosed registered trailer. VH-GSW. 660 hrs TT, mech & elec. varios, Dittel radio, current Form 2. Priced for a quick sale, won't last at \$12,900. Ph: Gary 03 5144 4953 (w), 03 5144 2362 (h).

**H201B Libelle** 1,800 hrs with 750 capability. VH-GBK is in excellent condition & is offered for sale as a complete package including parachute & trailer \$18,000. Ph: 02 6226 4773.

**ES60B Super Arrow** VH-GXS. 30 year survey & Form 2 inspection completed. Enclosed trailer. Ph: Reg Pollard 03 5762 6963.

**Skylark 4 & Cherokee 2** with enclosed trailers. Deceased estate, price negotiable. Ph: 07 4933 1178 or email <alanmcm@rocknet.net.au>.

**LS8a VH-GWB** Refinished in polyurethane 1999, full panel with Cambridge varios & GPS. Spotless! \$100,000 without trailer. As new Cobra trailer to suit \$10,000. No offers. All available after Gulgong Nationals. Bruce Taylor 02 6778 7345, <BruceLouise@bigpond.com.au>.

**SZD 51-1 Junior XOH** 1,654 hrs, 1,825 landings – \$30,000. **Mosquito KV** 2,714 hrs, 1,219 landings – \$32,000. **Standard Cirrus ZR** with trailer, 2,650 hrs, 1,345 landings – \$22,000. **20.5m LAK 12 GDE** 500 hrs, 165 landings – \$35,000. This glider has broken five Open Class World Records. All the above gliders are Tocumwal based. 50% deposit, bal. 12 months interest free. Ph: Don 03 5874 3897 (h).

### Two-Seaters

**NIMBUS 3 DT** Excellent record beater complete with trailer. Offers considered. Ph: 03 9432 2921 or 03 9439 8947.

**Soaring Club of Tasmania** wish to sell one of its two two-seater gliders. They are; IS28 & Blanik L13. Details contact Richard Doyle on 03 6225 2561 (h), 03 6226 2622 (w), email <Richard.Doyle@utas.edu.au>, or Dave Waller on 03 6492 3230.

### Instruments and Equipment

**FOR THE BEST** Varios, TE Probes, GPS Nav systems, dataloggers & parachutes contact BORGELT INSTRUMENTS ph: 07 4635 5784, fax: 07 4635 8796, mob: 0428 355784, email: <mborgelt@tmba.design.net.au>, web: [www.ozemail.com.au/~mborgelt].

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### General

The **Gliding Club of Victoria** offers for sale the following items due to a fleet restructure and to make way for new gliders:

1. **Hornet H206 VH-GMW** with trailer, radio & basic instruments, fair condition, A\$16,000.
2. **SZD Junior VH-XOA** with basic instruments, no radio, no trailer, new canopy, A\$25,000.
3. **IS28B2** damaged in heavy landing, basic instruments & radio, no trailer \$10,000 ono.
4. **Arrow canopy** \$500 (never used).
5. **IS28B2** (2 piece) canopy front piece, little used, main piece as new, never used \$700.
6. **Kestrel canopy front piece** \$400.
7. **Hornet canopy front piece** \$500.

For further details contact Graeme Greed at <gliding@benalla.net.au> or Garry Brasher <brash@eisa.net.au> or Darcy Hogan <darcy@hotkey.net.au>.

**Waikerie International Soaring Centre** is looking for tuggies to tow mid-week from Monday, 6 November until 30 March. This need not be one person but comprise several persons who will tow in allocated blocks. Accommodation provided. Enquiries to <wisc@riverland.net.au> or ph: 08 8541 2644.

**Waikerie International Soaring Centre** will be conducting the Immediate Post Solo Course & Beginners Cross-Country in the first two weeks in December. Enquiries to <wisc@riverland.net.au>.

au> or ph: 08 8541 2644. These courses have proved extremely beneficial to participating pilots in recent years.

**Waikerie International Soaring Centre** will be conducting Ab Intio Training in week blocks from Monday, 6 November until end of February. Enquiries to <wisc@riverland.net.au> or ph: 08 8541 2644.

**Lake Keepit Soaring Club** needs tow pilot(s) to assist our enthusiastic mid-week operation. Accommodation & other benefits. Enquiries to Jim Stanley 02 6769 7514 or <keepitsoaring@bigpond.com>.

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### Bathurst Soaring Club

GPO Box 3110, Sydney NSW 2001, ph: 02 9750 0209.

### Byron Bay Gliding Club

PO Box 815, Byron Bay NSW 2481, ph: 02 6684 4244.

### Central Coast Soaring

PO Box 1323, Gosford South NSW 2250, ph: 02 4977 2740.

### Concordia Gliding Club

231 Stanmore Rd, Stanmore NSW 2048, ph: 0412 145 144.

### Cudgegong Soaring

199 Stucco Rd, Gulgong NSW 2852, ph: 02 6374 2444.

### Forbes Soaring Club

PO Box 267, Forbes NSW 2871, ph: 02 6852 2329.

### Goulburn Gliding Group

PO Box 69, Goulburn NSW 2580, ph: 02 4821 4271.

### Grafton Gliding

11 Lighthouse Cres., Emerald Beach NSW, ph: 02 6654 1779.

### Harden Gliding Club

PO Box 24, Harden NSW 2587, ph: 02 6886 2275.

### Hunter Valley Gliding

PO Box 9, Newcastle NSW 2300, ph: 02 9534 2884.

### Kentucky Flying Club

PO Box 43, Newport Beach NSW 2106, ph: 02 6778 7345.

### Lake Keepit Soaring

PO Box 152, South Tamworth NSW 2340, ph: 02 6769 7514.

### Leeton Gliding Club

PO Box 607, Leeton NSW 2705, ph: 02 6962 7210.

### Orana Soaring Club

PO Box 240, Narromine NSW 2821, ph: 02 6889 2733.

### RAAF Richmond Gliding Club

RAAF Base Richmond NSW 2755, ph: 02 4579 1165.

### RAAF Williamtown

RAAF Base Williamtown NSW 2314, ph: 02 4964 5062

### R.A.N.G.C.

PO Box A37, Naval Air Base Nowra NSW 2540,

ph: 02 4421 1333.

### Soar Narromine

PO Box 56, Narromine NSW 2821, ph: 02 6889 1856.

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PO Box 132, Camden NSW 2570, ph: 02 4655 8882.

## Temora Gliding Club

PO Box 206, Temora NSW 2666, ph: 02 6977 2733.

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Mundaroo, Tumbarumba NSW 2653, ph: 02 6948 5283.

## Tumut Gliding Club

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## Wagga/Lockhart Gliding Club

PO Box 68, Lockhart NSW 2656, ph: 02 6925 2276.

## Warrumbungle Gliding Club

Kirriwa Gilgandra NSW 2827, ph: 02 6795 4333.

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### Canberra Gliding Club

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PO Box 211, Bundaberg QLD 4670, ph: 07 4155 3158.

### Caboolture Gliding Club

PO Box 920, Caboolture QLD 4510, ph: 0418 713 903.

### Central Queensland Gliding Club

PO Box 953, Rockhampton QLD 4700, ph: 07 4937 1381.

### Darling Downs Gliding Club

PO Box 584, Toowoomba QLD 4350, ph: 07 4663 7140.

### Gympie Soaring

PO Box 103, Gympie QLD 4570, ph: 07 5486 7247.

### Kingaroy Soaring

PO Box 91, Kingaroy QLD 4610, ph: 07 4162 2191.

### Moura Gliding Club

PO Box 92, Moura QLD 4718, ph: 07 4773 3542.

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PO Box 5790, Townsville 4810, ph: 07 4773 3542.

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### Albury Corowa Gliding Club

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### Bendigo Gliding Club

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PO Box 46, Benalla VIC 3672, ph: 03 5762 1058.

### Grampian Soaring

PO Box 468, Ararat VIC 3377, ph: 03 5352 4240.

### Latrobe Valley Gliding Club

PO Box 625, Morwell VIC 3840.

### Mangalore Gliding Club

PO Box 80, Avenel VIC 3664, ph: 03 5798 5512.

### Mt. Beauty Gliding Club

44 Roper St, Mount Beauty VIC 3699, ph: 03 5754 4096.

### RAAF East Sale Gliding Club

9 Weir St, Sale VIC 3851, ph: 03 5144 2362.

### South Gippsland Gliding Club

PO Box 475, Leongatha VIC 3953, ph: 03 5664 2300.

### Stawell Gliding Club

20 Jones St, Stawell VIC 3380, ph: 03 5358 2713.

### Sportavia Soaring

PO Box 78, Tocumwal NSW 2714, ph: 03 5874 2063.

### Sunraysia Gliding Club

PO Box 647, Mildura. Vic 3500, ph: 03 5025 7335.

### Swan Hill Gliding Club

PO Box 160, Nyah Vic 3594, ph: 03 5037 6688.

### Victorian Motorless Flight Group

GPO Box 1096J, Melbourne 3001, ph: 03 5369 5125.

### Wimmera Soaring

PO Box 158, Horsham. Vic 3402, ph: 03 5382 3491.

## SOUTH AUSTRALIA

### Adelaide Hills Soaring

PO Box 1, Bridgewater SA 5155, ph: 08 8534 4011.

### Adelaide Soaring

PO Box 94, Gawler SA 5118, ph: 08 8522 1877.

### Adelaide University Gliding Club

Sports Assoc. Uni of Adelaide SA 5005, ph: 08 8826 2203.

### Balaklava Gliding Club

PO Box 257, Balaklava SA 5461, ph: 08 8864 5062.

### Barossa Valley Gliding Club

PO Box 305, Angaston SA 5353, ph: 08 8564 0240.

### Blanchtown Gliding Club

12 Altona Road, Modbury SA 5092, ph: 08 8556 2240.

## Bordertown Gliding Club

PO Box 377, Bordertown SA 5268, ph: 08 8752 1321.

## Gawler Gliding Club

PO Box 274, Lyndoch SA 5351, ph: 08 8524 4595.

## Lake Bonney Gliding Club

PO Box 243, Barmora SA 5345, ph: 08 8588 2758.

## Millicent Gliding Club

PO Box 194, Millicent SA 5280, ph: 08 8739 3235.

## Murray Bridge Gliding Club

PO Box 1277, Victor Harbour SA 5211, ph: 08 8554 3543.

## Port Augusta Gliding Club

PO Box 272, Port Augusta SA 5700, ph: 08 8643 6228.

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PO Box 450, Renmark SA 5341, ph: 08 8585 1422.

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## Waikerie Gliding Club

PO Box 320, Waikerie SA 5330, ph: 08 8541 2644.

## Whyalla Gliding Club

PO Box 556, Whyalla SA 5600, ph: 08 8645 0355.

## TASMANIA

### Tasmania Soaring

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## NORTHERN TERRITORY

### Alice Springs Gliding Club

PO Box 356, Alice Springs NT 0871, ph: 08 8952 6384.

### North Australia Gliding Club

PO Box 38889, Winnellie NT 0821, ph: 08 8985 5330.

## WESTERN AUSTRALIA

### Beverly Soaring

PO Box 136, Beverley WA 6304, ph: 08 9646 1015.

### Gliding Club of Western Australia

356 Abernethy Rd, Cloverdale WA 6105, ph: 08 9635 1023.

### Morawa Flying Club

PO Box 276, Morawa WA 6623, ph: 08 9972 3022.

### Mt Newman Gliding Club

PO Box 119, Newman WA 6753, ph: 08 9175 2434.

### Narrogin Gliding Club

PO Box 232, Narrogin WA 6312, ph: 0407 088 314.

### Stirlings Gliding Club

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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 1 year, \$47 for 2 years, \$65 for 3 years. 107-1025 Richmond Road Ottawa, Ontario K2B 8G8 Canada, email: <sac@sac.ca>.

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

**SAILPLANE AND 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 6 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, New Zealand.

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*For Joel*  
*An inspiration to us all*  
*From his many friends*

**JOEL REBBECHI**  
**09/03/76 - 08/10/00**