

Gliding Australian SKYSAILOR

In this Issue:



**NSW State
Gliding
Championships**



**The Brisbane
Xtreme Games**



ARCUS

The Ultimate
Combination:

Outstanding
Performance

Incredible
Penetration

Ease of
Handling

**You
need
more?!**

**BASISINTERMEDIATE
DHV 1**

Find out why this is the
BEST SELLING DHV 1-2 GLIDER
in Europe this season.

Accelerated
DHV 1-2
49 km/h



The ARCUS is NOW available downunder.

With a solid 3 year 300 hour warranty
and with prices starting at \$3,850,
this new generation SWING ARCUS
will blow you away!

Contact: ANDREW POLIDANO at Poliglidge
Ph: 02 66843510 • Fax: 02 66856150
Mobile: 0414843510

Or come visit us on the web
and visit the free classifieds section:
<http://swinginoz.hypermart.net>

Dealer enquires welcome

ICOM

40GX UHF

Special Deluxe Pack !

GX RADIO \$ 470, Desktop
Fast charger \$ 119, two high
power 12v Ni-Cad batteries
\$ 218, Worth \$ 807 ON
SALE all up...

**ONLY
\$ 550!**

ICOM 40S UHF
radio. Budget
price with no loss
in quality. 5 watts
power, scan, clear
clean communica-
tions at the right price.
Includes a free
emergency battery
pack.



40S \$ 425

**ICOM AIRBAND radios
IN STOCK - CALL FOR
GREAT PRICE !**

Garmin GPS's !

Moving map display, weather-
proof, and more. The 2+ includes
a South Pacific town/city data-
base, full zoom, both vertical & horizontal
display. The 3 comes
with greyscale & expanded map.

GARMIN 12 \$ 329

GARMIN 2+SP \$ 490

GARMIN III \$ 650

Hall airspeed indicator \$ 37

Hall H.G. bracket \$ 16

Windwatch ASI \$ 144

All prices quoted tax exempt.

ULTRALIGHT FLYING MACHINES

(03) 9431 - 2131

24 HR FAX (03) 9431-1869

HGFA merchandise

Available from the HGFA, PO Box 558,
Tumut NSW 2720 Phone: 02 69472888
or Fax: 02 69474328



- ◆ **\$30 Polo shirt** with embroidered HGFA logo
in navy, green & white (sizes 16 to 24)
- ◆ **\$50 Rugby top** with embroidered HGFA logo
in navy, green & grey (sizes 16 to 24)
- ◆ **\$15 Cap** (cotton or corduroy) with HGFA colour
logo in red, black, navy or green



- ◆ **\$1.50 HGFA Car sticker** (no postage required)
- ◆ **\$6 Embroidered Badge**
- ◆ **\$30 HGFA Hang Gliding Training Video**
- ◆ **HGFA Competitions Manual** – no charge
- ◆ **HGFA Towing Manual** – no charge
- ◆ **\$45 1998 Hang Gliding Grand Prix Series video**
- ◆ **\$5 HGFA Pilot Training Workbooks**
- ◆ **\$15 Beginning Coaching**
(Australian Sports Commission)
- ◆ **\$35 Better Coaching**
(Australian Sports Commission)
- ◆ **\$35 Hang Gliding or Paragliding training video**
- ◆ **\$10 HGFA Operations Manual***
- ◆ **\$15 HGFA Operations Manual Binder***
- ◆ **\$5 HGFA Log Book***

* Replacement Prices only – These items are issued
free with initial Full Membership
◆ **\$5 Postage and Packing**
(Bulk orders sent C.O.D.)

Official publication of the Gliding Federation of Australia (GFA) and the Hang Gliding Federation of Australia (HGFA).

EDITORIAL CONTRIBUTIONS AND ADVERTISING

Contributions for the combined magazine should be sent to the appropriate sub-editor:

AUSTRALIAN For all Editorial and Advertising contact:

GLIDING The Gliding Federation of Australia, 130 Wirraway Road,
Essendon Airport VIC 3041, ph: 03 9379 7411, fax: 03 9379 5519,
email: secretary@gfa.org.au • website: www.gfa.org.au

SKYSAILOR HGFA sub-editor: Richard Lockhart

c/o Blackheath Post Office, Blackheath NSW 2785, ph: 0418 130354
email: skysail@ozemail.com.au • website: www.ozemail.com.au/~skysail/
Skysailor classifieds: Mailed or emailed to the sub editor or faxed to the HGFA on
(02) 6947 4328. Classifieds will be included in the next possible issue after receipt
of payment.

All photos and materials will be returned after publication only if a stamped, self-addressed envelope is supplied. Otherwise, photographs, whether published or not, will be filed and may be used subsequently in further publications.

CLASSIFIEDS AND ADVERTISING RATES

Classifieds are charged at \$15 for the first 4 lines, \$4 for every line thereafter (40 characters). Display advertising rates and mechanical specifications are available on request. All ads to be paid prior to publication.

ALL OTHER MATTERS

Subscriptions/circulation/changes of address:



The Gliding Federation of Australia – ACN 008 560 263 & GFA Sales:
130 Wirraway Road, Essendon Airport, VIC 3041, Ph: (03) 9379 7411,
Fax: (03) 9379 5519, Email: AdminOfficer@gfa.org.au Website: www.gfa.org.au



Hang Gliding Federation of Australia
PO Box 558, Tumut NSW 2720, Ph: (02) 6947 2888, Fax: (02) 6947 4328
Email: hgfa@tpgi.com.au

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.

NOTICE TO READERS AND CONTRIBUTORS

Contributions are always needed. Articles, photographs and illustrations are all welcome although the editors and the GFA and HGFA Board reserve the right to edit or delete contributions where necessary. Articles of unknown origin will not be published. All contributions should be accompanied by the contributor's name, address and membership number for verification purposes.

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.

Views expressed in this magazine are not necessarily those of the GFA, HGFA nor the editors'.

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

Copyright in this publication is vested in the GFA/HGFA. Copyright in articles and other contributions is vested in each of the authors in respect of their contribution.

Trade Practices Act 1974 (CTH): The publisher cannot ensure that the information/advertisements contained in this publication comply with the Trade Practices Act 1974 (Cth), and the responsibility for such compliance must therefore be upon those who submitted the information/advertisements for publication.

The publishers take no responsibility for any product advertised. The publishers reserve the right to refuse or withdraw any advertisement at their discretion. While every care is taken with material published, no liability is accepted for errors or delays in production.

CREDITS

Cover: Wingover – Photo: Jiri Stipek
Design: Suzy Gneist, Gneist & Moffatt
Film, Printing: Pirie Printers, Canberra ACT
Mailing: Pirie Printers, Canberra ACT



The Gliding Federation of Australia
and the Hang Gliding Federation of Australia
are members of the Fédération Aéronautique
Internationale (FAI)
through the Australian Sport Aviation
Confederation (ASAC).



Contents

February 2000

Paragliders, Penetration, Panic!

2

Brisbane Xtreme Games

4



Attempting the 1,000km hat-trick 6

The Competition Cockpit

8

Never a Dull Moment

10

Manfred Talks Shop

12

NSW State Gliding Championships

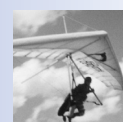
14

So, How Much Time Do I Log?

18

& Another Perspective

19



92nd FAI General Conference

20

Paraglider Baggage Allowance

21

In the Circuit & Stop Press

22

GST Blues

23



Narromine farmer
clears the way for aviation 24

Mervyn Millington Waghorn

25

HGFA News & HGFA Airworthiness Directives

26

HGFA Operations Manager's Report

28

Tasks of the World Masters

30

Sounds of Flight

32

GFA & HGFA Letters to the Editors

34

HGFA Events Calendar

35

The Pink House

36

AHSA Symposium Tocumwal

38

GFA New FAI Certificates & Badges

39

GFA Soaring Calendar

39

Schools in Australia

40

HGFA & GFA Classifieds

42

HGFA Addresses

44



Paragliders,

PETER BOWYER

(Instructor, Australian Paragliding Centre)

Paragliders are quite easy to fly and fairly safe when flown within their limitations. The main limiting factor is the very restricted speed range available. Most gliders are trimmed between 34 and 38km/h with a maximum speed of between 45 and 55km/h. I think there may be some confusion with understanding clearly the calibration of the actual wind strength itself, as most wind-talkers on hills are in mph and in aviation we are supposed to use knots to measure windspeed. Most pilots know the trim speed and maximum speed of their gliders in km/h, as most manufacturers' brochures, and real life as well, usually use the metric system.

Conversion Chart

13-18mph	=	20-28km/h
19-24mph	=	29-38km/h
25-31mph	=	39-49km/h

Once the wind gets above 20+mph at one of our local Canberra sites (Spring Hill, for example) it's time to start looking at which pilots are continuing to take off. A high airtime intermediate or advanced pilot may be able to cope with any difficulties that arise. The problem is that when a restricted or even a low airtime intermediate pilot sees others flying, they mistakenly assume the conditions are OK for them to fly as well.

Risk Versus Reward

On a weekend not too long ago the wind-talker was calling 15 gusting to 28mph. The gust factor here was obviously a concern. All you have to do is get your timing wrong on launch and you face the prospect of either being blown back into powerlines (as happened in this case) or experiencing a large tuck close to the ground after or during take off. Either one is an experience that's better to read about than actually experience yourself.

I have been amazed at some of the things I've seen over the past six years: Pilots ridge soaring with the speedbar on just to stay in front of the hill. Others with 'anchors' of up to four people attempting to launch.

But wait there's more! How about taking off with Big Ears already pulled in, or tying the speed system fixed on? Oh, I nearly forgot the few extra loops on the A-line mallions to trim the glider faster. Scary, huh?

The best way to deal with strong wind in a paraglider is to not fly at all. They aren't designed to fly in strong winds. Do a hang glider conversion, or better still get your sailplane license instead. What's the use of sitting in front of a ridge with little or no penetration, unable to do a 360? Where's the fun and safety?

**Ask yourself next time it's "SUSS" on launch:
Is the risk worth the reward?**

**A great day above Flinders, Victoria
Photo: Jiri Stipek**

Penetration, Panic!

Many pilots do however, at some time or another, get dealt a bad hand and have to deal with the forces of Mother Nature. So I thought it appropriate to write and share my experience in dealing with strong winds, in the hope that it may save others from the sometimes severe consequences. I have also found that the topic is never really covered sufficiently in the available textbooks and hope this article will help.

Getting Caught Out

If you do happen to get caught out (and it does happen from time to time) it pays to have thought about it beforehand and to be prepared.

The most common scenario I've seen is when the pilot has decided to fly even though he already knows that it's "borderline" too strong. He or she pulls up the glider and gets whipped off their feet and goes backwards immediately. The speedbar is tucked away with 'too much' velcro or simply can't be reached at all.

There are a few plans of attack here and a lot depends on the site involved and how much clearance you have behind take-off from obstacles like powerlines, fences or the terrain itself. The most important factor is the degree of wind speed you are actually trapped in and how fast you are going backwards (or better still, actually penetrating). If you are penetrating it's not that bad after all. Just relax, keep your hands up and get away from the hill. If you are going backwards though you might like to consider the following options:

1. Apply speedbar immediately, but not too much as your glider will become more unstable. Use only enough to start penetrating, since the ground is still very close and the last thing you need now is a large asymmetric collapse. It's also important to take a look around and to track away from any possible Venturi areas. If the wind is slightly off to one side, try to crab a little crosswind then slide off the side of the hill toward your improvised LZ. As you slowly penetrate away from the hill and your safety buffer improves, it's time to apply Big Ears then speedbar to lower you further into the wind gradient and improve your penetration. Remember that your glider is faster without the Ears applied as they create a lot of drag. So only apply Ears when in front of the hill.

Note: It's safest to release the speedbar momentarily to apply Big Ears, then you can re-apply it. With the Ears on it is safe to apply more speedbar if needed. To release Big Ears and speedbar, ease off the speedbar first, wait a few seconds, then pump out the Ears quickly if needed. Do not simultaneously release speedbar and pump the brakes, as a stall may occur when the glider pitches back due to the speedbar being released. Remember also not to set up your landing approach too far back, and allow for the wind gradient on your final glide when coming in to land.

2. The quicker you can make this decision the better: Pull Big Ears immediately (only one line each side); this will make your glider descend at a respectable rate and increase internal pressure reducing the chance of a collapse. Make sure that you are ready for a hard landing if the need arises with knees bent and legs together. Now is the time all that ground handling practice comes in handy as you get ready to slide your hands up to the rear risers following your brake lines, then spin around and pull the glider down with either the C or D-risers (depending on your glider's preference) the second your feet touch the ground. Most gliders come down quicker with the C-risers pulled. I personally would not recommend pulling the B or A-risers as some others would suggest. I have tried and totally dismissed these techniques.

Please note that this and other advice is only for emergency situations where getting blown back into lee-side rotor or powerlines could result in death or permanent disability. The possible hard landing from doing Ears near the ground is still going to be the better option.)

3. The 'Turn and Burn' option usually merits careful consideration after you have been trying to penetrate forward of the hill for a while and the wind has increased further still. The only good thing about this scenario is the abundance of dynamic lift and the tailwind component to help you with your unplanned XC over the back. If you already have a lot of speedbar on but have been steadily climbing in dynamic lift, keep pointing into wind the whole time you are climbing and keep the speed on. If you are still going backwards have a look where you are going to go and plan a 'turn and burn', as this is now your best option. Hopefully you are at least the height of the hill again as a minimum. Wait till you are directly over the top (apex) of the hill then do a shallow turn to save precious height. Apply a little speed (depends on your own glider's best glide, either hands right up or a touch of speedbar, some gliders even require a little brake). Rightly or wrongly (technically Speed-to-Fly theory) I have always flown very quickly away from the lee-side and felt much better for it afterwards! Glide as far as you can away from the hill. As you approach the same level as the hill you left, release speedbar if you had it on and prepare for any turbulence, associated tucks or pitching around. Hopefully it won't be that bad if you have flown far enough away. Turn on to final a little early in case you hit bad sink or turbulence. Chances are you will now be flying back toward the hill you left. On landing, remember to stand up early in your harness, cross both fingers and bend zee knees! *Good luck!*

What about a B-line stall?

The only time I would use a B-line stall in strong wind would be once I was safely a long way in front of the hill, still very high and wanting to get on the ground quickly for reasons such as signs of further increasing wind or a gust front approaching. I hardly ever use B-line stalls except when test flying a glider, and much prefer the use of Big Ears and speedbar combined as I still have a lot of airspeed and good rate of descent, therefore escaping the airmass I am worried about at the time.

B-Line stalls are not to be used near the ground.

I would always recommend at least a minimum of 500ft before B-lining to lose height, especially if your glider is old and has a few hours on it. If you do pull a B-line stall, remember to be prepared and give a slight push on the A-risers or speedbar if the glider is too slow to recover. It's common for a glider to be parachuted for a few seconds before the airflow "re-attaches". Always give yourself plenty of height above the ground for your glider to fully recover. I know of an instructor who was killed doing this manoeuvre by not allowing enough height for the glider to fully recover.

Fly Hard but Safely!



Brisbane Xtreme Games

PHIL PRITCHARD

The Xtreme Games were held on the Brisbane River at Jindalee, 3 to 4 December. Hang gliding was included as an aerobic demonstration. The river was not that suitable for hang gliding, with high trees lining the riverbank and the only landing options on water. For this reason we supplied two Moyes Sonics. Not exactly aerobatic gliders, so the scoring format was more freestyle and spot landing. *Mastercraft Australia* supplied two brand new top-of-the-range ski boats, and Bill Moyes supplied two pay-out winches. We invited ten pilots to compete, with a total prize pool of \$3,750. CASA granted a height limit of 1,000ft agl.

Day One Launch order was drawn out of a hat, with Mike Jackson drawing number one. The spot landing was a 6ft floating trampoline in the middle of the river. With the pressure on, Jacko landed in the middle of the spot, with the only drawback being he snapped the keel float off. Lucky for JR's gaffa tape. All pilots flew well, with the spot landing deciding the round winner. I think it was more luck than good management, with Jon Durand Junior dragging his wingtip in the water on downwind, then landing dead centre of the trampoline and jumping up and down a few times for joy (or anticipation of prize money). It was definitely a crowd pleaser, and also a high scoring display of sheer skill that won the judges over. Steve

Far left: A high banked manoeuvre during landing approach sets the pilot on course for the floating target
Inset: Steve Moyes is distracted during his pre-flight preparations
All photos: Peter Bolton





Above: Mike Jackson nails the spot on Day One
All photos: Peter Bolton

Moyes was the only other pilot to nail the spot for the two rounds. The other stand out's were Jon Durand Senior (who was a last minute reserve) and Karl Ewing for some awesome aero's in the intermediate gliders, and also Tasha who stood in the A-frame on final but missed the spot by a country mile.

Day Two Same launch order as the previous day with all pilots trying to do aero's close to the water, loosing some accuracy with the spot landing. I didn't see Carl's flight, but talk was that the certification had tested the Sonic to its limit! The judges scored him a loop but the problem for JR was aeros were only 30 percent of the total score. We had scheduled two rounds for the second day but the wake boarders ran way over time. We also had problems with winches and one of the young pilots crashed into the water on final, so the round was cancelled.

Overall placings were equal first Jon Durand Junior and Senior, with Steve Moyes coming in third.

The event was staged more for the promotion of hang gliding than pilot enjoyment. I would like to thank the pilots who competed, Moyes Gliders for their support, and all the volunteer workers who made this event possible. The Xtreme Games will be televised on Channel 10, 11am Sundays, from 13 February to 25 June. You can check out the Xtreme Games website for more information at www.xtremegames.com.au



Below: Five pilots in the launch boat (left to right): John Durand Senior, Tasha McLelland, Mike Jackson, a Newcastle pilot and Tove Heaney with Karl Ewing walking away





Attempting

BOB WARD

Early in November last year I realised that I faced the rather daunting prospect of three trips by road to Victoria in as many months, from my home in Queensland. Firstly, to deliver my Ventus 2CM to Sportavia, then to have a week of personal flying in January, and lastly to participate in the Nationals, and bring my beloved glider home again.

Driving with my glider in the trailer does not appeal to me at the best of times, and with the knowledge that gliders on line with Sportavia are almost never retrieved by trailer, I elected to keep my eye on weather patterns during late November, with the view to flying the glider to Tocumwal, realistically, probably in two stages, but if the opportunity presented itself, in one stage, which would give me my second 1,000km flight.

With respect to motor gliders, I have always been largely a purist, but since owning this ship I have to admit that the flexibility afforded by being able to self retrieve if necessary, and then to launch completely independently the next day, allows one to plan flights which would otherwise not be contemplated because of the logistics involved.

November 30, the last day of spring, presented a favourable weather pattern to attempt the flight. The synoptic situation enabling these ambitious flights south, presents as a ridging High up the Queensland coast, and a shallow trough further west, such that the flight to the south-west can be done with a following north-easterly wind.

With the unstable conditions afforded by the shallow trough, early starts from the McCaffrey field site of the Darling Downs Soaring Club are usually possible, indeed sometimes as early as 8am Eastern Standard Time.

The New South Wales State Gliding Championships were on at Narromine, which is right on track, and about 650km into the almost 1,100km flight. I had done

this leg comfortably in similar weather conditions four times before, so felt reasonably confident that Narromine as a first stage was realistic. If I got there on time to attempt the remaining 450km, then so much the better.

I launched from DDSC at about 9:45am, in hindsight much later than I could have, as the low-based cumulus were already well established, and my first thermal climb was a steady four knots. I made reasonably good progress with the following wind, and was fortunate to be able to get high to cross the unlandable scrub south of Millmerran.

Conditions remained consistent, although the cloudbase never got above 6,000ft for the first several hundred kilometres. Indeed at Narrabri I found myself at 1,200ft agl just when I needed height to cross the unlandable Pilliga scrub between Narrabri and Coonabarabran. However, I was able to recover quickly, and with a climb to cloudbase of about 7,000ft I was able to cross the Pilliga without deviating, although always being careful to maintain a comfortable glide angle to cultivated areas to either side.

Abeam Narromine at 4pm daylight saving time, I was surprised to hear the competition pilots already on final glide. With 450km yet to go and the knowledge that my mates would be soon enjoying a coldie at Narromine, I had to dig deep to find the reserves to continue the flight towards Tocumwal. However, south of Narromine I took my best climb for the day to over 11,000ft and conditions looked even better ahead for as far as I could see.

My next several climbs to almost Narrandera were all just as good, but the good times of course seldom last. In this area I found myself confronted with heavy cirrus overcast from the approaching trough. I struggled to remain reasonably high, knowing that in these conditions the high cumulus under the grey overcast would not work well at lower altitudes.

After several weak climbs I was finally able to glide clear of the cirrus overcast, to take my final glide thermal well south of Narrandera, to about 8,000ft. I was indeed very relieved to be able to call Tocumwal, this late in the day, to announce that I was on a final glide of the ferry flight from Queensland.

I landed at Tocumwal at about 8:15pm with about 30 minutes of daylight remaining, much to the delight of not only myself but Sportavia staff and guests as well.

After a few light beers, a welcome meal and much backslapping, my thoughts turned to the prospects for the following day. The trough gave every indication that it would not advance too fast, and other pilots were already talking 1,000km, naturally being encouraged by my success. I decided that as I had not yet done a 1,000km FAI triangle flight, an early night was in order and, if I felt up to it, I would indeed follow my luck on the morrow if the weather opportunity presented.

After nine and a half hours in the cockpit I naturally slept like a baby and awoke early, feeling really refreshed and ready to go for it

the 1,000km hat-trick

again. After a shower and a brisk walk, followed by the delightful Sportavia breakfast, I attended briefing to find, from Ingo's weather analysis, that another 1,000km day was at least possible.

Robert Looesen from Holland, and Hanna from Czechoslovakia were already planning a 1,000km FAI triangle – Tocumwal/Galong/Tottenham return. I decided to join them. Other pilots were planning different configuration 1,000km's.

Robert and Hannah launched about 9:45am and I followed about 20 minutes later. The day was never in doubt as a 1,000km one, and eight hours later I found myself rather bewildered at having achieved 126km per hour around a 1,000km triangle, and having flown two 1,000km flights in as many days. This, after having struggled for over 20 years to achieve my first one – on 3 January last year.

This day proved to be one of those very special days that Tocumwal so often presents. In all, five 1,000km flights were achieved. Needless to say there was much celebration in the bar and restaurant that night but I decided, with the weather pattern still very favourable, that just possibly, three 1,000km flights in as many days could be achieved.

I now had flown a 1,000km double out-and-return, a 1,000km straight out; and with today's flight, a 1,000km FAI triangle.

Why not try for the 1,000km out-and-return tomorrow, to complete 'the boxed-set of 1,000km flights' as well as the hat-trick?

I am sure, however, everyone thought I was joking when, on receiving the usual floral bouquet from Ritz, I announced that evening that tomorrow I would try the hat-trick!

The weather the next day still gave every indication of being as good as the previous two days. Despite almost 20 hours in the cockpit out of the previous 48 hours, I felt fresh and ready to fly. Not so, however, most of the other Sportavia guests, with not a single 1,000km declared for the day, other than mine. Those Europeans should really be made of sterner stuff! I guess when on a roll, one is to a degree running on adrenaline. However, with the good conditions combined with my good spirits, it seemed logical that I should try for a goal that may never have been achieved before, three 1,000km flights in three days.

I was a little delayed in getting my glider to the line on this day, and when I launched at 10:15am the cumulus were already established. The wind was stronger out of the north than the two previous days, and the thought of punching a 15kt wind for 535km to Gilgandra was more than a little daunting.

After two hours of flying, I was delighted to find that I was achieving 100km/h into a 20 to 30km/h headwind. Calculations showed that even if I could round Gilgandra as late as 5pm I would still have a fair chance of making the 535km glide back to Tocumwal by last light, provided the tailwind and thermals delivered.

I was delighted to round Gilgandra, north of Narromine at 4:15pm, but on looking south it was obvious that the return journey would not be easy. The tailwind was there, only 5kt at Gilgandra, but getting stronger every kilometre that I flew further south. The problem, however, was that conditions were rapidly bluing out on track, rather an unusual situation with the synoptic situation prevailing. I was faced with the all too common dilemma in long distance flying, of weakening conditions and the possibility that last light would prevent successful completion of the flight.

150km from home I elected to conclude the flight from 2,000ft agl with an engine climb of 5,000ft to put me on a comfortable final glide for Tocumwal, arriving just before legal last light.

As I was climbing out under power I realised that although conditions had completely died on track, 50 or more kilometres to the east, there were still cumulus bases at 12,000ft, higher than I had been at any time for the whole day. I think if the diversion had been made early enough, the three 1,000km flights in three days may well have been achieved. Isn't hindsight the keenest sight of all?

So that was it. Three days of the best soaring conditions I have ever experienced. Unfortunately, no records though. The straight out flight equalled Ingo's reciprocal Nimbus flight of many years ago, but was exceeded by Harry Medlicott's magnificent flight – Lake Keepit to Gawler – last year. My FAI triangle flight, at 126km/h was a little short of Ingo's Open Class record set in his Nimbus 3 several years ago. The out-

and-return flight, had I completed it, would have been an Australian record as there is, as yet, no claim for this 1,000km configuration.

Not to worry! The knowledge that one can occasionally tilt at windmills, and come close to toppling some, means that I still have these goals to aim for when next I fly from a potentially record breaking site.

Jondaryan, as a starting point for straight out flights, has to equal the best potential of any site in Australia for straight out distance attempts. I believe that 1,450km to Mt Gambier in South Australia is genuinely achievable, given an 8am start and a 15kt or better north-easterly. And, of course, Tocumwal as a site for record closed circuit distance flights is now legendary.

How fortunate I am that I am able to utilise my glider at both of these fabulous sites during each soaring season!



OUR LATEST RELEASE

Aussie designed and manufactured

Microair 760



- 760 channels – 25 memory channels • 2 displays – active/standby with flip flop or memory only (25 memory channels plus scanning)
- Priority toggle – immediately switches to channel 25, handy for 121.5, finish line frequency etc.
- Remote stick mounted toggle switch can allow hands free memory selection and scanning
- TX indicator – steady red means transmit – flashing indicates a transmission
- longer than 40 seconds STUCK MIKE INDICATOR!
- RX indicator – Steady green means signal
- Variable squelch control • 2 place hot mike intercom as standard
- improved mike input with speech compression • 3.5 watts carrier (14 watts PEP!) • 85 ma standby – 1.2 amps transit – will work down to 10.4 volts. Now only 135mm in depth!
- ACA approved – VFR approved to 25,000ft

RRP \$1,150.00 ex tax

Please enquire with dealers for club pricing.

Microair

**Boom microphone available
– rugged construction
electret insert.**

Contact

MICROAIR ELECTRONICS

PH: 07 5463 5670

FAX: 07 5463 5695

The Competition Cock

HANK KAUFFMANN

Competition gliding is largely a mental sport, a battle of wits. Apart from the obvious things like wing profiling, sealing, polishing, etc, there are big performance gains to be made by reducing the workload inside the cockpit so that you can concentrate on what is happening outside the cockpit which, of course, is also important from a safety aspect.

In my early competition years, I would climb out of the glider after a long flight absolutely mentally and physically exhausted. Inexplicable, bad tactical decisions indicated that I was mentally overloaded. The following are some of the cockpit details that I incorporate into my glider to reduce the cockpit workload.

The instrument panel layout should be designed to be the nearest thing possible to a 'head-up display'. Starting from the top of the panel:

Compass

In my opinion a card type compass is best in that a quick glance tells you which way to change course. Unlike the traditional airpath type which requires mental calculation.

Digital Vario

I have a very small, rectangular box with large numbers installed under the eyebrow of the panel, which is configured for 20-second average in climb. Netto or relative in cruise.

**Hank Kauffmann's
competition cockpit.**

ASI and Vario

My ASI and electrical vario are installed as high as possible in the panel. The vario audio must be precise, as this is on what you should be climbing and correcting, with only a glance at the averager.

Altimeter

I find using QNH requires too many mental calculations, and makes little sense when flying in the flatlands of Australia. I set my altimeter on QFE for tactical decisions, and the altitude print-out on my computer screen is set to QNH. This way I only use QNH when giving altitude on the radio as is legally required.

Computer Screens

Unfortunately, due to their bulk, computer screens are installed low in the panel. It is better if all the information you need is on one page, to avoid changing pages in flight. 'Off course' arrows reduce navigation workload. Computer buttons, switches and dials should be installed up high on the panel eyebrow if a remote

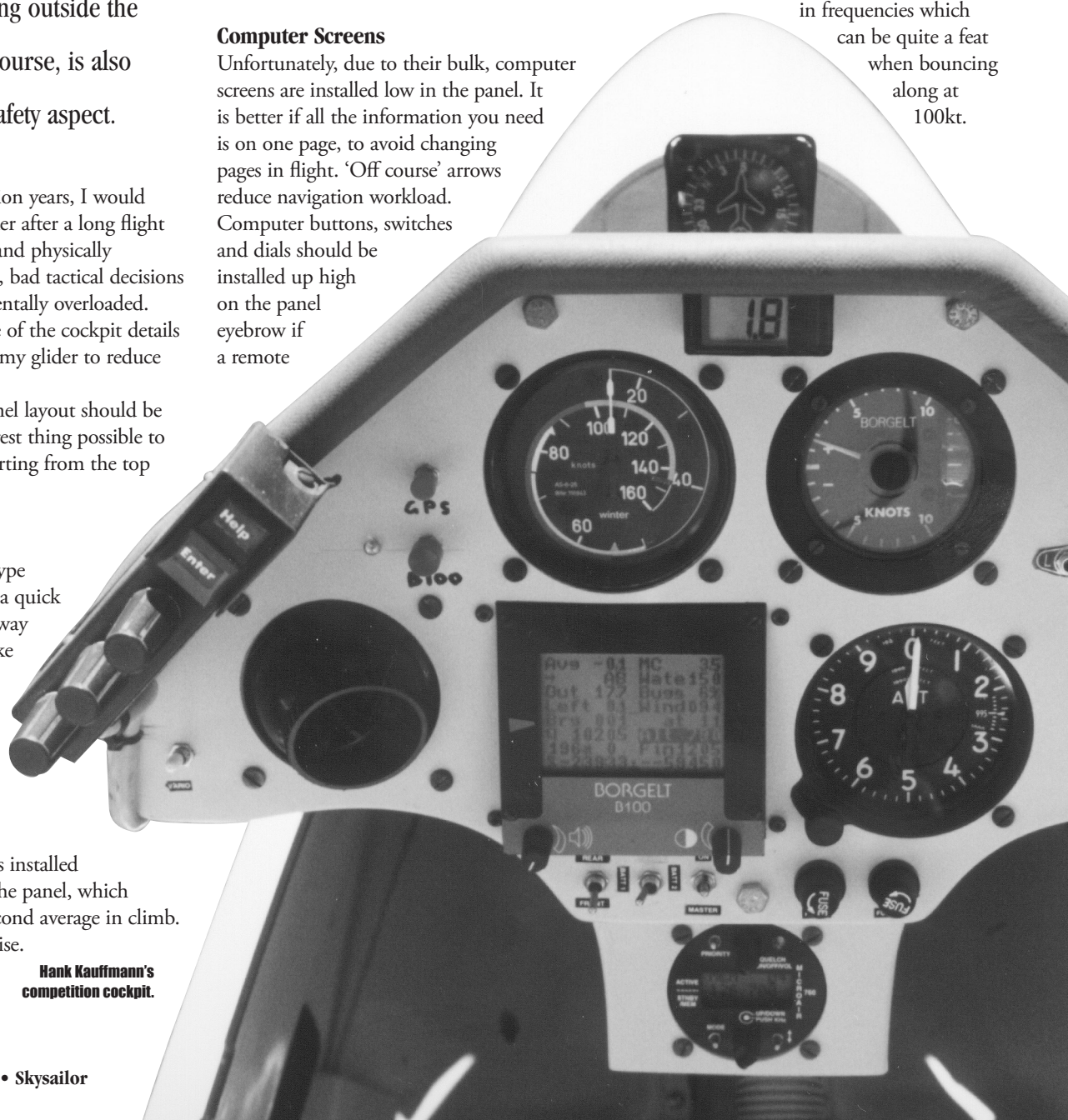
facility is available. This helps in keeping the eyes high.

Eyeball Vent

Most gliders have woeful ventilation. In my panel I have a 30mm eyeball vent which is essential here in Australia.

Radio

Competition flying requires many in-flight frequency changes, so a radio with a memory bank is best. I use a Microair as it has a remote frequency-changing button that I have installed on the joystick. All I have to do is move my thumb and press the button – no more leaning forward to dial in frequencies which can be quite a feat when bouncing along at 100kt.



Stopwatch and Drop Rate Chart

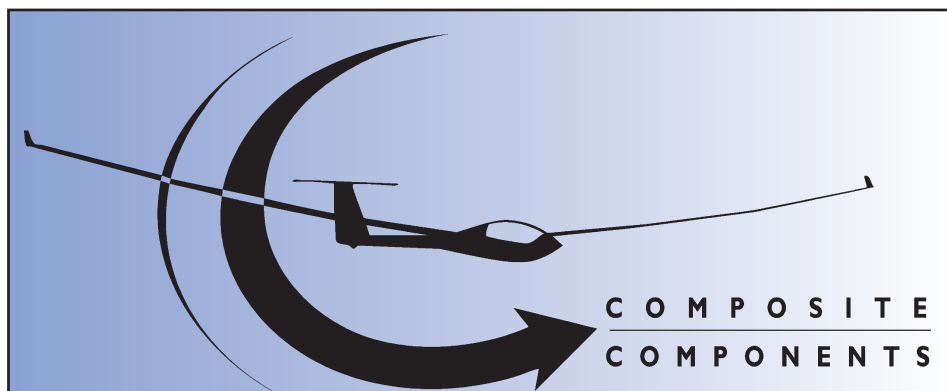
Water ballast management is essential to maximise your glide/climb. I hit the stopwatch when I open the dump valve, and again when I close the valve. A glance at the drop RTE chart tells me exactly my wingloading in kg/m^2 .

Oxygen

Oxygen requirements vary between pilots. In my case, bad decision-making and headaches on high days indicated I had a problem. I now go onto oxygen at 8,000ft using a nasal canula. On a 10,000ft day when the operating band is around 6,000 to 10,000ft I am on oxygen the whole time. I arrive home after a long flight feeling refreshed. The most convenient system is to hire a very light FRP bottle from your local BOC agent. Buy their regulator and screw it down to a trickle. Use medical oxygen with a nasal canula and in-line flow meter. This system is not suitable for over 18,000ft or very cold conditions, but is ideal for most competition flying. I have found that every country town has a bottle exchange depot.

Electrics

I use two batteries with completely independent circuits, plus independent circuits for radio and instruments to prevent interference. Use white aviation wiring not auto!



Make Horsham* Aerodrome your base for complete sailplane care and attention.
Repair work and hangarage fully insured.

- ★ GFA APPROVED WORKSHOP ★ REPAIRS – MAJOR/MINOR
- ★ REFINISHING IN SUPERIOR GERMAN 2K OR FERRO
- ★ INSPECTIONS/SURVEYS – FRP/STEEL TUBE/WOOD

Refinish Vacancy Available in Year 2000

Phone: Joe Luciani – 03 53825735
Hangar 03 53826777 Fax: 03 53821999
23 FARRAR AVE, HORSHAM, VIC 3400

Australian Agent for Mountain High Electronic Delivery Oxygen Systems.

**The Good Country. Home of the Wimmera Soaring Club.*

Pee Tube

It is impossible to operate efficiently if you are busting for a leak! You must be able to operate your pee tube one-handed and with only the occasional downward glance, so as not to interfere with your flying. Without an efficient pee tube system, pilots tend to dehydrate themselves which is dangerous and can lead to 'pilot's disease' ie kidney stones.

Cruise/Climb Switch

Automatic is best in reducing workload. In my gliders, I install a magnetic switch on the flap lever or trim system, aft trim or positive flap automatically switches to climb.

Electric Bug Wipers

Bug wipers are not really essential in Australia, but if you do decide to install them, the electronic system is the way to go. A flick of the switch and it is done. The hand-wind system is too time consuming and distracting.

Even if you are not into competition flying, a well set up cockpit makes cross-country gliding all that much more enjoyable and safer.

AIRBORNE AVIONICS Pty Ltd

**Sales and Service
of Avionic Equipment**

**CASA approved
Avionic Workshop**

Agents for

**ICOM
KING**

SKYPROBE

WALTER DITTEL

LEATHERMAN

Arnie Hartley

Phone 02 68 892 733

Fax 02 68 892 933

**Email: hartley@avionics.
com.au**

Never A Dull Moment

KEITH LUSH

There's something about our sport that sets it apart from so many other outdoors activities, and I'm not talking about the obvious.

I recently made the traditional early season trek to the Albany of WA region with two of my mates, to try out the old diver on the 'comfort zone' sites – sites that help those of us who don't fly a huge amount to get back into flying trim.

Three of us headed south on Thursday evening, setting up the canvas at around midnight at Albany's sacred site of hang gliding, Shelley Beach. The following morning the wind direction suggested we try out Bornholm Beach (Back Beach to the locals). A fairly overgrown 4WD track winds its way through fairly dense scrub, bushes and trees, and anyone with a nice shiny new vehicle would be reduced to tears at the sound of the sticks and branches gouging great furrows in the duco from front to back. Then when you get out there, it's a hot dusty struggle to the set-up area, lugging the gliders, gear, food and water that you must take with you for a trek like this.

Makes you wonder why the hell you persist. Especially when the size and ferocity of the march flies out there make it impossible to take a peaceful nap under your wing while you wait for the breeze to pick up. I swear that these monsters can drill their bloody beaks through denim Levis. Even when you give them a thump with a rolled up Skysailor they seem to give a bit of a shrug and fly off to attack some other poor bugger's shins.

So there we were, looking out over one of the most magnificent coast lines you can imagine, waiting for the sou-wester to pick up, but not really getting overly agitated about anything. Then before our eyes we were treated to one of those moments that Mother Nature bestows on the lucky few. From our vantage point, some 80m above the beach, we saw a pod of whales frolicking about 100m offshore. A huge majestic tail would lift high out of the water, then beat the surface in some mysterious ritual amid a great crescendo of agitated foam and the thumping echos that we could hear downwind from the spectacle. Then one of these magnificent creatures would hurl its massive body half out of the water before rolling onto its back as it crashed down, cleaving a passage through foaming water. Its huge flippers would flap about in the air as it powered along upside down for an indeterminate amount of time, seemingly showing off in front of its mates and sunning its milky white underside as it surged through the water.

For a while we completely forgot about flying and lunch and what to cook for tea tonight. If it wasn't for those bloody march flies it would have made the trip out there perfect just for that sight alone. But you see, as often happens, Esky suck got the better of us at about 4pm and we didn't get to fly. It might have come on half an hour after we left, but there's always tomorrow.

Nature threw up another spectacle for us to marvel over that very evening. Two blokes rolled up at about 7pm and started to put up their tents. With the heat beads in our mini Webber taking care of that night's meal there wasn't anything better to do than have another coldie and watch the light fade. After an hour or so, while one bloke had an igloo tent sort of up, the other was struggling a bit with his.

It was an A-frame tent with a funny looking green waterproof fly thing on top that just didn't look right, with baggy brown sides and sway back apex. To use my dear old mum's favourite saying, it was a bit wonky. By now their car headlights had to go on so they could see what they were doing. We had commented on this weird looking A-frame tent when the bloke with the igloo tent said something to his mate and the penny dropped. He'd put the bloody thing together upside down. The green fly turned out to be the waterproof floor and the baggy sides were meant to be part of the roof.

Must be paraglider pilots.

Next morning I went over to bid "Good Morning" and asked the guy in the A-frame if he worked for a roll in a turf company. He seemed a bit perplexed until I suggested that they too follow the green side up rule. He was a paraglider pilot.

We flew Sand Patch that morning in a light sou-sou-westerly. After a couple of hours flying, the breeze dropped so we parked the gliders in the set-up area and went into Albany for fuel and food. On our return a half dozen paragliders showed us how to handle the light conditions while we slept off lunch in the shade of our gliders. At least that's something you can't do so easily with a paraglider. Those six paragliders were having a wonderful time although not getting a great deal of height. Unless that is, you believe the girl who proudly announced over the two-way that she had reached cloudbase. French paraglider pilots – Merde! Every now and then one would fly down to where we were, just to piss us off since it was by now a little light for us. But we got our own back when we managed to lure one of them into an area better known to us regulars as the glider vacuum hole, and took great delight in guffawing as he realised he had been literally sucked in.

That night we all gathered around the glowing heat beads and mused over the day's activities. In the end it didn't matter what we flew, we all have the same goals and having fun is high on the list. Comments on cloudbase, Gordon finding the vacuum hole at Sand Patch, three hang glider pilots missing the best wind of the afternoon because they were sleeping lunch off under their gliders and green side up tents were all just part of the day that was. Who knows what tomorrow would bring?

Tomorrow, as it turned out, was typical of many 'last day at Shelley's for this trip' days I can remember. The breeze was out there... but not in at the ramps. Graham's theory made sense. West Cape Howe is a big lump of granite sticking into the Southern Ocean. It heats up and forms a big hot bubble of air that the weak south-easterly struggles to penetrate. You can sometimes wait all day and then just get one late glide to the beach. But you always wait and wait and wait, often packing up camp hours later than you intended and starting the long drive home very late. We reckoned that it would be on in another hour so we waited. One or two paragliders were practicing their ground handling and gliding to the beach. Easy for them to bundle the canopy into a car and get back up to take-off. Some guy from Channel 7 Perth rolled up with a camera crew hoping to get some action and we told him to come back in an hour. He asked if we could guarantee lots of gliders in the air then, and we just laughed. TV people don't seem to understand that we can't engineer nature.

As it happened, we were able to coax enough breeze for the paragliders to stay up, and an hour later when the TV circus returned there was action for them to film. Max, the compere guy for the TV

show they were shooting, managed to con a tandem flight and that was fun to watch. The self-assured confidence of the 'Star of the Show' gradually managed to evaporate as launch time approached. It was replaced with that look of 'Why am I doing this?' as he paced around verbalising his lines for the 'just before launch' shot. We had to chuckle when the cameraman, while gaffer taping a small digital video camera to Max's right hand, tried to make sure that he didn't wear any damage to the camera if the flight went wrong. He couldn't give a bugger about Max, it was the thought of his precious camera ending up in the drink that worried him.

However, I was impressed with Max's composure as soon as the cameras started rolling. He managed to get his voice under control while Jiri expertly ground handled the glider towards take-off, and with only one take away they went in a perfectly executed launch. Max was wrapped, the cameraman was happy and the last I saw of them was the local TV station producer bundling them into their vehicles while he mumbled something about their rent-a-crowd drinking all the wine and getting pissed before they got there for the next scheduled shoot.

As soon as the TV circus left, we decided that the breeze was strong enough to launch a couple of hang gliders. It was a bit of a scratch to get up to the top of the main ridge and I took about three or four passes, gaining about 50ft a time, until I finally made it to the top. Having to duck and weave between the four or five paragliders was an interesting exercise in spatial awareness since you have to constantly think in three dimensions. That, as well as judging the speed of your own hang glider compared with the slower paragliders, made it an interesting flight in the sweet lift bands of Shelley's main ridge.

Once again Mother Nature put on a show in the ocean below us. A school of some 20 or so dolphins were playing in the shallow water just metres off the shore. There were a couple of people swimming amongst them and a crowd on the beach thrilling to the spectacle. The dolphins were zooming around the swimmers, jumping occasionally out of the water then forming up in a group again as they mooched around, seemingly looking for some more fun to have. I've been coming to Shelley's for around 14 years and am happy to notice that the marine life in the area seems to be improving.

So that was the Shelley's trip. Sunday afternoon and later than it should be, we packed up the gear, bid our farewells to those lucky people staying down longer and headed up the dusty track that signals the start of the four and a half hour journey back to Perth.

So there is something else about our sport that is special. It's those memories that we have long after the details of the flight fade on the page of the log, that keep us coming back. Never a dull moment!



Matt Denton flying at Moggs Creek, Airey's Inlet, Victoria
Photo: Damien Lynch

Manfred Talks Shop

MANFRED RUHMER

(reprinted from 'Manfred's Rumors', courtesy of Icaro 2000)

From my observations during the last Hang Gliding World Championships at Monte Cucco, I will discuss the different hang glider types, harnesses, rigid wings and the performance differences between rigid and flex wings.

Flex Wings

Two new gliders were introduced at Monte Cucco. The first one was the 'Litespeed' from Moyes, designed mainly by Austrian Gerolf Heinrichs who won the Pre-Worlds last year on a Laminar. Above all the sail design and batten profile were changed, some parts of the frame were modified and improved. The outcome was a better glider than the CSX which, as I see it, will enable Moyes to come back into the competition scene. The best Litespeed pilot was Brazilian Nene Rotor (I refer to him by his nickname otherwise no one would know who I am talking about, plus I don't even know his real name!), who flew for Paraguay and finished 9th. After him Steve Moyes in 15th place demonstrated not needing to compete in the Senior Class to achieve a good rank!

The other newcomer was the 'Cheetah' from British manufacturer Avian. This glider is very big (170m²); unfortunately it did not perform that well and gave the impression of being an intermediate kingpostless glider more than a top competition model. I guess they will continue working on it and maybe improve its efficiency. It flew well in thermals and at lower speeds. The British pilot Ron Richardson showed, in particular conditions, that it was possible to win a day on his Cheetah!

The rest were already known models with some improvements.

I started looking at the gliders according to the ranking list. The first three gliders were Laminar ST14 '99. This glider was finished in December 1998 and introduced in January 1999. The differences are the SPU system (which is even more efficient than the previous one) small changes to the sail cut (especially the undersurface) and a new batten profile. About a month before the beginning of the competition I tried a glider with some extra modifications on the sail and it felt quite good. Since I had not tested it in any big competition to confirm my feeling, it became part the MR edition.

André Wolf was flying this model and had the thin cables plus a carbon A-frame; Pedro Matos (3rd) and Gordon Rigg (5th) were flying the regular ST '99 model with thinner cables and carbon speedbar.

The so called 'thin cables' were used by other manufacturers as well; we had 2mm ones for the side wires and 1.5mm for the longitudinal ones. The thinner cables (1x19 strand) are strong enough for the hang gliders but not as flexible as the normal ones; therefore they may kink easier and you must be more careful when de-rigging the glider. The important thing is that these thinner cables are changed more often than the normal ones and are thoroughly checked before every flight.

Guido Gehrmann showed us very clearly that these cables are resistant enough. On the last day, which was cancelled at Monte Subasio, he flew back to Mt Cucco and decided to lose height doing some loops. As he was coming out of what became his last loop that day, one downtube broke. For one thing he had very thin downtubes (14mm) and his longitudinal wires were attached to the central section of the downtubes (which is not a great setting for aerobatics). The wires resisted the high positive G-load and what ended up not holding were the downtubes! Fortunately Guido was able to land safely after deploying both his reserve parachutes.

Beto Schmitz on his La Mouette Topless finished 4th. He also had a carbon A-frame and thin wires. Thevenot had made some small changes but they did not seem to improve the performance at all. Noticeable in Betinho's flying was his good climb in thermals. The British pilot Steve Cook (7th place) and Gérard Thevenot (10th place) were flying this model as well.

Richard Walbec (6th) showed up with a WW Fusion this year. Wills Wing hasn't achieved any eminent results in important international competitions these last couple of years; it looked like they had just tuned the Fusion to make it go faster.

The best combination, concerning A-frames, for considerably lowering drag is, at the moment, carbon downtubes and a speedbar with the proper profile plus rounded aluminium joints.

One of the favourites for the title was Oleg Bondarchuk from Ukraine, who came in 8th with his Aeros Stealth KPL. He didn't make any outstanding changes to his glider; he decided to use a glider which he already knew, and was flying with the, now usual, carbon speedbar and thin wires. Last year for the Europeans in Slovakia, Oleg showed up with a KPL that had a different sail cut hoping to improve his performance. After being disappointed with the first task he decided to go back to his old sail because the new one had not met his expectations. Oleg on his KPL is the only one to show an impressive climb in thermals while flying a glider without round tips.

I have noticed that in the last World Championships the first places were occupied by pilots flying gliders with round tips. Apparently this type of wingtip is somewhat more efficient than the traditional one used by Wills Wing, Aeros, Bautek, Avian, etc. Even the new creation from Felix Ruhle, the Atos, has a round wingtip.

What is the difference between a 'tuned' glider and a series and certified one? Presently to have a certification (for instance DHV) the gliders must pass a series of tests. The pitch test is performed at different angles of attack and the pitch must not reach certain limits. I wouldn't say that these limits are excessive, even if I know that it is possible to lower the SPU's and still have a safe glider. The problem is to know how to lower them and what needs to be modified with it (ie batten twist, VG, etc.) in order for the improvement to be greater. The carbon A-frame and thin wires are not part of the series gliders. It is important to have a proper aerodynamic harness in order to enhance the improvement plus a proper flight position.

Rigid Wings

This year we had a Class 2 competition which we did not have in Australia two years ago. Basically there are two different concepts in Class 2. On one side there's the hang glider type with A-frame control (like the Atos, Exxtacy, Ixbo, Top Secret, Ghostbuster and E7), and on the other there's the airplane type with 3-axis joystick control (like the Swift and Utopia, both from Bright Star).



Flying over Montefestino, Italy – several years ago
Photo: Randy Haney

The Swift is definitely the highest performing rigid wing, but surprisingly only British pilot Johnny Carr was competing on it. Brian Porter was flying the Utopia, which has almost the same performance as the Swift but is lighter and smaller, easier to transport. Having the possibility to use an aerodynamic cabin with these wings, the performance difference is greater compared to the A-frame controlled ones. The Utopia has a system of combined pitch and roll rudders plus steerable winglets. I think this type of wing will be more popular in the future and am sure there are ways to improve its performance. The A-frame controlled wings offer a bit more performance as most flex wings while still being light enough (most of them) and easy to transport.

I won't go into details of the Class 2 competition, apart from mentioning that it was a shame that due to some photo problems the Bright Star wings lost their top positions... maybe even the championships itself!

The difference between the top tuned hang gliders and the A-frame controlled rigid wings is not too great. I did notice that when we were trying to get our best glide (approximately 50km/h) the rigids did better than

the flex wings having a glide ratio advantage of 1 or 2 points due to their higher aspect ratio. As soon as we started flying faster (70-80km/h) this advantage practically disappeared. These are no scientific tests, just my observations during the competition, and values may vary a little bit according to wing loading.

Harnesses

The major novelty was Nene Rotor's new 'Havana' harness. He used a combined fibre frame plate and internal pockets with the reserve parachute on the back. Optically the harness looked great and it had its success since the Brazilians in 2nd, 3rd and 4th place were flying with it.

Woody Valley presented the latest 'Nailer' model with a GFK frame plate and a partially inner parachute container. I liked the lateral pockets, they have a very clean cut.

Another new model, the 'Cigar', was introduced by Gerolf Heinrichs. He developed it with the support of M2. From all the new harnesses this is the one that most appealed to me. It has an articulated GFK frame plate and the same angle setting system used by M2. The parachute container

and other pockets are not internal but very well "hidden" covered by a second "skin". It is quite slim; the harness looked great and very aerodynamic. This could be the beginning of a new harness generation.

It looks like the belief is that having internal pockets is the solution, but the truth is that reducing the width is even more important. In some harnesses the position of the parachute deployment handle has been sacrificed and it has become hard to reach, which can be quite unsafe. It would be a better solution to have properly placed outer pockets and reduced width – if this can be achieved.

M2 showed up with an improved version of their harness model; the cut was different and so were the lateral pockets. What I liked the most in this harness is the angle changing mechanisms. I can easily change my flight position without taking my hands off the speedbar, and without having to correct it every now and then. The frame is made of articulated aluminium tubes, which enable you to easily move on the ground.

This covers most of what I had a chance to notice at Monte Cucco.



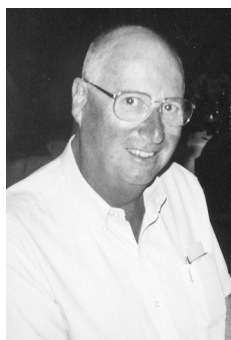
NSW State Gliding Championships



Orana Soaring Club pilot Geoff Flood with Tom Claffey at the NSW State Gliding Championships

COLIN TURNER

It all started at the 1998 NSW State Gliding Championships held at Gulgong in February 1999 when, at a NSW Gliding Association meeting called during the competition, Beryl Hartley raised the problem of there being too many competitions and not enough people to run them.



Competition director
Eric Sweet
All photos: Anne Elliott,
Western Star Newspaper

In the discussion which followed, it was proposed that future NSW State Championships should combine all classes and larger clubs should, in turn, accept the responsibility of running the competition.

The Bathurst Soaring Club was well represented at Gulgong and committee member Armin Kruger accepted the challenge of running the 1999 competition. The club's airfield is not suitable for landing a lot of aircraft at once so it was agreed that Narromine would be the preferred choice of site. While BSC members ran the competition, the Orana Soaring Club looked after catering.

The championships were held from 27 November to 4 December, following the Narromine Cup Week. There is no better site in Australia for early summer flights and the results support this.

Details of the championships follow, but during the week our overseas friends Pam and Gerrit Kurstjens, Pepe Valero and Paul Bourgard in their Nimbus 4s (our 'Million Dollar Sniffers' as we affectionately called them) turned in some remarkable flights. Gerrit flew to Dookie Ag College and return (over 1,000km at 137km/h) and Pam completed a 750km triangle to claim the UK Speed Record for this distance.



Pre-flight discussion by Paul Matthews, Christian Hostettler and Miles Gore-Brown

44 aircraft were entered in the championships, six in Open Class, six in 15 metre, 15 in Standard and 17 Club/2-seaters.

Many people contributed to running the championships but the stand-outs were Eric Sweet who did a great job as Contest Director, equally Miles Gore-Brown with the weather and Paul Matthews with the tasks. Tim Shirley looked after the verification and scoring, ably assisted by Alexander Edwards and Maurie Bradney. Nick Hunt was tugmaster. Beryl and Arnie Hartley supported by Anne Elliott and others fed and watered the troops in their inimitable gourmet style.

Combining the assigned tasks flown by the FAI Classes with POST tasks flown by Club Class loomed as a problem, but did not prove to be one. 16 start points were used and the four closest to Narromine were assigned exclusively to Club Class. Ron Sanders found a set of turnpoints suited to Club Class and the FAI Classes used the 1998 Nationals turnpoint list. Club Class was given a mandatory last turnpoint each day which aligned with the final leg of the FAI tasks. It all worked very well.

The practice day on Saturday, 27 November, was a washout but those who had flown the Narromine Cup Week were glad of a rest. We could also be a little more relaxed about the initial briefing, registrations and the myriad jobs that need to be done to get a competition up and running.

Day 1: Sunday, 28 November

Tasks: Open/15m/Standard Class: 245km Quadrilateral - Nevertire/Tottenham/Tullamore
Club Class: 2 hour POST

The FAI classes were set the same task; a quadrilateral to the north, west and south keeping everyone reasonably close to home as the weather was still moderating. A large band of cirrus to the west threatened to cut off convection early. Thermals were three to 5kt; marked with cu's on the first two legs, then blue later.

As it turned out the day did die early, penalising the late starters. Your reporter won the day in 15 metre Class so gets to tell his story.

I started early, reckoning that the quicker gliders would catch up halfway and I could follow them home. When the cu's ran out just past Tottenham I cast about for company and found Bruce Campbell in his Cirrus, which he had entered in Standard Class. Bruce showed me the good air down to Tullamore and marked quite a good thermal right at the turnpoint. I was surprised Bruce didn't stay with it, but he said later that he missed the core and pressed on, getting low on the way home.

He joined me in a thermal that we both welcomed but, again, he went on ahead. I was flying conservatively (aka "wimp mode") as the day was getting marginal. Anyway, that thermal gave me final glide and I beat Bruce home by a few minutes. Not unreasonable, you might say, given that I was flying an ASW20b and it ought to beat a Cirrus, to which I would answer "not often" when Bruce Campbell is in the Cirrus. Bruce came a creditable second to Miles Gore-Brown on Day 2 and went on to become League 2 Champion in Standard Class.

The late starters never did catch up; they fell in a hole around Tullamore and spent nearly half an hour digging themselves out. Hans Wiesenthal (DG600) was second in 15 metre Class with Paul Matthews (LS6a) third.

Hank Kauffmann (Ventus 2) beat Bruce Taylor (LS8) in Open Class with John Buchanan (ASW22BL) third. Bruce was obviously looking for some tough competition and found it – the big wings showed the way on the following days. Shigeki Sawada, a visiting Japanese pilot in an LS8, was a clear winner in Standard Class. Ron Sanders (Discus A) was second and another Japanese pilot, Seiji Fujimoto (LS4), third.

That hole at Tullamore punished the late starters in Standard Class too. Scott Lennon (Standard Libelle) thought he had won Club Class but a count back put Bill Tugnett (Open Libelle) first by two points with Peter Sheard (LS4) third. Scott was not disappointed on Day 2. The winning speeds were 125.65km/h in Open, 104.5km/h in 15m, 111.05km/h in Standard and 92.25km/h in Club.



Wendy and Harry Medlicott relax in the Orana Soaring Club clubhouse after three days of competition

Day 2: Monday, 29 November

Open Class: 372km Quadrilateral – Trangie/Condobolin/Parkes
15m/Standard Class: 337km Triangle – Condobolin/Parkes
Club Class: 3 hour POST

Another blue day with 5 to 6kt thermals predicted, which proved accurate, although there was still plenty of cirrus about making for a tough task. Definitely a day for gaggle flying.

The multiple start points tended to keep aircraft separated on the first leg, but as they came together at the first turnpoint the gaggles formed then stayed together for the remainder of the task – all being glad of company, particularly on the last leg.

The Open Class flock flew through on the back leg and as we reached the last turnpoint at Parkes. I counted at least ten aircraft in one thermal. Survival dictated we stay

together but spread out in the glide, and no thermal escaped being milked for all it would give. Just past Peak Hill, Miles Gore-Brown and Graham Engel picked up a good climb to give us final glide.

John Buchanan won Open Class with Bernard Eckey (ASH25) second and Peter Griffiths/Lars Zehnder (Nimbus 4 DM) third. The winner's speed was 113.2km/h. In 15 metre Class, Paul Matthews won at 89.21km/h with Christian Hostettler (ASW27) second and Hans Wiesenthal (DG600) third. Miles Gore-Brown (Discus 2) with 90.23km/h started his winning streak in Standard Class followed by Bruce Campbell, while Gary Speight (LS4) just pipped Phil Jones (Jantar) for third. Scott Lennon flew at 77.83km/h to take Club Class; Peter Sheard was second and Bill Tugnett third.

Day 3: Tuesday, 30 November

Open Class: 478km Triangle – Coonamble/Bogan Gate
15m Class: 443km Triangle – Combara/Bogan Gate
Standard Class: 397km. Triangle – Combara/The Troffs
Club Class: 3 1/2 hour POST

On Day 3 the weather started to live up to expectations with cu's at 6,000 to 7,000ft and 6kt plus climbs. With a moderately strong wind from the north-east, the tasks were set effectively as a double out-and-return, first to the north-east then to the south-west.

For performance flying this day belonged to Brett Sutcliffe (an Uncles Foundation sponsored pilot) and Tom Claffey flying the Bathurst ASK13 Uniform Quebec. Brett and Tom flew a 308km

triangle at 107.92km/h to clearly win Club Class. Bill Tugnett was second and Mitch Turner (LS4) was third.

In Open Class John Buchanan was the clear winner at 146.38km/h followed by Peter Griffiths and Hank Kauffmann. Christian Hostettler won 15 metre Class at 132.3km/h. followed by Paul Matthews and Graham Engel.

Miles Gore-Brown won Standard Class with Matt Anglim second and Shigeki Sawada third. Miles speed was 130.33km/h.

Day 4: Wednesday, 1 December

Open Class: 581km Triangle – Gular/Condobolin/Trajere

15m/Standard Class: 515km Triangle – Curban/Ootha/Trajere

Club Class: 3¹/₂ hour POST

As the weather improved the tasks lengthened. The FAI Classes flew a triangular course with Narromine about centred on the base leg. Good cu's formed and gave a great run up to the north-east and on the 200km plus leg to the south-west. There was considerable overdevelopment going into Trajere silo, which lies between Eugowra and Cowra. On the way out of Trajere some pilots took a line well to the west but the quicker pilots stayed close to the storm clouds, now dropping rain, to pick up a good climb under a massive cu-nim over the southern end of the Herveys. The run home was mainly in the blue.

In Open Class John Buchanan won at 152.93 km/h, again followed by Peter Griffiths and Hank Kauffmann. Paul Matthews, at 134.81km/h, won the 15 metre Class followed by Christian Hostettler and Hans Wiesenthal. Miles Gore-Brown again won Standard Class at 132.87km/h with Peter Holmes (LS8) second and Shigeki Sawada third. In Club Class the 2-seaters again showed the way with the day going to the Cubley's, Terry and daughter Tegan, in a Janus at 107.54km/h. Bill Tugnett was second and Peter Sheard third.



Matt Anglim, Alan Bones and Tom Claffey at briefing on Day 2 of the NSW State Gliding Championships

Day 5: Thursday, 2 December

Open Class: 575km Triangle – Lake Cargellico/Grenfell

15m/Standard Class: 535km Triangle – Lake Cargellico/Caragabul

Club Class: 4 hour POST

The weather was expected to be better to the south-west and that's where the tasksetters sent us. The cu-sonde predicted blue skies until 13:30 hours then cu's to 7,000ft, later rising to 10,000ft or higher. The winds were quite strong, 15kt from the north-east up to 7,000ft then veering to the east. Shear wave was possible.

While waiting for the day to develop a few pilots worked the shear wave to above 8,000ft, giving them a good start on the 210km first leg.

As aircraft converged on Lake Cargellico you could hear incredulous pilots calling average speeds in excess of 150km/h. With most climbs off the clock under well formed cu's and a 15kt tailwind, the going was as good as it gets. On the back leg there was a blue hole



**Last minute flight preparation by Bernard Eckey from Balaklava Gliding Club
All photos: Anne Elliott, Western Star Newspaper**



Left: Winner of the Standard Class, Miles Gore-Brown, with Councillor Ruth Mitchell at the NSW State Gliding Championships presentation night



Far left: Lars Zehnder, John Buchanan (Open Class winner) and Peter Griffiths at the presentation night in Narromine

about 50km wide to be negotiated, but occasional cloud wisps marked good climbs. We contacted cu's again south of Lake Cowal and these continued around the second turnpoint to just beyond Forbes where everyone changed down a gear for the run home in the blue.

Again, a Club Class 2-seater took the laurels for the best flight. Our two verifiers, Alex Edwards and Maurie Bradney took the Bathurst Puchacz along four crosswind legs to record 415km at 96km/h off the stick or 114.72km/h on handicap.

Interestingly, their primary datalogger failed during the flight so they had to use their Garmin track log to complete the verification. The Garmin is now an accepted back-up in state competitions. Tim Shirley has devised a program to extract times as well as verifying distances. Naturally Alex and Maurie won Club Class; Bill Tugnett was a close second with Scott Lennon and Errol Spletter (LS1) equal third. John Buchanan again took out Open Class at a speed of 154.12km/h, followed by Peter Griffiths and Hank Kauffmann. In 15 metre Class it was Hans Wiesenthal's day at a creditable 140.19km/h followed by Christian Hostettler and Colin Turner each exceeding 130km/h. Miles Gore-Brown took out Standard Class at 134.51km/h with Hans Raschke (LS8) second and Garry Speight third.

Day 6: Saturday, 4 December

Open/15m/Standard Class: 215km Triangle – Alectown West/Trundle Club Class: 2 hour POST

After three great days the weather cycled in a manner that makes the game hard for the weatherman, tasksetters and the contest director.

Strong winds and high temperatures were predicted for Friday, 3 December with the day starting late. After a lot of discussion, a rest day was called following concern about accumulating safety-related incidents and fear that the situation would worsen with the very hot weather. Typically, the winds moderated and the day boomed. Most pilots were happy to go for a swim or whatever, but one or two picked up their bat and ball and went home.

On the last day, Saturday, a trough line sat over the airfield refusing to move. Cu's were booming to the north-east but too far to reach even if a launch were possible. Tom Claffey twice took his DG400 sniffing in the blue which was gradually moving in from the south-west and on the second occasion reported heights safe for a launch. The time was 14:30.

Meanwhile the tasksetters had been agonising over what would be possible, and after three cancellations finally chose a 215km triangle to the south-west into a strengthening wind. It was a good call, even though the day had to be devalued.

The 15 metre Class provided the most interesting story on the day. Four pilots started from the same point within one minute of each other. A fifth, Graham Engel, struggling to gain height, started five minutes later. After a couple of gaggles on the first leg each pilot went their own way. All five pilots crossed the finish line within one minute of each other. Graham won the day at just over 106km/h and the others averaged 105km/h with only a decimal point separating them.

Christian Hostettler was second at 105.6km/h, Paul Matthews third (105.35km/h) Hans Wiesenthal fourth (105.32km/h) and Colin Turner fifth (105.20km/h).

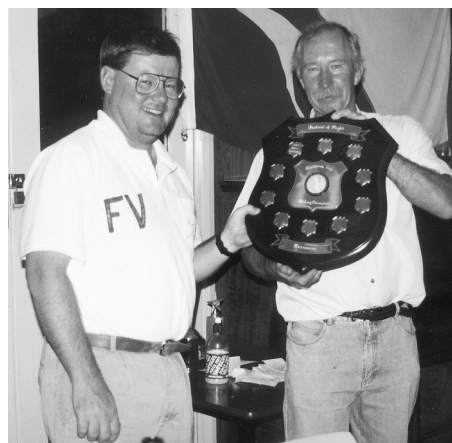
John Buchanan won Open Class, Ron Sanders took out Standard Class and Bill Tugnett clinched the Club Class crown.

And so it was on to the Narromine United Services Memorial Club for a superb smorgasbord and the presentations to the champions.

Winners

Open Class	John Buchanan
15 metre Class	Paul Matthews
Standard Class	Miles Gore-Brown
Standard Class League 2	Bruce Campbell
Club Class	Bill Tugnett

Christian Hostettler just pipped Paul Matthews in the 15 metre aggregate but, being a Swiss national, could not be declared champion. All the champions earned their laurels having flown six demanding tasks and kept very honest by tough competition from their peers.



Tom Claffey, winner of the Narromine Cup Week receives his trophy from Arnie Hartley, President of the Orana Soaring Club All photos: Anne Elliott, Western Star Newspaper



So, How Much Time Do I Log?

Phil Campbell launches at Gordon
All photos courtesy of Phil Campbell

PETER VAILE

On Sunday, 26 September 1999, I joined a band of intrepid pilots heading for Black Mountain at Gordon, just east of Ballarat...

Like many visible around Ballarat, the hill is a smooth, treeless, grassy slope; the remnants of an old volcanic cone. Launch is about 330ft above bomb-out and faces south-east, but will work from about east around to nearly south. I'd flown this site several times before and found it to be an easy site – I wasn't expecting this particular flight to be any different. Most of my previous flying there had been ridge soaring with very little thermalling, and because of the strong, cold, gusty wind, this day looked like being more of the same. This suited me OK; as an older novice pilot flying a rather ancient Sting 154, my thermalling leaves a lot to be desired.

Anyway, I remember the club meeting at the Golden Age Hotel at Beaufort on Saturday night. I remember getting out of bed in the hotel and dressing in the morning. I also remember having breakfast in Andy's cafe and driving to Gordon. However, things get a little foggy after that.

I have it from usually reliable sources that I did indeed fly that day, for about half an hour. At some point it was noticed that I carried out a normally inadvisable manoeuvre by turning towards the hill. Presumably I didn't crash. I have no idea how close it was. I do have some idea how disastrous it may have been.

From then on, I am told, a number of observers watched me fly rather further to the right than is normally considered prudent. I then landed normally and in full control, I am assured, in the designated "wrong" field. When, after a half an hour or so, there had been no sign of me packing up, Sara headed on over to investigate the cause of the delay. Apparently she found me to be disoriented and confused, and suspecting a possible stroke (hey come on, I'm not that old yet am I?) and gave me a quick check over. With no evidence of stroke, and yet with something very obviously wrong with my behaviour, she packed up my glider and somehow got us both back to the cars.

The group decided that I needed to be taken home to Melbourne, but as I was unable to drive Rachelle acted as chauffeur. We headed home in convoy with Sara and Rachelle's friend driving Rachelle's car. They kept in contact using the UHF radios and because Rachelle became concerned with my condition as the convoy neared home, they decided to proceed immediately to the casualty section at Box Hill Hospital. I was admitted, I am told, at about 3:30pm (give or take a bit, but by then I wasn't counting).

The girls phoned my home and told the story to my son, Stuart, who immediately tried to contact my wife, Joy. Unfortunately, she was in transit, on her way home from her parent's house. Upon arriving home she was confronted by a rather agitated young man, who informed her of my indisposition. Despite his assurances that I hadn't crashed and wasn't injured, she could see he was upset from the fact that he stubbed out a half-smoked cigarette (something uni students are not inclined to do). Together they immediately set out for the hospital, fearing the worst.

She found me to be quite distressed and confused and continually asking the same four questions: "Where am I?", "Where is my equipment?", "How long have I been here?", "How did I get here?".

I could apparently answer questions about my name, address, phone number and so on, but was unable to take in or remember moment to moment events.

During this time the doctors on duty examined me and gave me an ECG and a CAT scan, but could find no underlying problem. They believed that it was probably a concussion even though there was no evidence of damage to either my helmet or my head. As time went on, I slowly, slowly became aware of my surroundings, was able to remember things and regained my composure. I still could not remember much of Saturday or any of Sunday. Even things on Friday seemed vague and uncertain.

With this came the realisation of what the implications were for hang gliding, and possibly just living, and I virtually conceded the necessity to give up flying as being “too dangerous, after this little episode”.

At some time around midnight the neurologist on duty examined me, looked at the charts and consulted with other neurologists. He gave me a tentative diagnosis of “Transient Ischaemic Attack”, which means, I later learned, a temporary loss of blood to some organ, in my case the brain or part of it. It sounded pretty bad to me, but the neurologist decided that, as I was now behaving normally, I could go home with the proviso that I needed to see the senior neurologist as soon as possible during the week. I was told to rest and expect to have up to a month off work. Dark days indeed.

The earliest appointment I could get was on Thursday, and for the few days until then both my wife and I, although calm on the outside, dreaded what he might have to say.

The neurologist was Associate Professor Bladin from Monash University. He listened to my story (what we knew of it) read the reports from casualty and asked a few more questions. He told me that I presented as a truly textbook example of “Transient Global Amnesia” brought on by migraine.

Migraine! What an anti-climax! All those people who had taken so much care of me, put out by a migraine attack. The relief on my face must have been obvious; it certainly was on my wife’s face. Prof. Bladin said that there is no reason to think that it will ever happen again, and that he was not concerned about me flying or driving because the only faculty that is affected by TGA is short-term memory. I did land the glider safely, after all (OK, it was the wrong paddock, but fair’s fair). He also told me that I could return to work immediately. However, after only a little argument he agreed that Monday would be soon enough.

At the time of writing, I appear to have recovered all memory of events except for 8 to 10 hours starting from about the time I arrived at bomb-out (on arrival at the site), until sometime during the evening in Box Hill Hospital. I’m unlikely to ever be able to recollect what occurred during those several hours.

I wish to thank all those club members whose care and attention was lavished on me, and particularly Sara Moser and Rachelle Guy. Also any others who assisted me but whose involvement is now lost to my amnesia. We all know that we engage in a potentially dangerous activity, but dislocated bones and broken gliders somehow seem less frightening than the condition in which they found me and had to deal with that day. I’m sort of glad I don’t remember!

So, how much time can I log? Well, if a log book is intended as a record of your experience, how can you log something you don’t remember? Thus, I have written up the flight in as much detail as I could glean from those present, and shown approximately 30 minutes duration but not added it to my total experience. So I am still just under 12 hours. I expect to increase that soon.



Setting up at Gordon

Another Perspective

SARA MOSER

On the day described by Peter, about four or five pilots decided to fly at Gordon. Being a very gusty, strong, cold and blustery day in the middle of one of the coldest places in Victoria, some of us decided to opt for sitting on the hill and watching others brave the elements. Launches were interesting, often with three people on wire-assist in the strong conditions.

As Rachelle and I watched, we saw Peter get around the side of the hill, and in the strong wind he started to lose height. He came forward only to do the same thing again and soon we lost sight of him. We eventually saw him safely on the ground in a paddock just out the front – unfortunately a paddock where we don’t share very good relations with the landowner! Glad that he had landed safely and hoping that he would pack up quickly and get out of there, we proceeded to drive down to the bomb-out.

After arriving at the bomb-out we sat and watched the activities, noting that Peter had still not packed up his glider. We could see him walking around it every now and then so we didn’t think much of it (except to wonder what the hell he was doing and cursing him every now and then – sorry Peter! – for staying in a paddock he wasn’t supposed to be in). After more time had passed (half an hour or more by now) and he still hadn’t made a move to pack up his glider, I decided to go over and see what was happening.

When I arrived at the glider, Peter was just sitting on the ground fiddling with some of his pack up gear and looking fairly relaxed. I asked him if he was OK and he said he was. At this stage I pointed out that the farmer wasn’t exactly our greatest friend and that we had better get packed up. He seemed a little vague at this point, but since I didn’t know Peter very well I wasn’t sure what he was normally like. As I started to pack up his glider, he commented that he felt a bit disorientated. I questioned him about his landing and flight and he said that he didn’t remember flying. After a few further questions I managed to establish that he definitely hadn’t crashed and there seemed to be no real reason for his confusion. As I continued to pack up, Peter wandered around picking things up but really not doing anything. At this point the questions started which began to concern me. His main line of questioning which then continued for the next few hours (so Rachelle had an interesting drive home with him!) was as to whether he had flown. The conversations went something like this:

So, How Much Time Do I Log? – Another Perspective

Peter: "Did I fly?"

Us: "Yes you did."

Peter: "I don't remember flying."


Us: (A bit of an explanation about the flight.)

Peter: "Did I crash?"

Us: "No you didn't." (more explanations)

Peter: "I don't remember anything" (generally followed by more puzzled looks from Peter).

This conversation with slight variations was repeated many, many times. By the time I got back to the others with Peter and his glider I was fairly convinced that something wasn't quite right. After much discussion with the others and more questions from Peter ("Where are my car keys?" – "I've got them Peter." – "How did you get them?" – "You gave them to me Peter."), we decided that to let Peter drive home was out of the question. Thankfully we had extra drivers, so four or five of us set off on the hour and a half drive back to Melbourne in convoy with radio contact. Rachele had a long drive with many repetitive conversations with Peter, and when we arrived in Melbourne we took him straight to a hospital. After calling his wife and son we continued to answer his questions and reassure him until they arrived. The hospital meanwhile ruled out the obvious things like blood sugar levels, blood pressure, low oxygen in the blood, etc. After explaining things to a very anxious family, Rachele and I left to puzzle over the mysteries of the human mind and the events of the day.

Later in the week we were relieved to receive news from Peter that everything was OK and his short-term memory had returned. A thank you card from Peter was a really lovely thought for doing something that anyone of us would have done in the same situation. As usual there were a number of pilots that did everything they could that day to help when someone was in trouble. At this time of writing I hear that Peter has been back in the air and is now able to remember how many hours he can log. He flies with a novice's red streamer – what colour streamer do we use for "Warning: short-term memory loss!"? 

92nd FAI General Conference Cyprus, November 1999

ATUL DEV

(Reprinted courtesy of Air Sports International)

Cyprus, the third largest island in the Mediterranean after Sicily and Sardinia, is barely 9,251km² in area and is just 60km south of Turkey. Hosts to the 92nd FAI General Conference, the Cyprus Air Sports Federation laid out the "red carpet" in the true sense to make it one of the more successful and smooth running General Conferences of FAI history.

In Greek mythology, Aphrodite is the goddess of love and beauty. According to Hesiod, she was born when Uranus (father of the Gods) was castrated by his son Cronus. Cronus threw the severed genitals into the ocean which began to churn and foam about them (*Should I be censoring this? ED*). From the aphros ("sea foam") arose Aphrodite, and the sea carried her to either Cyprus or Cythera. Hence she is often referred to as Kypies and Cytherea. Homer calls her a daughter of Zeus and Dione.

It is this legend that built up our expectations of a glorious week, and I must admit that the hosts lived up to our expectations. The program for the conference was as per the laid down format, but the three discussion groups certainly raised a lot of interest. Discussions were held on:

- **The Future of Air Sports on TV and FAI's Role** (Co-ordinated by Ivo Mazzola)
- **Safety in Air Sports – The Human Factor** (Chaired by Hans Fricke, Secretary General, Deutscher Aero Club, Germany)
- **New Air Sports – Prospects in Future, Strategy for FAI Expansion** ((Chaired by Alvaro de Orleans-Borbon, Spain)

Besides the three discussions we were shown five videos made on the 1999 FAI World Championship series which covered the Paragliding World Championship in Austria, the Gliding World Championship in Germany, the European Aerobatics Championship in Spain, the Hang Gliding World Championship in Italy and the Hot Air Ballooning World Championship in Austria.

The Minister of Communications and Works, HE Mr Averof Neophytou, was present at the inaugural to wish the conference well. The inaugural function was a short but slick affair with the Master of Ceremonies, Elina Christofides, doing a commendable job of getting all the names correct with flawless pronunciation. A satisfying experience indeed.

Awards were presented, including all the diplomas. This was perhaps the first time in many years that the FAI did not award the FAI Gold Air Medal or the FAI Bronze Medal (the two FAI top honours) to anyone. The loudest applause was reserved for Mrs Oran Nicks and Mr Nicks Jnr when they jointly came up on the stage to receive the Lilienthal Gliding Medal awarded to Oran Nicks (USA) posthumously.


A major decision taken at the conference was the transfer of FAI membership from The Real Aero Club de España (RACE) to Real Federation Española Aeronautica (FEA – previously known as FENDA – the contracting party with FAI for the organisation of the 2nd World Air Games in 2001).

The future role of FAI Enterprise vis-a-vis the FAI/World Air Games was a matter of great discussion. Please see the Minutes of the General Conference on the FAI website for the progress on this point.

The commercial aspects of air sports were brought up to the FAI General Conference for the first time with formal reports presented by:

- Jean-Louis Monnet, General Manager, on FAI World Grand Prix of Aviation.
 - Jean-Claude Weber, CIA President, on the Great Balloon Race being planned.
 - Olivier Burghelle, CIVL President, on the FAI World Hang Gliding Series.
- Some other important amendments to Statutes were carried out:
- The FAI Hang Gliding Commission will henceforth be called "FAI Hang Gliding and Paragliding Commission".
 - The FAI Amateur Built Aircraft Commission will henceforth be called "FAI Amateur Built and Experimental Aircraft Commission".
 - The Membership Expansion Committee has been completely eliminated from the FAI Statutes.

For the hosting of the 2002 FAI General Conference, Croatia won the bid over Italy and India to host the 95th FAI General Conference in Dubrovnik.

Elections at the end of the day were as expected, and we find that the present team of Eilif Ness (as President) Wolfgang Weinreich (as 1st Vice-President) and Dr Hanspeter Hirzel (as Treasurer) will continue for another one year term. It is President Eilif Ness' sixth and last term in office as per our Statutes. We wish him and his team well and look forward to yet another year of dynamic leadership and progress that has lately been the hallmark of FAI work. 

Paraglider Baggage Allowance

JOHN MCKENRY

If you have ever done much overseas travel with your paraglider (whether it be for free-flying or competitions) you will no doubt have had hassles getting your normal baggage plus a 20kg glider through check-in. Invariably there are requests for various amounts of excess payments. Most of us resort to carrying all our heavy things on to the plane in bags to avoid the extra costs.

I thought it would be nice to find the airlines that support our sport by recognising paragliding as many airlines recognise golf or surfing, giving us adequate free excess. What has come to light is that European and Australasian carriers generally give far fewer kilos than the carriers from North America. There are a few exceptions and I will point these out.

I asked the airlines what their baggage allowances were, and whether they gave a special allowance for paragliders. I sent the airlines a picture of a paraglider in a backpack and gave approximate dimensions and a weight estimate of 20kg. Of the 104 airlines I wrote to, only 56 replied. I was in the UK at the time of the survey, so asked the airlines to base the costs on a flight from London to Australia.

Most airlines fall into one of three categories:

- A) Those who give two pieces of luggage not exceeding 32kg each. Often you are allowed up to 32kg on cabin luggage as well. There is a size limitation whereby bags must not exceed 62 cubic inches. These are normally the North American airlines.
- B) Most other airlines give 20kg to Economy, 30kg to Business and 40kg to First Class. They then charge up to 1.5% of the highest adult fare on the route being travelled per excess kilo, or have a flat rate. The excess can be as high as \$36 per kilo as was the case with Cathay Pacific. LOT Polish Airlines charged \$4.30 per kilo.
- C) Finally there are airlines who give a partial or full allowance for paragliding equipment.

Kuwait Airways responded to my request for information by saying that as they were members of IATA and were essentially guided by IATA regulations. These apparently have "Special Regulations" for the carriage of snow/water ski, golf and angling equipment. I contacted IATA and was initially told that it would fall within the 64kg weight limitation. When I queried this, I was told that the recommendations were on sporting goods and paragliders were not included. I asked whom I could lobby to change this, and was told members of IATA or affiliated associations are the only people who have a say.

It seems odd that the organisation looking after air travel over-looks pilots!

Most airline staff I spoke to said they would normally stretch the free 20kg allowance to 23-25kg, but not above that. Swissair and Ethiopian Airlines both said that pilots should contact the airlines prior to departure. JAT, who give 30kg standard, will also give an

Airline	International Baggage Allowance (kg)	Airline	International Baggage Allowance (kg)	Airline	International Baggage Allowance (kg)
Aer Lingus	23	EL AL Israel Airlines	20	Mexicana	64
Air France	20	Emirates	20	Nigerian Airways	20
Air Mauritius	30	EVA Air	20	Northwest Airlines	64
Air New Zealand	64	Finnair	20	Northwest Airlines	20
Air Zimbabwe	20	Garuda Indonesia	40	Qantas	20
Alitalia	20	GO	25	Qatar	30
American Airlines	64	Gulf Air	20	Royal Brunei	20
ANA	20	Iberia	20	Royal Jordanian	30
Austrian Airlines	64	JAT Yugoslav Airlines	30	Royal Nepal Airlines	20
Bahamas Air	20	Jersey European	20	Sabena	20
British Airways	20	KLM	20	South African Airways	20
Cathay Pacific	20	Korean Air	23	Thai	20
China Airlines	20	Kuwait Airways	20	Turkish Airlines	30
Continental Airlines	64	Lauda Air	20	US Airways	64
Cubana	20	Lot Polish Airlines	20	Uzbekistan Airlines	25
Czech Airlines	20	Lufthansa	20	Virgin Atlantic Airways	20
Debonair Airways	20	Malaysia Airlines	20		

extra 10kg for travelling pilots in groups of seven or more. Royal Jordanian gives 10kg over their normal 20kg. Air Mauritius also gives an extra 10kg.

The star of the airlines I contacted was Garuda Indonesia. They specifically give a 20kg allowance for paragliding equipment. Garuda also supports hang gliding and paragliding competitions with discounted travel.

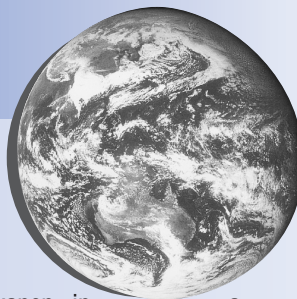
So where does this leave us? My personal belief is that before you book your tickets you should find out if you glider goes free. If not just look elsewhere for your flight. Most travel agents can get you free excess if they know a ticket sale depends on it.

If Qantas can give 30kg on domestic routes, why can't they give at least the same on international routes? In fact, why can't they give 64kg like Air New Zealand? Basically we are getting screwed. Maybe if we wrote to the airline they would do something about it. Even better, our representative body might want to assist as it always sounds better from the top.

Some advice for travellers to remember (and not just with respect to airlines) is to always make sure the wing is tucked inside the harness for protection. If possible, stick the glider bag in a sack so there are no loose straps. I have actually made a bag bigger than my glider bag to carry a few clothes and essentials. Never let the glider out of your sight in areas you feel are poor. To ensure no one has been in your bag, I tie the zips together so tight that the only way to undo the cord is to cut it. Never leave electronic equipment in your hold baggage while on flights, and take the batteries out.

The final and most important thing is to never loose your cool at the check-in desk. Most airlines will try to help, as the people at the check-in desks are human and many have sports of their own. Getting there early helps. I have on one occasion gone down a queue of people to find someone with almost no baggage. On another occasion I started unwrapping my glider in the check-in area of an airport in order to remove my reserve parachute to carry as hand luggage. It was amazing how swiftly the guys behind the desk sorted me out some free allowance. Safe travels.

In the Circuit



Local News

Kentucky Flying Club

The weather has been unseasonably cold up here, but the soaring days we've had have been exceptionally good, with high base cu's and strong climbs. Spring and early summer in New England have the best soaring, with some nice seabreeze convergences, long days and clear air.

On the glider scene there are some movements. Chris Kiehn has kindly left his delightful ASW 15b on line, and the club is subsidising its use to a large degree. Bruce Taylor recently made use of it to do a return trip to Lake Keepit, followed by a run up and down the convergence with great views out over the eastern gorge country. A five hour flight netted about 500km – not too bad for an empty "old timer"!

Brad Edwards has a K21 almost ready to fly. It was imported from the USA and has been undergoing some refurbishing by Bob Charlton in Ballina. Judging by some other work completed by Bob (and his willing co-worker Esther!), the K21 ought to look sensational. This will give the club a very presentable 2-seater for the many joyflights we do, as well as having a little more cross-country performance than the faithful Bergfalke.

Upcoming events are the usual autumn fly-in around late March and, no doubt, a big party for the maiden flight of the K21 in the near future! If you want to drop in and say hello, phone the club manager, Bruce Taylor on 02 6778 7345.

Benalla

A container load of gliders from the UK arrived in late November containing one LS818 and one LS815 for on line rental gliders for GCV, and one LS818, one LS6C18 and one Ventus 2CT 18m, belonging to British GCV members of the Gliding Club of Victoria.

On Tuesday, 14 December, GCV equalled a long-standing club record of seven 750km plus flights on the same day. Ron Davidson (900km) in an LS8/18, Shaun Driscoll (800km) Nimbus 3t, Brian Bateson (on his ??th birthday) Ventus 2CT, Bill Anderson DG202 17C, Lous Preiss ASW20C, Laurie McKinley LS3A and Chris Gildea Nimbus 2C. All pilots, unless noted, did 750km with Ron Davidson coming close to his 1,000km dream. Several pilots achieved their first 750km. Also of note, on this great day was GCV staff member, Enno Eyb, who flew his first 300km in the Junior only a week after doing his Silver Distance. Benalla locals considered the

previous week to have been one of the best in memory, with Peter Hokkanen in a Nimbus 3 achieving two 800km flights on successive days and Andrew Ward, in a Nimbus 3t, flying 800km the next day – so three 800km flights on successive days!



Another Record Claimed by Pam

Mrs Pam Kurstjens has claimed a British National record in Open Class in both general and feminine categories following a 755.12km FAI triangle flight on 2 December from Narromine runway intersection to Temora runway intersection to Hillston airfield reference point and back to Narromine. The flight took 5 hours, 30min 48sec at an average speed of 136.96km/h.

Not to be outdone, Pam's husband Gerrit claimed three Dutch National records on the same day. The first for an Out-and-Return distance of 1,027.81km; the second a free Out-and-Return distance of 1,030.24km; and the third a Speed record over 1,000km Out-and-Return at 137.94km/h.

The flight took 7hrs 27min from Narromine runway intersection to Dookie, north-west of Benalla, and return to Narromine.

It was a great day, too, for Paul Bourgard who claimed a Belgian National record in Open Class for a 300km FAI triangle flight at 143km/h from Narromine, via a GPS turnpoint north-west of Condobolin, and Parkes silo. Paul also claimed a Belgian 750km Out-and-Return record with a flight from Tocumwal to Parkes and back to Tocumwal at 122km/h on 18 November.

Narromine

A big day for Swiss national Erwin Szafranska in late December when he celebrated his 70th birthday, 50 years of flying and 20 years of visits to Narromine. Erwin has had a long and varied career in flying, which includes powered aircraft, ultralights, model flying and, of course, gliders. His gliding skills resulted in wins in two Swiss National Gliding Championships. Erwin escapes the European winter by spending three months in Narromine every year!

Paul Bourgard, Gerrit Kurstjens and Pepe Valero at Narromine aerodrome prior to the 2 December 1999 flight which resulted in Paul and Gerrit claiming new National records.

Photo: Anne Elliott, Western Star Newspaper

Stop Press

Pam Kurstjens has claimed two more records – a UK feminine record and a World feminine record in Open Class, following a 300km triangle flight in a Nimbus 4 on 3 January this year from Tocumwal to Burrumbuttock to Widgiwaa to Tocumwal at a speed of 153.85km/h. Pam recorded climbs of between 8 and 10kt to a maximum of 8,000ft on what was a pre-frontal day with some spreadout and a northerly wind.

Wellknown Australian pilot Ron Sanders took out the 15 metre Class section of the South African National Gliding Championships held at Mafikeng last month.

Unfortunately, for the organisers and participants, only five contest days were held due to poor weather conditions which saw most of South Africa flooded, apart from Cape Town.

GST Blues

RUDI SALTER

The famous “never ever” tax, hailed as making things much simpler and easier for us as well as ensuring that we will be better off, already promises to fall far short of achieving the promised benefits.

Understand full well that governments need a broader tax base to fund ever-expanding public services. Only simpletons will believe that you can have medical services, education, transport and welfare without having to pay for them. Taxing consumption does provide a tax base that moves with inflation and volume. Most developed countries have such a tax; but why make it so cumbersome?

The intention of a consumption tax is to have it impact on the end user of any goods or service, and to avoid imposing it on any stage of production before that end use is reached.

Ancient greybeards, like myself, will remember how this was done in the post-war period, when sales tax was implemented. Manufacturers, wholesalers and anybody not selling to the public got themselves a sales tax number. This they quoted to their suppliers and obtained their requirements free of tax. Retail customers or any other end user, not having a sales tax number, were charged the tax by the retailer, who then remitted it to the tax office. Only one group of enterprises was involved in paperwork. To their credit, the legislators observed the principles of KISS (Keep It Simple, Stupid).

This time, the experts managed to avoid simple solutions. The tax is levied at every stage, remitted to the tax office, which will then refund it to you if you were not an end user. This ensures that everybody will be saddled with paperwork, unless his/her annual turnover is below \$50,000, or \$100,000 in the case of a non-profit organisation. The end result is much what it was 50 years ago, but achieved with immeasurably more trouble and effort.

Such is progress!

So how will gliding fare? First of all, you need to look at your total revenue from all sources, including fees and flying charges to members. If your club is operating as a non-profit organisation, and its turnover is below \$100,000 and likely to remain so, it does not need to register, nor does it have to charge GST.

Having elected to go down this road, it cannot claim any rebates of GST paid on its inputs, which will increase in price by the amount of GST charged on them. There may or may not be savings from the abolition of sales tax on these inputs, but the odds are that costs will go up. You have to adjust the charges your club makes to recover these extra costs.

Is it sensible for such a club to register and obtain the tax credits on its purchases?

The answer depends on a number of factors. A club electing this option will have the benefits of tax credits, but must then charge 10% GST on what it obtains from its members and other customers, thus shifting the costs outside the club ambit. The result is likely to be negative. Unless a club is in a drastic loss position, income will be higher than or close to inputs, resulting in more tax having to be paid before it can be recovered. In most cases, clubs collecting less than \$100,000 will be better off paying tax on inputs, adjusting their charges and avoiding much paperwork.

What about the larger clubs?

If your revenue exceeds \$100,000, you have no choice in the matter. You must register and charge 10% GST to your “customers”. In return, you can claim back the GST charged by your suppliers on what you bought from them. But beware, there are traps for young players.

You can claim only if:

- Your supplier is registered himself, and quotes his business number on his invoice;
- the goods or services you bought were not tax exempt in the first place; or
- they were not an “input taxed” item.

The club treasurer will have to watch all this, and it will keep him busy. He/she needs to read the literature and brochures put out by the tax office. If he/she finds them confusing – join the club.

Next he/she has to apply and collect the tax in respects of fees, subs and sales made by the club. The treasurer will then

wind up with a liability to the tax office for tax collected, and with a claim for tax paid on inputs. Offsetting one against the other will result either in money due to the tax office, or to the club. A report along these lines has to be made to the tax office every three months, or monthly if you prefer.

Many questions still await clarification. I have had a number of discussions with the tax office in an attempt to disperse the dense fog surrounding this legislation. Even if all of these questions are resolved in the end, club treasurers will have to learn a lot about it, or employ professional help. No matter what, they will be saddled with a lot of work. (Maybe they will find time for an occasional flight).

Truly has it been said that the weight of paper must equal the weight of the aircraft before it can fly.

Happy paper shuffling!



LAKE KEEPIT

TAMWORTH NSW

- ★ Training 365 days a year
- ★ Good glider availability
- ★ Bulk flying discounts
- ★ Private owners welcome
- ★ Extended gliding season – 300km in July!

Contact Jim Stanley – Manager
P.O. Box S152
TAMWORTH SOUTH 2340
Ph: (02) 6769 7514
Fax: (02) 6769 7640

www.users.bigpond.com/keepitsoaring



Narromine farmer clears the way for aviation

Nothing was too much trouble for farmer Anthony Stonestreet from "Fairview", Narromine, when a glider competing in the NSW State Gliding Championships late last year landed in his wheat paddock.

The glider, an IS28 from Bathurst Gliding Club, flown by pilots Mike Norris and Lloyd Bungey, couldn't quite make it home to Narromine at the end of the day when the weather changed to overcast conditions, preventing any thermal activity.

The pilots selected a large paddock, which looked good from the air, but when they landed they discovered that the wheat paddock had not yet been harvested.

Their first concern was for the farmer and his reaction to a small area of crop being lost due to 'harvesting' from the glider wings.

When they met up with Anthony, nothing was a problem for him. They could use the telephone to ring in to base, use his vehicle as a taxi, "Have a drink?"...

However, the best example of co-operation and initiative from Anthony was yet to come.

When they arrived back at the paddock where the glider had landed, Mike and Lloyd expressed the thoughts that they wished they had landed in a nearby paddock which seemed suitable for an air retrieve, rather than have to gather up about six mates to de-rig the heavy 2-seater.



Glider CQD on tow behind the tug up the freshly harvested strip at 'Fairview', Narromine

"What type of paddock is suitable for an air retrieve," asked Tony. "Certainly not an unharvested wheat paddock" was the response. "No problem," said Tony, "I can go and get my auto header and mow you a runway any size you like!"

At first the pilots thought he was kidding, but soon realised his proposal could work and couldn't believe their luck that they had met such a nice guy to whom nothing seemed a problem, and who also had good ideas.

After tying the glider down for the night, Mike and Lloyd arrived back the next morning with tug pilot Nick Hunt to see if it would be suitable to land the tow plane in the paddock and aerotow out.

It was suitable all right! There was Anthony in his auto header, mowing a beautiful runway right into wind.

Never one to pass up the opportunity of a paddock retrieve, Nick hurried back to town to pick up the tug and later advised that the runway was 'large enough to land a 747 on.'

Not only had Anthony prepared such a large strip, he had also set the comb on the header much lower than normal, giving the glider pilots nice short straw to tow out of.

Narromine has a long history of hospitality towards visiting pilots, both power and gliding, but this was one of the nicest gestures seen.

The gliding fraternity passes on its thanks to Anthony Stonestreet and those other locals who support annual visits and competitions.



Lloyd Bungey, senior pilot from Bathurst Soaring Club, with Narromine farmer Anthony Stonestreet, tug pilot Nick Hunt and Mike Morris. Photos: Anne Elliott, Western Star Newspaper

Mervyn Millington Waghorn

Glider pilot and aeronautical engineer – 1917-1999

Contributed by ALAN PATCHING with the assistance of ALLAN ASH (past Editor, Australian Gliding) and BILL DOWNES (past Director, Hawker de Havilland).

Wag, as he was universally known, will be remembered by all who met him for many reasons.

His endless fund of stories on almost any subject certainly livened up meetings and got our attention, while his technical knowledge of both cross-country flying and airworthiness matters was invaluable.

He joined the de Havilland aircraft company Hatfield, England, as a student at its technical school in 1935; eventually working as a stressman on the design of the Mosquito which resulted in him being sent to Australia in 1941 as the design authority for production of the aircraft in Sydney.

Wag learnt to fly as a teenager on primaries at the London Gliding Club, Dunstable, and frequently flew with Geoffrey de Havilland, son of the company founder, on flight development work.

On arrival in Sydney he could not find any gliding operations, but his local railway stationmaster told him that a friend at Mordialloc in Victoria had gliders flying nearby.

Wag's next official visit to Melbourne in 1942 saw him taking the train to Mordialloc where the stationmaster pointed up into the sky at a glider. He walked the mile or so to find Geoff Richardson, and Jack and Bill Iggulden with the Golden Eagle. When it landed they sent him off for a flight.

They also told him who to contact in Sydney. As a result Wag joined forces with Doc Heydon and others to form the Sydney Soaring Club, which at that time was flying a Slingsby Gull I and towing with a Tiger Moth. This club set about making cross-country flights – many starting from Narromine. Gull IV, Olympia, Skylark 2b (in which Wag won the 1963 Nationals) and HP14 followed the Gull.

Wag set a number of National records including in December 1951 an Out-and-Return from Narromine to Parkes of 126 miles (203km); December 1954 a Goal record of 207 miles (333km); and in January 1955, when attempting Narromine to Benalla in the silver Olympia, landed at Wangaratta, setting a new National Distance record of 303 miles (488km). He also gained his Gold C and three Diamonds during these record-making flights.

Wag was chosen as Australia's Number One pilot to represent us at the 4th World Gliding Championships

in Spain in 1952. He flew a Weihe and finished 13th in a field of 38.

Wag was deeply involved in many aspects of gliding, starting in 1944 by helping to re-establish the NSWGA, serving as President for many years.

In July 1949 he was one of the members who formed the GRA, spending the first year as President, then Secretary in 1951, becoming Executive Vice-President in 1969. He took over the reins again in 1970, when WP (Bill) Iggulden died, until 1977.

Other positions held by Wag were: Councillor for NSW from 1949 to 1961 and again in 1967; CTO/A from 1958 to 1946 and during this time lectured at the National Gliding School, Gawler; Convener of the Design and Development Committee 1967 to 1971; Convener of ITSC 1980 to 1981.

Wag was a respected member of the Australian aviation community being appointed President of the Royal Aeronautical Society in 1958, having joined it in 1936.

The Oswald Watt medal awarded to him under the auspices of the Aero Club Federation of Australia has the following citation: "For the most brilliant performance in the air or the most notable contribution in aviation by an Australian or in Australia during the year 1954."

In 1980 he received the Bill Iggulden award from the GFA in recognition of his contributions to the sport of gliding in this country.

Wag finished his professional aviation career as a Director of Hawker de Havilland. He will be remembered as a very approachable person with the ability to simplify complicated technical problems. He was a strong proponent of the lightweight glider, recognising the ability to use the new materials to produce such an aircraft.

Those of us fortunate enough to participate in the GFA 50th reunion lunch at Bacchus Marsh in July 1999 were able to join Wag in recalling some of his memories of gliding events.



New FAI 50km Triangle Speed World Record Claim

On 5 December 1999, Australian Champion and national team pilot, Enda Murphy, flying an Advance Omega 4R launched from Mt Borah, Manilla, NSW, and flew a FAI 50km triangle in 2 hours 7 minutes giving a speed of 23.6km/h. The previous record has been held by Judy Leden since 1994 (15.8km/h). This is the first paragliding Triangle World record to be claimed in Australia. Mt Borah is also the site from which the FAI Paragliding Open Distance World record of 335km was set in November 1998 by Godfrey Wenness.

Manilla Sky Ranch

An airpark named Manilla Sky Ranch has recently opened on the shores of Lake Keepit. The exciting new venture is owned by well known German sports aviator Willi Ewig and his wife Tina who have sold up their flying school in Germany and immigrated downunder.

With 3 x 700m runways and a large hangar, the facility is expected to be in full operation late this year offering pilots license courses in trikes and ultralights as well as full sales and service of equipment.

Initially the operation will be restricted to TIFs and aerotowing hang gliders in the well known XC region of NSW.

For more information contact Willi Ewig, ph: 02 67697771 or check out the website: www.skyranch.de

Attention Paraglider Pilots under 21 Years of Age

Are you under 21? Are you, like us, passionately fond of paragliding? Do you have a competition licence and have participated in at least four competitions?

If so, pay close attention.

Every year in France, the French Paragliding Championship for Under 21s is held. This year it will take place from 23 to 30 August 2000, in the south Alps, right near our home.

Who are we? We are seven teenagers in the Pole Espoir paragliding area. On the occasion of this meeting we have had the idea to extend this competition and invite foreign pilots. If you are interested in participating, it would give us great pleasure to receive you in our valley. We will attend to board and lodging, transport and other costs on the spot. So, you only have to pay for the trip to come to our valley.

Important: All competitors under 18 must be accompanied by a tutor. Note though, that the reception described above concerning board and lodging is only good for competitors, not tutors.

26 Australian Gliding • Skysailor

If you have any questions you can contact us at the following postal or email addresses: Pole Espoir Parapente, Lycee Andre Honnorat, 04400 Barcelonnette France, email <bernard.giacometti@free.fr>

Airworthiness Directives

Attention Airborne Fun and Airborne Edge Owners

Please note the following Airworthiness Directives and Owner Advisories. These advisories have been forwarded direct to owners, and are also published in case any owners not have been contacted.

Further information and relevant parts are available from the Airborne factory.

99/56/AD – Fun Hang Glider Cross Tube

Wear: The king post bolt can wear the cross tube if the neoprene cover is damaged. Cross tubes should be checked for wear. A replacement bolt with bolt head protectors should be installed.

99/58/AD Edge Keel Buddy Security: Rivets securing the keel buddy should be drilled and replaced by 3/16" bolts.

99/59/AD Edge X Electrical Update:

Electrical box is removed from engine. Improvement on hour meter operation.

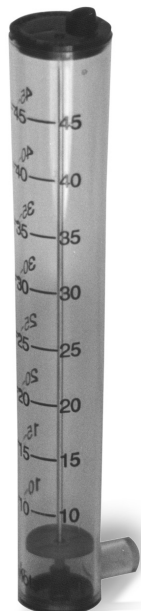
99/60/AD Edge Fuel Line Routing: Fuel line can be trapped between fuel tank and timber rear seat base constricting fuel flow.

Please contact the factory for more details on the relative directives. As with any airworthiness directive early action is important.

Rick Duncan, Airborne Windsports

Product News

Low Cost Airspeed



Hall airspeed indicators have been around as long as hang gliding. They are the only low cost airspeed indicators that are certified to an official accuracy standard. The name may not mean much, however when you see one, they are immediately recognisable, the clear hard tube with the floating disk identifies the Hall.

Although designed for the American market, UFM in Melbourne has arranged to have a custom built version made specifically for Australian and New Zealand flyers.

This new Hall is calibrated in knots (instead of mph) and has a speed range of 0 to 45kt, just right for slower aircraft such as hang gliders, paragliders and powered paragliders. This new unit compliments the 0-70kt Australian/NZ specification unit, designed for higher speed aircraft. Both units have specific mount brackets available. More information is available from Ultralight Flying Machines, ph: 03 9431 2131.

Club News

Sky High Paragliding Club

The Sky High Paragliding Club is organising a number of activities this summer:

- Sky High Millennium Cup
 - Weekend competition continuous over summer.
 - Four weekends (one weekend per month) 15-16 Jan, 26-27 Feb, 25-26 Mar, 29-30 Apr.
 - Novice, intermediate and advanced classes.
 - Each leg of the comp will be at a different site, both coastal and inland.
- Sky High Logo Design Competition

The club is looking for a new logo. There will be \$100 prize money for the best design. See our webpage for conditions. www.vhpa.org.au/skyhigh

Hill Flyers News

This year we are planning three major events, one each in autumn, winter and spring. They will be held at each of Mt Bakewell, The Range and Noondeening Hill. Final details in next Skysailor (and also on the Hot Line).

The Toodyay weather station details: Channel 8 UHF radio (when in the Toodyay area) or phone 0408 348877.

An award (thanks to Mike Derry) for the most safety conscious pilot will be awarded each month at the club meeting.

Windssocks for each of the designated landing areas will be in place, which are large and colourful enough to be easily spotted from the air on approach to landing. Windssocks will also be in place, each side of launch, with the 'Safety' logo inscribed on it to remind each pilot of "Safety First" as this is the last thing he/she sees right before launch. Well, the message this year is **Safety, Safety, Safety...** Hopefully we will reach our target of zero incidents for the year.

Oh, and don't forget the Hill Flyers meeting is the last Thursday of the month.

Rick Williams

FAI News

Virtual World Ranger

'Ailes Virtuelles', a Simulated Flying Club from Nice (France), will be trying to re-create on 3 to 5 December the around the world flight of an Airbus A340 which took place in June 1993 during the 'Le Bouget' Airshow. During the original flight, the aircraft established a number of World records which have been controlled and ratified by FAI.

FAI, which is working to develop simulated flying as an air sport discipline of its own, will be following this event closely. Valuable information will be collected to help in the establishment of rules to recognise simulated flying records.

This challenge has been carefully prepared and will be conducted by two crews of two 'pilots' each, plus a reserve crew. The flight will be monitored by a technical crew who will manage 18 networked computers. The aircraft has been specifically created and adapted for the conditions of this flight, following the real characteristics of the original aircraft. Particular attention has been paid to the onboard instrument panel.

More information is available at <http://flightsim.fai.org/worldranger.asp>

FAI World Hang Gliding Series Speed Gliding Final Ranking 1999

WHGS Ranking	Nation	Glider	Total
1 Betinho Schmitz	BRA	La Mouette Topless	1,605
2 John Smith	NZ	Moyes CSX	1,521
3 Karl Ewing	AUS	Moyes CSX	1,372
4 Geoff Dossetor	AUS	Airborne Shark	1,284
5 Mario Alonzi	FRA	Moyes Xtralite	1,086
6 John Borton	USA	Aeros Stealth	900
6 Oleg Bondarchuk	UKR	Aeros Stealth	900
8 Joel Rebecchi	AUS	Moyes Litespeed	801
9 Jaques Bott	FRA	La Mouette Topless	709
10 Callum Fisher	NZ	Enterprise Wings	677
10 Rich Cizaucas	USA	Aeros Stealth	677

FAI World Hang Gliding Series Cross-Country Final Ranking 1999

WHGS Ranking	Nation	Glider	Total
1 Betinho Schmitz	BRA	La Mouette Topless	900
2 Geoff Dossetor	NZ	Airborne Shark	900
3 Andre Wolf	BRA	Icaro Laminar ST	834
4 Gustavo Saldahna	BRA	Airwave Concept	737
5 Dustin Martin	USA	Moyes CSX	737
6 Mike Swift	CAN	Aeros Stealth	711
7 Tyler Borradaile	CAN	Aeros Stealth	679
8 Max Turiaco	ITA	Icaro Laminar ST	610
9 Martin Dennis	CAN	Wills Wing Fusion	602
10 Raymond Caux	FRA	Icaro Laminar ST	558

New Provisional Record Claims

FAI has received the following Class O (Hang gliders & paragliders) record claims:

Sub-Class O-3 (Paragliders) – Multiplace Claim number 6341:

Type of record: Straight distance

Course/location: Quixada (Brazil)

Performance: 214km

Pilot: Andre Fleury (Brazil)

Paraglider: Apco Futura 42 Tandem

Date: 2/12/1999

Current record: 200km (23/12/95, Richard Westgate, UK)

Sub-Class O-3 (Paragliders) – General Claim number 6343:

Type of record: Speed over a triangular course of 50km

Course/location: Mt Borah, Manilla (Australia)

Performance: 23.6km/h

Pilot: Enda Murphy (Australia)

Paraglider: Advance Omega 4R

Date: 5/12/1999

Current record: 15.80km/h (20/7/94, Judy Leden, UK)

The details shown above are provisional. When all the evidence required has been received and checked, the exact figures will be established and the record ratified (if appropriate).

New FAI Records Ratified

FAI has ratified the following Class O (Hang gliders & paragliders) record:

Sub-Class O-1 (Rigid HG controlled by weight shift) – General Category Claim number 6134

Type of record: Speed over a triangular course of 100km

Course/location: Schmittenhöhe (Austria)

Performance: 36.04km/h

Pilot: Hans Bausenwein (Germany)

Hang glider: Icaro 2000 Laminar 14

Date: 30/5/1999

Previous record: 34.81km/h (22/7/98, Martin Henry, Canada)

FAI congratulates the pilot on his splendid achievement.

World Rankings Update

No competitions have been dropped from the hang gliding rankings, and the Canungra Classic, which has just taken place in Australia, is the latest competition to be included. Joel Rebecchi's (AUS) win brings him up to 18th place overall (from 27th) and Steve Moyes (AUS) has climbed from 40th to 23rd. There are no changes to the top three female rankings, although there are three

new females in the ranking: Shirley Lake (AUS), Carol Binder (AUS) and Debbie Maher (AUS) who were all well placed in the Canungra Classic. The British have three pilots in the top 10, Brazil have two, and Luxembourg, Austria, France, Germany and Ukraine have one each. There are now 503 hang gliding pilots ranked.

There have been no competitions added to the Class 2 rankings, but the Atlantic Coast 1998 event (over 18 months old) has been dropped. As a result David Sharp (USA) now heads the Class 2 rankings ahead of Brian Porter (USA).

Full rankings can be found on FAI/CIVL website at www.fai.org/hang_gliding/ or the British HG league website www.theleague.force9.co.uk where they are available in positional and alphabetical order and the database files are available for downloading in Excel 97 format.

Forthcoming hang gliding competitions that qualify for WPRS points are:

Category 1

Pan American Championships	USA
Female World Championships	Greece
European Championships	Austria
World Speed Gliding Championships	Greece

Category 2

South African HG Championships	South Africa
Australian Championships, Hay	Australia
Bogong Cup	Australia
Millenium Cup	Mexico
Spanish Open (Pre-World Air Games)	Spain
Speed Run	Austria

Future paragliding competitions that qualify for WPRS points are:

Category 1

European Championships	Germany
------------------------	---------

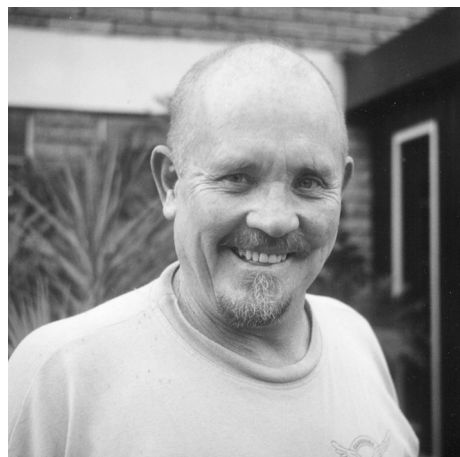
Category 2

Millenium Cup	Mexico
South African PG Championships	South Africa
Australian Nationals, Bright	Australia
Manilla Paragliding Open	Australia

Details on these competitions can be found on the CIVL webpage www.fai.org/hang_gliding/competitions/comp_schedule.asp



HGFA Operations Manager's



Is flying safer than sex?

If you are a praying mantis it is; I recently read that the male praying mantis cannot copulate while its head is attached to its body. The female initiates sex by ripping the male's head off. If I were a mantis I would stick to flying!

Instructor Training Clinic

The HGFA Safety and Operations Committee and I are currently planning a training clinic for existing and prospective instructors. The Clinic will be held in the Byron Bay area of NSW during May 2000. The course aims are threefold:

- to raise the overall standard of HGFA instruction by providing the opportunity for existing instructors to improve their skills through sharing their expertise on the latest training techniques and procedures;
- to allow prospective instructors to gain an insight into HGFA pilot training procedures; and
- to assess the suitability of instructor applicants. All persons interested in attending should contact me either by email, mail or telephone. My contact details can be found on the HGFA Addresses page at the rear of this magazine.

Accident Reporting

I ask that when reporting an accident the format of the HGFA accident report form is used. The Form can be found as Appendix 3 of your Operations Manual. The Form format allows me to readily add reports on the HGFA accident database. Pilots lodging a report via email can get a text pro forma for the report from me via email on request. This makes

reporting easier for both the reporter and me.

Accident Reports

No 1

Pilot: Intermediate PG pilot
Experience: 91 hours
Glider: DHV1-2 canopy
Aircraft damage: Nil
Harness: Standard back protector (also with side protection)
Weather: Moderate wind and turbulence
Location: Inland soaring site
Pilot injury: Three fractured vertebra, broken ribs and punctured lung

Description:

The pilot approached to top land with "Big Ears" on, but being too high turned away from the hill and released the Big Ears. The glider apparently encountered a thermal and pitched backward, then surged forward and collapsed asymmetrically (approx. 50-60%). The glider then rotated anti-clockwise before the pilot counter-braked the turn, and as the glider came back into wind the collapsed side re-inflated and the wing stalled, which led to a clockwise spin toward the hill. As the glider came head to wind, the pilot attempted to throw the reserve, though prior to it inflating the glider rotated another 90° and impacted the hill in a nose down attitude.

Comments:

It appears that three factors contributed to this accident: The decision to top land in moderate strength wind and turbulence; failure to dampen the initial surge; and over-controlling the glider too late during the first asymmetric collapse which led to the stall. Unfortunately the attempt to deploy the reserve was too late and with too little altitude.

No 2

Pilot: Restricted HG pilot
Experience: 25 hours
Glider: Restricted/Intermediate hang glider
Aircraft damage: Sail damage, two broken leading edges and broken control frame

Weather: Light wind and turbulence
Location: Inland soaring site
Pilot injury: Facial bruising, bruising to body and minor lacerations

Description (in the words of the

Safety Officer reporting the accident):

"Pilot executed a perfect launch with good pitch control and level wings in approx. 5kt of wind, slightly cross from the right. The pilot initiated a right hand turn in front of launch to fly parallel with the ridge. The pilot initiated the turn at trim speed and turbulence increased the angle of bank. He tried to weight shift to the left to correct, but the right wingtip stalled and he failed to pull the bar in.

The pilot made a snap decision to go with the right hand turn and try and complete a 360° turn. His left wing hit the top of a large bank of trees, and the crashing through trees seemed to go on forever until the glider impacted the ground."

Comments:

"The pilot was extremely lucky on this occasion to be able to walk away from this very serious accident. Lesson for me as safety officer assisting novice pilots on launch: In addition to running through flight plan and take off technique, pilots launching from inland sites must be advised to fly faster than trim speed when close to the ground. This applies to all pilots, but is particularly relevant to pilots with predominately coastal experience."

Ops Manager's comment:

Our instructors teach pilots to fly with a safe margin of airspeed when near to the ground; despite this it does not hurt to reinforce this when assisting a restricted pilot at an inland site.

No 3

Pilot: Advanced HG pilot
Experience: 13 years flying, though little motorised experience
Glider: High performance hang glider with motorised harness
Aircraft damage: Broken control frame and propeller
Weather: Light and variable wind
Location: Inland soaring site

Report

Pilot injury: Cracked rib and bruising to knee

Description (in the words of the pilot):

"Pilot launched in light/nil crosswind with full power applied; swung through A-frame with power induced momentum; had nose angle too high; stalled to the right and impacted hill 50ft below launch in long grass."

Comments:

"I volunteered to launch before a group of 25 gliders to test the air as a wind tech, as conditions looked marginal for thermal soaring (the ability to stay airborne using the powered harness gave me the advantage). I restarted the motor a couple of times after it stalled, to a response of jeering and laughs from the large crowd watching. I was very nervous; the harness was uncomfortable and difficult to stand in on the steep launch slope. Having restarted the motor and maintained revs, I was compelled to launch immediately with full power applied. Swinging through the A-frame as I did raised the nose angle and led to the stall. I was heavily winded by slamming into the ground onto the parachute container in front of my chest, which was packed tight, square and protruding 100mm against the outside of the harness resulting in a cracked rib. In hindsight, I consider myself lucky to not have suffered worse injury. The factors contributing to this mishap were:

- 1) pilot anxiety and loss of concentration – you really need to stay focussed and confident
- 2) incorrect launch technique – regardless of whether you have power strapped on or not, you still have to fly the glider off the launch
- 3) the parachute container could be more streamlined and less of a bulky protuberant
- 4) this is my 5th flight with the powered harness; all my previous flights having launched into a soarable 15kt. Just because the motor is running, doesn't mean you have to go then. It only hurts when I laugh, sneeze, cough, breathe..."

Some off the Web from Overseas

Pilot: Beginner/Novice
Glider: DHV1 with backpack power unit
Helmet: Open Face
Location: Portugal

Description:

"I'm sadly announcing the first powered paragliding death in our country. A friend of mine with a low time brevet (six months) was flying by the beach, the wind was blowing to the sea (20km/h). He didn't watch his position and was dragged over the sea, being slowly pushed away from land. He panicked when he was some 100m away from land, unbuckled and threw himself into the sea. He was fairly high (20m), hit the water badly (chest and face), apparently lost conscience and drowned before we could reach him."

Comments:

"What saddens me more is the fact that if he kept calm he would still be with us; he was flying a very stable school wing and if he kept flying we would have sent a boat and rescued him. Keep calm in adverse conditions."

Pilot: Flaming Lady
Experience level: Beginner/Novice
Glider: DHV 1-2
Harness: Standard back protector
Helmet: Full Face
Location: Thermal site, USA

Description:

"Just because a paraglider typically flies without gasoline and a spark engine, doesn't mean that it can't 'crash and burn' like a regular aircraft. A couple of days ago at my local intermediate rated thermal flying site, a novice pilot made an unauthorised launch into moderately high winds and managed to fly around for about half an hour before trying to glide down towards our landing field near a dry river wash with houses and 40ft high power poles about 1/4 mile from the landing. She was way short of making the landing area so she set up a landing approach near a low bridge which spanned the dry river bed, and when she was a few feet off the ground her wing struck some powerlines causing them to arc across the fabric of her wing which set it on fire. The flaming canopy landed on the ground and set the brush on fire which burned until a fire-fighting helicopter could drop a bucket of water on top of it. The pilot was not injured but the local hang glider pilots went into a state of 'parabashing' for a while over this incident. TV news 'copters and a minor media

frenzy ensued during the event. I am not providing the name of the pilot, but from now on she will be known as 'Sparky'."

Comments:

"There were clear areas to land in the dry river bed which were not near the powerlines but the pilot may have been motivated to land near a road/bridge to avoid a longer walk to the LZ. Remember to pick the safest LZ when landing out."

Ops Manager's comment:

I haven't said it for a while, must be time –

**DON'T SACRIFICE SAFETY
FOR THE SAKE OF CONVENIENCE!**

Fly safely,
Craig Worth

A Different Way to Tow a Glider...



Take one trike...



Hook on...



... and get high!

Tasks of the World Masters

St Auban, France – June 1999

JOHN BUCHANAN

The Pre-World and World Gliding Championships in St Auban, France, a few years ago forged many friendships between Australian and French gliding enthusiasts. Exchange visits, aircraft, domiciles, gifts and friendship have thrived and expanded. It is not therefore surprising when our French friends made the offer of free aircraft, accommodation, cars, etc, to several Aussie pilots and crews for the World Masters of Gliding at St Auban that not one person hesitated in accepting.

Whilst the event turned out to be the best and most fun-filled, relaxed competition of my life, I wish only to record here the impressions of all pilots at the event on the innovative tasking, bonus scores, start and finish systems used in the event. Without doubt these factors contributed to the enjoyment of all persons involved with the meet and the organisers deserve maximum credit for such a bold and outstanding effort.

The following tasks were used:

- the Classical (common racing) Task,
- the Pilot Area Selected Task (PAST),
- the Run Task, and
- The POST.

1. Classical Task

This is the usual 1, 2, 3, 4, etc turning point race. We found several improvements here.

- The start circle was a 10km radius for all tasks. Your start time was the time that you passed out of this circle in any direction. All pilots thought this was a much improved safety idea, and easier to use, as there was much less emphasis on a detailed line or confined area. There was much less cockpit workload and pilots were spread out a lot more. It may not be the fairest as there could still be one favoured spot to leave the circle on some days.
- I think the solution to this could be a simplification of the existing Australian multiple start point system. Instead of having four areas, oriented 10 to 20km from the base airfield, each area having four points, (totalling 16 points) as we currently do, we could have four (or five) points only, approximately 15km from the airfield with each point having a start radius of say 7km. On any one day, three of the points may be assigned to the task in a way that the one or two points having the obvious advantage are deleted.
- An interesting twist was added some days. A bonus of 30 points was awarded to the pilot who reached the first turning point first! This certainly encourages pilots to get out and get going. It could have application, for example on blue days or when the organisers want pilots to get home earlier, such as on the last day or when they deliberately wish to set a short task to allow pilots a more restful day. The bonus size can be modified of course and 10 or 15 points may be more "serious".

- A turning point radius of 3km was used. This was agreed to be a very good idea. It was much easier to be certain of entering the correct zone with less time spent looking at the GPS, compared to a 0.5km radius turnpoint. It was also safer because the gliders do not have to get so close together at the turnpoint. You also have a better chance to stay in lift or not have to fly into bad weather.

- The use, for all tasks of a 3km circular finish line was again applauded for its safety. This curved line could be approached from any direction and had to be crossed at a minimum height of 500ft. This ensured that all aircraft were able to slot into a safe circuit and unhurriedly make their landing decisions. Of course the odd "worm burner" across the airfield was allowed, after crossing the line at height and if there was no conflict. Some may not favour this finish line for its lack of spectator appeal. However, that is a separate issue and can certainly be overcome.

2. The POST Task

Apart from the different start, finish lines and turnpoint circles mentioned above, this was the normal POST task, as we know it.

No pilot was in favour of this task and it was unanimously agreed that this task should never be used again in view of the safer, fairer and more interesting PAST task. With the POST the pilots choose the order in which to use turnpoints, and this often means that there are pilots flying in opposite directions in the best part of the sky, and usually very fast at cloud base.

3. The PAST Task

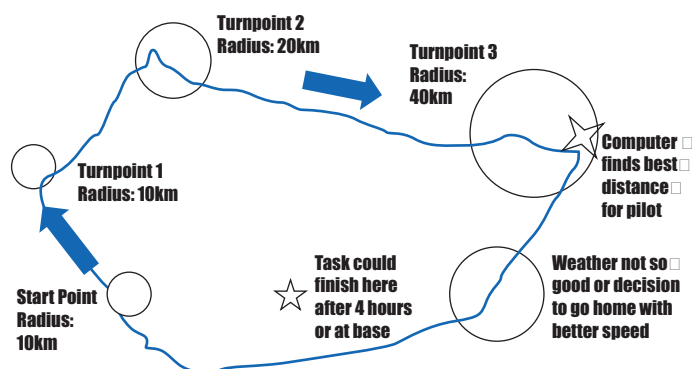


Diagram 1: The PAST Task

This task was voted as the best of all tasks. A vote that was unanimous and included several past, current, aspiring World champions and other top international pilots!

It was felt to combine the ideals of the POST and the best of the Classical tasks. Essentially it is a classical task with turnpoint "areas" and a time limit. See diagram 1.

- a) The turnpoint areas were of 15 to 40km radius. As such they were very simple to define and were very easy to turn within. There was little favour for a turning area defined by radials and distances from the start point or by geographical features, as they would be more difficult to find. (Similar argument for Australian start points?) After start (and this showed further advantages of the 10km radial start line – as you could start out to one side), you tracked for the first turn area but you could be going well to the side of the nominal point to make use of better air. You may turn anywhere in the nominated turnpoint cylinder and the scoring computer will credit you with the largest distance that can be extracted from your datalogger. If there is a rain shower at turn point two you may elect to only just enter the radius and go on to turnpoint three. At three there may be a good street so you can elect to fly to the farthestmost side of the turnpoint cylinder.
- b) There was a minimum time limit for the task, like the POST, so you must be careful not to just take the shortest distance and arrive home too early! Similarly if the tasksetters have got it wrong and under set the task you can fly further (scoring system effect here); or if over set, the pilot shortens his task to get home.
- c) Like most European POST tasks the PAST finished wherever you were at the time, which was your start time plus the task time. A 50 point bonus was then added for getting home. Points are awarded for distance and speed. This feature can be varied. For example in the USA, and other, Nationals, you actually do a finish at the airfield and your task time is the longest of your elapsed time, or the task time, and this is divided into your distance to get speed.
- d) The task is clearly safer than the POST or Classical because the large turning areas allow the pilots a large choice of where to turn, hence low GPS workload and less head in the cockpit – particularly compared to a concentrated point turnpoint. Also, the set order of the “areas” sets a flow direction. This flow direction keeps the pilots moving on, and not running along the lines of the best lift in opposite directions. This reduces the risk of head-on collisions.
- e) PAST was also considered to be not only fairer than the POST, but also a fair and enjoyable race in its’ own right. At the same time it allowed a better test of broader pilot skills than the classical. If the weather is poor in one area, all pilots have to go to that area and have the same problem, or if the weather is very good in another area, all pilots have the same chance of using that good weather. The opportunity to display meteorological knowledge, in-flight planning and airmanship skills comes from deciding how far to penetrate any of the given cylinders to maximise your speed and distance points.
- f) The fairness could be reduced if a turn area is too big. Perhaps 30km radius is big enough? The maximum size of the turning area could be related to the length of the legs of the task.
- g) 30 points bonus was provided for the pilot who flew the longest task leg for the task. Again, whilst not an essential feature, it was met favourably. When one sits back and puts this bonus into the context of more innovative and interesting tasks and competitions, with appropriate scoring systems, (another article) it is quite appropriate.

4. The RUN Task

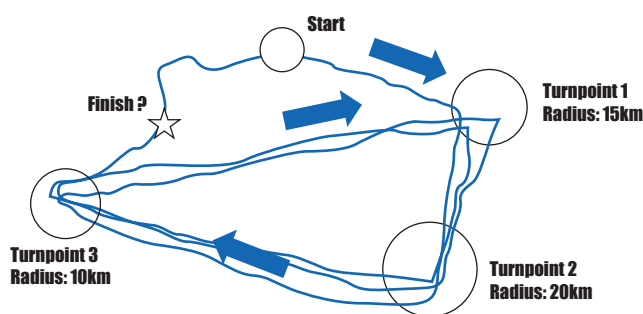


Diagram 2: The RUN Task

This was also voted a very good and enjoyable task to fly. It is probably the ideal task for a day with poor weather.

Essentially this task is a Classical task, (though smaller) with turnpoint areas (they can be small if you wish) that are raced around as many times as you can. See diagram 2.

Again a time limit is imposed and all pilots are going in the same direction. They can choose how far to go into each area when they are close enough to see what the conditions are like. For example, when the task is a 150km triangle, and each turnpoint area is a 15km radius, there is the possibility to fly a route between 60 and 210km on each circuit,

and of course as many circuits as you like, so the task is completely flexible. Again the home bonus of 50 points helps to prevent people flying into the ground at the end of the set time. However, it may be a good idea to offer a bonus which is proportional to the altitude of the glider at the end of the run, or set a finish height for wherever you are, or undertake any of the suggestions for finishing the race as in the PAST. Also longest leg bonuses were again applied.

On the last leg, to increase the chances of pilots flying home, perhaps the scoring distance should be from the last turning point in the direction of home, rather than in the direction of the next turning point. This was the case in the POST task in the European Championships at Leszno.

Comments

I have no personal preference for tasks. I enjoy them all except the POST and will just fly whatever tasks are predicated for the event. What really surprises me though is the number of National level pilots who become so emotively negative to even have a discussion on the topic of different tasks. They also veto them at any meeting without having tried them.

We have so many different sports, each with their unique method of competition. Swimming, downhill skiing, bobsledding,

Formula One and running are examples of “racing”. Golf, archery, gymnastics, etc, are examples of individual, pure skill contests but conducted entirely different to a race. Tennis, soccer, cricket, baseball are also another category of uniquely different sport competitions on the international arena.

What is probably not so well understood in our sport is what type of a competition ours actually is!

Many think that we should, and do, race around the same, fixed, course in a FAI contest. Yet by so doing we have eliminated all the “variables” that might set us apart from each other! The corollary being that we don’t want POST and other tasks that require the pilot to use additional skills such as meteorology, airmanship and in-flight planning (or is it thinking?).

Well nothing is further from the truth. We go out of our way to select a better start time than anyone else does so that we fly in the best conditions. We allow and seek out wave pre-start and hope that no-one else does. We start in different meteorological conditions, from what we consider to be the most advantageous, from the many start points. Then we deviate off the prescribed

Tasks of the World Masters

St Auban, France – June 1999

track to the best cumulus, or way off and keep deviating along a street. We identify and use different ground thermal sources. We use 8kt thermals and curse Taylor for being in 12kt – again! We are unlucky to dive under a dying cu when someone just left it at cloudbase in 10kt or to get caught out in a blue area or rain shower that many ahead of us missed and, of course, we are all allowed to have a better aircraft than anyone else.

Clearly our competitions are about finding and skillfully using better meteorological conditions than everyone else. That is, our competitions are contests with nature. Those of us who blend best with nature's ways will be the winners. We are not contesting the best pilot technical flying skills – that is what shooting and archery is all about. We all have very highly developed technical skills and a contest to establish the pilot with the best skills would indeed be very boring, whilst ignoring the basic premise of our sport.

The pilots at St Auban competed with the above tasks – and then voted unanimously that the preferred tasks in order of merit were the PAST, the RUN and the Classical and that the POST should never be used again. This from top USA pilots who regularly use POST tasking back home – namely George Moffatt and Tom Knauff.

Our Australian Sports Class competitions thrive on POST tasks so there is clearly some scope to vary our FAI task types. The Sports Class may well benefit further from some of the above-mentioned tasks.

Most overseas contests employ some of the above tasks. Notable amongst these are POST at World Gliding competitions, South African and the European Nationals. I understand that the next World comps will have at least PAST in addition to Classical. I think it is time we opened our FAI Nationals up to the fun and diversity of some of these tasks and thereby extend the ways in which we already test and select our champions.



Sounds of

ALLAN ASH

Among the pleasures of flying sailplanes and, I imagine, hang gliders and paragliders, is the quiet and peaceful environment in which we soar high in the sky, far from the maddening crows (to coin a cliché).

I have always been grateful that I entered the sport of flying, both powered and unpowered, in the early post-WW2 years in what those with poor memories refer to as 'the good old days'.

Forgetting the occasional times of terror and frustration, I recall the happiness of flying in an open cockpit or with no cockpit at all, with the wind in my hair and sometimes up the legs of my trousers.

At one with my aircraft, in the comparative silence of the sky, I became aware of the sounds of flight. In those early days, with my head sticking out of an open cockpit, I heard the symphony of the wind as it blew past struts, wires and other appendages. The sound varied with speed, of course, and ranged from a shrill piccolo to a more mellow flute sound.

An interesting aspect of the open cockpit was that sounds from the earth 1,000 or 2,000ft below could often be heard – the crow of a rooster, the toot of a car horn, the chuff-chuff of a steam train.

More than once, in those days of solo ab initio training, an instructor on the ground could shout to his pupil as he made a low circuit, *"Keep your speed up, you idiot,"* or *"More bank! MORE BANK!"*

Conversely, sounds from the cockpit could often be heard by those on the ground. Pilots who fancied themselves as budding Nelson Eddy's or Mario Lanzas thought their vocal efforts were heard only by passing birds, but it was not always so.

Then there was the pilot who, halfway around a loop was heard to plaintively cry, *"My God! I'm stalling."*

The move to the use of enclosed canopies virtually put an end to this interesting chatter and sailplanes became somewhat quieter. As I advanced onto later types of sailplanes, the sounds of flight changed. The sound of the Olympia was more of a shh – a hushed hiss. The Skylark 2 gave off a low organ-like hum, almost a moan I thought. The oboe of the aerial orchestra.

Of course, we all realise that noise meant drag, and as sailplane design advanced, drag was gradually reduced, so the aircraft became quieter in flight.

External sounds of the wind over the aircraft were not the only voices of flight. There were internal sounds as well. The old Grünau Baby was a very stiff aircraft. The wooden wings didn't flex. They were firm and solid, locked into place by sturdy struts. But as one wrapped into a good thermal they often omitted a distinct, c-r-e-a-k as the massive spars took the added strain of the turn. It was a sound similar to that of a yacht's mast as it leans with a heavy gust. It was quite a comforting sound really...

Then came the metal machines – the Blanik, Pilatus and IS28. They had a different sound. A rather tinny, oil-drum 'boing' or 'ting' as they strained on a winch launch or a boisterous thermal.

In time, I flew some of the new GRP sailplanes – Twin Astir, Janus and Cirrus. They were reaching towards the ultimate in drag-elimination and were almost completely silent. While I rejoiced at the improved performance, I missed the comforting sounds of flight to which I had become accustomed.

I haven't flown any of the really modern GRP sailplanes but I'm sure they are so silent in flight that the pilot can probably hear his pulse race as he manoeuvres in a crowded gaggle or crosses the finish line at 200km/h a few seconds ahead of a rival.

But there are other sounds that sometimes accompany flight that can be a bit disturbing. One becomes so familiar with the usual sounds that the sudden intrusion of a new sound can be startling.

On a cross-country flight, I was once climbing nicely under a large and very black cloud in an Olympia when there was a sharp 'crack' that made me jump, despite my restraining straps. The sound was so loud and

Flight

sharp that my first thought was that a wing spar had broken! But the Olympia continued to circle and climb normally so I began to wonder at the cause of the sound. My heart rate had no sooner returned to normal when the sound came again 'crack, crack'. Now I was really worried. Something was wrong, but where? What?

I was on the verge of panic when it came again 'rat-tat-tat-tat' – and with the sound came the solution. On the outside of the canopy in front of my eyes appeared a number of large splashes. I heaved a heavy sigh of relief as I realised that the noises were the sounds of large raindrops hitting the hollow wooden nose of the Olympia.

On another cross-country flight I was cruising merrily at a comfortable height when I became aware of a light tapping noise. I wondered what it was but could think of nothing that would cause the light but regular tap-tap-tap.

As the flight progressed, the tapping increased slightly in intensity though the regular rhythmic beat did not alter. The sound was not so much alarming as disconcerting. It appeared to be coming from somewhere above and behind my head. The tapping had a slight metallic ring but the Olympia is basically an all-wooden aircraft. Then I remembered that there was a narrow strip of duralumin covering the gap between the wings above and behind my head. But what was tapping on the metal cover?

A few moments thought brought the answer. Before taking off I had sealed the gap cover to the wing roots with strips of adhesive tape. Obviously, the front end of one of these tapes had been lifted by the airstream, which caused it to roll back a little on itself. This had created a small solid lump which, disturbed by the airstream, was now flapping about and tapping on the metal gap cover.

Strangely, having worked out the correct answer, I no longer noticed the light tapping during the rest of the flight. The sound had been accepted as normal.

The sounds of flight are not, of course, confined to motor-less flying. Just as sailplanes have become quieter over the years, so have light aeroplanes. In the 1940s, soon after I took up gliding, I obtained a student

power licence and had a few hours of dual instruction with the renowned Sid Marshall. Operating from Mascot aerodrome (as Kingsford Smith airport was then known) I flew Sid's Avro Cadet and Avro Avian on training flights over the eastern suburbs of Sydney.

With open cockpits and slow revving engines fitted with short exhausts, they were draft and noisy with an aroma of oil pervading them. I didn't do more than a few hours of training as my interest turned fully to flying gliders.

Then in 1969 I once again took up power flying, this time in Cessnas of that period. With enclosed cabins, fast revving engines and good exhaust systems they were considerably quieter and more comfortable than the old Avro bi-planes.

Fairly early in my power training I was shown how to refuel the Cessna 150 and I then carried out a re-fuelling on my own. A short time later I was airborne with my instructor, climbing towards the training area. At 2,000ft altitude I levelled off and was startled to hear a loud metallic banging above my head. The instructor took over, reduced power and turned back towards the airfield. Immediately, the banging ceased.


After landing, I stood on one of the main wheels and peered at the top of the wing. The cap of the petrol tank was lying on the top surface, beside its filter neck but secured to it by a short chain.

It was plain that when I had re-fuelled the aircraft I had not replaced the cap properly. During the climb out the airstream over the cap had apparently been insufficient to dislodge it, but when the aircraft was put into level flight the airstream over the wing must have altered sufficiently to lift the cap off the filler neck. Secured by its short chain, the cap had then rattled about on the wing top surface, causing the alarming noise.

After making sure the cap was properly fixed in place and ensuring that no damage had been done to the wing surface, I returned to the cockpit and we set off again for the training area.

Every experience in life offers us an opportunity to learn something, and noises in flight are among them. While we are taught to make the most use of our eyes

while flying, it is useful also to make full use of our ears.

This may be difficult for pilots of modern sailplanes fitted with audio varios, radio communication and landing gear warning horns. Anyway, I don't think the modern flexible sailplanes creak, boing or rattle like those of earlier times. However, there's always the possibility that sometime, somewhere, something will go 'boing' in the flight. 

BAROSSA GLIDE

A good roll-up of 48 gliders and 56 pilots at the Barossa Glide – the Club Class Nationals and Club Class Pre-Worlds held at Gawler last month. Nineteen of the participants were from overseas.

The Speaker of the Federal House of Representatives, Neil Andrews, opened the contest on 18 January.

A complete article on the event will appear in a future edition.

GFA & HGFA Letters to the Editors

Increasingly the sub-editors of both the HGFA and GFA are receiving letters aimed at members of both organisations rather than just one. We cannot print such letters twice, but instead have decided to combine the *Letters to the Editors* and sort them into subjects. Hopefully this will make it easy for all pilots to find their subjects of interest.



"Datalogger" Article Errors

I wish to point out to the readership a few errors contained in my datalogger article of a few months ago.

Firstly, I stated that the LCD display of the Colibri and Volkslogger dataloggers were of similar size. In fact the Volkslogger has a 2x16 display where the Colibri has a 2x8 display.

Secondly, I may have led the readers to think that the on-board lithium memory back-up battery used to retain memory contents in the Colibri and Cambridge loggers could allow the units to function briefly in the event of a power failure.

This is not so. The Volkslogger uses a flash ROM to retain memory contents when switched off. This is actually a plus for the Volkslogger.

Thirdly I may have incorrectly estimated the price of the Cambridge datalogger at \$3,000; I based this on the US price obtained from Cambridge's website. I suggest readers contact the agent for an accurate price.

I apologise to the manufacturers and dealers of these instruments and the readers of AG for my error.

Luke Dodd



Narromine Thanks for Support

I would like to publicly thank the Bathurst Soaring Club for choosing Narromine as its site for the NSW State Gliding Championships late last year.

Council and residents always welcome the presence of pilots in the district and the input they make into the local economy.

Narromine Shire Council is committed to continuing its further development of the airfield and expects the new 'triangle' and additional runway to be completed in March/April this year.

Councillor Angus Jones,
Mayor of Narromine Shire Council

Joint Magazine Matters

Lead Time

I would like to compliment Ian Jarman for his ability to put forward knowledgeable and convincing arguments.

With his reply to my previous letter he itemised the steps to produce Skysailor and how long each step took. So it appears that the deadline for submission of articles and news can't be appreciably shortened from the five weeks that it currently takes (not including Skysailor being up to two weeks late as well). I have just one question: How is it that a free, glossy covered, colour magazine that appears in my letterbox every week, can have a deadline only six days prior to publication? Granted it has a distribution ten times bigger and it employs professionals. But if they can do it in six days we should be able to do it in 14.

Graham Sutherland

I completed a university degree and worked in the "real" world for some years (for banks and large corporations as well as publishing houses and individual magazines in Sydney, France and Germany) before starting my own business and am rather offended by Graham's remarks about our lack of professionalism. I know that the HGFA has looked into getting the magazine done by a publishing house and the fact is that we don't have the distribution, advertising content and budget to afford it! Even Cross Country magazine which goes to pilots around the world (and which I laid out for a couple of years) has a similar deadline (if not longer) and so do all hang gliding magazines of similar production quality (I'm not talking about newsletters like APN here).

Graham is welcome to take over my job (or all of our jobs) and do the whole thing himself – maybe in a couple of months, if he hasn't burned out, he'll realise what a difficult, time consuming and often thankless job we are all doing to get the magazine out to everyone.

As for the lateness of issues in the past, we did have a problem with the shared printing being done by HGFA and GFA for some time (divided between Adelaide and Newcastle) and are using a new printer and mailing house (in Canberra) in the new year. Delays are also often caused by Australia Post and public holidays that eat into our production schedule.

I hesitate to guess that the magazine Graham receives in his letterbox contains at least 50-80% of advertising/advertorials (to make it viable and free to the public) and only little real editorial content, which probably also only covers the local area, not all of Australia and some of the rest of the world, like AG/Skysailor does. How can the two be compared?

Suzy Gneist

New Name

In recent issues of AG/Skysailor there have been suggestions for a new name for our various forms of leisure flying. I am inclined to agree with the thought that a name that encompasses all the air sports would be preferable to one that lists each and every one of them. As suggested in the December issue by the HGFA Board, a name that included every aspect of leisure flying would be long and cumbersome.

I have been involved in sailplane flying since 1942. I've never flown a hang glider or a paraglider and am now too old to try,

but I've flown in sailplanes on a number of occasions in company with hang gliders and have long admired the sport as both adventurous and stimulating.

I support the idea of an all-encompassing name that would include every air sport, including sailplaning, and I suggest that such a name already exists.

Why not have an all-inclusive title such as "Skysailors Australia", or "Sport Pilots Australia"? This would place the emphasis on the pilots rather than the aircraft and could include those operating sailplanes, motor gliders, hang gliders, paragliders, trikes, balloons, parachutes and, if necessary, any new form of aerial pleasures, even those who might jump off a rooftop holding an umbrella! I am saddened at the current decline in gliding and associated activities and would support any move that would stimulate an interest and participation by more people.

Allan Ash

Layout Suggestion

I would like to make a suggestion regarding the layout of the magazine.

That is to make, in essence, two magazines but place them back to back so that when you read one side you have Skysailor and when you flip it over you have AG. The middle double page could then be a "centrefold" with a hangie picture on one side and a rigid picture on the other.

I have seen this method used to great effect with another organisation that I used to belong to (they also combined with a like organisation) It is also used in some shop advertising mail-outs

Trevor Cripps,
Caboolture Gliding Club



Australia

2000 Paragliding Nationals

12-19 February 2000

Bright, VIC. Sanction: AA. Entry fee: \$140 after 10 Jan. Films \$5 each, processing & checking \$15 per film per pilot. Requirements: HGFA membership, a minimum of 50 hours inland flying experience, reserve parachute & either a GPS or fixed lens (not zoom) camera for flight verification. Recommended: GPS approved by Comps Committee strongly recommended & UHF radio. For further information see <www.cnl.com.au/users/djm/2000pgnats.html> or contact David Mills on <djm@cs.mu.oz.au> or ph: 03 57282668 or 0411 513404.

2000 NSW Hang Gliding State Titles

19-26 February OR 18-25 March 2000

Due to a date clash with the PG comp, the HG dates will be either 19-26 February or 18-25 March. The preference is for February. Firm dates available next issue, or contact Billo. Registration: Imperial Hotel, 10 Mar. Sanction: AA. Entry fee: \$120 incl. films, T-shirt & presentation dinner. Requirements: int-adv with inland experience, UHF radio & parachute, GPS recommended (if it still works in 2000), databack camera optional but recommended. HGFA rules & scoring apply with GPS turnpoint & timing verification. Fee payable to: NSW HG State Titles, 50 Park St, Charlestown 2290, email: <BOLIVE@hahs.health.nsw.gov.au> or ph: 02 49213804 (w).

Big Sky Manilla Paragliding Open 2000

4-11 March 2000

Sanction: AA & CIVL category 2 (for international ranking). Over \$3,000 in cash & prizes for Open, Int, Nov & Female classes plus day prizes. Registration: Manilla Town Hall HQ 3 March 7-9pm. Max. 120 pilots. Requirements: GPS (Garmin or Aircotec), UHF radio, reserve, adequate thermalling experience. Entry fee: \$140 (\$170 after 21 Feb) incl. posted info pack (if not on email), hill transport, map, prizes, trophies, T-shirt, presentation night (dinner & band). Pilots must organise their own retrieves. Wind techs welcome. Info & entry by ph/fax/email (credit cards accepted). Contact: Godfrey Wenness, ph: 02 67856545, fax: 02 67856546, email: <SkyGodfrey@AOL.com>. Full pilot information is on our club web site <www.gri.une.edu.au/mss>. If paying by post (cheque/money order made out to "Manilla Comps" The Mountain, Manilla, NSW 2346.

2000 Victorian Hang Gliding Open

12-18 March 2000

Corryong, VIC. Contact: Wesley Hill, email: <whill@nm.com> or ph: 0408 305943.

"Grampians Adventure Flying Holiday

10-16 April 2000

Grampians, VIC

"The Lore of Flight" adventure flying Grampians based holiday is 7 days of scenic flying and Nav-ex's. Fly or tow to the 4,000ft RWY and park your aircraft right next to your accommodation. Accom. & all meals from \$325 pp. This holiday is open to all pilots, and all aircraft types. Accommodation is limited, so for more information ring Peter or Anne McLean, ph/fax: 03 5797 2159; email: <lore@yca.com.au>

"Flutter than the Flatlands" Birchip 2000

21-25 April 2000 Easter holidays

Birchip, VIC. The Flutter than the Flatlands hang gliding competition for next Easter, will be 5 long glorious days of flying due to ANZAC day falling on the day after Easter Monday. Apparently this is something to do with the eclipse. Entries open on 15 January 2000 (note this has changed from previous years). Further information and updates are available on the official website at: <www.users.bigpond.com/warwick.duncan>

Paragliding State of Origin Series 1990-2000

Easter 2000 Weekend

Manilla, NSW. Contact either Deirdre Skillen (NSW) ph: 02 9877 0279 or Mark Plenderleith (QLD) ph: 07 32786274 for more information. Alternatively check out the events at: <www.uq.net.au/~zzdcrook/psoos/psoohome.htm>

Yea Adventure Fly-In

29-30 April 2000

Murrindindi Aviation Group Inc. is holding the 3rd Annual Yea Adventure Fly-In. Fly into Yea, VIC, on Sat. & join the aviators for some fun. Sat. night dinner & entertainment at the airfield Fire Station Hall. Sunday we will be doing more local flying to some of the 10 airfields in our area. Food & accom. available both days. For more info call John Norman ph: 03 57972972 or Peter McLean ph: 03 57972159.

Overseas

New Zealand PG Nationals 2000

23-30 January, 2000

Wanaka, South Island, NZ. Contact: Bryan Moore, 19a Achilles Place, Wanaka, South Island, NZ. Ph: +025 2815950 (mobile) or +64 (3) 4431013 (h) or email <high@xtra.co.nz>.

New Zealand Hang Gliding Championships

12-19 February 2000

Wellington, NZ. Pilots are invited to fly in the NZ National Comps in Wellington. The Wellington area offers a variety of userfriendly sites to suit conditions, varying from mountainous to flat valley. Mt Climie is the primary site (2,850ft asl, 2,350ft agl) with a nice ramp launch & open valley landings in front & the option of distance to the north via the Wairarapa. Base

will be at Tauherenikau in the Wairarapa (midway between Greytown & Featherston). This location is central to the planned flying sites & has great accommodation set in the tree-clad grounds of Tauherenikau racecourse. Cost is \$15 per night; for bookings contact Jenny Fenwick, 06 3089026 (w), 06 3089393 (h). There will be an Intermediate and Open Class, as well as day and spot prizes. Entry fee is \$120. The fee provides for films, maps, T-shirt, function, organisation costs etc. Please make your payment out to Grant Tatham. Remember that it is essential that you be a paid up member of the NZ Hang Gliding & Paragliding Association Inc., or if an overseas visitor, that you hold a visitor's license that is current for the duration of the comp. It will be possible to complete a membership form onsite, prior to your first day's participation, but cash payment only will be accepted. Of course, current WOF's on wings are mandatory. For more info contact: Grant Tatham, ph: 06 3797322, email <tathams@xtra.co.nz> or Trevor Leighton, ph: 06 3088464, email <TREVOR.HELEN@xtra.co.nz>.

Auckland XC Aerotow Classic

23-31 January 2000

Matamata, NZ. This will be an open distance cross-country event. Two trikes will be available, both capable of towing intermediate/advanced hang gliders. For further details contact Ian Clark, email <iandclark@xtra.co.nz> or ph: +64 +9 5240091.

Nelson Championships

5-10 February 2000

Nelson, NZ. For further details contact Noel Tait, email: <Tait@ts.co.nz>.

Women's Hang Gliding Worlds

18-30 June 2000

To be held in Greece. Contact HGFA office on ph: 02 69472888.

Under 21s Paragliding Championship

23 to 30 August 2000

Pole Espoir, France. If you have a competition licence, have participated in at least four competitions and are interested in participating, we will attend to board, lodging, transport and other costs, you only have to pay for the trip over. Competitors under 18 must be accompanied by a tutor. Note that the offer concerning board and lodging is only good for competitors, not tutors. If you have any questions you can contact us at the following postal or email addresses:

Pole Espoir Parapente, Lycee Andre Honnorat, 04400 Barcelonnette, France, email <bernard.giacometti@free.fr>

The Pink House

MAURIE BRADNEY

On the last day of the recent 1999 NSW State competition at Narromine I was invited to fly with Ian Barraclough in his syndicate ASH 25. The conditions were a little difficult at first, but as they and we improved it became a pleasant, enjoyable flight. The last leg, Tullamore to Narromine, gave me an opportunity to carefully examine the properties to the northern side of the road as Ian turned the 'barely there' final glide into an accelerating safe one.

The reason for my interest was a retrieve that I had during the 1975/76 Nationals that turned out to be not so simple. In fact, one significant item of that retrieve was never found.

"They will find you very easily," said the lady. "Just tell them to take the Narromine-Tullamore road. About 3km out they will see a pink house on the right. About 200m past that is a dirt road. They just follow that to the end and they are here."

A simple message. I phoned it in and settled back in the comfortable chair in front of the TV with a beer, awaiting my crew.

Nothing by dinner time, so I was invited to dine with the family. Around 11:00pm they said they were going to bed and suggested that I do the same in the spare room. About 2:00am the phone rang.

It was Justine, my daughter and crew chief. *"Hi, Dad, we're in Tullamore and didn't see any pink house on the way. We've been along the road again with a local we picked up in Tullamore who said he knew it, but still didn't find it. Do you have any better instructions?"*

I had to admit that I hadn't and wasn't going to wake up my hosts to find out anything new. I gave my estimate of how far I was from Tullamore. A little more than half-way – about 45km straight line and 1km to the north of the main road where there were some big tin sheds. Justine said that she would try that.

A little after dawn I heard the rattle of a trailer outside the house. With Justine were

John and Roly, the two Waikerie tug pilots sharing the tug and crew duties for me and the five other Waikerie pilots who were competing. It was not my trailer, but it was a similar open one for the Standard Cirrus that I was using, so the de-rig was easy. So was the return journey. By way of explanation, Justine said, *"Sorry we're so late, but we couldn't get a trailer until after 11:00 o'clock."*

I got most of the story on the drive back, but it took a few more sessions to fill in all the details. And there were some more parts to the story in addition to the events of that day. We drove into the airfield just in time for a clean up and off to briefing. Fortunately for me, the weather change that had brought all of the Standard Class but one down the day before was here, so there was no task for the day. We could all rest and recover from the long night.

The story had really started about a month before.

My club Standard Cirrus was brand new. Just out of the container. Richard had a Standard Cirrus from the previous summer and had an easy-to-use closed trailer. We set off from Waikerie for Gawler with his trailer to pick up the new club one. On a long straight stretch of road between Blanchetown and Stonefield, he pulled out to pass a semi. We hit the gravel on the side of the road and the trailer went wild. As I slid down in the seat and tightened my belt, Richard gave up on trying to get it under control and touched the brake.

As the car spun, the force was enough to shear the two bolts that held the towball tongue onto the towbar and the car. This was fortunate, as the car going backwards slid to a halt just a few feet from a stobie pole. The trailer continued on, through a fence and about 100 yards into the field. Fortunately, remaining upright.

No sign of the semi. It had shot through. A VW slowly drove out of the scrub opposite. The two women in it saw our antics and left the road on the opposite side to keep clear. They and their car were OK. Richard's car had a small crease on the rear mudguard, where the trailer had nicked it in passing. Although shaken we were OK. The trailer was undamaged. We made repairs to the fence and retreated to Waikerie to repair the tow hitch so that Richard could rescue his trailer.

The next day I borrowed another trailer and returned with the new glider without any further incident. We fitted up the Cirrus with instruments and put it to use. I got in a few days practice.

As his trailer was fairly heavy, Richard decided to put his trailer on a 4-wheel bogie and add stabiliser bars to fix the stability problem. Richard was ferrying our tug to Narromine and his wife Betty was towing his trailer. I set off for Narromine (1,027km) the day before with the club Cirrus on a Waikerie standard open trailer.

My journey was without incident. However, the next day Betty arrived without

the trailer. On the first "S" bend out of Waikerie, about 5km out, the trailer went out of control and rolled! The only damage was to Betty's ego and pride. The glider still in the trailer was back at Waikerie.

We still had two days to the first competition day. I suggested to Richard that he take my trailer back and bring his glider in it. He could then aerotow back to Waikerie behind the tug when the competition was over. A brief consultation around our group and the decision was made. Bob Martin went to share the driving and 24 hours later Richard was back with his glider.

The competition went well with no problems. In a series of improving weather days, our tasks were worked up to a 500km task – Narromine/Garema (south of Forbes)/ Lake Cargellico/Narromine. As we left the briefing tent, someone asked, "What about that cirrus in the west? Won't that slow us down?" "No, that's just an isolated patch," was the met man's reply. There were no satellite cloud pictures to study in those days.

The first leg was great. Cumulus at 6,000ft and going up and the wind was negligible. About one third of the way on the second leg, Richard called me up. He had pushed too low and might have to land. I said don't worry, use my trailer if you need it. I was confident of getting home. Richard landed shortly afterward near Manna Mountain.

Actually, the day was going to worms. The cumulus had disappeared. The thin streaks of cirrus in the west were now overhead and it was increasingly thickening in the direction we were going. My progress had slowed and I realised that I was pushing into a strengthening westerly wind. Despite the climbs weakening to about 3kt, I held my ballast to penetrate into the wind. A nice loose term that: Penetrate – We all think we know what it means, but ask someone to define it someday.

After about half an hour of frustratingly slow progress I dropped my ballast. The climbs, pleasingly, went back to 6kt and, surprisingly, the glide did not seem to suffer. I was making good progress again. There was a good lesson there! I went around Lake Cargellico at about 4,000ft and saw that about half of the fleet had landed at the airfield or there-about. A long way home in a dying day, but now I had a quartering tailwind.

At Tullamore, with 77km to go, I took a weak climb from below 2,000ft. It petered out before 3,000ft and I knew it was my last climb. I drifted along the road to Narromine and when the time came, selected a stubble field not too far from a prosperous looking farm.

The farmer's wife greeted me. Her husband was out, about 20km north fighting

a bushfire that I could see the smoke from making a lone late cumulus. I couldn't have reached it. Perhaps if I hadn't had that slow patch in the middle of the second leg? But then I would have been early enough for another thermal on track anyway. Only about 30km from home, it should be a simple retrieve.

When I rang in, Richard's crew were not back with my trailer. My crew, being enterprising, asked the first Cirrus back could they borrow the trailer? "Sure, but you'll have to help rig our Cirrus first."

No trouble, John was a strong man with biceps like most men's thighs. Roly was slight, but wiry tough. Justine knew the right sequence to do things. They soon had an empty trailer.

Uh oh! The trailer's electrics were totally different to those of my car. While they were puzzling how to overcome this problem another Cirrus trailer came in. Check the electrics first before asking.

"No worries, but you will have to help rig the glider first" This was done even more quickly. Uh oh, again! While the electrics fitted, the towball was a different size. It refused to budge, even with John on the end of a pipe over a large spanner. It was rusted

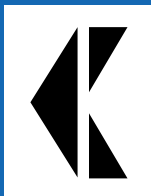
solid in place. "I'd lend you the car, but it is running on five of the six cylinders, and could leave you stranded out there."

Oh well, apart from my trailer with Richard's glider on it, there was one more Standard Cirrus to come back. John and Roly retreated to the bar to await whichever was first. Before they could get a drink, they found that Roger Woods, the contest director, was having an altercation with a group of local teenagers. He was trying to eject them from the bar and they were not having it. John charged in, pushing aside one blocking the door and confronting the others. They saw that they were now more than a little out-muscled and retreated to the town.

There seemed to be an unusually high number of attractive teenage glider pilots' daughters at the comps that year. The local lads had noticed this and the girls welcomed some new attention.

John Rowe came in with a Cirrus trailer built just like the open Waikerie type. Electrics and towball the same size. Of course, "You'll have to help us rig our glider first." That done, my crew were quickly on the way.

None of us ever did see the pink house.



Chamberlain Knights. Let us set a better course for your GFA Glider insurance.

Chamberlain Knights Pty Ltd Insurance Brokers

Chamberlain
Knights
Australia's Aviation
Insurance Specialist
ACN 002 493 521
PO Box 329
Epping NSW 2121
Fax: (02) 9868 5262

Chamberlain Knights Glider insurance packages are the only option approved and initiated by the GFA for the benefit of Members. Why pay more than you need to?

Call Kevin Chamberlain now*

(02) 9868 4044

* and swap flight stories with a pilot of over 25 years experience!

A PROFESSIONAL REGISTERED INSURANCE BROKER

AHSA Symposium Tocumwal

GARY SUNDERLAND

Member attendance at the 1999 AHSA symposium held in the Sportavia briefing room at Tocumwal on 13 and 14 November last year was down on previous years, possibly due to a change of venue. Those who did attend had a feast in store. Not just the excellent 'Wings' dinner on the Saturday night, but also a varied and interesting series of presentations by members on building and flying their sailplanes.

Saturday

President Gary Sunderland's opening address kicked off with the failed amalgamation and moved to establish contact with kindred spirits within the Hang Gliding Federation that were producing results. New members and visitors from the HGFA were welcomed to the meeting. Gary then went on to present John Ashford's paper on the glider flight envelope. This is of vital importance to all those who design or fly sailplanes.

After lunch, Paul Johnson entertained members with stories of his 'wing-ding' ultralight adventures, leading on to the building and flying of his Maupin 'Windrose' sailplane. At the moment this needs 1,000m of hard runway and has a modest climb, but, as Paul says: "I'm in no hurry." Power-off handling is excellent and soaring is most enjoyable. Paul intends to work on improving power trim and approach control as the next steps in his project.

Sunday

Graham Betts flew in from Sydney, not in his 'Carbon Dragon' but in a Piper 'Spam-Can', with a number of friends. Nevertheless, Graham brought videos and lots of photographs of his 'Beautiful Betsy', a Maupin Carbon Dragon built from plans. This is one of three 'Dragons' now flying in NSW.

The Carbon Dragon was originally designed to be foot-launched and weighs only 75kg. It is a little over this when fitted with a tow release, seat harness, emergency parachute and instruments. Practical launching is by car tow or aerotow behind a trike. Graham is an HGFA member, but has had some gliding training with the Southern Cross Gliding Club at Camden in orthodox sailplanes. With such a low wing loading the stall is only 27mph and normal flying is below 50mph. Strong turbulence and winds are to be avoided, as is the slipstream of normal gliding tugs. However the Carbon Dragons are very suitable for exploring gentle lift in the early morning, or on days which are not considered soarable in orthodox sailplanes. Paul described the building process as being "just like that of a large model aircraft".

From this presentation the meeting then held a forum on ultralight sailplane operations generally and the 'Carbon Dragon' in particular. This was a useful exchange of ideas and the meeting decided to forward the results to the HGFA and the GFA for information and any action considered necessary.

After Sunday lunch, members gathered at Mike Burns' workshop nearby, where they inspected Mike's Bregliab BG-12. This is in excellent condition after many years of service and is a demonstration of his workmanship and the longevity of modern urethane finishes. An interesting commercial project on display at the workshop was a Motorfalk SF25B/C, which is being re-engined with the Australian Jabiru 4-cylinder engine. Although still at an early stage, Mike said that figures were looking good, with the possibilities of a worthwhile improvement in performance.



Participants at the 1999 AHSA symposium course held at Tocumwal were (front) Peter Champness (GCV), Doug Robinson (GCV), Roger Druce (demonstrator), Eugene Blunt (RTO/A), Ken Williams (South Gippsland), (rear) Bob McDicken (Hunter Valley), Bill Johnston (Geelong), Tobias Geiger (CTO/A), Claus Endres (South Gippsland) and John King (GCV)



The jet-powered Caproni, a self-launching sailplane with wing tips and tailplane yet to be fitted brought keen interest to participants at the AHSA symposium
Photos: Anne Elliott, Western Star Newspaper

The highlight of the 2-day symposium was Mike's demonstration ground running of the jet-powered Caproni, a 2-seater, self-launching sailplane. A local group has taken over this project from the old Caproni organisation and is making many changes to improve safety and simplify the operation of the jet engine. The big improvement in safety comes in the rare event of an engine failure when the Caproni has full glide performance available. This contrasts with current self-launchers using propellers, which have very poor performance available until cleaned up. On the other side of the equation is the current high cost of turbine engines. Mike had news of likely developments in the near future, which will see relatively cheap and practical jet engines available for small general aviation aeroplanes.

The symposium ended on this high note, with much talk of model aircraft jet engines now available at \$7,000 each, and clean light sailplanes from wood and carbon fibre, light but strong. The thanks of AHSA members go to James Garay for organising this year's event. He is already starting to organise the Year 2000 meet that will see at least two Woodstocks and a Duster flying. Graham Betts promised to take along his Carbon Dragon and there is a possibility that other rigid wing hang gliders will be demonstrated. The venue will be chosen to ensure that all lightweight sailplanes may be operated safely.

The AHSA looks forward with enthusiasm and excitement to the Year 2000 for future developments in homebuilt sailplanes.



Red Grunau, Benalla 1953, pilot: Jim Barton, wing tip: Noel Hardy

Soaring Calendar

Horsham week Y2K

5-12 February 2000 (inclusive)

Enjoy a great week of cross-country competition flying over one of the safest areas in Australia. Ideal for early cross-country pilots through to champions. Limited camping available. Loggers strongly recommended. More information call Joe Luciani ph: 03 5382 5735.

VSA Regional Committee meetings

24 February 2000 & 20 April 2000

At 19:30 at the Uniting Church Hall, 329 Dorcas Street, South Melbourne.

29 July 2000

AGM (venue t.b.a.)

Gulgong Regatta

4-11 March 2000

All classes, gliders and pilots handicapped. Multiple pilots welcomed. Camping space available on airfield and plenty of accommodation in Gulgong. Enquiries to Christine Meertens ph: 02 94522777, fax 02 94530777 email: <hkmxor@msn.com.au>



GFA Badges & Certificates

FAI Badges and Certificates to 22 December 1999

A Certificate

QUINLAN Wayne Stephen	10362	Australian Air League
NELSON John William	10365	Southern Cross
WILKES Darryl Ronald	10366	Beverley
HANNAFORD David Leonard	10367	NSW AIR TC
POONPOL Jonathan	10368	NSW AIR TC

B Certificate

WILSON Joel Bruce	10340	NSW AIR TC
-------------------	-------	------------

A & B Certificate

WATT Eddie	10361	Australian Air League
McGRATH Stephen Michael	10363	North Australia Gliding Club

C Certificate

JUNG Brian Heinz	10155	Mangalore
GEE Stephen	10334	Darling Downs
LEWIS Scott	10315	Adelaide Uni
NAYLOR William Harvey	10232	Boonah

A B & C Certificate

O'CONNOR Trent Davoren	10364	Adelaide Uni
FLAVEL Gavin David	10369	Bordertown/Keith

Silver C

SALAS Roger Christian	4290	Beverley
YOUDALE Leigh Malcolm	4291	Bathurst
GRAY Nigel Laurence	4293	Bathurst
ANIFTOS Christopher Nicholas	4294	Darling Downs
DUFFY Michael Jason	4295	Hunter Valley

Diamond Distance

SUTCLIFFE Brett Allan		Bathurst
DuBOIS Patrick Charles		Beverley

750km Distance

BUCHANAN E. John	90	Darling Downs
------------------	----	---------------

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:

Gary Hollands

92 Grange Road, Westbourne Park SA 5041

Ph: 08 8230 5722 (w), 08 8271 2020 (h)

Fax: 08 8230 4428

Email: Gary.Hollands@adelaide.on.net

Schools in Australia



ACT/NSW



Tarago Flight Park

2 1/2 hours from Sydney

- Introductory Courses
- Refresher Courses
- Aerotowing Courses
- Cross-Country Tours
- Full License Courses
- Ground Towing
- Courses
- Cross-Country Courses

The last weekend of each month is an open towing weekend. All pilots are welcome and tow endorsements can be obtained.

Agents for Moyes & Airborne • Demo gliders available

Call Tove on 02 4849 4516 or 015 269376.

Canberra Hang Gliding and Paragliding Centre,
chggpc@goulburn.net.au

Email address: chggpc@goulburn.net.au



MOTORISED PARAGLIDING SCHOOL

AERIAL DISPLAY SPECIALISTS

Bookings phone

0412 013 134

Paramotor & Paragliding Courses, Endorsements,
Promotions, Certification, friendly sales and service.

9 Cumberlege Crescent, Pearce, ACT 2607

Phone & Fax: 02 62867337 Mobile: 0412 229499

Email: mikebrady@netspeed.com.au

Mike Brady Chief Flying Instructor

New South Wales



SYDNEY HANG GLIDING CENTRE Stanwell Park

Hang Gliding Courses, Refresher Courses,
Instructional Tandem Flights and Gift
Vouchers.

Equipment and Accessories.

Available 7 days.

To arrange your booking or to test fly a glider

Call Chris Boyce (02) 4294 4294.

www.hanggliding.com.au

BYRON AIRWAVES

Hang Gliding School

- Lessons & full instruction available.
- 20 years hang gliding experience with training all year round.
- Learn to fly safely and accurately with all skill levels catered for.

Phone Brian and Anne on 066 290354,

mobile 014 615950, email: byronair@hotmail.com

40 Australian Gliding • Skysailor

New South Wales continued



High Adventure Airpark

Since 1987

Australia's internationally renowned training centre

Located on 460 acres just 3 1/2 hours drive north of Sydney, offers courses in Hang Gliding, Paragliding and Microlights ALL YEAR ROUND!

- Our Live in Novice License courses for Hang Gliding and Paragliding start from \$990-\$1,490 with unlimited days of instruction until your license is received. Our Microlight license courses start from \$2,500 and all Flight and Theory instruction is done on site. With the training hills and hangar just a walk away from your accommodation.
- Now with over 15 flying sites consisting of both inland and coastal soaring, covering every wind direction, we can ensure that you cover all the aspects of the license skills needed to get into the sport confidently and quickly. You can also be confident that the equipment you learn on will be the newest and latest available.
- We sell all major brands of Microlight, Hang Gliding and Paragliding equipment and aircraft
- Aero and Winch tow endorsements are available!
- Conversion courses for Hang Gliding, Paragliding and Microlight pilots available!

Check Out our Web site on www.highadventure.com.au

and email us on

highadv@midcoast.com.au

HIGH ADVENTURE AIRPARK

You'll pay a little more to fly with us but you

will with Qantas also! Call us on 02 6556 5265

AIR SUPPORT HANG GLIDING & PARAGLIDING



As well as training, we also offer many ranges of gear, including custom made AIR SUPPORT harnesses. Enquire for brochures and price lists for new or 2nd hand gear.

Call on 02 94502674, 0412 273552 (8am-8pm).

New South Wales continued



- *Manilla has more flyable days per year than anywhere else in Australia! (300+ in fact!)*
- *Mt Borah* is one of the worlds most consistent all year round sites with 4 large launches catering for nearly every wind direction.
- *Paragliding license courses* – a week of quality tuition using the latest techniques & equipment for only \$850 (inc. accommodation).
- Thermalling and cross-country courses all year
- *HG to PG conversion courses* – it's easier than you think!
- *Importer of ADVANCE paragliders, FLYTEC instruments, HANWAG footwear and most accessories – we sell only the best quality European made equipment.*
- *Mini Paraglider Kites* also available – great fun for everyone.

So come flying with Manilla Paragliding,
where the person who shows you the mountain,
owns the mountain!

Phone Godfrey Wenness on: 02 6785 6545 or

fax: 02 6785 6546 email: SkyGodfrey@aol.com

"The Mountain", Manilla, NSW, 2346.

Victoria



ALPINE PARAGLIDING

Alpine Paragliding has introduced over 2000 customers to paragliding since it began operations in 1988. The school is located in Bright, which is nestled in the foothills of the Australian Alps. It is an ideal location for Paragliding with conditions and flying sites suitable for beginners through to experts. Bright is also a popular destination for overseas pilots and hosted a Paragliding World Cup event in 1998.

Courses offered:

- 1 and 2 day Introductory courses
- HGFA approved licence courses
- Tow clinics
- Thermal and XC clinics
- SIV clinics
- Tandem Flights

We also offer a full range of Paragliding
equipment and services.

Visit our web site for more details.

4 Ireland Street, Bright VIC 3741

Ph: 03 5755 1753 Fax: 03 5750 1153

email: alpnpara@netc.net.au

web: <http://alpineparagliding.netc.net.au/>

Victoria continued

WINGSPO RTS

Flight Academy

- Paragliding courses
- Hang gliding courses
- Paramotor courses
- Inland and coastal
- Tandem flights
- Towing courses
- Cross-country courses
- Equipment sales

Located in stunning holiday destination, on the Great Ocean Road, 2 hours from Melbourne's Westgate Bridge.

Wingsports, 1 Evans Court, Apollo Bay VIC 3233
Hans van Santen 03 5237 6486
Fiona Waddington 0419 378 616.

DYNAMIC FLIGHT

HANG GLIDING SCHOOL & FLIGHT PARK

1½ hours from Melbourne

We offer a full range of services including:

- Restricted License Courses
- Introductory courses
- Tandem instructional Flights
- Towing Endorsements
- Introduction to XC Flying & tours
- Equipment Hire

We sell new and used gliders, spare parts and accessories for:

- Moyes
- Airborne
- Icom
- Aussie Born
- Bräuniger
- Flytec

Thinking of updating? Trade in your old glider with us.

Rohan Holtkamp P/F 03 5349 2845 – M 014 678734



ULTRALIGHT FLYING MACHINES

Use your flying skills to fly a 3 axis control ultralight. With our "wind in the face" fleet of CASA legal 3 axis Drifters and fully enclosed Gazelle and SkyFox aircraft we can show you another type of sport aviation flying.

Our robust aircraft are:

- Strong wind capable
- Crosswind capable,
- Comfortable to fly, not cramped,
- No fatigue, joy stick controlled,
- A lot of fun to fly!

Why not check us out, Melbourne's only ultralight school. We fly from Sunbury airfield, only 20 min drive north west of Melbourne. Trial instruction flights only \$69. Cheap accommodation available.

UFM, Sunbury Airfield, Sunbury 3429

(03) 9744-1305, (03) 9431-2131

www.iconworks.com.au/ultralight/index.html

South Australia

ADELAIDE AIRSPOTS

Sales, Service and Instruction

- Hang Gliding
- Tandem Hang Gliding
- Sky Floating
- Microlights

Agents for Moyes, Airborne and Wills Wing.

Larry Jones – Judy Manning

Ph: (08) 85563030, Fax: (08) 85574113,

Mobile: 0408 815 094,

Email: skyfloat@terra.net.au

Website: www.terra.net.au/~skyfloat

Queensland

Rainbow Paragliding

Rainbow Beach is one of the world's best coastal soaring sites, with year round flying, situated 2.5 hours north of Brisbane and 12km south of Fraser Island. Surrounded by amazing beaches and national parks.

Rainbow PG offers the opportunity to experience winter flying from a selection of well established coastal and inland sites.

Paragliding licence courses: Learn to fly in the safety of soft sand and smooth air. Ten days intensive: \$980. Accommodation available from \$10 a night. HG to PG conversion. Tandem flights and licence.

Paramotoring tuition, sales, hire and flying excursions to Fraser Island.

Surfing, sailing, canoeing, horse riding, etc.

So come and fly Rainbow magic!

Jean-Luc Lejaille

Ph: 07 5486 3048, Mob: 0418 754157

Fax: 07 5486 3288

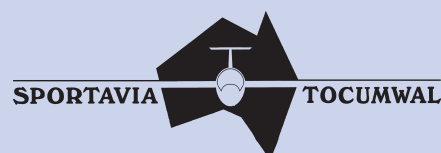
Email: intheair@ozemail.com.au

www.ozemail.com.au/~intheair

PO Box 227, Rainbow Beach, QLD 4581

Advertising Index:

Airborne Avionics	9
Airborne Fun	BC
Chamberlain Knights	37
Composite Components	9
GFA Form 2 Notice	43
HGFA Merchandise	IFC
Lake Keepit Soaring Club	23
Microair Electronics	7
Parafunalia Paragliding Sale	41
Poliglidge Swing	IFC
Schools in Australia	40
Sportavia Soaring Centre	41
Ultralight Flying Machines	IFC



HANG GLIDER PILOTS

Quick conversion course

Christof Kratzner – World Champion
Hang Glider Pilot 1999 FAI 2 – will be at Tocumwal most of the summer – come and meet Christof!

CLUB PILOTS

– Build your hours and extend your cross-country training experience.

Largest fleet in Australia waiting for you!!!

Motel Pool Spacious lawns
Liberator lic. Restaurant

AUSTRALIA'S MOST ADVANCED SOARING CENTRE

Web Site: www.sportavia.com.au

Email: info@sportavia.com.au

P.O. BOX 78, TOCUMWAL 2714
N.S.W. AUSTRALIA

PHONE: (03) 5874 2063

FAX: (03) 5874 2705

PARAGLIDER SALE!

**Used, 2nd hand, pre-loved
All for beginners: DHV 1-2!**

Advance:

Epsilon 1/23, 55-75kg, white, 20hrs	\$1,800
Epsilon 1/26, 70-90kg, yellow, 70hrs	\$1,700
Epsilon 1/29, 90-105kg, yellow, 90hrs	\$1,500
Epsilon 2/25, 65-80kg, white, 80hrs	\$2,500
Epsilon 2/31, 90-110kg, milka, 30hrs	\$3,200
Epsilon 2/31, 90-110kg milka, 40hrs	\$3,100
Epsilon 2/31, 90-110kg, white, 35hrs	\$3,300
Sigma 3/27, DHV2, 80-95kg, white, 140hrs	\$1,800
Sigma 4/25, DHV2, 65-85kg, milka, 80hrs	\$3,000

New Epsilon 2 in various sizes still available from \$3,600 – over 2500 sold worldwide !

Pro Design:

Compact (S) 31, 65-85kg, blue, 50hrs	\$1,500
Compact (M) 33, 75-95kg, blue, 180hrs	\$900

Edel:

Atlas L, 90-110kg, yellow, 80hrs	\$2,200
Quantum M, 60-75kg, yellow, 50hrs	\$1,200
Space (S) 22, 60-80kg, green, 60hrs	\$1,000

Flight Design:

A4 M, 70-90kg, red, 130hrs	\$1,300
----------------------------	---------

Nova:

Phocus M, DHV2, 75-100kg, blue, 50hrs	\$1,800
---------------------------------------	---------

**All gliders are ex-school or trade-ins.
Weight ranges are all-up**

* Intermediate gliders – please phone for pilot suitability.

Used Harnesses

with Back Protection also available from \$200.



Phone Godfrey Wenness on: 02 6785 6545 or fax: 02 6785 6546 email: SkyGodfrey@aol.com
"The Mountain", Manilla, NSW, 2346.



Classified Rates

\$15 for a normal ad (up to 8 lines, 40 characters per line); with longer ads charged at \$4 per extra line. All classifieds **MUST** be paid for at the time the ad is placed. Please direct ads for Skysailor, together with payment, to the HGFA office (credit card payments may be made by phone). Ads for Australian Gliding can be placed with the GFA Advertising Contact listed on Page 1.

Hang Gliders and Equipment

New South Wales

Bräuniger Competition instruments altimeter/ vario with barograph & more, unused, \$850 ono. Ph: 02 49430674 (h) or email <aprice@ozemail.com.au>.

Foil 139 adv, spare upright and LE. Danny Scott harness, all black, suit 5'8". Also parachute, Sjöström vario, other bits & pieces. All cared for & in good condition. Urgent sale. Offers: Helen 02 42943333.

Mosquito Motor Harness new & used, both include the latest modifications. Auto decompression (easier starting), dual throttles (cruise/launch), kill switch (safety), silencer/air filter (quieter) & much more. Used has less than 4 hrs, sell \$4,500 ono. New \$5,800. Ph: 02 42627677.

Moyes GTR adv, white & fluoro green, excellent condition, \$1,000 ono. Ph: Mick 0418 411969.

Sting II XC 154 int, as new, 25 hrs, \$3,500 ono. Air Support Skylight harness, front entry, black, suit medium build approx 5'10", as new, \$650 ono. Ph: Jeff 02 85662208 (w), 02 49461993 (h).

Queensland

Moyes SX6 adv, white mylar sail with fluoro yellow undersurface, 40 hrs flying, excellent condition, \$4,200. Moyes Xtreme harness with parachute, suit 5'10-6'2" pilot, \$500. Electrophone radio, \$250. Full-face helmet with ear phones, worn once, \$200. Bräuniger instruments, \$400. Uniden base set with digital display, \$250. Pilot relocated & having a break from sport. Ph: Scott 07 40322792.

Xtralite 147 adv, beautiful cond., only flown 90 hrs, mylar, U/S purple & yellow, \$1,800 ono with UV bag. XT 145 nov/int, as new, only 10 hrs use, U/S red & blue, \$2,500. Also D/Scott Racer harness, chute with d/bag, Bräuniger vario, Moyes F/F helmet & T/wheels. Ph: 07 55778490 or 0411 333221.

Victoria

Moyes XT 145 nov/int, fluoro green & orange undersurface, white top. Pod harness. Suit smaller pilot, \$1,500. Ph: 03 52376486.

Sting 118 nov/int, suit new buyer, pink LE, white main, orange US. Excellent condition, \$2,500 ono. Ph: Steve 0428 570168, 03 57501174.

Wills Wing 225 tandem glider adv, green LE, white main, black US. Good condition, \$2,000 ono. Ph: Steve 0428 570168 or 03 57501174.

South Australia

Moyes XT 145 nov/int, 20 hrs, flex harness, chute, helmet, Flytec vario, radio, tow bridle. Excellent condition, \$3,800 ono. Ph: Nigel 08 97911014.

Trikes and Equipment

New South Wales

Airborne Edge 582 T2-2544, passed Aug 99 HGFA 5 yearly inspection & rego, fully rebuilt/zero-timed engine, new UV treated sail, reg/rect, ASI, Alt, dual EGT, water temp gauge, hour meter, always hangared, GC, \$13,000 neg. Ph: Oliver 02 66872202.

Wizard wing rego 2857, 89 hrs total, red/ white in colour, manufactured by Airborne. Asking price \$4,400. Ph: Kim 0418 659213; 02 67612300 (w).

Victoria

Airborne Edge X 582 electric start, 73 hrs, Wizard wing, as new condition, lcom radio & helmets, full set of covers, stone net, new trailer. \$21,000 ono. Ph: Peter 03 53395529 (h).

Quantum 912 T2-2912. One of only two in Aust with Rotax 912, 4 cylinder, 80hp, 1,211cc, 4-stroke. Only 85 hrs on a 1,200 TBO engine. Landing lights, dual strobes, kingpost aerial, VSI and ASI, glove box, IVO prop & spinner, mud flap, training bars, pannier bags, GPS, compass, Rotax 912 flydat & electric fuel pump. Always hangared & only set-up 4 times ever. The best performing trike in Aust bar non-Aust. Selling to finance new business. New 912 price with these options \$52,000 will sacrifice for \$32,900. Ph: 0412 356271.

Free-Flying Magazines

Cross Country Magazine subscriptions Carol Binder 0417 311360.

Sailplanes – GFA

Single Seaters

STD Jantar 41A KYX low hrs, has to be seen. Profiled wings finished in 2 pack with winglets. Well instrumented panel. Peschges VP2 vario, lcom A22 brand new. Under the Jantar 3 one piece canopy, all ground & trailering aids, wing covers. This great performer, a dream to fly, comes in excellent trailer. No expense spared to finish this glider. \$26,000 ono. Ph: Laurie 03 55811914 (h) or Joe 03 53826777 (w), 03 53825735 (h)

NIMBUS 2 Complete with all gear and trailer. Phone for details. \$35,000 negotiable. Ph: 03 55616546

STD CIRRUS VH-GOP 1,035 hrs, Cambridge M-NAV, Narco 360 ch radio, no gelcoat problems, g/h gear, enclosed trailer, fresh Form 2, PA Slimpack, \$24,500 ono. Ph: Don Chessor 02 42611941, email <dchessor@cyberelectric.net.au>.

SZD 55 Standard Class glider, 410 hrs, 135 landings, excellent condition, large pilot weight range, PZL instruments, aero & winch hooks \$54,000 ono. Ph: 03 58821132.

LS7-XJJ Excellent condition, 340 flights 1,000 hrs, no prangs, complete package incl. GPS, logger, covers, Komet trailer, \$52,000. Ph: Bob Powell 03 94399869 or 0409 840071.

Motor Gliders

STEMME GTS at Camden, the ultimate 2-seat 50:1 motor glider, has every luxury, great performance, my share at below market value. Ph: Dennis 02 98991843.

DG400-XJZ 1,550 AF hrs, 190 E hrs, 17/15m wing, fuel & water tanks, BEA automatic prop. retraction, fully equipped incl. Dittel 760ch radio, headset, S-NAV, ACK beacon, Cobra trailer, large T-hangar at Camden A/P, c/w water, solar. All in excellent condition, never damaged, always hangared, \$69,000 share. Ph/fax: Frank 02 44543955.

LS3-17 TOP-WQT Excellent 17m performance, refinished, comp. sealed, fully self-launching, long range tanks, an absolute delight to fly. All ground handling, parachute, good trailer (hardly used) & heaps of extras. Reduced to \$59,000. Phone for full details & video 03 9598 3265, email <daveb@primemover.com.au>.

DG 505M 2-seater, 22m span, tinted canopies, 335 hrs, Rotax 535 engine 43 hrs. Instruments, 760ch radio, full ground kit, tow out gear, nose steer & wing walker. Based south-east Queensland. Currently stored. \$190,000 ono. Ph: 07 46343911 or 46381813 at night.

Motor Gliders continued

DG400 Rare opportunity to obtain a share in a well run and friendly syndicate. self-launching, so no more waiting for tugs & no more outlandings! Based at Camden, in a T-hangar, for easy one man operation. Well equipped with low hrs on motor & airframe, complete with trailer, ground handling gear, & parachute. A joy to fly, with an LD of 44:1. My share is reluctantly for sale as I have moved to Port Macquarie. Asking \$30,000, but all offers considered. Interested? For more information, phone Terry on 02 65861982 or email <terryoxborough@mpx.com.au>



SUPER XIMANGO award winner at Avalon. Rotax 912, 450 AF hrs, 360 E hrs, always hangared, dual instruments, KLX135 nav com, 6"x 4" Skyforce GPS. The best touring motor glider 14 L/h, 7 h endurance. Go fly the Morning Glory in 2000. Ph: Barry 02 4636 6314, fax 02 46366418.

Instruments and Equipment

BORGELT INSTRUMENTS for the latest and best in sailplane instrumentation phone 07 46355784, mob: 0428 355784, fax: 07 46358796, email <mborgelt@tmba.design.net.au> webpage: www.ozemail.com.au/~mborgelt

Narco HT-830 handheld NAV-COM, 720 comm, 200 nav channels, charger & spare battery, \$250. Walter Dittel Base Radio fitted with Dittel FSG 16 radio, 12 vdc/240 vac ops. \$495. Ph/fax: Ron Brecknell 07 38214191.

CAMBRIDGE INSTRUMENTS at GST prices! Take advantage of post-June tax rates right now. I will pay the difference myself! Current model L-Navs, GPS-Navs, CAV II's and Palm-Navs all in stock. Remember the "try before you buy" deals on loggers too. No rental charged if you take one home! Ph: Bruce Taylor 02 67787345 or email <BruceLouise@bigpond.com>.

MICROAIR radios are alive and well and are in stock. Ph: Ian McPhee 02 6684 7642 (fax 942). 990 radios and 380 microphones sold worldwide.

CAMBRIDGE you must be using PC software 5.8.4E or you have a real Y2K problem. Cambridge are offering 3 great package deals plus extra deals on Microair radio and Winter instruments. Ph: Ian McPhee 02 6684 7642 (fax 942) mob 0428 847 642

Wanted

Terra TX 720 Panel Mount Transceiver must be serviceable. Cheap repairables also considered (push button freq selector). Ph: Peter Chegwidan 02 96312737, fax 02 96312747.

Spares

For information and Spare Parts on:



SUPER DIMONA
KATANA XTREME

and
Alexander Schleicher
Ultra High Performance Gliders
and Training Sailplanes

Please contact:

CHRIS ECKEY

Ph: (08) 84492871 Fax: (08) 82423698

Schempp-Hirth, Grob and Glasflugel spares from stock only. Bulk Spruce and Birch Plywood, Mecaplex canopies; Limbach parts. Edmund Schneider P/L PO Box 1154 Gawler 5330. Ph/fax: 08 8522 2978.

Gliding Publications

AUSTRALIAN HOMEBUILT SAILPLANE

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

FREE FLIGHT: Bi-monthly journal of the Soaring Association of Canada. A lively record of the Canadian soaring scene, and relevant international news and articles. \$US26 for 1 year, \$47 for 2 years, \$65 for 3 years. Suite 101, 1090 Ambleside Drive, Ottawa, Ontario K2B 8G7, Canada. Email <sac@sac.ca>

SOARING: Official monthly journal of the Soaring Society of America Inc., PO Box E, Hobbs, N.M. 88241 USA. Foreign subscription rates: \$US43 surface delivery; \$US68 premium delivery. Annually.

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

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

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

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 and Omarama the N.Z. base for many of the current world records. \$A44 annually. (Send \$A25 for 12 months back issues). New Zealand Gliding Kiwi, Private Bag, Tauranga, New Zealand.

AIRBORNE MAGAZINE: Covering all facets of Australian and New Zealand modelling. The best value modelling magazine. Now \$21 p.a. for six issues. Plans and other special books available. PO Box 30, Tullamarine, Victoria 3043.

GLIDING FEDERATION OF AUSTRALIA

Airworthiness Inspection

FORM 2 NOTICE

- ☐ A Form 2 inspection is due
Cheque for \$125 is enclosed
- ☐ A 20, 30 yearly, etc is due
Cheque for \$275 is enclosed
with copy of aircraft log book
- ☐ An initial C of A inspection
and initial registration is due
Cheque for \$465 is enclosed

(tick appropriate box)

on the following aircraft.

TYPE

VH

Please forward relevant airworthiness documents to:

.....

.....

.....Postcode.....

Forward to:

GFA Secretariat, 130 Wirraway
Road, Essendon Airport 3041

HGFA Addresses



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

Hang Gliding Federation of Australia

Executive Director: Ian Jarman
Administration: Margaret Crane
PO Box 558, Tumut NSW 2720,
ph: 02 69472888, fax: 02 69474328,
email: <hgfa@tpgi.com.au>

President: Rohan Grant

188 Bathurst St, Hobart TAS 7000,
ph: 03 62311112 (h), 0419 344011.

Treasurer: Robert Woodward

PO Box 6260, Adelaide SA 5000, ph: 08 8232
5405 (w), 08 82977532 (h), fax: 08 82237345,
email: <benchpos@dove.net.au>

Secretary: Tim Cummings

PO Box 116, Canungra QLD 4275, ph: 07
55435093 (h), 0418 778422, fax: 07
55434493, email: <tim@eis.net.au>

Vice-President: Keith Lush

5 Fortune St, Sth Perth WA 6151, ph: 08
93679066 (w), 08 93673479 (h), fax: 08 9474
1202, email: <keith.lush@hds.com.au>

Board Members:

Rohan Holtkamp

RMB 236B Western Hwy, Trawalla VIC 3373,
ph/fax: 03 53492845, 014 678734,
email: <dynamic@netconnect.com.au>

Michael Zupanc (CIVL Delegate)

6 Sibyl Street, Southport QLD 4215, ph:
07 55325895 (h), 0408 662328, email:
<zupy@ozemail.com.au>

Peta Roberts

PO Box 256, Helensburgh NSW 2508, ph/fax: 02
42943941, 0412 009952, email: <epicon@
ozemail.com.au>

Steve Ruffels

Bright VIC 3781, ph: 018 570168, fax: 03
57501174, email: <eagle@netc.com.au>

Michael Eggleton

27 Knightsbridge Ave, Belrose NSW 2085, ph:
02 99754114.

Operations Manager: Craig Worth

(Safety & Operations Committee, Pilot
Development & Training Committee)

PO Box 71, Hallidays Point NSW 2430, ph/fax:
02 65592713, 0418 657419, email:
<hgfaops@midcoast.com.au>

Microflight Public Relations: Paul Haines,
ph/fax: 02 42941031.

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

States & Regions

North Queensland HG Association

12 Van Eldik Ave, Andergrove QLD 4740; Pres:
Graeme Beplate 07 49552913, fax: 07 4955
5122, email: <sitework@mackay.net.au>; Sec:
Ron Huxhagen 07 49552913.

New South Wales HG Association

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

Victorian HG & PG Association

PO Box 400, Prahran VIC 3181; Pres: Phillip
Campbell 03 53343034; Sec: Andrew
McKinnon 03 95631162; SSO: Rob Van
Der Klooster 03 52223019.

ACT HG & PG Association

PO Box 3496, Manuka ACT 2603; Pres: Michael
Porter 0415 920444; Sec: John Wilson 0419
600636; Trs: Craig Hopkins
02 62862488 (h), SSO: Peter Dall. Meetings: 1st
Tue/month 7:30pm, "Sky Lounge" Yamba
Sports Club, Phillip.

Tasmanian HG Association

PO Box 163, South Hobart TAS 7004;
Pres: Brett Tooker 03 62503506; Sec/Trs/ State
Co-ord: Stephen Bayley 0408 154156.

South Australian HG Association

1 Sturt St, Adelaide SA 5000; ph: 08 84101391,
fax: 08 82117115. Pres: Stuart McClure 08
82973452; Sec: Mark Tyminski 08 8377 4570 (h),
08 84076621 (w), 08 84076628, email: <Mark_@
Tyminski@nag.national.com.au>;
Trs: Gary Stockton 08 82702910.

HG Association of Western Australia

PO Box 82, South Perth WA 6151; Admin:
Graeme Wishart 08 94449505; PG Rep: Julian
McPherson 08 93881584 & David Humphrey
0418 954176; HG Rep: Michael Derry 08
92840750 (h) & Keith Lush 08 93673479 (h),
08 93679066 (w); Trike Rep: Graham McDonald
08 93649226 (h), 0418 910841; Trs: Phil
Wainwright 08 92424483.

Clubs

NEW SOUTH WALES

Blue Mountains Hang Gliding Club Inc

Pres: Richard Lockhart 0418 130354,
<flytation@mailandnews.com>; Sec: Alan Bond
02 98995351, 9 Finchley Pl, Glenhaven
NSW 2353; Trs: Dolores Sempredoni, SSO:
David Middleton 02 4736 2605; Newsletter:
David Phillips 02 9456 252, <dphi@jna.com.au>;
Meetings: Last Wed/month, 7:30pm at the Blue
Cattledog Tavern, St. Clair.

Byron Bay Hang Gliding Club Inc

Pres: Bill Bailey 02 66853626, <bill@omcs.
com.au>; Vice-Pres: Andrew Polidano 02
66843510, <andrew@byron-bay.com>; Sec:
James Samuel 02 66804336, <freely@mullum.
com.au>; Trs: Shirley Lake 02 66858147,
<lois@linknet.com.au>; SSO: Chris Rollins
(HG) 02 6689 7217, Brett (PG) 02 66876907.
Meetings: 1st Wed/month 7:30pm, Bangalow
Bowling Club.

Illawarra Hang Gliding Club Inc

Pres: Mark Ryan 0412 424 760; Sec: Tim
Causar 02 4294 8110, <timcau@ozemail.
com.au>; SSO: James Nathaniel 02 4262 7677
or 0413 737077.

Kosciusko Alpine Paragliding Club

Pres: Roger Lilford 06 2815404 (h); Sec: Lisa
Ryrie 06 2359120, 06 2359060; SSO: Heinz
Gloor 02 64576019 (w), 02 64567171 (h).

Manilla SkySailors Club Inc

http://gri.une.edu.au/mss Pres: Brian Shepherd
02 67852182; Sec/Trs: Felix Burkhard 02
67751050, <felixb@xyon.com.au>; SSO (HG):
Patrick Lenders 02 67783484; SSO (PG):
Godfrey Wenness 02 67856545, Trikes: Willi
Ewig 02 67697771.

Mid North Coast Hang Gliding Association

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

Newcastle Hang Gliding Club

Pres: Tascha McLellan 02 49278867 (h), 1800
653935 (w), <tascha.conrad@hunterlink.net.
au>; V-Pres: Jason Turner 02 49408665 (h), 015
636384; Sec: Karl Kindl 02 49677711;
Trs: Tony O'Connor 02 49529146, SSO: Coastal
- Jason Turner 02 49408665 (h),
015 636384, Inland - John O'Donoghue
02 49549084. Meetings: Last Wed/month,
Souths Leagues Club.

Northern Beaches Hang Gliding Club Inc

Pres: John Clark 02 99972842 (h); Sec: Mike
Warner 02 94521217 (h), 02 95573188 (w);
SSO: Mike Eggleton 02 94517127, Forrest Park
02 94502674, Glenn Salmon 02 99180091.

Stanwell Park Hang Gliding and Paragliding Club

PO Box 258 Helensburgh NSW 2508; Pres: Rob
Lepre 02 42948694, <pepielepre@one.net.
au>; Events Co-ord: Jules Sanderson
02 42943092 Site Manager: Steve Pick
02 42944195.

Sydney Hang Gliding Club

Pres: Dick Heffer 02 93872613; Sec: John
Trude 02 98873371; Trs: Greg Wilkinson
02 98184704. Meetings: 2nd Mon/month,
Moyes Factory Loft.

Sydney Paragliding Club

Pres: Rob Fakes 02 42942273 (h); Sec: Duncan
Cross, 48 Cormiston Ave, Concord NSW 2137, 02
97435128; Trs: Dave Worthington 02 9665
1465; SSO: Mark Mitsos 02 42949065.
Meetings: 1st Mon/month, St George Leagues
Club, Kogarah.

University of NSW Hang Gliding Club

Pres: Daniel Faber 02 93150727, <dfaber@
kensocoll.unsw.edu.au>; Sec: Jon Ingles 02
93150571, <jingles@kensocoll.unsw.edu.au>;
www.vision.net.au/~gbeng/Hang_Gliding.html

QUEENSLAND

Cairns Hang Gliding Club

Pres: Brod Osborne 07 40534686 (h), 07 4051
5555 (w); Vice-Pres: Ian Graham 07 40954466;
Sec: Lance Keough 07 40912117, 31 Holm
Street, Atherton QLD 4883; Trs: Kasanda
Brease 07 40532586 (h), 07 40512438 (w).

Canungra Hang Gliding Club Inc

Pres: Shauna Purser 07 66793404,
<shaunapurser@yahoo.com>; Vice-Pres:
Andrew Horchner 07 38707709, 0412 807516,
<afactor@gil.com.au>; Sec: Richard Glasscock
07 55435057, 015 120874, <richardg@
qldnet.com.au>, PO Box 41 Canungra 4275;
Trs: Fran Ning 07 55773260, <ning@ausinfo.
com.au>; SSO: Glen McLeod (HG) 07
55435716, John Botting (PG) 07 33002049,
<bottings@bigpond.com>

Capricorn Skyriders Club Inc

Pres: Brian Hampson 079 226527;
Sec: Geoff Craig 079 923137;
Brian Smith 079 287958.

Conondale XC Flyers Club Inc

13 Cottman St, Buderim QLD 4556; Pres:
Bruce Crerar 07 54451897; Sec: Graham
Sutherland 07 54935882; Trs: Annie Crerar 07
54451897; SSO (HG): John Blaine 07
54948779; SSO (PG): Graham Sutherland
07 54935882.

Gladstone Hang Gliding Club Inc.

16 Far St, Gladstone QLD 4680; Pres: Colan
McGree 0413 941134; Sec/Trs: Natasha
Atkinson 07 49726840; PR: Brian Duffy 07
49922676; SSO: Geoff Craig 07 49923137, Paul
Barry 07 49922865, <prbarry@tpgi.com.au>

Rainbow Social Flyers Club

PO Box 206, Rainbow Beach QLD 4581. Pres:
Andy Abbott ph/fax 07 54863771 or 0419
897005; Sec: Kevin French 07 54863773; Trs:
Kachina Rye; HG SSO: Alan Goldsworthy 07
54864280; PG SSO: Jonathan Allen 07
54748169.

South East Queensland Hang Gliding Club

Pres: Peter Beard 07 33487150, <Peter_@
Beard@msn.com.au>

Sunshine Coast Hang Gliding Club

PO Box 227, Rainbow Beach, QLD 4581; Pres:
Gary Allen 07 549440543; Vice-Pres: Duncan
Whyte 0418 714618; Sec/PG SSO: Jean Luc
Lejaille 07 54863048/ 0418 754157; Trs:
Michael Powell 07 54425970; SSO: HG SSO:
Tony Giammichele 07 33584101.

Townsville Hang Gliding Association Inc

Pres: Gary Rogers 077 538565 (w),
077 79264511 (h); Vice-Pres: Peter Scarfe 077
721766 (w), 077 212666 (h); Sec/Trs: Brad
Cooper 077 792853 (h), fax 077 815230;
SSO: Graeme Etherton 077 724467.

Whitsundays Hang Gliding Club

Pres: David Nash 07 49531817; Sec: Ron
Huxhagen 07 49552913, Fax: 07 49555122,
<sitework@mackay.net.au>

VICTORIA

Dynasoarers Hang Gliding Club

Pres: Peter Hannah 03 52632335; Sec:
John Norton; Trs: Rod Trevor 03 52811209;
SSO: Ted Remeika 015 841107;
Rob van der Klooster 03 52223019, <hrt@
deakin.edu.au>; PR: Warwick Spratt
03 52531096. Meetings: 1st Fri/month,
Bay View Hotel, 2 Mercer St, Geelong.
Eastern Hang Gliding Club
Pres: Geoff Tozer 03 97583250 (h); Sec:
Andrew Medew 03 98227861, 16/25-29
Brougham St. Box Hill VIC 3128; SSO:
Harry Summons 03 59646055 (h), Lance
Sheppard 03 59623570 (h), M/ship: Mark
Jeffrey 03 59689015 (h). Meetings: 3rd Wed/
mth, Montrose Town Centre Meeting Room,
Cnr Swansea Rd & Mt Dandenong Tourist Rd,
Montrose.

North East Victoria Hang Gliding Club Inc

Pres: Ted Jenkins 03 57551753; Sec: Lisa
Basler 03 57501252; Trs: Bill Graham 03
57501828; SSO: Geoff White 03 57501244.
Meetings: 1st Tue/month, Alpine Hotel, Bright;
www.home.aone.net.au/gilbert/ nevhc.htm
Sky High Paragliding Club

<skyhigh@vhpa.org.au> Pres: Hakim Mentas
0412 617216; Vice-Pres: Carolyn Dennis 0417
515626; Sec: Fabrice Millet 03 95961321.
Meetings: 1st Wed/month 8pm, Retreat Hotel,
226 Nicholson St, Abbotsford.

Southern Club

Contact: John Reynoldson 03 95970527.
Meetings: 1st Tue/month, Middle Park Hotel,
Canterbury Rd.

Southern Cross Paragliding Inc

Pres: Gary Clarkson 0419 319948; Sec:
Nicole Matthews 03 57501884, 018 450626,
<nicolematthews@hotmail.com>. Meetings:
Last Wed/month.

Southern Trike Club

Pres: Mark Howard 03 97511480, 0418
533731, fax: 03 97511584; Vice-Pres: Dave
Wentworth; Sec: Ben De Jong; Trs: John Amor.
Meetings: 2nd Tue/month 8pm, Jakes
Nightclub, 23 Church St, Brighton.

Western Victorian Hang Gliding Club

Pres: Phillip Campbell 03 53343034; Vice-Pres:
Andrew Hume 03 93760907; Trs: Sandra
Holtkamp 03 53492845; Sec: Rachelle
Guy 03 98092974; SSO: Rohan Holtkamp
03 53492845. Meetings: Last Sat/month,
The Golden Age Hotel Beaufort.

WESTERN AUSTRALIA

Avon Valley Hang Gliding Club

Pres: David Drabble 08 93071816, <wescoast
@iinet.net.au>; Vice-Pres: Rob Stevenson 08
92211338; Sec: Stephen Hoeffs 08 95275782;
Trs: Michael Derry 08 92840750.

Cloudbase Paragliding Club Inc

Club message bank 08 9487 5253; www.cygnum.
uwa.edu.au/~madmike/paraglid.html;
<cloudbase@paragliding.org>; Pres: Dave
Humphrey 08 9574 5440, 0418 954176,
<paradive@avon.net.au>; Sec: Michael Duffy
08 9382 3036, 0417 923741 <madmike@
cygnum.uwa.edu.au> Meetings: Last Wed/
month, 8pm at the Sportsmans Association,
Woodsome Rd, Mt Lawley.

Geraltion & Midwest Hang Gliding Club

Pres: Des Hill 08 99216219; 231 Third Street,
Geraltion WA 6530.

South West Microlight Club

Pres: Brian Watts 0412 552363; Vice-Pres:
Don Wilson 08 97641007; Sec: Paul Coffey 08
97251161; CFI: Brendan Watts 0408 949004.

WA Hill Flyers Club

Contact: Rick Williams 08 92943962 (h),
015 057961. Meetings: last Thu/month at
7:30pm at the Swan Districts Football Club,
Guildford Rd, Bassendean.

Western Soarers Hang Gliding Club

Pres: Sam Blight 08 93363738; Trs: Nav
Brennan 08 93397991; Comp coordinators:
Gordon Marshall 08 94519969, Nav Brennan.



<input type="checkbox"/> G.F.A. White or Black Drill Badge	6.50	<input type="checkbox"/> Tost Rings	45.00
<input type="checkbox"/> G.F.A. Transfer	1.00	<input type="checkbox"/> Ottfur Rings	10.00
<input type="checkbox"/> Silver or Gold Glider Pendant	20.00	<input type="checkbox"/> Sunglasses	60.00
<input type="checkbox"/> G.F.A. Metal Clasp	7.50	<input type="checkbox"/> Cotton Hats (all over glider motif)	6.50
<input type="checkbox"/> Glider Pin Badge	5.00	<input type="checkbox"/> Tail Skids Bronze (Large)	25.00
<input type="checkbox"/> G.F.A. Tie (Brown or Blue)	17.50	<input type="checkbox"/> Tail Skids Bronze (Small)	20.00
<input type="checkbox"/> Pilot Training Log Book	3.50	<input type="checkbox"/> Tip Skids Bronze	10.00
<input type="checkbox"/> G.F.A. Pilot Log Book	3.50	<input type="checkbox"/> G.F.A. Bow Tie	11.50
<input type="checkbox"/> Deluxe Pilot Log Book	17.50	<input type="checkbox"/> Bumper Sticker (I'd rather be Soaring)	4.00
<input type="checkbox"/> G.F.A. Instructors Hand Book	32.00	<input type="checkbox"/> Key Rings (blue with silver c motif)	3.50
<input type="checkbox"/> G.F.A. Daily Inspectors Handbook	12.00	<input type="checkbox"/> Cloth Wings	7.50
<input type="checkbox"/> Aerotowing Manual	15.00	<input type="checkbox"/> Meteorology Simplified	6.50
<input type="checkbox"/> Operations Manual	17.50	<input type="checkbox"/> Understanding Gliding	45.00
<input type="checkbox"/> Airways & Radio Procedures	5.00	<input type="checkbox"/> The Complete Soaring Guide	39.50
<input type="checkbox"/> Cross Country Soaring	75.00	<input type="checkbox"/> Flight at Lower Level	17.50
<input type="checkbox"/> Silence on the Wind	75.00	<input type="checkbox"/> Sailplane Aerobatics	42.50
<input type="checkbox"/> Beginning Coaching	27.50	<input type="checkbox"/> Gliding	45.00
<input type="checkbox"/> Better Coaching	32.50	<input type="checkbox"/> Practical Wave Flying	32.50
<input type="checkbox"/> Turn Points	47.50	<input type="checkbox"/> Flying Sailplanes	75.00
<input type="checkbox"/> Gliding Safety	52.50	<input type="checkbox"/> Understanding Flying Weather	27.50
<input type="checkbox"/> Beginning Gliding	45.00	<input type="checkbox"/> Winning on the Wind, Moffat	17.50
<input type="checkbox"/> Meteorology and Flight	47.50	<input type="checkbox"/> Great Glider Pilots Stories Vol.2	52.50
		<input type="checkbox"/> Theory of Flight	17.50
		<input type="checkbox"/> International Soaring Symposium	10.00
		<input type="checkbox"/> Basic Gliding Knowledge	20.00
		<input type="checkbox"/> Performance Enhancement of Modern Sailplanes	20.00
		<input type="checkbox"/> Glass Fibre Repairs - Slingsby	30.00

VIDEOS

<input type="checkbox"/> WIND-BORN - A Journey into Flight (N.Z.)	50.00
<input type="checkbox"/> CHAMPIONS OF THE WAVE (N.Z.)	50.00
<input type="checkbox"/> LET'S GO GLIDING - Lake Keepit	28.00
<input type="checkbox"/> AIRSCAPE - Soaring Weather	50.00
<input type="checkbox"/> AIRSCAPE - Landing Out	50.00
<input type="checkbox"/> AIRSCAPE - Nav & Maps	50.00
<input type="checkbox"/> AIRSCAPE - Thermals & Thermalling	50.00
<input type="checkbox"/> AIRSCAPE - Instrumentation	50.00
<input type="checkbox"/> AIRSCAPE - Speed to Fly	50.00



Prices Include Postage

GFA SALES DEPARTMENT

130 Wirraway Road, Essendon Airport VIC 3041 Ph: 03 9379 7411 Fax: 03 9379 5519

AirBorne

AUSTRALIA



PURE FUN

