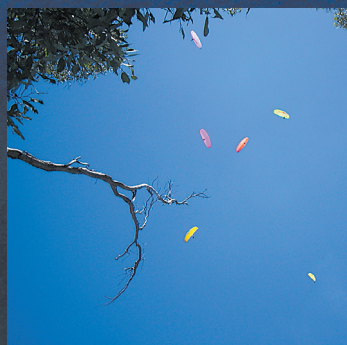


Australian **Gliding** **SKY SAILOR**

In this Issue:



**Paragliding Open
Manilla 2001**



**Gawler 2001
– A View from Inside**



Launching at Mt Buffalo
during the 2001 Bogong Cup
Photo: Top Shots Photography

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Bogong Cup 2001

ANITA MAMERS AND PHIL LAHIFF

The Bogong Cup, in its thirteenth year this year, once more attracted a very diverse range of 75 pilots from all over Australia and the world. The international contingent was very strong and included many of the world's top pilots from 14 different nations. Headquarters was once again Mountain Creek Lodge, which for 10 days became the Hang Gliding Social Capital of the World.



Goal at Mt Beauty Airfield was a busy place on some days

Day 1 to 3

The start of the Cup had to be delayed by three days due to inclement weather, but for most pilots this was a welcome relief after the heat and the dust of the Flatlands during the preceding four weeks. White water rafting became the popular choice, with spot landing competitions offering a diversion for the truly desperate.

Day 4

With a strong inversion layer in the Kiewa Valley in the morning, launch had to be delayed till mid-afternoon, which meant only a short task of 67km could be set. Launch was from Mt Emu with a turnpoint at Gundowring and the goal at Mt Beauty Airfield. With a strong northerly blowing, the upwind leg to Gundowring was challenging, and for many pilots having to adjust to Alpine flying the task proved quite difficult.

The day's results: 1st Gerolf Heinrichs, 2nd Betinho Schmitz, 3rd Andreas Olsson.

Day 5

A relatively short task was set for a day which yielded some superb flying conditions. The task was Mt Emu launch, to Gundowring, to Running Creek, and back to Mt Beauty Airfield. Very little wind and some very buoyant air resulted in 28 pilots making goal, including several kingposts led by Lloyd Pennicuick and Heather Mull. There were many 'happy little vegemites' at the end of Day 5.

The day's results: 1st Davis Straub, 2nd Betinho Schmitz, 3rd Gerolf Heinrichs.

Day 6

Another good flying day, even though the weather bureau predicted 40kt winds at 10,000ft. Fortunately the winds never eventuated and the white fluffy clouds showed that there was some good lift around. Launch was

Mystic Hill with the first turnpoint at Ovens, the second at Running Creek, and goal at Mt Beauty Airfield again. The task was 77km long and proved the downfall of many top names. Sixteen pilots made goal, with several Australians finally putting in a good showing.

The day's results: 1st Betinho Schmitz, 2nd Rohan Holtkamp, 3rd Balazs Ujmelyi.

Day 7

It was very difficult to decide on a launch site. Southerlies were forecast but there was not a breath of wind early morning in the Kiewa Valley. A punt was taken and Mt Emu was chosen. A long task of 92km was set to Running Creek, Ovens, Kancoona South, back to Mt Beauty. Very little wind at launch with many pilots expressing doubts about such a long task. The first few pilots launched and found some awesome thermals out in the valley. Like lemmings the rest piled off Emu and the sky was full of gliders thermalling up to cloudbase at 10,000ft. Suddenly the task seemed easy. The flying conditions were perfect with many pilots having their best day's flying yet. Getting back to goal, however, was a different matter. Most pilots were very close to goal when a very strong southerly hit late afternoon. If you can't go forward you go down – the Kiewa Valley began "raining gliders" as nearly everyone was forced down. Only three gliders made goal, but everyone agreed it was the best flying to date.

The day's results: 1st Betinho Schmitz, 2nd Mike Barber, 3rd Brett Hazlett.

Day 8

If yesterday's flying was good, today's was just awesome! The launch site was Mt Buffalo and it was a perfect Buffalo day – no wind but strong thermal activity straight up the face. The task was Mt Buffalo, Boorhamen (near Wangaratta) with goal at Brown Brothers Winery. The flying conditions were so favourable that the high performance gliders were



Pilot briefing, Mt Emu

achieving groundspeeds in excess of 85 km/h. The task was 104 km long, with the top pilots achieving this in under 1.5 hours. Everyone had a really terrific day with many personal bests being achieved. Forty-six pilots made goal.

Big changes were starting to happen at the top of the leaders board with only two days to go.

The day's results: 1st Oli Barthelmes, 2nd Andreas Olsson, 3rd Jon Durand Jnr.

Day 9

Another day of perfect flying conditions. Launch again at Mt Buffalo. A long task set of 160 km, from Buffalo, to Glenrowan, to Rutherglen, with goal at Brown Brothers. In the flatter land though, the flying became very technical as thermal activity proved to be very patchy. A lot of crucial decisions needed to be made. It took about 5.5 hours to complete the course. However, 17 pilots still made goal.

The day's results: 1st Betinho Schmitz, 2nd Mike Barber, 3rd Brett Hazlett.

Day 10

The final day. A lot of tired but happy pilots. Launch was Mystic Hill again, with a relatively short task of 76 km set to Ovens, Running Creek, and back to Mt Beauty. Only 12 pilots made goal. The crosswind leg was challenging and many pilots had just run out of 'oomph'. The highlight



Comp Director, Tove, hard at work

of the day was when Russell Ferrier, flying a FUN, finally outflew his team mates, all of whom were flying Litespeeds.

The Presentation Dinner that night was held at Mountain Creek Lodge. It was a great night to end a great comp, and as was traditional did not end until the 'wee hours of the morning'.

Special thanks must be given to Tove Heaney who was a fantastic Comp Director; to Wes Hill for the great job he did as Scorer, to Gen Rebecchi for recognising every glider that came into her sight as Goal Marshall; and to Phil Schroder for all his hard work behind the scenes before and during the competition. Also, many thanks to everyone else who helped and to all the pilots for making the Bogong Cup such an overwhelming success.

Final Results

1	Betinho Schmitz	Brazil	Litespeed	6,128 points
2	Andreas Olsson	Sweden	Litespeed	5,401 points
3	Brett Hazlett	Canada	Litespeed	5,246 points
4	Rohan Holtkamp	Australia	Climax	5,193 points

Kingpost: A Grade

27 Lloyd Pennicuik

Kingpost: C Grade

42 Kevin Grosser

Kingpost: B Grade

49 Peter Dall

Highest Placed Female

8 Kari Castle



The winners, from left to right:
Andreas Olsson, Betinho Schmitz and Brett Hazlett



Participating pilots and organisers at the Bogong Cup 2001



Competition Scoring

C. E. WALLINGTON published in Australian Gliding, July 1969

One of the most outstanding features of the 1968/69 National Championships organisation at Renmark was the excellent way in which Moss Potter dealt with the scoring. The foundation of the efficiency with which the scores were calculated and published was the forethought and preparation that Moss had applied to the job before the competition started.

Future scorers would do well to pay such attention to planning, but before embarking on a lot of work on aids to calculations we should consider whether or not such aids will be necessary, and this means taking a long term look at the evolution of the scoring rules.

After dissatisfaction with the rules had been expressed in the 1967/68 championships, the question of scoring was considered by the subsequent competition committee. The committee's task was more difficult than that of rules committees in many other countries, because of the need to compare pilots who do not fly on the same tasks. (*This comment relates to the sharing of gliders which was the general case at the time – MB*)

There is no unequivocal solution to this part of the problem, but the committee devised what is probably the simplest and best compromise by creating the rule that a pilot's final score should be proportional to his total daily points divided by the sum of the maximum daily points awarded the days on which he competed.

The other part of the problem concerned rules for awarding daily points. A placing system that had been put to the committee was considered, but, at the time, evidence of its use or its characteristics was not available to the committee, and it was not apparent that it could be coupled with the new method of calculating final scores.

So, after careful consideration, it was decided to use a more familiar and well-tried system. The eventual scoring rules for daily points were almost identical to the current British Gliding Association rules. Obviously, the hope was that these rules have been so well developed and tested that they will be satisfactory for many a year and that they will be never very different from international rules.

Is this hope justified? To answer this question let us consider both views overseas and events here.

BGA and International Rules

Correspondence and articles in *'Sailplane & Gliding'* suggest that, despite prolonged development, the BGA rules are still not satisfactory. For those who would like to read the criticisms, the S & G references are: Dec. 1964/Jan. 1965, p 432 and p 465; April/May 1965, p 48, 149, 151, 152; June/July 1965, p 249; Oct./Nov. 1965, p 446; Dec. 1965/Jan. 1966, p 497; April/May 1968, p 122; Aug./Sep. 1968, p 296; Dec. 1968/Jan. 1969, p 466 and p 503.

Objections have been raised to the (speed)² factor in the speed marks formula, and a study of racing results has indicated that squaring the speed serves no useful purpose other than acting as an indirect means of setting the range of speed marks on a contest day.

The devaluation formulae for speed and distance marks have also been criticised, as no reason appears to have been put forward for making steps in top and bottom sections of the devaluation scales.

In fact, devaluation occurs in ways which were not intended; for example, if all pilots finish a course and get speed marks, the range of points is usually from 1,000 to about 500, in other words the day's winner gets only 500 points more than the worst pilot; thus a race, that may be considered highly successful, is virtually devalued.

Another criticism, not only of the BGA rules, but of all rules based on the current points system, is that inadequate account is taken of variations of soaring conditions along a course. This deficiency is particularly noticeable when applied to a course along which progress

along one leg is much more difficult than that along another. The Benalla-Yarrawonga-Benalla course in the 1967/68 nationals was a clear illustration of a long, strenuous into-wind leg being rewarded by far fewer points than a relatively easy return downwind leg.

Devaluation does not remedy this defect in rules, and, at present the only way around it is for tasksetters to try to avoid setting tasks in which the difficulty of making cross-country progress varies considerably from one leg to another.

To see the nature and possible magnitude of the effect of wind direction on, say, an out and return race let us consider the following hypothetical example.

Suppose 50 pilots are set a 200 km out and return race on a day on which soaring conditions allow each pilot a maximum of four hours in the air after crossing the start line, and that the speeds through the air of these pilots range from 80 km/h to 48 km/h in equal steps from the fastest pilot's speed to the slowest.

If there is a 40 km/h crosswind over the course, 25 of these pilots will complete the course.

The line labelled "090/40 4hr" in Figure 1 is a plot of the points that would be awarded to the 50 pilots on the 1965 World Championship rules (which are very similar to the rules at Renmark).

But suppose the wind were 30 degrees off the crosswind direction and 10 km/h more. In this wind, with precisely the same speeds through the air and duration of soaring, we get the points curves labelled "060/50 4hr" and "120/50 4hr" in Figure 1.

The 060 denotes the headwind component on the first leg, while the 120 denotes the tailwind component on the second leg. The difference between the two curves is between 100 and 400 points for the 70% of competitors that do not complete the course.

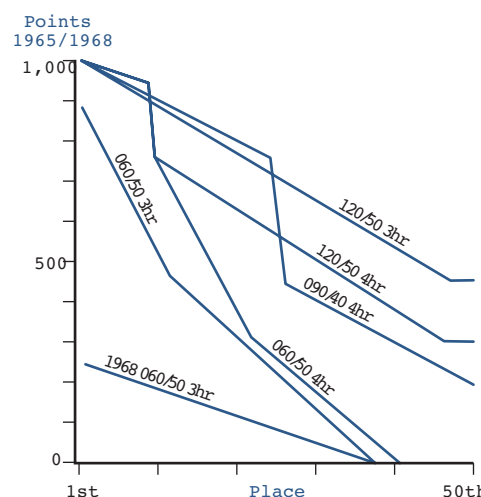


Figure 1

If, as well as a slight change of wind, the duration of soaring is cut down to three hours we get the two graphs labelled "060/50 3hr" and "120/50 3hr".

No one completes the course and, for the 060 degree wind the day is theoretically devalued.

But this devaluation is in name only. With a range of 680 points between the first and last 10 pilots, who do not score, this uncompleted task carries more weight than an apparently more successful race!

The curve labelled "1968 060/50 3hr" shows the points that would be awarded under the 1968 World Championship rules for the 060 degree 50km/h wind and three hours soaring duration.

These examples are hypothetical but they are not unrealistic.

Together with other studies that are not described in this article, they illustrate how sensitive the points system can be to choice of rules and slight variations in task, weather and organisational factors.

This is one reason why a universally acceptable version of the points system has not been evolved.

The 1968/69 Nationals

Let us take a look at our own recent Nationals to get a closer view of the nature of the current points system.

Figure 2 shows graphs of Standard Class points plotted against place for each day of the championships. The curves are labelled 1 to 12, corresponding to the 12 contest days, and each successive daily curve is displaced to the right for clarity. Each full line indicates the points for pilots who completed the day's course, while each broken line is for those who did not do so.

Notice the marked difference in character between the eighth day and all the others. On this day conditions for the last hour or so of soaring were rather poor and flukey, and only three pilots completed the course. Pilots who did not complete the course got far less for their efforts on this day than they did for comparable efforts on any other day.

To mention one example, the pilot in seventh place on this day was awarded 420 points. The average points for seventh place on all the other days was 865 points. It could be argued that this day cost this pilot the championship.

He flew against the champion on four days and beat him on three days out of the four, but the day he lost to the champion was this eighth day which carried more than three times as much weight in the championship as the average contest day.

Before developing the argument further, I must stress that the actual championship results are not in dispute. All pilots earned their final places fairly and squarely on the

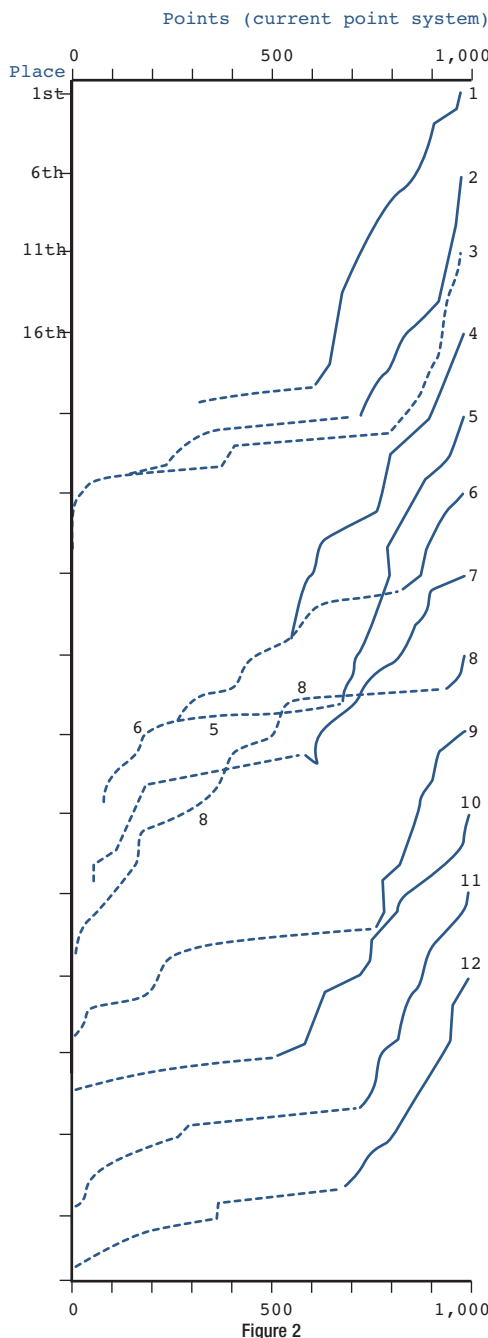


Figure 2

rules that were in force. Here we are discussing only features of the scoring system and not any subjective assessment of particular pilots.

With due respect and well deserved praise to the three pilots who completed the course on the eighth day, it is certain that they did not suddenly become better pilots on this day – nor did all the others suddenly and temporarily become worse.

But the day was worth much more than any other day because of the scoring system. Perhaps some pilots like the risk of such uncertainty in the effects of a scoring system. It adds a sort of excitement to the proceedings.

But rules committees have been at great pains to try to reduce the risk of the scoring system itself giving undue weight to any particular day in a championship. *(Those days gliders were shared and a scramble was devised to try to have every pilot flying against every other*

THE GFA SAFETY SEMINARS

- Bi-Annual Safety Seminars will again be conducted this year by the GFA in all parts of Australia
- Conducted by the GFA Chief Technical Officer Operations in conjunction with the local Regional Technical Officer Operations.
- These important Safety focused Seminars are open to all GFA members – Instructors, pilots and students.
- Emphasis on two way discussions among those attending
- Typically half to one day sessions, from April to October. Programme will be announced in AG/SS and advised to Clubs. A total of about 12 seminars.
- All are encouraged to attend – please look for locations and dates for a seminar in your area.

GFA Secretariat, 130 Wirraway Road, Essendon Airport VIC 3041

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The Problems of Scoring

MAURIE BRADNEY

Emilis recent letter (AG/SS, February, 2001) about the problems of scoring, seems like so many other complainants to have completely missed the point.

The (computer) program known as GFAScore, developed by Tim Shirley, is certainly a scoring program, but the scoring is only a small part of the program. Its real purpose is to allow the daily and cumulative scores to be printed out and/or displayed on monitor screens.

This then allows viewing and distribution of the current scores to the people at the site within a few hours of a day's flying and also at the same time provides a file that can be emailed away or displayed on a web site, apart from providing a permanent record for back checking.

Even with the current apparently complex formula, the actual calculation of the individual scores can certainly be done on a hand calculator. But what does that leave you with? If you have been thoughtful enough to note down the results as you go on a piece of handwritten paper, then tape it up on a bulletin board and there is no way of further promulgation of the results. And another lot of calculation for a cumulative. This is not really very useful, and I think not what people are on about.

If what is being complained about is the method of calculating the individual pilots' daily score then that is another matter, quite independent of the GFAScore program.

There is a small GFA committee that is reviewing this scoring formula. As such formulas have been around for some 65 years, not surprisingly, a lot of old ground will be covered.

In following this I returned to a letter written by Wally Wallington published in the July 1969 AG. Wally did a lot of nice analysis of the competitions of the time and concluded that complex formulae were really not satisfactory and that a placing system would do rather better.

One of Wally's points was that the 1,000 points scoring system (although the current formula is a little different it is still very close to what it was then) rewarded mediocrity rather than talent.

While at the time, I was against Wally's proposal, with more experience behind me I understand his arguments much better and regret that we did not stay with placing after a couple of trials. I think that I would have become a better competition pilot for it.

Because I understood how the scoring system worked, I always opted for the percentage rather than taking a more daring decision that may have won but was more risky. Mediocrity at work!

With the exception of Ingo Renner, who has an exceptional talent, I think that Australian results in internationals have reflected our mediocre approach.

I propose that we move all competitions to a placing scheme where a pilot scores a point for every pilot beaten (by flying faster or further) plus one. The plus one is so that the last person actually gets a score. People do not like getting zero if they have flown the course.

This system removes all the anomalies that the 1,000 points system creates with the mix of finishers and non-finishers as well as outlanders and slow homecoming speeds. If you think that it creates other anomalies, then you should read the original letter. Wally addresses many aspects of these issues.

The results are easy to work out. Apart from calculating the speed or distance not even a hand calculator is needed. Of course this formula could be put into the GFAScore program and the scores printed, displayed, emailed off and accumulated if people so wanted.

pilot, except his partner, at some stage in the competition – MB)

With our daily scramble system, we ought to be particularly worried that chance can still find loopholes in the scoring rules. One of the principal aims of the rules committee was to ensure that all contest days would be more or less equal in the championship stakes. Nonetheless, a number of pilots, including a few in the running for the championship, virtually lost about 400 points by being scheduled, by chance, to fly on this day.

We ought to think more deeply about the scoring system. Do we really believe that it is as precise as the complications in the rules seems to imply?

Is it worth squaring the speed ratios? Does devaluation, intentionally or inadvertently, work in the way we want? If we keep the rules shall we require tasksetters to take special care to avoid anomalous contest days?

This would mean either being ultra cautious and persistently setting short tasks, or ensuring that there were a sufficient number of excessively long tasks for the harsh penalties of not completing a course to be spread over most contest days.

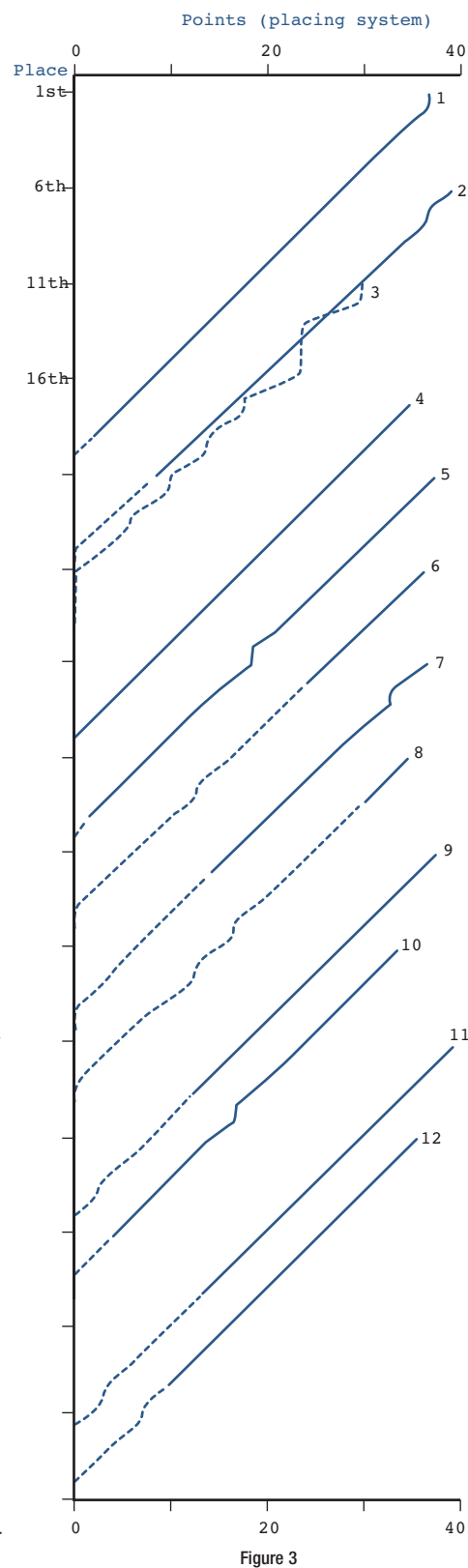


Figure 3

Placings in the 1968/69 Nationals

To add to the experience already accrued of using and assessing the placing system, I compiled scores for the 1968/69 Nationals using the principles of the system together with the rule that each final score should be 1,000 times the pilots total marks divided by the maximum marks awarded on the days on which he competed.

The object of this exercise was to see how the final results compared with the actual results and to examine differences in the characteristics of the two systems.

Before listing the placing system results, I must report that the actual results are not in dispute. We are concerned only with an objective comparison of systems, and not with any subjective assessment of particular pilots in the championship. Therefore, I shall refer to positions in the final order of merit and not to names, and I hope that readers also think in terms of impersonal numbers rather than names.

Table 1 lists the final places and scores on both the actual system used at Renmark and the placing system. Only the Standard Class is dealt with. The actual and placing results for the Open Class are so similar that, with so few pilots involved they are not worth presenting here.

Table 1 – Standard Class final results

(A) Actual final position. (B) Actual final score.
(C) Final position on the placing system.
(D) Final score on the placing system.

1	939	2	838
2	909	7	749
3	887	1	908
4	881	3	818
5	869	5	780
6	858	10	665
7	853	4	785
8	812	9	637
9	793	17	553
10	790	7	726
11	779	13	577
12	740	11	638
13	734	20	475
14	729	15	569
15	725	12	617
16	721	6	758

17	696	24	468
18	686	18	527
19	682	14	576
20	655	21	474
21	644	25	417
22	644	23	472
23	636	16	557
24	632	27	311
25	610	29	305
26	608	22	473
27	601	19	503
28	597	26	355
29	548	28	305
30	525	35	202
31	514	30	319
32	467	31	231
33	402	32	226
34	453	33	209
35	389	36	199
36	365	34	209
37	263	37	109
38	195	38	78

There are, of course, differences between the two sets of results, but statistically they are of no practical significance. By this I mean that the application of standard tests of comparison to the two sets of results do not reveal any fundamental differences between the results of the two systems.

If the current points system is considered to be a fair and proper way to judge a championship, so is the placing system.

Examination of the nine final places that are changed by five or more positions by the placing system shows a characteristic of the placing system that has already been revealed by tests over the past few years.

In the placing system a pilot is not penalised so heavily by one bad day in an otherwise good daily record. On the other hand, one good day is not enough to raise him from an otherwise mediocre level. Thus the placing system demands of the pilot a fairly sustained effort throughout a championship but it is not so harsh on one day's failure or bad luck.

Figure 3 shows the daily points that would have been awarded under the placing system. The layout of this diagram is similar to that used in Figure 2 showing the actual points.

The third was automatically devalued because there were gaggles of pilots with not much separation between their scoring distances. I think that most pilots at Renmark would agree that slight devaluation of this day was appropriate.

Whatever our views on scoring systems are, we must realise that the international problem of scoring is far from settled.

The reason why the past 20 years has not led to a universally acceptable version of the points system is that the system was originally designed for requirements that are not appropriate to the modern gliding era.

Of course, I am an advocate of the placing system, as I believe that, in effect, this is what successive rules committees are striving for but in a roundabout way.

Some countries are already considering placing methods. It would be nice if we could take a lead in thinking and in action on the problem before 1975.

The Sailplaner

EMILIS PRELGAUSKAS

The image of the glider pilot held by the public is characterised by a Belgian I met recently.

He was in Oz with his DG800; spending a few weeks touring. He packed all his belongings on his lap, behind his head, and on each arm rest; locked the canopy, raised and fired the two-stroke, and climbed out to thermal soar to his destination for the day.

There goes the epitome of the aspiration for people contemplating taking up gliding.

Along with this European ideal in people's minds come the grassed runways, modern clubroom, refuelling and servicing point – provided by the base club (of course, at no charge natch).

To get the yet-to-be-aspiring glider pilot to that point, a club training operation and sailplane dealership are expected to offer commensurate financial incentives.

April 2001

The reality of many gliding sites in Australia (including my own) is of a barely operational strip on broken ground, developed with the minimum level of necessary facilities focussing on entry-level usability rather than presentation for public consumption.

The fleet comprises elderly gliders and a winch of an even earlier geological age.

Everything is set up on the principle – the less complexity, the less to go awry.

The glider pilots themselves are a motley crew in their gardening wear sharing a day of camaraderie ahead of sophisticate flying. (Some wear TTHs, without emblem).

Currently, both arms of gliding characterised above operate under the same descriptive umbrella – 'gliding'.

In the same way as there are questions about whether the common ground between hang-glider and sailplane is relevant at these sports' coalface; similar questions potentially arise about common ground between these different expressions of sailplaning.

The public certainly reject the motley crew as an acceptable entry-point for their hopes of sophisticate flying. This goes back to the early 1970s where David Ryder-Turner dismissed the club 'on the scrubby heath' as being any longer representative of the sport (AG Yearbook).

In the following period, advocates looked to absorbing these little gliding operations into the big central clubs.

But 30 years later, some motley crews continue to exist. There is a reason for this – the camaraderie and mucking-in remains relevant for a small section of society despite most of the public having moved on to more up-market expectations.

So there is good reason to look for a distinguishing trademark or name to separate these relics of the sport's infancy from the mainstream gliding centres of today.

The benefit will be to spare the enquiring customer the shock of a motley crew who have only their club fees as an attractive feature. And permit the discriminating customer to head directly for the gliding centre where they can begin their path toward the flying they aspire to.



Australian Paragliding Open – Manilla 2001

GODFREY WENNESS

The 2001 Australian Paragliding Open was held in Manilla in the first week of February. In anticipation of great Manilla XC flying and full FAI Category 2 validity, the entries reached the 120 pilot maximum four weeks before the start of the comp and the waiting list was growing rapidly. In the weeks leading up to the comp the two months of dry conditions were providing the highest cloudbases ever seen in the region – around 4,000m plus! The hot dry bubble burst on the Tuesday prior, just as pilots from the rained out Bright Open and blown out NZ Nats started arriving in town!

Things were looking grim a few days out and memories of the Big Wet 2000 Comp started to fill every one's minds. Hundred-and-fifty kilometres to the north and the Moree area had received its annual rainfall in just two days! There was even talk of moving the comp somewhere else, but the weather map looked promising for the weekend and beyond.

As all pilots had registered and paid online, the final rego night was simple: check-in, grab a T-shirt and a Guardian Chemist pack (sunscreen and insect repellent), and get the GPS downloads. This year the PWC "Check In"

GPS verification software was used, which also made final rego much more simplified. To keep pilots entertained a large screen was showing videos this and other nights, as well as photos in the mornings before briefings. In the end 127 pilots from 18 countries were registered, including seven wildcards and 19 women.

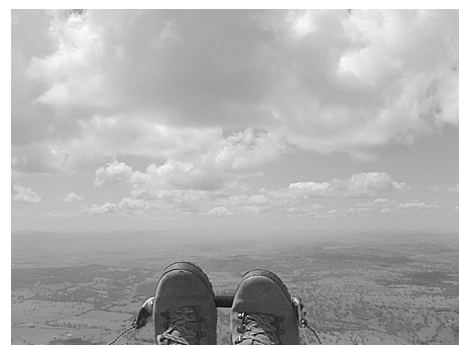
Day 1, Saturday 3 February: The First Briefing

The first morning competition briefing by Godfrey Wenness was preceded by a blessing of the pilots by a local minister whose church



group also provided a well received morning tea! In the briefing the usual local Manilla Rules were made clear as well as a new cloud flying rule – a zero day score if a pilot is caught taking advantage from cloud flying, and banned from the comp for a second offence. Cloud flying was defined as any part of the wing touching the cloud.

After the briefing the day was held off until 1 pm when it looked like a task was possible. Once at Mt Borah large saturated clouds and occasional showers in the area resulted in the day being cancelled. An impromptu spot landing comp was organised with free beers from the Imperial Hotel as prizes. Eight of the 100 or so pilots that launched hit the spot and claimed their beers!



Task 1, Sunday 4 February: 59.3km Race to Goal, Mt Borah to Curlewis

The northerly winds in lower levels made the task setting pretty obvious, though it was evident that some southerly effect would kick in later as well as over-clouding and possible OD. The Mt Borah north launch was on and 127 pilots launched over a two hour period with around 30 pilots bombing and needing re-flights. The late starters were affected by over-clouding near Lake Keepit and had a slow progression along the course line. The second half of the task was via the Carrol flatlands, which were quite damp, resulting in slow climbs and fewer clouds. Some higher and drier country to the west of the course line provided a cloud street later which many pilots used to advantage with up to 15 km final glides in zeros! Thirty pilots made goal, including the British team who persisted, never gave up and flew together to make it in last in around 4 hours 15 minutes. The fastest time was



2 hours 15 minutes by Ron McKenzie (AUS) on his Millennium.

Task 2, Monday 5 February: 73.1km Race to Goal, Mt Borah to Caroda

Things were looking good weather-wise for the rest of the week, though the slower climbs and scratchy conditions suited the Euro pilots more than the locals. The task to the north with a light tailwind often saw changeable conditions, with lift varying from strong 5 m/s cloud suck to light <1 m/s drifting climbs needing great patience. Some of the 38 pilots that made goal also lost their goal virginity that day – and some only made it with a few meters to spare over the line. The day again had 1,000 points available and the fastest time was 2 hours 45 minutes by Oystein Walle, the Quarx flying Norwegian team leader who made it with a fractured rib from a launch run mishap during Task 1.

After two tasks, competition organiser Godfrey Wenness flying an Omega 5R was surprised to be in the lead with Japanese PWC pilot Tsuyoshi Tsuji on a Boomerang 2 in second place.



Task 3, Tuesday 6 February: 58.4km Race to Goal, Mt Borah to Taylors Plain

The meteo info from Moree indicated the possibility of OD and rain showers, which was in keeping with the actual weather seen from April 2001

launch by the tasksetters (Godfrey Wenness, Enda Murphy and Craig Collings). The Mt Borah east launch was alive with gliders after the window opened with one mega-gaggle of over 100 pilots swirling like a confetti tornado in a slow climb. The task, a shorter fast run west to Taylors Plain, was the only track that didn't initially have larger clouds in the area. Most pilots were well on course or at goal when the launch was closed due to a rain line approaching from the SE. The wind also generally had picked up making for fast times into goal for the 19 pilots who made it. A protest by one pilot about the windy conditions at the end of the task window was dismissed the next day. Oystein Walle, who was still nursing a rib injury, won again on his Windtech with a time of 1 our 53 minutes. Kiwi woman, Jasmin Hill, placed tenth on the day (only 12 minutes behind the leader), making goal every day so far on her Avax!

Hungry pilots attended an excellent free BBQ at the RSL club that night. The drinking and limbo dancing carried on late into the evening.

Task 4, Wednesday 7 February: 101km Race to Goal, Mt Borah to Kiandool

The French Hill Top Cafe and George's Ice Cream Bar were doing a roaring trade as pilots amassed on the east launch. The day looked right for a longer task over the cotton fields west to Narrabri. As with previous days a one hour elapsed time window was used, after which all pilots had the same start time.

The 100 or so pilots who got on course early (around 1 pm) had the advantage of massive gaggle flying and great clouds for the first 40 km, but were then held up at the wellknown Square Forest. Those making the decision to push on were rewarded with better clouds en-route to goal. Of the late 1:30 pm launchers and those left waiting at the forest, only two

made goal, indicating the tricky conditions during the latter half of the day. Japanese PWC pilot Tadano powered his Boomerang 2 to win the day in 2 hours 45 minutes. On a serious note, a Polish pilot flying a Krypton Proto had a major collapse just after launching and crashed just below the east launch. The now locally based Westpac Rescue helicopter was called in by the ambulance, but luckily he only suffered from a fractured forearm and the rescue was then more of a training exercise for the chopper crew.

After four tasks Kiwi Craig Collings was temporarily ahead of Michal Orolin (SVK) by 23 points, with Norway's rising PWC star Rolf Dale in third. After the morning's briefing, Michal was penalised for cloud flying with a zero day score, which put Jasmin Hill into third place overall!

Task 5, Thursday 8 February: 106km Race to Goal, Mt Borah to Terry Hie Hie

Task setting was made difficult by variable winds aloft and the obvious inversions on the temp trace. A straight-line task north-west to the locality of Terry Hie Hie was set. After one hour of flying it was clear that the low heights being achieved (1,500 m) and the lack of full tailwind would make things very difficult, especially given the higher plateau country that was en-route. Later on thermals reaching 2,200 m were occasionally encountered, but all in all the day was a full test of patience and determination. Kiwi veteran, Russell Read, coaxed his X-Pert along for 60.5 km, with most of the field landing evenly spread out behind. Local Aussie female pilot, Suzi Smith, impressed the boys with her efforts and twelfth place on the day, only 10 km behind the winner.



Task 6, Friday 9 February: 121km Race to Goal, Mt Borah to Warialda Rail

This was by far the best looking XC day of the week, with consistent wind direction and a good trace. Though there was a temptation to set a 162 km goal, it was deemed more important to have a good number of pilots into goal rather than run a race of attrition. This was the correct decision in hindsight. Those on course early, and who flew fast, had the best chance of mak-



ing goal as conditions in the last few hours of the day deteriorated to become scratchy with nil wind. Sixteen pilots made goal after 6pm, with a total of 40 flying past 100km. Czech pilot, Tomas Brauner on his Avax, was fastest in 4 hours 25 minutes. Annette Gardhagen was the best female and also captured the Swedish women's distance record with her flight of 100.8km!

Korean female champion, Jung Park, lost control of her Millennium and elected not to throw her reserve for over 400m, finally crashing into a tree'd rocky gully seven kilometres north of launch. Competition organiser, Godfrey Wenness, was in the area and spiralled down to assist from cloudbase after pilots radio calls said that no movement was seen. At the same time, emergency services were put into action by comp/launch director, Brian Shepherd. The pilot was uninjured, but didn't call on the official radio channels, resulting in a great deal of panic for nothing. Thanks to Nicky Matthews and other pilots for assisting with the retrieve and radio calls. Godfrey was given day points in line with his average ranking in the comp to date for assisting.

Task 7, Saturday 10 February: 90km Race to Goal, Mt Borah to Bingara

A similar day to yesterday, and the desire to have a race finale prompted a shorter task to the Bingara Racecourse goal. Most pilots were off the west launch and on course within a 30 minute period. With cloudbase now over 2,000m there was some good old fashioned racing happening for much of the task. Around halfway the infamous high country north of Barraba took out over 20 pilots in 20km. A grass fire at the end of the Bingara valley assist-

ed the main (some would say "leeching") goal gaggle to leap frog the hard working racers and get in with minimal fuss. Twenty-eight pilots made goal and Japanese Aerotact team pilot, Tadano, won his second task of the comp in a time of 2 hours 44 minutes. Best female was Kiwi intermediate, Jillian Borst, who made goal in 3 hours 27 minutes on her Target.

The Results

After seven successful tasks the Australian Paragliding Open in Manilla was blitzed by the Kiwi invasion. Both top male and female places were taken out by Kiwi pilots and the hotly contested Trans Tasman Cup was prised off the Aussies as well!

Craig Collings, the New Zealand Champion and the overall leader going into the last day, held on to his handy margin and continued his ultra-consistent form by

once again making goal. He totalled 5,906 points for the week. In second place was Japanese Champion, Tadano Syoichirou, on 5,335 points. Norwegian pilot, Rolf Dale was pipped at the post for second by only two points after landing just 5m short of the line on the last day having made every goal day during the comp!

Best placed Aussie was new National Champion, Enda Murphy. He finished the week in form again after a slow start and clawed his way into fourth place overall. The Aussies generally were down in the overall results – a reflection of the high standard of pilots that entered this year's comp.

The Women's section was won by 22-year-old Kiwi, Jasmin Hill, who lead from start to finish and was ranked as high as third overall mid-week! She finished the competition in eleventh place and surprised many of the experienced pilots with her determination and skills. Best Aussie female was Manilla local apprentice instructor, Suzi Smith.

In all, 35,725km XC were flown during the seven days of competition by the 127 pilots. Goal by an average of 20-30 pilots was



made on all but one day. Only two injuries resulting from accidents occurred (fractured forearm and rib) and despite the mega-gaggles and over 1,000 launches and landings only a couple of mid-air touches were reported.

Given the success of the FAI Category 2 Manilla PG Comps, the 2002 Manilla International PG Open will again see a full entry field and pilots are advised to register early!

The Competition Presentation Night: \$6500 in prizes

The big bash was held in the Manilla Town Hall next to HQ with a huge two course smorgasbord to satisfy the over 200 hungry pilots and entourage. Over A\$6,500 in prizes were given out, and the Fat Men Can't Dance crew played solid rock 'n' roll to the crowd who were well served with free beer, wine and drinks all night long.

The Competition Organisation Team

Organiser/Manager: Godfrey Wenness
Launch/Comp-Director: Brian Shepherd
Goal Official: Carl Rust and Amber Cocking
Scorers: JJ Bastion, Bob Smith and Regine Endres
Secretary: Suzi Smith and Elisabeth Wenness
Official Driver and Barman: Peter Rossmair
Social Directors: Rhettski, Munsie, Coxy, Mark and The Murph Monster

Thanks to our Sponsors:

Manilla Shire Council, Manilla RSL Club, Manilla Guardian Chemist, FLYTEC, Icom Australia, Garmin – GME Australia, Advance – Parafunalia Australia, Hanwag, Cross Country Magazine, Vic 'n' Tom's, Imperial Hotel, The Big Fish, Manilla Bakery, Manilla RSL Chinese Restaurant, River Gums Caravan Park, Ambleside B&B, Manilla SES.

1	Craig Collings (NZL)	Argon	5,906
2	Syoichirou Tadano (JAP)	Boomerang 2	5,335
3	Rolf Dale (NOR)	Simba C	5,333
=4	Enda Murphy (AUS)	Omega 4R	5,021
=4	Stein Tore-Erdal (NOR)	Bagheera C	5,021
1	Jasmin Hill (11) (NZL)	Avax	4,740
2	Britta Steude (36) (NZL)	Bagheera	3,487
3	Annette Gardhagan (52) (SWE)	Bagheera	2,942
1	Enda Murphy (= 4)	Omega 4	5,021
2	Godfrey Wenness (14)	Omega 5R	4,709
3	Rhett Rockman (24)	Omega 5P	4,109
1	Suzi Smith (74)	Sigma 4	2,210
2	Frances Ning (85)	Bagheera	1,879
3	Beate Schlapps (115)	Session	1,049
DHV 2 Class: Stein Tore-Erdal (=4) (NOR) Bagheera C			5,021
Best Intermediate Pilot: Jillian Borst (68) (NZL) Target			2,389
Best Veteran: Russel Read (7) (NZL) X-pert			4,961

HGFA Events Calendar

Australia

State of Origin 2001 PG Comp

Easter Long Weekend, 13-15 April 2001

Manilla, NSW. Fun comp for all levels. Registration: Friday morning 9-10am. Free entry, just turn up & fly for the glory of your state (& maybe some free beer). For any further info contact Enda Murphy 02 4294 2129 or email <endamurphy@ozemail.com.au>.

Flatter than the Flatlands 2001

13-17 April (Easter) 2001

Birchip, VIC. Entry fee: \$60 per person. Entries from teams only. Min. 5 pilots per team. Entries open 15 January 2001. For more info & updates visit [www.aains.net.au/~warwickduncan/].

South Moreton Island Fly-in (QLD)

28-29 April 2001

Koorinal "Baroco" airstrip on VTC.

Fly to this beautiful island location and enjoy a weekend with other flyers and friends.

Food and accommodation available if needed. For info call John Elcock ph/fax 07 5491 5571 or Graham Roberts 07 3267 6662. For accommodation call Phillipa Rigby 07 3409 0105.

WA Hill Flyers Autumn Fly-in

28-29 April 2001

Free event, open to all HG & PG pilots. Hill launch from Bakewell, Noondeening or The Range, for either out & return or downwind tasks set on the day. More details on the hotline (08 9487 3258) or <wshgc@listbot.com> or <skysailing@yahoo.com> during the week before the event, or contact Dave, Rick or Mike at the Hill Flyers Club.

HGFA Fly-In and Awards Night

28-29 April 2001

Canberra Area, ACT. All HGFA pilots welcome, bring your wing (& your friends) & have some fun. Awards Night in Canberra City. For more details phone the HGFA office on (02) 6947 2888.

St Bernards Canungra

Hang Gliding Classic 2001

13-20 October 2001

Canungra, QLD. Entry fee: \$120 + \$40 site fees. Registration: 12 October. GPS mandatory (Garmin or Aircotec). Int rating required. PGs and Floaters welcome. Close of entry 31 August 2001. Late entry fee: \$30. Send cheques/money orders to: Rod Stead, 9 Griffith St, Nth Tamborine 4272, QLD. Entry inquiries to Rod ph: 0428 132 215 or 07 5545 0969. Further details to be advised or contact Tex ph: 07 3901 7401, 0417 766 356, <TEXDOC@bigpond.com>.

Overseas

UK National Hang Gliding Championships

2-11 August

St André-les-Alpes, France. The UK National HG Championships will again include an Open Competition for both Class 1 and Class 2 gliders. The FAI Category 2 sanction fee has been paid for both competitions, so this will give opportunities to gain eligibility for entry to future Category 1 championships. In addition to the usual trophies there is substantial prize money available in the Class 2 competition GB£1,000 for the winner, GB£500 for the runner up and GB£250 for 3rd place. Details of the competition can be found on the UK competition web site at [www.theleague.force9.co.uk/welcome.htm].

HGFA Board News



BRIAN WEBB, HGFA Board President

Insurance

You may recall last year I warned of significant insurance premium increases to come. Earlier this month our insurers SLE called us to a meeting to advise us of their intention to raise our premium by approximately 400%. They intend to lift it from the current ~\$125,000 to ~\$450,000, this premium to become effective at the end of March. SLE cites a rapidly increasing litigant society in Australia together with recent significant claim awards as major reasons for the premium hike.

Our premium has been very reasonable over the last three years and an appropriate increase was overdue, but 400%!

We will minimise this premium increase. We have instructed our broker Kevin Chamberlain to pursue quotes from alternative insurers.

We have also asked Kevin to investigate alternative insurance options. When the Board have this information we will consider the alternatives available.

Nationals XC League

Mark "Bomber" Thompson is working towards organising a National XC League for hang gliders and paragliders. Any potential sponsors for trophies or prizes please contact the office, or Mark on 0417 764 571.

Membership database check

The office has recently been collecting member email addresses. They will be using these to email members with their membership details in order to sample the accuracy of the HGFA database. Should you be a part of the survey please respond.





Gawler 2001

— A View from Inside

TERRY CUBLEY

After three to five years of preparation, including promoting Club Class at international level; proposing the introduction of Club Class as a World Championships; submitting and winning the bid to hold the first championships at Gawler; continual meetings in Adelaide; numerous committees; a large number of dedicated folk who worked hard

to arrange their particular element of this whole symphony; resurrecting the old Adelaide Soaring Club buildings (paid for by ASC); negotiating with the Gawler community and councils; promoting the sport at every opportunity; discussing with politicians and government departments; promoting the event to Australian and International glider pilots; seeking support from clubs and private owners; watching the local club members at Gawler work their butts off over the final four months, I finally arrived at Gawler for the start of the competition.

We ended up with 44 entries from 22 countries in the Club Class and six in the grand prix. The numbers looked much better for a while, but at the end there were no New Zealand entries (they said they were coming but then nothing else was heard – a little disappointing), the Finland entry had to withdraw at the last minute and the three Russian entries just couldn't find the money to get over. In the grand prix we had potentially 15 entries at one stage but most of the Australian entries pulled out over the last few months – all for legitimate reasons, but it left me pulling what little hair I have out by the roots, trying to make sure the competition happened. In the end we had two late Aussie entrants and the competition was finally on. Fifty pilots and their crews, team captains, and 22 national flags flying at the airfield, made it all worthwhile. We finally had a significant world championships poised to happen.

Driving into the airfield on the Saturday before the practice week, I was amazed and impressed by the transformation that had taken place since my last visit two months earlier. New roadways, a team village, signs, flags, lots of people, and the most impressive aircondi-

tioned hangar and Santos-sponsored marquee provided a tremendous atmosphere.

The caterers for the event, 'Bang Promotions', provided a fantastic bar and dining area inside the hangar, with the briefing area at the far end complete with stage, whiteboard and projection screen. The airconditioning was certainly a surprise. It consisted of about 12 fabric tubes approximately one metre in diameter, suspended across the hangar roof, each with a large series of holes about the size of your hand. Huge airconditioners pumped large quantities of cold air along the tubes and out into the hangar. During the competition we had over seven days in a row with temperatures in excess of 40°C, with one day where the temperature reached 46°C. The airconditioned hangar made the difference between an enjoyable competition and just plain hard work in the heat.

With this being the first world championships we had an opportunity to establish an atmosphere that would encourage and motivate pilots to keep coming back. My own experience of world comps was that you would fly hard for a few weeks and finally get to meet the majority of other competitors on the final night dinner. This seems to defeat the 'developing relations between gliding nations' part of the aims of world championships. With this in mind we convinced the local councils, who had offered to host a 'civic reception' for pilots and team captains, to change their focus a little. Instead we arranged a welcome breakfast on the Wednesday of the practice week. In actual fact it was two breakfasts – the pilots and team captains were invited into Gawler and were welcomed by local council members and mayors (Gawler airfield is actually in the Council of Kapunda and Light whereas the town of Gawler has its own council). The crews, organisers and volunteers were invited to a breakfast, at the same time, out at the airfield. Both of these events were very successful. The pilots were able to meet each other whilst they were still relaxed about the whole competition bit. The crews got to meet each other, as well as the ground marshals, tug pilots and other volunteers they would be working



And we think he's joking



Fred Weinholtz from Germany catches up with Ron Sanders



Gliding? – What gliding?

closely with over the following two-and-a-half weeks. I certainly hope that this will become a precedent for similar events at all future Club Class world competitions. (It may also be useful at our National championships?)

Creating the 'right' atmosphere was an important part of our operation. We emphasised with all of the volunteers that they were here to have fun and so were the international teams. The avoidance of officious attitudes was also emphasised. If the volunteers encountered any problems these were to be sorted out by one of the 'heavies' – myself, deputy comps director Daryl Connel, safety officer Reg Moore, executive officer Karl Faeth, or volunteer manager Gabby Hayes. The Aussie temperament was very evident and there were no real problems – a happy face was easy to find, and everyone was enjoying themselves. This great attitude from all concerned was really what made the competition such a success.

I remember attending the opening ceremony at Bayreuth, Germany when I visited for a few days in August 1999. It was held in the town of Bayreuth before a huge crowd, in hot

PHOTOS: LYNDON POORE



Gabby gives the Italian lads a few clues



The beauty chorus



Michael Nyrup hard at work

conditions and on the best soaring day for years. I understand that there were four 1,000km flights flown that day. As we listened to the speeches, everyone's eyes kept turning to the high cloudbase and a few very small gliders climbing towards the cloud. At Omarama, the wind blew and we all stared at the great lenticular clouds.

We decided for our opening ceremony that taking it to the town was a great idea, but we held it on the Thursday evening of the practice week. I guess it is a little strange opening the competition and then flying another two practice days, but nobody seemed upset by this. It meant that pilots could fly a short practice task and then make it to the opening ceremony without any great rush. We chose the Thursday night because that is 'shopping night' in Gawler and therefore the biggest crowd. Pioneer Park looked great with an official marquee to provide shade (it was still bright and warm at 6pm), the Gawler town band, flags flying, gliders on display, a march past and introduction of the teams, a presentation by some local Aboriginal children (really the highlight

for the international guests) and a flypast by two gliders (flown at a 'safe' height by Gabby Hayes and Steve Pegler). As it turned out, Thursday was not a great flying day. A few pilots took the opportunity for a little bit of 'local' flying whilst others rested or fettled with their equipment. Any opening ceremony is a great spectacle, and if you provide free beer and wine at the conclusion then everyone has a good time. This was made possible by support from Bang Promotions and Yalumba wine. The pilots and crews then visited the many bars and restaurants in the surrounding district. Heidi, team captain for the Swiss team said that the Swiss, Slovenians, Belgians and some others bought out all of the kangaroo steaks at one of the local restaurants.

Most of the pilots hired gliders in Australia, putting some cash flow into many of the clubs who supported the event. Without this support then the competition could not have happened. It became apparent during the practice week that many of these club gliders have fairly poor radios and instruments. Arnie Hartley spent most of the practice week helping pilots with 'five minute jobs' to try and get the radios working, replacing TE tubes, installing new radios, etc. It is a wonder that Australian pilots are able to soar many of their club gliders given the poor state of some of the instruments. It is worth noting that the British team members were the only ones to bring their own gliders to Australia, and their three pilots placed first, second and fourth in the competition. Australian teams have found that having your own glider to fly is a much better proposition. You are used to the instruments and feel of the glider, and know what its performance is like.

Another significant component of the total event was the huge range of entertainment provided at the airfield. On most nights, Keith Willis, who was in charge of all social events, arranged for a variety of entertainers. These varied from country and western bands, and a very attractive group called Double Vision (the German team fell in love with these girls), to Dutch klompen dancers, an Austrian oompah band and karaoke. The karaoke was surprisingly popular and proved that these people have a talent for flying, not for singing. Keith Willis was one exception to this statement, as was Dutch pilot Rob Looisen, well known to many Australian pilots. Rob did an excellent job with some Frank Sinatra songs. The local 'groupies' (Viv and Roy) gave everyone some confidence to join in – no one could sound as badly as them.

The flying was certainly challenging for everyone, with a huge range of conditions experienced. During practice week we had some really great days, with thermals to 14,000ft out

to the north. This really impressed the Europeans and raised expectations for the contest proper. We initially used PST tasks (Pilot Selected Task – or speed only POST that we use in Australian Club Class Nationals), as many pilots had not flown this sort of task before. They quickly understood the concept and almost started to enjoy it.

The other type of task used in the competition was the Assigned Area Task (AAT). In this task, a set course is declared but the turnpoint sectors are circles around the turnpoints with radius of 20-60km. The pilot has a choice of where he/she turns within the sector, and therefore can lengthen or reduce the task size quite significantly. A pre-set course of 300km with 30km radius turns can result in a task distance less than 200km or more than 400km.

We were keen to give the pilots a chance to experience this type of task prior to the commencement of the competition, but as soon as we tried to set this task the weather turned poor. We didn't fly on the Thursday or Friday and were very keen to get the task in on the Saturday – the last practice day.

Luckily, the weather improved and a short AAT task was set. As it turned out, the weather was better than predicted with a temperature of 45°C, and pilots needed to use most of the available distance to use up the set task time. A few didn't go far enough into the first sector and therefore ran out of room through the last sector and despite travelling to the furthest point came home in under the two hour time limit. We learnt a lot from that experience and in all future AAT tasks we set extra turnpoints to give a little more variation, and set larger turnpoint circles to give more variation in achievable distance.

One limitation on the verification software is that the turnpoint circles cannot overlap, otherwise there can be some strange anomalies. By the end of the competition we learnt that if the day was only good enough for say 200km, you were better off setting a distance of 300km with large turnpoint circles so that pilots could turn short and travel 180-240km, than it was to set 200km with small turnpoint circles. On a shorter task, the turnpoints are closer together and so the radius has to be smaller, therefore you have a much smaller variation in task distance and direction available to the pilot.

The AAT task was very popular. Towards the end of the competition we held a pilots' meeting and also issued a survey. Both of these results gave a very big 'thumbs-up' for the AAT. There were 56 votes in favour of the AAT, 33 in favour of the PST and the normal speed triangle, and one vote in favour of the



Stowe in the log position



Twenty-three nations competed



The last day

Time Distance Task (basically a Cats Cradle type task).

The first contest day turned out to be a bit of an anti-climax. The weather was just not good enough, 39°C but needing 41°C to get to reasonable heights. Another two non-flying days were accepted with reasonable spirit but we were all starting to get a little anxious. There are only so many wineries and go-kart racing tracks, and we really came here to fly.

We did do a little bit of marshalling and even sent a sniffer up on one day, mainly to keep some of the media people happy. We had to look like we were going flying. This is one of the problems with our sport as far as the media is concerned. They cannot understand why we just don't go up and fly when it is warm and sunny. Some of the pilots were wondering this also.

Finally, on the fourth day, the weather came good. Temperatures in the mid 30s and heights up to 6-7,000ft. A blue day again, but a good contest day. Karl Striedeck proved the hype that had been generated about his ability and won the first day. From our perspective, it was nice to send them away. Everything

worked well, weighing, marshalling, launching, start and finish. There was certainly a more positive attitude in the bar that evening. A 'happy hour' also helped with the enjoyment.

My philosophy is to set a reasonably long task for the conditions, with the intent of getting pilots to start as soon as possible after the gate opens, and to encourage them to fly to some of the more interesting parts of the task area. Day one had a four-hour PST task.

One technique that I like is to use a compulsory first turn point. This is for a number of reasons. It ensures that all pilots fly in the same general area whilst they work out the day's weather conditions and see where the conditions are more likely to be good. It also, for this reason, reduces any 'local knowledge' advantage that may occur – the international pilots certainly appreciate this aspect. The final reason is that even at a world championships there are pilots who have more limited experience than others. There is some real value in them being able to see what the 'experts' are doing.

Weather briefing and tasksetting

The normal day for the organisation started at 7am with the temperature trace. By the time Daryl and I walked from our house near the far side of the runway, and arrived at 8am, Mike Hancy and the guys from the Bureau of Meteorology – Peter Webb and Graeme Crooks – were studying various maps, computer models, satellite information and data collected from the mobile weather station they had erected at the airfield. This was certainly the best weather data I have ever seen, and the best service I have ever experienced from this team of guys. Their weather briefing was certainly well received and respected.

They had one computer model which showed a map of the area and the expected thermal height at all places on the map in hourly intervals. With Gawler being close to the coast, actual conditions at the home base could be (always were) very different from the conditions further inland. The model showed very accurately that on some days we had only 4-5,000ft at Gawler whereas in the north-east sector there were thermals to 12-14,000ft. Knowing this sort of information gave us a lot of confidence to set tasks in particular directions and gave pilots the confidence to head out in fairly mediocre conditions.

The weather at Gawler was anything but normal. We had seven days in a row with temperatures over 40°C, with one day reaching 46°C plus. We had a couple of small fronts and troughs coming through but they were all very shallow, only cooling the air at low altitude. This meant that the trigger temperature for

thermals was very high, and one degree could mean the difference between thermals to 2,000ft or to 12,000ft.

Each morning we would start with the weather briefing at 8am. Due to very touchy conditions we were often faced with some very negative views. There were a few days when the prospects of flying were very poor, and the mood in the weather briefing was quite negative.

Following briefing, Daryl, myself, and task-setter Paul Mason would meet to set a task. The hardest thing at this time was to remain positive about the prospect of flying the day, even when there was high cloud or on one day, rain outside. We were here to fly, so we had to assume that that was what we would do. You are much better to set a task, marshal, even launch and then call it off, than to not set a task and then have the day suddenly come good.

On many days we assumed the best that could happen would do so, and then added an extra bit just in case. We would go to briefing with a fairly significant task set, listen to the fairly conservative weather forecast and show a confident smile as the puzzled pilots looked at us as though we were crazy.

We set an alternate task just in case the weather deteriorated (ie became as expected) and each day we arrived at the launch point set up with paperwork to alter the task. Meanwhile, on the surface we tried to be as positive as possible whilst team captains slowly walked past to see how the temperature was looking and asking if we were going to shorten the task or call it off. It was fortunate that on all but one of these days the weather actually worked in our favour and our brazen image paid off. There is a lot to be said for the task-setters having a very positive frame of mind, whilst you need the met guys to be a little more conservative so that you don't overset the task.

The time just before launch was certainly a very tense one from the perspective of the competition director. The aim was for the pilots to fly, but the task had to be reasonable and fair. Too short meant that it could be a little lucky, too long could mean everyone out in paddocks. If the conditions just didn't come good enough it could also mean a fairly lucky day. To send them or not? To change the task or not? This can be a fairly lonely time. One thing I did find was that once the decision had been made, and the fleet launched, I became quite complacent. From now on, what happened was up to the pilots. I had no sympathy or concern at all, they just had to go out and do their best.

On day six a front was expected through Gawler in the middle of the afternoon. It looked like a no-contest day for sure. However, the thermal model showed quite good condi-

tions to the north and east, with quite good heights as the day developed. We then changed our view by accepting that all pilots would land out as there was no hope of getting back through the front, but there would be good soaring to the east of it. We set a PST task with a reasonably long task time so pilots would be forced far to the east. We tried to sound confident about the possibility of them coming home but we weren't really believed. As the front approached the upper level winds increased and one of the best lenticular clouds I have seen in Australia established to the north-east of Gawler, over the task area. Well, the wave worked well with pilots climbing in the rotor to 9,000ft and then up in the wave to 15,000ft which was the top of the airspace limit. Over 80% of the competitors came home, most final-gliding 140km or more from 15,000ft, at speeds of 60-70kt. Do your own calculations, but this took some of them nearly an hour of gliding. Gawler, the wave capital of South Australia.

As mentioned above, one of the jobs of the CD is to ensure that all pilots have a fair chance to complete the task. Gawler's individualistic weather conditions certainly test this capability. On contest day four we had such a day. The sea-breeze was expected through shortly after thermals became established. We used the cross strip so that even if the wind changed we would still have some headwind component. The first launches provided fairly low climbs but gradually increased with cumulus showing the way. About half way through the launch though the wind changed to the south and created some difficulty with launching – the sea-breeze had moved in. The launch instructions in the rules are quite restrictive. All gliders have to be released in the same drop zone at the same height. Unfortunately, the initial launch area was now downwind of the strip with over development in that specific area. We suddenly had gliders being dropped on the edge of their glide angle with no thermals. As you can imagine, this made the pilots a little 'touchy'. A couple just glid back for a re-launch, then a couple of others claimed that they were out of glide range and were seen to be climbing very slowly but drifting away from the strip. I asked the tow planes to use the full extent of the drop [zone] (ie try and drop them somewhere near to the lift) and not to be too restrictive with the height (because of the sea-breeze, they needed a little extra to get back to the strip). This direction obviously upset the couple that were drifting away at low height and they started to indicate some concern (read – a protest is coming your way).

The first gliders to be launched were now having a good time ahead of the sea-breeze, the

last few were really struggling, with a number of reflights. The start gate was due to open 20 minutes after the last launch. If I opened the gate and the last pilots couldn't get away then the day would be cancelled by a protest. This would have ruined everyone's day. I therefore delayed the gate opening as we talked with the last few gliders and the low ones who had drifted away. It really was a fine line between go and no-go, and frustrating to think that the task would be called off simply because the sea-breeze couldn't be 10 minutes later. At last, the last few gliders climbed away and I was able to permit the gate to be opened. The first gliders launched were obviously getting quite anxious because they were getting fairly high and could not understand the fuss. Later that evening, once all understood the issue, all agreed with the decisions made. Certainly a touch and go situation.

Twenty-four January was equally as difficult from the perspective of the task going ahead. The forecast was for thunderstorms later in the afternoon, mainly over the hills to the north and east. Chances were that the thunderstorms would be late and stay mainly to the east, so we set an AAT task mainly over the plains to the west side of the task area. It was expected to work provided the pilots were careful to avoid any areas of rain.

The day boomed early, it was going to be a good day. Cumulus with bases above 7,000ft were present at launch time. To the north-east, however, there was evidence of vertical development and some showers on the hills. It looked good over the task direction. The met men were watching the radar information from Adelaide which showed showers and Cb moving a little closer. After the last launch we had 20 minutes to wait. The rain was obviously getting closer and it was a little overdeveloped along the first leg. Was it good enough to send them off? They were getting to over 8,000ft, the cumulus was looking good, rain was developing. The met men were getting conflicting information from various sources and the sky changed dramatically every few minutes. We continued the countdown to the gate opening whilst frantic reassessment took place. With five minutes to go I decided it would be okay and told the start line to proceed. A quick discussion with the met men and another look at the ever darkening sky I finally decided to cancel with one minute to go. The message went out and the gliders commenced returning to the field. A few locals soared for a short while before being reminded that the rules required them to return. Some of the locals went soaring and had a good hour or two in the local area. Heavy rain went through the airfield in mid-afternoon. There was rain

reported around most of the task area, and the few brave souls who ventured away were driven home by rain and cloud after only a few kilometres. The right decision was made.

Australia Day was the last contest day. We had lost the first three days of the contest, flown the next seven, and then lost the last two days. We really wanted to finish on a high, we had to go flying. The day was not easy, it was blue and the wind was strong. They flew and they did well. The best pilots came home quite well to prove that they deserved to be champions. Everyone finished the competition in fine form and good humour.

After that those of us from the organisation breathed a sigh and started to relax. In the words of Rob Moore, one of the main drivers of the competition for many years, *"we done good."*

The last official act for the day was, of course, the scoring. Tim and Joy Shirley, Steve Kittle, Maurie Bradney and Ann Woolf did their normal efficient job. The verification worked smoothly and the computer produced scores on schedule. After a short delay wait-in for two pilots who had outlanded, the final scores were produced at 9pm.

My memory of the Benalla world comps back in 1987 was that we got the whole scoring thing wrong, it just didn't work. My greatest memory of Gawler 2001 will be that we got the scoring 100% right. Tim sold a large number of his scoring and verification software because the international pilots were simply impressed by what they had seen. One innovation was to issue each pilot with a verification sheet which showed what the computer said he had done. This gave a lot of confidence and enabled individual pilots to come and speak with the verifier if they thought their flight had been hard done by. They always went away with a better understanding of their flight.

The final dinner was held on the Friday evening in the hangar. It was very formal, with great service, a great meal, live entertainment, and a lot of people who had truly had a great experience. The party went late into the evening, and the friendships which had developed over the previous three weeks were well and truly cemented.

Gawler is now back to normal. We have all suffered a little from withdrawal symptoms – you can't put so much into helping turn a vision into reality and then just walk away when it is finished. The cleaning up is now finished, the accounting side almost finalised, and one more wind-up meeting to be held. I had a great time. ✂

Terry Cubley was the Contest Director for the recent World Gliding Championships at Gawler.



The Redback and the Battle of Waterloo

STEVE BARNES

Sunday 5 March 2000 was a beautiful day. At 6pm I found myself having a cleansing ale in the Tyabb Aero Club after spending an hour cruising solo along the beaches of the southern Peninsula, when Jon Flynn wandered over for a chat, shortly joined by Bob McLardie. After the initial pleasantries, Jon suggested a fly over to Phillip Island the following Friday night with the view to staying overnight. As a start to the long weekend, the idea sounded pretty good.

The following Friday the Gods smiled upon us. At about 5pm the sky was clear with not a breath of wind. I packed my sleeping bag, rubber mattress and extra fuel into the "Redback" (my trike so-named by its makers at Airborne because of its black pod and red stripe) and took off south toward Balnarring where I knew the good lady wife Sharon would be waiting on the beach. All three of us, Jon, Bob and I buzzed back and forth past her as she and half a dozen on-lookers stood and watched with beaming smiles. But enough of that! Onto bigger and better things we shot off to Phillip Island and landed in Farmer John's paddock where we intended, initially, to stay. However, the evening was far too good and there was far too much daylight left to be dagging around in the paddock so we loaded up the trikes and moved to Beverly, Hills that is, Inverloch!

Bob and Jon had spotted an immaculate grass strip just out of Inverloch township in the local real estate man's paddock, with both N-S and E-W runways. Landing was as soft as a feather in the mild conditions.

After we spoke to the lady of the house and gained permission to stay on her airfield for the night, we tied down the wings, set up the sleeping bags and called a taxi to take us into town for a feed. Due to a jazz festival happening in town, Inverloch was alive with people. We cruised into the local, had a monster counter meal, then caught the taxi back to the airstrip and bedded down for the night beneath the Southern Cross. At that moment I just laid back and thought "it doesn't get any better than this".

Saturday 11 March we woke just before daybreak to a stunning autumn morning; clear, still and mild. Out of Jon's Pegasus (and this was after the tent, sleeping bag, and other home-ly goodies that came out of it the night before) came the backpacker's sized stove, baked beans, toast and coffee. What a bonus! What a trike! It's like a flying campervan. Just as we were packing up to go, Ben Dejong came motoring in from the east and landed, having rocketed down from Tyabb. All of us took to the sky and headed down the vast isolated sandy beach from Inverloch to Cape Liptrap. The day was about an hour old as we wound ourselves around Waratah Bay to Sandy Point, where the beach was wide enough for us all to fly side by side over the sand. Thanks to Jon's \$15 investment at the local Inverloch chemist, I have some

Side by side at Sandy Point
of the most memorable photos sitting in the album at home.

The conditions were holding fast and didn't look like deteriorating, so we simply kept heading south toward Wilson's Prom. At this point we climbed to about 2,500-3,000ft. The view was simply breathtaking. If Leonardo Da Vinci had a vision of what he might see when he first thought of taking to the sky, then this was surely it. Up and over Tidal River to Oberon Bay, then east through the valley to Waterloo Bay we flew. What a blast. I wished Sharon could see this!

My loose mental itinerary would see us land on the beach at Waterloo Bay, refuel, then head on back to Tyabb. All, however, did not go to plan. Whilst difficult to put the next 10 minute period into words, it will go down as one of the most bitter-sweet memories of my life. I was coming in to land and knew I was close to the water, as I didn't want to land in the soft dry sand. After having bled off most of my speed I noticed a wave coming in further than the others. It just came and came and came. By the time I realised I was going to land in the water I had no speed left to abort. At that very moment everything went into slow motion. The back wheels touched the water, causing the front wheel to be thrown down as if weighted with a sack of bricks. Over onto its back the Redback went – with me in it – into about two and a



half feet of water. The one emotion I would have expected – panic – did not occur. I was under water and still had my hands on the control bar. I remember thinking, *"I'm gonna drown,"* as I watched small drops of blood fall over my glove. Instinct then kicked in and I lifted my head, barely, out of the water to get a breath of air. The seat belt wouldn't let go, I suppose because of the weight of my half upside-down body on it, and I couldn't get the helmet off. Still no panic. I took another breath and wrestled with the helmet, and finally the little clasp let go. I threw it away from the trike and went back to work on the seat belt. The next vision I had was that of Jon leaping over the upturned trike and between us we managed

to get the buckle undone. I got up, grabbed the GPS (why, I don't know), sat on the sand and simply stared at what was, up until three minutes ago, my pride and joy. The wing was broken and was being washed back and forth by the waves across the abrasive sandy bottom. The pod had a fracture in the side and the spats, quite frankly, were stuffed.

Looking back on everything, it was at this point that things began to look up. Apart from a sore nose and dented ego, I was completely unhurt. An hour long struggle ensued to get the trike out of the water and up the beach to the high water mark. After splitting up my gear between Jon and Ben, I jumped into the back of Bob's trike and we all headed off home,

The Redback with friends at Shallow Inlet

but not before a couple of anxious moments with the soft sand and thin wheels, I might add. If there could be one criticism of the Pegasus, I reckon it would be the thin wheels.

Cold, wet and lonely I sat in the back of Bob's trike the two and a half long hours back to Tyabb. Headset full of sand and water, I had no communication with the others, so had only my own thoughts to contend with and answer to. "How the hell did I do that?" seemed to re-occur in the thought pattern until the mother of all thoughts materialised, *"How the hell do I tell Sharon?"*

Late Saturday afternoon got home, told Sharon and tried not to ponder what might have been.

Sunday began with the first of many phone calls of the day. It was to the Head Ranger at the Prom to let him know what had happened and to try to figure out how to get the trike out of Waterloo Bay, the nearest vehicle access point being some 10km through the bush. Some discussion took place about maybe engaging the services of a charter fishing boat from Welshpool to come down with a crew and take the trike out by sea. Yeah right! I wasn't going to put the trike back into the sea, at least not voluntarily. There had to be another option.

Enter Jayrow Helicopters, Moorabbin. As it turns out, they are contracted to go down to the Prom monthly to ferry gear from Tidal River to the lighthouse. Their next appointment? Tuesday 14 March. Yee-ha! After a few more phone calls and what seemed a mile of red tape, someone at the Department of Lands



Ranger John and John the chopper pilot lend a hand

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Sunrise over Waterloo Bay

and Conservation finally gave the okay for me to sub-let the chopper.

Before dawn on the Tuesday Sharon and I left home with Rob Gibson's trailer in tow and met Ranger John at the Tidal River Headquarters at 9am. After a quick G'day and howdy doody, he drove us down a sheeptrack some 3km towards Waterloo Bay and we hiked the last 6 or 7km through the bush 'til we came out on the beach. Time for some lunch, a survey of the ill-fated landing spot and a quick once-over of the sad looking Redback before the chopper came buzzing over the point to land. About 0.536 of an hour later (or in layman's terms, \$330), all three of us, Sharon me and the trike, were standing in the car park at Tidal River ready for the trip home. Until this stage, I had intended to get the trike home, ship its sad and sorry form back to Airborne in Newcastle and wait for their diagnosis. But before I had driven an hour out of the Prom, the mobile rang. It was Flynny, asking how things went and offering his garage and his help to strip the trike down. He mentioned that Bob had offered to help too. I accepted, and wearing a stupid grin, continued the drive home with new found spirit.

By 11pm that night the trike was literally in pieces. The motor was stripped to the block and was sitting with carbies and other stuff in the back of the Patrol, ready for Bert Flood's workshop. The rusty exhaust was destined for the sand-blaster and ceramic coaters at Leongatha, and the pod, together with spat-like looking bits of fibreglass, was ear-marked for the Bayswater fibreglass man. My role in all this activity? Let's just say if I couldn't push a pen for a living, I'd starve.

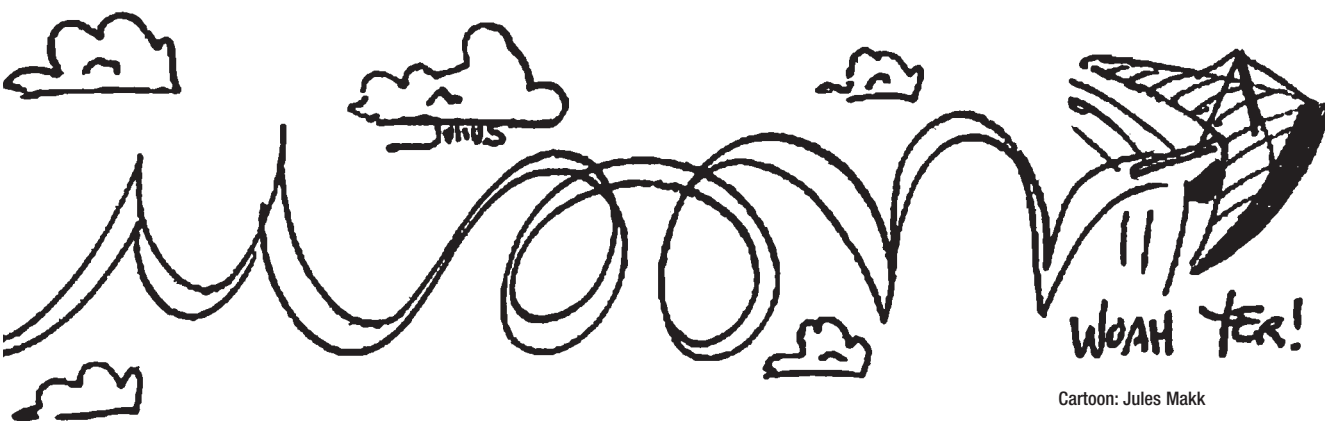
Weekly over the next couple of months I took the trike frame, bits and pieces round to Jon's where he and Bob methodically re-constructed my flying machine. My job was to desalinate nuts, bolts, cables and anything else I could get to with a toothbrush and CRC (and of course to hoe into the goodies prepared by Jon's wife, Lynette). Eventually, the re-constructed Redback, minus red stripes (a mate,

Ron O'Brien had just spray-painted the pod and spats) sat in my barn looking almost better than the day it was born. Then the awaited phone call came – the new Streak wing had arrived at Benalla. So, on 10 June, exactly three months to the day later, the Redback and I, with help from Tony Dennis, were back in the air.

Now for the serious bit. I used to think that the warnings and stories from other experienced trike pilots about the "100 hour sloppy pilot syndrome" were not going to apply to me because, well, it just wouldn't. Don't be fooled. At 118 hours flying I lost sight of one of the most basic rules of flying, and that is to focus on and maintain focus on the actual landing strip you intend to land on, regardless of whether it's at an airport, in a paddock or on a beach. Visualise where you want to put down and do a circuit so you get a good look at the spot where you want to put the front wheel. Then on final, if you're not happy with the choice or the conditions or you get a pang of doubt, go round or simply give it a miss and go elsewhere! What's the big deal?! I also think (and I know I'll get support from one of the other members of the Broken Wing Club) that power-on landings, where the length of the intended landing strip will permit, are a valuable asset because of the ability to abort at that crucial last moment should it be required, or to help cut through that last nasty bit of turbulence before landing.

I'd like to publicly thank those who helped keep my dream of flight a reality. Rob Gibson for the endless use of his trailer. Peter McLean at Murrindindi for the "practical" flight with the Streak wing which dispelled a few myths about its capabilities. Kel Glare and Ryan Romeike from Benalla for the use of their trikes to further assess the Streak. Tony Dennis for his help with the mongrel job of attaching spats. And to the many club members whose concerns and well wishes made the whole ordeal a little easier to come to grips with. Finally, to Jon Flynn and Bob McLardie a debt of deep gratitude. What can I say, except that it's blokes like Jon and Bob that make a club a Club.





Cartoon: Jules Makk

My theory is this... If there is any doubt at all as to the likelihood of an action you are about to take being totally successful, then you must either plan an escape action before you do it, or don't do it at all.

Luck Factor

KEITH LUSH

Many pilots have heard the term "flying within the envelope".

A basic interpretation of this is flying within the design capabilities of the aircraft.

Taking it one step further, flying within the envelope to me is flying within the acceptable standards of the AirManShip message. That covers the glider, the person flying it, and the conditions.

Now, when I try to analyse what it is that makes a pilot launch and land a hundred times without incident (that is, a 100% success rate) I can really only come up with a couple of basic factors. Pilot skill and pilot experience. But there is one more factor that you can't ignore. The luck factor.

I know a pilot who has been flying hang gliders since long before I started, and I have always admired his style. When I tried to allocate a percentage figure for the three factors that make up the 100% of Dave's flying, I came up with something like this:

<i>Skill factor</i>	49.75%
<i>Experience factor</i>	49.75%
<i>Luck factor</i>	00.5%

You see, I don't believe it is possible to completely eliminate that luck factor. Even if you play around with the skill and experience factors and add a few more that I can't think of, there has to be an element of luck in there.

So this begs the question, what is an acceptable luck factor? I have seen some guys who are lucky to get down in one piece every time they launch – luck factor probably up around 30%. It's usually ego that stops these guys from accepting that they are pushing their luck every time they launch. I know some

people who seem to fly with a very low luck factor most of the time. Then for some strange reason, maybe showing off in front of a new girlfriend or trying to impress somebody with a movie camera, they suddenly fly right up to the edge of the envelope or beyond and operate with a double figure luck factor for a short while. These guys seem to get away with it because of their experience and skill, but nevertheless, what they are really doing is pushing their luck. Eventually it will run out.

I would love to stimulate some opinion exchange here. As I have said, I believe that you can't completely eliminate that luck factor so you need to establish what is a reasonable level.

So what is a reasonable level of luck that you can use in your flying and how do you qualify it?

My thoughts are that we should definitely get well below double figures. In fact, I would consider any more than about 2-3% as pushing your luck.

So do me a favour and ask yourself the question, what luck factor do you fly with? Be brutally honest here and don't let ego get in the way. Then ask your flying mates what luck factor they believe you fly with. You might be surprised. Then perhaps ask yourself whether you always fly with that level of luck factor, or do you sometimes stray up towards double figures.

Qualifying the luck factor is a bit harder. I offer one theory here. When you set up a landing approach, do you simply decide to land in 'that spot' and go ahead and land there? Or do you over-fly your approach a few times with practice or dummy runs first before actually touching down?

When you wang the glider around a few times, and we all like to do that every now and then, do you make doubly sure that you are far enough from the ground or other gliders first? Seems like a pretty dumb question, doesn't it? But I've seen experienced pilots throw a couple of 360's right after launch only to run out of ground and auger in. Right in front of a hill full of spectators.

Great, just great. *"You'd have to be mad to fly one of those things. You'd never get me up there in one of those..."* Can't you just hear it?

Otherwise you are pushing up the luck factor.

Let me close with an incident that illustrates this. Another pilot that I admire over here in WA was flying with a bunch of other pilots at West Cape Howe. Shelley Beach, to be precise. The guys decided to race from Dingo beach to Dunsbies beach and off they went. This guy decided to hug the low cliff face on the last part of the journey, but apparently misjudged the headwind. The thing here is that he knew that there was an outside chance that the headwind might beat him and he set himself up with some options before he entered that area. That headwind did seem to beat him as it happened, so he then had another decision to make. Will I make it downwind back to the beach? He probably had about an 80% chance of making it back safely. But he had a better than 95% chance of successfully doing a fly on the wall landing in the soft bush above the rocks adjacent to where he was. It meant a few scratches and hard work to walk the glider out, but the luck factor was lower. So he did the fly on the wall, kept his luck factor to a minimum and walked.

What I'm trying to do here is introduce a line of thought to pilots... When I fly, what luck factor am I flying with at any time during the flight?

To our instructors who throw students off hills, what luck factor do you operate with? If there is more than a 3% chance that one of your students is going to get into some trouble that they can't get out of, then either move to another location or wind direction where there is minimal luck factor... or don't chuck them off at all.

The thing with students is that they don't have much skill or enough experience to overcome problems if they arise, nor do they have the vision yet to recognise potential danger, so luck factor needs to be way down.

I dedicate this article to George and Marge Bignall. They don't fly any more. George was over 80 when he stopped flying his old Mars because his undercarriage wore out. The thing is, George and Marge never flew unless they were completely sure everything was exactly as it should be for them.

As close to a zero luck factor as you might get.





Australian Gliding Museum



Garth Hudson's Grunau Baby photographed at Benalla in 1953 – Roy Sellers in the cockpit
Photo: Courtesy Frank Smith

JIM BARTON

In February, 1999, a group of six (mainly grey-heads) met to discuss an idea to establish a gliding museum, thereby moving to ensure the preservation of some of Australia's rich gliding heritage.

We all hear from time to time of artefacts, aircraft etc, being lost or destroyed due to lack of interest and foresight by their custodians. In the case of this small group, a window of opportunity was potentially available to them to explore the prospects of establishing an organisation which would devote time to a project of this nature.

The group comprised Alan Patching, David Darbyshire, Geoff Hearn, John Ashford, and Graeme and Jim Barton. These people now comprise the Australian Gliding Museum Inc. Committee of Management. All of these members have had extensive involvement in gliding clubs, most being in excess of 50 years.

To gain more widespread involvement in the project, a number of other very experienced gliding enthusiasts both in Victoria and other states have been co-opted to act as advisers to the committee, assisting and liaising as required.

The eventual outcome of the February 1999 meeting was the establishment of the

Australian Gliding Museum Inc. The agreed basic charter covered the preservation and exhibition (including sharing around the nation via state and regional museums, exhibitions, etc) of Australia's gliding heritage, including aircraft, artefacts, films, photographs, memorabilia etc. Our firm resolve also was to have the central base museum as a living museum, thereby allowing flying demonstration of suitable airworthy aircraft.

Now, two years down the track, we have most of the basic requirements in place to permit the physical establishment of the museum. We are an incorporated association, affiliated with the Gliding Federation of Australia, an institutional member of Museums Australia, and have established working relationships with a number of like organisations, both in Australia and overseas.

In addition, the Australian Gliding Museum has been endorsed by the Australian Taxation Office as a deductible gift recipient. This means

that cash donations of \$2 and upwards are allowable deductions from taxable income by the donors. Graeme Barton has been the driving force in the establishment of the administrative processes, and we are indebted to Graeme for his thorough and painstaking efforts to achieve the solid administrative foundations that he has developed.

Moving to the nuts and bolts, or bricks and mortar, of the museum, early in our development phase we became involved in, and supporters of, the campaign to save Point Cook aerodrome from subdivision and to have it recognised as an aviation heritage site.

For an aviation museum to be successful, it must

- be established to a major population centre,
- be based on an active aerodrome so that flying demonstrations can take place, and
- in the case of a gliding museum, be associated with other aviation activities.

Point Cook meets all of these requirements.

The battle for retention of Point Cook aerodrome as an aviation heritage site is hopefully now drawing to a close, and if it is retained as an historical aerodrome, there is every possibility that it will also be the home of the Australian Gliding Museum.

► A more recent photo of Garth Hudson's Grunau
Photo: Courtesy Frank Smith

▼ T35 Austral fuselage – Bill Riley collection

▼ Schweizer TG3 on trailer at Tocomwal,
to be recovered – Bill Riley collection

As information has filtered out about the museum project, the response from the gliding world has been extremely positive.

At the Vintage Gliding Rally held at Bacchus Marsh last January, the museum was presented with its very first airworthy aircraft – a Grunau Baby 3 built by Schneiders in the early '50s for the Gliding Club of Victoria. The Grunau, VH-GHW, owned by Garth Hudson, who, due to ill health, is no longer able to fly, is in pristine condition.

Currently we have in excess of 20 gliders on offer to the museum. A number of these are in need of a lot of TLC. Where possible, they will be restored to flying condition, whilst others will only be suitable for display purposes. Most importantly, many of these gliders will have been saved from destruction in coming years.

Of special mention is the Bill Riley collection at Tocomwal. Bill is a strong supporter of the museum development and he has offered his unique collection to the museum. Several working groups from the museum have been to Tocomwal to sort out, catalogue, and assess the refurbishment needs of the gliders in Bill's collection.

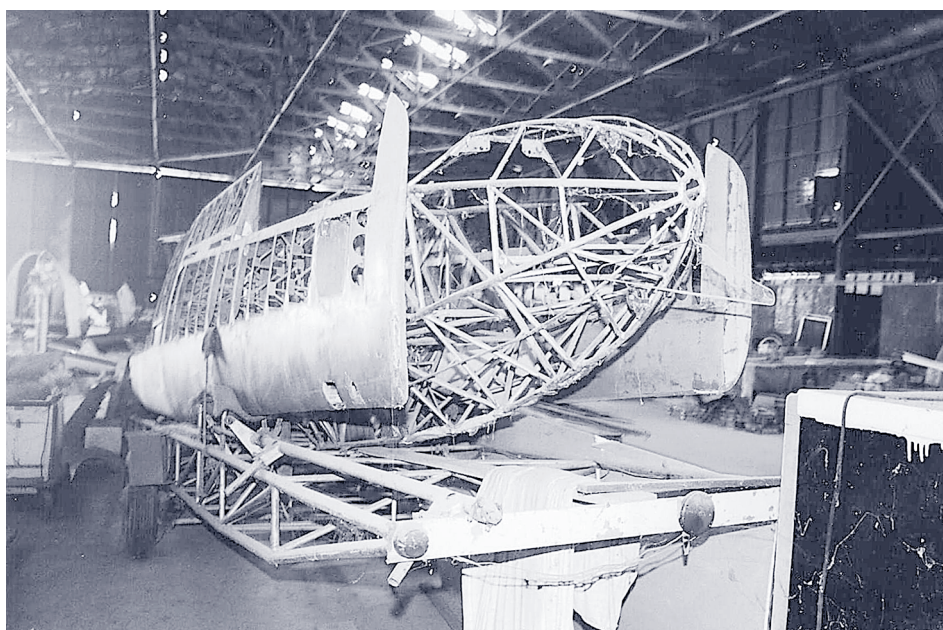
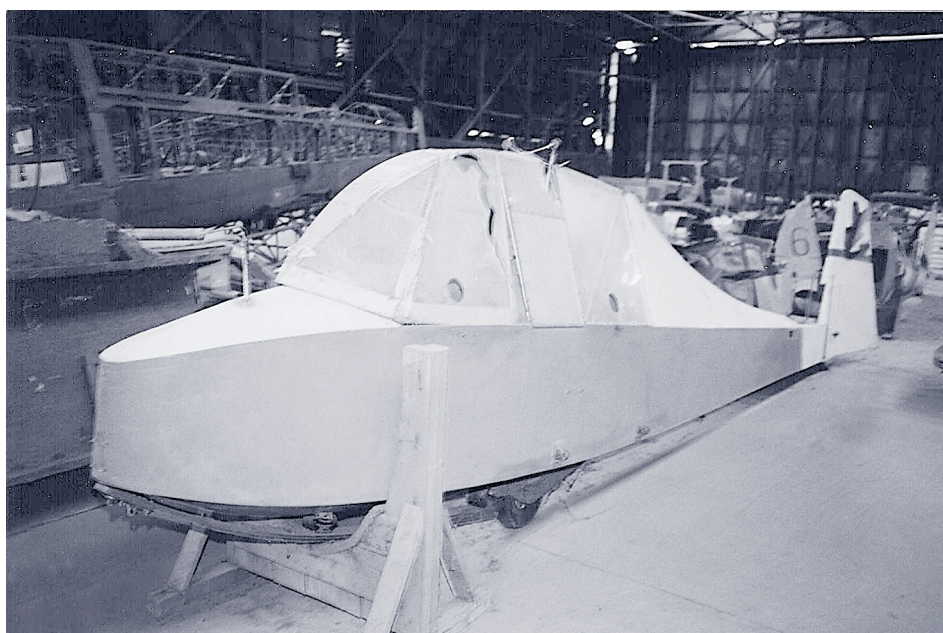
Many items of historical interest are also starting to appear from other, and often unexpected, sources. Should any gliding type know the whereabouts of any glider gathering dust (irrespective of its condition) or have items of historical interest, please contact me on phone number 02 9309 4412 and I will log the details for future collection.

The museum is also in need of volunteers who may be able to assist in the refurbishment of some of the gliders, particularly wood chip-pies. Currently we have under refurbishment a Primary (flying status) and a Flying Plank (for static display) and are about to start work on the ES50 Club two-seater.

Membership

Currently the museum has approximately 40 financial members. The annual subscription is \$15 and covers the financial year through to 30 June. When we have a home it is envisaged that volunteers will be the mainstay of its day-to-day operations, as is the practice with most museums.

In the meantime, if you would like to be involved in the project, give us a call. Our contact address is 2 Bicton Street, Mount Waverley VIC 3149, phone 03 9802 1098.





The Two Out and Return

EMILIS PRELGAUSKAS

RE-READING MY FEBRUARY NOTE, I GET THE FEELING I WAS BEING A BIT TOO CRYPTIC. IT HAS LED TO OTHER READERS ASKING WHAT TYPE OF POWER PLANE I TRAVELLED IN TO THE SOUTH AUSTRALIAN STATE GLIDING CONTEST. IT DIDN'T QUITE COME ABOUT THAT WAY. IT IS AN INDIRECT TRIP FROM HOME TO THE CONTEST SITE TO STAY OCTA (OR WHATEVER IT'S CALLED THESE DAYS), SOMETHING LESS THAN 200KM IN A CURVE AROUND THE INTERVENING BLOCKING AIRSPACE.

I had booked to fly in the contest, paid my money, and it seemed reasonable to get there and get home by air. The week before the contest, on the Wednesday, the trip up as already described elsewhere was good 'getting in the mood' flying.

That mood was reinforced after I arrived, somewhat dazed, at the contest site after that grovelling delivery flight, by the suggestion I should CD the week. This meant as well as dealing with my own flying; caring each day of the contest about other things like the tasks, fleet dispersal into classes, sniffer flights, through to walking the tie-down near last light to be able to cancel daily SAR.

By the contest end I wasn't in a fit state to fly home then and there, though the Adelaide Soaring Club Hornet did. The weather didn't look inviting either. However, local glider pilots went out of their way to make themselves available to launch on a day we chose.

That turned out to be Wednesday. An itinerant DG-800M (D-KLII) motored out late that morning to soar to the Flinders Ranges as part of an Australian tour, Scott Lewis was flying GMI home, and myself. The last two off winch.

To finish off the exercise, it turned out to be a good day, with cumulus with acceptable bases so that it was a 'three thermal, one-and-a-half hour' trip to fly home.

To add 'interest' to the flight, the weather selectively over-developed and was pushed across the countryside by a mild front transiting the area from the south-west.

So in flight, to the left of selected track, were isolated Cb's with rain and lightning indicating their core positions amongst overdeveloping and spreading cumulus bases; generally in the alignment of the River Murray valley.

To the right of track was clear blue sky over the Mt Lofty Ranges where, usually, there are clouds. And track itself was characterised by a succession of troughs with alternating areas of smooth air and then turbulent patches with good cores in turn on about a 25km cycle.

That captures the pilot's attention as the glide converts from final glide to undershoot and back again.

And as one wag has already pointed out, it seems only right that to fly 400km would take me two weeks, even in such conditions.

Music

EMILIS PRELGAUSKAS

A chorus strikes a particular chord of recognition. Ed Kilbourne's CD 'Cloudbase' can't be expected to top the charts. The songs and words will only strike that reaction for those to whom the experience is already real.

*'...with all our high flights
and all of the reflights
if we couldn't soar
we would all go insane;
...if we weren't already crazy
we would go insane.'*

To a few glider pilots this brings both a smile and a tear.

What is interesting is how, to many glider pilots, it doesn't bring a reaction. These are the pilots who fly mainly locally, take their flight only when the thermal is marked

ahead, fly as a routine rather than as a needed 'fix'.

Less surprising is that the interested outsider can't react to the words.

You can't recognise the spirit being uplifted until you've experienced that in flight.

So to me, it explains a little the sadness I feel when fronted by the gonna-be who defines his wish to fly gliders by the length of the flight and the fee. I can see them having, before they've even begun, locked themselves out of the core of what gliding has to offer.

*'...when they see the grin
and ask where I've been*

I don't even try to explain...'

*(from the song 'Changes in Attitude'
by Ed Kilbourne)*





THE GLIDING FEDERATION OF AUSTRALIA

Please note: all prices include GST

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A Glider Pilot Bold – Wally Kahn	\$49.50
Aerodynamics for Soaring Pilots – Millicer	\$33.00
Aerotowing Manual	\$22.00
Airways and Radio Procedures – GFA	\$5.50
Basic Gliding Knowledge – GFA (\$16.50 each for 10 copies or more – postage not included)	\$22.00
Basic Sailplane Engineering	\$35.20
Beginning Coaching Level 1 – Australian Coaching Council	\$30.25
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Meteorology Simplified – AOPA UK	\$7.15
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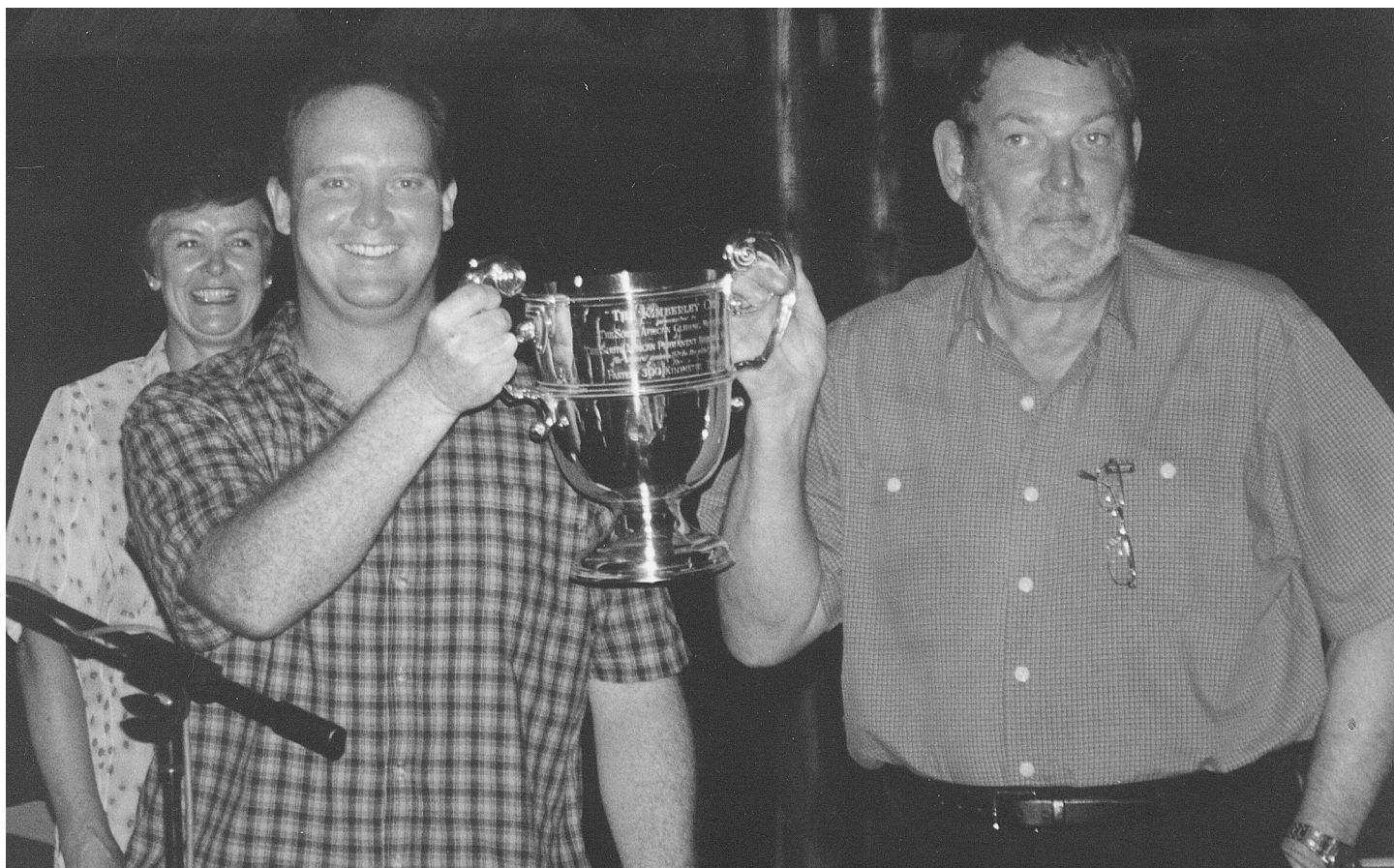


Tom and Kerrie Claffey

GYPs AFRICANUS **Mafikeng, South**



Graham Parker



Open Class winners at Gyps Africanus, Mafikeng held in December 2000 were Lars Zehnder and Peter Griffiths

Africa



Peter and Monica
Griffiths and Lars Zehnder

A Tiger by the Tail – Flying with Thunderstorms

DAVID PHILLIPS

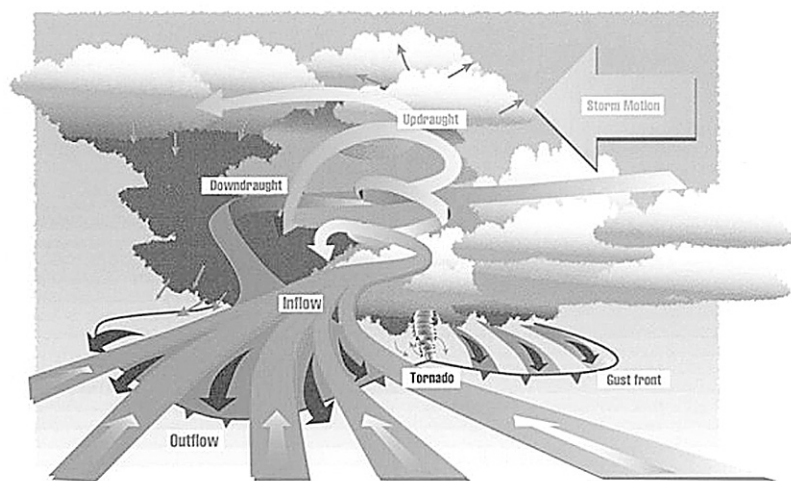


Diagram courtesy of the Bureau of Meteorology [www.bom.gov.au]

If you spend long enough grabbing tigers by the tail, eventually you're going to get eaten...

Everybody knows that we should avoid thunderstorms, but sometimes the dangers are less obvious than we think. Try this quick quiz:

1. You are ready to launch, there is a big cloud in the distance, but there are only a few puffy cumulus clouds overhead. What should you do?
2. You are low in a valley in the late afternoon and encounter widespread lift. There is a big cloud with rain at the other end of the valley. What should you do?
3. You are climbing under a nice dark cloud and the lift is getting stronger. What should you do?
4. The sky is completely covered with cloud and the lift is light. You head under a dark patch and find strong lift. What should you do?

Some comments on these questions later.

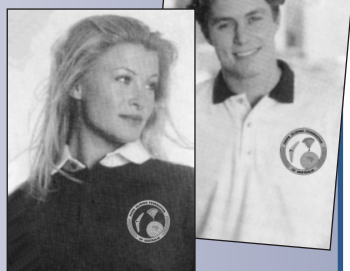
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What is a Thunderstorm?

A thunderstorm is a cumulus cloud (Cu) on steroids. As a cumulus cloud grows, the condensing moisture releases heat. This warms the surrounding air, which continues to rise allowing further condensation to occur. Under the right conditions the cloud can grow very large and is called a *Cumulonimbus (Cb)*. It is not unknown for a fully formed Cb cloud to extend from cloudbase to more than 40,000ft. The energy contained in one of these behemoths is huge, and generates some of the most powerful weather on the planet.

How Do Thunderstorms Happen?

Thunderstorms require three main ingredients: a source of moist air, an unstable atmosphere and a mechanism to initiate their development. Moist air is important because it is the heat energy released by condensation that makes the rising air more buoyant and “fuels” further cloud growth. An unstable atmosphere is necessary so that developing cloud is able to rise to great heights in the atmosphere. And initiating mechanisms are important as they serve as a focus for storm development. Typical mechanisms that initiate thunderstorms are features of topography such as hills and mountains, fronts, troughs and regions of low pressure.

The Anatomy of a Thunderstorm

There are two basic types of thunderstorms, *frontal* and *air mass*. Frontal storms occur at the junction of two air masses, such as at a cold front. Multiple cells can develop along the front, which itself may be fast moving. Cells can combine into a very large and long lasting storm called a *supercell*. Supercells are capable of causing major damage (as happens

I LANDED IN MOUNTAINOUS COUNTRY, WITH

A SMALL STORM WITH RAIN AND LIGHTNING

ABOUT TEN KILOMETRES AWAY.

WIND ON LANDING WAS LESS THAN

TWO KNOTS FROM THE NORTH-EAST.

FIFTEEN MINUTES LATER THE GUST FRONT ARRIVED

AND IN ONLY A FEW MINUTES THE WIND SWITCHED

TO THE SOUTH-WEST AND INCREASED

TO APPROXIMATELY 30 KT.

in midwest USA during the summer tornado season). No sane pilot would contemplate flying if a front with associated storms is forecast.

We are far more likely to come into contact with air mass thunderstorms. These are formed by the same processes that create the thermals we seek – in fact, they form *from* those thermals. They are generally isolated, single cells that develop in the mid to late afternoon and last for one to two hours.

Let's have a brief look at what's going on inside a thunderstorm cell (diagram courtesy of Bureau of Meteorology).

As the cloud builds, the air that feeds it creates a very strong inflow. This creates lift under and near the cloud that can be up to 3,000 fpm. Remember that 3,000 fpm is nearly 60 km/h – *straight up*.

At this stage, the cloud looks similar to a normal cumulus cloud, except that it is building vertically into a tower with visible churning at the top.

The strong updraught continues within the cloud to the top, where rain or ice form, cooling the air, and creating a downdraught. During the developing phase of the storm, as the downdraught approaches the bottom of the cloud, the ice and rain vapourise, releasing moisture which is carried aloft again.

The cycle of updraughts and downdraughts produce strong wind shears, lightning, rain, hail, and severe turbulence, particularly if the prevailing wind increases at higher altitudes, causing the cloud 'lean over'.

At this stage, the cloud may be very large and may take on the characteristic appearance of a thunderstorm, with a towering body topped by a large *anvil* shaped head. The head may have a fibrous appearance due to the formation of ice crystals within it.

Eventually the cooling effect of the downdraughts overcome the updraughts, and the downdraught reaches the ground under the cloud. The lift is now replaced by sink, together with rain or hail falling from underneath the cloud and possibly from the anvil head as well. The top of the cloud will start to dissipate at this stage, as it is no longer being fed with moist air from the cloud below.

Descending air from the downdraught spreads out as it approaches the ground and creates a *gust front*. This is probably the most dangerous phase of the storm for us, as the wind associated with a gust front can be very strong and extend a great distance from the storm itself. This is particularly the case in mountainous country, where the wind is channelled into valleys. A gust front commonly extends 10-20 km from the storm – for large storms it can be up to 100 km.

The gust front from even a minor storm can generate winds up to 40 kt (75 km/h), but it can be much more. The Bureau of Meteorology keeps records of storm activity. Here are a few recent examples of major wind gusts recorded in NSW.

29 September 1996	Armidale	gusts to 84kt (156km/h)
17 January 1996	Condobolin	gusts to 80kt (148km/h)
2 November 1995	Woolbrook	gusts estimated at 110kt (204km/h)
7 January 1995	Kyogle	gusts estimated at 110kt (204km/h)
17 January 1994	Windsor	gusts to 89kt (166km/h)
21 January 1991	Sydney	gusts estimated at 120kt (230km/h)

April 2001

The shear at the boundary of a gust front is very abrupt and is usually only a few hundred feet thick. This means that the wind speed (and probably direction) will change very quickly as the front passes.

Knowing The Signs

Thunderstorms are only dangerous if they sneak up on us unawares. Being alert to their possibility gives us time to safely fly away from danger, to land, or the option of not flying at all.

Do Your Homework

The first source of information is the local weather forecast from the Bureau of Meteorology or the newspaper. Be particularly vigilant for any mention of approaching fronts or squall lines. A forecast for afternoon thunderstorms means that air mass thunderstorms are likely.

Know The Sky

Any cloud structure that has a towering appearance is a strong sign – it means that the atmosphere is moist and unstable for a considerable depth, exactly the conditions for thunderstorm development.

Alto-stratus cloud indicates the approach of a front, with the possibility of thunderstorm activity near it, especially if there are cumulus clouds developing below the stratus cloud.

Look carefully at any cumulus clouds in the area. If any are growing taller than they are wide, they are called *cumulus congestus*. This is the first stage in the development of a thunderstorm. It is probably still safe to stay in the air if other cumulus clouds are normal, but give the developing clouds a wide berth and be very careful when approaching cloudbase.

If a number of cumulus clouds in a group are developing vertically, they are called castellated cumulus. This means that the atmosphere is extremely unstable and thunderstorms are very likely. If one cloud develops into a thunderstorm, it can precipitate a chain reaction and a number of storms can develop throughout the area very quickly.

Be very wary of any cloud that is raining or has a lazy, steady appearance.

A HANG GLIDING COMPETITION DAY WAS CANCELLED BECAUSE OF THE HIGH PROBABILITY OF THUNDERSTORMS.

THERE WERE CASTELLATED CUMULUS CLOUDS THROUGHOUT THE VALLEY BY MIDDAY. A NUMBER OF PILOTS FLEW ANYWAY AND REPORTED STRONG CONDITIONS. MOST LANDED QUICKLY,

BUT THREE REMAINED IN THE AIR AND WERE CAUGHT WHEN THREE STORM CELLS RAPIDLY DEVELOPED.

THEY WERE CAUGHT IN THE GUST FRONT FROM THE LARGEST OF THESE AND FORCED TO LAND IN 40 KT WINDS.

ance underneath it. This is called virga and is rain falling from the cloud that evaporates before it reaches the ground. The downdraught within the cloud is beginning to reach the ground and a gust front is imminent.

What To Do If You're Sucked Into A Cloud

The immediate effects on entering the cloud are vertigo and an inability to determine what the glider is actually doing. This makes corrective action difficult, if not impossible. The general consensus is that using a conventional magnetic compass to maintain a constant heading is useless. A GPS may be better, because of its immunity to g-force and attitude effects. Realistically the only thing that can be done is to attempt to keep the glider flying at a reasonable speed and not to panic.

A Tiger by the Tail

Here are some comments on the quick quiz:

1. You are standing on launch, there is a big cloud in the distance, but there are only a few nice puffy cumulus clouds overhead.

What should you do?

If there are clouds with significant vertical development anywhere in the area, then it means that the prevailing conditions are suitable for the formation of thunderstorms. It is quite possible that any of those nice puffy cumulus clouds overhead could develop into a storm at any time. You should watch all clouds carefully for signs of development and be very wary of approaching any cloud too closely

2. You are low in a valley in the late afternoon and encounter strong widespread lift. There is a big cloud with rain at the other end of the valley. What should you do?

You are encountering lift produced by the passage of the gust front. Your position is pretty precarious, as there is significant shear turbulence close by, strong wind and probably a wind direction change. If you can't escape the area, your best option is to fly towards the cloud, as the wind from the gust front will be travelling away from it. This means you will encounter an (abrupt) increase in headwind as you descend into the front. If you try to fly away from it, the abrupt wind change will be tailwind, risking a radical stall close to the ground.

3. You are climbing under a nice dark cloud and the lift is getting stronger. What should you do?

The cloud may be developing vertically, which you won't be able to see from underneath. The most important thing here is to recognise the situation early, to give yourself time to escape. The darker the bottom of the cloud appears, the more vertical development there is. You should be watching the cloud above you constantly as you climb and be ready to leave if the lift is strong or the bottom looks black.

Probably the least effective escape strategy is to spiral straight down under the cloud. The lift under even a moderate cumulus cloud can exceed your sustained sink rate in a spiral. Even with the most aggressive aerobatics, a hang glider is unlikely to be able to sustain a descent rate of much more than 1,000 fpm. A paraglider may fare a little better, as by using Big Ears or a B-line stall, it is possible to approach descent rates of 2,000 fpm. A sailplane could use a sustained spin or a speed limited dive, but would probably choose the better option of heading for the nearest edge of the cloud. This can be a trap for lower performing aircraft, however, as a building storm cloud can grow horizontally faster than they can fly (especially for paragliders). Lift will generally be strongest on the upwind side of the cloud.

4. The sky is completely covered with cloud and the lift is light. You head under a dark patch and find strong lift. What should you do?

This is potentially a very dangerous situation, as it may indicate an embedded thunderstorm. These occur above a layer of stratus or cumulo-stratus cloud. The danger lies in the fact that they are hidden by the cloud layers and you may not be aware of their presence until it is too late. A number of hang glider pilots were killed in Italy in the late 1980s when they were sucked into an unseen Cb cloud. Treat any area of strong lift at altitude, especially under dark cloud, as if it is the result of a developing thunderstorm.



My thanks to the Bureau of Meteorology for providing the reference information for this article.

Electrikery — Ele

Part 1 - Basic Units

NED McINTOSH

This series of articles will explain basic electrical principles as they apply to trikes. By the time

the series is finished, you should be well-equipped to handle routine electrical maintenance tasks.

The more you know about your electricals and radio, the more trouble-free flying you'll enjoy.

The very first thing to sort out is basic electrical terminology and units. What is voltage? What is current? What is resistance? How do we measure the work an electrical circuit does?

A good analogy is a tank of water on a tower 100ft high with a pipe down to ground-level and a tap at the bottom. Fill the tank with water and there will be quite a bit of pressure at the tap. In electrical terms, the unit of pressure is the Volt. So, the greater the voltage the greater the electrical "pressure" available. But, thinking about the tank on the tower, the tap is turned off so no water flows, in spite of the pressure. Same with electricity. Pressure on it's own doesn't mean any current is actually flowing.

Suppose you turn on the tap on – wide open. You get quite a current of water. You might measure that water current as so many litres per minute or gallons per hour or even pounds (or kilos) per unit of time. With electrical current we just use different units.

Electrical current flows when two points with different voltages are connected. Electrical current flows from the point of higher voltage to lower, just as water (and air!) flow from the higher pressure to lower. The unit of electrical current flow is the Ampere.

One Amp is a lot of current. Commonly, especially in airband radios for example, currents a thousand times smaller would be the norm. These are measured as thousandths of an Amp or Milliamps. No matter what the quantity, electrical current is the flow of electrical energy from one point to another. Electricity doesn't do any useful work until a current actually flows.

Going back to our tank of water on the tower with the tap open, the tank doesn't empty instantly; the flow of water stabilises at a certain value. Why? The pressure of the water and the resistance of the pipe determines how much water can flow. Exactly the same thing happens in electrical circuits. Every electrical circuit (except a short-circuit) has resistance. The unit of electrical resistance is the Ohm.

So, the Volt measures electrical pressure, the Amp measures the flow of electrical current, the Ohm measures the resistance to that flow. How are these units related? A formula called Ohm's Law ties them neatly together:

"The current flowing in a circuit is equal to the voltage applied divided by the resistance of the circuit."

Electricity and your Trike

In algebraic terms: $Amps = Volts/Ohms$ ($I = V/R$)

This simple formula is the cornerstone of all electrical work. But there is one unit we haven't covered yet, the unit that tells us how much work the flow of electrical current is doing (or how much heat it is producing, which is basically the same). The flow of water from the tank might be powerful enough to move a large object (like a rock, perhaps) some distance. That's work. For mechanical work we use terms like horsepower (the power rating of your Rotax engine, for example). The unit of electrical power is the Watt. In Metric it is also used for mechanical work as well.

To calculate power in Watts we have a simple formula. By definition:
Watts = Amps Squared multiplied by Resistance or
Watts = Volts Squared divided by Resistance

Now, is any of this useful? You bet it is! Let's do some practical stuff. Take, for example, your trike's starter-motor. Ever notice how heavy the wire to it is? Why does it have that heavy wire? Surely thinner wire would do, after all, 12 volts from the battery isn't a very high voltage, is it?

It all depends on the current drawn through the wire! Your starter motor draws lots of amps when you first turn it on. An electric motor which is initially not turning has a low resistance (especially a starter motor) because that is an inherent characteristic of electrical motors. (I'll explain why later). If you try to draw lots of Amps through very thin wire it will melt, the insulation will burn and you have a fire in your trike! Why? Because the resistance of thin wire is greater than thick wire (there is less copper to carry the current). Remember, when a current passes through a resistance, work is done and heat is generated. Huge currents in thin wires are bad news!

Let's work out some figures. Assume the initial resistance of the (non-rotating) starter-motor is just three tenths of an Ohm (which is probably pretty close to reality):

Initial Starting Current = Battery Volts divided by Resistance
 therefore $I = 12 / 0.3 = 40 \text{ Amps}$

That's a hell of a lot of current and that's why the wire to the starter motor is so thick! It's also a huge surge drawn from your relatively small starting-battery. Now, once the starter-motor is turning, it's resistance increases dramatically because it develops a "back-emf", which I'll explain later. The starter-motor may have a resistance of, say, seven Ohms, due to back-emf. How much current is drawn from your battery if you keep cranking the starter for several seconds?

$I = 12/7 = 1.71 \text{ Amps}$... compare that to the initial current drawn when you first press the button!

How much power is consumed by the starter motor when you first press the button? Well, Power = Amps squared multiplied by resistance, so:

*Power (at start) = $40 * 40 * 0.1 = 160 \text{ Watts}$*

and once the motor is turning and the resistance has increased due to back-emf, *Power = $1.71 * 1.71 * 7 = 20.4 \text{ watts}$*

So, initially your starter-motor draws a huge current which rapidly decreases as the starter motor comes up to speed. Your battery has limited ability to source such large surge currents. Overdo it and you can easily kill the battery.

Now, let's clear up that "back-emf" thing in motors. It may surprise you to learn an electrical generator and an electrical motor are

essentially identical. One can become the other, it just depends on how you make them work.

An electrical generator moves coils of wire (the central rotating armature) through a magnetic field (the outside windings or stator), producing a voltage in the armature which can be picked off for use elsewhere.

A motor works in the opposite manner. Apply voltage to the armature in a magnetic field from the stator and the armature itself develops a magnetic field which repels it from the stator, so causing the armature to rotate.

Now, once it's rotating, the armature is just a series of coils rotating inside a magnetic field and it therefore becomes a generator, but the voltage it generates is the opposite to the voltage which is applied to the armature to make it rotate in the first place! That's back-emf and it results in a greatly reduced current flow once the motor is turning.

So now we know our units and how they are related to each other. We've put this to practical use by looking at what happens when we use the starter-motor and as a result we now know how to be kind to our battery. We even know a bit about motors and generators. Quite a good start, actually.

In next month's article we will discuss batteries in more detail; what they're made of and how to get the best from them.



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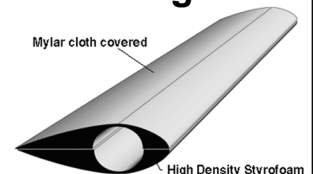
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International Air Show

► I am a past member of GFA and have not flown for many years due to family commitments, but I still like to keep in touch by reading some of the club newsletters and GFA magazines. I attended the recent International Air Show at Laverton and, as usual, I looked for the GFA site in the hope of catching up with some old friends and showing my son some of the gliders I used to fly. When I eventually tracked the "display" down I was disturbed to see only one single seat glider and no handouts or information for perspective new members.

I do realise the logistics and commitment required to set up a display at an event such as this, but one aircraft! The hang gliders were far better represented. I cannot understand why there was not a greater presence of the GFA at this superb event - there could not be a better way of promoting the sport to the masses. I have read with interest many articles over the years of the flagging numbers in your ranks and particularly fewer new members, with suggestions on how to recruit members. Surely this was one of the greatest opportunities with a captive audience.

Hoping to see a better display in 2003.

Bruce Owen

The Australian Gliding Movement Revisited

► Richard Pincus raises some very important issues about the future of gliding in Australia in his two recent articles, "Two Cultures." (Dec 2000, Feb 2001). His main argument is that the GFA itself is at fault for the situation where clubs in general and smaller clubs in particular have not prospered.

Whatever the GFA has or has not done, it is unfair to lay the blame wholly on the federation. The world has simply moved on over the last 25 years or so. There is much more competition for the interest of potential glider pilots. "Adventure" and "extreme" sports now offer an exciting range of activities. Even in these sports, however, clubs sometimes struggle for members. I have been involved for many years with the New South Wales Sea Kayak Club. Our main worry has been the lack of women and the ageing demographic of the membership. (Sound familiar?)

It seems that many young people are content to fill their lives with virtual reality, rather than the real thing. They are increasingly urbanised and seek their entertainment in the familiar surroundings of the city. In addition, as a society, we have become hooked on instant gratification. People might think they would enjoy gliding, or sea kayaking, but don't want to invest the time in learning the necessary skills.

Young women are even scarcer than young men on a gliding field. Women, being sensible creatures, are less likely to tolerate the discomfort of a hot/cold/windy/dusty paddock with primitive

or non-existent toilet facilities. In addition, women don't like being yelled at.

A lot of yelling goes on around gliding operations. In fact, yelling is the major impression left on new visitors to the field. They remember a bunch of control freaks running around shouting: "Don't touch that canopy!" "Don't step over that wing!" "Don't push on that wing tip!" "Don't park your car there!" (I am not entirely blameless in this area, I am told.) All these admonitions are perfectly reasonable and necessary in themselves, but need to be delivered in a positive rather than a negative manner if we want the visitor to hang around long enough to become a glider pilot. A public harangue may temporarily elevate the ego of the person delivering it, but is a very poor teaching tool. Far better to give a calm explanation of the dangers involved.

I recently observed a good example of the right way to treat newcomers. Three of us were driving around the airfield, cutting the grass away from the runway markers. When we finished the job on one marker, the (rare) young club member started to climb into the back seat in deference to us elders. "Get in the front," said the driver. "We're ALL eagles here!"

Instruction is another area which needs attention to cut down the high attrition rate of students. I have recently returned to gliding after an absence of several decades. I found that most of the gliding instructors are almost as old as I am. People of my vintage had our schoolteachers as instructor role models. In those distant days, schoolteachers were characterised as sadistic, sarcastic authoritarians whose word was law. Often, our glider instructors themselves were in this mould. We tolerated the abuse because we wanted to fly so much that we would put up with any amount of indignity.

Modern students simply won't cop that much flak. They are looking for mentors, not tormentors. The more enlightened ones may consider what emotional problems may be prompting the outburst, but most will just say, "Stuff you mate!" and not bother to come back as they ride off on their Harley on the way to pick up the 4WD for a weekend of skiing.

Richard Pincus is particularly hard on the gliding instruction system in Australia. He points out that there is a secretive Kangaroo Court aspect to instructors' panel deliberations and a lack of feedback. He states that, "Those few who do persist learn as much as they do learn despite, not because of, the system." He points out that, in contrast, general aviation instructors are "Thorough, friendly and encouraging." There is nothing in the gliding instructional system itself which prevents instructors from sharing the same attributes. (And many do.) All that is needed is an attitudinal change by some individuals.

Perhaps the instructors' panel could hold regular forums, say once a month, with current students and low-time solo pilots. These could be

used to discuss theory and to give constructive feedback individually concerning what aspects of the syllabus needed attention, how to deal with problems, and advance skills. Considerable preparation would be needed to run such an evening effectively in a constructive and non-threatening manner. However, it could help remove the "Kangaroo Court" perception of the panel and get all the instructors on the same wavelength.

I noted a significant difference between instructional approach in the US, (my former home) and Australia. On March 4, 1959, I drove up to El Mirage field, California to get a glider rating. I already possessed a power commercial license with instructor, land and sea ratings.

Gus Briegleb (BG-6, BG 12, etc) gave me a total of 1.2 hours instruction in four flights and turned me loose solo. After three hours solo and a flight test, I got my rating. I later towed for Gus in his notorious oil-splattering PT-23s and joined the Antelope Valley Soaring Club. The club's most notable member was world record altitude holder Paul Bickel — 48,000 feet in wave.

I migrated to Australia in the 1970s. Instead of the US approach of supporting the student to progress as rapidly as possible, I found a marked tendency for caution. In part, this is due to the situation where the student is exposed to a number of different rostered instructors.

Instructors simply are not aware of the student's capabilities. Then too, the gliding fraternity has been inevitably influenced by years of dealing with a federal aviation bureaucracy which is dedicated to the proposition that the only safe aircraft is one which is in a hangar with the doors welded shut. Some may argue that the US system is too free-wheeling and is unsafe. Statistics don't seem to support this contention.

I have gained a great deal of enjoyment from gliding over the years and would like to think that the younger generations could have the same experience. I hope they can be encouraged to gain their wings and rejuvenate the movement in the process. If numbers continue to dwindle, the gliding clubs in Australia may be reduced to a few syndicates composed of old-age pensioners flying their antique machines. But, hey, I LIKE flying the Blanik!

Norm Sanders

Not the First!

► The article "Crossing the Great Divide" in Feb 2001 issue of AG/SS by Dave Pearson gives the distinct impression that he was the first PG to cross "The Range" in Qld. I don't wish to burst his balloon but this is NOT the case. The other pilot mentioned in the article - Rhett Rockman - crossed the range earlier on the same day making him the first to do it.

This is a fact acknowledged by all present. Rhett may not have flown to goal, but he did cross and land before David! Either way, both flights were well done - but please, credit where credit is

due, especially when we are talking about the all important "aviation history books".

Godfrey Wenness

Cherokee 2

▶ Regarding the article on the Cherokee 2, VH-GLU, in January's AG/SS.

Reg Barrington did indeed build two Cherokees, GLV and GLU, in his workshop in Denmark.

He became interested in the glider from reading AG articles, and started to correspond with the designer, Stan Hall, in USA, who forwarded information including 8mm movie footage of a Cherokee slope soaring.

Reg started building two Cherokees with the assistance of John Maddocks. They were to have one each.

Halfway through construction it was decided to concentrate on one, to be finished in time for the 1960-61 Nationals at Gawler. This was to be the "orange" Cherokee, VH-GLV, which sported the competition number 1 and did win a day of the competition.



Reg Barrington about to carry out a test flight
Photo: Ron Wingate

GLU's first flight was in Reg's hands on 24 December 1962. Four days later it was entered in the January, 1963 Nationals at Narromine. Reg and Erwin Lackner had flown over 36 hours by the end of the competition.

GLU was then used by the Renmark club until 16 July 1966, when it was sold to the Wimmera Club, as Renmark graduated into Boomerangs and a Cirrus. Whilst it was with the Renmark club GLU flew at the Waikerie nationals, 1965/66.

It was good to have two identical gliders in the club, and there were many discussions about which one was better. GLU was ply-covered back to the second spar, and it was claimed to be more stable and responsive at slower speeds because of the thicker and more accurate wing section.

GLV was plied only to the first spar, which gave it a scalloped thinner wing and was the faster glider.

We are still arguing.

Ron Wingate

Magazine Name

▶ From time to time, comments have been made by both GFA and HGFA members about the name of our magazine. I think many would agree "Australian Gliding/Skysailor" is a bit unwieldy, although I guess it does preserve the two separate identities. The question is, do we see the magazine as simply a means of internal communication, education and entertainment for members of the two federations, or do we (collectively) want to reach out to the wider community (or at least those who are potentially interested in soaring flight)? If the latter is a possibility - which is the way I see it - maybe our committees could consider something along the following lines: "Australian Soaring" or "Australian Soaring Flight", with a 'tag' - "Covering the airports of gliding, hang gliding, paragliding and microlights".

Martyn Yeomans

Board Ring-ins

▶ It's not often that I send a letter to anyone, but the HGFA Board overstepping its boundaries has pissed me off. The HGFA has always been crap value for money, poorly run with decisions like this cementing my view. "Thank God" is what I said when a new board was elected and Ian Jarman quit. The hope was that with the dead wood out of the way, and a board that was going to listen to its members, the HGFA would move forward into a brighter future. But no, the board has just slapped the vehicle that is the HGFA into reverse and stepped on the gas. The reason so many old board members were voted out was that they believed that the HGFA was

a "Qantas" of the aviation world, not just a very small drop in the ocean. I hate to be the one that breaks the bad news, but the HGFA is not Qantas and never will be - I should know, I'm knee-deep in the industry. The sooner the HGFA realises this the better. Fill the two vacant positions with democratically elected members and get on with the job of a GOOD, sensible, well-informed HGFA.

Richard Worton

Control

▶ Whilst I am no longer a member of GFA, and unlikely to ever be one again (my son is, which is why I read the magazine occasionally), I am therefore somewhat detached from the consequences of whatever decisions (or lack of them) dictate the future of gliding in Australia. I nevertheless read with interest Richard Pincus' articles on the culture of gliding versus other recreational aviation areas. Richard's articles, as is his usual style, raise a number of contentious points; however (also as usual) he is facile and shallow in his development of those arguments. Nevertheless, the subject matter is very serious, and (as a mere casual bystander) I would offer a couple of points for consideration:

What Richard is really talking about, I believe, is the culture of "control". However, regardless of

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who does the controlling or how competently they do it, a certain level of control is essential. The burning question is, how much control is actually necessary? I would like to suggest that there is a dispassionate way of evaluating the necessity for control (and this debate has been far too passionate, for far too long, with far too few facts.)

The method whereby one can assess the necessity for and effectiveness of a control mechanism, is by the application of "control-loop" theory. What is a control-loop? A familiar example of a control-loop is the cruise control in most motor cars. This consists of a speed sensor which "feeds back" information about the car's speed, to a control mechanism that adjusts the throttle. The car's speed is a consequence of the throttle inputs, so it is a closed-loop. If the system responds too sluggishly, the throttle inputs will lag behind the need for adjustment, with the result that there will be a considerable loss of speed on commencing to climb a hill, and a large speed overshoot after passing the crest of the hill (leading to a speeding fine if there is a radar gun on the other side). If the system responds "nervously", the controller will be forever making rapid, jerky throttle adjustments. The system can only function acceptably with a small but finite lag, and the "twitchiness" (gain) of the system needs to be fine-tuned to prevent "hunting".

That's because this form of control is always behind the action - it cannot anticipate the hill, because it can't see what's coming; it can only react after the car starts to slow down. This is a pretty fair analogy of how the control that is exercised by the GFA over gliding actually operates, in matters such as the proposed new Part 47 legislation. The inherent time-lag is a bit too long for control bodies of this kind to react quickly to that sort of thing. That is just one consideration in the overall picture of sport aviation administration; but it illustrates very well, the need to seek pro-active rather than reactive forms of control.

What's an example of pro-active control? For aviation, a vitally important form of pro-active control (though it is not often recognised as such) is aircraft type certification, (or indeed any form of consumer product safety standard). This type of control ensures that commercially-manufactured goods - including aircraft - meet a statutory safety standard before they can be put on the market. Why is this so vitally important? Could we not instead de-regulate the manufacture of aircraft by dispensing with type certification and manufacture quality control, and let market pressures do the regulating instead? Lots of "free market" protagonists seem to think so. However, leaving aside the fact that most thinking people would not want to get into a glider that had no quality control exercised over its design and manufacture, the fallacy of this argument becomes obvious when we apply control-loop theory to it. Any form of "market pressure" regulation becomes effective only after there are a large number of examples of the product already on the market, i.e. it has a large built-in time lag. "Regulation by litigation" has an even greater time lag. Control-loop theory shows us that too great a time lag leads to the control mechanism aggravating the situation, not correcting it - as if the cruise control was so slow to respond, that it opened the throttle on the downhill parts, and closed it just as we commenced the next hill.

Type certification and consumer product safety standards are the only form of control of which I am aware, that is effective without any time lag. As such, they are extremely effective in stabilising the industry. If we want there to be manufacturers who stay in business long enough to supply us with spare parts, whether for our aircraft or our motor cars, such stability is essential. "Regulation by litigation" is disastrous. We saw a prime example of this mechanism in action, in the early days of the ultralight movement; it led, in 1985, to the House of Representatives Standing Committee on transport safety, spending almost a complete year in studying the problem, and spectacular media sensationalism. A number of ultralight manufacturers died in their own products. The

subsequent introduction of type certification for two-seat ultralights has, by contrast, led to a healthy growth, with one Australian manufacturer at least, earning millions of dollars in exports. Maybe it's not a perfect control mechanism, but it can't be all that bad to produce that kind of result.

There is, of course, a downside to such "before the event" regulation, and that is that it may get so restrictive that it damps-out the activity more than necessary, or even prevents it altogether. The task for those responsible for setting such control mechanisms, is to apply just sufficient control to prevent instability, and no more. The problem is, one cannot tell how much is actually necessary, unless one lets-off for a bit to see where oscillations start to occur. But that sort of playing-around is extremely dangerous, and in practice never seems to occur. So there is a tendency, once this sort of "up front" control mechanism has been established, for people to get over-enthusiastic about it, leading to "control freak" thinking - which seems to have been running riot in CASA (and, maybe, in the GFA?) in recent decades. This leads to another form of instability, i.e. insurrection and sedition, such as Richard is preaching.

What Richard has to say about typical gliding club instructor panels (and I've been there and done that), is a microcosm of this. Pilot training is another "up front" control mechanism that stabilises the activity and, by and large, the GFA approach - looked at in the large view - has worked pretty well. But at detail level, Richard's comments are quite valid. I'm not sure how to improve on this, but it's surely preferable to no control.

So, I would advocate a complete, dispassionate review of everything the GFA does, or thinks it ought to do, using the methodology of control-loop theory. For example, what is the control-loop function of aircraft registration? It certainly has a bearing on who is responsible for the maintenance of the aircraft, so maybe it has an important function. If each aspect of control is examined in this way, it will become obvious where control is necessary and effective, and where it is not. Then we can dump the ineffective and unnecessary bits. That means we won't throw the baby out with the bathwater (as Richard seems to be advocating).

What's the real alternative to GFA control of gliding? The most probable alternative model is the American one; and my understanding of that is that gliding comes under the General Operating and Flight Rules for all aircraft, as expressed in Part 91* of the U.S. Federal Aviation Regulations. (Glider towing gets a special mention in 91.309). That means that gliders have to meet the same certification, registration, maintenance, and pilot licence regulatory requirements as do general aviation aircraft. (No, Sarah, that doesn't mean they have to have artificial horizons, weather radar

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or ground proximity warning systems – but it does mean the exemptions that are granted by Australian Civil Aviation Order 95.4 do not exist in the U.S.A.). That means that the whole self-help voluntary labour basis on which our gliding club system is founded, goes out the door. What replaces it is something akin to the power flying club/ flying school system, with all that goes with it – Air Operator Certificates, licensed maintenance engineers, and all the rest of it. There are no doubt both good and bad aspects of such a change, however Richard has hardly presented a balanced discussion of them. Rather than be terrified of the unknown, let's lay it out for all to see, and (dispassionately, please!) decide which way it should go.

Bear in mind, though, that it's all or nothing; there is no half-way house between the "devolved" and "CASA" forms of control.

DJ Llewellyn

Two Cultures – A is for Airworthiness

"Let me make it very clear today: there is no self regulation of any sector of aviation... There can only ever be one set of regulations, and therefore by definition one regulator." – Mick Toller, Director of Aviation Safety, Sydney Morning Herald, 22 February 2001

In two previous articles I have tried to explain that having the GFA "control" gliding just adds another layer of control on to an existing one.

To the extent that the GFA exercises any power it is superfluous. To the extent it offers services, it must be compared with the alternatives. I have suggested that handing power and control back to the regulator, and inculcating a culture of individual freedom and responsibility, would help the gliding movement blossom, and not have adverse effects on safety. I have suggested that starting from scratch, with no pre-conceptions, is essential. I have suggested we may not need a sailplane-specific additional bureaucracy at all, any more than there is a need for an organisation to control green aeroplanes. In this letter I will deal with an example. I want you to ask yourself: Could we do without the GFA's cumbersome and expensive airworthiness system altogether?

Dangerous airworthiness problems, which have caused crashes, are rare. My best guess is that over the years I have read accounts, or heard accounts, of perhaps 200 Australian glider crashes. I can think of about six that were caused by airworthiness problems. Each, apart from a flutter accident, should have been detected by the daily inspection. The flutter accident would presumably have been prevented had the repair/ annual inspection system worked properly. The system does not work.

A little history

When I first became involved in gliding, in 1958, every member of the club was expected to help in

maintaining or repairing our one flying glider and to help build its replacement. When I rejoined the gliding movement 30 years ago, we had a professional person to repair and maintain the fleet.

He did most of the work, but every flying member was taught by other members how to be an effective daily inspector, and those who were willing helped with Form 2 (annual) inspections. They could learn how to become a Form 2 inspector themselves in the process. Because teaching was done by any experienced member (but with George Detto's sharp eye on things) and because it was done on the gliders by people who knew the gliders, there was a wide spread of knowledge. Nothing forces you to learn more effectively than to have to practice, think about, and to teach, some skill.

Gradually, all this changed. Because the GFA took on a regulating role in airworthiness, and pursued a culture of control, the system became highly structured, multilevel, rigid, and selective. What has been the result?

Today

Pity the poor GFA airworthiness officer. He has legal responsibility, but often few resources. He may feel that he is not fully trained for all the tasks he is required to try to meet, and especially not trained in training.

He can take some comfort from the GFA liability program, but the legal case-books are cluttered with examples of insurers attempting to duck responsibility, so that may be cold comfort.

Pity the average member. In two of the three clubs I belong to, he can (and does) complain that it is difficult for him to get access to the person or persons who are authorised to teach him to be a daily inspector, and if he does, it is difficult again to get access to the person authorised to approve him as a daily inspector. When he transitions from a metal glider to a fibreglass one, he starts all over again. By the time he has the experience and knowledge and interest to purchase his own glider, he is unlikely to be able to consider doing his own annual inspections. If he is selected by his club or by the GFA for training, in each of these clubs he has no alternative but to go away for a full-time course, and then do that again after another year or two, before he can obtain that ticket. The latest course was full before it was advertised. For our modern glider pilot, say a salaried member on even average wages, it is certainly easier to have a daily annual inspection done by some already authorised person, usually operating for profit.

One result is that the pilot knows far less about his glider than he should. A second result is that he is unable to teach any skills to any person, as he has acquired none. A third is that he has to perform his own very careful inspection after the annual inspection.

The alternative

If the gliding movement/GFA simply handed back this "regulating" role, and only provided advice, information exchange, and encouragement, what would be the result? The simplest answer to that question is to examine what happens in general aviation today. There is no general aviation body corresponding to the GFA. General aviation has not added any additional layer of control over the basic laws governing airworthiness in Australia. The regulator's laws (alone) would govern gliders.

The DI

The heart of airworthiness is the daily inspection. In general aviation every student pilot learns how to DI the aeroplane very early in his training. These aeroplanes are in general both much more complex, and much more susceptible to problems than gliders (particularly from vibration, and the complexity related to the engine and its fuel, oil and exhaust systems.)

The things that have to be checked on each type of aeroplane are explained and demonstrated. They are fixed and definite. Teaching them takes only a few mornings of decreasing supervision, and performing the DI (for small planes) takes about three minutes – about the same time as many glider pilots take for their pre-flight walk around. My overwhelming impression from watching both systems in action is that the



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general aviation system is far superior. The general aviation pilot is under no illusion that he is performing a kind of abbreviated annual inspection. He knows precisely what things he is looking for, and his list is specific for the particular aeroplane.

My observation is that the average modern glider pilot is not so clear about what he is trying to do. From the questions I am asked, and from the number of times I see a glider being towed out with such defects as flat tyres, I'm not at all confident that our present system is really working well. I know of several glider pilots who have left the movement at least partly because they were unhappy about and unsure of, the airworthiness of the gliders they were flying. I do not know many power pilots in the general aviation segment that expressed the same feeling. A deskilling results from taking the training function away from the routine morning DI.

Skills atrophy, and knowledge become obsolete. My suggestion is that GFA hand the regulator back all powers in regard to DI teaching and authorities, and drop all glider specific regulations except those (if any) the regulator makes law of its own motion. As in our past, and general aviation's present, all Instructors would be once again allowed to train pupils and authorise them to DI the gliders they fly.

The periodic (usually annual) inspection

There is without doubt a group of glider pilots which has benefited from the present system. Selected individuals have been trained as periodic inspectors, and been authorised by the GFA to sign glider maintenance releases without having to be licensed aircraft maintenance engineers. The members of the clubs these persons have serviced is the benefiting group I referred to. I would include those who gained the authority mainly or entirely to "do" their own glider.

Whether these inspectors have been carefully and fairly selected, and whether the inspections they perform are better or worse than those performed by professionals, are to my mind open questions. In the past, authorised inspectors have done huge amounts of unpaid and unthanked work, conscientiously and diligently. This still happens today in some clubs, but in more recent times it is my impression that the average authorised inspector does his own glider, and occasionally a club glider, the latter usually more in a supervisory capacity. In the Sydney basin at least, if the system was designed to allow ordinary club members to play a role in annual inspections, to learn to do them "on the job," and to avoid having to pay commercial rates, it has failed. One regional technical officer simply refused to countenance the "mentor" system. The load on

those few authorised inspectors willing to do club aircraft without charge rose as the barriers to entry rose, and fewer were willing or able to become authorised Inspectors. That RTO left gliding altogether when the responsibility and workload became too great.

If we have reached the stage where most of the inspections are done for profit, away from the club scene, perhaps it would be better if they were all done by professionals, that is, trained licensed aircraft maintenance engineers? (LAME's) This would be necessary if the GFA repudiated its unwanted responsibilities. My price experiences suggest it would not be dearer. If the regulator wanted to authorise those non-LAME periodic inspectors the GFA has authorised – fine. If pilots want to learn more about their gliders, they could, as they can now, work under supervision, and have the supervising LAME/Inspector sign for the work. That cannot happen at present. No ordinary LAME can sign the GFA-specific maintenance release because, under our present system, the licensed aircraft maintenance engineer would not have been approved by the GFA authorised officer to sign it.

Surprisingly, (to me) there are a number of additional requirements in annual inspections of gliders compared to power planes – some are rather curious.

One is that a glider has to have an evaluation flight by a pilot authorised by GFA to do that, and who is wearing a current parachute, before being returned to service. You draw your own conclusions from that one – I have drawn mine.

Building, registering and modifying aircraft

The SAAA warmly embraced the concept of experimental aircraft that the EEA had shown to be so outstandingly successful. Far more new aircraft in the US are built under this de-regulated system than are built by the manufacturers. The safety record is astonishingly good. Builder-originated modifications are routine. There is no requirement for a professional engineer to draw, and for another professional engineer to approve or disapprove of, these modifications. Occasionally, a crash is ascribed to such a modification, rightly or wrongly. But the overall safety record is, according to "Australian Flying" an improvement on the Australian record in a country with far worse terrain and weather.

For reasons that I have never been privy to, I understand the GFA has decided to resist and reject the concept of experimental as applied to gliders in Australia. Nowhere is the determination to control and regulate more clearly opposed to the concept of individual responsibility and freedom, than in this regard.

Most of the gliders I have seen in the USA are registered as experimental. Their owners often build or rebuild them, almost invariably they do some modification. They usually perform most or all of the work for the annual inspection and all maintenance. The annual inspection has to be signed off by a licensed aircraft maintenance engineer, who is generally happy to inspect the aircraft while the owner explains what he has looked for, what has been done, and the history of the glider. The engineer will examine the relevant paperwork and sign for the inspection for a relatively small fee.

Some glider clubs (both here and in the USA) have retired but still licensed engineer members. These might be willing to assist if we went the de-regulated route.

In the USA, and now in Australia, the owner-builder or re-builder can get authorisation to do the periodic inspection, and sign the maintenance release, himself, merely he because he built the aircraft. In Australia he cannot do so, if it is a glider, because of the GFA "added-on" layer of regulation.

We don't need the extra control layer

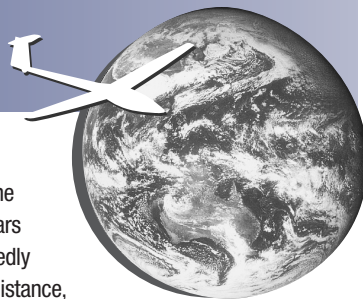
You do not need to be a GFA member to fly gliders in Australia – refer CAO 95.4 s 4.1, Op Reg 5.1. You do currently need a GFA authorised Inspector to complete a GFA Form 2 (periodic/annual inspection) and the GFA Form 1 (maintenance release), and there are additional requirements above that set down for other registered aircraft. The additional regulatory cost is roughly \$330 – GFA membership plus the annual administration charge, compared to \$0 for my power plane.

The considerations set out in this article have led me to the tentative conclusion that the gliding movement would be no worse off, and might indeed be better off, if it got out of the regulating game and concentrated on providing encouragement, information and advice only.

There is one regulatory role gliding does need. The GFA does not supply it, Rudi. We need a watchdog to inform us promptly of impending regulatory change adverse to our interests, to find out from us what action we want taken, and to take that action.

Richard Pincus





Local News

39th FAI Australian National Gliding Championships – wins for Buchanan, Parker and Renner

The 39th Australian National Gliding Championships finished at Gulgong on 23 February. The two-week long event attracted 33 competitors and saw only one non-flying day.

Winner of the Open Class section was John Buchanan. Second place went to Gerrit Kurstjens and third to his wife Pam.

The 15/18 Metre Class was taken out by Graham Parker, followed by Tracey Tabbart and Trevor West. Graham also topped the 15 metre list, with Annie Hartley and David Speight coming second and third respectively.

Honours in Standard Class went to Ingo Renner, followed by Bruce Campbell and Miles Gore-Brown.

A full report and photos will be presented in the May issue of Australian Gliding/Skysailor.

Overseas News

Death of Anne Burns

Anne Burns, former British gliding champion and air accident investigator died on 22 January aged 85.

She was born Anne Pellew on 23 November 1915 in Haworth, Yorkshire to Major Fleetwood Hugo Pellew and his wife Violet.

Her acquaintance with aviation came early when, at the age of 12, she made her first flight in a Gypsy Moth. After leaving school Anne went to St Hugh's College, Oxford, where she was the only woman reading aeronautical engineering.

When war broke out she joined the Ministry of Supply and was sent to the Royal Aircraft Establishment where she learnt to fly in a de Havilland Tiger Moth bi-plane. At the RAE she was involved in development for the RAF and Fleet Air Arm, flight-testing types ranging from Blenheims to Lancasters. Later in the war she played an important role in the launch tests of troop-carrying gliders.

In 1947 Anne married Denis Burns, also a scientist at the Royal Aircraft Establishment.

Anne was appointed a principal scientific officer at the RAE in 1953 and in the next year was involved in the exhaustive tests which were carried out after the destruction in mid-air over the Mediterranean of two BOAC Comets.

In 1955 she was given a Queen's Commendation for Valuable Services in the Air for her detection work on the Comet failures.

Anne's career as a glider pilot began on 15 August 1954, when she went solo in a glider bought by her and her husband at Lasham, Hampshire. The following June she established a women's gliding record of 134 miles from Lasham to Market Drayton in Shropshire.

Over the next 10 years she repeatedly improved distance, speed and height records. In 1957 she was the first woman to glide across the Channel and she constantly improved on her world record time for 100, 200, 300 and 500km triangles. In South Africa in 1961 Anne and her husband broke five world and 12 British records.

Then in May 1966, at the age of 50, when she was already the holder of three Women's World Records and nine British Women's Records, she became British National Glider Champion. She was awarded the Lilienthal Medal of the Fédération Aéronautique Internationale in that year, and the Founders' Medal of the Air League in 1967.

In August 1977, whilst gliding above the Hampshire countryside, a birdstrike damaged Anne's aircraft and it went into an uncontrollable dive. At 2,000ft she baled out, but one foot became entangled in the shrouds of the parachute and she accomplished half her descent hanging upside down. By the time she had extricated herself it was too late to aim for a soft landing place and she ended up in the branches of a tree 10ft from the ground.

At that point she decided to give up flying for quieter pursuits.

In other sad news, Anne Morrow Lindbergh died recently. She was the first American woman to gain any gliding licences or certificates. ✂

GFA Soaring Calendar

Victorian Soaring Association Incorporated

Amended Meeting Notice
19 April 2001
Executive meeting

To be held at
329 Dorcas Street,
South Melbourne.
This meeting will
commence at 1930
and conclude at
2200 hours. ✂

STOP PRESS!

Amys Aviation Important announcement

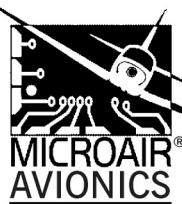
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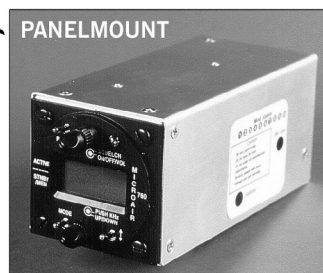
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Flight Recorders and Badge Claims

TIM SHIRLEY, *Chair Sports Committee*

There have recently been a couple of unfortunate cases where the FAI Certificates Officer has had to reject claims for badge flights that were flown during a competition. The reason was that the rules for verifying in the competition were not the same as the rules for verification of badge flights. These rule differences are related mainly to the use of flight recorders. In the days of camera verification there was little difference between the two, and you could be pretty sure that if the flight was okay in the competition then it was okay to claim a badge.

It is important that all pilots who are planning to claim badges understand what they have to do in order to claim a badge or record when using a flight recorder, and it is especially true that Official Observers need to understand this also.

The FAI, through the IGC, sets the rules for badge and international record flights. The GFA is just one voice at IGC, and while we have

influence we must accept IGC decisions. We have no choice but to follow the Sporting Code when certifying badge flights.

The FAI Certificates Officer simply follows the Sporting Code – there is no scope for varying this, because badges and records are international awards.

The Sporting Code does not permit the use of commercial GPS units in badge and record claims because these devices can be falsified by the pilot easily, and with no possibility of detection. I won't give specific examples here for obvious reasons, but I am prepared to discuss this privately with anyone who wants to know more.

In Australia, the Sports Committee makes the rules for the National FAI and Club Class Championships. For these events a secure flight recorder is required as a primary logger, but a commercial GPS may be used to verify the flight if there is a demonstrable failure of the flight recorder, and only for the remainder of that flight. This lowers costs to pilots who might otherwise have felt that it was necessary to purchase two secure flight recorders. The chance of cheating in this situation is minimised by the fact that the commercial GPS can only be a back-up, and the scrutiny of competition offi-

cials and other pilots makes cheating difficult. Most importantly however, it is a GFA decision to make this rule – the IGC is not involved.

In other competitions within Australia, at state and lower levels, many competitions permit the use of commercial GPS units as primary verification. This is very reasonable, and it is a decision for whoever makes the rules for those competitions. It does not mean that the rules for badge claims change as a result.

A similar situation exists with the rules for waypoint rounding and start and finishing procedures. The requirements are likely to be different for a competition than for the badge claim. For example, the typical waypoint "shape" in competition is often a cylinder or a thistle, while for the badge flight it is the old FAI photo sector. As a result it is quite possible for a waypoint to be correctly rounded in a competition but rejected for a badge claim. In the days of cameras, this problem didn't really exist because the rules for waypoint rounding were the same for the competition flight as for the badge flight.

I'm sorry that this situation has led to some excellent flights being rejected for the awards they deserved. Hopefully this article will help pilots and Official Observers to appreciate that there are differences, and that if they think a competition flight will get them a badge or record, to fly it so as to satisfy both requirements. ✂

The New Millennium Comp – Lake Keepit

WENDY MEDLICOTT

After a great deal of worry about the weather, entries and the prospect of a complete failure, the New South Wales State Gliding Championships held at Lake Keepit from the end of December through to the beginning of January this year turned out to be a complete success, with five out of seven possible competition days being flown.

In November most of our task area was under water so, with only a few weeks to dry out before the start of the competition, a few pilots pulled out at the last minute. For a while things looked pretty grim, however, as it turned out, we ended up with 23 entries, and a competition.

The FAI classes were very much down on numbers, resulting in officials doing quite a bit of thinking as to how the numbers could be made up to get a class. It was decided that all gliders could win Open Class, 15 Metre and Standard Class gliders could win 15 Metre Class, and there would be no Standard Class champion. How's that for confusion in the scoring office! Club Class had plenty of com-

petitors to make up a proper class.

As organiser of the competition, I was extremely pleased with the support received

from Lake Keepit club members, new and old, along with non-members from other areas of the state who just called in to lend a hand.

Overall winners of the competition were:

Garry Speight, Dave Shorter, John Hoyer

Miles Gore-Brown, Harry Medlicott, Bill Snead

Miles Gore-Brown, Paul Matthews, Peter Trotter

Dion Weston, Trevor West, Geoff Sim

John Hoyer, Ian McPhee

The BP trophy for the highest speed went to Dion Weston with 132km/h, and the Gliding Accessories trophy for the highest Standard Class speed was taken out by Miles Gore-Brown with 128.8km/h.

While all pilots appeared to enjoy the competition, they also managed to have a great time bringing in the new millennium, helped somewhat by wellknown gliding identity, Ian

McPhee. As we were all enjoying good food and fine wine in the flight centre all of a sudden a light bulb went on in Ian's brain. He jumped up from his chair, raced outside and starting digging around the base of a gum tree located just near the door.

"Oh well, McPhee has finally gone around the twist. Let's have another glass of wine and we will see what we can do for him in the morning." Suddenly he reappeared, with a rusty old cash box that he remembered burying some years ago, full of burnt and dirty coins. Unfortunately, for Ian, and despite his pleadings, the find didn't buy too many drinks! The cash box is now on display in the clubhouse for all to see.

A special event at the dinner was the awarding of life membership with the club to Frank Hudson. Frank earned the honour some years ago, but it took us all this time to get him to a public gathering where a proper presentation could be made. It was a well deserved honour as Frank has been a member of Lake Keepit Club for a long time, being an instructor, committee member, president etc, and maintained all our gliders to a very high standard for many years. We look forward to flying more with him in the future.

To all the people who assisted the club in running the championships – I thank you most sincerely. All the hard work was worth it. ✂

A Dream Come True

MICHAEL RYAN

It's taken me nearly 20 years to finally achieve

my ultimate dream: HANG GLIDING.

Between work, relationships and marriage I could never find the time or funds to fulfil my dream to fly. So, after changing jobs, getting a divorce and swearing off women for four months I found the time. And wouldn't you know it, the money was saved in no time at all to cover all expenses.

The course, up north, was for eight days. I enjoyed myself so much I stayed for three weeks and gained my restricted licence. But for a couple of cracked ribs (which I kept quiet about for a while in case they tried to stop me flying) I was on cloud nine, literally.

Nearly three months later I managed some time off work and ventured back up north to pick up my hang glider and custom made harness (which didn't arrive until just before I was leaving to come home). While up there I managed three flights in my very own Wills Wing Falcon 195. Two 10 minute sled rides, and then on the day I was due to come home I decided, much to my new driver, err... girlfriend Sandra's chagrin, to wait the weather out and try for one more flight. Let me tell you it certainly was worth the wait (and tongue-lashing). I managed a flight off North Brother Mountain (1,600ft) that was two hours and 20 minutes of sheer ecstasy. Ridge soaring, thermalling and having a large hawk join me in flight. I was then joined in the air by two paragliders, one tandem and one single. They both landed after about thirty minutes, leaving me the sky all to myself. I kept making passes over the launch area (1,600ft) where a lot of spectators were watching. What a buzz that was – me in the air instead of on the ground looking up. Then I would spot another cloud approaching, fly over to the general location, thermal up to 2,500-3,000ft in a couple of turns and then off for another wander.

After about an hour of flying the radio squawked, "Mick, we're going into town for lunch, turn left if you want to stay up." Well, that was the quickest left turn in flying history. Next I heard, "Okay, we'll see you in about an hour, wait for us in the landing paddock." Well, I didn't have any plans to land, so I figured if I could stay up I would wait where I was. They realised this a bit over an hour later when I was still 'up there'. The radio again squawked, "Okay Mick, times up, we're ready to go home, we will meet you

in the landing area." My reply (now confident enough to move one hand up to my shoulder-mounted radio) was, "Okay, I need to go to the toilet anyway." So I flew over to the paddock, checked the windsock and started to reduce my height. Wouldn't you know it, my glider didn't want to land. I was fighting against this thermal that wanted me back up to cloudbase (3,000ft). The trouble was my turns to reduce height were perhaps not as sharp as they should have been (as a beginner I am a little cautious about banking too sharp in rough air and slipping down). Once I was down low enough to think about my 'aircraft approach' this wind blowing up the river kept me busy working the rough air. I was reducing my height upwind of the landing area and each time I pointed into this wind I swear I gained another hundred feet in height. I was then worried about ending up too far downwind of the paddock (ala cracked ribs) so I pointed my baby into the wind, pushed the bar to my waist, and with the wind singing through the wires and sail I won the height battle.

What a buzz that was. I love flying. Who needs drugs when you've got adrenaline? As my harness had not arrived I borrowed one which was a little short for me, so halfway through the flight I went into hang to get the blood flowing in my legs. So wouldn't you know it, when I landed (on my feet and not the wheels this time) I nearly dropped to my knees because my legs didn't work too well.

But I could have landed on my head and I still would have come up smiling.

Well, that more than doubled my total airtime. What a buzz, can't wait to fly Canberra (my birthplace) and enter my first competition.



FUNNY CAPTION COMPETITION



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

Send your entries to:

Richard Lockhart

c/o Blackheath Post Office,
Blackheath NSW 2785

or email <skysail@ozemail.com.au>
by 25th April.

The winner (announced in the June issue) will receive a HGFA cap.

As the February comp was cancelled due to lack of photos and entries, there is no winning caption to be announced this month. If you would like this feature to continue, please send in amusing photos ASAP.



Club News

Sunshine Coast HG Club, QLD

The New Year didn't start well with the weather, but we sure did catch up towards the latter part of January. At Rainbow November had 11 flyable days, December 10 and January 14 days.

There was a good turnout on the weekend of January 13th, with 12 PG and 7 HG.

The Australia Day long weekend blessed 14 PG and 7 HG with three beautiful days. Bruce Parker flew his Aerochute from Rainbow airstrip and Graham Sutherland flew his paramotor to Double Island Point and back in the morning.

In the afternoon he was free-flying at 2,000ft close to Pyramid Hill and decided to be the first to cross over to Cherry Venture. He didn't encounter turbulence and landed safely in his Bagheera. The next day he did it again, this time landing 4km after Cherry Venture. Gavin McIntosh got his Fiesta Light to cloudbase (ergonomic clouds) at 1,500ft, while Neil Sutton, enjoying his new weapon (Dave's Serial Class champion Bagheera), could see clouds forming below him at 2,000ft. A few days earlier, John Madden convinced his wife Ann to camp at Teewah. In the morning he flew 32km from the ramp back to camp. Good going, John.

A PG pilot nearly caused the loss of a site, Pt Cartwright, when he flew above the highrises without ringing the tower first. A helicopter reported him and a CASA report had to be written. So a reminder to everyone, before flying Cartwright you must ring Maroochy tower (ph: 5448 7662) and you must not fly over 300ft asl.

Also, I'd like to remind all PG pilots flying Teewah that the little sandblow 50 metres north of the ramp is strictly off limits, as National Parks has already approached the club on that issue and allowed us to build a bigger ramp so PG won't use the alternative site. Any pilots apprehended by the rangers using the illegal site will not be supported by the club and will be subject to a fine.

The lady-owner of the horse that got hurt running into a fence at Widgee as a PG was flying above the paddock, rang the club to complain about HG flying over her land. She had to run to restrain and calm the horse.

Please, be considerate and avoid flying over that place.

Cherish our sites, they are the backbone of our sport.

It is with my deepest regret that I inform you of the loss of Trevor Mitchell. He will be missed by many pilots as he was an inspiration for all with his enthusiastic approach to the sport. An active club member and committee member, he was always the first one to offer a helping hand. Trevor's favourite site was Teewah, and he will

be remembered as the first PG who went further than Freshwater Gap. His record of 33km is still standing. Our deepest sympathy is felt for his wife Ann and his family.

Ciao, a PG from Colombia (the one pictured tree-hanging in Skysailors earlier this year), scared himself again. He was ground handling on flat ground in a 12-15kt wind at the Mapleton bomb-out when he got lifted up to 50 metres. He suffered collapses and overcorrecting, but landed safely. Lesson to be learnt: ground handling during the middle of an unstable day can be dangerous, especially for low airtime pilots.

Jean Luc LeJaille

Hill Flyers Club, WA

February saw a continuation of cooler weather (low and mid 30's) in Perth than most summers (where temperatures usually hit the mid and high 40's).

Many pilots, including quite a few infrequent flyers, have been taking advantage of it by getting some great flying at Bakewell, most notably in late Feb, where starting Friday 23rd, Bakewell remained on right through till the following Tuesday. This was midway through the State Comp up at Wylie, where weather conditions saw overcast skies and drizzle before fining up to beautiful cross-country conditions and no doubt some great flying (details in the next Skysailor).

The Hill Flyers Autumn Fly-in is coming up soon (end of April). Check the HGFA Events for details. Launching off Bakewell in the thermic autumn weather usually sees pilots doing distance, either downwind or out and returns. This year we will be setting tasks for both during the fly-in, but will leave it up to the pilot to choose his task, either the easier downwind or a more demanding out and return course.

See you in the air, Rick

Product News

Airborne March 2001

The CLIMAX

At the end of December both the 13m and 14m Climax passed USHGMA pitch and structural tests. Both gliders showed excellent pitching moment results through the full range of angle of attack and speeds tested.

Since the completion of certification testing we have had several pre-production gliders at the Australian competitions. Rohan Holtkamp finished the season on a Climax 14 as the Australian National Champion at Hay and heads the National ranking with a considerable margin. Overall results saw Rohan in the top five places at all of our National competitions. Rohan has been actively involved with final development of the Climax over the last few months and the result is a very user-friendly glider.



Our recent State championships had a total of eight gliders flying. Rick was in contention going in to the last day in 3rd place only to have a shocker on the last day and drop to 7th. Eight of the 18 gliders to make the last day's goal were Climax's (Rick was the only one to miss out). We had the opportunity to allow several pilots to test fly the Climax with personal best flights achieved, first hundred mile flights and lots of smiling faces. All in all a very successful week for team Climax.

Climax production started mid-February with our standard control frame. The new streamline control frame will be available towards the end of May as an option.

Our new CNC milling machine is producing all of the more complex components and is working at 100% capacity to build a buffer of stock components. Unfortunately we have had to postpone the release of the streamline frame until May to allow the component stock to increase. The new downtube fittings use up a lot of machine time, which is at a premium at the moment.

Team Airborne

New ELT on the Market

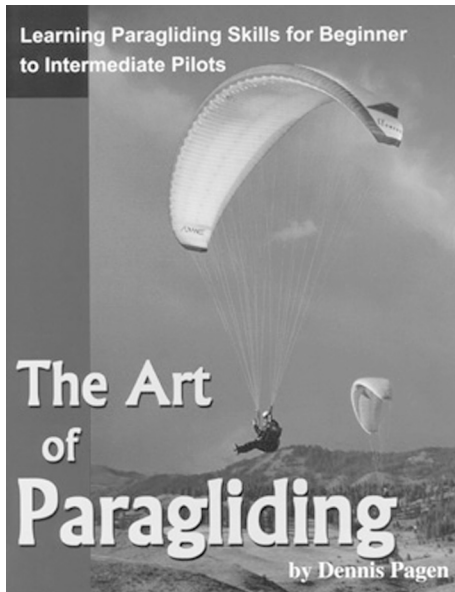
An Australian electronics company has just released a new emergency locator transmitter (ELT). Called the Mini Sat-Alert 3, this new beacon not only transmits on both international distress frequencies simultaneously, it also incorporates a strobe light to assist with emergency rescue. If you need to be found in a hurry, this new feature might just save your life. The strobe can be seen at night in excess of 4km and operates continuously when activated. the transmit time with the strobe operating is up to 3.5 days.



The Mini Sat-Alert 3 only weighs 215g, is 11 x 8 x 3.8cm in size and comes with a five year parts and labour warranty. When you go flying, be prepared – consider taking an ELT

with you. these new models are light, waterproof and easy to use. the Mini Sat-Alert 3 costs \$299 GST paid and is available from AeroShop in Melbourne (see ad in this issue).

Rod Birrell, AeroShop



The Art of Paragliding

Sport Aviation Publications is excited to announce the release of a new book entitled 'The Art of Paragliding' on 1 March 2001. Subtitle: Learning Paragliding for Beginner to Intermediate Pilots. Authored by Dennis Pagen, this book is the fruit of 10 years of practice and two years of intensive research on the latest paragliding techniques in the US and other countries. Top instructors (including Dixon White of Airplay, 1999 US Instructor of the Year) participated in making this manual the most complete and up-to-date on the market.

Beside actual flying skills and step-by-step training, we have covered equipment, safe procedures, how paragliders work, as well as launching and landing in two special chapters. The material is enhanced by Safety Tips, Pro Tips, and special Caution notes where necessary. Quotes and stories from world-class pilots are also included. There are a total of 13 chapters divided in three parts: Beginner, Novice and Intermediate levels. This book follows the recommended USHGA teaching methods and is designed to be readily used as a training manual.

The Art of Paragliding is in the large 8 1/2 x 11 inch format for ease of use and clarity of figures. There are 248 illustrations and 81 photographs which greatly enhance understanding. The book has 374 pages and a four-colour cover.

The Art of Paragliding includes ground handling, learning judgment, history of paragliding, equipment concerns, perfecting turns, avoiding dangers, flying in wind, troubleshooting common mistakes, parachute insights, learning to soar, thermal lore, flight rules, performance factors, USHGA rating guide, weather for paragliding, emergency procedures, and much more.

Whether you are new to the sport, wish to review your skills or want to learn about the latest techniques and equipment, The Art of Paragliding will provide many insights on paragliding that pilots of all levels can find nowhere

else. This book is the most extensive ever compiled on the subject. Its comprehensive and well-organised outline makes it easy to use as a reference book.

The Art of Paragliding retails for US\$34.95. Don't miss this chance to expand your knowledge and purchase what will soon become the standard text on paragliding. Get this book from your dealer or contact us to get a copy: Sport Aviation Publications, PO Box 43, Spring Mills, PA 16875; ph/fax: 814-422-0589; email: <pagenbks@lazerlink.com>.

More information and an order form are available on our web page: [www.lazerlink.com/~pagenbks]

FAI News

World Pilot Rankings Update

The WPRS sees changes to paragliding, hang gliding, speed gliding and Class 2. There are no changes to precision paragliding.

The PG rankings sees the addition of the All Africa Open, Mexico Open, Bright Open, Zicosur Open, Australian Open, Millennium Cup and Real Minas Governador Valadares Open. Deleted events (from 1999) are Jackson Hole (USA), Swedish Open and the Morzine and Piedrahita PWC's.

The Top 10 is dominated by Switzerland, Japan and Austria with the exception of Andrew Smith from South Africa. The top four places remain the same: Martin Brunn (AUT) maintains the lead on 286 points, ahead of Masataka Kawachi (JPN), Tsuji Tsuyoshi (JPN) and Kaspar Henny (SUI), who now shares 4th place with Andy Hediger (SUI, from 10th). Steve Cox (SUI) continues his descent, now 6th (from 4th), with Christian Tamegger (AUT) moving up two places to 7th, Stephan Stieglair (AUT) dropping to 8th (from 7th), Andrew Smith (RSA) moving back into the top ten at 9th and Kari Eisenhut (SUI) also descending to 10th (from 8th).

Louise Crandal (DEN) still has a clear lead in the female rankings and is in 40th place overall (185 points) with Petra Krausova (CZE) and Noriko Mizunuma (JPN) in equal 2nd place (86th overall). There are currently 740 pilots ranked from 37 countries.

The HG ranking sees the addition of Xceara (Brazil), South African Nationals, Australian Nationals, Forbes Flatlands, Zicosur (Chile) and the Millennium Cup (Mexico). The following 1999 events have been deleted; HG World Championships, Canadian Grand Prix, Slovenian Nationals, British Open and Spanish Nationals.

Oleg Bondarchuk (UKR, 1st) maintains the lead on 243 points, ahead of Richard Walbec (FRA, 2nd). Those moving up the top ten are Gerolf Heinrichs (AUT) whose win at Forbes has moved him right back into the Top 10 to 3rd (from 12th), Mario Alonzi (FRA) is up to 4th (from 9th), Jon Durand Jnr (AUS) is a newcomer to the Top

10 in 7th (from 29th), Andreas Ohlson (SWE) moves up to 8th (from 15th), Jean-François Palmarini (FRA) up to equal 9th (from 13th). Gordon Rigg (GB) maintains 5th and those moving down the Top 10 are Manfred Ruhmer (AUT, 6th from 3rd), Andre Wolf (BRA, equal 9th from 4th) and Betinho Schmitz (BRA, equal 9th from 6th).

Françoise Moçellin (FRA) still leads the female rankings in 32nd place overall (125 points) closely followed by Kathleen Rigg (GBR, 37th overall, 118 points) and Kari Castle (USA) 3rd (41st overall, 111 points), who have both closed the points difference between the top three. There are 622 pilots ranked from 39 countries.

Speed Gliding sees the deletion of the WHGS Canada 1999 event. John Smith (NZL) still leads the rankings ahead of Oleg Bondarchuk (UKR), Manfred Ruhmer (AUT) and Karl Ewing (AUS). 5th to 9th places are held by the USA (5th GW Meadows, 6th Ken Brown, 7th Chris Giardina, 8th M Vorhis and equal 9th Aaron Sweptson). Michael Scrott (AUT) is also in equal 9th position. There are 38 pilots from 12 countries.

Class 2 sees the deletion of the 1999 World Championships and subsequently a few changes in the Top 10 places. Diego Bussinger (SUI) is the first pilot outside of the USA to head the Class 2 rankings. Toni Raumauf (AUT) is second with Brian Porter (USA) equal 3rd with Marcus Hoffmann Guben (GER). Christof Kratzner (GER) has dropped from equal 2nd to 5th, David Sharp (USA) has dropped to 6th (from 4th). USA pilots Jim Zeiset and Bruce Barmakian are equal 7th ahead of Maraio Campanelli (BRA) equal 9th with Hansjoerg Truttmann (SUI). Niki Hamilton (GBR) is the only female ranked (26th overall). There are 39 pilots from 9 countries.

Results not yet received (and therefore not included in WPRS yet) Bogong Cup, Australia (HG Class 1 & 2) and the Argentinian Open (PG).

Forthcoming HG competitions (Class 1 unless otherwise indicated) that qualify for WPRS points are: Category 1: World Air Games, Spain. Category 2: Oshino Rigid, Japan; Flytec Championships, USA; International Swiss Open; Millau Classic, France; Test Europeans, Slovenia; Dutch Open, Laragne, France; Test Female Worlds, USA; Test Class 2 Worlds, USA; UK Open National Championships, St André, France; Lone Star National Championships, USA.

Forthcoming PG competitions that qualify for WPRS points are: Category 1: World Air Games, Spain. Category 2: Coo Spring Cup, Japan; Cornizzolo, Italy; Tateyama Raityou Valley Cup, Japan; Bavarian Open; PWC Konitsa, Greece; PWC Simmenthal, Switzerland; US Nationals/Pre-PWC, USA; Nordic Open, Piedrahita; Test Europeans, Slovenia; PWC La Clusaz, France; PWC Castejon, Spain; Pre PWC Germany; PWC Kobarid, Slovenia.

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

Any queries/questions regarding the World Pilot Ranking Scheme should be sent to Sarah Fenwick, email <civil@ntlworld.com>.

Country Rankings

In PG country rankings the top three places have changed, with France now leading ahead of Switzerland who have climbed to 2nd and Japan who have moved up to 3rd ahead of Austria 4th, Germany 5th, Great Britain 6th, Denmark 7th, Italy 8th, Slovakia 9th and South Africa 10th.

The nations which are entitled to send two females to the WAG (PG) are Denmark, Czech Republic, Japan, South Africa, Great Britain, Germany, Switzerland, Norway, New Zealand and Austria.

For details of team size allocation for the World Air Games (PG) please see [www.fai.org/hang_gliding/competitions/pg-team-size.asp].

In HG country rankings France are 1st ahead of Austria and Australia, with Great Britain now 4th, Brazil 5th, USA 6th, Germany 7th, Spain 8th, Hungary 8th and Ukraine 10th.

Full details of the country rankings (PG and HG) can be found on the World Pilot Ranking System website. Pilots should check that their personal record shows the correct nationality, particularly as there are a number of hang glider and paraglider pilots of unknown nationality.

All amendments should be emailed to Sarah Fenwick <civil@ntlworld.com>. Full details of the rankings can be found on the FAI/CIVL website at [www.fai.org/hang_gliding/rankings/].

Pilot Qualifications for World Air Games

Please note that pilots still seeking qualification to compete in the WAG have until 31 May to qualify. Qualification criteria (both 1 & 2 must be met):

1. as per section 7 5.11 (and proposed amendment to be voted on at the Plenary meeting 22-25 February 2001).
2. In ADDITION to section 7 5.11, either
 - a) Top two thirds overall place in a PWC competition, or b) Eagle gold badge distance (ie 100km or more).

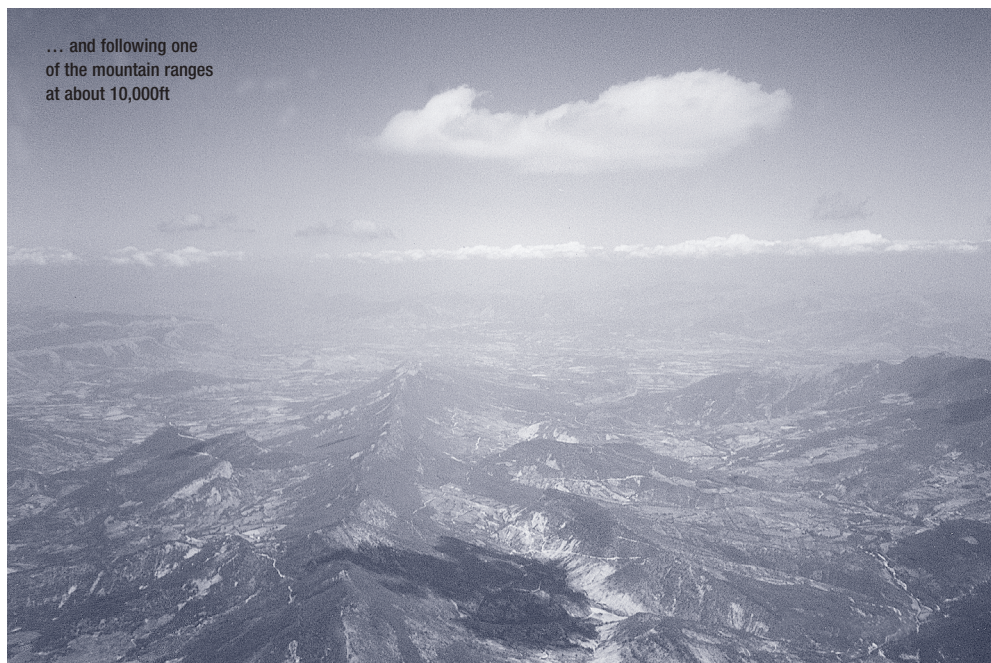
See CIVL website for full details.

The list of qualified pilots will next be updated 1 April 2001. Any pilots wanting confirmation of their qualification for Category 1 events should contact Sarah Fenwick <civil@ntlworld.com>.

PHOTOS THIS PAGE: SUZY GNEIST



Your magazine's production editor above Laragne launch in Haute Provence, Southern France...



... and following one of the mountain ranges at about 10,000ft



A postcard from Laragne: The British League sets up at launch. Photo: Claude Gauron

Pilot Profile: Bogong, Europe and things in between



Heather Mull

(Sub-ed note: I thought this article, submitted by Heather, would serve as a good Pilot Profile contribution for this month.)

“So what are you up to now?” – seems to be the first question people ask when they see me. So I thought it was time to make a long overdue contribution to Skysailor

and also provide a contact for pilots wanting to fly in Europe.

I’ve just finished taking part in the Bogong Cup – what a fun competition! In my opinion it’s one of the best comps in the world, where average pilots can mix it with the world’s best, have fun and learn heaps. Great to see some women competing too. Thanks again to Phil and Anita at Mountain Creek Lodge (HQ), Tove (Meet Director) and everyone else who ran it so well. Not being obsessed with competing and totally flying-unfit, it was a nice surprise to come second in C grade behind Kevin Grosser (next year Kev!), and just quietly, the two of us in our Xtralites beat the B grade guys as well (and a few kingpostless gliders)! For seven days I managed a total of 21 hours (total now of some 500 hours), goal one day (almost twice) and a longest flight of five hours. One flight was cut a bit short when I landed to help a team mate who had dislocated his shoulder – hope you’re on the move again Blaino! Good fun also having in the team Pete Greenhill and ‘Blast from the Past’ Steve Blenkinsop – still a super competitive pilot!

For those of you who don’t know me I learnt to fly in 1988, as Stephen Ruffel’s first inland student, and lived in Bright where I taught Phys Ed/Science at the High School for five years before beginning my own remedial massage clinic. That was back when the NE Vic HG Club had a strong representation of HG pilots! When I became involved with the organisational side of HG I ran the Bogong Cup for several years, helped organise and launch direct the Women’s Worlds in Bright in ’96 and was MD for a PG comp the same year. Not long after those comps I shifted to

Holland – quite a radical change to expand my horizons in new directions.

If you like big open spaces and nature you probably wouldn’t like living in Holland. It has its good points, of course – wages are good (cost of living is high) and it’s easy to travel to other European countries. The flying is restricted to occasional aerotowing or coastal low dune soaring. The Dutch Nationals (Category 2 event) consist of two tow weekends plus a week in the mountains in another country. This year it will be held in SE France – Laragne – a fantastic place in the Alps for spectacular XC flying and where I fly every summer for a couple of months. We conveniently have a holiday house there, as my boyfriend, Mart Bosman, is a builder (and current Dutch champion).

In Europe I have had the opportunity and assistance to get involved in the Dutch HG organisation. Along with Flip Koetsier I now help organise the Dutch National team. Rated as a ‘top’ sport, they have impressive government financial support (from a state lottery system) for training and competitions – there is little the pilots need to fork out for. Consequently I have observed how the team – green when I arrived in Holland – have steadily improved to produce credible team and individual results in Category 1 events (Worlds/Europeans).

I have also been working as a Steward at some events for CIVL. A Steward is present at Category I events to ensure that the competition is well organised, fair and safe for the pilots and to try to anticipate problems before they arise. Three jury members are also present to deal with protests. These are not paid positions, but all expenses are paid. A Steward acts

as an advisor to the meet director so it is necessary to have a good understanding of all the rules in the Section 7 and General Section documents (obtainable from CIVL website). A lengthy report about the comp needs to be submitted to CIVL at the end, so that recommendations for future MD’s can be put into the organisers handbook. Even though all this can be quite stressful at times, it’s a great way to keep in touch with pilots and travel to new places. So far I have been a Steward at: ’98 Europeans – Slovakia; ’99 Pre-Euro’s – Austria; 2000 Euro’s – Austria; 2000 Women’s Worlds – Greece; and have been asked to help in 2002 at the W. Worlds/Rigid wings in Chelan, USA. Flip Koetsier is also a Steward. He will be one of the Stewards in Spain this year at the World Air Games, and even though I was initially asked to be a Steward there, I decided to have a go at being the Dutch team leader there instead.

What else have I been up to? I can have a pretty decent conversation now in Dutch (initially it’s hard to get the guttural throat sounds going) and am also learning French. I do remedial massage for clients in Holland (my massage skills began some 13 years ago when I massaged pilots at the Bogong Cup).

I also had a book published in England last August titled “How to Run a Marathon – the Complete Guide for First-time and Amateur Runners.” I ran the Rotterdam Marathon in 1998 and hadn’t been able to find a book with basic tips in it beforehand. So after the marathon I wrote one myself, with chapters that include info on training, nutrition, injuries, problems specific to females, clothing, etc. If you’re interested, check it out at [www.amazon.co.uk], or use the ISBN number 1 85058 7469. Some of the items such as stretching and nutrition can also be applied to hang gliding, which can be an endurance sport at times!

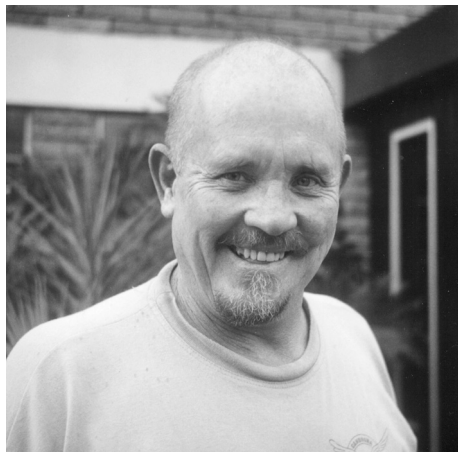
So basically I’m having a great time and being around the Dutch team is improving my flying heaps. If you want to contact me for info on European flying my email address is <info@heather-mart.demon.nl> but you’ll need to be in touch before June.

If you want to take part in the Dutch Nationals, the dates are:
Towing (Holland): 19/20 May and 2-4 June.
Mountain (fly just this part if you like): 16-22 July, Laragne. The British League final is also in the area (St André) sometime in July.

To finish on, fly safely (if in doubt – there’s always tomorrow), stay healthy, enjoy life and JUST DO IT!



HGFA General Manager's Report



I look forward to seeing many of you at the HGFA Fly-In and Awards Night over the weekend of 28 and 29 April in the Canberra area. The HGFA Board will be meeting over the same weekend – all are welcome to sit in on the meeting and provide input.

Aircraft Insurance

HGFA members can insure their aircraft and equipment against loss or damage whilst being transported under a "Marine Cargo Policy" established through our insurance brokers Chamberlain Knights-OAMPS. The policy carries a \$500 claim excess and costs \$20 per \$1,000 cover plus a \$55 fee. Members seeking more details of this cover should call Kevin Chamberlain on 02 8838 5760.

CASA, Clouds and Codswallop

I must respond to Graham Sutherland's Letter to the Editor (February AG/SS). Graham paints a picture of increasingly draconian rules and reg's being introduced, simply for the sake of having rules – this is certainly far from the case. HGFA members, employees and volunteers are continually striving to maintain our freedom to enjoy our sports and increase safety. Whenever any rule or requirement is proposed, many factors are considered, including: Is it necessary? Will it increase safety? Is it reasonable? Without these components pilots will not accept it; and obviously without pilot acceptance gaining compliance is impossible.

We enjoy a high level of self-administration of our sports in Australia, under the oversight of CASA. I agree with Graham that CASA is not an evil tyrant, and CASA officers are certainly well intended. But do not think that our good relation-

ship with CASA just "happened". It has been built through many years of "seeking to ensure" compliance, promoting safety, being prepared to discipline our members and generally being seen to be responsible airspace users. Without this ongoing commitment to safety and the promotion of compliance, we would rapidly lose many of our freedoms. Similarly, without a strong commitment to safety, we would lose more of our flying mates.

I am not so naive as to argue with Graham's statement that few "bother" to adhere to our requirement to remain 1,000ft below cloud, though this is a worldwide standard for all aviators. If you are in the practice of ignoring this rule, you should do so with extreme caution. Powered aircraft operating on instruments (or "IFR") will break cloud on descent – if you are at cloudbase the pilot will have no chance of avoiding you. Sure our "big sky" means that we have had few near misses, though this doesn't mean it can't happen. Several years ago a medium size RPT (regular passenger transport) broke cloud on descent into Dubbo NSW, only to find a gaggle of hang gliders just below the cloud. Though travelling at around 200kt, the captain of the RPT was able to take quick evasive action to avoid the gliders. I recommend pilots check the En-route Charts for the area in which they fly. These charts show routes regularly used by aircraft operating on instruments. These must be avoided.

Our sports rely on volunteers, there is no way that CASA could begin to monitor our sites and carry out the many functions of our clubs and members. Gaining compliance through using "peer pressure" to sway pilots into adhering to safety based operating rules cannot be replaced by someone waving a big stick. I would be happy to discuss any of our rules that are seen to be needless – I suggest that there are very few.

Flying Unauthorised Sites

I am still hearing of pilots flying sites in close proximity to busy beaches and crowds of people. Flying sites in inner cities where many people are in close proximity is not on. I remind hang glider and paraglider pilots that we must remain 25 metres horizontally and 100 feet vertically clear of people, buildings and roads.

Accidents

No 1

Pilot: Advanced HG pilot
Experience: 500+ hours
Hours previous 90 days: 11, including 4.5 on previous weekend

Hours on craft: 50+, 2.5 years
Aircraft: High performance HG
Damage: Bent keel and basebar, crossbars damaged at nose, torn sail at wingtip
Weather: 10kt, moderate turbulence
Location: Coastal cliff, 30m
Pilot injury: Cracked rib and grazes to knees

Description:

This was the first time the pilot had flown this site. He spoke to the local pilots present, five flying "Funs" and 2 paragliders, and watched four hang gliders take off. The pilot launched, the wind was slightly crossed, with a cross-headwind on the first pass. He turned immediately after take off to stay in the lift band. Observers said that the glider was lifted in a gust and turned toward the cliff, then a wingtip became caught in the bushes on top and the glider turned into the cliff below cliff top. The glider then went down the cliff face upside down, slowing on an earth slope at the bottom before stopping among large boulders. A paraglider pilot landed immediately and assisted the pilot to get out, after taking precautions in case of neck injury.

Comment from the pilot:

"The ending could easily have been more serious, as it was there was no concussion or damage to the helmet, and I climbed out immediately with only some grazes and stiffness, before removing the glider from the beach. I recall deliberately taking the decision when the glider hit the cliff to dive it upside down to put the glider between the cliff and myself. The launch was difficult in a high performance glider, where it is not so difficult in the Fun type gliders. I should not have attempted the cliff launch with a cross wind in that glider. I should have flown straight out, better to be safely out and risk losing the lift band than risk being lifted into the cliff. I believe that my run could also have been better, after one of the pilots said in the car park that he had heard another pilot say to me that it is similar to a Stanwell Park take-off, I gave it more than this, but maybe not enough. I was not aware of the advantages of the Fun type gliders, thinking my glider was better than any there, so whatever they could do, I could do."

No 2

Pilot: Advanced PG pilot
Experience: 208 hours
Hours previous 90 days: 30
Hours on craft: 125
Aircraft: High performance PG
Damage: Nil



A gaggle of paragliders during the 2001 Manilla Open

Photo: Courtesy Godfrey Wenness

Harness: Thick foam back protection included
Weather: 4-5kt, strong turbulence
Location: Inland outlanding
Pilot injury: Compressed vertebra L1

Description:
 Whilst doing beats to set up a landing in a small field, a thermal broke off and the wind direction changed, greatly increasing the glider's ground-speed. The pilot was forced to make a quick turn to make room to land, and then make another 180° turn into wind. At this point the glider was into wind, straight and level, without any surge. The wind then backed off suddenly, and the glider encountered what seemed a strong patch of sinking air, which resulted in the glider and pilot falling 5-8m. The pilot automatically attempted to flare, which led to him landing on his rear rather than his feet.

Comment by the pilot:
 "If I had not automatically flared, which put me off balance, I could have landed on my feet uninjured. A larger field would have been desirable. The glider didn't collapse, I think either the trees on the upwind side of the field or strong thermal sink must have led to the rapid height loss."

No 3
Pilot: Advanced HG pilot
Experience: 200 hours

Hours previous 90 days: 35
Hours on craft: 45
Aircraft: High performance HG
Damage: Broken upright
Weather: 5-10kt, light turbulence
Location: Inland outlanding
Pilot injury: Broken arm

Description:
 Pilot elected to land uphill after allowing insufficient height and time to fully plan a landing. On late final, the pilot had to manoeuvre to avoid a previously unseen wire fence. A significant tailwind component and insufficient flare caused the basebar to impact the ground at significant speed, causing the pilot to swing through the control frame, breaking his arm.

Pilot comment:
 "Due to thermalling much too low and leaving insufficient time to plan my landing I failed to observe the wire fence or the tailwind component of my chosen landing direction (which was probably caused by a thermal breaking off). On approach I also failed to keep adequate airspeed for an effective flare. The lessons I have learned are: always leave adequate height to plan a landing, especially in light and variable conditions; and fly with wheels fitted (I believe that wheels would have prevented injury in this instance)."

Fly safely,
 Craig Worth

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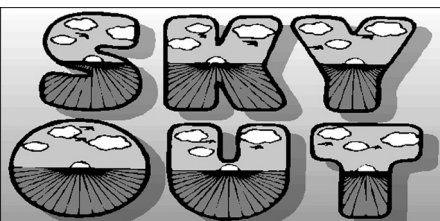
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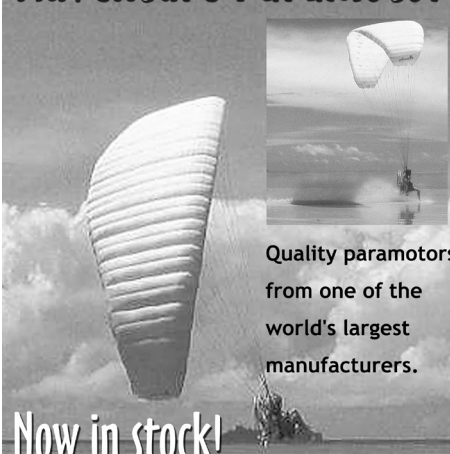
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CLASSIFIEDS ARE NOW FREE OF CHARGE to HGFA members up to a maximum of 40 words. One classified per person per issue will be accepted. Classifieds are to be delivered directly to the sub-editor, by email or post, not by phone. The deadline is 25th of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

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

Hang Gliders & Equipment

New South Wales

Aero 145 nov, GC, Danny Scott harness with chute, ball vario, full face helmet, spare DT. Everything needed for novice to start flying. \$1,500 for the lot. Ph: Julian 0418 600031; email: <ambercon@1earth.net>.

Airborne Shark 156 adv, flies & lands beautifully. VGC, less than 100 hrs airtime. Folding basebar (no more tangled wires or dropped pip pins!), XC bag. White with red centre US. Bargain at \$2,600. Will transport. Ph: Peter 02 6281 3746 (h).

Airborne Shark 156 adv, less than 20 hrs, one year old. As new cond. (of course!). Telly tubby purple/air sea rescue orange US with white MS. Suit new buyer. Handles sweetly (overcame feeble pilot input to gain 3rd place in 'B' Grade in the State Titles.) Must sell due to building commitments (ransomed to the interest rate). \$4,000 or nearest offer. Ph: 'headwind' Harry Docking 02 66854181.

Charley Insider full face helmet, medium-58, brand new, metallic grey, \$200. Ph: 02 42942817.

Danny Scott 'Stealth' harness, EC, side mounted 'chute, suit pilot around 6'2", \$750. Ph: Mark 02 95483493.

GTR 162 – free to any home! Flew 10 years ago, now stored in a Newcastle garage. Looked okay last week when I set it up for old times sake. Might suit an OS pilot touring OZ? Or maybe pool training or whatever. If not, then off to the tip it goes! Also got a SkySytems Bug harness with Metamorphose PA Chute. Best offer for them gets 'em. Ph: Peter 0427 401627.

(General Manager note: Do not fly old gliders without a safety check first. Also, old high performance gliders are still high performance gliders & should be flown by Advanced Certificated pilots only.)

EW Combat 2 (152) adv, EC. New "PX" LE by Moyes in early 1999. Pink/purple US. \$1,100. Ph: Martyn 02 99936072 (w); 02 94988849 (h).

Fun 190 nov, low airtime, suit new glider buyer, \$3,250. Ph: 02 49434900 (h).

East Coast HG and PG Centre

For the following equipment contact: Jason Turner, ph/fax 02 4963 7070 or email <jasonturner@iprimus.com.au>.

Fun 190 nov, lavender/fluoro yellow/white, 20 hrs, \$3,300.

Mars 170 nov, blue/fluoro yellow/white, new sail, \$650.

Fun 220 nov, red/fluoro yellow/white 80 hrs, suit fat boy/foot blender/tandem, \$3,800.

Stealth II harness, ex-demo, suit 175cm slim, \$950.

Moyes Sonic 165 int, fluoro yellow/black, speed bar, only 20 hrs, near new cond., possible delivery NSW, \$3,300. Ph: Pearce 02 95247191; 0418 278142.

Moyes Flex harness, blue, suit pilot around 6', as new, \$550. Hi-energy 22 gore reserve, never deployed, three yrs old, \$480. Icom 40GS, plugged to full face helmet, \$400. Ph: Murray 0403 252080; 02 97737408 (h).

Sting 118 int, GC, blue/fluoro yellow. New wires, spare DT, speedbar, wheels, full face helmet, batten profile & manual included, \$700 ono. Ph: 02 44762098.

Sting 154 int, hardly used, suit new buyer, \$2,600. Sydney. Ph: Roger 0418 447294.

SX4 adv, new cond., \$3,500. Ph: 02 42680589.

Xtralite 147 adv, flies beautifully, \$1,500. GPS, Garmin Etrex \$260, new last December. Sydney. Ph: Bruce 0417 467695; 02 93654635 (h).

Xtralite 164 adv, VGC, new sides wires, c/w brand new unused spare sail, \$3,500 ono. Ph: Alan 0408 470544; 02 98995351 (h).

Victoria

Moyes CSX5 adv, purple & red US. Power rib TS. Nice handling. GC. \$3,200. Ph: Phil 0407 042 634; 03 5751 1594.

Moyes SX 155 adv, 3 yrs old, white power sail, US black with orange "MOYES" lettering, new side wires, \$2,800. XS 155 adv, white/orange power rib sail, \$800. Parachute GQ Security reserve modification pulled down apex, \$295. Ph/fax: 03 59786388; mobile 0428 390560.

Moyes SX4 adv, <100 hrs, white with Icom logo, fin, spare DT. \$3,900 ono. Ph: Gilbert 03 57501158 (w); 03 57551124 (h).

Queensland

Airborne Shark 156 adv, VGC, 15 hrs, orange/yellow US, folding basebar, spare DT, \$3,800. Ph: 07 55298793.

Fun 190 nov, perfect cond., only 5 hrs airtime. Suit beginner or pilots requiring hassle-free flying. Ph: 07 49780132.

South Australia

Moyes Xtralite 164 adv, 140 hrs, LE White, TS Mylar white, US black with turquoise X, VGC,

2 spare DTs, sweet handling, \$1,750. Ph: Chris 0411 793692; email <c.nagel@leonardo.com.au>.

Xtralites 137 (2) adv, one mylar white/purple, the other white/pink, both with small control bar. GC. \$1,500 each obo. Ph: Colin or Sue 08 83771641. Will be at Birchip for Easter.

Western Australia

Sting 154 int, 31 hrs on logbook, speedbar, wheels, harness, helmet, tow bridle, or swap for paraglider. Ph: Chris 08 97343206.

Paragliders & Equipment

New South Wales

GOORAMADDA AIR:

For all your paramotor needs. Importer and agent for Delta Sky Paramotors. Dealer enquiries welcome. Contact Jos Weemaes <jweemaes@albury.net.au>, 02 6026 5658 (h) or visit [www.albury.net.au/~jweemaes].

East Coast HG and PG Centre

For the following equipment contact: Jason Turner, ph/fax 02 4963 7070 or email <jasonturner@iprimus.com.au>.

Matrix DHV1-2, 1 x large 90-115kg red; 1 x XL 105-137kg red. Both gliders are spotless with less than 5 hrs. \$2,900 each.

Firebird "@" DHV1-2, small 65-80kg, purple, 15 hrs only, \$2,700.

Gradient Saphir 26 Perf, 100 hrs, bargain, \$1,200. Edel Galaxy tandem DHV2, 50 hrs, EC, \$2,500. Ph: Brett 02 66876907; email <blps@mail.com>.

Victoria

Edel Response DHV2-3, small, green, EC, \$3,200. Edel Confidence DHV1-2, large, mauve, EC, \$3,200. Ph: Fiona 0419 378616.

Edel Response DHV2-3, medium, mauve, EC, \$3,400. Edel Space 40 Tandem, 10A 2B, mauve, VGC, good first tandem wing, \$1,000. Ph: Hans 0419 378616.

Trikes & Equipment

South Australia

Edge 582 T2-2631, reg 24/2/05, new wing fabric, most extras incl. trailer & car racks. 200 hr service just completed. Maintained in GC. \$11,000 ono. Ph: 08 86823148; fax 08 86823869.

Other

Free Web Site: 300 hang gliders for sale on the net. Free site, no catches. List your gear and see your ad immediately appear, for everyone to see. Change your ad at anytime. Check it out at [www.technet2000.com.au/~mikeros/cgi-bin/Ultimate.cgi].

Cross Country Magazine – For subscriptions ph: Carol Binder 0417 311360.



All classifieds MUST be paid for at the time the ad is placed.

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

All GFA Classifieds can be viewed on the official
GFA web site [www.gfa.org.au].

Sailplanes

Single-Seaters

SPEED ASTIR – pristine condition, 900 hrs total, \$30,000 ono, must sell. Ph: 08 8572 7373.

STD JANTAR VH-IIT Serial No B994, 850 hrs, all aerotow, one owner, fitted with Ricoh vario, Edo Aire radio 720, comes with enclosed trailer & pigeon proof wing/fuse covers, \$30,000 or consider exchange for 25ft trailer sailer with cash adjustments. Ph: 03 9437 1155 or fax 03 9874 1342.

ASW15B – well equipped, sweet to fly, reluctant sale. Full details call Ray on 0403 412 280. Trailer, but always hangared \$22,000 ono.

SZD 55 High performance Standard Class. Low hrs, no damage, immac cond. Little more than 1/2 price of a new 55. Trailer, tow out gear, covers \$54,000 ono. Ph: 03 5882 1132, email <moroco@ozsky.net>.

SZD32A – FOKA 5 complete with fully enclosed trailer, L/D 36:3, flies well, Form 2 10/01, oxygen fitted, \$12,000. Ph. Doug Taylor 07 3216 6363.

Two-Seaters

KA7 GQP, very good condition, 30 yearly & Form 2 complete, re-sprayed, gap sealed, dual instruments & trailer. Ph: Ron 02 9759 3086 (w), 02 9543 5222 (h).

SZD-50-3 PUCHACZ 40 hrs total. Factory rebuilt after accident. As new \$84,500 fly away (ex Camden). Two panels with instruments, covers, etc. Reg. marks sprayed on. Ready for shipment now (from Poland). Call Amys Aviation ph/fax: 02 9894 7784, mobile: 0408 155 215, email: <amysavia@hotmail.com>. Ask how to get A\$4,000 rebate.

Motor Gliders

C-FALKE 1700 Limbach motor – Immaculate condition, extensive instrumentation only seeing it & flying the aircraft can do it justice. \$45,000 ono. Ph: 02 6684 9183, email <jolea@mullum.com.au>.

STEMME S10 GTS Based Camden, two-seat, 50:1, self launch, every luxury item. My share for sale, \$27,000. Join a first class syndicate at this very low price. Ph: Dennis 02 9899 1843.



Available again after a trip halfway round Australia. Touring Motor Glider ZBN

– 12 litres/hr, 3 position prop, retract undercarriage, folding wings, toe brakes, strobe lights, 31:1 glide ratio, cruise at 100kt, 6 hrs endurance, 2 headsets, KLX135 GPS, Skyforce GPS, dual flight instruments, low hrs, side by side comfort. Form a syndicate & see Australia. Ph: Barry 02 4636 6314.

DG500M 1/5 share, based Boonah SE Qld. Fly anytime, one person operation. Enjoy wave, ridge & thermal around Scenic Rim. Call Mike for details: 0408 195337 or 07 3812 2029.

DG400-XJZ 1,900 AF hrs, 200 E hrs 17/15m, wing-fuel & water tanks, BEA-auto. prop. retrac. fully equipped, incl. Dittel 760 radio, headset, S-NAV ACK beacon, Cobra trailer. All in excel. condition, always hangared. Ph/fax: Frank 02 4454 3955, email <fjkriz@shoal.net.au> or John on 02 9771 3017. All offers including 1/2 share of above & large T-hangar at Camden c/w water, solar, power will be considered.

Instruments and Equipment

FOR THE BEST Varios, TE Probes, GPS Nav systems, dataloggers & parachutes contact BORGELT INSTRUMENTS – ph: 07 4635 5784 – fax: 07 4635 8796 – mob: 0428 355 784 – email: <mborgelt@tmbsa.design.net.au> – web: [www.ozemail.com.au/~mborgelt].

\$1,500 – ATR 720 Comm “Avionic Dittel GMBH” base station. Dittel radio is removable for use in aircraft. Unit is in very good condition with A1 battery. Replacement cost for Dittel alone is \$2,500. Can email photo. Contact: <Don@Cramer.com.au> or ph: 0409 699115.

Spare Parts

For Information and Spare Parts on:



and



Alexander Schleicher
Ultra High Performance Gliders
and Training Sailplanes

Please contact:

CHRIS ECKEY
Ph. (08) 84492871 Fax (08) 82423698

General

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

1. **Hornet H206 VH-GMW** with trailer, radio & basic instruments fair condition REDUCED TO A\$12,000 ONO.
2. **SZD Junior VH-XOA** with basic instruments, no radio, no trailer, new canopy REDUCED TO A\$19,000 ONO.
3. **IS28B2** damaged in heavy landing, basic instruments & radio, no trailer \$10,000 ono.
4. **Arrow canopy** \$500 (never used).
5. **IS28B2** (2 piece) canopy front piece, little used, main piece as new, never used, \$700.
6. **Kestrel canopy** front piece \$400.
7. **Hornet canopy** front piece \$500.

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



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 & relevant international news & articles. \$US26 for 1 year, \$47 for 2 years, \$65 for 3 years. 107-1025 Richmond Road Ottawa, Ontario K2B 8G8 Canada, email: <sac@sac.ca>.

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

SAILPLANE AND GLIDING: The only authoritative British magazine devoted entirely to gliding. 52 A4 pages of fascinating material & pictures with colour. Available from the British Gliding Association, Kimberley House, Vaughan Way, Leicester, England. Annual subscription for 6 copies £17.50.

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

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

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

AIRBORNE MAGAZINE: Covering all facets of Australian & New Zealand modelling. The best value modelling magazine. Now \$21/pa for 6 issues. Plans & other special books available. PO Box 30, Tullamarine, VIC 3043.



NEW SOUTH WALES

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1 Perry St, Kings Langley NSW 2147, ph: 02 9674 2551.

Bathurst Soaring Club

PO Box 1682, Bathurst NSW 2795, ph: 02 9750 0209,

email <pbowring@bigfoot.com>.

Byron Bay Gliding Club

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

Central Coast Soaring

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

Concordia Gliding Club

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

Cudgong Soaring

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

Forbes Soaring Club

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

Goulburn Gliding Group

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

Grafton Gliding

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

Harden Gliding Club

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

Hunter Valley Gliding

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

Kentucky Flying Club

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

Lake Keepit Soaring

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

Leeton Gliding Club

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

Orana Soaring Club

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

RAAF Richmond Gliding Club

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

RAAF Williamtown

RAAF Base Williamtown NSW 2314, ph: 02 4964 5062

R.A.N.G.C.

PO Box A37, Naval Air Base Nowra NSW 2540,

ph: 02 4421 1333.

Soar Narromine

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

Southern Cross Gliding Club

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

Temora Gliding Club

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

Tumbarumba Gliding Club

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

Tumut Gliding Club

PO Box 112, Tumut NSW 2720, ph: 02 6947 1148.

Wagga/Lockhart Gliding Club

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

Warrumbungle Gliding Club

Kirriwa Gilgandra NSW 2827, ph: 02 6795 4333.

ACT

Canberra Gliding Club

PO 1130, Canberra City ACT 2601, ph: 02 6231 1995.

QUEENSLAND

Boonah Gliding Club

PO Box 107, Boonah QLD 4310, ph: 07 5463 0190.

Bundaberg Gliding Club

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

Caboolture Gliding Club

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

Central Queensland Gliding Club

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

Darling Downs Gliding Club

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

Gympie Soaring

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

Kingaroy Soaring

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

Moura Gliding Club

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

North Queensland Soaring

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

QAIR Training Corp

PO Box 698, Booval QLD 4304, ph: 014 984 752.

Southern Downs Soaring

PO Box 144, Warwick QLD 4370, ph: 07 3378 1717.

Tarwan Soaring

PO Box 34, Wandoan QLD 4419, ph: 07 4627 4080.

VICTORIA

Albury Corowa Gliding Club

PO Box 620, Wodonga VIC 3689, ph: 018 691 611.

Beauford Gliding Club

7 Chapman St, Footscray VIC 3011, ph: 03 9687 6691.

Bendigo Gliding Club

62 Lawson St, Bendigo VIC, ph: 03 5443 9169.

Corangamite Soaring

Kurweeton, Derrinallum VIC 3325, ph: 03 5593 9277.

Geelong Gliding Club

PO Box 197, Bacchus Marsh VIC 3340, ph: 03 5369 5125.

Gliding Club of Victoria

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

Grampian Soaring

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

Latrobe Valley Gliding Club

PO Box 625, Morwell VIC 3840.

Mangalore Gliding Club

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

Mt Beauty Gliding Club

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

RAAF East Sale Gliding Club

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

South Gippsland Gliding Club

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

Stawell Gliding Club

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

Sportavia Soaring

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

Sunraysia Gliding Club

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

Swan Hill Gliding Club

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

Victorian Motorless Flight Group

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

Wimmera Soaring

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

SOUTH AUSTRALIA

Adelaide Hills Soaring

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

Adelaide Soaring

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

Adelaide University Gliding Club

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

Balaklava Gliding Club

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

Barossa Valley Gliding Club

PO Box 123, Stonefield via Truro, SA 5356,

ph: 08 8564 0240, email <brynw@senet.com.au>.

Blanchtown Gliding Club

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

Bordertown-Keith Gliding Club

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

Gawler Gliding Club

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

Lake Bonney Gliding Club

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

Millicent Gliding Club

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

Murray Bridge Gliding Club

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

Port Augusta Gliding Club

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

Renmark Gliding Club

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

SA AIR TC

PO Box 2000, Salisbury SA 5108, ph: 08 8258 8026.

Waikerie Gliding Club

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

Whyalla Gliding Club

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

TASMANIA

Tasmania Soaring

PO Box 24, Ross TAS 7209, ph: 03 6255 2191.

NORTHERN TERRITORY

Alice Springs Gliding Club

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

North Australia Gliding Club.

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

WESTERN AUSTRALIA

Beverley Soaring

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

Gliding Club of Western Australia

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

Morawa Flying Club

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

Mt Newman Gliding Club

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

Narrogin Gliding Club

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

Stirlings Gliding Club

Post Office, Lower King WA 6330, ph: 08 9828 2119.

WA Air Training Corp

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HGFA Addresses



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



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

Hang Gliding Federation of Australia

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

Board Members:

Brian Webb (President)

PO Box 238, Bright VIC 3741, ph: 0417 530972, <President@hgfa.asn.au>

Rohan Grant (VP & ASAC Delegate)

188 Bathurst St, Hobart TAS 7000,
ph: 03 62334405 (h), fax: 03 62243598,
<Vice_president@hgfa.asn.au>

John Reynoldson (Treasurer)

68 Teddington, Hampton VIC 3188,
ph: 03 95970527, fax: 03 95981302,
<John_Reynoldson@hgfa.asn.au>

Rohan Holtkamp

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

Bill Moyes

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

Philip Pritchard

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

Michael Zupanc (CIVL Delegate)

6 Sibyl Street, Southport QLD 4215,
ph: 07 55325895 (h), 0408 662328;
<Mike_Zupanc@hgfa.asn.au>

General Manager & Operations Manager: Craig Worth

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

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

ACT HG and PG Association

PO Box 3496, Manuka ACT 2603; Pres: Belinda Head 02 62268400, <belinda.head@casinocanberra.com.au>; Sec: Kev Whitton <kev.whitton@dofa.gov.au>; Trs: Steve Foggett <Steve.Foggett@aspect.com.au>; Committee Members: John Chapman, Duncan Kelley, Peter Beckwehl, Michael Porter (SSO). Meetings: 1st Tue/month 7:30pm, "Sky Lounge" Yamba Sports Club, Phillip.

Hang Gliding Association of WA

PO Box 82, South Perth WA 6151; Admin: Richard Williams 08 92943962, 0427 057961; 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.

NSW Hang Gliding Association

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

North Queensland HG Association

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

South Australian HG Association

PO Box 59, Hove SA 5048; Pres: Stuart McClure 08 82973452; Sec: Mark Tyminski ph: 08 83774570 (h), 08 84076621 (w), 08 84076628, <marknjan@senet.com.au>; Trs: Gary Stockton 08 82702910.

Tasmanian Hang Gliding Association

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

Victorian HG and PG Association

PO Box 400, Prahran VIC 3181; [www.vhpa.org.au]. Pres: Phillip Campbell 03 53343034; Sec: Sara Moser 03 98130449; SSO: Rob Van Der Klooster 03 52223019.

Clubs

NEW SOUTH WALES

Blue Mountains Hang Gliding Club Inc

Pres: Peter Burkitt 0418 435204, <artisan@sia.net.au>; Sec: Alan Bond 02 98995351, 9 Finchley Pl, Glenhaven NSW 2353; SSO: David Middleton 02 47362605; Newsletter: Michael Reese-Evans; Site Development Officers: Richard Lockhart 0418 130354 & Derek Toulalan 02 47877305. Meetings: Last Wed/month, 7:30pm, Blue Cattlelog Tavern, St Clair.

Byron Bay Hang Gliding Club Inc

Pres: Andrew Polidano 0414 843510, <andrew@byron-bay.com>; V-Pres: Brett Cook 02 66876907; Sec: Michelle Batterham 0414 876907, <bllps@linknet.com.au>; Trs: Brian Braby 02 66280983, <bbraby10@scu.edu.au>; SSO (HG): Mark Woods 0418 676469; SSO (PG): Brett 02 66876907. Meetings: 1st Wed/month 7:30pm, Bangalow Bowling Club. Comp day: 1st Sat/month, ph: Adrian Connor 02 66285997.

Illawarra Hang Gliding Club Inc

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

Kosciusko Alpine Paragliding Club

Pres: Roger Lifford 02 62815404 (h); Sec: Lisa Rylie 02 62359120, 02 62359060; SSO: Heinz Gloor 02 64576019 (w), 02 64567171 (h).

Manilla SkySailors Club Inc

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

Mid North Coast Hang Gliding Association

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

Newcastle Hang Gliding Club

PO Box 64 Broadmeadow NSW 2292; Pres: Tascha McLellan 02 49278867 (h), <tascha.conrad@hunterlink.net.au>; V-Pres: Brad Coates; Sec: Pat Roberts 02 49551669; Trs: Bill Olive 02 49213804; Newsletter: Jason Turner <jasonturner@iprimus.com.au>; SSO: Coastal - Jason Turner ph/fax: 02 49637070 (h), 0419 997196, Inland - John O'Donoghue 02 49549084. Meetings: Last Wed/month, Souths Leagues Club.

Northern Beaches Hang Gliding Club Inc

Pres: Sandy Thomson 02 99812019, 0419 250220, <planky@bigpond.com.au>; V-Pres: Angus Evenden 02 99978777, 0416 205025, <creation@tpg.com.au>; Sec: Nils Vesk 02 99382963; Trs: Jim Gaal 02 99977704, 0414 799822, <jimg@acay.com.au>; SSO: Mike Eggleton 02 94517127, Forrest Park 02 94502674, Glenn Salmon 02 99180091. Meetings: 1st Tue/month, Long Reef Golf Club.

Stanwell Park HG and PG Club

PO Box 258 Helensburgh NSW 2508; Pres: Rob Lepre 02 42948694, <pepielepre@one.net.au>; Sec: Angela Johnson 02 42683748; Trs: Joe Fussell 02 42943942; Events Co-ord: Jules Sanderson 02 42943092; Site Manager: Steve Pick 02 42944195; SSO: Jamie Cannon 0410 686232, Steve Pick (PG) 02 42943072.

QUEENSLAND

Cairns Hang Gliding Club

Pres: Bernie Zwalen 07 4096 5593; V-Pres: Russell Krautz 07 40541085; Sec: Lance Keough 07 40912117, 31 Holm St, Atherton QLD 4883; Trs: Nev Akers 07 40532586 (h), 07 40512438 (w).

Canungra Hang Gliding Club Inc

Pres: P. Beard 07 33487150; V-Pres: Shauna Purser 07 6679 3404, <shaunapurser@yahoo.com>; Sec: David Pearson 07 5543 7252; Trs: Fran Ning 07 55773260, <ning@ausinfo.com.au>; SSO: Andrew Horchner 07 38707709, 0412 807516, <afactor@gil.com.au>

Central Queensland Skyriders Inc

PO Box 1428 Yeppoon QLD 4703; Pres: Bob Pizzev 07 49387607; Sec: Grayden Long 07 49397701; SSO: Geoff Craig 07 49923137; Paul Barry 07 49922865.

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.

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 Allan 0417 756878; V-Pres: Duncan Whyte 07 54431698; Sec: Jean Luc Lejaille 07 54863048; Trs: Michael Powell 07 54474093; SSO: David Cookman 07 54498573.

Townsville Hang Gliding Association Inc

Pres: Clint Smith 07 47747650; Sec: David McMahon, 07 4772 3858, PO Box 103, James Cook University, Townsville QLD 4811; Trs: Graeme Beplate 07 47732913; SSO: Graham Etherton 0427 831797.

Whitsundays Hang Gliding Club

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

VICTORIA

Dynasoarers Hang Gliding Club

Pres: Peter Hannah 03 52632335; Sec: John Norton; Trs: Rod Trevor 03 52811209; SSO: Ted Remeika; 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 Victorian Hang Gliding Club

[www.vhpa.org.au/ehgc/] Pres: Andrew Wickes 03 9752 5528; Sec: Scott Barrett 03 5941 5656; Trs: Steve Donehue 03 9873

3473. Meetings: 3 Wed/month, "Rhubarb Room" The Palace Hotel, 893 Burke Road Camberwell (opposite Camberwell train station).

North East Victoria Hang Gliding Club Inc

[www.home.aone.net.au/gilbert/nevhc.htm] Pres: Bill Graham 03 57501828; Sec: Sarah Nicholas ph/fax 03 57551040; Trs: Gavin Hanlon; SSO: Karl Texler. Meetings: 1st Thu/month, Alpine Hotel, Bright.

Sky High Paragliding Club

<skyhigh@vhpa.org.au>; Pres: Hakim Mentess 0412 617216, 03 98538921; V-Pres: Carolyn Dennis 03 98991304, 0417 515626; Sec: Rick Keating 03 93052032, 0408 514571; Trs: Barbara Scott 03 94898152, 0408 844224. Meetings: 1st Wed/month 8pm, Retreat Hotel, 226 Nicholson St, Abbotsford.

Southern Cross Paragliding Inc

Pres: Gary Clarkson 0419 319948. Meetings: Last Wed/month.

Southern Microlight Club

Pres: Mark Howard 03 97511480, 0418 533 731, fax 03 97511584; V-Pres: Kel Glare; Sec: Ben De Jong; Trs: Dianne Pierpoint. Meetings: 2nd Tue/month 8pm, various venues.

Western Victorian Hang Gliding Club

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

WESTERN AUSTRALIA

Avon Valley Hang Gliding Club

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

Cloudbase Paragliding Club Inc

Club message bank 08 94875253; [www.cygnus.uwa.edu.au/~madmike/paraglid.html]; <cloudbase@paragliding.org>; Pres: Dave Humphrey 08 95745440, 0418 954176, <paradive@avon.net.au>; Sec: Michael Duffy 08 93823036, 0417 923741 <madmike@cygnus.uwa.edu.au>. Meetings: Last Wed/month 8pm, Sportsmans Association, Woodsome, Mt Lawley.

South West Microlight Club

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

WA Hill Flyers Club

<hillflyers@hotmail.com>; Pres/SSO: Rick Williams 08 9294 3962, 0427 057961; Sec: Dave Longman 08 9385 9469; Trs: Alice Williams; Committee member: Mike Thorn 08 92988174; 0409 901500. Meetings: Last Thur/month, 7:30pm, "Cascades" Bistro and Function Centre, 231 Guilford Rd, Maylands.

Western Soarers Hang Gliding Club

[www.iinet.net.au/~navi] Pres: Mark Thompson 08 9491 3076, <mark.thompson@team.telstra.com>; V-Pres: Daryl Speight 08 93568195, <Daryl.Speight@kbjv.com>; Sec: Geoff Smith 08 92232323, <geoff.smith@jhg.com.au>; Trs: Graeme Sharp 08 9445 7044, <GSharp@stothoore.com.au>; SSO: Mark Stokoe 08 9581 3572; Events & Promotion: Krista Gaunt 08 93484246, <Krista.Gaunt@woodside.com.au>. Meetings: 1st Wed/month 7:30pm, The Irish Club, 61 Townshend, Subiaco.

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