

# Gliding

## Australian SKY SAILOR



### In this Issue:



**Czech Republic  
Aerotow**

**Taking the  
Plunge, Boots  
and All**





# AIRTIME PRODUCTS

## AUSTRALIA

INNOVATIVE AVIATION

• FULL RANGE SPARES

• AUSTRALIAN IMPORTERS FOR RADNE & CORS-AIR MOTORS

• PACKAGE DEALS AVAILABLE WITH HANG GLIDERS  
AND PARAGLIDERS

### DISCOVERY PARAMOTORS



- 4 PART CAGE
- LOW HANG POINTS
- REMOVABLE 9 LITRE FUEL TANK
- IN-FLIGHT RESTART
- CHOICE OF RADNE OR CORS-AIR MOTORS
- PRICE FROM \$5,500 INCL GST

### THE EXPLORER



- IN-FLIGHT RESTART
  - PROPELLER BRAKE
  - QUICK & EASY SET UP
  - PRICE \$5,800 INCL GST
- FOLDING PROPELLER AVAILABLE AS OPTION  
FITS ALL MODELS

### POWERLITE TRIKES



- PACKS UP INTO CARRY BAG
- REMOVABLE 10 LITRE FUEL TANK
- IN-FLIGHT RESTART
- CHOICE OF RADNE OR CORS-AIR MOTOR
- PRICE FROM \$5,800 INCL GST

3 STORMVOGEL DRIVE. AIRLIE BEACH QLD 4802 PH: (07) 4946 6305 FAX: (07) 4948 0974 MOBILE: 0407 147 991  
INTERNATIONAL PH: 617 4946 6305 FAX: 617 4946 0974 info@airtimeproducts.com www.airtimeproducts.com

# Emergency Parachute Systems

## Parachutes Australia

has been supplying the world with emergency parachute systems for Civilian and Military applications for over 30 years.

### The Thinback and Slimpack Emergency Parachute Systems

manufactured by Parachutes Australia are designed, tested and manufactured beyond regulatory requirements and provide the maximum safety, performance and comfort. A choice of parachute canopies are available to suit your requirements.

Parachutes Australia holds both Certificate of Type Approval issued by CASA and TSO Authorisation from the United States FAA for the various component parts that make up the Thinback and Slimpack Parachute Assembly.



B12 Snap  
Standard

Quick Eject  
Snap Option

Slimpack (Seat Version)



22 Bosci Road Ingleburn NSW 2565  
Ph 02 9829 5355 Fax 02 9829 1300  
Email: sales@parachutesaustralia.com  
Web: parachutesaustralia.com

Thinback Emergency Parachute System



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

## EDITORIAL CONTRIBUTIONS AND ADVERTISING

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

### AUSTRALIAN For all editorial contributions contact:

**GLIDING** GFA sub-editor Anne Elliott, PO Box 189, Narromine NSW 2821, ph/fax: 02 6889 1229, email <annel@hwy.com.au> or The Gliding Federation of Australia, 130 Wirraway Road, Essendon Airport VIC 3041, ph: 03 9379 7411, fax: 03 9379 5519, email <secretary@gfa.org.au>.

### For advertising bookings contact:

The Gliding Federation of Australia, 130 Wirraway Road, Essendon Airport VIC 3041, ph: 03 9379 7411, fax: 03 9379 5519, email <secretary@gfa.org.au>, web site [www.gfa.org.au].

### SKYSAILOR For all editorial contributions and advertising bookings contact:

HGFA sub-editor Richard Lockhart, c/o Blackheath Post Office, Blackheath NSW 2785, ph: 0418 130354, email <skysail@ozemail.com.au>, web site: [www.hgfa.asn.au]

Skysailor classifieds: To be mailed or emailed to the sub-editor or faxed to the HGFA on 02 6947 4328. Classifieds will be included in the next possible issue.

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

## CLASSIFIEDS AND ADVERTISING RATES

All GFA advertisements to be paid prior to publication. GFA classifieds are charged at \$16.50 for the first four lines, \$4.40 for every line thereafter plus GST. HGFA classified rules are set out on the HGFA Classifieds page. Display advertising rates and specifications are available on request.

## ALL OTHER MATTERS

Subscriptions/circulation/changes of address:

The Gliding Federation of Australia – ACN 008 560 263 & GFA Sales: 130 Wirraway Road, Essendon Airport, VIC 3041, ph: (03) 9379 7411, fax: (03) 9379 5519, email <AdminOfficer@gfa.org.au>, web site: [www.gfa.org.au].

Hang Gliding Federation of Australia PO Box 558, Tumut NSW 2720, ph: (02) 6947 2888, fax: (02) 6947 4328 email <office@hgfa.asn.au>, web site: [www.hgfa.asn.au].

Deadline for all editorial contributions and ad bookings is the 25th of each month, five weeks prior to publication.

## FOR CONTRIBUTIONS TO SKYSAILOR AND HGFA WEB SITE USE EMAIL ADDRESS AS FOLLOWS:

Category	Email address	Description
Club News	clubnews@hgfa.asn.au	Information is forwarded to Skysailor and the maintainers of the HGFA web page.
Competition News	compnews@hgfa.asn.au	Information is forwarded to Skysailor and the maintainers of the HGFA web page.
Articles, advertisements and other content	skysail@ozemail.com.au	Skysailor only content

## NOTICE TO READERS AND CONTRIBUTORS

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

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

Drawings, maps, cartoons, diagrams, etc. should be in black ink on white or transparent paper.

Lettering may be pencilled lightly but clearly on the drawing, for typesetting.

Advertisements may be submitted in high resolution (300dpi at 100% size) digital TIF or EPS formats.

Please avoid sending JPG or GIF files, these do not usually achieve good printing results.

Views expressed in this magazine are not necessarily those of the GFA, HGFA nor the editors'. They are strictly the views of the contributor. Any GFA officer quoting his title will be responsible for submitting an official GFA article.

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

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

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

## CREDITS

Cover: Lake George, one of Canberra's premier soaring sites, using a 35mm Canon SLR mounted on the leading edge – Photo: Peter Kestel

Design: Suzy Gneist, Gneist & Moffatt

Film, Printing: Pirie Printers, Canberra ACT

Mailing: Pirie Printers, Canberra ACT & National Mailing, Canberra ACT



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

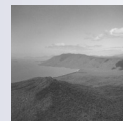


# Contents

October 2001

## This Magnificent Bowl

2



Taking the Plunge, Boots and All

4

Funny Caption Competition

5



Harry Schneider  
– Life Membership

6

NCC News

7

Sports Psychology Extracts

from a Coaching Camp – Part 1

8

How Airplanes Really Fly

– The Physical Description of Lift

10

Darrel's First Big Retrieve

14

In the Circuit

15

GFA President's Report 2000/2001

17

Jim's New Boots

18

## Winter Flying in Geraldton

– A Beginner's Perspective

19



Malaysian Paramotoring Tour 2001 – Part 2

20

Active Australia

23

HGFA General Manager's Report

23

In A Galaxy Far Far Away

26

FAI Corner

27

GFA Badges and Certificates

27



Changeover Time:  
Wizard or Streak Wing?

28

HGFA News

30

What Price for Safety?

34

## The Czech Republic Aerotow

39



Letters to the Editors

40

HGFA Events Calendar

41

HGFA Classifieds

44

GFA Soaring Calendar

46

GFA Classifieds

47

GFA Clubs

48

HGFA Addresses

IBC



# This Magnificent Bowl

Launch at the Rex and the soarable end of the Rex ridge, behind it is the Bowl. In the far distance the Washing Machine ridge can be seen



**KEN WRIGHT, Vice President, Cairns Hang Gliding Club**

This story is about an exciting hang gliding site that is little known about and even less spoken about outside of the club members that fly it. If asked to describe this site I would say that it is a site with 'attitude'. A place of unsurpassed tropical beauty, that will demand your respect and challenge your courage.

I confess to being somewhat of an adrenaline junky, but on many flights the powerful ridge lift and the boisterous punchy nature of the resident leeside thermals have produced more adrenaline than my 50 year old heart can bear. What follows is a site profile, and my hope is that many of you southern and western adrenaline junkies will come north and test your nerve at this magnificent flying site that the locals simply refer to as 'The Bowl'.

This site is not for the fainthearted or the novice; pilot rating required is intermediate to advanced with cross-country experience. The Bowl itself has no launch, and access is via a four-and-a-half kilometre downwind flight from the local Cairns flying site at Wangetti beach, commonly known as 'The Rex'.

The Rex is some 30 km north of Cairns and has a safe launch provided that the wind is left of Double Island. Double Island sits two kilometres off the mainland and 10 km south-east of launch. When the wind moves inside the island conditions degenerate rapidly and

launch becomes unsafe. The Rex is the soarable blunt southern end of a three-and-a-half kilometre razorback ridge which runs south-east along the coast. It rises at its highest point to just under 1,400 ft asl. At its northern end the ridge drops away sharply into a deep rainforested valley, only to rise again a further one-and-a-half kilometres as a near vertical wall of dense rainforest to a height of 1,800 ft asl. This awesome near vertical wall of rainforest is known as 'The Bowl'.

The Bowl is positioned slightly east of the Rex ridge and runs south-west to north-east and therefore catches squarely the prevailing south-easterlies that blow almost continuously throughout our winter. The lift at the face of the Bowl with a 20 km south-east breeze often exceeds 700-800 ft/min, but again if the direction is not optimal expect the air to be a little churned up and the lift can be marginal.

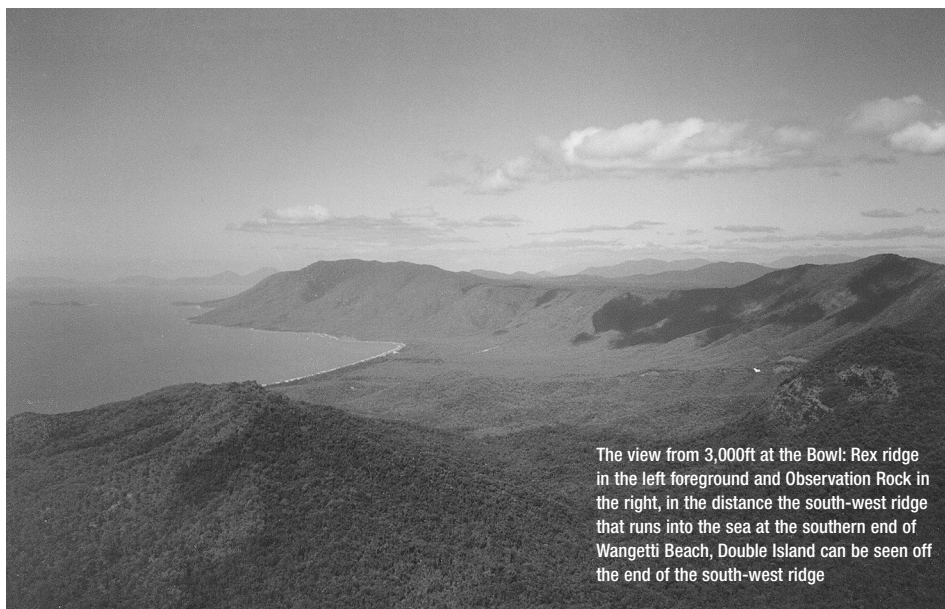
Entering the Bowl is an exercise that must be well understood as there are few landing options. The geography of the Bowl is com-

plicated by a 1,000 ft razorback ridge that runs off the seaward end into the south-east for about one kilometre before dropping into the sea at 'Turtle Cove'. Maintaining a minimum of 250 ft above this ridge on entering the Bowl is vital. Conditions at the face of the Bowl and 500 ft below the top can often catch you by surprise. Getting caught below this ridge on the inland side may qualify you to enter the Koala Club as there are no landing options other than the canopy of 100 ft rainforest trees. Be sure to keep your exit options open.

To arrive at the Bowl with sufficient height to enter safely, it is necessary to climb out to 1,600 ft at the Rex before you leave on your downwind slide to the Bowl face. On climb out keep a watchful eye on the wind direction. If it swings south you may experience sink on the way down and turbulence at the face. Too far east will compromise your glide, therefore arriving lower and again turbulence could be experienced at the face. Every Cairns pilot has a story to tell about being spat out of the Bowl with wire slaps and sail deflations. If you talk to Nev or Bernie you may never want to fly here, but on average the experience is exhilarating and unique in Australia.

Having left the Rex you arrive tracking straight at the seaward end of the Bowl, only turning into the Bowl when you are about four or five wing spans from the face. As you begin to track along this gigantic wall of rainforest, try to relax and take the pressure off the boot of your harness. At this point the rainforest canopy falls away over 1,000 ft below you and reaches





The view from 3,000ft at the Bowl: Rex ridge in the left foreground and Observation Rock in the right, in the distance the south-west ridge that runs into the sea at the southern end of Wangetti Beach, Double Island can be seen off the end of the south-west ridge

◀ The Bowl with the end of Rex ridge in the foreground running into a rainforested valley below. Clearly seen is the razorback ridge that runs off the seaward end

up over 500ft above you. Make short passes of about 50m on first entering, so that you always keep in touch with the escape route. Conditions on the day will give you a reasonable idea of what to expect at the bowl face. Don't take chances when flying low in the Bowl. If turbulence and sink are found at the face then you can escape over the ridge and fly a further one-and-a-half kilometres to 'Pretty Beach', which has a soarable ridge behind it and a safe bomb-out on the beach. However, conditions are usually safe on entering the Bowl and your vario begins to sing as you are rocketed towards the top in the powerful ridge lift.

After climbing out to the top, you begin to encounter thermals with more punch than Anthony Mundine. Bullet like, they pick you up and hurl you skyward. These thermals often carry the mentality of a bully. Usually the ridge lift will carry you to about 2,500ft asl, and from there you can appreciate the awesome splendour of where you are. The view of the Coral Coast to your east with Cairns in the distant south and Port Douglas in the distant north. After wrestling with a few bullets, enough height can be gained to see far into the Tablelands to your west. Below you the canopy of the rainforest stretches for miles, broken only occasionally by rocky outcrops and streams falling over the 2,000ft escarpment. The conical shaped black mountain is a dominant feature that sits over your right shoulder and rises to 4,000ft asl. Clouds are also a dominant feature of flying the Bowl. The warm tropical air often turns into a mystical wonderland as puffy cumulus form beneath you and rush up in the ridge lift, threatening to engulf you. Escape, however, is

▶ The complex coastline we fly: Rex launch is on the very point, the Bowl can be seen behind the camelback ridge of the Rex. Observation Rock stands forward of the Bowl in the centre and runs up to the start of the south-west ridge. Lower spurs run back to the coast from the start of the south-west ridge. Black mountain sits in the background under the cloud street and Wangetti Beach is in the foreground

only a matter of flying to the seaward end of the Bowl, where you can just sit into wind and enjoy the spectacle of it all.

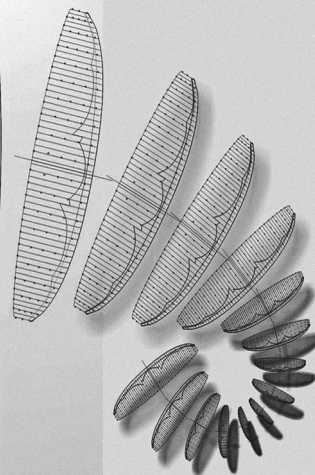
On blue days, you can ride the robust lee-side thermals generated behind the Rex ridge to over 4,000ft asl, and when this becomes a bit of a sensory overload, you can simply turn tail and continue on your flight north. The Bowl is in fact only the first stopover of an exciting 30km cross-country flight to Mossman, or a 20km flight to Port Douglas beach. But if the Bowl seems like a bit of a challenge, then the next stopover point, four kilometres downwind, will really convince you that you should have stayed at the Rex. This friendly little ridge is known to the locals as the 'Washing Machine', and for good reason. The thermals at the Washing Machine can often exceed 1,000ft/min, and all only two kilometres from the beach.

Now if you're looking for a fresh experience, breathtaking scenic beauty combined with exhilarating and challenging cross-country flying, why not come and pay us a visit? The Cairns Hang Gliding Club would appreciate the opportunity to introduce you to the unique flying experiences of tropical Far North Queensland. Our flying season is from April to November, the best time being from July to October when the south-easterly tradewinds blow five days out of seven. The Rex is primarily a strong wind site, where we fly in 15-30mph sea-breezes.

The sun is warm and the pilots are friendly, with many of us flying during the week. If you feel a call to the Far North, then you can contact me on (07) 4093 7028, or email <kzwright@start.com.au>.

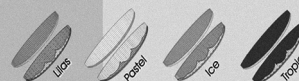


CATCH THE SPIRIT!



New!

Colors:



DHV 1/2  
XS/S/M/L/XL  
5 Sizes

WindWorks Paragliding

69 Narrabeen Park Parade

Warriewood NSW 2102

02-9913 9086

proser@tig.com.au

www.windworks.com.au





## Taking the Plunge, Boots and All

TIFFANY MACNEISH

Angels watch from overhead?

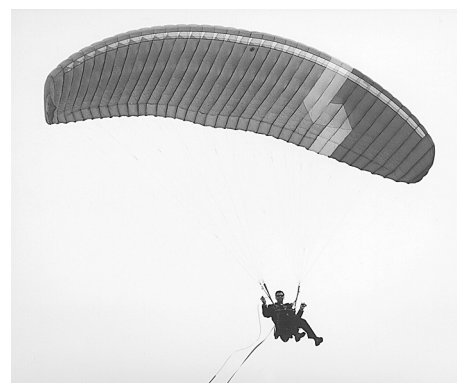


▲ Paul Macneish, the groom, launches  
▼ Tiff in harness with full gown, train, veil and boots!



Paul had spent the past 10 flights doing sleddies from Mystic and touching down near the carpark at the landing paddock. A few bewildered paraglider pilots had quizzed him as to why he was landing so short of the target. He replied with a quiet mutterance and assurance that he meant to land there. Then, on Saturday afternoon (7 April 2000), all was revealed as the groom swept down amongst the crowd, streamers in tow, amidst the applause and cheers. At one point, as he flew into the usual figure eight landing approach, he turned away from the crowd and a guest yelled out *"He's doing a runner...!"* As he unclipped himself and gathered up the wing, the familiar pilots looked on in realisation and congratulated him on his efforts. The bagpipes droned an unforgettable *"Here comes the Bride..."* as I, although a student pilot myself, arrived in tandem with Ted Jenkins. Clutching my gown (with train) and veil, I could feel the anticipation from the crowd below. Ted did a couple of spirals which brought my heart to my mouth. I requested a halt to his aerobatic performance in fear of losing my grace... and the bride came in to land... boots and all (safety first)... and we were married in the landing paddock.

Very special thank you to Ted Jenkins, who was on his best behaviour, and to Sarah Ruffles for her brilliant photography and driving the truck back down the hill.



▲ The groom on landing approach, in full tuxedo and with streamers trailing. Photo: John Ploog  
▼ Ted and Tiff launch in tandem





ALL OTHER PHOTOS: SARAH RUFFELS



▲▲ Ted and Tiff on landing approach. Photo: John Ploog  
 ▲ Touchdown! Photo: Vicki Broome  
 ▲ Tiff, with bridesmaids in attendance, kisses her father. Photo: Vicki Broome



- ★ 1st & 2nd place PWC 2000 & European Championships!
- ★ Closed Cell Technology – the new innovation by ADVANCE

## Fly the New Generation Now!

► Ex demo Omega 5/27 now available!

**ADVANCE**  
 PARAGLIDERS & KITES

**Australian Importer:**  
**PARAFUNALIA – MANILLA**

Test fly the Omega 5 in Manilla now – contact: Godfrey Wenness: ph 02 6785 6545, email: skygodfrey@aol.com

- DHV 2/3 accelerated
- More Performance
- More Stability, More Safety
- All this with LESS Aspect ratio!
- Suitable for XC and Comp Pilots as well as experienced Intermediate Pilots who are ready to move up a level

OMEGA 5

[www.advance-paragliders.com](http://www.advance-paragliders.com)





# Harry Schneider

## – Life Membership



▲ Harry Schneider  
 ▲ E. Hänle (centre), Harry and Margaret Schneider  
 at the 1974 World Championship Opening Ceremony  
 Photo N. J. Wynne

The Gliding Federation of

Australia has awarded life

membership to Harry Schneider.

### Lifetime Achievement

Mr Harry Schneider came to Australia as a youngster along with the whole Schneider family. The Gliding Federation of Australia had sponsored the Schneider family to Australia from their location after World War II.

The sponsorship arose because of the family achievements as sailplane designers and builders at Grunau in eastern Germany during the period of evolution of the sport of gliding in the 1920's to 1940's. Some of their product had come to Australia and was well received because of its innovative design, practicality and workmanship. This early period was reviewed by *Australian Gliding* in 1968.

In sponsoring Edmund Schneider Pty Ltd to Australia, the gliding movement gained local manufacture capability with world standard best practice knowledge. This was a major innovation step for a small sport with a fledgling support structure. Individuals underwrote that innovation with private support in the form of introductory work opportunities, followed by factory location, and first commissions. The sport supported the innovation by helping define product needs unique to Australia.

From this came a string of one off and production types emphasising practicality in the Australian environment. Features unique to Australia included emphasis on small span designs, use of locally available materials and

construction suited to in-field maintenance. The compact staggered seating of the ES52 has only been emulated by few other designers around the world (Foch and Globetrotter). Harry Schneider validated the sailplanes produced by the factory in club training and contest flying.

At one time Edmund Schneider Pty Ltd was a major aircraft manufacturer in Australia, exporting to New Zealand, Brazil, Argentina and the USA; cross-manufacturing rights were also established with major German manufacturers.

In the mid-1960's Edmund Schneider Snr returned to Germany to head a glider company there. Harry Schneider took over the management of the Australian company's operation.

With the maturing of the sport of gliding in Australia Harry took the company in new appropriate directions. Notably, he built the ESKa6 under license, designing the 13 metre ES59 to achieve matching performance to comparable 15 metre types, introduced laminar flow technology to Australia with the ES60 and 60b types, developed projects ES61 to 67 of which only the ES65 reached prototype status. This overview is better described in the book on Schneider history prepared by renowned aviation author Martin Simons.

Harry Schneider's faith in gliding remained undiminished from the early days where each individual job gave the family a living and mate-

rial purchase for the follow-on project, through to the 1970's onward where overseas advances outstripped local capability. He built a modern factory adjacent to Gawler aerodrome, and continued to develop new designs alongside repair work, imported types and maintenance.

Harry Schneider devoted a lifetime to gliding, his impact and influence is incalculable having set the stage for the sport to grow through and beyond practical machines and aspire to sophisticated outcomes.

In 1996 the South Australian Gliding Association acclaimed that lifetime achievement, including the rear cover of *Australian Gliding*. A review of Schneider sailplane types is in the ground display at Monarto in South Australia.

The South Australian Gliding Association commends that a life membership be presented by GFA to Harry Schneider for lifetime achievement in gliding in Australia. ✂

### Life Members of the GFA

Alan Ash  
 Col Churches  
 Richard Gething  
 John Iggulden  
 Alan Patching  
 Geoff Richardson  
 Geoff Strickland  
 Diane Thomas



# NCC News – October

MILES GORE-BROWN, NCC Chairman

As Club Class has been incorporated into FAI Class it is necessary to specify which Class/es we are talking about. In the past the FAI Classes have been the traditional Standard, 15 Metre, Open and the more recent 18 Metre Class. Now that the Club Class is also a FAI Class it will not be possible to talk about the “FAI” Classes without referring to Club Class. In order to clarify this situation the traditional four classes will be referred to as the “Multi-Class” As such the latest edition of the “FAI Rules” will be titled the “FAI Multi-Class”. In addition the traditional FAI Nationals will be classified as the “Multi-Class Nationals”. These changes will be implemented over the next soaring season.

Last year saw many FAI rule changes due to the introduction of dataloggers as the sole means of verification. In addition there were many other minor rule changes, all of which have been previously covered in detail. This year there will only be a few minor changes with the exception to the 18 Metre Class.

## 18 Metre Class

It has been identified that there are many gliders that are not flown in the National Championships, as they are no longer competitive in their respective class, eg the Open Class Nimbus 2. In addition there are many new two-seater gliders being imported into Australia that really do not fit into any class, except Two-Seater Class. These gliders are not competitive in Open Class.

The new two-seaters, such as the Duo-Discus and the DG-500/505, have exceptional performance. The only competition specifically available for these gliders would be the Two-Seater Class competition, however they would be heavily handicapped.

In order to provide an opportunity for these gliders to fly in the “Multi-Class Nationals” it has been agreed to allow some of these new two-seaters and older Open Class gliders to fly in the 18 Metre Class, on an unhandicapped basis. They will also qualify for 18 Metre Class

League 2 provided the pilots are eligible. The handicap for 18 Metre League 2 is currently being determined.

Allowing these gliders to fly in the 18 Metre Class is also an attempt to try and increase the number of pilots flying at the competitions and more specifically entering in the 18 Metre Class.

In addition it has also been identified that allowing two-seater gliders such as the Duo-Discus and the DG500/505 to enter may also provided the opportunity for pilot-pairs and club two-seaters to enter, especially as there is no other class in which they could fly, unhandicapped, and be reasonably competitive. Entry in Open Class for these gliders would be soul destroying to say the least.

It is also hoped that allowing some of the older Open Class gliders to enter in the 18 Metre Class will help to boost the numbers and bring some of those pilots back to the FAI Multi-Class competitions.

An 18 Metre Class glider acceptance list will be included in the “Multi-Class Nationals” rules. This list will detail those gliders that are eligible for 18 Metre Class.

The following is a “short” list of those gliders eligible for the 18 Metre Class. The list is not an exhaustive list. Pilots with gliders not on the list should approach the competition organisation to establish if their glider is eligible.

Gliders eligible to enter 18 Metre Class:

*Duo-Discus*  
*Janus (all models)*  
*Nimbus 2 (all models)*  
*Jantar (all models)*  
*DG-800*  
*DG-600*  
*DG-500/505*  
*Kestrel (all models)*  
*Glasflugel 604 & 304*

## NCC Discussion Page

As some of you may have seen a new NCC discussion site has been set up, thanks to Nick Gilbert. This site has replaced the previous NCC site. It is available for pilots to discuss all matters related to competition gliding. Unfortunately there has been very little discussion on this site. This is in contrast to last year where the discussion group was very active. What I can assume from this is that there are no real issues that the pilots are interested in discussing and that the general pilot group is happy with what is being done within the NCC.

If you are interested in starting and or entering into a discussion then the NCC discussion site can be found at [[www.users.bigpond.com/szd55.htm](http://www.users.bigpond.com/szd55.htm)]. When you log onto this site all you need to do is register and then you are able to discuss issues in amongst the group.

## Narromine Nationals

Preparation for the Nationals is coming along. Eric Sweet has volunteered to be competition director. There is still a need for volunteers to help with the organisation. If you are interested in providing assistance then please do not hesitate to get in touch with the competition secretary Anne Elliot or Beryl Hartley.

## Junior Training

Pilots for the next three George Lees “Plain Soaring” cross-country courses have been chosen.

Congratulations to the following three pilots who will attend these courses:

*Matt Anglim, Warwick Gliding Club QLD, course number 03 2001*  
*Heath L'Estrange, Warwick Gliding Club QLD, course number 04 2001*  
*Caleb White, Mangalore Gliding Club VIC, course number 01 2002*

Applications are open for the next set of courses in 2002, please refer to the June issue of AG/SS for details.

I will be overseas for a period of up to six months. Until I return Tom Claffey will be standing in for me as NCC Chairman.

Safe Soaring







# Sports Psychology Extracts from a Coaching Camp

## – Part 1

PHIL HEARNE

Getting your head up to speed with your dreams and aspirations is no accident if you have any prospects of doing well at the next gliding competition. Ask John Buchanan, Bruce Taylor, Maurie Bradney (National Coach) and Ingo Renner to name a few. Nor is it a trite put off, that they are just better pilots than you and I. Yes they are, but for very good reasons. They all have real and psychological advantages working for them. How? It is no accident and takes careful analysis and application to make everything work for you. Preparation for your next competition starts now for an assault in about one to two years time. *"I can't afford that sort of commitment, I am a short-term planner. There is a competition in three months time and I want to compete."* Then compete for the placings two thirds of the way down the ladder. If however you are planning to be in the top third or top 10 placings with a chance of winning, then we are going to have to work on some other aspects of your gliding. We are going to war as the victor. We need to put some strategies in place to achieve this other than just turning up on the day and flying well. From now on *"Every stroke must cut the enemy"* – Musashi (*A book of five rings*) ...but how?

Let's break up how we go about this task into easy to achieve bits:

- Personnel
- Skills
- Equipment
- Organisation

### Personnel

Gliding is basically a cerebral sport and it doesn't take a great deal of effort to fly a glider. On the other hand flying in a competition 10 days straight in over 35°C heat is now in the marathon category. If your performance gradually gets better as the competition goes on, then you were not as current as needed. If your performance waxes and wanes then you were not fit enough to compete at the level required.

Physical fitness need not be at the same level as the 10-second sprinter but must be able to cope with prolonged and consistent exercise with short recovery times at high stress levels. Does this sound like you? What about a reasonable diet to support this "new you." A low

fat, low protein, high carbohydrate diet is available from any doctor or dietitian. *"God! Here we go, eating cardboard is not my idea of preparing for a gliding competition. When do we get to fly?"* Too late the paradigm is already set. You are competing against these sorts of people. And what has this to do with psychology? Lots! It is just one thing in the back of your mind that requires no further thought that you may need to overcome obesity, flatulence or lack of feeling well in your efforts to achieve a top 10 finish. After this you must be starting to feel good in yourself. Able to take one month straight of flying every day, five hours in the cockpit at least with just a drink and a few muesli bars, and still feel good.

This is now being noticed around the club and flack comes thick and fast. Can you cope with psyching by the opposition? Are you able to monitor your responses and moods to cope adequately so that your confidence is not eroded? Getting better isn't it?

Goal setting is now on the agenda. You have just started. But there are bigger goals to achieve, firstly by setting smaller achievable goals. This is an ability you will require all the way through.

Dan Millman, Olympic athlete, assessed his progress after every day by asking, *"Did I do my best today?"*

Ron Barassi, football coach, re-committed himself after every session with *"If it is to be, it is up to me."*

These sorts of platitudes help you stay focused on each effort. Write them on the refrigerator or on the wall of the office to stay reminded of your commitment.

Surely by now the home front is noticing the "new you" It doesn't do any harm to discuss these aspects with your partner. In fact she is part of the team and if you have been discussing this all the way, jolly good. This plays a key role in your intended success and is strong psychological support. Your wife or partner is an integral part of the team and your success is also theirs. Don't underestimate this aspect.

### Skills and Talent

Best if we define these terms as skills... *"actions we need to master to achieve an outcome; and talent... one's natural ability to recognise and use attributes to achieve an outcome"*. Skills we can practice and talent we don't all have. There are probably two or three pilots I know who have talent. I call them feral flyers. Natural ability gets them through every time. They learn quickly and have instant recall on recognising

weather conditions that they can use. We can never know enough about the weather. We must make up for lack of talent by practising skills and improving them. Who ever heard of going to gliding practice? We should treat it just like a piano lesson. Learning to have good speed control in tight thermals. Fly crisply and smoothly, no wasted actions. Ability to centre the thermal on the first turn. Save 15 seconds for 15 thermals – a winning margin. Able to reject poor lift – leave at the right time and not follow it to the bitter end. Able to relax and not be tense at critical altitudes.

When we learn to fly we start by being "unconsciously incompetent" and develop through "conscious incompetence", to "conscious competence" and hopefully to "unconscious competence" where we can then free up the brain for other things other than flying. We hand over some trained actions to a part of the brain that stores the action as a feeling. The surrounds support the feeling as: *"This feels right for 45 degrees angle of bank and 50kt."*

We don't need to think of each part of the action. We can get on with looking out, feeling the thermal, scanning the instruments, keeping clear of other circling aircraft, monitoring radio traffic, planning tactics to give the gaggle the slip, staying relaxed. The brain is a fairly simple single channel instrument that can be trained to do stored actions. But to do these we must have practiced the right actions and stored them. The final glide feels right, constant speed, right height, and distance ticking off in unison with the altimeter and navigation computer. But to do this we must practice. Every flight you do, make sure you do a final glide. The best ones start 30 to 50km away from home, however even on low days fly out as far as you can to achieve a calculated final glide.

Next time you are out the door, call back and say: *"Just off to gliding practice, love!"*

To do this effectively it is necessary to define which skills need improvement, a bit of constructive navel gazing is necessary; get a coach. Some skills are obvious, others will only become evident as measured against other pilots. Always try to fly with other pilots better than you or sometimes fly with a coach in a twin to get instant feedback. The psychology behind this is for continuous self improvement, establishing confidence in your own actions.

### Equipment

This is a pretty big ask. Just when do you feel comfortable that you have a competitive sail-



plane, equal to the best, sealed, profiled? This is a personal choice as it is endemic with the competition class entered. The best that money can buy for FAI Classes and very subjective for Club Class and handicapped events. Instruments and cockpit layout need special attention. Can you use all facilities offered in the configuration available to you? How much better can you use the instruments than others using similar equipment? Are you confused by all the whistles and bells or would you be better off with a simpler configuration? In an effort to feel more with the aircraft pilots are practicing without audio and covering the vario, forcing them to feel more from the thermal and become more intuitive towards gusts and wing movements. This sounds scary doesn't it? Ingo Renner reputedly flies without an audio and how many times has he been World Champion. With all of these questions neatly answered psychological support seems still a long way off. Equipment still not accounted for comes in the shape of trailers and ground handling equipment. Can the crew use it well? Is the crew fully conversant with rigging, handling, flight preparation and any special need you may require? This is the sort of preparation done well before the competition to set your mind at ease just so you can compete "at your best".

## Organisation

Write a plan. It is surprising the difference made by that little 'peace' of paper. No, not spelled incorrectly. Peace of mind is what a written plan gives you. Consult it regularly, change it and get others to review it. *"What? And open myself up to public ridicule?"* No! Public ridicule is what you get coming last. With these things in place pre-competition nerves fade away and psyching yourself to the event becomes a reality. How much of this mumbo jumbo stuff do we need to perform at peak levels? Just enough. Understimulated our performance suffers. Overstimulated and we choke up.

Peak performance to get us *"On"...*  
*"In flow"...* *"On the boil"* requires seven feelings to be in place:

- *Confident*
- *Relaxed and calm*
- *Energised with positive emotion*
- *Challenged*
- *Focused and alert*
- *Automatic and instinctive*
- *Ready for FUN!*

This is what a winner takes around the task. Notice there is nothing here about angle of bank, inter thermal speed, technical competence, etc. You have all of them already. You have been practising. The seven items are all

emotional. *"Emotions are biochemical changes in the body leading to a cascade of powerful changes in the body,"* says Dr James Loerh sports psychologist and author of *The new mental Toughness*. Intuition now leads the rational side of the brain. We can turn this ON and OFF. Women do it all the time by asking: *"How do I FEEL about this set of circumstances?"* Blokes need practice. *Intuition* is an undeniable friend of winners. But don't be lead by its evil partner *impulse*. What is the difference? If the feeling grows out of sudden fear and uncertainty, chances are, it is impulse. If the feeling grows from a unified view of the whole and feels right, it is intuition. If the problem is simple and open to logic – use the left brain. If the problem is complex, two or three possibilities, high emotional stress, go with your feelings and intuition – right brain. You control the switch.

Remember all the intuition and sports psychology won't do you any good if you haven't practised. An empty bottle produces nothing. Similarly, a full bottle stoppered by emotional chaos also produces nothing. Focused, energised, automatic and instinctive, relaxed, confident, challenged, ready for FUN is the recipe for WINNING.



## NEW LX20-2000 FAI Datalogger with final glide display

The latest LX20 datalogger provides a moving map display in addition to enhanced navigational data presentation and final glide calculator. The large screen provides the pilot with comprehensive information in large easy to read fonts. 5 Main pages are available to the pilot. The Navigation screen shows McCready setting, ballast and final glide altitude deficit plus current altitude. Windspeed and direction is displayed graphically with an arrow pointer. The Moving map screen shows glider on task, track and also entering the TP sector. Near Airport screen displays Navigation data to the 10 nearest airports from your current position. GPS status and Main set-up screens also available. On task the LX20 gives audible and visual confirmation of turnpoint rounding and automatically cycles to the next turnpoint on task. The LX20 also shows comprehensive post-flight statistics in graphical format. No need to connect the unit to a PC! The large 60X40mm graphically display shows your track flown, the barograph trace and flight statistics. On screen zoom feature. An Internal battery (rechargeable) allows for independent operation. Actual size of LX20-130X88X38mm, current drain 150mA. Australian Airport database now available.

### Does the job of a handheld GPS, FAI Datalogger, and final glide computer.

Supplied complete with mounting hardware, software, antenna, carry case, cables, AC adaptor. Special Offer free "SEEU" software worth 129-Euro included with the purchase of an LX20-2000.

FILSER UTR57- 760 channel VHF radio, 57mm panel mount, 9 frequency memory, current and standby frequency displayed. Only 90mA current drain. Great radio Easy to Operate.

'SeeYou' Flight Analysis Software – Intuitive flight planning over Vector Maps, also all popular waypoint formats supported – Cambridge, Filser, Ilec, Volkslogger, Zander and more. Comprehensive flight analysis, supports IGC flight files, Garmin track logs plus others! Also displays multiple flights, 7 printing options available. Australian maps included. Go to <http://www.seeyou.ws>. DEMO VERSION available.

**LUKE DODD Sole Australian agent for Filser and Colibri**  
Phone (07) 3841 6083 H (07) 3332 7331 W  
Email: [LKDodd@bigpond.com.au](mailto:LKDodd@bigpond.com.au)



# How Airplanes Really Fly

## – The Physical Description of Lift

DAVID ANDERSON & SCOTT EBERHARDT

Article Courtesy Sport Aviation, February 1999 issue

The following is an edited version of an article by the above authors and published two years ago on the FAI web site. For those interested in the full text, the web address is [<http://airports.fai.org/feb99/feb990d.html>].

Thanks go to Martyn Yeomans for sourcing, editing and submitting this article, which is sure to be of great interest to AG/SS readers.

**M**any ask the simple question: “*What makes an airplane fly?*” We are going to show you that lift is easier to understand if one starts with Newton rather than Bernoulli. We will also show you that the popular explanation that most of us were taught is misleading at best and that *lift is in fact caused by the wing diverting air down*.

Let’s start by defining three descriptions of lift. These are first, the **Mathematical Aerodynamics Description** which is used by aeronautical engineers. However, this does not lend itself to an intuitive understanding of flight.

The second description we will call the **Popular Explanation** which is based on the Bernoulli Principle. The primary advantage of this description is that it is easy to understand and has been taught for many years. The major disadvantage is that it relies on the “Principle of Equal Transit Times” which is wrong. This description focuses on the shape of the wing and prevents one from understanding such important phenomena as inverted flight, power, ground effect and the dependence of lift on the angle of attack of the wing.

The third description, which we are advocating here, we will call the **Physical Description** of lift. This description is based primarily on Newton’s laws. The Physical Description is useful for understanding flight, and is accessible to all that are curious. This description gives a clear, intuitive understanding of such phenomena as the power curve, ground effect, and high-speed stalls.

### The Popular Explanation of Lift

Students of physics and aerodynamics are taught that airplanes fly as a result of Bernoulli’s Principle, which says that if air speeds up the pressure is lowered. Thus a wing generates lift because the air goes faster over the top creating

a region of low pressure, and thus lift. This explanation usually satisfies the curious and few challenge the conclusions. Some may wonder why the air goes faster over the top of the wing and this is where the Popular Explanation of lift falls apart.

In order to explain why the air goes faster over the top of the wing, many have resorted to the geometric argument that the distance the air must travel is directly related to its speed. The usual claim is that when the air separates at the leading edge, the part that goes over the top must converge at the trailing edge with the part that goes under the bottom. This is the so-called Principle of Equal Transit Times. Just for a moment, let’s assume that this argument is true. The average speeds of the air over and under the wing are easily determined because we can measure the distances and thus the speeds can be calculated. From Bernoulli’s Principle, we can then determine the pressure forces and thus lift. If we do a simple calculation we would find that in order to generate the required lift for a typical small airplane, the distance over the top of the wing must be about 50% longer than under the bottom. Figure 1 shows what such an airfoil would look like. Now, imagine what a Boeing 747 wing would have to look like!

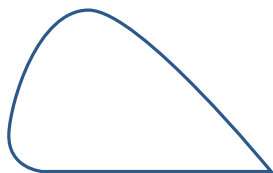


Figure 1: Shape of wing predicted by the Principle of Equal Transit Times

If we look at the wing of a typical small plane, which has a top surface that is 1.5-2.5% longer than the bottom, we discover that a *Cessna 172 would have to fly at over 400mph*

*to generate enough lift.* Clearly, something in this description of lift is flawed. But, who says the separated air must meet at the trailing edge at the same time? Figure 2 shows the airflow over a wing in a simulated wind tunnel. In the simulation, coloured smoke is introduced periodically. One can see that the air that goes over the top of the wing gets to the trailing edge considerably before the air that goes under the wing. In fact, close inspection shows that the air going under the wing is slowed down from the “free-stream” velocity of the air. So much for the Principle of Equal Transit Times.

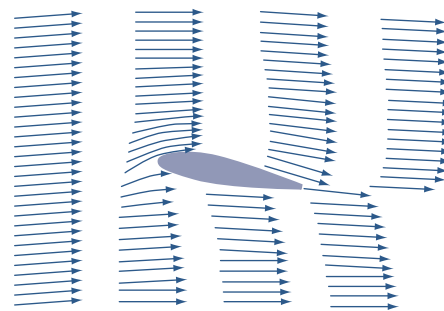


Figure 2: Simulation of the airflow over a wing in a wind tunnel, with coloured “smoke” to show the acceleration and deceleration of the air

The Popular Explanation also implies that inverted flight is impossible. It certainly does not address aerobatic airplanes, with symmetric wings (the top and bottom surfaces are the same shape), or how a wing adjusts for the great changes in load such as when pulling out of a dive or in a steep turn?

So, why has the Popular Explanation prevailed for so long? One answer is that the Bernoulli Principle is easy to understand. There is nothing wrong with the Bernoulli Principle, or with the statement that the air goes faster over the top of the wing. But, as the above discussion suggests, our understanding is not complete with this explanation. The problem is that we are missing a vital piece when we apply Bernoulli’s Principle. We can calculate the pressures around the wing if we know the speed of the air over and under the wing, but how do we determine the speed?

Another fundamental shortcoming of the Popular Explanation is that it ignores the **work** that is done. Lift requires **power** (which is work per time). As will be seen later, an understanding of power is key to the understanding of many of the interesting phenomena of lift.



## Newton's Laws and Lift

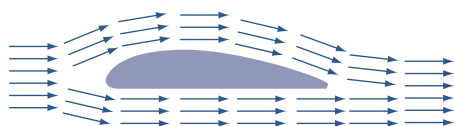


Figure 3: Common depiction of airflow over a wing. This wing has no lift

So, how does a wing generate lift? To begin to understand lift we must return to high school physics and review Newton's first and third laws. (We will introduce Newton's second law a little later.) Newton's first law states: "*a body at rest will remain at rest, or a body in motion will continue in straight-line motion unless subjected to an external applied force.*" That means, if one sees a bend in the flow of air, or if air originally at rest is accelerated into motion, there is a force acting on it. Newton's third law states: "*for every action there is an equal and opposite reaction.*" As an example, an object sitting on a table exerts a force on the table (its weight) and the table puts an equal and opposite force on the object to hold it up. In order to generate lift, a wing must do something to the air. What the wing does to the air is the **action** while lift is the **reaction**.

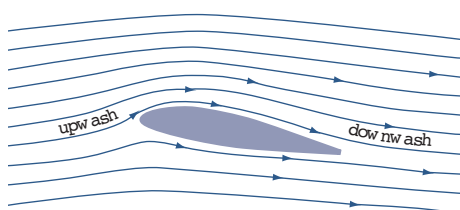


Figure 4: True airflow over a wing with lift, showing upwash and downwash

Let's compare two figures used to show streams of air (streamlines) over a wing. In Figure 3 the air comes straight at the wing, bends around it, and then leaves straight behind the wing. We have all seen similar pictures, even in flight manuals. But, the air leaves the wing exactly as it appeared ahead of the wing. There is no net action on the air so there can be no lift! Figure 4 shows the streamlines, as they should be drawn. The air passes over the wing and is bent down. The bending of the air is the **action**. The **reaction** is the lift on the wing.

### The Wing as a Pump

As Newton's laws suggest, the wing must change something of the air to get lift. Changes in the air's momentum will result in forces on the wing. To generate lift a wing must **divert air down**: lots of air.

The lift of a wing is equal to the change in momentum of the air it is diverting down. Momentum is the product of mass and velocity. *The lift of a wing is proportional to the amount of air diverted down times the downward velocity of that air.* It's that simple. For more lift, the wing can either divert more air (mass) or increase its downward velocity. This downward velocity behind the wing is called **downwash**.

To an observer on the ground, if he or she could see the air, it would be coming off the wing almost vertically. The greater the angle of attack, the greater the vertical velocity. Likewise, for the same angle of attack, the greater the speed of the wing the greater the vertical velocity. Both the increase in the speed and the increase of the angle of attack increase force of the vertical component of air.

If we estimate that the average vertical component of the downwash of a Cessna 172 travelling at 110kt to be about nine knots, then to generate the needed 2,300lb of lift the wing 'pumps' a whopping 2.5 ton/sec of air! In fact, as will be discussed later, this estimate may be as much as a factor of two too low. The amount of air pumped down for a Boeing 747 to create lift for its roughly 800,000lb take-off weight is incredible indeed.

Pumping, or diverting, so much air down is a strong argument against lift being just a surface effect as implied by the Popular Explanation. In fact, in order to pump 2.5 ton/sec, the wing of the Cessna 172 must accelerate all of the air within nine feet above the wing. (Air weighs about two pounds per cubic yard at sea level.) Figure 5 illustrates the effect of the air being diverted down from a wing. A huge hole is punched through the fog by the downwash from the airplane that has just flown over it.



Figure 5: Downwash and wing vortices in the fog  
Photo: Paul Bowen, courtesy of Cessna Aircraft, Co.

So how does a thin wing divert so much air? When the air is bent around the top of the wing, it pulls on the air above it, accelerating that air down, otherwise there would be voids in the air left above the wing. Air is pulled from above to prevent voids. This pulling causes the pressure to become lower above the wing. It is the acceleration of the air above the wing in the downward direction that gives lift.

We have previously stated that an observer on the ground would "see" the air coming off the trailing edge of the wing almost vertically. But what is the air doing above and below the wing? Figure 6 shows an instantaneous snapshot of how air molecules are moving as a wing passes by. Remember in this figure the air is initially at rest and the wing is moving. Ahead of the leading edge, air is moving up (**upwash**).

At the trailing edge, air is diverted down (**downwash**). Over the top the air is accelerated towards the trailing edge. Underneath, the air is accelerated forward slightly, if at all.

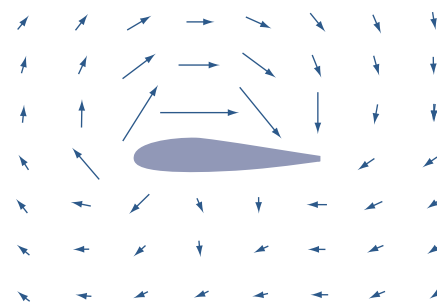


Figure 6: Direction of air movement around a wing as seen by an observer on the ground.

One observation that can be made from Figure 6 is that the top surface of the wing does much more to move the air than the bottom. So the top is the more critical surface. Thus aeroplanes can carry external stores, such as drop tanks, under the wings but not on top where they would interfere with lift. That is also why wing struts under the wing are common but struts on the top of the wing have been historically rare. A strut, or any obstruction, on the top of the wing would interfere with the lift.

### Air has Viscosity

The natural question is: "*How does the wing divert the air down?*" When a moving fluid, such as air or water, comes into contact with a curved surface it will try to follow that surface. To demonstrate this effect, hold a water glass horizontally under a tap such that a small stream of water just touches the side of the glass. Instead of flowing straight down, the presence of the glass causes the water to wrap around the glass as shown in Figure 7. This tendency of fluids to follow a curved surface is known as the **Coanda Effect**. From Newton's first law we know that for the fluid to bend there must be a force acting on it. From Newton's third law we know that the fluid must put an equal and opposite force on the object which caused the fluid to bend.

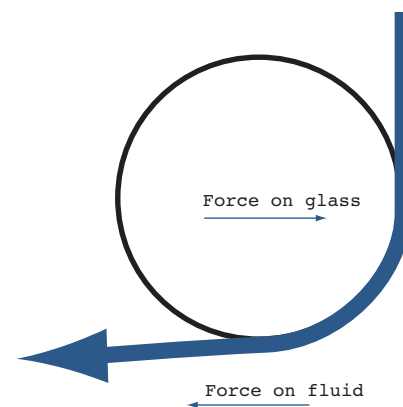


Figure 7: The Coanda Effect

Why should a fluid follow a curved surface? The answer is viscosity; the resistance to flow which also gives the air a kind of "stickiness". Viscosity in air is very small but it is enough for the air molecules to want to stick to the sur-



face. At the surface the relative velocity between the surface and the nearest air molecules is exactly zero. Just above the surface the fluid has some small velocity. The further one goes from the surface the faster the fluid is moving until the external velocity is reached (note that this occurs in less than an inch). Because the fluid near the surface has a change in velocity, the fluid flow is bent towards the surface. Unless the bend is too tight, the fluid will follow the surface. This volume of air around the wing that appears to be partially stuck to the wing is called the "boundary layer".

### Lift as a Function of Angle of Attack

There are many types of wing: conventional, symmetric, conventional in inverted flight, the early bi-plane wings that looked like warped boards and even the proverbial "barn door". In all cases, the wing is forcing the air down, or more accurately pulling air down from above. What each of these wings have in common is an *angle of attack* with respect to the oncoming air. *It is this angle of attack that is the primary parameter in determining lift.* The inverted wing can be explained by its angle of attack, despite the apparent contradiction with the Popular Explanation involving the Bernoulli Principle. A pilot adjusts the angle of attack to adjust the lift for the speed and load. The Popular Explanation of lift, which focuses on the shape of the wing, gives the pilot the ability to adjust only the speed.

### The Wing as Air "Scoop"

We now would like to introduce a new mental image of a wing. One is used to thinking of a wing as a thin blade that slices through the air and develops lift somewhat by magic. The new image that we would like you to adopt is that of the wing as a scoop diverting a certain amount of air from the horizontal to roughly the angle of attack, as depicted in Figure 8. The scoop can be pictured as an invisible structure put on the wing at the factory. The length of the scoop is equal to the length of the wing and the height is somewhat related to the chord length (distance from the leading edge of the wing to the trailing edge). The amount of air intercepted by this scoop is proportional to the speed of the plane and the density of the air, and nothing else.

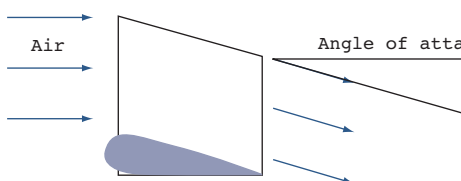


Figure 8: The wing as a scoop

As stated before, the lift of a wing is proportional to the amount of air diverted down times the vertical velocity of that air. As a plane increases speed, the scoop diverts more air. Since the load on the wing, which is the weight of the plane, does not increase, the vertical speed of the diverted air must be decreased propor-

tionately. Thus, the angle of attack is reduced to maintain a constant lift. When the plane goes higher, the air becomes less dense, so the scoop diverts less air for the same speed. Thus, to compensate, the angle of attack must be increased. The concepts of this section will be used to understand lift in a way not possible with the Popular Explanation.

### Lift Requires Power

When a plane passes overhead the previously still air ends up with a downward velocity. Thus, the air is left in motion after the plane leaves. The air has been given energy. Power is energy, or work, per time. So, lift must require power. This power is supplied by the airplane's engine (or by gravity and thermals for a hang glider/paraglider/sailplane).

### Wing Vortices

One might ask what the downwash from a wing looks like. The downwash comes off the wing as a sheet and is related to the details on the load distribution on the wing. Figure 9 shows, through condensation, the distribution of lift on an airplane during a high-G manoeuvre. From the figure one can see that the distribution of load changes from the root of the wing to the tip. Thus, the amount of air in the downwash must also change along the wing. The wing near the root is "scooping" up much more air than the tip. Since the root is diverting so much air the net effect is that the down-

## XC ADVENTURE

**Working hard? Want a break,  
with fun/great flying?  
Why not join our  
"all organised" XC Tour?**

**All you have to do is to bring your own flying  
equipment, we'll take care of the rest!**

### TOUR DATES:

**Saturday, 8 December 2001  
to Sunday, 16 December 2001  
(Departure Friday, 7 December 2001)**

**We are aiming to use the Deniliquin Competition  
tow paddock, two minutes out of town.**

**These XC Tour will suit all licensed HG pilots on  
any level. Please book early to secure your spot.**

**For more details please contact TOVE on:**

**02 4849 4516 or 0419 681 212**

**Canberra Hang Gliding and Paragliding Centre**

**Email address: chgpgc@goulburn.net.au**



## HIGH ADVENTURE AIRPARK

### — more than just a Flight School

- Offers the New Evolution in Hang Gliding Instruction by Tandem Aerotowing
- Paragliding Instruction, Adventure Paramotors
- Microlite Training
- Aero- & Winch Tow Endorsements
- Onsite Block Training and Accommodation, bring your wife and kids along
- Some of the Most Scenic and Accessible sites in Australia, Coastal and Inland

### SELL YOUR OWN GEAR ONLINE FREE [[www.highadventure.com.au/skyshop](http://www.highadventure.com.au/skyshop)]

**We sell online** all your hang gliding and paragliding needs at the best prices!

**Trade in** your old wing for the new at realistic market prices

**You will find online** full-face helmets from \$220, radios from \$195, flight suits from \$250, varios, UV stuff bags for paragliders from \$60, 4 styles of paragliding harness, a full range of Firebird paragliders, Fun Floater Demos at unbeatable prices!

**And Much More!!**

**Click onto [[www.highadventure.com.au](http://www.highadventure.com.au)]  
or call us Toll free on 1800 063 648**

**Email: <[Leescott@highadventure.com.au](mailto:Leescott@highadventure.com.au)>**

**For all our customers** that bought new gliders from us in the last two years we are conducting a **Free Week** of Advance flight skills/instruction on the dates of the **26 November to 30 November 2001**  
Accommodation and meals are not included **BOOK NOW!**



wash sheet will begin to curl outward around itself, just as the air bends around the top of the wing because of the change in the velocity of the air. This is the wing vortex. The tightness of the curling of the wing vortex is proportional to the rate of change in lift along the wing. At the wing tip the lift must rapidly become zero causing the tightest curl. This is the wing tip vortex and is just a small (though often most visible) part of the wing vortex. Returning to Figure 5 one can clearly see the development of the wing vortices in the downwash as well as the wing tip vortices.

## Ground Effect

Another common phenomenon that is misunderstood is that of ground effect. That is the increased efficiency of a wing when flying within a wing length of the ground. A low-wing airplane will experience a reduction in drag by 50% just before it touches down. There is a great deal of confusion about ground effect. Many pilots mistakenly believe that ground effect is the result of air being compressed between the wing and the ground.

To understand ground effect it is necessary to have an understanding of upwash. For the pressures involved in low speed flight, air is considered to be non-compressible. When the air is accelerated over the top of the wing and down, it must be replaced. So some air must shift around the wing (below and forward, and then up) to compensate, similar to the flow of

water around a canoe paddle when rowing. This is the cause of upwash.



Figure 9: Condensation showing the distribution of lift along a wing. The wingtip vortices are also seen (from "Patterns in the Sky" J.F. Campbell and J.R. Chambers, NASA SP-514)

As stated earlier, upwash is accelerating air in the wrong direction for lift. Thus a greater amount of downwash is necessary to compensate for the upwash as well as to provide the necessary lift. Thus more work is done and more power required. Near the ground the upwash is reduced because the ground inhibits the circulation of the air under the wing. So less downwash is necessary to provide the lift. The angle of attack is reduced and so is the induced power, making the wing more efficient.

## Conclusions

Let's review and get some idea of how the Physical Description has given us a greater ability to understand flight. First, what have we learned?

- *The amount of air diverted by the wing is proportional to the speed of the wing and the air density.*

- *The vertical velocity of the diverted air is proportional to the speed of the wing and the angle of attack.*
- *The lift is proportional to the amount of air diverted times the vertical velocity of the air.*
- *The power needed for lift is proportional to the lift times the vertical velocity of the air.*

Now let's look at some situations from the Physical point of view and from the perspective of the Popular Explanation:

- *The plane's speed is reduced. The Physical view says that the amount of air diverted is reduced so the angle of attack is increased to compensate. The power needed for lift is also increased. The Popular Explanation cannot address this.*
- *The load of the plane is increased. The Physical view says that the amount of air diverted is the same but the angle of attack must be increased to give additional lift. The power needed for lift has also increased. Again, the Popular Explanation cannot address this.*
- *A plane flies upside down. The Physical view has no problem with this. The plane adjusts the angle of attack of the inverted wing to give the desired lift. The Popular Explanation implies that inverted flight is impossible.*

As one can see, the Popular Explanation, which fixates on the shape of the wing, may satisfy many but it does not give one the tools to really understand flight. The Physical Description of lift is easy to understand and much more powerful.

get high  
fly far  
have fun

## summer xc tours



Dynamic Flight is proud to offer their summer cross country tours. Whether you're a novice dreaming of your first XC flight or a seasoned veteran you'll find our all inclusive flatland towing tours fit the bill. Here's what you get:

- All your accommodation in air conditioned luxury in a Victorian XC Mecca Motel or Hotel options. All breakfasts and evening meals supplied
- Morning briefing including thermaling tips and daily weather report
- Personal instruction from top comp pilots - on the ground and in the air
- All the tows as you can handle. Australia's best road network for easy no hassle pickups
- Retrieves in relaxing air-conditioned comfort of our Taragos and 4Runners
- Reflights if you bomb out and Windsurfers in case of strong winds
- Yes we can help with gear hire and tow endorsements if required.
- Highlights of past tours have included the low hours novice who doubled his total airtime in a single flight while flying over 75km on his first XC distances of 300km+ and altitude gains of 9999 feet.

All inclusive price \$990 inc GST\* Dates: 2-9 December 2000 3-10 February 2001



**DYNAMIC FLIGHT**  
DISCOVER THE FREEDOM!

For further details and bookings contact: Rohan Holtkamp Ph: 03 5349 2845 e-mail: [info@dynamicflight.com.au](mailto:info@dynamicflight.com.au)

\* price can be more or less depending on desired luxury of accommodation.





# Darrel's First Big Retrieve

DARREL MACZKOWIACK

The following is the truth, the whole truth and nothing but the truth, I'm telling you, it's the truth. It was a Saturday afternoon and getting late; the Gawler Easter comps at the Adelaide Soaring Club were in full swing and I had just finished my gliding (training) for the day. I was walking past the pie cart when Daisy (bless her) yelled out "Hey Darrel, you want to do a retrieve?" Now, I've been dreaming about this moment for months, how can I say no? Quick call on my trusty mobile to get the okay from the missus and it was all systems ready for take-off.

## Daisy gives directions

The mission: To retrieve one outlanded pilot, John Harris, and glider. Daisy, who is one of the stalwarts of the club, gave me the paper with the directions she had just received over the phone from some farmer up in the back blocks of the Barossa-St Kitts. With a majestic sweep of her right arm she pointed to a gaggle of cars underneath the trees alongside the empty glider trailers. Sure enough, just as she said, there was the white four-wheel-drive (4WD) with the keys sitting ready in the ignition just waiting to leap into action on a "retrieve".

## Getting ready

My big moment had arrived. With Michael Hewittson's help (Headmaster of Trinity College) we soon had the correct trailer hooked up. After making sure we had the trestle as requested in the back of "John Harris' 4WD" plus directions and the UBD of the Barossa area, off went the two white knights on their mission of rescue.

## Off to the Barossa

Now Michael, who said he had done a retrieve before (and was therefore the expert), was getting anxious to get to the glider as it was getting pretty close to sundown. Being the cautious type, though, and not wanting to have

an accident in "John Harris' 4WD" especially on my first big retrieve, I was taking it careful, 80km/h at first and then 100km/h. So after an hour of travelling and with a bit of backtracking we finally came around a bend on a dirt road up the back of nowhere (St Kitts) and there, waiting patiently by the gate, was John Harris. And lo – there in the distance, in the fading light, on the side of a rolling hill, in all its beauty, was the glider at rest. What a picture to behold.

## De-rigging the glider

After a bit of manoeuvring, grunting and silent swearing and under the guidance of John Harris, we soon had the glider de-rigged and safely stowed in the trailer, just as the sun gave a great yawn and slipped down over the hills in the distance. So far so good. Yours truly then turned to John and offered the keys to his 4WD so he could drive it back to Gawler, but he turned it down. "Now that's strange," I said to myself, "I wonder why he didn't want to drive his own 4WD back to the club?" I concluded he must be feeling tired after his ordeal of outlanding – no problem.

As our weary but intrepid team wound its way carefully down the side of the hill towards the paddock gate, John, who was sitting in the back seat, murmured, "Thanks for coming and getting me and I'll give you some money for the

petrol when we get back." Now that seemed a bit weird, so ever the innocent (or should that be slow?), I asked him, "Why would you want to give me money for your own vehicle? Next you're going to tell me it's not yours (ha ha ha)." "No", said John, "This is not *my* 4WD, I wondered why you didn't bring *my* 4WD." I looked at John in horror and Michael looked at me with disbelief. I suddenly felt like I had just hit a giant wind shear trying to land IUF (the club's twin) doing 35 kt at 50 ft above ground level. YE GREAT GLIDING GODS! The penny now dropped... Whose 4WD have I knocked off?

---

???????????

---

After we looked around inside the 4WD for some clues as to who owned it, I spied a blue World Wildlife Fund "Save the Panda" transfer. It suddenly hit me like a pie in the face: "Good grief, I've stolen Sue and Darrell Ingham's 4WD." Now for the unknowing, Darrell Ingham just happens to be a policeman, in fact, a Chief Inspector of police and the Barossa area just happens to be his patch. Already I could hear the cell door in the Nurioopta Police station slamming, with Senior Constable Brian Brearly (gliding instructor) snarling, "Knocked of the Boss' 4WD did you, punk? Wait till the magistrate gets to hear this one!" Maybe the magistrate would be lenient and give me six months community work – like picking up empty used pastry bags around the club or letting me sweep out the main hangar every weekend. Worse still – when this gets back to the committee, banned for life, excommunicated, persona non grata, bloody criminal type we can do without around here. I felt sick. Now from previous phone calls I knew that Sue and Karl Faeth (retired policeman/tug pilot) had outlanded just south of Tarlee in the Janus and would also be waiting for a retrieve. I could see Karl standing alongside their glider breathing fire and brimstone waiting for the Inghams' 4WD to finally turn up at midnight (groan) to retrieve them. Little did I know at that stage that they had been rescued with an aerotow. Suddenly my mobile phone rang and Michael Hewittson answered the call with: "Michael here, on Darrel's phone... (wait for it) in the stolen 4WD." I swear I saw red sparks an inch long coming out of the earpiece. The nice policeman was promising a cold burnt snag for dinner when I got to his place at Wasleys.



## Overseas News

### Motor Gliding International

Man has dreams and loves challenges. My dream and challenge is to fly a Stemme motor glider from Helsinki to Cape Town with lowest possible fuel consumption. This became a reality, when a friend of mine acquired a Stemme S10-VT. Our target is to fly the distance, almost 13,000km, in 50 days and to use minimum fuel. It means we want to fly at least half of the distance engine stopped and use the pure solar power, thermal lift for travelling. It will not be easy, because you have to combine the different seasons of northern and southern hemisphere.

We have chosen late August 2001 as our start date. The rough routing will take us from Helsinki via Eastern Europe to Turkey. Then we will fly via Syria and Jordan to Egypt. In Africa we will continue over Sudan, Ethiopia, Kenya, Tanzania, Malawi, Zimbabwe and on to South Africa.

The largest newspaper in Finland, *Helsingin Sanomat*, will follow the expedition at least on a weekly basis. The first story will be published on 26 August.

My friend, Anssi Soila, is a successful businessman who is currently the chairman of Sponda, Finland's largest listed real estate company and the chairman of ARCarton, Europe's largest folding carton producer.

The take-off for the African journey will be on 27 August 2001. The goal is to land in Cape Town on 6 October. After that I will fly the Stemme to Mafikeng and use it as a sniffer during the Worlds. I will visit my work in between. We will have a laptop with internet connection en-route, but it will be used mainly for weather information and PR.

### From Helsinki to Cape Town Route

27.8.2001	EFHF – Pärnu (EPU)	376km
	– Riga (EVRA)	
28.8.2001	EVRA – Warszawa (EPWA)	564km
30.8.2001	EPWA – Debrecen (LHDC)	522km
1.9.2001	LHDC – Bucharest (LROP)	474km
3.9.2001	LROP – Shumen – Grudovo	
	– Istanbul (LTBA)	470km
5.9.2001	LTBA – Eskisehir (LTBY)	
	– Kapadokya (LTAZ)	560km
7.9.2001	LTAZ – Kahramannaras (LTCN)	
	– Aleppo (OSAP)	405km
8.9.2001	OSAP – Amman (OJAI)	510km
10.9.2001	OJAI – Bakir-NWB-SHM	
	– Hurghada (HEGN)	555km
17.9.2001	HEGN – Abu Simbel (HEBL)	580km
18.9.2001	HEBL – Khartoum (HSSS)	765km
20.9.2001	HSSS – Addis Abeba (HAAB)	1,001km
22.9.2001	HAAB – Lokichoggio (HKLK)	725km
23.9.2001	HKLK – Nairobi (HKJK)	680km
25.9.2001	HKJK – Dodoma (HTDO)	560km
27.9.2001	HTDO – Songea (HTSO)	505km
28.9.2001	HTSO – Blantyre (FWCL)	560km
29.9.2001	FWCL – Harare, Charles Prince (FVCP)	490km
1.10.2001	FVCP – Pietersburg (FAPB)	695km
3.10.2001	FAPB – Mafikeng (FAMM)	455km
5.10.2001	FAMM – Hendrik Verwoerddam (FAHV)	530km
6.10.2001	FAHV – Cape Town (FACT)	760km
<b>Total distance</b>		<b>12,747km</b>

Twenty-two legs from 376km to 1,001km, with an average of 580km.

Tapio Savolainen, IGC Bureau Member

### Foot and Mouth Bans are Lifting

The outlook for British glider pilots is improving as the foot and mouth epidemic recedes.

Bans on cross-country gliding have been lifted in Britain outside the infected areas. In the areas outside the infected areas it is proposed to allow BGA competitions to go ahead. Separate guidance will be provided to competition organisers and tasksetters regarding risk assessment and management during competitions.

Pilots are advised that standard aviation insurance policies carry an exclusion clause in respect of pollution and contamination caused by the insured aircraft.

### Oz Gliding

There are six pages of articles promoting gliding throughout Australia in the latest *Sailplane and Gliding* magazine from Britain. With the exchange rate of the pound sterling to the Ozzie dollar and the ban on cross-country gliding in Britain this last summer, Australian clubs can expect an increased number of Pommie gliding visitors this coming season. Welcome!



### Back to Gawler

So the intrepid trio arrived back at Gawler. As I was driving of to Wasleys. I saw John Harris drive off in his white 4WD. At that stage, I developed a life long hatred of all white coloured 4WDs.

### Arriving at the Ingham's Farmhouse

With fear and trepidation in my heart I arrived at the back door of the farmhouse where I could hear noises from within. Now being the cautious type I opened the back door, quickly threw my floppy gliding hat in and then just as quick closed it, waiting for yells and curses and the sound of police issue .357 Magnum gun-

shots. But all was forgiven (my wife Helen stuck up for me) and I got to eat dinner after all, accompanied by lots of side splitting laughter. Proves that gliding has other benefits apart from being a great sport.

**P.S.: The moral of all of this is...**  
**IF YOU'RE GOING TO KNOCK OFF A 4WD**  
**FROM THE ADELAIDE SOARING CLUB**  
**– MAKE SURE ITS WHITE WITH**  
**A BLUE PANDA STICKER ON IT!**

Regards – yours in gliding (I tell you it's the truth)



# GCV

## BENALLA Vic.

- **Open 365 days a year**
- **7 day ab-initio courses**
- **Cross-country training**
- **Outback safaris**
- **Mountain flying camps**
- **High performance fleet**
- **Visitors welcome**

Contact:

Gliding Club of Victoria

P.O. Box 46 BENALLA 3672

Tel: (03) 5762 1058

Fax: (03) 5762 5599

Email: [glidingbla@cnl.com.au](mailto:glidingbla@cnl.com.au)

Web site: [www.gliding-benalla.org](http://www.gliding-benalla.org)





## THE GLIDING FEDERATION OF AUSTRALIA

Please note: all prices include GST

### Books

A Glider Pilot Bold – Wally Kahn	\$49.50
Aerodynamics for Soaring Pilots – Millicer	\$33.00
Aerotowing Manual	\$22.00
Airways and Radio Procedures – GFA	\$5.50
Basic Gliding Knowledge – GFA	\$22.00
(\$16.50 each for 10 copies or more – postage not included)	
Basic Sailplane Engineering	\$35.20
Beginning Coaching Level 1	
– Australian Coaching Council	\$30.25
Beginning Gliding – Derek Piggott (1st Ed.)	\$49.50
Beginning Gliding – Derek Piggott (2nd Ed.)	\$49.50
Beginning Gliding – Derek Piggott (3rd Ed.)	\$49.50
Better Coaching – Advanced Coaching	\$35.75
Blanik Inspection Plans & Survey Schedule	\$22.00
Blanik Overhaul Manual	\$22.00
Blanik Technical Manual	\$22.00
Cross-Country Soaring – Helmut Reichmann	\$99.00
Flight at Lower Levels	\$19.25
Flying Faster & Further (Part 1)	
– Maurie Bradney	\$16.50
Flying Faster and Further (Part 2)	
– Maurie Bradney	\$16.50
Flying Sailplanes – Helmut Reichmann	\$82.50
GFA Daily Inspector's Handbook	\$13.20
GFA Instructor's Handbook	\$35.20
GFA Manual of Standard Procedures	
(Part 3) – Airworthiness	\$11.00
GFA Manual of Standard Procedures	
(Part 4) – Sporting	\$11.00
GFA Operations Manual	\$19.25
Glass Fibre Repairs – Slingsby	\$22.00
Gliding – Derek Piggott (7th Edition)	\$71.50
Gliding Safety – Derek Piggott	\$60.50
Great Glider Pilots (Part 2) – Berg	\$71.50
IS29D Maintenance Manual	\$13.20
Limbach Workshop Manual	\$30.80
Meteorology Simplified – AOPA UK	\$7.15
Modern Elementary Gliding – BGA	\$18.50
Nimbus 3/24.5 Maintenance Manual	\$16.50

Pilatus B4 Maintenance Manual	\$16.50
Polish Woodwork Manual	\$16.50
Powered Sailplanes Manual	\$22.00
Practical Wave Flying – Mark Palmer	\$44.00
RF5 Maintenance Manual	\$19.80
Sailplane Aerobatics – Les Horvath	\$55.00
Sporting Coach Manual	\$16.50
Standard Repairs to Gliders – BGA	\$16.50
Stirling Range Wave Camp Manual	\$16.50
The Complete Soaring Guide – Welch	\$43.45
The Modern Soaring Dictionary	
– Roake & Phillips	\$11.00
Turnpoints – Gren Seibels	\$52.25
Understanding Gliding –	
Derek Piggott (3rd Ed.)	\$55.00
Ventus B Maintenance Manual	\$11.00
Weight and Balance Notes	\$13.20
Winch Launching Manual	\$22.00

### Videos

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

### Accessories

Aircraft Log Book	\$35.20
BGA Sticker	\$1.10
Bumper Sticker (Glider Pilots do it quietly)	\$4.40
Bumper Sticker (I'd rather be Soaring)	\$4.40
Flight Reference Cards	\$6.60
GFA Bow Tie	\$8.25
GFA Cloth Wings	\$8.25
GFA Drill Badge – Black	\$7.15
GFA Drill Badge – White	\$7.15
GFA Metal Clasp	\$8.25
GFA Tie – Blue	\$19.25
GFA Tie – Brown	\$19.25
GFA Tie (Big red glider on blue background)	\$19.25



GFA Transfer	\$1.10
Glider Pin – Silver	\$5.50
Key Ring – BGA	\$3.85
Ottfur Rings	\$11.00
Pilot Log Book	\$3.85
Pilot Training Record	\$3.85
Tost Rings	\$49.50

### Airworthiness Items

Re-issue of C. of A.	\$27.50
Initial Aircraft Registration fee	\$44.00
Change of Ownership fee	
(payable by new owner)	\$27.50
Annual inspection (Form 2) fee	\$137.00
Annual Inspection, including 20/30/40	
year survey	\$302.00
Total fee for Initial Form 2 inspection &	
issue of First C. of A. (Homebuilt & Imports)	\$511.00
(includes Aircraft Registration fee and initial Aircraft Logbook)	

GFA Weighing Sheets	
(Form W1 and W2)	No Charge
Individual ADs and ANs	No Charge
Homebuilders Brochure	No Charge
"How to form a Gliding Club" leaflet	No Charge

### Copying Service

Your news sheets, manuals, minutes, etc. – this service is charged at 22 cents per copy plus return postage, using your original. Our machine will copy both sides and automatically collate. If you use the machine yourself the cost will be reduced to 11 cents per copy.

**Ordering Information:** Prices plus postage. Credit card facilities available (Visa, Bankcard, Mastercard). Order from:

# GFA SALES DEPARTMENT

130 Wirraway Road, Essendon Airport, Victoria 3041

Ph: (03) 9379 7411 • Fax: (03) 9379 5519 • Email: [Secretary@gfa.org.au](mailto:Secretary@gfa.org.au)



# GFA President's Report 2000/2001

BERYL HARTLEY

This last year the GFA Executive has moved to enhance the purpose of the Gliding Federation in supplying services to its members. The Federation through its members, affiliated clubs and organisations faces changes in societal expectation and how this impacts on volunteer organisations. The Executive has addressed these changes, working with the GFA Council on a development plan to ensure continued quality management of the Federation. When developing policy with effects for individuals and member organisations, caution is needed, as we cannot predict the consequences. All members of the GFA have a vested interest in the outcomes of the development plan.

In this "Year of the Volunteer" it is an appropriate time to recognise the huge contribution that thousands of gliding enthusiasts have made and continue to make, to our sport. Within gliding clubs throughout Australia we see how one person can make a real difference to the successful operation of a single club. I encourage all members to take this opportunity to recognise these special members within their clubs.

I welcome the many new members of the GFA and encourage you to support your gliding club or organisation in its endeavours to provide services to the members. The total number of members in the last 12 months has increased slightly from the previous year. The GFA Council moved to appoint a Development Officer in 2000/01 to assist clubs and organisations to grow their membership and to increase the activity of existing members. The position was advertised, a number of excellent applications were received and an appointment approved. Terry Cubley will commence the implementation of the development plan from early August 2001. As development officer, Terry will work with interested clubs through the next year to implement programs specifically targeted to increase new participation and the retention of existing members.

Australia hosted the first Club Class World Championships in Gawler, South Australia, in January 2001. Members of the Adelaide Soaring Club and South Australian Gliding Association worked tirelessly through the extremely hot weather, with the temperatures in the mid-40°C on many days. This championship was an excellent demonstration of the camaraderie between gliding enthusiasts from around the world. The concept of Club Class is to be encouraged as it provides a new forum for affordable gliding at international championship level. Congratulations to the organising team who made this event an outstanding success. International gliding events provide a venue for pilot to display their

skills and importantly provides an opportunity to showcase our sport to a wider audience. The championships were featured on National television, radio and press.

The GFA secretariat has introduced a new membership database program to meet the needs of the members and to simplify the process within the office. An internet link between the new database and the GFA web page will provide read only files for information to members and clubs on membership issues. The web page continues to offer an increase in services as more members move to using this medium. David Head manages the GFA web page on a volunteer basis.

The basic requirement of gliding pilots to have ready access to safe, unregulated airspace continues to be a great challenge and considerable work for the GFA Executive. As the number of users of our airspace increases each year, the demands for increased regulation are relentless. The glider pilots of Australia have been very well served again this year by the continued commitment of the GFA Executive Officer Henk Meertens, and the GFA ASAC delegate Bob Hall who constantly meet and participate in formation of programs with all airspace users to ensure any increased regulation can only be justified on safety grounds.

May I take this opportunity to thank those members of the Executive, council, the secretariat staff and the general membership who have offered support and challenges to me in this past year during my term as GFA President.



*Proudly Australian designed  
& manufactured*




## TRANSPONDER T2000

- ◆ 61mm wide x 61mm high x 160mm deep
- ◆ 600 grams





**BASE STATION**

## WORLD'S SMALLEST PANELMOUNT 760 VHF

- ◆ Micro size (fits standard 2 1/4" instrument hole)
- ◆ 135 mm long



**PANELMOUNT**

- ◆ Micro weight (400 grams)
- ◆ Affordable avionics
- ◆ NOW CASA APMA APPROVED (#E2000-004)

**FOR DEALERS LISTINGS CONTACT:**

Microair Avionics Pty Ltd (ABN 92 091 040 032)  
 Airport Drive Bundaberg Qld 4670  
 Phone: 07 4155 3048 Fax: 07 4155 3049  
 Email: sales@microair.com.au Web site: www.microair.com.au



## Jim's

# New Boots

MIKE BEANLAND

*"Jim," his mum said, "while you were in the operating theatre the paramedics gave me all your clothes but I'm confused about something. Your jeans and jocks were all cut up, obviously to get them off you, and I see they also had to cut your socks off, but your boots are just fine. Weren't you wearing them? Were you flying in your socks?"*



Thomas Cook

Jim laughed – but since I was in the hospital bed opposite him I'd heard the "boot" story already – here's what happened:

It began on Monday. As I pulled up to park at the top of the take-off hill there was Jim sitting on a large flat rock looking down into the valley and pulling on his boots. I'd driven up into the hills 90km from Perth to do a bit of paragliding with Jiri, West Australia's only paragliding instructor. He was with Jim, his latest student, at "The Range", WA's most popular winter gliding spot a few miles from the trendy inland town of Toodyay.

Anyway, as we both got ready to fly I commented on Jim's boots. "Yes," he said, *"they are new Thomas Cooks"*. He was really happy with them. *"I live in my boots,"* he added.

We took off and flew along the front of the hill, using what little ridge lift there was to soar back and forth for a while. It wasn't a comfortable ride as there were a lot of heat thermals coming up the slope, caused by the hot spring sun, resulting in rough "lift" and "sink" pockets and causing all our flights to quickly become bomb-outs as we landed in the paddock at the bottom and to the left of the hill. It was not the best place to land, but as the usual bomb-out paddock directly under the hill was in crop and could not be used until after harvest, we had to land in a clearing behind the farmhouse. It was in a paddock with a pile of rocks and a fairly large tree right in the middle, but with enough clear area to land around or behind.

I had had enough of being bounced around in the air and so after three flights I gave up and went back to Perth. The next morning, the forecast was for similar conditions. Don, another of Jiri's students, and I were both going to fly with Jiri but decided not to, so Jim and Jiri headed up to The Range to continue with Jim's training.

Jim was a country boy, a station owner's

son, and had grown up tough – in the cattle-yards, in the saddle, the sun, the flies and the dust. All of his 92kg was tough and he had the scars and missing body parts to prove it. He was learning to paraglide so that he could get a paramotor and use it to muster cattle, he said.

Anyway, as luck would have it, on his fourth flight Jim hit a thermal just as he was about to land some 20 or 30 metres behind the big tree in the middle of the paddock. Just three feet above the ground, all ready to touch down and suddenly the glider lifted him up again and he was headed straight for the tree. "Turn!" Jiri called on the two-way radio. Jim turned. Now remember, he's a strong boy – he didn't tweak the control line, he didn't gently glide to the right of the tree, he **turned** and the thermal helped. Now you've seen what happens to those swings at the fun fair when they swing around fast? They go out horizontal! So the next thing Jim knew, there he was being swung up horizontal 20ft in the air in a big arc, and there in front of him was the glider, plunging into the ground, with him following it at a rapidly accelerating speed.

They say he probably hit the ground at 60 km/h.

While he lay on the ground Jim knew he was hurt, and hurt badly – broken up into pieces to be more accurate. But he didn't just lie there. No, not Jim. First he unclipped the carabiners on the harness he was wearing and let the paraglider go so it did not drag his broken body across the paddock. Then he found the PTT switch to answer the frantic Jiri who was calling him from the top of the hill. "Yes, I can hear you Jiri...", he said. Then, *"I'm sorry Jiri, I messed that landing up didn't I?"* and then, *"I'm pretty broken up Jiri."*

On his mad drive down the hill Jiri called 000 and had a medivac helicopter on its way

from Pearce Airbase and an ambulance dispatched from Toodyay.

As I said, they make them tough in the Pilbara. Jim chatted on the two-way all the while Jiri was racing down the hill, and was fully conscious when the instructor finally got to him.

Once he had been loaded in the helicopter Jim overheard the paramedic's saying something and interrupted them. *"Will they have to cut off my boots?"* he asked. "Yes."

*"I don't want them cut!"* *"We have to cut them to get them off. Your pelvis is broken, your ankle is broken and your leg is broken. If we don't cut the boots off now they'll cut them off when we get to the hospital."* *"Well, pull them off now!"* was his demand.

The paramedics were shocked, *"But..."*

*"Pull them off!"* he insisted. *"They're my best boots and they're brand new. I don't want them cut, so pull them off... Now!"*

So, while Jim gritted his teeth and clenched his fists they pulled at the boots, until a hiss escaped his lips... and they stopped. A few minutes went by and then he gritted his teeth again, *"Okay, pull,"* until another hiss... And later a bit more, and more and more. It took about 25 minutes for the helicopter to fly to Perth and by the time it was hovering over the big "H" at the hospital Jim had saved his boots.

It'll be many months before Jim can wear his Thomas Cooks again, but at least they won't be cut. *"My body can fix itself,"* he said from his hospital bed, *"but my boots can't,"* he laughed. His mum wasn't laughing.



**Sub-ed note:** I asked Mike why he was in the hospital bed across from Jim. Sheepishly he explained that he too had had an accident, injured his ankle, but... unlike Jim, he let his boot be cut off. *"That's another story, for another day,"* he said, *"I might tell you that one too, sometime..."*



# Winter Flying in Geraldton

## – A Beginner's Perspective

MARK ALLEN

Having completed a paragliding course in April this year, I was very interested when I heard that my instructor, along with about 10 members from the local Cloudbase Paragliding Club, were heading to Geraldton for a long weekend of flying. Geraldton is located 400km north of Perth and is a great winter location because it has ridges that can be flown in wind from almost any direction, just as long as it isn't too strong!

**A**rriving in Geraldton midday on Saturday, I set up camp at the local caravan park and raced up to the slope known as City View to where most of the pilots had already congregated. My first lesson here was that if the winds weren't direct enough up the slope, or strong enough for the experienced guys to stay up for long, then I would be looking at an express elevator to the basement level! So after a rather invigorating walk back up the slope I decided to watch and learn for the rest of that afternoon.

The second lesson for that day was that I would definitely need to get a 4WD to negotiate the rocky roads to some of the sites. In fact, this was probably the most frequent fact pointed out to me over the entire weekend, and explains why everyone else there did actually have one. That night we all went for a bite to eat in town where I discovered that quite a few of the pilots had Polish heritage and a definite penchant for Chinese and Italian food, and Vodka. I was blown away by how many different places they had all flown and their various experiences, and hope to do some of the same things myself one day... well, except that one thing where one of the guys ended up at 100ft with no pants on!

Sunday started on a much brighter note; after a leisurely McBreakfast it was up to a nearby ridge called Wazza's Knob where things were looking much more positive than the previous day. I managed about four flights, totalling half an hour of flying and 40 minutes of walking after the bottom landings. The guys pointed out to me that unfortunately I couldn't actually log the time it takes to walk back up the hill as flying time! Most of the experienced guys managed to fly without any bottom landings at all, which leads me to lesson number three. If the wind strength is on the lower end, then periodically top landing as the wind is abating is a very good option, unless you are looking to work off the crap you ate for breakfast. (Oops! I guess that's the end of that McSponsorship deal I was looking at!)

As the wind swung more westerly, the south-west slope began to generate even less lift, so it was off to the coastal site of Horricks Beach for some afternoon flying. So after stopping at the health shop for lunch (is there actually one of these in Geraldton?) we all headed out 80km north to Horricks. It was a fantastic site with a soaring ridge of many kilometres. The only down side was that the wind was still a little southerly and this made for a bit of turbulence on the west facing slope. I managed an hour long flight before deciding to come in as the wind strength was increasing. One of the more experienced guys talked me in for a top landing on the radio, which made it much easier and made me feel much more comfortable, as did the little bush I landed on (oh well, I still gave it a 6/10). Most of the other guys stayed up for another half hour or so on their more high performance gliders, but still had serious issues to deal with on their top landings, as wind speeds kept increasing. That night was another great get together at the camp site BBQ, but I couldn't bring myself to eat anything as unhealthy as steak and salad, so a couple of us turned up with a few take-away

pizzas instead. So while talking over the day's flying, I was wondering why most of the pilots looked so fit and lean, because diet definitely had to take a back seat on these away trips. After toying with the ideas that some of them may have been bulimic, I decided that walking up from a bomb-out really does chew up some serious calories, which would explain why my legs were so stiff!

I discovered lesson four the next day when waking up in the tent. The wives' tale that "eating lots of pizza will keep mosquitoes away" is total crap! Rain had been forecast for that day as a weak front was expected to move through around lunchtime. With south-westerly winds expected we all headed off to Mt Rennie, which was a ridge facing that direction. When we arrived on location it was obvious that the wind strength was on the increase, and the window for flying was only around 30 minutes or so. After carefully watching the more experienced guys launch (team Pol-Air as they are known) I decided to give it a go. It was quite enjoyable for the first two or three minutes, then as the wind picked up it was a combination of big ears and maximum speed bar just to maintain my position out from the ridge... and yes, you guessed it, this will take us onto lesson five. When you notice all the senior pilots that fly faster gliders than you land after only 10 minutes of flying, then this is probably not just a toilet stop, and you should start to wonder why! So by now a bottom landing was the only safe option for me, and it went quite smoothly, despite a bit of wind shear close to the ground which turned a perfect landing into a three point touchdown.

Unfortunately that was the last day of flying for that trip, but I was very happy to have gained a bit more experience and to have met a great group of people. There are plans for another trip to Geraldton in the near future, and I will definitely be signing up for that based on this experience.



# Malaysian Paramotoring Tour 2001

## – Part 2

EWAN McCABE

### Day 4, 11 February – Kuala Teren to Kapas Island

As the wind in the morning wasn't right to take-off from the resort, we were bussed to a large, sandy, carpark at the edge of a large dock in the nearby town. We waited for a while for the motors to turn up – half of them had apparently been dropped off at a different large, sandy carpark.

After an hour or so I asked Basir where he thought my motor might be, as it looked like everyone had found their motor except me. He said, *"Ah, that will be your motor then."* He drove me in his 4WD to the other side of the dock. There in the middle of another large, sandy carpark, on its Jack Jones, was my F3. I didn't think it was very good etiquette to start swearing at my host, so I didn't, but I would have liked to. He told me to strap the motor – complete with cage – onto my back, climb up onto the passenger side running board and hold on. We were off!

This was a bit of a laugh, until we arrived at one end of a narrow bridge the same time as a truck arrived at the other. Just for your information, the first rule of Malaysian driving is: *"On no account slow down under any circumstances."* I guessed it would be a tight fit when Basir pulled over to the left as far as he could and I pressed myself as tight as I could to the side of the 4WD. My cage only just grazed the powerpole as we roared onto the bridge at 40 or so km/h.

I later told some of the guys what had happened and no one really so much as batted an eyelid, as it was, in the overall picture, such a small event.

By this time we had identified three of the Russians as being total gits. Rather amusingly, two out of the three had appeared that morning with squares of paper stuck to their heads to cover up sunburned noses and ears. On a comedy scale of zero to 10 it was right up there.

Again there was no wind, and again Sloth and I, plus a few others, failed to get off. The problem seemed to be a generic lack of lift; even some of the top pilots were taking a while to climb out. One of the Ivans from Minsk got airborne after a long run and climbed very slowly indeed, towards the trees at the far end of the carpark. People watched and said he would have to abort, but as we already know, there is no direct translation in Russian for the word, *"Stop!"* He wasn't even going to get close to clearing the trees/powerlines/houses, when his wing tip caught the corner of a two storey building (later we were told it was a school). This then spun him round the back of the building, at full power and out of our view. There was an almighty bang and the sound of a screaming F3 was no more. My first thought was, *"I've never seen anyone kill themselves before, until now."* Again, the Ivans appeared to be constructed exclusively out of the material that aircraft flight recorders are made of, as he appeared after about 10 minutes from the other side of the building, apparently unscathed, although he had developed a limp by the following morning. The story went that, as he swung around the far side of the building, he was catapulted through a tree, which, very gently, slowed him down and broke his fall.

After this the rest of us – if we hadn't already done so by now – packed up. We then got bussed to Marang, where we met up with the rest of the crew who had flown there. The organisation was now almost zero, as we put our gear in a hotel room thinking we were spending the night there, but in actual fact it was only to keep things safe for the next two hours to allow people to mill around like zombies, wondering what would happen next and where.

After a while it transpired that we had to get the gear to the fishing port and then get ourselves to a different jetty for a boat trip across to the Island of Kapas. Eventually, after a bit of brutality in the transport of some of the paramotors had been witnessed (if it was livestock being



Anticlockwise from front left: Ewan, Oliver, Paul 'P2' Bailey, Sasha, Col. Basir, Jean Eve and Jan, Paul 'P1' Mahoney

transported the Greens would have blockaded the port) we got the motors and ourselves in the right places at the right times.

We got transferred in groups of eight or 10, in the water-going equivalent of an HSV Commodore. These long speedboats leapt from wave-to-wave, as we grinned maniacally at each other holding onto whatever we could. It was a great buzz. We arrived at the island and checked in, to find that we all had rather smashing log cabin style accommodation. Brilliant! The only downer was, that no one had asked the current occupants to leave. These small, black mosquitoes had red racing stripes on them. They also had little crosses painted down their sides to indicate how many previous residents they had bitten to death. They were indeed little bastards.

Later on, after a bit of island exploration, we had a great meal, washed down by a night on the turps. And it probably was turps. Since prohibition on the island, it looked like almost all of the once burgeoning tourist trade had all but died. Rupert was able to suss out that there was a stash of Vody on the far side of the island. So after we'd all chipped in at a very extortionate rate, a local was dispatched to get hold of the illicit grog. Well, it wasn't quite Smirnoff. There was a copy of Beefeater Gin and a copy of Finlandia vody. We took a couple of bottles that still had the seals intact and proceeded to get merry. (I should say that everywhere we stayed outside of K.L. the accommodation was first class and the food likewise.)

### Day 5, 12 February – Kapas Island to Marang

With the aid of John Phillipe and Yanne (two very capable French competition pilots) I managed to launch from the beach first thing in the morning. I was the only one to get a decent flight that morning, as a rain squall came in before anyone else got a chance to get airborne. By the time I'd landed and got my gear under cover the canopy was soaked.

After breakfast, about eight hardy souls prepared for the cross channel flight back to Marang. I was not one of them; the potential losses seemed to far outweigh the gains. I think the team was: John, Jay, Basir, P1, P2, Sasha, Tim and Ivan Mad Eyes. We watched the guys get airborne. Jay was first off (as usual by now) and spiralled up to the 2,000ft ceiling that Basir had cleared for us. The plan was for everyone to get up together and fly as a gaggle, with the fastest gliders doing occasional 360's so as to not lose touch with the slower gliders. In the event of a problem a paramotor was to spiral down – that would be the sign to the rescue boat that someone would need imminent assistance. There were the usual mixed opinions of whether to splashdown upwind, downwind, jump out before hitting the water, etc. Everyone would be wearing a life jacket – which was good. Also, the sea was pretty calm so by the time someone did hit the water they'd have had a good 10 minutes to sort out in their own mind what they were going to do. With all but a couple of the Russians



airborne, Basir gave the signal and the gaggle started to head out towards the mainland. One of the Russians was vainly still trying to get airborne at this point. Eventually he gave up, and then from nowhere a paramotor took off and headed out to sea, at just above sea level. It was Sasha. He roared past us on the dock at 10ft. That was the height that he kept all the way over – what a guy. The rest had uneventful journeys over, except Tim. His engine gave up the ghost with a blown cylinder head on his landing approach – lucky lad. The rest of us had our gear packed up onto a waiting fishing boat. We got the speedboat back, but it was much more sedate this time, since there wasn't half as much swell as the trip out.

On arrival, we messed around again, getting the gear to the new take-off site. This was beside the rather lovely resort of Buai Beach, which again seemed to be only too pleased to welcome a load of blokes – and one woman – with smelly paramotors (and, I might add, by this time it wasn't just the paramotors that were smelly). We tucked into our meal of one sandwich and one egg. We'd be taking off in around 90 minutes, so Tim had the chance to have his head repaired by the healing mechanical hands of P2 (Paul Bailey) with the assistance of Rob's gasket cement and the hotel caretaker's wet 'n' dry sandpaper. John Eve took the opportunity to wash his paramotor down with warm soapy water. The wind had picked up a wee bit by now, so there would be no problem with the take-off for me this time. This flight was to be an 80km trip down the coast, with a refuelling stop at 35-40km, marked out by a tarp on the beach. Sloth was still currently grounded (as the leaky cylinder head gasket had turned out to be a stripped thread) so I said he could use my motor to do the second leg.

Rupert and I were the first off, so we bombed off together, down the coast, without a second glance back. Our gliders are four to five years old and pretty slow by comparison to some of the modern paramotor designed tackle on show. We clocked around 63km/h ground speed as we headed down the coast side by side. Just for the record, P1 and P2 clocked 85km/h. The 40km came up almost exactly at 45 minutes. I waved goodbye to Rupert – no refuelling for him – and turned to land upwind (making about five kilometres an hour above the beach). The ground crew, which included Andy and Sloth, had only just arrived and set out the tarp as we flew towards them. I refuelled and helped Sloth strap-in, then off he went on the second leg. One of the Malaysians came in and landed for refuelling, but had no joy at all in getting back up using the forward launch technique they are so good at. Two of us tried in vain to convince him to try a reverse launch in the 30km/h wind, but it was something that he rarely practised and didn't feel confident in trying. So two of us tried to give him an assisted forward launch to no avail. After a good 15 minutes he gave up, totally knackered. We waited until everyone had flown past, then packed up and headed-off. The guys were able to land on the beach (as usual) outside the new hotel. Again it was a pretty swish affair, which welcomed paramotor pilots with open arms. We ended up having a good session, when we discovered that they did jugs of Heineken at the hotel bar.

#### Day 6, 13 February – No Fly Day

When the day dawned, the wind was blowing even harder than the day before and we doubted if there would be any flying. However, a few of the very experienced guys got their gear ready and Olivier did an excellent demonstration of the new, vertical take-off paramotor – no one else fancied giving it a go. Basir did, however, give it a go and flew onto the next resort. His only reported problem was a massive collapse, where he lost several hundred feet in lee-side rotor as he passed low over the biggest hill we'd seen so far. He appeared totally unfazed by it.

The rest of us got the team bus to the next resort. Thanks to a few Russians, there was by this time a fair amount of bent aluminium tubing accompanying us wherever we went on the bus.

The Golf Resort where we stayed that night was a mega eight storey affair, with a massive open atrium and equally massive buffet area – which we later on did some serious damage to.

#### Day 7, 14 February – No Fly Day

Again the day dawned windy, probably even stronger than the day before. October 2001

**“It has to start somewhere.**

**It has to start sometime.**

**What better place than here.**

**What better time than now!”**

## **INFINITY AIRPARKS**

**Pty Ltd**

**Manilla NSW**

**(Operations commence November 2001)**

**Tandem Hang Glider Flights**

**Tandem Microlight Flights**

**Training Courses**

**Advanced Flying Courses**

**Aerotowing**

**Flying Tours**

**Retail Sales**

**Come to Infinity and Beyond...**

**[www.flynow.com.au](http://www.flynow.com.au)**

**Ph/Fax: 02 49 637 070**

A local businessman, whom I sat and had breakfast with, told me that it would be great paramotoring weather there in a month or so's time... after the monsoon season had finished properly...

It was so windy when we assembled for our morning briefing, that not even Basir talked about getting his gear out. So we got a bus transfer to the next resort. This was starting to get a bit boring; we'd come here to fly, not be herded around like some live animal export. There was also the thought that this weather may continue all the way to K.L. and thus scupper the Twin Towers flight.

#### **Day 8, 15 February – Cherating**

The wind hadn't abated by the next day, so we took a trip on the team bus into town. We all got enough room this time, as some of the guys stayed behind and there was no paramotor gear on board. Downtown, Sloth was able to score a suitable tap, but was unable to get a matching bolt – he'd have to wait until we got to K.L. to get his motor going again.

When we got back, we had a look to see what, if anything, was happening. We found that a couple of the guys had offered to teach the



A not-so-typical Malaysian market scene

# RAINBOW PARAGLIDING – offering the full range of APCO equipment

## APCO Aviation

- 3 years/250 hours warranty for porosity
  - Gliders that are made to last
  - Unique in the industry
- www.apcoaviation.com**

APCO – Australia and PWC winner  
of the Serial Class 2000

### SIMBA DHV2/Afnor Perf

- The only DHV2 that wins Open Class competition
- Finesse 8.9 – Min sink 0.9m/s

**NEW! Fiesta Light  
5kg with harness**

### ALLEGRA DHV1/2 Afnor Std

- For the intermediate who wants performance in Standard class
- Finesse 8.2 – Min sink 1.0m/s

**NEW! Finesse  
harness, lighter  
more protection**

### FIESTA DHV1/Afnor Std

- The first time ever that a wing rated DHV1 offers the performance of a true XC machine. Ideal for paramotor with purpose built risers.
- Finesse 7.8 – Min sink 1.1m/s

**Jean-Luc Lejaille – Rainbow Paragliding**

PO BOX 227, Rainbow Beach 4581 • Ph: 07 5486 3048 0418 754 157 • Fax: 07 5486 3288

Email: [intheair@ozemail.com.au](mailto:intheair@ozemail.com.au) • Web: [www.ozemail.com.au/~intheair](http://www.ozemail.com.au/~intheair)

Malaysians how to reverse launch. It was still too windy for the motors, but just right for a bit of ground handling. We were all spewing, as the beach was at least two kilometres long and about 200m wide, of flat hard-packed sand (not the five metres wide, soft, pot holed things that we'd been doing banzie forward launches from, in nil or next to no wind).

John Eve was a Fresh Breeze paramotor pilot extraordinaire, who also had vast experience free-flying. I knew this, as I had asked him if he free flew, since he was one of the few pilots who obviously weightshifted to carve his turns when flying under power. He was coaching the Malaysian guy who'd landed on the roof of the first resort (Day 2). John Eve was battling with the wing, strapped-in with the Malaysian's harness, sans motor. At one stage he was lifted up about four metres and spun around so he was flying backwards. He then got dumped and dragged backwards on his arse along the beach. This would have been funny in itself, but old John had until now exhibited an air of aloofness that a small minority of French people excel at. Plus, being an ex-Brit, the memories of French farmers burning lorry loads of (live) British sheep were still fresh in my mind. Yes, I pissed myself.

P1 then had a go with the same rig. He'd sussed that there was a bit of turbulence being generated by the trees alongside the beach, so he moved down the beach a bit towards a headland, where the path of the wind was uninterrupted. Now, Paul is a competition pilot for paramotors, paragliders and sailplanes, all sponsored to a greater or lesser degree by Her Majesty's Royal Air Force. However, I was pleased to see that the wing wasn't letting him have it all his own way (although he was getting on better than John Eve). Later, as P1 was checking the guy's gear over, he noticed something very interesting. All three of the RHS A-lines had been taped (and presumably stitched or just knotted) about two inches above the maillon. Closer inspection by a team of willing helpers revealed that, out of the three, one line was almost the right length, another was about one inch too short and the winner was about three inches too short. After about four double-checks by the team to confirm this, a few things started falling into place – the crap ground handling, the landing

on the hotel roof, and Paul Bailey remembered flying past a glider with a defined flat area on one side, along what should have been the curve of the leading edge. The wing and harness had been sold to this guy during his training by the school, on the understanding that when the new lines from Edel arrived, they'd be replaced FOC by the school, in the meantime the wing was safe to fly. Remember, this guy had only just qualified, and two very good free-flying pilots could not ground handle the wing in fairly smooth sea air. This poor guy was more than a little pissed off and never flew – sensible chap – for the rest of the trip. When we got back to K.L. he kindly ferried some of the guys around in his C class Merc that he was immensely proud of. Previously, however, during one of our non-paramotor-centric chats on a bus going to somewhere, Sir Rupert Derrham had told us that the new C class Merc's were ladies cars, only good for dropping the kids off at school and nipping down to the local shops. He told us he drove a proper man's Merc, a 500SEC. Nobody quite knew where to look when the Malaysian guy then told us he had just got one of the new C class Mercs.

## Day 9, 16 February – Cherating to Kuala Lumpur

This was the day of the nightmare bus journey back to K.L. Some people had had such a gutful of the shithouse old bus that they paid for the taxi and airfare to fly back to K.L. rather

than take the bus. The end result was that there was a lot more room on the bus, plus it was a relatively new bus with reclining seats and none of the more vociferous Russians on board (about three of them had earlier decided that the tour wasn't for them, and they'd headed back early to be noisy in K.L.). So the journey back wasn't too bad after all.

We got back to K.L., did a bit of sightseeing, bought some cheap tat (*Sub-ed note: I am unfamiliar with the term 'tat', and hope I wasn't meant to put a 'w' in there somewhere.*) and all gathered in the hotel foyer in preparation for what we thought would be a recce of the Twin Towers landing and emergency landing fields. It was at this stage that we were told that the Twin Towers flight had been brought forward from Sunday morning to Saturday afternoon, tomorrow in fact. The recce trip eventually started late on in the afternoon. The first port of call was the site for tomorrow morning's flying, which turned out to be a good 60km out of K.L. We did get there eventually; most of the drive was in the pouring rain and we got lost at least three times. We were then driven back in approaching darkness to K.L., to recce the landing field for the Twin Towers flight. We arrived at the landing field as night fell. It was right in the centre of K.L. surrounded by high rise buildings, but it was a good sized cricket oval and had a massive flag pole with matching flag. This gave a good indication of the wind direction, although it did seem to differ by 90 degrees from the flags of the normal sized flag poles that lined the adjoining street. We were then driven to the Twin Towers for no apparent reason. Once there, we insisted on being shown the emergency landing field, which someone who'd done last year's tour reckoned was very close by. It turned out to be an unused park. As it was pitch black we didn't really get much of a chance to appreciate any potential landing problems, but it was adjacent to a rather beautifully illuminated ornamental fountain, so that was nice.

*Sub-ed note: Tune in next month for the third installment of Ewan's four-part Malaysian paramotoring adventure! Some highlights are: Monkey-boy does laps of the Malaysian seat of government, Ivan Mad Eyes reveals his shocking past, Malaysia's last working F4 attempts the infamous Twin Towers flight.*





# Active Australia

BELINDA HEAD

**U**nder the Active Australia Initiative, the HGFA has secured funding for the purpose of club development. This is not a grant for distribution to clubs to assist in the day to day running of our club activities and member programs. It is a grant provided for the purpose of education and strategic development, which will in turn provide a measurable outcome for the Federal Government.

One of the many goals of the HGFA and its Board is to become compliant with the Active Australia model for sporting bodies, to enable the State associations and clubs to better meet the government's expectations of sporting groups operating within the community.

One feature of this model is a well-managed communication strategy. Not just information going out to members, but the efficiency and effectiveness of the feedback mechanisms. The HGFA already had two tools for communication: Skysailor magazine which is distributed to all HGFA and GFA members, and its own internet discussion groups which any member may register and participate in.

But the key words are **effective** and **efficient**, which means we need to develop the communication strategy further

to include a tool to monitor on a regular basis the needs of our members – and where possible monitor the reasons members choose to leave the sports.

Over the last couple of months, the HGFA has addressed this by sending out a member survey. The response to this has been overwhelming with replies exceeding 10% of current members. I am now going through these surveys and collating the data to assist in identifying our strengths and weaknesses.

The result of the survey will be forwarded to the Board and a summary of the report will be published in Skysailor in coming months. This information will accompany a report based on the findings from a survey of members who have left the sport in the past 18 months.

With this information, I will be preparing the presentation and preferred club model for club development workshops. In the workshops we will be identifying key areas we need to improve on in order to meet the standards set within the Active Australia program. By complying with their standards, we will be better

positioned to take the next step – becoming an important part of the Australian sporting community. This will in turn make us more independent and place us in a better position to apply for government funding through State government sporting bodies.

The Club Development Officer's role (which has been advertised over the past couple of Skysailor issues) is also an important part of the communications strategy. These appointments will provide support to clubs while preparing their development plans and integrated strategies. They will be communicating with members, club executives and myself to ensure each club is given the best possible service while trying to implement the Active Australia model. 

## Important Note

Please make sure that you keep your club contact information up to date with Margaret in the HGFA Office. Without this information, I cannot contact clubs regarding workshops and NDO development issues.

If you would like to contact me directly regarding the Active Australia workshops or other related issues, please do not hesitate to call me. I can be contacted after work on 02 6226 8400 or on email <belinda@australianparagliding.com>.

# HGFA General Manager's Report

On page 31 of this issue is a notice calling for members to apply for election to the HGFA Management Board. I encourage interested members to make application.

## National Site Development Project

I ask that any club executive members who have not yet provided the requested information to our National Site Development Officer do so as soon as possible. Damien Gates (aka Tex) has encountered difficulty in gaining site details for our national site database. The database will be used to develop a national site-guide for internal use and for provision to travelling pilots. Clubs that wish to have site details kept confidential can specify this and details will not be made public.

## Club Control of Operations

My item in last month's magazine regarding club responsibilities in controlling flying operations and "seeking to ensure" that our pilots comply with requirements has led to several clubs contacting me regarding the process of disciplining our pilots. Thankfully the vast majority of our pilots realise that our rules are based on promoting safety – for our pilots, other airspace users and the general public. Nevertheless there are still a minority of pilots that do not always comply with our operational requirements and club rules.

As I said last month, the HGFA constitution outlines the procedures for disciplining pilots and where an incident is reported to me I will initiate the disciplinary process. Where a failure to comply with a club rule is minor in nature and does not endanger others, some clubs have adopted a policy of giving the offending pilot a "first and final" warning, asking that he or she ensures compliance in the future. Then, should the pilot continue to ignore requirements, the matter

is forwarded to me to be referred to a tribunal in accordance with our constitution.

## Microlighting Incident

I have received a report of two microlight pilots illegally landing at the Williamtown Air Force Base in NSW. I remind all pilots of the need to gain specific approval prior to flying into any military airspace. Where such approvals are provided, there are often specific operational requirements and procedures in place, as is the case at Williamtown. Two RAAF personnel have gained approval to operate their microlights from Williamtown on a trial basis. This incident occurred when the two offending pilots followed one of the approved pilots into the base. In doing this these pilots managed to cut off another aircraft in circuit and endanger any ongoing approvals for microlight operations. Good one, guys!

## Accident Reports

### No 1

**Pilot:** Advanced HG pilot  
**Experience:** 430 hours  
**Hours previous 90 days:** 15  
**Hours on aircraft:** 70  
**Aircraft:** High performance HG  
**Damage:** Broken keel spar, leading edge & upright

### Weather:

**Location:** XC outlanding  
**Pilot Injury:** Broken shoulder, concussion

**Description:** The pilot was a visitor to the area and decided to fly down along the ridge he was soaring. He found minimal thermal activity and the wind was swinging off the ridge as he flew along it, until eventually he was forced to land in an area exposed to severe rotor turbulence.

### Comments:

The reporting pilot himself stated that the decision to fly along the ridge was a bad one. He had decided to continue on the flight despite indications that conditions were too stable for the planned flight. This is a classic case of sticking with a preconceived flight plan, despite conditions not being as anticipated. Significantly, this pilot is not the first experienced pilot to disregard the subconscious "alarm bells" and press on regardless.

### No 2

**Pilot:** Microlight pilot  
**Experience:** 150 hours  
**Hours previous 90 days:** 25  
**Hours on aircraft:** 150  
**Aircraft:** Two-place microlight  
**Damage:** Wing, prop & one spat  
**Weather:** 5kt crosswind, moderate turbulence

**Location:** Inland grass strip, 250m long  
**Pilot Injury:** Nil

### Description:

On the second attempt to land at the unfamiliar strip, the pilot encountered turbulence on short final which resulted in a high approach and being turned toward trees adjacent the strip. Having to avoid the trees led to the landing being made further down the strip than anticipated and necessitated a turn to avoid a fence at the end of the strip, resulting in the aircraft rolling onto one wing.

### Comments:

As is usually the case, several factors compounded to cause this accident: an unfamiliar landing field, a crosswind, turbulence on approach and a reasonably short strip (250 metres is the minimum recommended for non-training operations).

Fly safely, Craig Worth







Another stunning image by Bernhard Eckey, flying above Uluru



# A Galaxy Far Far Away

EMILIS PRELGAUSKAS

Reasons are always complex. The beginning is now lost in the mists of time. Martin Simons had done the ground work with a series of information and interest gauging meetings over more than a year. Tony Kiek was active in the Adelaide Soaring Club administration, and looking to expand his inputs to gliding. The Worlds at Waikerie had built an interest in gliding in the general community not seen again since that time. I had a shiny new instructor's ticket and Lima Zulu. Between all these contributing influences, the founding of a gliding club seemed possible.

The university administration of the day was dubious. Other aviation oriented sports start-ups previously had had problems. Even well established other sports clubs (with high equipment costs similar to gliding), like boat ski, needed bailing out financially. We would need to stand on our own feet for 18 months to prove our bonafides before becoming eligible for support funding. We would have to put up or shut up.

Within gliding, established clubs at the time could see no rationale for a new separate club either. University based clubs were to have a rough trot in that period. Those unable to attract a stable senior membership to complement the enthusiastic but inexperienced student body had mishaps, sometimes a series of them. University based clubs operating as a sub-set of an established club tended to wither because of the mismatch between the youngsters' expectations and aspirations, and the throttling grip of control of the overarching club.

Those of us who saw a role for a university based club thought:

- *there was money from outside which might get pumped into the sport for the benefit of the sport and its participants more widely*

- *here was a distinct target market which avoided the 'all things for all people' approach to membership hawking used by most established clubs*
- *for the student, a low cost but full immersion environment could be created, attuned to their specific needs.*

This meant students being with students for the whole weekend at the airfield; and getting together with students during the week doing other things but still with their gliding peers. A team dynamic if you will.

From that came aspects of the club that are still visible to some extent today. Carpooling. Social events as a club. Camps and excursions. The total immersion approach of maintenance as well as flying, building a complete club from scratch in an (on many occasions uncomfortable) open paddock.

Some ambitions at inception extended onward even further to hoping for an environment akin to European Akaflieg tradition. Opposing this are the Oz 'she's right' ethic and the unfamiliarity of the Australian academic world then to what now would be termed 'ties to industry'. Oh, well, there have been other gliding bases founded since, that explore those possibilities; and the possibilities are still latent

in the university club, albeit propelled by the senior people who give the place continuity.

We did some things right, sometimes by intuitive feel rather than rational intellect. While other university clubs went their way, this one today is still around. And notionally the second largest in its region. A measurable pay off for effort. Who says altruism is effort foregone. I used data from those early years in my master's thesis. More accurately altruism as naked self interest extended into the long-term.

And there was fun. Taking a bunch of pre-solo and recent solos to a major regional contest. Same face in the backseat, but a new face up front each day. How about the tyro getting on their first ever cross-country flight set at 500 km in the Bocian? Out over the blank slate of the wheatlands. Onward, ever onward. For God's sake, which way is home; and more importantly, how far away is it? (Only 250 km to go says the backseat.)

The world of course has changed. Expectations extend to doing many things as a student rather than taking on a single primary hobby. HEXS imposes financial demands today not intruding back then. Sampling as a consumer mindset extends as much in the student target market as in other consumer brands in society. I suspect getting such a specific club up today would be a big ask. Not just because university funds are scarcer, nor that GFA membership now costs more than the \$9 per annum full member as it was then.

I never expected then that I would ever be looking back 25 years. That our actions today are history tomorrow. Which gives insight into why I'm involved in the aspects of gliding today that I am. Taking the view for the next coming period.

That mindset is of course quite at odds with the dominant economic rationalist 'let's make money now' view of the world which drives many things. If that view had dominated thinking back then, the Adelaide University club would never have come into existence. Despite its 1930s original precedence. And without 'naked self interest into the long-term' none of the things which are being created by enthusiastic individuals would pass the bean counters' test today. Which gives an insight into 'us' and 'them'.







BERYL HARTLEY

### Diamond Goal/ Diamond Distance

The rules for Diamond Distance flights are easily understood. The Badge is awarded for flying more than 500 km. The only requirements are:

1. You must declare the turnpoints before the flight
2. You can use up to three turnpoints
3. You do not have to fly the turnpoints in the order declared
4. You do not have to use the turnpoints in the order they are declared
5. The start point and the finish point are not turnpoints
6. Turnpoints must be at least 10 km apart
7. You cannot use the same turnpoint more than once
8. You may use the start point as a turnpoint
9. You do not have to complete the declared task
10. You do not have to land at the place you launched from

## GFA Badges & Certificates

### FAI Report to August 2001

L'ESTRANGE Heath Edmund

Sthn Downs

#### A Certificate

NEELAND Hayden John	10564	Caboolture
SALAS Justin Richard	10570	Beverley

#### B Certificate

BANI-ARDALAN Daniel	10442	NSW AIRTC
---------------------	-------	-----------

#### C Certificate

MARTIN Ray Lewis	10150	Grampians
FUKUKAWA Shingo	10496	Southern Cross
HAUTOP Lorraine	10257	Adelaide

#### A, B & C Certificate

HOFMEISTER Hugh Brian	10565	Darling Downs/ Caboolture
HOFMEISTER Brian Edward	10566	Darling Downs/ Caboolture
COLLEY RAYMOND Harry	10568	Caboolture

#### Silver C

HUGHES David Michael	4365	Darling Downs
KRUYSEN Barry Glen	4366	Darling Downs

#### Diamond Distance

The rules for Diamond Goal are more restrictive, as you are setting a "goal" to be completed.

1. You must declare the turnpoints before the flight
2. You must fly a Triangle or Out and Return task
3. You must fly the task exactly as it is declared

Claims for all badges and certificates to:

FAI Certificates Officer  
Beryl Hartley

PO Box 275, Narramine NSW 2821  
Ph: 02 6889 2733 (w), 02 6889 1250 (h)  
Fax: 02 6889 2933  
Email <hartley@avionics.com.au>

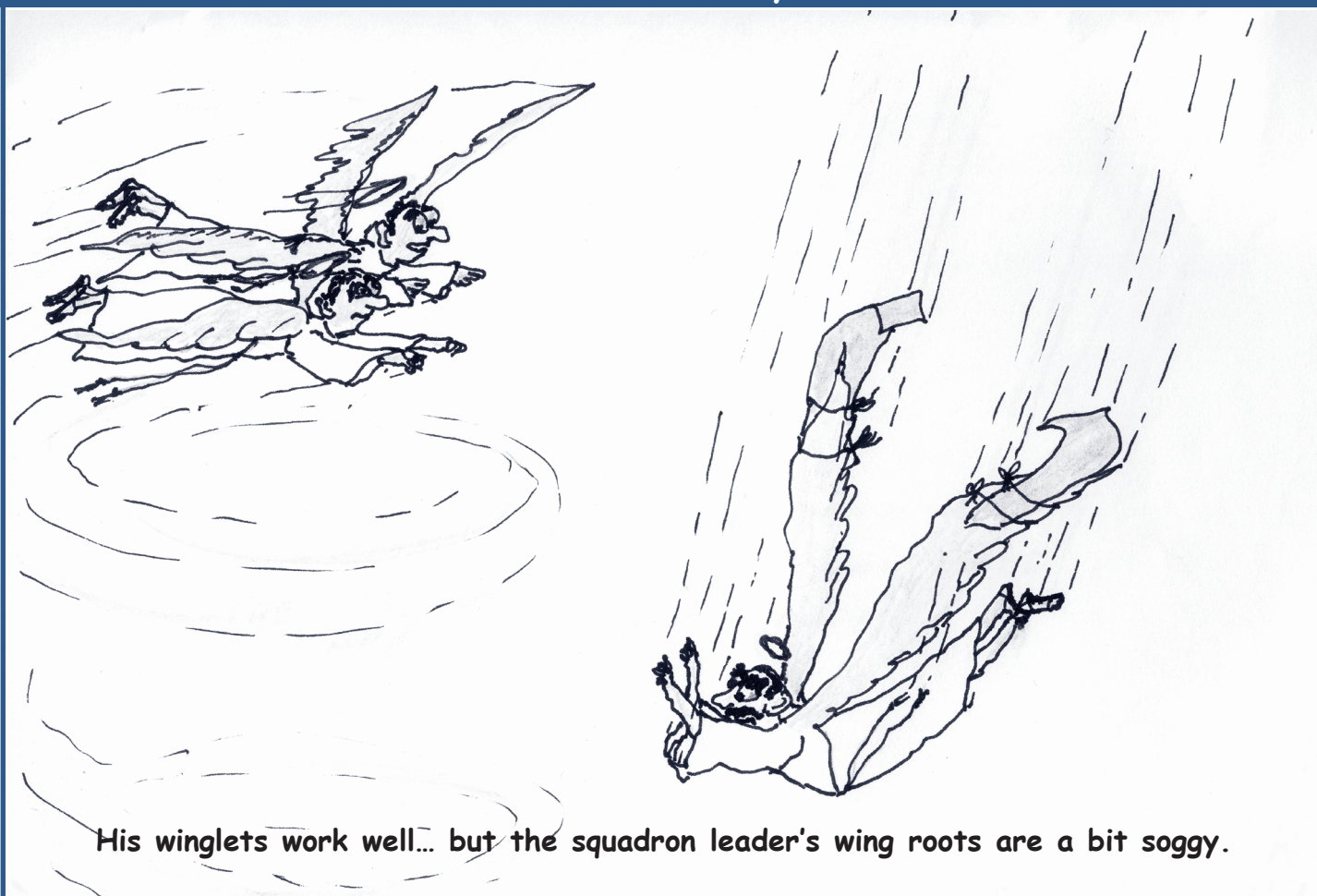
Decentralised Competition entries to:

Chris Stephens  
PO Box W48 Wanniasa ACT 2903  
Ph: 02 6231 4121  
email <poboxw48@dynamite.com.au>

4. The flight must start and finish at the same place

For assistance with setting Badge flights, the FAI Official Observer and Pilot Guide, Annex C to the FAI Sporting Code Section 3 – Gliders is available on the GFA web page at [www.gfa.org.au].

## CARTOON by Codez



# Changeover Time: Wizard or Streak Wing?

JOHN MORGAN

Wizzy or Streak, which wing to fly? Of course there is no concrete answer, there never is... So why did a Streak wing appear atop my trike, and is it a better way to go than the Wizard? Frankly I wanted to fly with the Streak. No logic, just a straight out 'I'm gonna do it' decision. As always we try to use a bit of logic afterwards, to work out the pros and cons...

## What has been my experience up till now with both wings?

Wizzy #144 came with my new Edge X at the end of 1999. Coming to flexwing flying from years of three-axis flying, the Wizard seemed the best choice. The responses suited my transition for reversal of the controls. As it has transpired, the wing is an excellent one. Logging up over 100 hours for me, with lots of airport and paddock landings to its credit, the Wizzy has been a great performer in doing what was asked of it, no complaints. This type of flying is really the fun end of the spectrum. My flying mistakes have been punished with only minor damage to me or the trike – broken wire sort of stuff. Not the doom and expensive disaster that perhaps could have befallen me. The big, slower flying wing has given me time to build up the level of skill to stay in one piece and enjoy flying a trike.

## My best magical moment in the Wizard?

Floating alongside Mt Canobolas at 5,000 ft en-route to Cowra, above an inversion layer, with no need to control the trike whatsoever. The late purple hued light was unreal...

## Worst terror moment?

Flying into clear air rotor turbulence off Port Kembla with another trike. We were not really able to control the trikes, just kept the bar in till below the tumbling air, took a deep breath, restarted the heart, and proceeded back to the airport. On the ground we all worked out the most likely cause of the turbulence. Easy when the feet are on terra firma (more firma, less terra). Thinking which wing would have handled the scenario better? I don't think even a 747 would have done too well.

## Testing moments?

Approaching a short paddock to land, too close to a row of trees, smallish downwash from the trees, and the ground approacheth... fast! Full power managed to prevent disaster, clipped a wheel on the ground too firmly (and broke a wire). A go around, this time over the trees with a final punch through to land. A nice landing too. Wonder how that would have turned out with the faster Streak wing? I'll think about that. This is the area of really learning to handle paddock landings with the new set-up. Practice, practice.

Then the sad moment selling the Wizard and ordering the Streak wing and waiting for delivery. Most production goes overseas now, so it's wait for a little production slot. During this time Dianne Pierpoint of Punkinhead Air Sports was able to alter my wing covers for the wing change. Just knew the little birds were sitting up in the hangar with full cheeks waiting to dive bomb the sparkling new wing! Foiled! Heh, heh.

## The great day, assemble and test

A left turn in the wing needed sorting out. Paul sorted out the problem, but it took all day, as he was also busy with pupils. The interesting point about sorting out the turn problem was that the heavy control in roll just went away. In three-axis speak, we had 'adverse yaw' dragging the wing back from the turn. Next morning we went up and started familiarisation. The stall was higher than the user manual stated by about five knots. Hmmm... it was time to check out the ASI with the GPS, but a little caution near the ground would be wise. (I sent a query to Airborne on this – they believe their findings, not my ASI.)

## Set-up time and effort

When chatting with Carl, one of our club members, he observed that the set-up/break-down time and effort would defeat his early morning fly before work. He enjoys flying at 6am when most of us are still in the cot. The Streak does take longer, but frequent flyers will get better sooner; set-up can be completed in reasonable time. Here the Wizard wins hands down for short 'set-up and fly' time. My trike is usually left assembled in the hangar, so the set-up time is not as much of an issue, except on trips away when trailered to the flying site.

Some pilots go fly their Streak wings without any help from an instructor... bully for them. I'm a chicken; been flying on and off for 40 plus years, but still here and still a chicken. Some of our club members have extensive experience on faster wings, Peggy Qs, Edges, etc. These guys would take to the Streak with hardly any re-orientation at all. (But speaking with some of the Edge wing users, a tractor would be needed to take their Edge wings away anyway.) My total powered flexwing time is around 130 hours, all on a Wizard. Being a chicken with this amount of experience is okay, I feel. Some pilots I talk to have many, many hundreds of hours experience.

## Travelling comfort

My trusty freezer suit is under challenge in the faster winter air. Brrrrrr. I have started looking at motorcycle coats. These coats are around \$400 or so, but they sure handle the faster airspeed and cold air easily... save away, John. The next modification was to put some thin hobby foam in my helmet for a firmer fit – turning sideways with the greater airspeed soon found that one. Whoops!

## The trim wire set-up

This is used for lower speeds, and is an opportunity for a fix to prevent jamming. This is an irritation, but the trim on mine is just left off... worry about that when group flying with a mix of wings and pilots. A specially reground small screwdriver is now resident in my pocket, to gently hook the trim wire back onto the pulley. A query to the factory on this didn't hold out much hope for a better set-up. Time will tell.

## Now to the flying department

The increased airspeed of the Streak is noticed immediately on take-off and climb-out. The climb seems to be a shallower angle, just faster. The climb-out of the Wizard is rapidly upwards, at a fairly steep angle. A climb-out comparison at the last Narromine AUF fly-in showed the difference between the two wings clearly. The Streak trike took off soon after my trike with the Wizard, took a little time to catch me, and more time to go higher, but not too much. The Wizard climbs at the steepest angle for sure. A VSI test is the best way to sort out the winner.





Photos: John Morgan

However, Confucius says: *"The angle going up, can become the angle coming down, on engine out."* Thruster pilots know all about this, and the need to urgently find flying speed is understood. So with the Wizard, taming the climb angle is wise, as the transition to glide angle/glide speed needs to happen fast on engine out. My Streak climbs about 15kt above glide speed at increased engine rpm. Engine rpm is now 6,300 max, with full load. This is close to ideal for this boy. What was the effect of a judicious lift off the throttle foot on climb-out? The Streak set-up just goes to level flight. No drama. I'll test this out further, starting with 1,000ft of altitude, to see what is the lowest recoverable height. For the Wizard's recovery height on take-off, I was happiest when passing 300ft agl. With the Wizard the speed difference window is noticeably less. So get the bar in smartly, in engine out situations on early take-off. This has been my mindset to date.

### Flying around the training area

The Wizard, with the greater area, is more prone to feel turbulence than the smaller Streak. My eldest son reminds me about this; his small heavy plane with lower wing area doesn't feel much turbulence at all... and lands like a missile! (By trike standards.) Can't have it both ways, it seems. The smaller area of the Streak seems to give a faster 'shake' in turbulence.

Overall the beat-up is less with the smaller wing area. We explored this at Narromine with a run to Trangie in the noon day turbulence with the Wizard. The Streak pilots thought we were thick! They handled it better than we did.

### Pitch control is lighter

This is partly because the wing chord is less for the Streak. Pilots starting off without a lot of flying time could need some training on this one... The Streak goes where it is pointed, and we reached 72kt going down. No, I haven't thrown it into a turn at that speed, I'd expect possible overload on one wing tip, maybe a bit of a rotate... don't need that, I'll stay more conservative and leave you brave youngsters to test that area out. The Wizard doesn't allow for a death-defying 72kt dive. It is happy to go down for a bit, but usually wants to speed weave if too much bar-in is used. Speed will probably max out a tad over 50kt or so. Mine did. (Pilot handling of speed weaving is overcome in early training, but the weave onset tends to indicate that speed limit is nigh.) The rate of descent of the Streak is twice that of the Wizard. Ever been held up from landing on a summer day from the thermal generated by the hot tarmac? I have with the Wizard (some interesting 180 degree turns back and forth finally overcame the lift). A couple of Cessnas in the circuit at the time were not amused. Probably were muttering... @\$\$ trike pilot. The Streak would handle this

# Adventure Paramotor



Now in stock!

Quality paramotors from one of the world's largest manufacturers.

A3 2000 models complete with electric start.



Available from:

**AirBorne**  
AUSTRALIA



PO Box 7042 Redhead NSW 2290 Australia  
Phone: 02 4944 9199 Fax: 02 4944 9395  
[www.airborne.com.au](http://www.airborne.com.au)



situation more easily I feel, with the ability to dive through the thermal. Wait and see the next time I encounter this unusual situation.

## Rumours about steep turn drama

This seemed a non-event for my fairly conservative flying style (and speed). Unlike the earlier Edge wings, the latest wings will hold a bank all day. Not much to choose between them there. The Streak needs more muscle for roll control, lighter pilots may need to check their arm strength. A bit of gym time needed? Just fly a lot, the gym is built in. My rangy 88kg build didn't notice the somewhat greater effort, most of the time. Arm muscle a bit conservative? – Go Wizard!

## Landing is another ball park

The 'safety speed' for the Streak is, say, 50kt (check for your weight/safety speed on the aircraft placard). The Streak can be dived to the field at a fairly steep angle, the drag-bag trike will get rid of the excess speed near the ground, conveniently... nice longish flare... little chirp... greaser! That is what we all want (and sometimes manage) when landing. The lighter pitch, heavier roll, greater speed of the Streak suggests a goodly amount of practice and a bit of lesson time. Most likely a wise way to go if one's longevity is a major interest. I used to find the last minute direction adjustments for variable winds tended to stuff my pitch control a bit; now I just motor on until settled, cut power and land.

## Outlandings, paddock style

Now this is an area where the Wizard really shines. Floating along on high, it's nice to know how well Wizzy can land in a small space if ya' gotta! Queried on this, the lads at Airborne said simply for the Streak, "Fly higher and look for a bigger paddock." So I do. Good paddock technique will remain my challenge for a while. We have a smallish paddock in our training area. Time to learn how to short land, for power-out situations. Following short take-off in the longer grass will be interesting. Have tried both styles of take-off:

1. Bar neutral, build up speed till fast enough then up, up and away.
2. Wing nose up and blat along until the trike lifts, then back to trim for the climb-out. From experience the nose-up in short paddocks seems to get me out of the grass. Then I flatten it out a smidgin and gather speed to climb away.

## Motor size considerations

My trike has a Rotax 582, with after muffler and four-blade Brolga prop. This combo copes easily. The new found increase in rpm by about 300 at take-off, suggests that the original 17 degree pitch was a touch too high. Fuel use has gone up a little bit, could be partly my heavy foot. The Wizard will fly at 1,500ft for hours at 4,600rpm one up. Not so the Streak; 5,000rpm seems to be the minimum to even look like holding altitude. 5,100rpm is better

in cold weather, probably 5,200 as the temperature goes up. 5,400 will cruise climb over 4,500ft. Haven't tried over 5,000ft yet, but the rpm and fuel use will go up some more. I would expect it to go up to 5,500 revs at altitude.

**Note:** If 5,500rpm is used at altitude with the Rotax 582 with a full load, the Rotax 503 DCDI becomes a bit of a possible question mark. 5,500rpm with a 582 is about 50hp viz very close to the peak hp of the 503 at well over 6,000rpm. One of our club members had a Rotax 503/Streak wing combo. This set-up possibly works okay at moderate altitudes or moderate loads, but it was soon changed for a Rotax 582. 'Nuff said?

## Summary

The above article is what I've had fun discovering to date. Most of the speeds are a result of the technique used (remember the trike maxim: throttle = altitude, bar position = speed). My six foot two inches by 88kg frame will give more air drag than a smaller pilot and will tend to reduce some speeds. Airborne specification data is noted. My stall is noticeably faster than spec (mid hole). I would be interested to see what others are finding in the real world. And yes, I'll get a lot more enjoyment from my Streak wing. However, the Wizard is easily the king of easy handling, forgiving trike flying. Less expensive, docile, it won't bite us unless we are careless... Doh!

	Wizard	Streak
Speed range:	35-44kt one up, bar in or out to suit speed required	38kt with trim, 53kt no trim. Centre hole wing mount. Front & back holes go faster or slower.
RPM used, Rotax)	4,500-4,800 (582 Rotax)	5,000-5,300 (582)
level flight (say 1,500ft alt):	Load & temperature depending	Load & temperature depending
Climb rate:	600ft/min (spec data)	900ft/min (spec data)
VSI check gives:		900ft/min two up, full fuel
Climb speed:	38kt @ 5,500rpm	52kt @ 6,300rpm (so far)
Note: climbing varies heaps, with bar position preferred	Will go back to 6,000	start followed by 5,500 cruise. Climb soon.
Dive rate:	600 to maybe 800ft/min	1,600ft/min going like crazy
Turbulence?	OK big wing, seems to grab turbulence a bit solidly	Better, smaller wing 80% double surface. Bit softer in turbulence
Stall speed:	24-28kt for 1 or 2 + fuel. Less for lightweights	29kt just me & full fuel 35kt, 160kg crew & 7/8 fuel, 582 trike with the lot. Higher than Airborne spec. Need to suss out more
Short fields:	Short landing/take-off king. Wing braking the best. Helps stopping in small field	Needs a bigger field. Longer to start of climb, smaller wing, less wing up braking effect on landing
Cross-country:	OK, has done Murray trips, etc. Headwinds? Not flash. Think of some alternate downwind destination	Simply has longer legs, a 20+kt headwind? Still enough speed to press on

**Note:** If in any doubt check out for yourself BEFORE committing. The info here is from one man's flying experience. Your flying is probably going to be different. Email <john\_h\_morgan@yahoo.com>.

## Urgent Notice to all WA Pilots Regarding Cottesloe Site

Recently, the Town of Cottesloe commissioned a beach safety audit which was conducted in conjunction with Surf Life Saving Australia. Alarm bells rang for us when the audit suggested that hang gliding at Cottesloe needed to be reviewed.

Subsequent communications and meetings with the Town of Cottesloe has highlighted that the operation of hang gliders and paragliders at Cottesloe is in fact against existing council regulations. Notwithstanding the fact that we have been operating there for nearly 30 years, the council believe that this is an outstanding issue that needs to be addressed and WASSP has submitted a full proposal to the Town of Cottesloe to formalise once and for all our tenure at that site.

### In the meantime

There exists a number of issues that we must be extremely sensitive to until we close this matter:

- The face of the take-off hill is out of bounds. Please keep well away from this area and make sure any non-flying bystanders keep off the hill.
- The crossing of the fence that we traverse to get to the launch spot is of concern to the council. They are particularly concerned about general public crossing the fence because they see us doing it and think it is okay to follow. It is our responsibility to police this, since strict adherence to council regulations have the potential to land us with a fine.

The council recognise that we have been long-term users of the site and do want to find a way to allow continuation of hang gliding. Also, the South Cottesloe Coast Care Association is a respected group who are actively working to preserve the area for all legitimate users to enjoy. We should be aware of this group's needs and activities and be ready to co-operate with them to help maintain this area.

If any pilot has difficulty understanding the sensitivity of this site at this stage or what is expected of them for us to secure tenure, please contact me at any time. My contact details are in "HGFA Addresses".

Keith Lush, WASSP

## HGFA Web Site Update

The HGFA has been working to expand and improve its web site and as part of this has introduced new content to support potential new members, as well as introducing some news pages aimed to be updated on a regular basis. There will be three categories of news: HGFA, Club and Competition, with separate maintainers for each.

The aim is to use the web site to complement Skysailor, and correspondingly, the method by which news is submitted has been updated.

Email addresses have been set up for Competition and Club News such that news items will be forwarded to both the web site and Skysailor. Please refer to the Contents page (Page 1) for more details.

The web site will continue to undergo development and suggestions, content contributors and those interested in further developing or adding to the site are welcomed.

Michael Bruce, <mike@thebruces.org>

## Manilla Paragliding Open 2002

2-9 March 2002 – Manilla, NSW

All XC and competition pilots are invited to Manilla for Australia's major international paragliding competition! Flying will be from Mt Borah (890m asl) which has four large launch areas for nearly every wind direction and 2WD access. The Manilla area, just five hours drive from Sydney, provides mainly flatlands style flying without the hassles or costs of towing. Mt Borah is the take-off site of the current FAI PG World record for open distance (335km, 11/1998) as well as many years of successful competitions. During the 2001 Open, 125 pilots flew





seven out of eight days for a total of 35,000km of XC!

Sanction is CIVL/FAI Cat 2 (for international rankings) and Australian AAA. Over \$5,000 in cash and prizes for Open, Intermediate/Sports, Female, Veteran and Team Classes plus day prizes are for grabs. 125 pilots maximum, so enter early – the last four years have been full well before the competition! All pilots entering must have a GPS, as full GPS flight verification will be used! No GPS – no entry!

Entry fee of \$140 before 1 January includes email info service and support, hill transport, map, prizes, trophies, T-shirt, mid-week BBQ, presentation night (dinner and band) and excellent Manilla XC weather. Pilots must organise their own retrieves. Wind techs are welcome. Living in Manilla is cheap – accommodation in the pubs only costs \$70/week – so pilots can come early to practise and maybe break a few personal bests before the competition.

For entries contact: Godfrey Wenness on 02 6785 6545, fax 02 6785 6546 or <SkyGodfrey@aol.com> (credit cards accepted). Also... Full pilot information and online entry (using a credit card) will be available on [www.mss.org.au] from 1 October onwards.

Godfrey Wenness

## Mystic Update 2001

In north-east Victoria the days are getting warmer and the flying season is quickly approaching. Through winter there have been many flyable days with pilots making some good distances.

Please mark in your diaries 1 September. From this day Mystic Passes are required to fly Mystic in Bright.

The NEVHGC is still actively looking into purchasing the site and landing paddock and have recently renegotiated a new five year lease with a five-year option, to ensure the site remains accessible for pilots in the interim. A big thank you goes out to Bill Graham for all his time and business acumen in securing the site for another 10 years.

Whilst there is an official landing paddock, the club has also negotiated with the landholder across the road to use his paddock for emergency and occasional landings until we can secure the section of land between the existing paddock and the river. A gold coin donation is no longer required when you land in his paddock.

Pilots visiting Mystic Flight Park over the past year will have noticed the ongoing improvements to the site. Works have been done on launch and the road received substantial regrading.

The lease, alternate paddock and site works all require considerable income, which is raised from the sale of the Mystic passes.

After much debate at the recent NEVHGC AGM, and looking at the figures based on previous years, sales, the structure and price of the Mystic passes has been simplified, and is as follows:

Long-term pass, valid until 31 May 2002 – \$50.  
Short-term pass, valid for 3 days – \$10. This represents a 33.3% reduction on a long-term pass (or season pass) from previous years.

It is up to all pilots to ensure that they and their

## HGFA Management Board Election

The current HGFA Management Board's two-year term of office expires at the end of this year. Therefore, in accordance with Section 6 of the HGFA Constitution, applications are invited from HGFA members to stand for election to the Board.

The constitution prescribes self-nomination and applicants are asked to provide a brief resumé outlining what skills, experience and vision he or she would bring to the Management Board.

The HGFA Management Procedures Manual states: *"The HGFA Board is responsible for administration, financial management and leadership. The Board is a team that draws on the skills and talents of each member, working with the one common goal that will ensure the HGFA's success."*

*Effective Board members have: energy and enthusiasm; an interest in people; good leadership skills; tact and discretion; good listening skills and dedication."*

As defined in section 6.4 of the HGFA Constitution the committee (Board) shall be made up by nine members, elected via postal ballot by the general membership.

Preferably resumé should be provided on software and sent via email to <hgfa@tpgi.com.au>. Alternatively, resumé can be lodged via mail to: The Office Manager, HGFA, PO Box 558, Tumut NSW 2720 or sent via fax to: 02 6947 4328.

**APPLICATIONS MUST BE RECEIVED BY FRIDAY 19 OCTOBER 2001.**

fellow pilots have a valid Mystic pass. There are still many pilots that are flying without one and therefore making it more expensive for those pilots who are doing the correct thing. If everyone buys a pass, it will make it cheaper for all in the longer term.

As in previous years, club members will be checking passes on a regular basis and there is a *No Pass – No Fly* policy for the site.

For the 2001/02 season, passes will be available from Alpine Paragliding, Bright Hikers, Bright Central, Gilbert Griffith and various club members.

Lisa Basler, Mystic Pass Sales Co-ordinator

## VHPA Parks Victoria Festival, Albert Park, Melbourne

I guess the Federation Parade may have affected the numbers of people as it was on at the same time, but literally hundreds and hundreds of people turned up for the Parks Victoria Festival as well, Sunday, 6 May.

Rob Van Der Klooster had built a simulator and it was undeniably an outstanding success. The simulator was a Moyes Sonic glider atop a pyramid structure, its four legs made of glider leading edges. The harness was mounted from the apex so the glider did not actually take any weight. We also had Rob's Litespeed set up and an Airborne glider inside the Alpine Shire tent.

We had a prime position in the open space in front of the main stand. Starting at 10am till 5:15pm we put through hundreds of kids of all ages from two to 40. We didn't get a break. Each of us did three-and-a-half hours non-stop. When we weren't on the simulator, we were talking about HG/PG, which parks we fly, etc. Most people are keen to tell where they have seen the sports before; Mt Buffalo, Portsea and other high visibility sites usually.

By the end of the day we were both exhausted. This proved to us we'll need more help next year! It was a beautiful day (please don't anyone tell me how good the flying was) and we had many news

photographers record the action.

I have no doubt that being so central, so visible and so big, we would have to have made a significant impression on many people.

The simulator is fully transportable, if anyone needs it for some other display – all you need is a glider and heaps of energy! Finally, thanks must go to Rob for getting the simulator built, supplying the gliders (two out of three), driving up from Geelong at 8am on a Sunday morning and facing the Federation Parade & Federation Footy Game traffic back to Geelong at 7pm that night. It was a long day for me; but four hours longer for Rob.

Mark Pike, VHPA Site Development Officer

## Club News

### Hill Flyers, WA

A lack of suitable flying weather this winter has made it difficult getting off a hill around Perth through July and August.

A few pilots managed to get some good flying on the dunes around Perth in the winter westerlies, but not without incident, where low flying (in the moderate to strong conditions needed to soar the low dunes) resulted in a need for new downtubes for some and sail repair for others... Some good flying was also found around the bigger westerly sites further south of Bunbury along the coast to Yallingup and beyond. A few were rewarded with some good flights after making the trip to Geraldton for a weekend.

Mike Thorn had a fly at the 800ft northerly site near the whaling station in Albany, and judging by the video taken from the wing it looks like a fantastic coastal winter site to fly.

A possible top landing area for hang gliders has been identified at Bakewell behind the existing launch... hopefully in readiness for the Spring Fly-in (Watch for the article in Skysailor).

See you in the air, Rick Williams

## CMac National Cross-Country Winter League Update – 20 August 2001 – Top 10

Pilot Name	State	Flight 1			Flight 2			Flight 3			Flight 4			Flight 5			Total
		D	T	P	D	T	P	D	T	P	D	T	P	D	T	P	
1 Jon Durand Jnr (Adv, HG, Litespeed)	QLD	66	OD	66	100	OD	100	90	T	270	436						
2 Wesley Hill (Adv, HG, Litespeed)	VIC	55	DG	83	78	OD	78	39	OD	39	51	DG	77	29	OD	29	306
3 Mark Plenderleith (Adv, PG, Sigma 4)	QLD	49	OD	83	29	OD	50	34	OD	55	17	OD	29	44.5	OD	76	293
4 Andrew Horcher (Adv, PG, Bonanza)	QLD	64	OD	109	23	OD	39	50	DG	109							257
5 Ian McFarlane (Nov, PG, Bolero)	QLD	15	OD	75	16.5	OD	83	5.5	OD	28							186
6 John Piercey (Int, PG, Atlas)	WA	20	DG	90	21	OD	63										153
7 Dave Tonks (Nov, PG, Bolero)	QLD	6	OD	30	19	OD	95										125
8 Jamie Oorshot (Adv, HG, Blade)	WA	65	OD	78	35	OD	42										120
9 Damien 'Tex' Gates (Adv, HG, SX6)	QLD	48	OD	58	33	DG	59										117
10 Brandon O'Donnell	QLD	32	OD	96													96

## ► Cairns Hang Gliding Club, QLD

The Cairns club recently held another extremely successful tow training weekend at Innisfail, 20-22 July. The photos came out really well and are here for readers to enjoy.

Many thanks go to instructor Brod Osborne for all his skill and caring.

Lance Keough

## WA State Association – HGAWA

### WA All Clubs Meeting

HGAWA will be hosting an All (WA) Clubs meeting from 7:30pm, on Wednesday, 17 October upstairs at "Cascades Bistro & Function Centre", 231 Guilford Road, Maylands. Light refreshments will be served (free), bar facilities from 7pm upstairs and bar facilities and bistro meals available downstairs from 6pm.

Rick Williams, Administrator HGAWA

## Melbourne Hang Gliding Club, VIC

On 18 July 2001 at the club's AGM, members of the former Eastern HG Club passed a motion to change our name to the "Melbourne HG Club Inc."

Also at this AGM a new committee was voted in. The successful volunteers for this year are Andrew Medew, Vanessa Sparke, Geoff Tozer, Kevin Grosser, Geoff Tozer and Peter Batchelor. Their positions and contact details can be found in the "HGFA Addresses".

A new web site [www.vhpa.org.au/melbourne/] and email address <melbourne@vhpa.org.au> have been created. More details are available there.

These changes will not affect the vigorous and positive member initiatives that have already taken place, but was simply to give a quick and simple explanation of our current and hopefully new member base.

Our club welcomes pilots of all levels. Recently we have had great success (middle of winter in Victoria) with our pilot initiatives and have been able to assist some very new pilots with their first flights outside a school environment.

Another important initiative of our club is to have a fun and knowledge gaining presentation or guest speaker at each of our monthly meetings. At our last meeting in August at which 48 pilots attended we were lucky to have Rohan Holtkamp as a guest speaker. Rohan was kind enough to talk about the goings on at the recent World Championships in Spain at which he placed 4th overall. He also spoke about ideas for pilots on entering competitions, competition flying and glider maintenance in preparation for comps.

Andrew Medew, President

## Sunshine Coast Hang Gliding Club

The AGM was held on 4 August at the Cookman residence in Tewantin. All positions were declared vacant and nominations called for. The results of the election: President: Phil Lewis, taking over from Gary Allan; Vice-President: Stan Roy, taking over from Duncan Whyte; Treasurer: Michael Powell; Secretary/PD SSO: Jean-Luc Lejaille; HG SSO: David Cookman; Committee members: Mark Albrecht, Michael Riggs and Ken Gesh.

Lucky door prizes were won by Rob McDermont and Jean-Luc Lejaille.

Winter was very generous to Sunshine Coast pilots this year. Neil Sutton has the record of 63 hours from 1 June to 30 July. As well as the west and south-east sites working, coastal Rainbow had its share with seven soaring days in June, six in July and an amazing 13 days in August – not bad for the worst time of the year. JJ of Manila fame, Neil and JL enjoyed a great day practicing their 360's and spirals over whales going up and down the beach all day.



Towing up behind the trike into a fantastic looking sky

Photos: Lance Keough



Waiting gliders



Pre-flight briefing (left to right: Steven Samford, Russell Krautz and instructor Brod Osborne)

Pt Cartwright and Moffat Beach are still closed until further notice. Check out the dates for the Mt Widgee Fly-in (HG/PG, hill, tow, aerotow) and the Rainbow Fly-in (HG/PG) in the next club newsletter. Also, don't forget to register for "Trevor's Challenge" at Teewah, with first prize \$800 off any new Apco glider and a perpetual eagle trophy, ballast bag and T-shirt. The winner will be the first one to fly over 34km.

Fly high, fly safe,

Jean-Luc Lejaille, SCHGC Secretary



Brod adjusts the tow bridle release



Finally nine-year-old Sophie Osborne gets a flight with her instructor dad!

time/date. – L/D-calculator range: 19.9.

General information: Comes complete with leg clamp, batteries and transport bag. Special clamps for glider and harness available. Power supply: 2 x 1.5V AA alkaline batteries for 100 hour operation. Dimensions: 150 x 85 x 37mm. Weight: 250g. Warranty: 12 months.

The Moyes Team

## Product News

### Bräuniger Flight Instruments

Moyes is now the new Australian distributor for Bräuniger Flight Instruments and we have stock of the IQ series instruments and accessories.

More information at [www.brauniger.com].



#### IQ Series – Comfort

The new "BASIS" instrument for all pilots! Easy to handle for beginners, but lots of functions for advanced pilots.

Features: New Super-twisted-LCD technology for best reading – 2 altimeter system – 0-set auto – hPa & temp – Battery 0-100 % – Separate

speed probe real time/flight time

– Memory for peak values/date/time for 50 flights  
– Symbol flags for active functions – L/D calculator  
– 2 different sink signals & more...

Technical data: Rate of climb metre: +/-8m/s/1,600ft/min (+/-20m/s/4,000ft/min digital) – Resolution: 0.2m/s/40ft/min analog, 0.1m/s/20ft/min digital – Averager: 1-30sec – Altimeter: to 10,000m/20,000ft, resolution: 3ft – Speed range: 0-40km/h, resolution: 1km/h – Measurements: km/h/mph/kt – Temp range: -20+80°C (°F switchable), resolution: 1°C/1°F – Memory diary: Allows the readout of peak values from 10 past flights for altitude, rate of climb (descending), speed/

## Extreme Sports Goggles

Very cool high quality sports goggles with polycarbonate lenses (not acrylic) that provide 100% UV400 protection. Several designs with clear, mirrored or colour tinted lenses available (subject to variation and availability.) These goggles are manufactured to the highest CE/ANSI standards. They are not the typical budget sports goggles available elsewhere. Manufactured exclusively for Total Control Skydivers and available now for your skydiving, hang gliding, paragliding, triking or other extreme sports. See them at [www.totalcontrol.com.au/page7.htm].

Nick Balgowan, Total Control Skydivers

Ph: 08 9325 6001, 0418 545 154, fax: 08 9325 9452

## FAI News

### Provisional FAI World Record Claims

FAI has received the following Class O record claims:

Sub-class O-2 (HG with a rigid primary structure/ movable control surface(s)) – General

Claim number 7077:

Type of record: Straight distance to a declared goal

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

Performance: 350km – Pilot: David Glover (USA)

Hang glider: Air Atos-C – Date: 29/7/01

Current record: 316.7km (20/7/00, D.H. Sharp, USA)

Claim number 7081:

Type of record: Straight distance to a declared goal

Course/location: Zapata, TX (USA)

Performance: 502km – Pilot: Betinho Schmitz (Brazil)

Hang glider: Moyes Litespeed – Date: 28/7/01



Current record: 488.2km (3/7/90, Larry Tudor, USA)

**Claim number 7093:**

Type of record: Speed over a 200km triangle

Course/location: St André-les-Alpes (France)

Performance: 43.8km/h – Pilot: M. Hoffmann-Guben (Ger)

Hang glider: Flight Design Ghostbuster – Date: 22/8/01

Current record: 39.83km/h (15/8/00, M. Hoffmann-Guben, Ger)

**Claim number 7094:**

Type of record: Speed over a 100km out-and-return

Course/location: Hearne, TX (USA)

Performance: 48.8km/h – Pilot: Robin Hamilton (UK)

Hang glider: Swift – Date: 10/8/01

Current record: 33.13km/h (10/7/99, S. Midwinter, Can)

**Claim number 7095:**

Type of record: Speed over a 150km triangle

Course/location: Hearne, TX (USA)

Performance: 51.4km/h – Pilot: Robin Hamilton (UK)

Hang glider: Swift – Date: 15/8/01

Current record: none

Sub-class O-3 (Paragliders) – General

**Claim number 7079:**

Type of record: Straight distance to a declared goal

Course/location: Zapata, TX (USA)

Performance: 308.9km – Pilot: Josh Cohn (USA)

Paraglider: Windtech Quarx – Date: 27/7/01

Current record: 250.2km (18/12/94, A.F. Louw, Sth Africa)

**Claim number 7082:**

Type of record: Speed over a 100km triangle

Course/location: Brauneck (Germany)

Performance: 19.45km/h – Pilot: Burkhard Martens (Ger)

Paraglider: Gin Gliders Boomerang – Date: 28/7/01

Current record: none

Sub-class O-1 (HG with a rigid primary structure/controlled by weight shift) – Feminine

**Claim number 7080:**

Type of record: Straight distance

Course/location: Zapata, TX (USA)

Performance: 402.3km – Pilot: Kari Castle (USA)

Hang glider: Wills Wing Talon – Date: 27/7/01

Current record: 370.87km (2/12/98, T. Heaney, AUS)

## FAI World Record Ratification

FAI has ratified the following Class O records:

Sub-class O-3 (Paragliders) – Multiplace

**Claim number 7024:**

Type of record: Speed over a 25km triangle

Course/location: Oetz (Austria)

Performance: 27.1km/h – Pilot: Burkhard Martens (Ger)

Crew: Renate Bruemmer (Ger)

Paraglider: Airex Cargo S – Date: 27/6/01

Previous record: 24.31km/h (14/8/00, Mark Hayman, UK)

FAI congratulates the pilots on their achievements.

## Jury and Steward Handbook

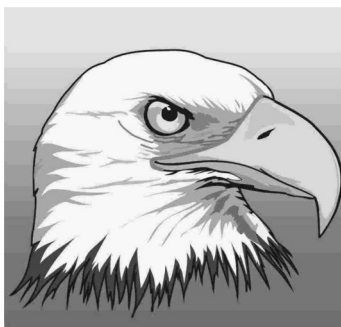
Version 1.3 of the CIVL Jury & Steward Handbook is now available at [www.fai.org/hang\_gliding/documents/]. The handbook now has an appendix on 'Coping with stressful situations' written by Sarah Fenwick, who in addition to her CIVL work is a sport and performance psychology coach.

The CIVL handbook should be read in conjunction with the FAI Jury Handbook available at [www.fai.org/documents/juryhandbook.asp].

## 'Free Movement of Pilots' Document

The Free Movement of Pilots document, which gives information (provided by each country) on recognition and acceptance of IPPI cards and insurance requirements has been updated (Version 3). New inclusions: The Netherlands and Portugal. There is also information on permitted radio frequencies in Canada and Turkey.

Twenty-six countries have now supplied information which is available in pdf format at the web site [www.fai.org/hang\_gliding/general/free-move.pdf].



# "Ol' Eagle Eyes" Flight Glasses

From North Coast Avionics Pty. Ltd.

ABN 61003732492

PO Box 741 Byron Bay NSW 2481

Phone / Fax (02) 6685 6287

email [cummings@nor.com.au](mailto:cummings@nor.com.au)

Check out our web page

<http://www.nitroaustralia.com.au/eagleeyes.html>

**Frames - Glider, Hangglider, H/g Small and World's Specials**  
**Tints - Original Red 6, Red 4.5, Amber 6 and Purple 6**

**Australian Dealers**

**Moyes Delta Gliders - NSW**

**Steve Blenkinsop - SA**

**International Dealers**

**Nixon Beltrao - Brazil**

**Johnny Carr - England**

**Hiroshi Mamiya - Japan**

**Dealer inquiries Welcome**



CIVL are still waiting for replies from those countries not listed in this document (Note: Non-reply does not indicate non-acceptance of IPPI card or no insurance requirements).

## World Pilot Rankings Update

**Hang Gliding**

New results include the Norwegian Masters, Slovenian Open and the Spanish Open. The 2000 Australian Nationals, Bogong Cup and Millennium Cup have been deleted. Manfred Ruhmer (AUT) maintains 1st place and the only change in the top 10 is Jean-Françoise Gerard (FRA, 8th) and Richard Walbec (FRA, 9th) swapping places.

Kathleen Rigg (GBR) still leads the female rankings (28th overall), 38 points ahead of Françoise Moçellin (FRA, 44th overall) and Kari Castle (USA, 47th overall). 634 pilots (41 female, 6.4%) are ranked from 39 countries.

**Paragliding**

The PG rankings see the addition of US Nationals, Greek Championships, Nordic Open, PWC France and British Open. Comps deleted are: 2000 Australian Nationals, South African Nationals and Millennium Cup. Steve Cox (SUI) maintains 1st place (306 points) and the only change to the top 10 is Angus Tapper (NZL), now 9th.

Louise Crandal (DEN) keeps the lead of the female rankings and is now ranked 33rd overall, but Andrea Joubert (RSA, 92nd overall) has closed the gap slightly. There are currently 839 pilots (39 females, 4.6%) ranked.

Results not yet received (therefore not included) are the Argentinian Open (PG), Belgian PG Open, Czech & Slovak PG Nationals, Dutch HG Open, HG Internationale de France. The International Swiss PG Championships and the Nordic HG Open (Iceland) were not validated.

Forthcoming HG comps (Class 1 unless otherwise indicated) are: Cat 2 – UK Open Nationals, St André (FRA, Class 1 & 2); Podbrezova HG Cup (Slovakia); Lone Star Nationals (USA, Class 1 & 2); Korean Championships; Canungra Classic (AUS). Forthcoming PG comps are: Cat

2 – Pre-PWC Greece; Norwegian League Final; PWC Kobariid (Slovenia); French Championships; Alpen Adria PG Open; British International (St André, FRA); Polish Open; Cornizzolo Cup (ITA); Mun Gyong International (KOR); Korean PG Championships; Canungra Cup (AUS); Australian Nationals; Manila Open (AUS).

For all queries please email Sarah Fenwick at <civil@ntlworld.com>.

## Country Rankings

In HG country rankings Austria maintains first place and the only top 10 changes are the USA (now 5th) changing with Australia (now 6th) and Spain (now 7th) changing with Switzerland (now 8th). Major changes outside the top 10 are Norway who climb to 16th (from 20th) and Mexico drops to 36th (from 32nd).

There are a few more changes in the PG country rankings, with Switzerland still in the lead ahead of France. Austria (now 3rd) changed places with Japan (now 4th). Germany maintains 5th, whilst Great Britain moves to 6th (from 10th), pushing South Africa (7th), Denmark (8th) and Slovakia (9th) down a place. The top 10 is completed by newcomer Norway climbing from 15th to 10th. Major changes outside the top 10 are: USA up to 15th (from 18th) and Zimbabwe up to 28th (from 31st); Korea down to 16th (from 11th), and Hungary down to 31st (from 27th). Israel (30th) is a newcomer to the PG country rankings.

Full details of the country rankings (PG and HG) can be found on the World Pilot Ranking System web site. Pilots should check that their personal record shows the correct nationality, particularly as there are a number of HG and PG 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 web site at [www.fai.org/hang\_gliding/rankings/].





The following article from *Technical Soaring* Volume 24, Number 4, October 2000 has been published at the request of Alan Patching. When Alan was in charge of the Crash Safety and Crashworthiness work at the Aeronautical Research Laboratories it became obvious that our gliders could be made safer for little or no extra cost. On raising this at the OSTIV Sailplane Development Panel he was appointed chairman with power to co-opt of a crashworthiness committee. Fortunately there was no shortage of other enthusiastic people and as the article advises the support has continued to increase. There have now been a number of glider accidents from which the pilots have walked away instead of being carried!

# What Price for Safety?

PETR KOUSAL, *OSTIV-SDP, Crashworthiness Subcommittee*

**D**uring the past decade remarkable and permanently increased effort has been promoted inside the “technical soaring community” to enhance “passive safety” in gliding. A special sub-committee was established by the OSTIV Sailplane Development Panel to study the subject and prepare appropriate amendments to OSTIV Airworthiness Standards and also for preparing recommendations to the JAR-22 Study Group. The author attempts to summarise the work already being done and wants to point out some problems arising, which are more of a commercial and “philosophical” nature, than a technical one.

## Brief History

At first the author wants to apologise for possible deleting of some details or persons involved. But this review should not be considered as a complete historical survey. It should only roughly demonstrate, what is already done and what were the reasons for doing so. The appearance of modern composite materials dramatically changed the sailplane design. The new technology enabled us to create an “absolutely pure” aerodynamic shape with excellent surface qualities and it resulted in relatively easy crossing the magic “ $L/D = 40$ ” margin and to push the distance and speed records to figures which were unbelievable a few years ago. On the other hand it presented new problems, as any new technology. The fatigue and safe life substantiation were extremely complex because of the unknown influence of ‘ageing’ especially from sun radiation and moisture effects. They have finally been resolved thanks to immense effort of – mainly – German manufacturers and research institutions. A further appreciable support came from Australian sailplane researchers. The continuing effort to increase the current limit of 12,000 flight hours is the best demonstration that a great job has been done! Another serious problem, which appeared with composites, especially with the most advanced ones (like carbon-fibre reinforced plastics), was the relatively high “brittleness” compared to the excellent static and fatigue strength. This fact, together with permanently increasing all-up mass, wingloading and resulting higher stall speed, resulted in a growing number of fatal accidents at outfield landings with nose impact on an obstacle or the ground during stall/spin accidents. The brittle front part of the cockpit dispersed without providing the occupant with an adequate protection by absorption of kinetic energy. This became very critical especially in case of composite tandem two-seaters. This fact was recognised by the OSTIV-SDP and started the strong energy engagement in the matter in the late 1980’s.

At the same time the other institutions, like German DOT (Bundesministerium für Verkehr), encouraged and supported the research in their domains. It is out of the scope of the paper to summarise and describe completely all effort devoted to the matter till now. The attempt to describe the most important actions of OSTIV-SDP and research institutions involved, co-operating or acting parallel is presented in Figure 1. To get an idea of the immense work that has been done (and still continues!) the reader must read through the referenced literature marked in Figure 1 and other text by figures in square brackets.

## What is the Improvement in Crashworthiness during the Last Decade?

### Sailplane structure/construction

Again, we cannot answer this question without slight simplification. To provide the pilot of a modern sailplane with the current standard of passive safety, we should design and manufacture sailplanes with:

- A reasonably strong cockpit cage (called a “survival cell” in Formula One racing cars) combined with an energy absorbing structure (“soft nose” as we say in our slang) in front of the pilot’s legs/front control column mounting (the latter is expressed in new OSTIV AS, the former is suggested by JAR 22 Study Group and demonstrates a slight difference in philosophy between both gremia – see following section).
- A properly shaped and fixed seat pan with the backrest and parachute pack, providing adequate support to the spinal column during impact decelerations.
- A safety harness retaining the occupant under “15 G deceleration” and preventing “submarining” without endangering the male pilot’s crotch.
- Properly designed instrument panels with well rounded edges from tough material.
- Front pedals combined in a strong block, enabling controlled backward displacement of feet and lower legs during the energy absorbing crumpling of the forward fuselage structure.
- Seat cushions and adequately strong headrest made of energy absorbing foams/materials.

### Glider/Pilot Parachute Recovery System (GPRS, PPRS)

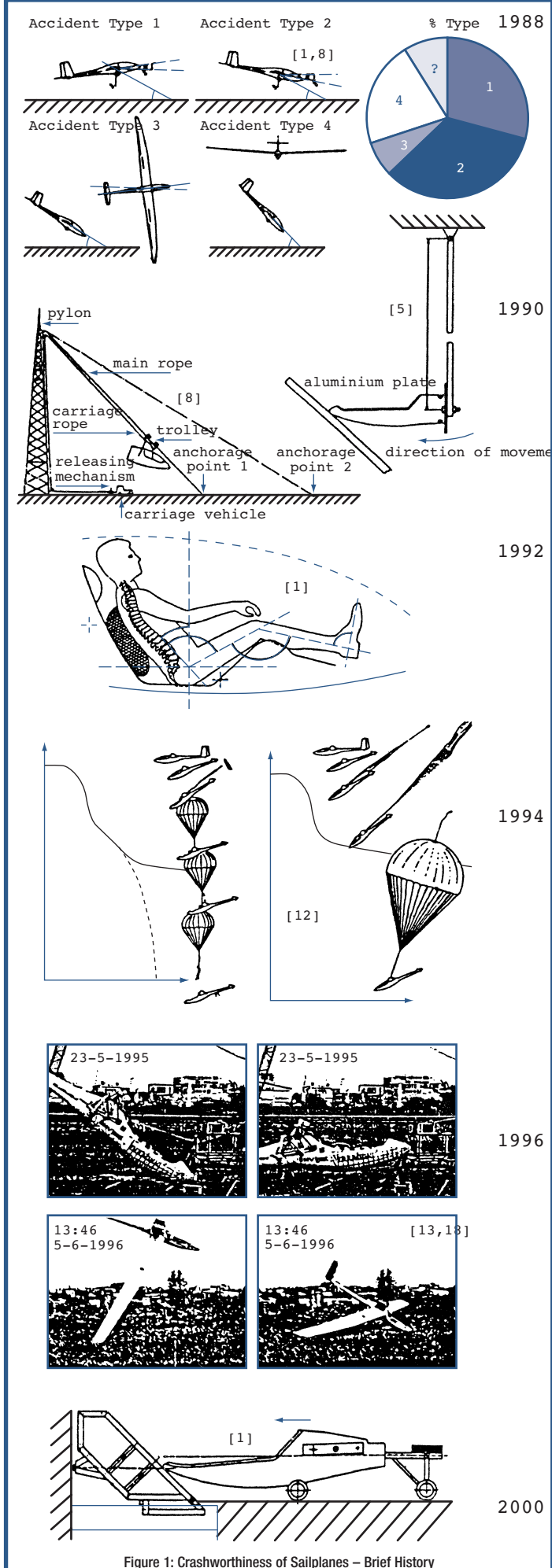
Although originally not readily accepted by the gliding community, the development of automatic recovery systems got growing support during the last two years. The increasing numbers of mid-air collisions with more victims, together with the better understanding of associated technical problems convinced more and more people, that “automation” of



- 1983-89 Sailplane accidents in Germany analysed by TÜV Rheinland [1,8]  
 1988 Dr Segal accomplishes the full scale glider impact test [4]  
 The maiden flight of ASW 24 – first “crashworthy cockpit” design  
 1989 First published call for GPRS [3]  
 E Crawley et al. publishes results of composite scaled models dynamic/static tests [5]  
 OSTIV-SDP Wiener Neustadt meeting, discussion on the energy absorption at crash impact  
 Medical aspects of crash cases, spinal protection by proper design of seatpan backrest, parachute pack shape  
 Revision of ‘Icose items’ restraint crash loads [6]  
 TÜV starts Restraint System Investigation [8]  
 1990 OSTIV-SDP Stuttgart meeting, proposal on accepting “Crawley’s 15 G crash load and partial fuselage nose crumpling for OSTIV-AS crash cases  
 Crashworthiness Subcommittee established  
 Investigation of energy absorbing seat cushion foams  
 Canopy jettisoning, bail-out problems investigations in FH Aachen  
 Seatpan and restraint system design aspects [1,7,8]  
 1991-92 OSTIV-SDP Uvalde, Orlinghausen meetings continuing elaboration of revised OSTIV-AS crash cases  
 Anthropometry and Cockpit design, canopy jettisoning research in FHA continued [9,10]  
 Suggestion to establish a GPRS sub-committee  
 1993 OSTIV-SDP Borlinge meeting, development of detailed design requirements (H-point, angle of shoulder harness, discussion on ‘crushable seatpan attachment’  
 1 – draft of amended ground loads case’s standard [1,2]  
 Further progress in GPRS investigation in Germany (FHA)  
 1994 OSTIV-SDP meeting in Budapest definition of the “Energy Absorbing Structure (crushable nose)/Strong cage” fuselage design.  
 Rationalisation of pilot seating position, spine supporting elements, energy absorbing headrest and seat cushions [11]  
 The symposium on GPRS investigation results (FHA) in Bonn, Germany [12,13]  
 1995 OSTIV-SDP meetings Omarama, Zlin continuing work on OSTIV-AS Amendment/Advisory Materials  
 Draft of the OSTIV-AS for GPRS. LBA preliminary Suppl. Requirements, FAA Spec. Conditions 23-ACE-76 for GPRS  
 1996 OSTIV-SDP meeting in Helsinki-Am. 4 to OSTIV-AS issued (embodied to 1997 Edit.) [14]  
 TÜV Rheinland accomplished impact tests [1]  
 1997-98 SDP meetings St Auban, Elmira finalisation of A.M. to appropriate OSTIV-AS paragraphs on crashworthiness  
 Co-ordination of SDP activities with JAR 22 SG and FAA  
 1999 OSTIV-SDP meeting in Bayreuth  
 The updated OSTIV-AS crashworthiness requirements embodied into Amendment 1 to 1997 Edition  
 Continuing research on safety harness, eg foams, GPRS in FHA  
 The first World Championship sailplane equipped with GPRS [15,16,17,18,19]

#### Abbreviations:

TÜV	Technischer Überwachungs Verein
GPRS (GRS)	Glider (Parachute) Recovery System
PPRS (PRS)	Pilot (Parachute) Recovery System
OSTIV-SDP	Sailplane Development Panel of the “Organisation Scientifique et Technique du Vol a Voile”
OSTIV-AS	OSTIV Airworthiness Standards
FHA (Aachen)	Technische Fachhochschule Aachen
LBA	Luftfahrt Bundesamt (Germany)
FAA	Federal Aviation Authority (USA)
A.M.	Advisory Material





the rescue process is the most promising way how to bail out in the few seconds remaining for survival after mid-air collision. The initiative of German Aero Club and some competition pilots was very appreciated! (see the web pages [www.soaring.net/Actuelles/] for recent news!) At the time this paper was written the research still continues, at FH Aachen, individual system manufacturers and authorities. We cannot tell at this moment, which solution will be the best one, whether GPRS or PPRS (abbreviations GRS/PRS are used in some literature instead). Both systems have their advantages or disadvantages. The opponents to GRS argue about the higher mass (a bigger parachute is necessary) and problems with dynamic opening shocks compared to PRS [17]. Also the fact that the descent inside the fuselage torso does not provide any possibility to control the impact point is discussed. It is out of the scope of this article to discuss "pros and cons" of both systems; let us wait for first practical figures!

## Some Interesting Design Features

Despite that, we have promised to avoid discussion on technical details in this paper, the author nevertheless would like to show some proposed effective design features, to improve crashworthiness. It must be emphasised that the examples shown below are "acceptable, but not the only means" to show compliance with new OSTIV-AS requirements. In other words, it depends on the individual designer, how to resolve the problem.

## "Soft Nose – Strong Cage" Concept

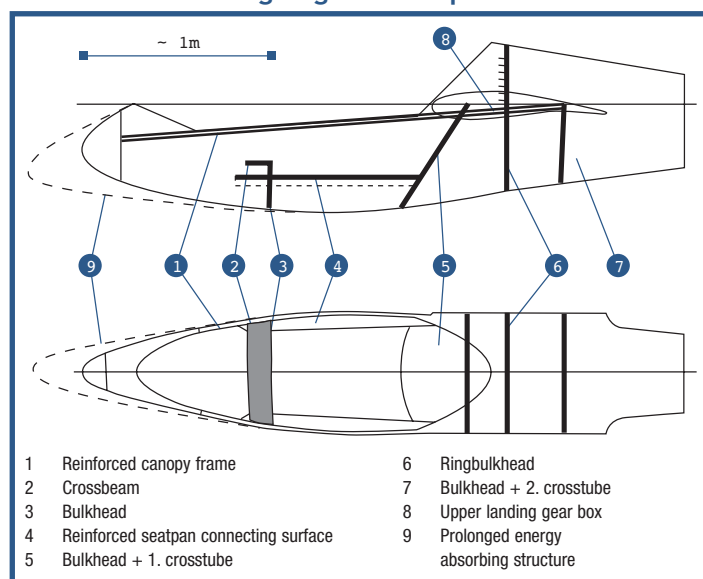


Figure 2: Structural reinforcements – "soft nose/strong cage" concept [1]  
Item 9 added by the author of this essay

Figure 2, reprinted from [1] with slight modification by the author shows the proposal developed by TÜV Rheinland how to ensure the "strong cage" appropriate strength (items 1-8). Item 9 is the author's proposal (and that of some involved colleagues) for extending the "Frontal Absorbing Structure" (soft nose) by say, 30 centimetres to increase the crush-length. By doing so the decelerations at impact can be reduced and better protection of the extreme parts of the legs is given. Prof. L. M. M. Boermans from Delft TU and associated researchers have confirmed by calculations, that the resulting drag increase (performance drop) would be almost nil or negligible. Some colleagues have noted that the increase of bending moments from side load component of such a long nose at non-symmetric impact would increase the risk, that the long nose may break away sideways instead of crumpling and absorbing energy. At this point we have to emphasise, that the above described concept is necessary for both crash scenarios, for the "free" nose-impact

and the ground impact of the fuselage torso, descending on the GPRS parachute.

## "Flat-impact" Problem

The flat-impact is the "nightmare" of researchers and designers. Although we are not fully satisfied with the current "crush-length" in frontal fuselage part (see proposal above) we are quite unsatisfied with the one between the pilot's pelvis ("ischial tuberoses" as our flying doctors call these two things on our skeleton) and the lower fuselage shell. In modern gliders the pilot practically "sits on the fuselage floor" when the landing gear is retracted. This means that practically no "energy absorbing structure" exists for the almost vertical impact direction at "zero pitch". This case is practically not probable for the first impact of the sailplane on the ground, because in any case the forward speed vector exists and the resulting deceleration is inclined forwards. But it was shown during the drop tests, and confirmed by crash analysis, that after the first impact the sailplane rebounds rearwards and the second impact follows in the "flat" or almost flat attitude. Figure 3 is a sketch of the trajectory of a L13 Blanik after the "nearly precise" OSTIV-AS/JAR 22 "45 degree Head-On-Impact" (two guys survived with minor spinal problems) [20].

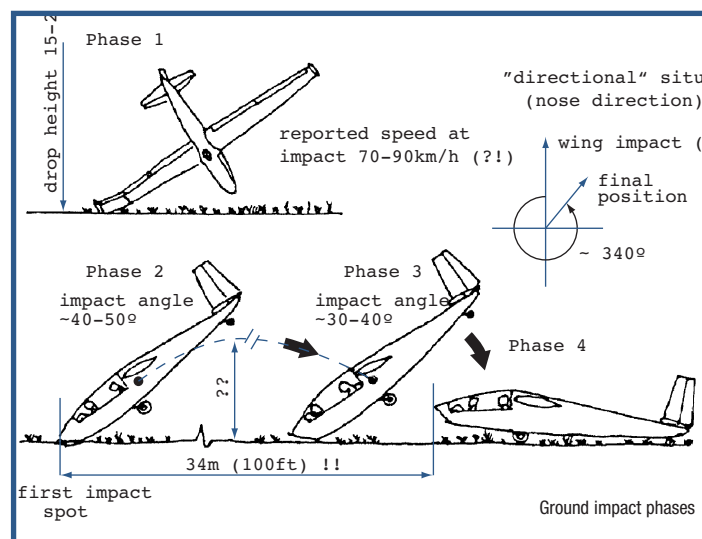


Figure 3: Blanik crash – post impact trajectory

## Design Ideas for Improving the Energy Absorption Capacity

How can we resolve this issue? In this case the requirement to increase the crush-length is not acceptable. This would mean to increase the front area of the fuselage which results in an unacceptable increase of drag and therefore a reduction of performance. But the vertical impact is much less critical when the landing gear is down! OSTIV increased (not only from the "crashworthiness point of view") the energy absorption capability required for landing gear in the last Amendment to OSTIV-AS. The JAR 22 Study Group prepares almost the same for JAR 22.

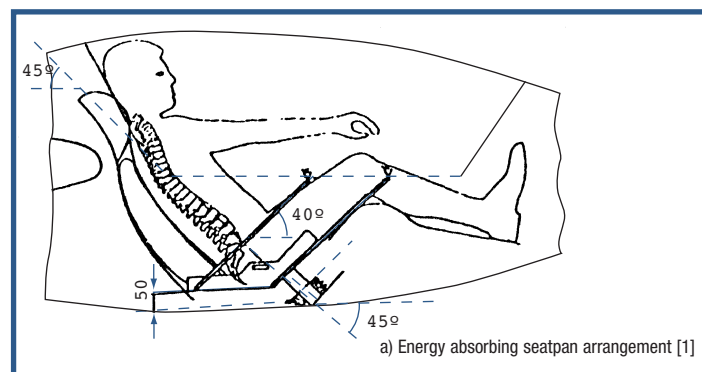


Figure 4 a and b: Energy Absorbing – design proposals



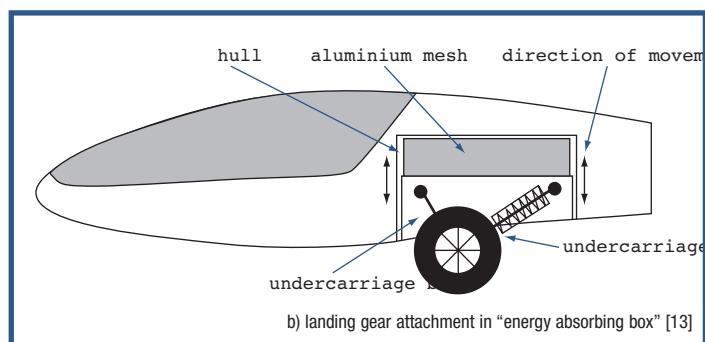


Figure 4 shows some (still rough) ideas on how to improve the energy absorption by a moveable seatpan, supported by the energy absorption crushable “damper” [1] and the landing gear attachment in a special “box”, fixed to the airframe by an energy absorbing honeycomb plate [13]. Both elements should yield after the critical crash loads exceed the limit values. The extension of the landing gear in an emergency is a matter of “understanding why”, “Emergency Procedures” sections in flight manuals and proper training. It may be automatically operated in case of a good GPRS installation as a part of the GPRS activation. Seat cushions and headrests made of energy absorbing foams are an additional means, which help to protect the spine. Frankly said, the limited thickness of seat cushions in modern gliders can only absorb a very limited amount of energy. But in case of refitting older model sailplanes or preparing additional seat cushions for small pilots a significant improvement may be reached, using the proper material! Such an attempt is shown in Figure 5.

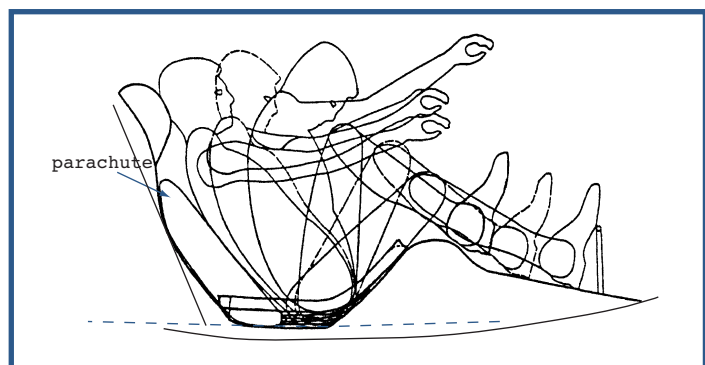


Figure 5: Movement of the occupant by accident type 4 with the deformation of the front of the cockpit [1]

Schematic sketch of the additional seat cushion (energy absorption layers) added by the author of this essay. This figure published in [1] at first shows the sequence of motion of the pilot's body in a 45 degree impact. One can see, how important the installed system of safety harness is and how important the proper tightening of the belts must be (see [19] too!). Second, the author “misused” this dimensionally correct sketch for drawing his scheme of layers for an additional front seat cushion for the smaller pilot of a Duo-Discus. The lower thin layers are from the most energy absorbing material being a compromise between energy absorption capability and seating comfort. The cushion is now in practical operation and passes its “endurance tests.”

## Conclusion – What Price Safety?

The modern technology, design features and requirements for higher performance of modern gliders have brought some problems in providing the occupants with adequate passive safety. Figure 6 presents the diagram of the kinetic energy (the half of the product of mass and squared stall speed) at stall speed of different single-seater sailplanes, typical for the second half of the century. In opposition to the features of modern cars, where probably nobody would buy his new car without a proven restraint system and airbags which successfully passed the dynamic barrier tests,

the sailplane manufacturers complain about the lack of similar interest among their customers. The author feels, that the matter cannot be better expressed than by using the desperate words of our friend, “big crashworthiness promoter” and ASW's “father” Gerhard Waibel: “My customer will gladly pay me 10,000 Marks for my promise to increase the glide ratio by one point, but he does not want to pay a Pfennig extra for a more crashworthy cockpit.”

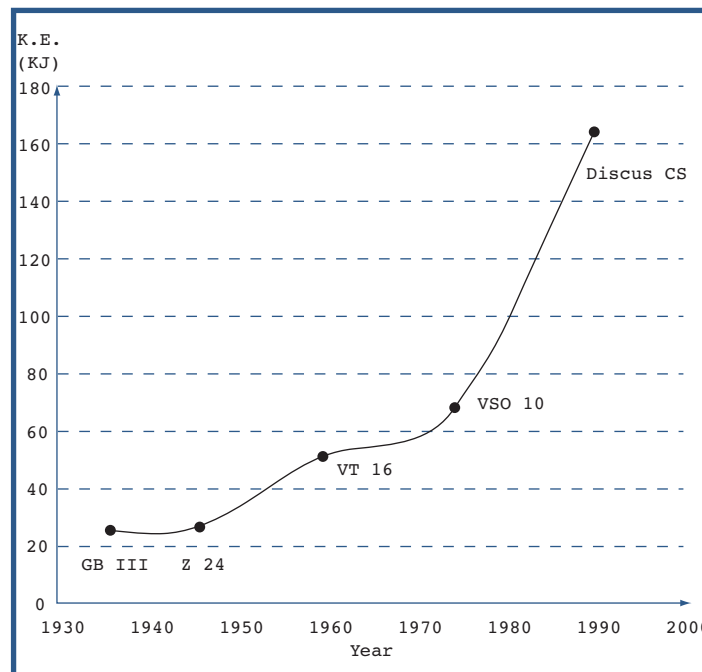


Figure 6: Kinetic energy at stall speed

As we have noticed in previous sections, these opinions are starting to change. There is a significant difference between motorcar and sailplane business. Almost anyone would agree, that a Formula One racing car driven by the amateur driver should not be allowed to operate in normal highway traffic. The majority of sailplane industry clients are the competition pilots and they insist on performance in the first place. But the same gliders are sold to and operated by amateurs, in many cases beginners or moderately experienced people. The last (very useful!) discussion among OSTIV-SDP, JAR 22 Study Group and industry on the demands of increasing the limit of the stall speed started at Bayreuth and continues by correspondence. It has demonstrated that FAI and IGC could also help to resolve similar problems when they establish appropriate “sportive” limitations. In the latter case it would be the specific wing load limit somewhere around 50kg/m<sup>2</sup>.

## Resulting Final Advice

Potential new sailplane buyers/users: Do not hesitate to pay some extra money for additional safety features! It is a better investment than to spend it on the medical treatment and – in worst case – whole-life after-effects! What has happened to many other people before may also happen to you!

## Acknowledgments, Last, but not Least

The author, as the last Chairman of the SDP Crashworthiness Sub-committee which completed its current task by issuing the new OSTIV-AS edition, expresses his thanks for excellent co-operation from many people who contributed to our subject. It is not possible to present names without the risk of forgetting somebody, which would be an inexcusable faux pas! However allow me two exceptions: The first is my predecessor Alan C. Patching from the GFA who started the job, and the second is the late Oran W. Nicks, American scientist and gliding enthusiast who lost his life in a off-field landing. This is a real tragedy as he promoted and

## GLIDING FEDERATION OF AUSTRALIA

### Airworthiness Inspection

## FORM 2 NOTICE

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

TYPE.....

VH.....

Please forward relevant airworthiness documents to:

.....

.....

..... Postcode.....

\* prices include GST

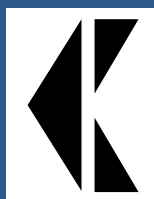
Forward to:

GFA Secretariat, 130 Wirraway Road,  
Essendon Airport VIC 3041

summarised the requirements for future GPRS. It is also my duty to remember another late friend, Bill Scull, the former OSTIV Safety and Training Panel Chairman. Although not directly involved in design problems, he immensely contributed to our work by providing the operational data and experience. At the very end I want to thank Gerhard Waibel for careful reading and removing most of my Czenglish from the text!

### References

- 1 Sperber, M., *Crashworthiness of Glider Cockpits, paper presented at OSTIV XXV Congress, 1997, St Auban.*
- 2 Sperber, M., *Restraint Systems in Gliders under Biomechanical Aspects. Technical Soaring Vol. XIX, No. 2 (1995).*
- 3 Saundby, P., *Survival for Sailplanes. Sailplanes and Gliding Oct/Nov. 1989.*
- 4 Segal, A M., *Aircraft (full scale glider crashworthiness impact test. Technical Soaring Vol. XIX, No. 2 (1995).*
- 5 Hansmann, R J., Crawley, E F., Kampf, K P., *Experimental Investigation of the Crashworthiness of Scaled Composite Sailplane Fuselages. Technical Soaring Vol. XIV, No. 4 (1990).*
- 6 Segal, A M., *Protection from Spinal Injury, Technical Soaring Vol. XII, No. 4 (1988).*
- 7 Roger, W., Conradi, M., *Evaluation of Canopy Jettisoning Systems for Sailplanes. Technical Soaring Vol. 14, No. 2 (1990).*
- 8 Pusch, D., Sperber, M., *Investigation of Glider Safety Belts Behaviour under Accident Conditions. Technical Soaring, Vol. 15, No. 3 (1991).*
- 9 Roger, W., Staubenau, Ph., *Problems and Improvement of Canopy Jettisoning Systems. Technical Soaring, Vol. XVII, No. 2 (1993).*
- 10 Segal, A M., *Anthropometry and Glider Cockpit Design. Technical Soaring Vol. 18, No. 1 (1994).*
- 11 Segal, A M., *Dynamic Testing of Highly Damped Seating Foams. Technical Soaring Vol. XIX, No. 4 (1995).*
- 12 Roger, W., Staubenau, Ph., *Glider recovery and Pilot Rescue Systems. Technical Soaring, Vol. XVIII, No. 3 (1994).*
- 13 Roger, W., Conradi, M., Ohmimus, T., *Insassensicherheit bei Luftfahrtgeräten, Bundesministerium für Verkehr, BRD, 1996.*
- 14 Vernon, C. O., *Revised OSTIV AS Ground Loads Standards, Technical Soaring, Vol. XX, No. 3, (1996).*
- 15 Czarnocki, P. et al., *Effects of Replacement of a Dynamic Crash test with a Quasi-Dynamic one. Technical Soaring, Vol. XXI, No. 3 (1997).*
- 16 Woollard, M., *A Comparative Evaluation of Glider Parachute Rescue System Design aspects. Technical Soaring, Vol. XXII, No. 1 (1998).*
- 17 Melber, S., Roger, W., *Trajectory of the Parachute Bag during the Deployment Phase. Technical Soaring, Vol. XXIII, No. 3 (1999).*
- 18 Roger, W., Ludwig, N., Conradi, M., *Glider Ground Impact Tests, Technical Soaring, Vol. XXIII, No. 4 (1999).*
- 19 Segal, A M et al., *Four and Five Point Glider Seat Harness, Static and Dynamic tests. Paper presented at XXVI OSTIV Congress, Bayreuth 1999.*
- 20 Kousal, P., L13 BLANIK Crash. Paper presented at OSTIV SDP meeting, Elmina, 1998.



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

## Chamberlain Knights – OAMPS Insurance Brokers Ltd

Chamberlain  
Knights – OAMPS  
Australia's Aviation  
Insurance Specialist  
ACN 005 543 920  
PO Box 2481  
North Parramatta  
NSW 1750  
Fax: (02) 8838 5770

**OAMPS**

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

**Call Kevin Chamberlain now\***

**(02) 8838 5760**

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

Email: kevinc@oamps.com.au

A PROFESSIONAL REGISTERED INSURANCE BROKER



**LAKE  
KEEPIT**

## TAMWORTH NSW

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

Contact Jim Stanley – Manager  
P.O. Box S152

TAMWORTH SOUTH 2340

Ph: (02) 6769 7514

Fax: (02) 6769 7640

Email: keepitsoaring@bigpond.com  
www.users.bigpond.com/keepitsoaring



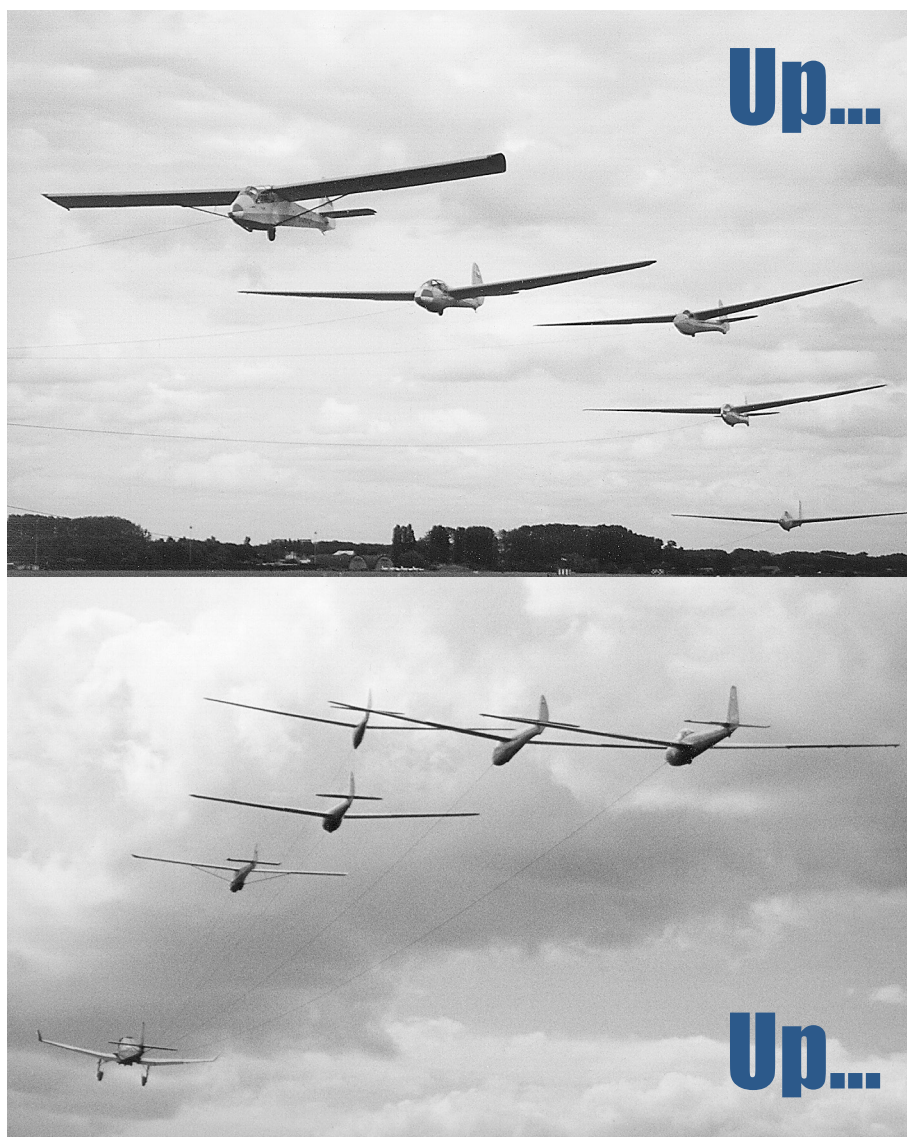


# The Czech Republic Aerotow

The sequence of launches was carried out for display at an airshow in the Czech Republic. The “Aviaticka pout 2001” airshow held at Pardubice City on 3 June 2001. All aircraft are Czech manufactured vintage gliders.

Aircraft	Pilot	Aeroclub
1 LF-109 Pionyr	M. Rameret	Benesov
2 LG-130 Kmotr	J. Stastny	Medlanky
3 LG-125 Sohaj 1	J. Rozlivka	Letnany
4 LG-425 Sohaj 4	R. Santus	Podhorany
5 LF-107 Lunak	L. Kluger	Hosin

The tow plane was the Czech Z-137 Trubo Cmelak turboprop with 370PS. Tow pilot R. Kovar. The pilots flew two testflights prior to the display and then two exhibition flights.







## August Issue

► Enjoyed the August edition! Nigel's article was great – I'd heard about Lake Maninjau and was curious about it. Lots of other good stuff too! Looks like the stirring up for contributions has worked!

Stewart Dennis

## Sick of Whingers

► I am overwhelmed at the amount of whingeing going on in AG/SS and clubs in general. I wonder if we should split the GFA/HGFA and the magazine back up again, so that there is one for those who want to whinge, and one for those who want to go flying and read about flying.

Tish The Flying Fish

## Promoting Flying

► Channel 10 was showing clips of the speed gliding competition during its promotion for the Sports Tonight program so I made sure to watch. Except for one wing tip shot of Manfred Ruhmer in a full-speed dive most of the footage was really dull. There was no sense of speed at all, they all looked like hang gliders about to land on a golf course. I know they were going fast and it's dangerous and skillful, it just doesn't look that way. If the aim is to promote hang gliding through television and this footage is anything to judge by then the attempt is going to fail dismally.

In contrast, the same show had footage of longboard surfing, which was pretty good to watch, and free-style BMX riding which was extremely spectacular. It's pretty sad when guys on old men's surfboards and kiddies bikes look more spectacular than flying.

Similarly, the recent successful tandem flight from the summit of Mt Everest by Claire Bernier and Zeb Roche never rated a mention in the mainstream press. The media was full of stories of other climbers dying on the mountain. Obviously two people romping up the mountain, looking at the view then flying off the top isn't news.

I recently bought the La Maniobra video of acrobatic paragliding. The production values on this video are fair, but the action is amazing. The paragliders performing consecutive loops, SATs and synchronised wingovers are unbelievable. Watching a paraglider spinning end-over-end, apparently maintaining height in the lift band has to be seen to be believed. Even my non-flying friends are impressed.

It seems to me that if you want to promote free-flight in the media it would be best to have nude, tattooed, female pilots performing acrobatics then crashing spectacularly to finish, with loud music and caps on backwards.

Greg Walsh

## Re: Stan Roy's Resignation and Suggestions for the HGFA

► Stan Roy is a real "character" in the true Australian sense. He opened the first hang gliding school on the Sunshine Coast so he is one of the fathers of the sport in Australia. He is a man that says what he thinks whatever the consequences. As a result he has over the years rubbed a few people up the wrong way and can be perceived by some people as a bit of a loose cannon. The people that get into our sports are not average people. The average Joe Bloggs wants his feet firmly on the ground. The free-flying crowd is full of "characters" that resist the mediocrity of being average. It's one of the great things about having pilots as friends.

Stan's story is long and convoluted. It tells of backstabbing, anti-competitive action, personality clashes and irresponsible behaviour. The HGFA could have treated him better, many people could have behaved better. Stan himself could perhaps have handled it better, but his gripes are not without foundation. In my opinion the HGFA needs to change its attitude from being the centralised controller, to one of being a service organisation. As Richard Worton

said in a past letter, the HGFA is not Qantas.

I don't see Stan's resignation doing much good though except to help make people realise that lots of pilots aren't happy with the HGFA. I think the HGFA already realises this and they do seem to be making an effort to consult the membership (surveys, etc). However the response seems to be to try harder to provide more fancy projects. I think this is the nature of the type of people who want to run things. They tend to just assume that good intentions mean that they will do the right thing. Human history is just full of people that thought they were doing the right thing, who have destroyed cultures, de-forested countries, unleashed decimating pests and taken children away from their mothers.

I think that what is required of the HGFA is a "getting back to basics" program. Considering the membership is shrinking, trying to do more and more seems like "fiddling while Rome burns". I think periods of contraction are healthy in that they trim off the fat, the inefficiencies and the personal agendas that accumulate in the growth times. The HGFA needs to re-evaluate it's function from the ground up. It should think about what the average (intermediate) pilot wants out of flying (fun?) and try to help in the most basic ways. It's the old KISS principle, Keep It Simple Stupid.

As an example there is Damien (Tex) Gate's massive undertaking as National Site Development Officer. Tex is undoubtedly very keen, very motivated and has the best of intentions, and he should be appreciated as such. He seems to be the sort of person that can help a great deal, provided he realises that good intentions and doing stacks of work are no guarantee of doing the right thing. His project of developing site access agreements with the various government bodies offers great benefits if it is done well, or it could be a disaster if tackled the wrong way. I can say this from experience as I was recently responsible for CASA closing one of our sites because I tried to do the right thing in getting some official approvals (it's a long story that is still unfolding). Tex should keep in mind that he is dealing with bureaucrats.

Bureaucrats' first priority is to protect their own arse and foster their own career. This is just human nature. As such it is usually much easier and safer for them to say "no" to potential problem and litigation causing people like us. They will say that they want to talk to a united front, and this is just to make it easier for themselves. It also makes it easier for them to say "no" and have to justify it only once. They don't feel like such a bastard by having to keep saying "no" to every club that approaches them.

We have to make it easier for bureaucrats to both say "yes" and also to make it harder to say "no". I feel we have been focusing on giving reasons for saying "yes" and largely ignoring the other side of the coin. Pushing as well as pulling works better than either alone. The consequences of saying "no" without having very good reasons that pilots can appreciate need to be pointed out, ie: it is incredibly difficult to enforce a ban, especially on paragliding. Paragliders can land in tiny out of the way places and just stuff their canopy in the boot of a car and be gone within seconds of landing. This means that any bans on paragliding need the backing of peer pressure for them to be effective. Peer pressure is a very effective way of getting most pilots to tow the line. If pilots feel that a ban is without good reason then there will always be those that chose to commit civil disobedience. If other pilots feel the ban is unjust then there will be little peer pressure to stop them. Civil disobedience is also a well proven and effective method of protest. Protest actions could in turn generate media and parliamentary interest that could reflect badly on the bureaucrat, agency, etc, that has said "no". Bureaucrats should be made aware that they can help us to control the "bad guys" by only saying "no" when they have

good reasons that pilots can appreciate. Otherwise peer pressure control is not effective.

The "Good Guy, Bad Guy" approach works very well. I speak from experience because I was on the receiving end 25 years ago in a police station. The good guys make the first approach. If that is not progressing well then the bad guys stir people up severely and makes them realise what could happen. The good guys then step back in with a very nice and conciliatory tone to defuse the situation, and to offer to exercise some control over the bad guys. This gives the good guys much greater bargaining power. I am suggesting a "good pilot, bad pilot" approach to government bodies. Firstly we need to give them very good reasons for saying "yes". If that doesn't bear fruit, then the bureaucrats need also be made to realise that to say "no" without very good reasons will create problems that ultimately reflect back on them. The bad guys also make the good guys (Tex, Craig, etc) try very much harder as they may lose credibility if pilots defy a ban. It probably works better if the good guys are only ever nice and conciliatory. So it is probably better to take two people to meetings rather than have one guy try to be good, then bad, and then good again. Although I know Dave Cookman once did this successfully on his own in a meeting with Queensland National Parks.

I realise that there will be plenty of people that go "Ooo! Don't rock the boat", but we seem to be under threat of losing lots of sites on government lands. Maybe it is time to be more forceful. QLD and NSW National Parks in particular would keep just about all people out of National parks if they thought they could. They would turn National parks into museums where people are restricted into crowded enclosures and told that they must not touch anything. If we act only nice, and get into bed with them, they'll have their way with us for sure.

The only trouble I see so far with Tex's approach is with the site database. His reasoning is that it is necessary to know all the sites in National parks in one state for example, before entering into negotiations with National parks in that state. This is probably good reasoning, however why must this then be expanded to include all sites all over Australia? It's a lot more work, lots of clubs are against "site guide" types of things, and it is very hard to believe that clubs will bother to notify the HGFA of every little change in site status or rules. So in a few years it will be so out of date that to approach a government body using it could cause more problems than it solves. Why not just keep it simple? Clubs will be much happier to co-operate and even enthusiastic, if they can see the direct and immediate benefit for themselves. Don't ask for more from clubs than is actually needed at the time. Otherwise you risk getting nothing at all.

Graham Sutherland

► Graham raises a couple of points that warrant clarification. The HGFA applied for and gained funding from the Australian Sports Commission under the Active Australia Initiative (AAI) to implement several projects. These projects include the Club Development project that Belinda Head is working on and Damien Gates' Site Access project. The implementation of these projects has not replaced any other HGFA functions.

For many years the HGFA administrators have rightly believed that clubs play an integral role in member retention. The aim of the AAI club development project is to assist clubs in this task. In recent years there has been increasing pressure on existing sites through the creation of new National parks. Unfortunately policy regarding our access to National park sites has often depended on the whim of the regional director. It is hoped that through the AAI site project we will be able to standardise policy for ongoing site usage and maintenance.

My experience with CASA officers has been that they



# HGFA Events Calendar



## Australia

### 2001 Master's Games

5-14 October 2001

Hunter Valley, NSW. Entries are sought from pilots who want to compete in a boat tow (HG) competition to be held on the waterways around the Hunter Valley. This is your chance to be a part of the largest games held in Australia. Requirements: tow endorsed. No electronics needed (unless you would like them destroyed by water immersion), no chute, no harness, no glider. All supplied. For further info contact Billo on 02 49213804 (w), 02 49423131 (h), email <William.Olive@hunter.health.nsw.gov.au>. The PG event has been cancelled.

### St Bernards Canungra HG Classic 2001

13-20 October 2001

Canungra, QLD. Registration 12th. Entry fee: \$150. Site fee: \$40. GPS mandatory. Minimum int pilot rating with inland experience. Cheques/MOs to Rod Stead, 9 Griffith St, Nth Tamborine. Entry enquiries to Rod 0428 132215 or 07 55450969. Comp info: Tex 07 39017401, 0417 766356, <TEXDOC@bigpond.com>. You can register online at [www.triptera.com.au/canungra/classic2001/index.html]. We will be based on Mt Tamborine with HQ at St Bernards due to their continued generous support. Including accommodation from the night of Fri 12th – Sat 20th at: motel – \$450 double or \$500 twin (fully self contained); hotel – \$300 double or \$350 twin (share amenities); cooked brekkie for \$7.50, continental \$2.50, meals from \$5 nightly. Camping may be made available if required (\$50pp), but why bother at these excellent room rates? Call Ray at St Bernards to book, 07 55451177 or <sales@stbernardshotel.com.au> & visit their web site at [www.stbernardshotel.com.au]

### Hughenden Competition

20-21 October 2001

Hughenden airstrip. Cost: \$20. Open to HG pilots. Counts towards North QLD Championship. Requirements: Tow endorsed. For more info contact Clint Smith on 0415 181042.

### Southern District Flying Club Spring Fly-in

21 October 2001

Strath Airfield 35 18'S 138 59'E (6nm due N of Milang). The club invites all to attend our annual Spring Fly-in from 9am. BBQ lunch available. For more info: John Neuling 08 82724160; Sandy Cummins 08 83821779; Garry Fimeri 08 83845742.

### Not The Vic Open Competition

3-6 November 2001

Bright, VIC. This fun comp, run over the Melbourne Cup long weekend, is open to everyone. We herald the new season with this comp & it covers various activities incl. balloon dropping, slalom racing, XC comp, spot landing, expo, etc. The Phoenix Cup is a new event that runs under the Not

The Vic Open comp (see below). More details from <skyhigh@vhpa.org.au> or see [www.vhpa.org.au/Skyhigh].

### Phoenix Cup Masquerade Event

3-6 November 2001

Bright, VIC. Open to all pilots. Run in conjunction with the Not The Vic Open, fancy dress flying is the purpose of the event & the best costume wins. We'd like to see as many entries as possible to make the event spectacular. Contact Malcolm 03 94441185 (h) or <phoenixcup@optusnet.com.au>. For pictures of a similar event see [www.coupe-icare.org/2000/concours\_photos.html].

### Canungra Cup 2001

3-10 November 2001

Canungra, QLD. Canungra club invites PG pilots to participate in the 2001 Cup. Event has HGFA AAA sanction, FAI Cat 2 status & is the first sanctioned PG event of the Australian season. Entry fee: \$180 after 30/9/2001, incl. maps, comp T-shirt, presentation dinner, site fees for duration of the event & a chance to win up to 450 national ladder points each day (\$5 HGFA Competition Committee levy not incl. in entry fee & will be collected from all pilots at the event). Last year's successful organised retrieve system will be operating this year if there's sufficient interest. Cost of this package is \$160 for the 8-day event. To reserve a place in the retrieve system, notification & payment must be received before 30 September. For pilots new to comp flying we offer a series of workshops to enhance comp flying skills. These will run all week & incl. on-hill briefings, post-flight analyses & hopefully contributions from the leading pilots. They're free of charge to all pilots flying in their first comp. Expressions of interest have to be incl. on the registration form. For more info visit [http://home.iprimus.com.au/plenderleithm/canungracup/], email <canungracup@hotmail.com> or ph: Keith Allen 0412 255879.

### Lawrence Hargrave Competition

17-18 November 2001

Stanwell Park, NSW. Entry open to all nov, int & adv, HG & PG at \$60 per person. Organised by the Stanwell Park HG & PG Club.

### Australian Open HG Championship

29 December 2001 – 5 January 2002

Deniliquin, NSW. Ground- & aerotowing. We are now recruiting new pilots to fly in competition. Lately a lot of comps in Australia have become like a marathon, taking up to eight hours to complete the task. What chance does a new pilot flying an entry-level glider have? They never get the reward of seeing the finish line coming up! Never get the luxury of having a cold drink given to them by their mate in goal! Flying halfway might be a personal best, but no cheers to greet you when you land! By running this Australian Open we want to change that! Three comps in one: Open, Kingpost, Floater sub-classes. The aim: To have more fun! Tasks to suit most pilot skill, experience & fitness level (three different tasks); all pilots to have a realistic chance of making goal every day; new, low airtime pilots being able to fly with the good guys, but compete against their peers; most pilots to have a chance of winning the competition regardless of the glider they fly. (The competition will be run like three separate competitions. You can only win the sub-class you have entered. There will be three separate winners of this Australian Open!) For more information please contact us on [www.cool-ether.net.au/australianopen2002], email <chgpgc@goulburn.net.au>, ph: 0419 681212 (from overseas +61 419 681212).

### Australian National HG Championship

8-16 January 2002

Hay, NSW. AAA, FAI Cat 2. \$15,000 in prizes have been given away in the last two years, mostly to C & B Grade pilots. Requirements: Enthusiasm, GPS (for scoring), parachute, UHF radio, tow endorsement. Teams or fully catered packages can be arranged. Aerotow or ground tow

on 3km strips. Entry: Free if you've never been to a Nationals at Hay, otherwise \$150 by 8 Dec. \$50 late fee. For full details see [www.dynamicflight.com.au], ph: Rohan Holtkamp/James Freeman 03 53492845, <info@dynamicflight.com.au>.

### Corryong Cup

12-19 January 2002

Registration & practice day: Saturday, 12 January. Registration & comp start: Sunday, 13 January. Last competition day & presentation night: Saturday, 19 January. Entry fee: \$95 if paid before 1 January (\$105 thereafter). Contact Steve Bell at PO Box 401, Helensburgh NSW 2508 or <spbell@1earth.net>.

### Bogong Cup

20-27 January 2002

Mt Beauty, VIC. AA sanction. 28 January is a public holiday to allow time to travel home. The Bogong Cup offers some of Australia's best Alpine flying. We will be using Mt Emu, Tawonga Gap, Mystic & the awesome Mt Buffalo. The field will be limited to 75 so we can all fit on the Hill. First in, best dressed. Requirements: Enthusiasm, GPS (for scoring), parachute, UHF radio. Teams or a fully catered package can be arranged. Plenty of activities for the family. Entry: Free if you have never been to a Bogong Cup before, otherwise \$150 by 20 Dec. \$50 late fee. For full details see [www.dynamicflight.com.au] or ph: Rohan Holtkamp or James Freeman on 03 53492845, email <info@dynamicflight.com.au>.

### Australian National PG Open 2002

16-23 February 2002

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

### WA State Soaring Championships

23 February – 3 March 2002

Wyalkatchem, WA. (Monday, 4 March is a public holiday.) Premier event on the WA HG & PG calendar. Eight days of heart-thumping XC action. See [www.iinet.net.au/~navi] or contact Gordon Marshall <gordo@hangglide.com.au>.

### Manilla Paragliding Open 2002

2-9 March 2002

Mt Borah, Manilla, NSW. Final rego: 1 March, 7pm Manilla Town Hall. CIVL/FAI Cat 2 (for WPRS) & HGFA AAA. Over \$5,000 in prizes. 125 pilots max. (& it will be full like the last four years). \$140 before 1 Jan, \$160 thereafter. Full online registration at [www.mss.org.au] from 1 October. Organiser: Godfrey Wenness, ph: 02 67856545; fax: 02 67856546; email <skygodfrey@aol.com>. Sponsored by: Advance, Flytec, Hanwag, Garmin, Manilla Shire Council, Manilla RSL Club, Guardian Chemist Manilla, Ambleside B&B, Rivergums Caravan Park, Vic & Toms, Imperial Hotel & more. (See "News" for more.)

## Overseas

### Fly in Lake Maninjau

14-21 October 2001

Lake Maninjau is located in West Sumatra with Tabing international airport at the capital Padang. Join us in this special location: US\$250 pp/twin share, US\$150 single supplement, incl. 3-Star resort hotel, land transport to flying area, transfers hotel-airport-hotel, dinner with cultural show, sightseeing, video taping for night discussion. How interesting is this location for flying? Height: 750m, beautiful view, quiet & peaceful surrounds, other adventure activities on request. No political activities. Visit: [http://fliag.com/indonesia/~sumatra.htm] or [www.paragliding.indonesia.com], email <anwisata@cbn.net.id>, ph: +6221 8841915, fax: +6221 7970924/8841915



*will go out of their way to assist us where possible. The officer that asked us to cease flying at Pt Cartwright did so because no approval could be found for our operations at the site. Approval is required as it is situated in CTA, 10km from Maroochydoore airport. The same officer has since sought to assist us to gain operation approval – last I heard negotiations were progressing well.*

*Over the years the HGFA as an organisation, and its individual members, have built a reputation as sound administrators and responsible airspace users. An integral part of gaining this reputation has been through taking the initiative in disciplining recalcitrant pilots and "seeking to ensure" compliance. I suggest that just because "Paragliders can land in tiny out of the way places and just stuff their canopy in the boot of a car" does not give them the right to fly where they like – such irresponsible actions of a minority can only be detrimental to us all.*

Craig Worth, HGFA General Manager

# Schools in Australia



## Tarago Flight Park

2½ hours from Sydney

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

ENQUIRE NOW ABOUT OUR CROSS-COUNTRY TOURS FOR THIS SUMMER! All pilots are welcome and tow endorsements can be obtained.

Agents for Moyes & Airborne • Demo gliders available  
Call Tove on 02 4849 4516 or 0419 681 212  
Canberra Hang Gliding and Paragliding Centre  
Email address: chpggc@goulburn.net.au



## Learn to Fly in Canberra!

The Paragliding Capital of Australia  
and only 3 hours drive from Sydney.

At Australian Paragliding Centre we fly all year round  
and are open 7 days a week.

Learn to fly in a friendly, caring environment with first  
class tuition and equipment.

- License & Introductory Courses
- Tandem Flights
- Gift Vouchers & Group Discounts
- Pilot Development Clinics for Novice, Intermediate, and Advanced pilots.
- International Flying Tours
- Cross-Country & Towing Tours
- Pro-Design Paragliders, Harnesses, Reserves, Flying suits and Para-Kites.
- Paramotor sales and tuition
- Sales and Service of all major brands.

Contact: Peter Bowyer on

**(02) 6226 8400**

<pete@australianparagliding.com>

Check out our new homepage! [www.australianparagliding.com]

## New South Wales

### BYRON AIRWAVES

Hang Gliding School

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

Phone Brian and Anne on

02 6629 0354, mobile 0427 615950,

email <byronair@hotmail.com>



## High Adventure Airpark

Since 1987

Australia's Internationally Renowned  
Training Centre on Australia's Holiday Coast  
Situated on 460 picturesque acres. Offering:

- Live-in International Licence Courses for Paragliding, Hang Gliding and Microlights
  - Conversion Courses for all three sports
  - Importers and Dealers of Quality Flight Gear
  - Over 15 flight sites from 30 metres to 700 metres in every wind direction (truly) most in a 20 kilometre radius
  - On site Hangar, Airstrip and Winch tow facilities
  - Paramotors
  - Cross-Country Tours since 1987
  - Tow and Licence endorsements
  - Personalised customer service
  - Flying since 1978!!
  - Trade in your used Flight Gear
  - FLYING AND OPERATING ALL YEAR ROUND
- Contact Lee Scott toll free on 1800 063 648  
or email <leescott@highadventure.com.au>  
or [www.highadventure.com.au]  
for full details and online video.



- *Manilla has more flyable days per year than anywhere else in Australia! (300+ in fact!)*
- *Mt Borah* is one of the world's most consistent all year round sites with 4 large launches catering for nearly every wind direction.
- *Paragliding license courses* – Autumn and Spring only: a week of quality tuition using the latest techniques and equipment for only \$990 (including GST and accommodation)
- *Your CFI is Godfrey Wenness:* World Record Holder, Australian Team Member, HGFA Safety and Operations Committee Member for Paragliding
- Thermalling and cross-country courses all year
- *HG to PG conversion courses* – it's easier than you think!
- *Importer of ADVANCE paragliders, FLYTEC instruments, HANWAG footwear and most accessories – we sell only the best quality European made equipment.*

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

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

## New South Wales continued

### SYDNEY HANG GLIDING CENTRE



#### Stanwell Park

Hang Gliding Courses, Refresher Courses, Instructional  
Tandem Flights and Gift Vouchers.  
Equipment and Accessories. Available 7 days.  
To arrange your booking or to test fly a glider  
Call Chris Boyce (02) 4294 4294.  
[www.hanggliding.com.au]

## Victoria



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

#### Courses offered:

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

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

Visit our web site for more details.

4 Ireland Street, Bright VIC 3741

Ph: 03 5755 1753 Fax: 03 5750 1153

email <alpnpara@netc.net.au>

web [http://alpineparagliding.netc.net.au/]

## WINGSPTS

Flight Academy

- Paragliding courses
  - Paramotor courses
  - Tandem flights
  - Cross-country courses
  - Hang gliding courses
  - Inland and coastal
  - Towing courses
  - Equipment sales
- Located in stunning holiday destination, on the Great  
Ocean Road, 2 hours from Melbourne's Westgate  
Bridge.

Wingsports, 1 Evans Court, Apollo Bay VIC 3233

Hans van Santen 03 5237 6486

Fiona Waddington 0419 378 616.





# Dune Goon Extravaganza

STOCKTON DUNES FUN LAUNCHING & LANDING CLINIC 15-17 NOVEMBER 2001  
LACKING CONFIDENCE? IS YOUR FEAR OF LAUNCHING & LANDING SPOILING THE REST OF YOUR FLYING?  
WE HAVE THE ANSWER FOR YOU!

## Features

- Tove Heaney will be our fully endorsed HGFA instructor
- Conditions at Stockton are light to medium sea-breezes with sandy launch & landing surfaces
- The dunes are up to 60ft high
- We provide low performance gliders, incl. skyfloaters
- We will billet as many people as possible with local pilots, first come first serve basis.
- NSWHA provides digital camera for tech critiques
- We will run only one theory session on one evening
- There'll be dinner on Sunday night, tell us if you're vego
- Bring your tow bridles, for back in case of weather
- We have NSWHA funding for the event

TISH

<conradtascha@hotmail.com> or phone: 02 4927 8867

We actively encourage everyone, especially women, to participate. This clinic will take the hard work out of launching & landing. There will be experienced pilots to fly the gliders back up to the top of the dunes for you until you are confident enough to top land.

Fee: \$40 includes dinner on the final night & 4WD hire to get to the dunes

Registration: Please contact Tish the Flying Fish or Tove Heaney

TOVE

<chggpc@goulburn.net.au> or phone: 02 4849 4516

## THE ULTIMATE HANG GLIDING ADVENTURE

[www.flynow.com.au](http://www.flynow.com.au)

### Victoria continued



## AirSports Flying School

With our "wind in the face" fleet of CASA legal 3-axis Drifters and our fully enclosed Gazelle ultralights you can use your aviation skills to fly another type of sport aircraft.

- Unrestricted visibility
- Strong wind capable
- Crosswind capable
- Comfortable to fly, not cramped
- No fatigue, joy stick controlled

Why not check us out, we fly from Sunbury Airfield only 20 minutes drive north-west of Melbourne. Trial flights and full time courses available. Low cost accommodation available.

AirSports Flying School  
Sunbury Airfield Sunbury, 3429  
(03) 9744 1305 (03) 9431 2131  
[\[www.gofflying.com.au\]](http://www.gofflying.com.au)

### South Australia

## ADELAIDE AIRSPORTS

Professional flight training since 1985  
Hang Gliding • Sky Floating • Microlights  
Yes... You can learn to fly!

All flight training and endorsements available from beginner to instructor level and beyond.

Larry Jones

Ph: (08) 8556 3030, Fax: (08) 8557 4113,

Mobile: 0408 815 094,

Email <fly@airsports.com.au>

Web [\[www.airsports.com.au\]](http://www.airsports.com.au)

## AUSTRALIAN Paragliding CENTRE



## Attention!

### Restricted/Intermediate Pilots

### Pilot Development Clinics/ Tours 2001/2002.

Our Pilot Development Clinics are designed specifically for pilots of your skill level. If you not only want to better your overall flying skills but also fly safer and further, we can help you to expedite the development of the skills you need.

We are measured by your level of improvement and satisfaction you gain from our clinics.

**"Great flying,  
value and fun!"**

### Pilot Development Clinics

Paramotor Endorsement (20 hours min)

26-28th October

Lake Cargelligo Tow-XC Clinic –

15th-21st December

Australian Alps Tour/Clinic –

December 29th-Jan 7th

Women's XC /Thermalling

Clinic, Tumut – 26th-28th January

**For more information  
and prices please call**

**Peter Bowyer on:**

**(02) 6226 8400 or fly to [www.](http://www.australianparagliding.com)**

**[australianparagliding.com](http://australianparagliding.com)**

**Email: [fly@](mailto:fly@australianparagliding.com)**

**[australianparagliding.com](http://australianparagliding.com)**



## DYNAMIC FLIGHT

Hang Gliding School & Flight Park

Little over an hour from Melbourne  
Australia's Largest School  
Virtual Reality Hang Gliding Simulator  
Introductory & Full Licence Courses  
Tandem Introductory Flights  
Ground & Aero Tow Endorsements  
Cross Country Tours  
Equipment Sales, Hire & Trade In



Ph/FAX: 03 53492845

email: [dynamic@netconnect.com.au](mailto:dynamic@netconnect.com.au)

Rohan: 0409 678734 Paul: 0418 348948

Jim: 0417 366766 James: 0419 129234

**DISCOVER THE FREEDOM!**



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

**Airborne Fun 190** nov, 70 hrs, VGC. No hard landings (bent a DT once). Mint LE, lavender/white. Bag, manual, profile incl. See in Newcastle. \$2,700. Ph: Ray 0402 086760; <ray@lifewithoutbarriers.org.au>.

**Airborne Fun 190 Floater** nov, almost new cond, faired DTs, speed bar, wheels. Will transport, giveaway at \$2,950. Ph: 0418 293615; 02 49434900.

**Moyes CSX4** adv topless, 100 hrs, blue/black US. New side wires & spare DT. Absolute steal at \$1,500. Ph: Chris 02 99552996 (h); 02 83745113 (w); <cjones@rbni.com>.

**Moyes Xtralight 147** adv, GC & flies well. New CSX batten profile, \$1,500. **Aero 170** & Moyes pod harness to suit pilot about 6' tall, glider in GC & harness near new, spare DT tubing provided, \$1,200. Ph: David 0409 809309; 02 99533159; <dseib@seipar.com.au>.

**Xtralite 147** adv, GC, orange/yellow/blue, was CMac's glider so autolocates thermals. \$400 ono. Ph: Al Giles 02 49430674; <aprice@ozemail.com.au>.

**Airborne Sting 154** int, speed bar, wheels, batten profile, spare DTs, Danny Scott Stealth harness, Roochutes PDA, Icom IC-40S, headset, switchbox, Bräuniger Basis-SP, mounting bracket. All cases/manuals, full-face helmet, wind speed indicator, hook knife, \$4,000. Ph: Steven 0412 083999.

**Fun 220** nov, in VGC, was used as a solo wing, any offers. Ph: Scott Dow 0412 625487.

**Moyes Max 157** int, same as the Rage to fly, EC, one owner, 62 hrs, int-adv, \$2,800 ono. Ph: 02 65632218, fax 02 65632329 to arrange test fly.

**Moyes Tracer** harness, VGC, suit pilot around 6'-6'3", \$500. Ph: Mark 02 95482493.

### Victoria

**Desire 151** adv, as new, very low hrs, light colours, \$900. Also, **Combat II 152** adv, easy to handle, bright colours, \$600. Plus manual, batten profile, LE stiffeners & spare battens to suit Combat \$150. Ph: Steve 03 98766227.

**Magic 4 155** adv, VGC, one owner, low hrs, 15 hrs since new wires/bolts, always garaged. Red LE, rainbow US, much too good to scrap. Make an offer. Ph: Nick 03 95558804; <nickwirdnam@optusnet.com.au>.

**Moyes CSX5** adv, red and white US, white power-rib mainsail. This glider is in VGC and flies extremely well. Includes owner's manual and batten profile, \$3850 ono. Ph: 03 97621364.

### Queensland

**Moyes XT-PRO 145** adv, VGC, new LE (like Xtralite), nice sail, white/pink/purple, 170 hrs, manual, batten profile & pod harness, \$1,400. Ph: Bertrand 07 55229442, email <surfnet@write.com>.

**Aeros Stealth KPL111 151** adv, as new, carbon X-bar & tips, long-life dacron sail, awesome performance & handling, never pranged, purchased 12/00, 70 hrs in only 28 flights, spare DT, enjoy weekend flying or win comps, \$5,200. Ph: Jason 0418 771400.

**Motorised Explorer** harness, medium, electr. start, 20 hrs airtime, EC, \$4,000. Ph: 07 49461157 (h); <dsamont@pg.com.au>.

**XT 145** adv, approx 10 hrs airtime, EC, \$1,850. Aussie Skins prone harness with tow bridle, EC, \$450. Reserve 'chute, VGC, \$200. Bräuninger vario/alt, GC, \$400. UHF radio with headset & recharger, battery needs re-packing, \$150. Sell separately, or as package for \$2,800. Ph: Brett 0411 983259.

### Western Australia

**Airborne Shark 132** adv, GC, 200 hrs. Perfect for lighter pilot. Great first high performance glider. Only \$1,200 incl. freight to any capital city. Owner has bought a topless. Ph: Phil 08 92424483 (w); 08 92455974 (h); <phil@iqpc.net.au>.

**Airborne Sting 154** int, VGC, \$1,800 ono, incl. harness. BRS-5 rocket parachute to suit trike, brand new, \$3,000 ono. Ph: Gavin 08 93790469 (h); 0401 403581 (m); <penfoldgavin@hotmail.com>.

**Xtralite 147** adv, 50 hrs, purple/green US, Moyes Xtreme harness with PA chute (suitable for 5'6"-6') fluoro orange, Electrophone radio & external extra long-life battery, Sjöström vario. Reasonable offers considered for complete package. Ph: Ian 0414 716 812; <ianyoung@inet.net.au>.

## Paragliders & Equipment

### New South Wales

**Aeros Rival 29** adv, \$2,200 neg. "...an amazing wing, climbs like a homesick angel..." — Keith Pickersgill, South African instructor & only person to have flown this particular wing. Good for the serious thermal pilot. New cond, only involved in test flights! For more info go to [www.aeros.com.au/products/pg/competition.htm]. Ph: Paul 0415 524232.

**Airwave Alto 27m<sup>2</sup>** Acupl, 75-100kg, genuine 130 hrs, yellow. Well maintained, EC. Will fit with Alto Sport risers if preferred, \$1,500 ono. Ph: Andy 02 95252133 (w); 02 95232801 (h); <amhoward@bigpond.com>.

### Victoria

**Adventure F3 Solo 210** with electric start, c/w Adventure High Tech PP 98 harness, for added comfort, during launch & in flight. Approx. 40 hrs flying time, EC. Incl. battery charger, tools, new spare parts, spare prop, prop covers & packing bags. Reluctant sale! \$5,500. Ph: Greg 03 59742123; 0419 304873.

**Airwave XMx DHV3**, L, 95-120kg, GC (low hrs, still crispy). No repairs, c/w inner bag & rucksack. Only flown to church by an old lady on Sundays. Great glider for exp. XC pilot, or dune basher. Be quick, a bargain at \$700. Ph: Simon 03 52592132 (h); <simon.robertson@nre.vic.gov.au>.

**Edel Promise DHV2**, M, 85-105kg take-off weight, current Edel DHV2 sports glider, 50 hrs, purple/white, porosity & line cond test excellent. "...easily amongst the most secure in its class, an ideal choice for pilots who require high levels of performance without sacrificing passive safety." Only \$2,650. Ph: Nic 0418 583233.

**Swing Arcus DHV1/1-2**, M, New, 80-105kg take-off weight, glider with a 3 yr/300 hr warranty. Red/white. Safest & most popular beginner glider, with a top speed of 49km/h. Also an excellent wing for paramotoring. Special offer: free comfort backpack & flying suit valued at \$550. All for \$4,400 incl. GST. Ph: Nic 0418 583233.

## Trikes & Equipment

### Victoria

**Pegasus XLE SE T-2710**, fully optioned ASI, VSI, etc. Training bars, full factory cover, in-flight variable wing,

ground adj. prop, aerotow kit, full manuals & logs, always maintained to EC by engineer. Headsets & comms, helmets & flight suit, custom trailer available, \$10,500 ono. Ph: 0418 127659; <resqrob007@hotmail.com.au>.

### Queensland

**Airborne Edge 582 T2-2626**, rebuilt engine, tidy cond, \$9,500. Ph: 07 38553322.

**Airborne Buzzard T1-2041**, Edge pod, spats, dash, w/ screen, professionally painted in stunning blue mica, main gear suspension, castoring nose wheel, new tyres, polished alloys, 'B' type g/box, 3-blade lvo, alloy spinner, tip protection. Engine covers recently powdercoated, new exhaust manifold with screw-in probes, quiet kit, main muffler aluminium sprayed. New instruments, ASI, VSI, ALT, dual EGT & CHT, volt AMP, compass & Hobbs hr mtr. Klaus Grimm reg, new battery, landing lights. Arrow wing, blue LE/white TS/orange US. Complete with professionally built galvanised registered trike trailer with jerry can holders, 2 jerry cans & ramps. Full set of covers, integrated helmet/headset, Icom A20, Garmin GPS11, flight suit. Always hangared, approx 400 hrs. A stunning looking, reliable, economical trike that flies well, \$5750. Ph: Ron 0402 018086; 07 55617501 (h).

## Wanted

Explorer or Mosquito powered harness.

Ph: 0418 775610 or <ssharp@nycap.rr.com>.

Millennium or Swift. Must be in good flying cond.

Ph: Jason 0418 771400.

## Other

**SPORT WINDSOCKS:** Portable windsocks/self standing models available. Easy set-up in 2 minutes. Sizes range from 90cm-3.5m. Pivot kits available for permanent mounting. Contact WINDWERKS for a fact sheet. Ph: 03 63523429; fax: 03 63523829; <keastman@tassie.net.au>.

For the following items contact Lee Scott on 1800 063 648, <leescott@highadventure.com.au> or [www.highadventure.com.au]:

**Airborne Edge 582 Wizard** wing, full instruments & full covers, always hangared, never been broken down, has aerotow system & 4-blade Brolga prop. Will sell with a license for \$28,000 or \$26,000 without license. Worth over \$32,000 new & has 95 original hrs.

**Payout Winches:** Made for HG & PG; robust, reliable & with an automatic line layer, perfect for individual or club from \$3,200. See our web site on [www.highadventure.com.au/Winches.html].

**Flying Suits:** We have the new Firebird Flying suits for HG & PG, made from the latest new age material, Porotex. Has a nice soft feeling making movement easy & comfortable in flight, water resistant & breathes without losing body heat. Suits from \$250-\$350.

**Paragliders:** We have new & demo wings in stock. Trade up! We guarantee the best trade-in on your wing. Save \$\$\$ on our demo wings. The new Matrix c/w new built-in tow system on the riser, plus the new DHV Hornet highly praised by the DHV test pilots. Quality assured.

**Paragliding Harnesses:** Trade-in old for new. We have a selection of 4 different harnesses to choose from NOW!

**FUN Demos:** Save \$\$\$ on our demo Funs with as little as 10-15 hrs flight time on them. Give us a call!

**Aerotow & Winch Tow Endorsements:** Contact us for our schedules

**Tandem Paragliders:** 2 in stock from as low as \$2,800 in EC. 1 Prime tandem (blue) & 1 Firebird Choice. Like new. **Sting 2 154 XC & Sting 154 XC:** Sting 2 in EC, \$3,100 & Sting XC \$1,900 in GC.

**Moyes Xtreme** harness suit 5'10", sell for \$500.

Advertise your flight gear for free online on [www.highadventure.com.au/skyshop]. Find where everyone is selling their gear from. Pilots contact you directly, no commissions or fees attached — it's FREE!



**Moyes**

**PHONE, EMAIL: (02) 9316 4644,  
<moyes@moyes.com.au>**

**SIZE, COLOUR:**

**Full page B&W**

# ALPINE SOARING

## Omarama

New Zealand's Premier Soaring Site

- All Dual Flying Requirements
- Courses Mountain Flying
  - Wave Flying
  - Cross-Country
  - Check Flights
  - Glider Hire
  - Tow Planes
- Accommodation
- Height Gains
- Oxygen Supplies
- Official Observers on Staffing Site
- Operating 7 Days Sept to April

Fly with the Professionals

### Alpine Soaring

Phone 0064 3 438 9600

Fax 0064 3 438 9877

Email [alpsoar@extra.co.nz](mailto:alpsoar@extra.co.nz)

[www.soaring.co.nz](http://www.soaring.co.nz)

## CARTOON by Codez



The red kangaroo's been at it for years... now a bloody koala... trimmed out nicely though.

## GFA Soaring Calendar

**Bendigo Gliding Club invites all to: Season Open Comp & XC Coaching**

3-6 November 2001 (Melbourne Cup Weekend)

No entry fee. Realistic tasks with honesty verification (or anything else). Aerotow and winch launching. Fully catered. Contact Phil Organ on 03 5435 3665 or email [libelle@impulse.net.au](mailto:libelle@impulse.net.au).

**Narramine Cup and Performance Camp Week**

25-30 November 2001

The week before the NSW State Gliding Championships at Narramine, for pilots with a personal goal or PB to better. Silver C to 1,000km attempts welcome. Orana Soaring Club provides the infrastructure and launches – you provide the flying. Administration and temp trace costs \$10 or \$20 for the week, depending on numbers. Contact Beryl Hartley 02 6889 2733 or Chris Stephens 02 6231 4121.

**SA State Gliding Championships – 1-7 December 2001**

At Waikerie. All classes and all GPS/logger included. Inquiries to Catherine Conway [conway@aus.com](mailto:conway@aus.com) or Waikerie Gliding Club.

**NSW State Gliding Championships – 1-8 December 2001**

Narramine Airport. Enquiries to Eric Sweet email [ejsweet@ozemail.com.au](mailto:ejsweet@ozemail.com.au).

**South Australian Performance Week – 10-15 December 2001**

At Waikerie. Cross-country coaching for entry level pilots in both lead and follow single-seat and shared flying in two-seater sailplane. Details from Waikerie Gliding Club.

**FAI Club Class Championships – 31 December 2001-11 January 2002**

To be held at Temora.

**40th Australian National FAI Gliding Championships**

13-25 January 2002

Narramine Airport. Enquiries to Anne Elliott, Narramine, ph/fax: 02 6889 1229 or email [annell@hwy.com.au](mailto:annell@hwy.com.au).

**Gulgong Regatta – 2-9 March 2002**

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

*GlideOmarama.com*

Gavin Wills' mountain  
soaring school

**OMARAMA**  
New Zealand

The world's best mountain  
and wave flying  
just across the ditch!

[www.GlideOmarama.com](http://www.GlideOmarama.com)





## NOTICE TO ALL AG/SS ADVERTISERS

All advertisements for Australian Gliding are now being handled by Angel Administration. All advertisements and payments can be sent to Angel Administration at the following:

The Gliding Federation of Australia/Advertising  
P.O. Box 1163, Penrith BC, NSW 2751.  
Ph: 0407 593 192 Fax: 02 4739 0185.  
Email: <frowe@optusnet.com.au>

Advertisements may be emailed in high resolution (300dpi at 100% size) using TIF or EPS formats. Photographs may be provided in either photo print or slides. Disk photographs are not suitable. Photographs, slides or disks may be returned. Please include a self-addressed and stamped envelope for the return of any promotional material. All GFA advertisements must be paid for prior to publication. (Payment by cheque, money order or credit card). Don't forget Classifieds deadline is the 25th of the month, for publication 5 weeks hence.

## Sailplanes

### Single-Seaters

**Vintage Grunau IV GHK** Totally overhauled. New fabric & paint to stitts manual. 7 years of C of A, new canopy, basic instruments. Icom radio, two man rigging, tow-out gear, dolly wheel, full covers, fully enclosed trailer, hangared at Corowa. All inclusive price \$7,000 ono. Ph: W. Wolf on 02 6027 1880 or 0407 271 880. Would consider suitable syndicate.

**201 Libelle VH-GBA** s/n 344 \$12,500 MR until 27/4/01, early survey completed. 2,696 hrs, 2,560 launches. New C of A issued. Basic instruments, New harness webbing. Enclosed trailer, registered, handling gear. See home page [waikerieglidingclub.com.au]. Enquiries to <wisc@riverland.net.au> or ph: 08 8541 2644.

**Nimbus 3 25.5** Excellent condition, 1,650 hrs. Refurbished, tailtank, S-Nav with mini instruments & chute. Komet clamshell trailer. Make an offer. Contact Kathryn 03 9762 7658 (h) or 03 8627 8629 (w).

**Pilatus B4 PC11 AF, VH-GJV** is in excellent condition & comes with a Cambridge vario, oxygen system, towing gear & a refurbished enclosed trailer. It has a tinted canopy and is ideal for early cross-country, wave & aerobatics. \$18,000 ono. Ph: Steve on 02 62313135 (h) or 02 62629911 (w), email <schmidt@diabetesaustralia.com.au>.

**SZD32A – FOKA 5** complete with registered trailer, parachute, etc. Pleasure to fly. L/D 36. Oxygen panel fitted. Ph: 07 3216 6363 or email <deegetail@yahoo.com>.

**Nimbus II** in excellent condition. Good performance at an affordable price. Enclosed trailer, chute. Ph: 03 5027 9249.

**Ventus 2 CM** Full competition instrument panel clamshell trailer & ground handling gear. \$299,000 incl. GST. Delivery restriction applies. Ph: 03 55939242.

**Callair 250 HP** Excellent condition. All Ad's done. Ph: Peter Johnson 0413 309177 or 03 57985525 (h).

### Two-Seaters

**Wife says my mistress must go.** For sale with reluctance. My M-200 Foehn, A two-seater with a difference, see Australian Gliding December 2000. Staggered seating makes it perfect for instruction or shared flying. Aircraft in factory fresh condition. Ring John (03) 9787 5922.

**Blanik L-13 WWF** 5,000 hourly & 20 yearly completed. Fresh Form 2, good condition, incl. enclosed trailer. \$15,000 ono. Ph: 07 4946 6453.

### Motor Gliders



**Touring Motor Glider ZBN** 12 litres/hr, 3 position prop, retract undercarriage, folding wings, toe brakes, strobe lights, 31:1 glide ratio, cruise at 110kt, six hrs endurance, two headsets, KLX 135 GPS, Skyforce GPS, dual flight instruments, low hrs, side by side comfort. Form a syndicate & see Australia. Ph: Barry 02 46366314.

**DG400** 1/4 share based at Camden. One person operation, T-hangar, trailer, parachute. Well equipped with B100 & GPS. Bargain at \$27,500 ono. Ph/fax: Terry 02 4647 7734 or email <terryoxborough@mpx.com.au>.

### Instruments and Equipment

**FILSER INSTRUMENTS LX20-2000** Large screen GPS datalogger, final glide & wind. LX-Colibri compact affordable datalogger, also LX5000, LX6000 flight computers. ATR57 panel mount VHF radio – easy to use. "See You" advanced flight analysis software. Upgrades available. LUKE DODD (07) 3841 6083, <LKDodd@bigpond.com.au>.

**NEW PARACHUTES:** Short pack ATL M88/90 \$1,925. Slim line long pack ATL 88/92-S \$1,995 includes GST. **Airborne Avionics P/L** ph: 02 6889 2733, fax: 02 6889 2933, email <hartley@avionics.com.au>.

**SAVE! SAVE! ICOM IC-A22E VHF/VOR** Handheld comm, includes GA headset adaptor. Save \$100 special price: \$680, includes GST. **Airborne Avionics P/L** ph: 02 6889 2733, fax: 02 6889 2933, email <hartley@avionics.com.au>.

**ICOM UHF SALE!!** IC-40 Jr 40 channel UHF handheld comm. Free cover. Just \$198, includes GST. **Airborne Avionics P/L** ph: 02 6889 2733, fax: 02 6889 2933, email <hartley@avionics.com.au>.

### General

**Glider Trailer** \$3,000 fully enclosed box type metal frame, cladding & floor. Tandem axle set up for Astir CS 77 TDP-202, Plenty of room, easily fit a larger glider. Enquiries to <wisc@riverland.net.au> or ph: 08 8541 2644.

**Waikerie International Soaring Centre** is looking for two instructors and tow pilots for next season (mid November to end March). Hours are from Monday to Friday with some weekend work. Accommodation is provided & a remuneration package will be negotiated. Enquiries to <wisc@riverland.net.au> or ph: 08 85412644.

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** (two 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 Bob Gray, ph: 03 57621058, email <gcvbob@hotmail.com>.

## 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 one year, \$47 for two years, \$65 for three 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 2100, 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 six copies £17.50.

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

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

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

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



# AVTEC Aviation

ABN 34634846442

## Specialist Repairs/ Maintenance to FRP Aircraft

- Major Repairs
- Minor Repairs
- Modifications
- Form 2 Inspections
- Surveys
- Refinishing

**Roger Bond**  
32 Bognuda St,  
Bundamba QLD 4303

**Phone:**

**(07) 3389 4843**

**Email:**

**<avtec@iprimus.com.au>**

## Advertising Index

Airborne – Climax & New A-frame	BC
Airborne – Adventure Paramotor	29
Airtime Products	IFC
Alpine Soaring	46
Australian Paragliding Centre	43
Avtec Aviation	48
Canberra HG Centre – XC Adventure	12
Chamberlain Knights – OAMPS	38
Doon Goon Extravaganza	43
Dynamic Flight – Summer XC Tours	13
GCV Benalla	15
GFA Form 2 Notice	38
GFA Merchandise	16
Glide Omarama	46
High Adventure Airpark	12
Infinity Airparks – Jason Turner	21
Lake Keepit Soaring Club	38
Luke Dodd	9
Microair Avionics	17
Moyes Delta Gliders	45
North Coast Avionics – Ol' Eagle Eyes	33
Parachutes Australia	IFC
Parafunalia – Advance	5
Rainbow Paragliding – APCO	22
Schools in Australia	42
Windworks Paragliding – Flying Planet	3

# GFA Clubs



## NEW SOUTH WALES

**Australian Air League**  
1 Perry St, Kings Langley NSW 2147, ph: 02 9674 2551.  
**Bathurst Soaring Club**  
PO Box 1682, Bathurst NSW 2795, ph: 02 6337 1180 (weekends & public holidays only), email <pbowring@bigfoot.com>.  
**Byron Power Gliding Club**  
PO Box 815, Byron Bay NSW 2481, ph: 02 6684 7627, email <byrongliding@hotmail.com>, web [www.byrongliding.com].  
**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.  
**Cudjergong 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.A.**  
PO Box A37, Naval Air Base Nowra NSW 2540, ph: 02 4424 1333 or 02 4256 6018.  
**Scout Association of NSW Gliding Wing**  
15 Harrison Avenue, Eastwood NSW 2122, ph: 02 9874 0578.  
**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 6452 3994.  
**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**  
300 Vincent St, Leederville WA 6007, ph: 08 9444 0522.



# HGFA Addresses



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

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

## Hang Gliding Federation of Australia

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

## Board Members:

*Rohan Grant (President, VP & ASAC Delegate)* 188 Bathurst St, Hobart TAS 7000, 03 62234405 (h), fax: 03 62243598, <President@hgfa.asn.au>.

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

## John Reynoldson (Treasurer)

68 Teddington St, Hampton VIC 3188,  
03 95970527, fax: 03 95981302, <John\_Reynoldson@hgfa.asn.au>.

## Rohan Holtkamp

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

## Keith Lush

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

## Bill Moyes

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

## Philip Pritchard

PO Box 734, Beenleigh QLD 4207, 0418 761193, <Phil\_Pritchard@hgfa.asn.au>.

## Brian Webb

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

## Rob Woodward

38 Addison Rd, Black Forest SA 5035, 08 8232 5405, 0408 808436, fax: 08 82237345, <rob\_woodward@ultimatepositioning.com.au>.

## General Manager & Operations Manager: Craig Worth

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

## 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 7:30 pm, "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, <rickandalice@hotmail.com>; 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 Gladwood Gardens, Double Bay NSW 2028, ph/fax: 02 93274025, <nswhga@s054.aone.net.au>.

### North Queensland HG Association

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

### South Australian HG Association

1 Sturt St, Adelaide SA 5000, ph: 08 8410 1391, fax: 08 82117115; Pres: Stuart McClure 08 82973452, <stuart.mcclure@adl.cw.csiro.au>; Sec: Mark Tyminski 08 83774570 (h), 08 84076621 (w), <marknjan@senet.com.au>; Trs: Rob Woodward 08 82977532, <benchpos@dove.net.au>.

### Tasmanian Hang Gliding Association

PO Box 27, Rosny Park TAS 7018; Pres: Craig Semple 0418 520991; 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: Geoff Tozer 03 9586 3208 (w); 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: Jim Grant 02 47588625; Trs: Allan Bush 02 47738037, <fairallan@pnc.com.au>; SSO: Dave Petrie 02 47871610, <petrie@lisp.com.au>; Allan Bush 02 47738037, <fairallan@pnc.com.au>; Newsletter: Alan Bond 02 98995351, <skybond@primus.com.au>; Site Development Officers: Paul Hunt 02 47881409, <phunt@macquarie.com.au> & Mark Madden 02 63612367. Meetings: 3rd Wed/month, 7:30 pm, Blue Cattle Dog Tavern, Mamre Rd, St Clair.

#### Byron Bay Hang Gliding Club Inc

Pres: Andrew Polidano 0414 843510, <andrew@byron-bay.com>; V-Pres: Brett Cook 02 66876907; Sec: Brian Rushton 0427 615950, <byronair@optusnet.com>; Trs: Brian Braby 02 66280983, <bbraby10@scu.edu.au>; SSO (HG): Brian Rushton 0427 615950; SSO (PG): Lindsay Wooten 02 66854551, 0427 210993. Meetings: 1st Wed/month 7pm, Byron Golf Club.

#### Hunter Skysailors

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

#### Illawarra Hang Gliding Club Inc

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

#### Kosciusko Alpine Paragliding Club

Web page [www.homestead.com/kapc]; Pres: James Pyrie 02 62359120, <rymicalago@netspeed.com.au>; V-Pres: Nigel Hack 02 64576452, <freexoz@snowy.net.au>; Sec: Charles Palmer 02 62925664, <palmerc@charlespalmer.net>; SSO: Heinz Gloor 02 64567171.

#### Manilla SkySailors Club Inc

[www.mss.org.au]. Pres: Brian Shepherd 02 67852182; Sec/Trs: Felix Burkhard 02 67751050, <felixb@xyon.com.au>; SSO (HG): Patrick Lenders 02 67783484; SSO (PG): Godfrey Wenness 02 67856545, Trikes: 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 Cootes; 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: Mark Robertson 0427 702864, <Robbos71@hotmail.com>; 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, 7pm, Mona Vale Bowling 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: Ken Wright 07 4093 7028; V-Pres: Russell Krantz; Sec: Lance Keough 07 4091 2117, 31 Holm St, Atherton QLD 4883; Trs: Nev Akers 07 40532586 (h), 07 40512438 (w).

### Canungra Hang Gliding Club Inc

PO Box 41, Canungra QLD 4275; [www.triprater.com.au/canungra]. Pres: Jon Durand Snr <durand@ausinfo.com.au>, 07 55333596; V-Pres: John Ripley <rip\_ripley@hotmail.com>, 07 32898275, 0417 507906; Sec: John Tree <jst@winshop.com.au>, 07 55354259, 0417 607191; Trs: Shirley Lake <chcgtreas@mac.com>, 07 55434047; General Executive Member: Greg Hollands <greg.s.hollands@transport.qld.gov.au>, 07 32534239 (w), 07 38448566 (h); Newsletter Editor: Ros Taber <rostab@aol.com>, 07 33490393, 60 Wanda Rd, Mt Gravatt QLD 4122; SSO: Andrew Horchner <aforator@gil.com.au>, 0412 807516.

### Central Queensland Skyriders Inc

PO Box 1428 Yeppoon QLD 4703; Pres: Bob Pizzey 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.

### Dalby Hang Gliding Club Inc

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

### 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; <intheair@ozemail.com.au>. Pres: Phil Lewis 0412 739302; Sec/SSO (PG): Jean-Luc Lejaille 0418 754157; Trs: Michael Powell 07 5442 5568; SSO (HG): David Cookman 07 54498573.

### Townsville Hang Gliding Association Inc

Pres: Clint Smith 07 47747650; Sec: David McMahon, 07 4772 3858, PO Box 103, James Cook University, Townsville QLD 4811; Trs: Graeme Beplate 07 47732913; SSO: Graham Etherton 0427 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: Darren Brown 03 5222 8625; Sec: Tony Hughes 03 52437661; Trs: Greg Holt; SSO: Ted Remeika; Rob Van Der Klooster 03 5222 3019, <hrt@deakin.edu.au>; Meetings: 1st

Fri/month, venue web site [vhpa.org.au/dyna].

### Melbourne Hang Gliding Club Inc

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

### North East Victoria Hang Gliding Club Inc

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

### Southern Cross Paragliding Inc

[http://fly.to/southernx]; Pres: Gary Clarkson 0419 319948, 34 Rose St, McKinnon VIC 3204. Meetings: Last Wed/month.

### Southern Microlight Club

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

### Western Victorian Hang Gliding Club

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

## WESTERN AUSTRALIA

### Albany Hang Gliding Club

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

### Cloudbase Paragliding Club Inc

Club message bank 08 94875253; [www.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.

### Hill Flyers Club WA

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

### South West Microlight Club

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

### Western Soarers Hang Gliding Club

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



AirBorne  
AUSTRALIA



CLIMB OUT!



GLIDE TO GOAL!



LAND  
LIKE A CHAMPION!

CLIMAX

Available sizes: 13 & 14

PO Box 7042 Redhead NSW 2290 Australia

Phone: 02 4944 9199 Fax: 02 4944 9395

[www.airborne.com.au](http://www.airborne.com.au)



See our  
website for  
latest stock  
updates!

STREAMLINE  
OPTION NOW  
AVAILABLE

Fully manufactured at Airborne!

NICE ONE ROHAN!

NO 1 RANKED  
AUSTRALIAN PILOT  
ROHAN HOLTkamp,  
PLACES 4TH OVERALL  
AT THE 2001 WORLD  
CHAMPIONSHIPS  
IN ALGODONALES, SPAIN.

(Rohan was flying a factory standard Climax 13)

AirBorne  
AUSTRALIA