

WINGS!

NOVEMBER 1978

MAGAZINE



**American Cup
Issue**

NEWS FROM Birdman

Birdman Sports is one of the pioneer glider manufacturers in the U.K. We have wide experience in all aspects of hang gliding. We are unique in being able to offer under one roof everything a hang glider enthusiast or beginner may need, from basic schooling to the purchase of gliders, harnesses, parachutes, instruments etc. etc.

SPARES SERVICE

We operate a fast and comprehensive spares service. Each Thursday we deliver spares to our local main station Red Star service. These will be ready for the customer to collect at any British Rail Red Star office on the mainland by Friday midday. Alternatively, our agents will have some spares available.

AGENTS

Birdman Sports do not appoint agents lightly. Each one deals exclusively with ourselves ensuring a good standard of product knowledge. Each one is a dedicated hang gliding enthusiast. This means you, the customer, will get good service, good advice and follow up help and advice to your purchase.

In Scotland contact: David Squires 33 Whitehurst, Bearsden, Glasgow, G61 4PF
The North contact: Trevor Birbeck, Hambleton House, Clotholme Rd., Ripon, Yorks.
North Wales contact: Birdman Hang Gliding School, 186 Bryn Place, Llay, Wrexham, Clydd.
South Wales contact: Ewart Jones, The Quarry, Crickhowell, Powys.

CONGRATULATIONS

To: Bob England and Johnny Carr (2nd and 4th respectively) for their tremendous performances on the Moonraker '78 in the highly competitive Class II at the European Open Championships Kossen against the best that Europe, Australia, America and Japan could muster.

To: Rolf Nossen and Brian Wood (1st and 2nd respectively on Moonraker '78) Class III at the Midnight Sun Cup, Norway.

To: Rolf Nossen (Moonraker '78 again) for his 1st place in the Norwegian nationals making him the 1978 Champion.

To: Mike Bundock and friends who scored a resounding 1st, 2nd, 3rd and 4th places on Moonrakers at the '78 South African Championships.

To: Johnny Harris for the first balloon release in Ireland last year and also for his more recent release using a Moonraker '78 for the first time.

To: Paul Beukers (Holland), who has the first powered '78 (courtesy of Gerry Breen and Soar-master). The glider is turning out to be very suitable for power having such a strong airframe.

To: Eleven out of the fifty or so regular competitors in the British National League fly Moonrakers. If you are an experienced pilot and want an all out performance glider for competition or cross

country flying the Moonraker '78 has got to be your choice.

The "Cherokee"

The "Cherokee" is a new intermediate/expert pilots glider. Built to our usual high standard of construction and finish. Because of its mellow handling characteristics it is suitable for new E.P.C. holders right through to expert pilots who want performance with a relaxing easy to fly glider.

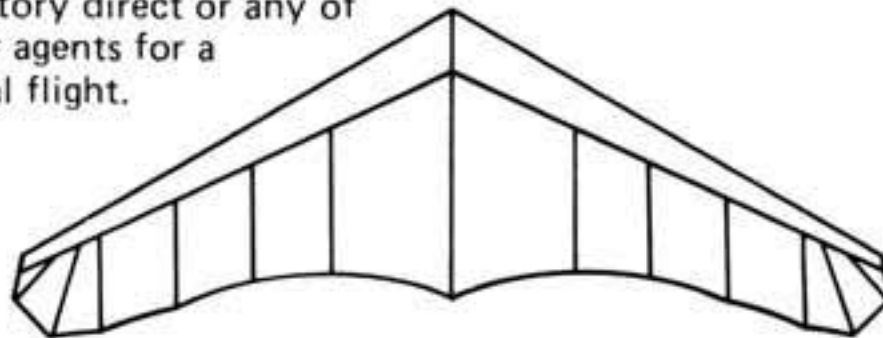
With the "Cherokee" Birdman Sports have utilised all the latest techniques and knowledge accumulated from our wide experience of all aspects of hang gliding. We are the only manufacturer to exclusively use Howe & Bainbridge Dacron. It is obviously more expensive than other sailcloths but we maintain that it pays to use the best materials available. The "Cherokee" sail is built in 3.8oz material with 6oz reinforcing panels where needed. It is fully cambered and is the result of our constant R & D programme in the pursuit of higher performance and better handling.

The air frame is in 1³/₄ x 18G HT30TF aluminium, inner and outer sleeved where appropriate. Control frame is 1¹/₈ x 14G and folds with the removal of a single button pin. Our usual centre box system is used to allow quick easy rigging.

The glider breaks down as standard to approximately 12 feet. It can be flown seated or prone. Available in two sizes to cover a wide pilot weight range.

Basic specifications are as follows:-
"Cherokee" 170 Nose 120° Span 30.5 ft.
Aspect ratio 5.47 ft. Area 170 sq. ft. Root chord 10.5 ft.

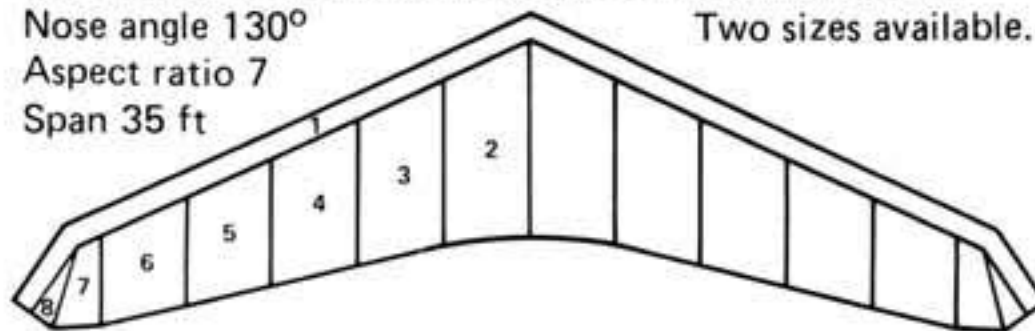
If you are seriously interested, contact either the factory direct or any of our agents for a trial flight.



Moonraker '78

The glider for experienced pilots who are looking for maximum performance. In the right hands the '78 is extremely competitive when matched against the best hang gliders built anywhere in the world. Our competition successes prove it. Very strongly built with a 2" O.D. x 18G airframe, Bainbridge sail beautiful finish.

Nose angle 130° Two sizes available.
Aspect ratio 7
Span 35 ft

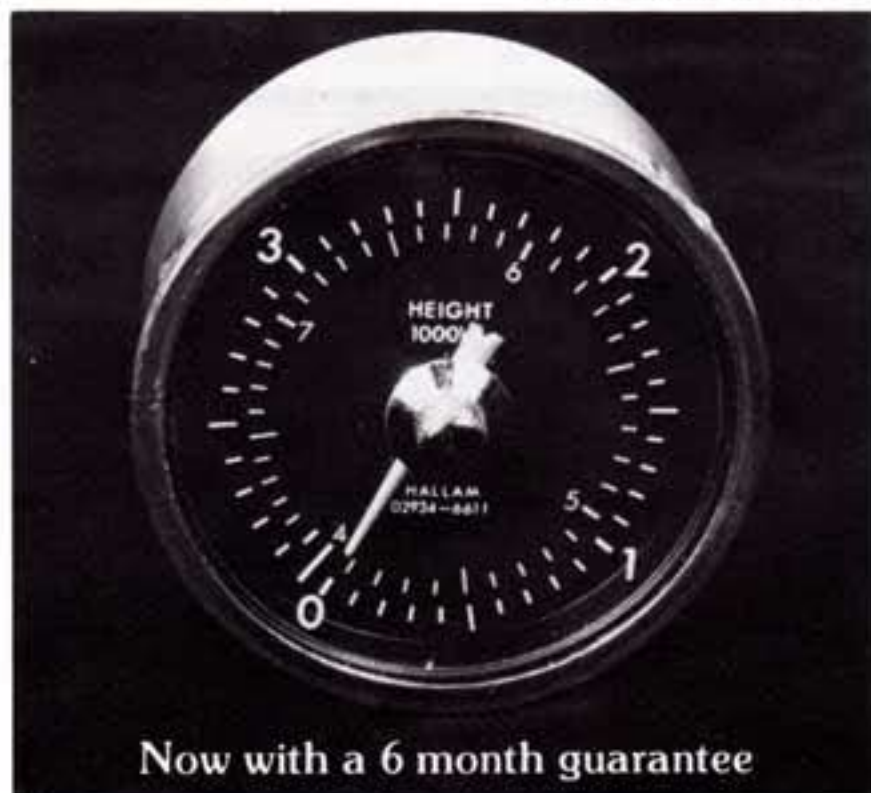


Colours normally available: RED(dark red), ORANGE, SPECIAL GOLD(deep gold), GOLD(yellow), LIGHT BLUE, BLUE(mid blue), PURPLE, WHITE, GREEN(dark green), LIME. These colours are named using the Howe & Bainbridge designation - our own description is in brackets. Please order using Howe & Bainbridge description.

Birdman Sports Ltd. Overtown House, Mildenhall, Marlborough, Wiltshire. Tel:0672 53021

ULTRA SPORTS

Shown slightly larger than actual size



Now with a 6 month guarantee

BOWLAND ALTIMETER

2 inches in diameter by 1 inch deep, weight 2 ozs.

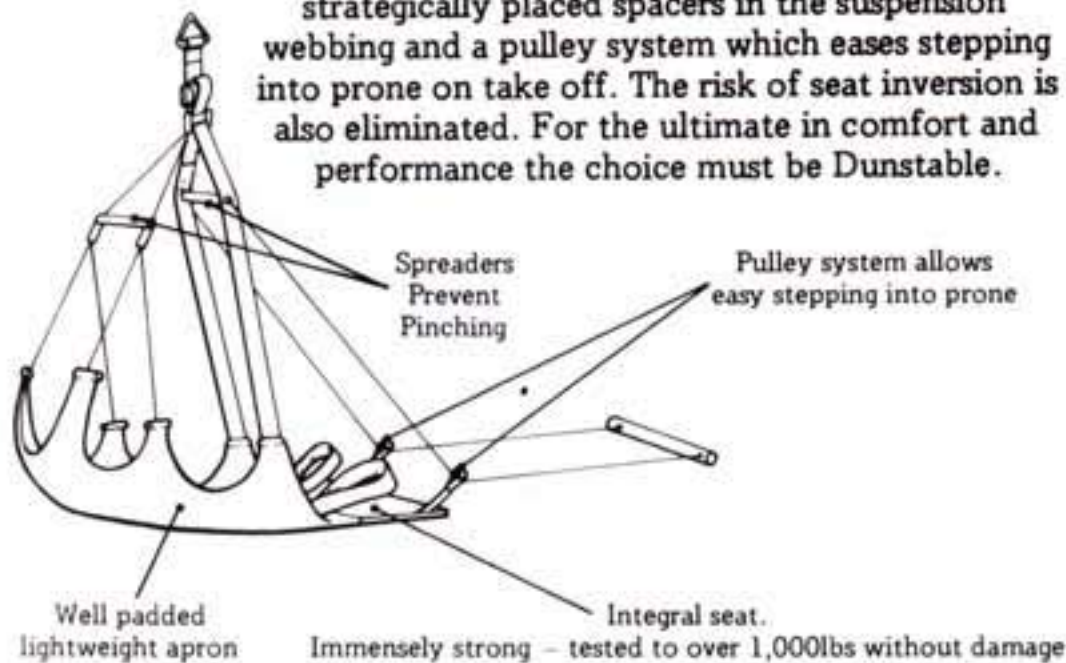
Scale: 8000 ft with 720 degree sweep.

£22.20 including VAT and postage

Available from: Ultra Sports Hang Gliding Centres Ltd.
11c Denmark Terrace, Brighton, Sussex.

Dunstable Hang Gliding School Limited

The main problems associated with convenience and comfort of the prone harness have been pinching at pressure points and ease of finding the stirrup. The Dunstable Prone Harness virtually eliminates these problems by incorporating strategically placed spacers in the suspension webbing and a pulley system which eases stepping into prone on take off. The risk of seat inversion is also eliminated. For the ultimate in comfort and performance the choice must be Dunstable.



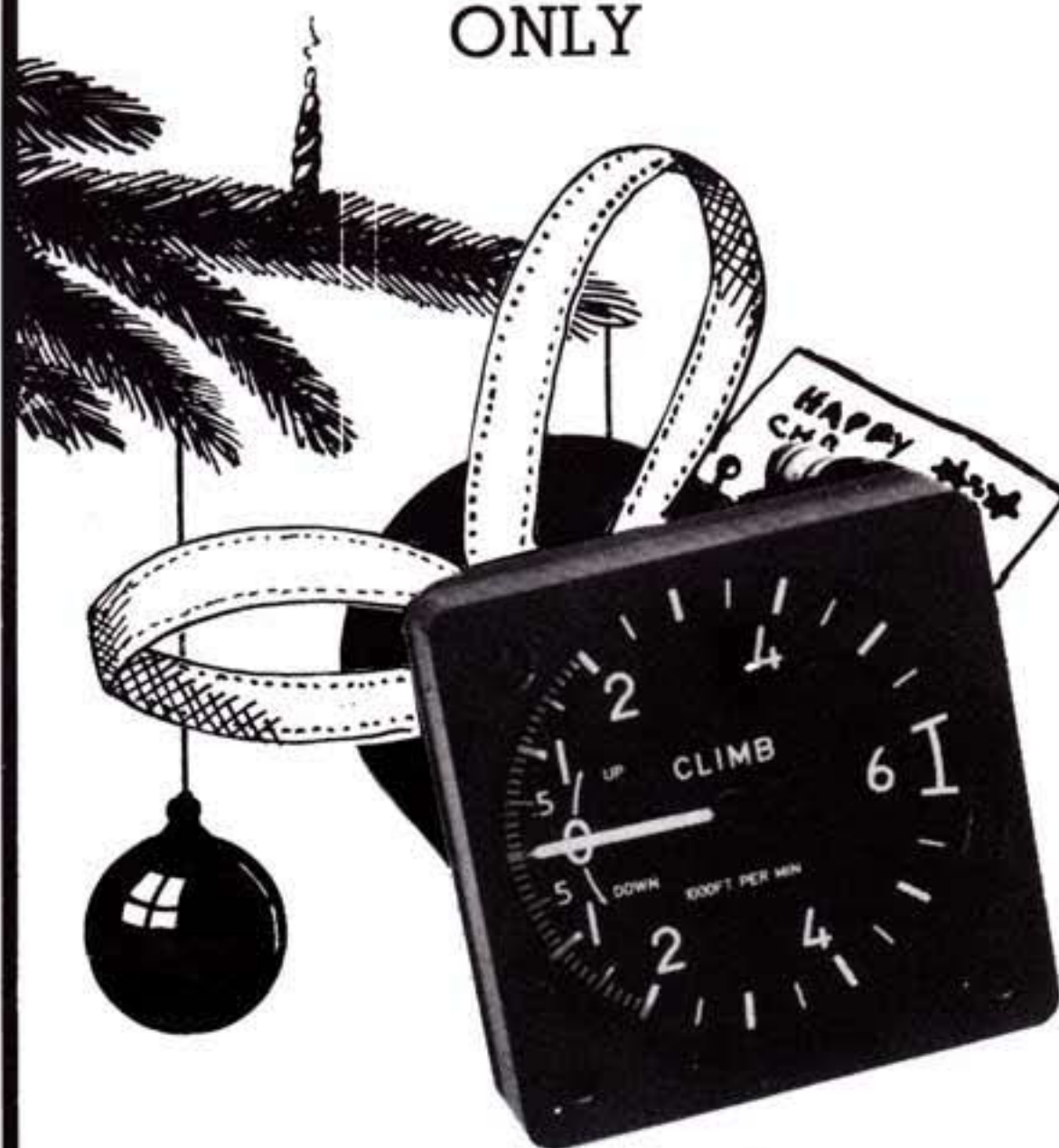
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£44.00 inc VAT

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THIS ADVERT IS FOR WIVES AND GIRL FRIENDS ONLY

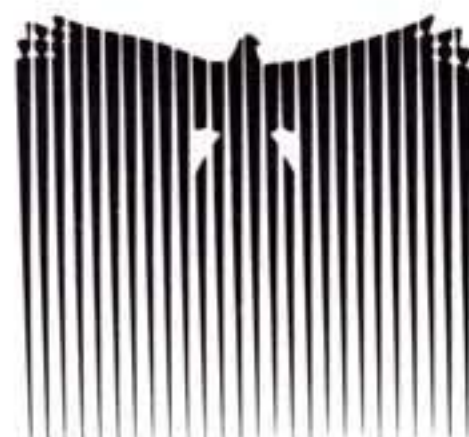


If you are wondering what that hang gliding mad husband or boyfriend would like for Christmas, then forget your worries and telephone John Hudson of Mainair Sports.

John will be able to advise you of the best Christmas present for a hang gliding fanatic, whether you have a few pounds to spend or a few hundred. How about a Flexiform Grab Bag, or a Thommen Altimeter, or a Winter Airspeed Indicator, a Vario or an Instrumount. Are you worried about his safety, then why not splash out on a parachute.

Mainair has a huge stock so we can't list the lot. Ring John and just say how much you want to spend.

Mainair Sports for the best in hang gliding accessories — we stake our reputation on it.



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Shawclough Road Rochdale Lancashire OL12 6LN
Telephone Rochdale 50436



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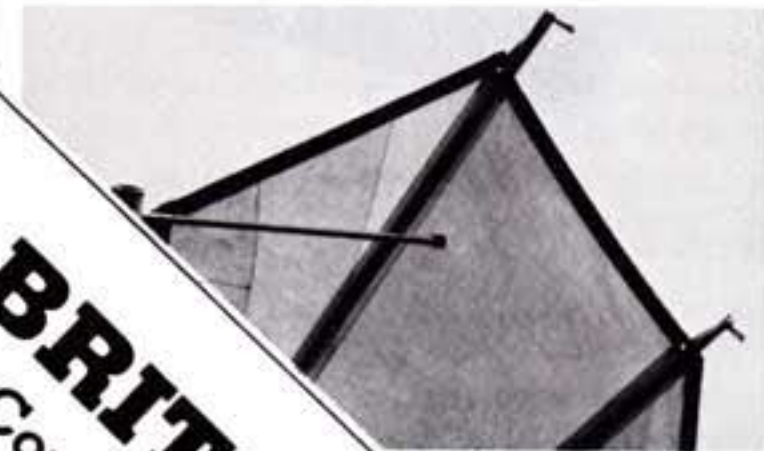
SUPER SCORPION

A worthy successor to the existing Scorpion, this is the machine for the serious cross-country and competition flyer. The 120° nose angle and low twist values of the wing make the Super scorpion a highly efficient glider.

Incredible min sink performance coupled with an ability to flat 360 in very tight spaces, make the Super scorpion the ultimate thermal eater.

Pitch is light but positive. A new aerofoil section allows extended glides at high speed – ideal for getting out of sink or hopping from thermal to thermal.

Super scorpion is equipped with two small tip struts. These struts allow the sail to ride as high as it likes when flying at low speeds, but ensure that at high speeds or radical attitudes the keel always has a higher angle of attack than the tips, thus providing quick dive recovery.

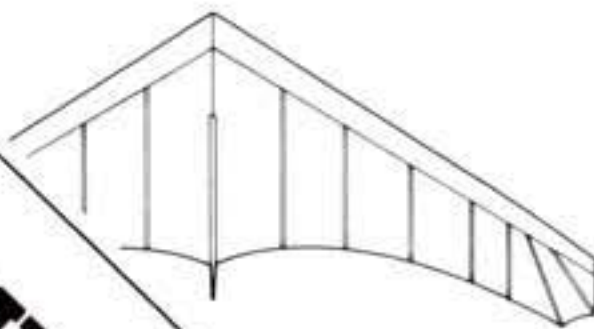


(Spectrum) have anodised. Under is only a 'B' bar.

because the removal of deflexors, bottle screws and cables also means removal of the sleeving at the attachment points. Also, Super scorpion is lighter than its older brother because the short keel pocket is less cumbersome than the fin, full pocket and related hardware.

No wing wires and bottle screws means you don't have to be continually tweaking the cables to keep in tune. It's all in the sail, fully tuned and permanently tuned. No wing wires means there's less to go wrong, and the removal of all that clutter from the leading edges pays huge dividends in drag reduction.

The variety reduction of components is also reflected in the price of the machine. A supership at a reasonable price is now a reality.



Knockdown length

Area

12'3" (3.75m) 150ft² (13.6m²)

13'3" (4.05m) 173ft² (16m²)

14'3" (4.35m) 198ft² (18.4m²)

Strength rating

Span

1200lbs (545kg) 27'10" (8.5m)

1700lbs (571kg) 30'7" (9.35m)

2000lbs (585kg) 33'6" (10.2m)

BRITISH TEAM WIN AMERICAN CUP!
 Congratulations to Graham Slater, Robert Bailey and Bob Calvert who were placed first, third and sixth respectively in Super Scorpions.

In a competition that 'promised to be the most important hang gliding event ever held in the United States' — (Tracy Knauss, editor of Glider Rider), Hiway Super Scorpions dominated the field and demonstrated yet again that if you want the best in handling and performance — it's got to be Hiway.

Super scorpion

A		
B	14'	
C	19'8"	
	Aspect ratio	Nose ang.
A	5.5	120°
B	5.6	120°
C	5.7	120°



WINGS!

The official magazine of the BHGA

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John Hunter (Hatfield 71027), Ashley Doubtfire (Marlborough 3021), Garth Thomas, Co-opted Members: Gordon Wyse

Northern Ireland: Chris Simmons. **Council Officers:** Technical Officer: Alan Barnard (Crewkerne 72478),

Training Officer: Keith Cockroft (Calder Valley 2883), Registration Officer: Terry Dibden

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Secretary: Chris Corston (Taunton 88140)

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Cover: Graham Slater on the Super Scorpion at Chattanooga

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Editorial

November '78 — has there ever been such a momentous month?

The British Team wins the American Cup SO spectacularly, through a combination of superb flying and excellent management. . . BUT, Brian Milton then piles in the "Blue Bird" powered Safari almost, it appears, for the benefit of TV. Miraculously, he survives, but with a broken shoulder and wrist, it will be some time before he flies again. Tony Fuell, out for a weekday's flying at Beachy Head, puts his harness on wrongly, loses control, crashes and damages his spine. He won't fly for at least 5 months. Keith Cockroft, test-flying a Gemini 2-seater dual-prone with Dave Garrison, is turned into the hillside and is unconscious for 8 hours. He will need a clean bill of health from his doctor that he is not suffering from long-term effects of concussion before he flies again. It's something of a

relief to find that the reason John Hunter is lying flat on his back at present is that he sustained whip-lash injury to his back in a car shunt! In a surgical corset he will be able to work and carry out his duties as Accident Investigation Officer, but again it will be months before he is flying.

This edition of *Wings!* has been delayed to bring you as immediate as possible a report on the stunning success in Chattanooga. Instrumental in bringing about this achievement was Brian Milton who set up the challenge to begin with, found and trained the champion pilots through his League, and with his team of managers funded, motivated, coached and generally "psyched" our fliers. Success in the American Cup has done a great deal of good for BHGA: a spate of accidents equally does us harm. Indeed, from the telephone reports I have received, Brian's flight alone (with

its attendant "high-profile" publicity) has caused hostile comments from all grades of flier — and from my wife, who is seriously concerned whether hang-gliding is the right interest for a man of my age and responsibilities! All of us in hang-gliding have responsibilities—to our families, to fellow fliers, to the sport, to ourselves—and surely Council Members (on Council, let it be stressed, because they wanted to be) must accept a greater degree of responsibility. My view is that Council Members should be the last people to have their judgment (of whether or not it is safe to fly, for instance) swayed by considerations of media or commercial interests. What's your view? Let's get a debate on what we expect from Council Members — and from Council — before the next AGM. (Constructive views and suggestions are more likely to get space in *Wings!*)

Wings! needs your help! Specifically I need the assistance of fluent French and German readers who would scan Continental hang-gliding publications, seeking out and translating articles of interest to BHGA readers. I also need the services of a photographer, or more accurately a photographic developer and printer, who would make good, reproducible black and white prints from colour transparencies and colour prints. Please phone me on Tamworth (0827) 52330 if you would like to help. I am also keen to encourage wives and children to contribute to *Wings!* and in return I promise to print items that I think will be of interest to all ages and sexes. Please send contributions to me at "Bole Hall Cottage", 15 Amington Road, Bolehall, Tamworth B77 3LH

Garth Thomas.

Council Matters

The Chairman had invited Gerry Breen to be present to give him the right of reply on a point raised at a previous meeting concerning Gerry's possible prosecution by the CAA for infringements to Air Law. Gerry stated that he felt he had been judged, tried and convicted by Council before he had heard of the C.A.A.'s likely action.

It was explained to Gerry that while Council had a clear duty to protect its members interests it had to uphold the law to retain credibility. Once the facts had been established BHGA could equally well have provided for his defence if Council felt he had not broken the law.

It was further pointed out that Powered hang-gliding had been, and still was, a delicate matter as the CAA were being pressed to exercise the powers to control which they certainly possessed. The CAA had not finally decided on the wisdom of delegating control to the BHGA and actions drawing the Public's attention to a lack of control would in the end endanger the freedom currently enjoyed. There needed to be closer consultation and advance warning of power flight in future.

Ashley Doubtfire, the Council Member responsible for powered hang gliding had submitted a report which covered the results of a survey carried out with Clubs (only 7 had not replied). Returned questionnaires had indicated at least 40 people had flown under power, approximately 37 intended to buy soon, there were 18 owners of power units and approximately 65 others were very interested.

Council welcomed the probable formation of a Powered Hang Gliding Club as a Member Club of the BHGA and noted that an initial meeting would take place on 28th October. Ashley Doubtfire was asked to stay involved with the Club.

Council endorsed the Treasurer's expenditure of £61.25 on BHGA bannerettes for presentation to mark special occasions.

Keith Cockroft had inspected the Birdman Flight Training School at Marlborough and had recommended that the School was suitable for re-registration. His recommendation was accepted, re-registration to be immediate.

Council reconfirmed that Registration of Hang Gliding Schools is at the discretion of the BHGA Council. Council took

note of Robin Tomkin's application for Registration and decided not to place his School on the Register, at present.

The Pilot and Observer Handbooks, compiled by the Training Officer, had been read by Garth Thomas and the Chairman and the conclusion had been reached that professional editing was essential before publication. Garth Thomas undertook to take a week off work to complete the task.

(Later in the same meeting Garth Thomas was appointed to the Editorship of "Wings!" and though willing to retain responsibility for editing the Pilot and Observer Handbooks has been relieved of that task by the generous gesture of Ann Welch, our President, who volunteered to take it on).

The Competitions Committee report detailed the names of those now on that Committee and covered the Atlas Express League Final that had gone well, the European Championships and plans for the Americas Cup. Brian voiced his thanks to all who had helped make the League and International participation such a success during 1978. Council endorsed the make up of the America's Cup Delegation.

Council Meeting of 1st October 1978 held in London.

Reggie Spooner and Roy Hill reported verbally on the recent International Hang Gliding Commission Meeting (C.I.V.L.). The next World Championship would take place in 1979 at Grenoble, France. C.I.V.L. had agreed to recognise an International Championship with emphasis on cross-country flying that would take place in the U.K. in 1979. The Scandinavians particularly wanted closer competition ties with the U.K. With the object of developing World Competition Standards, Japan had confirmed its bid for the 1981 World Championships. We had made a bid for the 1983 World Championships.

Our CIVL delegates went on to explain that CIVL is responsible for developing and promoting all aspects of hang gliding, not only competitions and records. There was a worldwide desire to have common Airworthiness Standards, Pilot Grading systems, etc. The current Glider Class definitions would remain until after the 1979 World Championships. Roy Hill was working on redefining the classes and once the new definitions were accepted they would be adopted for all FAI events after August, 1979. Similar work was going on on Com-

mon Airworthiness Standards – and we could also accelerate the adoption of Common Pilot Rating Standards if we so wished.

After substantial discussion and consideration of Editorial Committee views Council decided unanimously to appoint Garth Thomas as Editor of "Wings!" with total responsibility for content and layout.

Council took note of the recommendation by the Chief Pathologist of the R.A.F. that all hang glider pilots should consult their GP's at regular intervals about their fitness to fly and anyone who had suffered concussion or other head injuries should be advised to have a full medical check before flying again. Dunstan Hadley would give mem-

bers additional information on this through "Wings!"

Council endorsed the search for and selection of a Development Officer subject to their final ratification. The Chairman and Secretary were directed to proceed with the search for a suitable candidate.

Chris Corston

From The Chairman

It is difficult to explain the pride that I experienced when I learned that we had won the America's Cup. That pride is a compound of many factors! For years before the war I was deeply immersed in that other America's Cup—for yachting: we are all familiar with American professionalism; their dedication to win in competitive sport. Add to that the lead time Rogallo gave them, the fact that hang gliding was active there over ten years ago—the lead they showed us at Kossen three years ago—and I believe you will understand my doubts that

we would see them off—as our team was obviously determined to do.

This victory has put us at the pinnacle of international recognition. The victory is founded on the drive, initiative and vision of Brian Milton—and I make no apology for giving him pride of place in my comments. Conversely, he has been at pains to point out that the result is solely the work of the team, the reserve flyers, the League pilots and the tireless band of helpers, the Roy Hills, the Derek Evans and a dozen others.

It is a resounding success and I take off my hat to the achievements of all.

But what is in it for the "cabbage patch"—or perhaps I should say, the individual on the hill. There is a very great deal.

Our aircraft out-performed everything against which they flew. Not only did our pilots out-perform but our aircraft out-performed also. There was not a single accident or incident, not one bent control frame. In short, the result (of which this competition is only the immediate outward sign) is an aircraft of better performance and safer to fly than anything we have had before. Great credit for that goes to our manufacturers, for it has been pressures of competitive flying, culminating in the winning of this Cup, that has improved our aircraft and has made hang gliding better and safer for you and I.

By the drive, initiative, ability and work of a dedicated group, but above all by team work in pursuit of a clearly defined aim—that is to beat the World at hang gliding—British hang gliding has won international recognition. Having done that let us similarly establish our National aim and concentrate on achieving the same National recognition. That means establishing an Association of stature, recognised by member and Government Department alike. It means establishing clear goals, securing the sites, securing the air space, improving our training—at whatever level you wish to enjoy hang gliding. A dozen or so people are trying desperately hard—join with them to make hang gliding what you want it to be.

Reggie Spooner,
Chairman BHGA,
Cowes, Isle of Wight

AMERICAN CUP T-SHIRTS

In Tennessee recently our flyers won the First Annual American Cup against teams from the U.S.A., Canada and Japan. We all made it possible and can be proud of the team effort that showed hang gliding expertise in the U.K. leads the world. To mark the event we have produced a commemorative T-shirt. The design, in four colours, is by Bob England, one of the British team. The shirts are of high grade cotton-based material from 'DEEGEE', one of the U.K.s leading suppliers.



SEND £2.90 (inc. p & p.) AT ONCE TO AVOID DISAPPOINTMENT AS STOCKS ARE LIMITED, TO: BHGA T-shirts, 167A Cheddon Rd., Taunton, Somerset. State size required - S (30-34") M (36"), L (38-40"), EL (42-44"). Don't forget to give your address. Allow up to 3 weeks for delivery. Make cheques/P.O.s payable to B.H.G.A.

A VERY MERRY CHRISTMAS PRESENT

'HANG GLIDING DON'TS AND DON'TS'

Bob Mackay & Bill Lehan's hilarious book of the sport.



Here's what they are saying:

"... I'm not the most outwardly humorous of people, nevertheless I have read it from cover to cover numerous times . . . non-hang gliding friends find it the funniest . . ."

Greg Button, Singapore

"The book is splendid".

Bettina Gray, Rancho Santa Fe, California

"Thoroughly enjoyed your excursion into the realms of authorship and Bill's cartoons have always been favourites of mine . . ."

Don Watts, Canterbury, New Zealand

"... its humour leaves me with sore sides".

Stan Doih, Edinburgh, Scotland

"... it's great, we will certainly use parts of it in coming issues . . ."

Vincene Muller, Editor "Flypaper" Alberta, Canada

"... I enclose a cheque for ten more copies, plus my one".

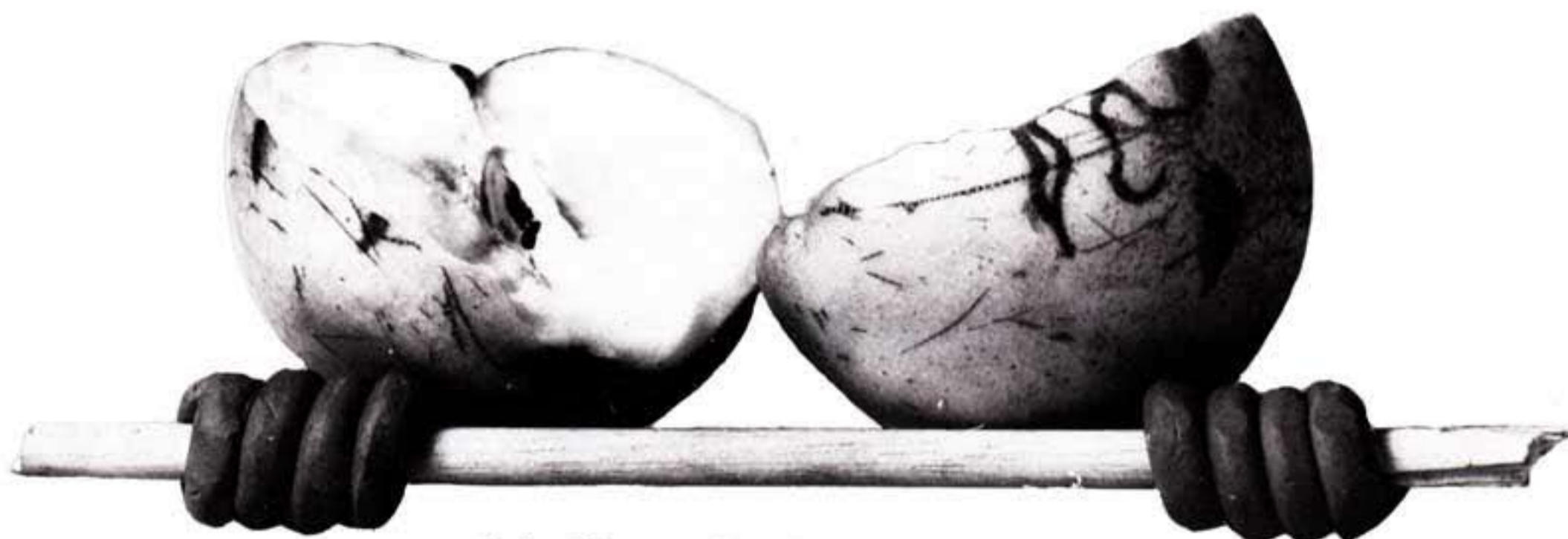
Tony Tate, Avon H.G.C. England

"Now that the laughter has subsided I can put pen to paper to pay you a compliment, I really enjoyed it".

John Cunningham, Tuam, Eire

The ideal present for a flyer or non-flyer, male or female. £1.50 (includes postage). Direct from:—Sailwing Publications, 83 Wern Road, Skewen, West Glamorgan.

Stalling — and Apples



When, this week or next month, you stall and hit the ground harder than you ever intended, you will *not* be joining a small select group of heroes. It is a nameless, faceless, multitude of some hundred thousand one-time pilots that you will find yourself among — and that is probably an underestimate of the number who have died because they failed to fly with enough airspeed. Answer this question: When you stall inadvertently (and every pilot does sooner or later) will it be because:

- you didn't know how and why it is essential to maintain enough airspeed?
- you thought you were quick enough and good enough to catch any incipient stall before it got away from you?
- you were unaware you were flying too slowly?

Which did you decide was for you? Because there are no other reasons (or excuses), unless you involved yourself in structural failure or hit extreme turbulence. For many of the friends and relatives that you could join it was probably a bit of all three. So let's have a look at understanding about stalling; you can do your own job of trying to understand yourself.

You've known since you dropped your first baby food on the floor that nothing actually *wants* to stay in the air. At school you learnt, or were supposed to have learnt, that this was due to gravity (the rotten apple syndrome) but that if you made a device of a suitable shape — a wing to you — and gave it speed through the air its rate of return to earth could be slowed.

A wing works best, as you already know, when it is flown at the most suitable angle to the airflow — the angle of attack. If the angle of attack is too low the wing will provide lift but, because it is flying unnecessarily fast, the drag will be high and the wing will perform less efficiently. If the angle of attack is too high the wing will cease providing enough

John Hunter, B.H.G.A. Accident Prevention Officer, asked Ann Welch, our President, to write this hard-hitting article. Anyone as concerned with accidents as John is — he has the unenviable task of investigating personally all hang-gliding fatalities and serious accidents on behalf of the Association — is only too aware that the result of an inadvertent stall can be permanent injury — or death.

lift to support what it is supposed to support— YOU. So when you fly your wing you have to try to keep it at the angle of attack which will give you low sink combined with proper control. You will find this out by trial and error and recognise it by sound, feel on the control bar, airflow on your face, and sundry other little inputs of information — and you become quite good at doing it. When you are flying at the correct angle of attack for low sink your airspeed is only a very few miles per hour above the stall speed but, in case you didn't learn this in school, the stall speed is not a constant. It will alter slightly with the weight of the pilot and the wetness or dryness of the wing, and it will change, increasingly radically, when it is loaded up by g — gravity — forces, including centrifugal force. This means that in any turn above a minor change in direction the stall speed will increase. So if you are flying at min sink speed you have to increase your airspeed to maintain the same margins. If you intend to do steep turns you have to increase airspeed a lot before the start of the turn because, for instance, at a bank angle of 65° the stall speed has almost doubled. On a hang glider with a small speed range the performance will drop off rapidly with increased speed, so you will find that you are also losing height faster. But there is nothing you can do about it; if you want to make steep turns or quick 360's you will have to accept that *you must increase airspeed because there is no other way for the wing to continue to fly*. You have to treat gravity as a friend — but be sure that you have enough height to start with!

The first time that you are likely to get into airspeed difficulties (apart from your early attempts at landing) are when you first fly with a substantial downwind component. This is a pity because the problem here is not one of changing airspeed, but a result of incorrect assessment of the info that your eyes are sending to your overworked bird brain. Because the windspeed added to your airspeed is making the ground pass more rapidly underneath than usual, you have a natural reaction which says, "Slow up". So, out goes the bar and into the hill goes you. Too late to remember that there is no substitute for airspeed.

But maybe your instructor's warnings did filter through and you have now reached the stage of soaring on the hill. Now, in case you didn't realise, you have two more airspeed problems. The first comes because you know you can control your hang glider quite well, so you start to throw it around a bit, or you get a bit close to someone else and turn sharply away. Up goes the angle of attack, passing the stalling angle because you didn't think to build in some airspeed, and away it goes. Maybe this time you are lucky. Maybe *not*.

The second problem is not to do with you, but is caused by changes in the structure of the air in which you are flying. It is not always homogeneous, like diluted treacle, but contains discontinuities, shears, accelerations and decelerations. You have a temporary airspeed problem through loss (or gain) of energy when you suddenly encounter any of such abrupt fluctuations. As you enter a thermal, for example, you receive a temporary gain in energy which temporarily increases airspeed, but as you leave it there is an equally temporary loss of energy and airspeed. If you have only taken advantage of the former you will have insufficient margin of airspeed when you hit the far side — and you fall out of the thermal. If you enter a wind gradient — common in bottom landing fields where the wind blows less strongly than on top — your

aircraft will be temporarily subjected to a decrease in energy and you will find yourself sinking rapidly, which is one of the first signs of insufficient airspeed. If you enter a really strong wind gradient with an inadequate airspeed margin *it may be impossible to gain further airspeed however much you pull in the bar*. You arrive on the ground stalled.

Obviously the first defence against inadvertent stalling is to be able to recognise changes in the airflow pattern; less noise or change in sound, increased sinking or sagging feeling, etc. But even if you recognise when you are getting too slow, you have to be quick because a hang glider decelerates rapidly. When the stalling angle is reached it will go without waiting for your grey cells to churn out some action. The second defence, to be added to the first, is to remember that every moment you are in the air is by courtesy of gravity. Only it can give you airspeed so use it, use it, use it.

Abuse it and you are just another rotten apple.

Give yourself just one good reason why it should never happen to you.



"KIRK TO TRANSPORTER ROOM—
COULD WE TRY THAT AGAIN, SCOTTY???"

Fitness to Fly

Anybody who applies for a Private Pilots Licence is required by the C.A.A. to have a medical examination by a C.A.A. approved doctor. This usually costs about £12.00 and must be repeated every 2 years for those under 40, and every year for those over.

From time to time BHGA gets hints from various official or authoritative sources that perhaps hang glider pilots should be required to do the same. BHGA has never considered that this is necessary. The B.G.A. requires its pilots to sign a declaration that they do not suffer from certain diseases, and to report any change in health. Applicants for driving licences are also required to sign a statement on their health and required to report any change. This declaration is much the same as that required by the B.G.A. The official view of BHGA is that "Anyone who is eligible for a driving licence, and who is able to lift a hang glider, and to control it on the ground prior to flight, is fit to fly".

In view of the continued enquiries it is proposed to draft a statement, along the lines of that used by the B.G.A. for applicants for BHGA membership to sign. This will include a section requiring a member to consult his

doctor, should there be any change in his state of health, or following a serious accident.

Following a head injury, sufficiently severe to cause loss of consciousness, a pilot should not fly again until after he has consulted his doctor. Sometimes the after effects of a head injury may not be immediately obvious. Internal injuries may also cause delayed effects. Even after a "cold in the head" the ears may be affected for some time after the cold is better. It is possible that any treatment or drugs, which a person is required to have, may affect his ability to control an aircraft. The pilot may be unaware of this unless his doctor knows that he flies and has specially warned him about it.

Flying a hang glider is approximately equivalent in risk to riding a motor cycle. It therefore seems sensible to expect that those who fly should be in a reasonable state of health.

Dunstan Hadley
BHGA Medical Adviser

The French equivalent of our Sports Council produces a document which prospective fliers must show to their doctor. It details the physical fitness standards deemed to be necessary. The French also place an emphasis on mental fitness to fly. Ed.

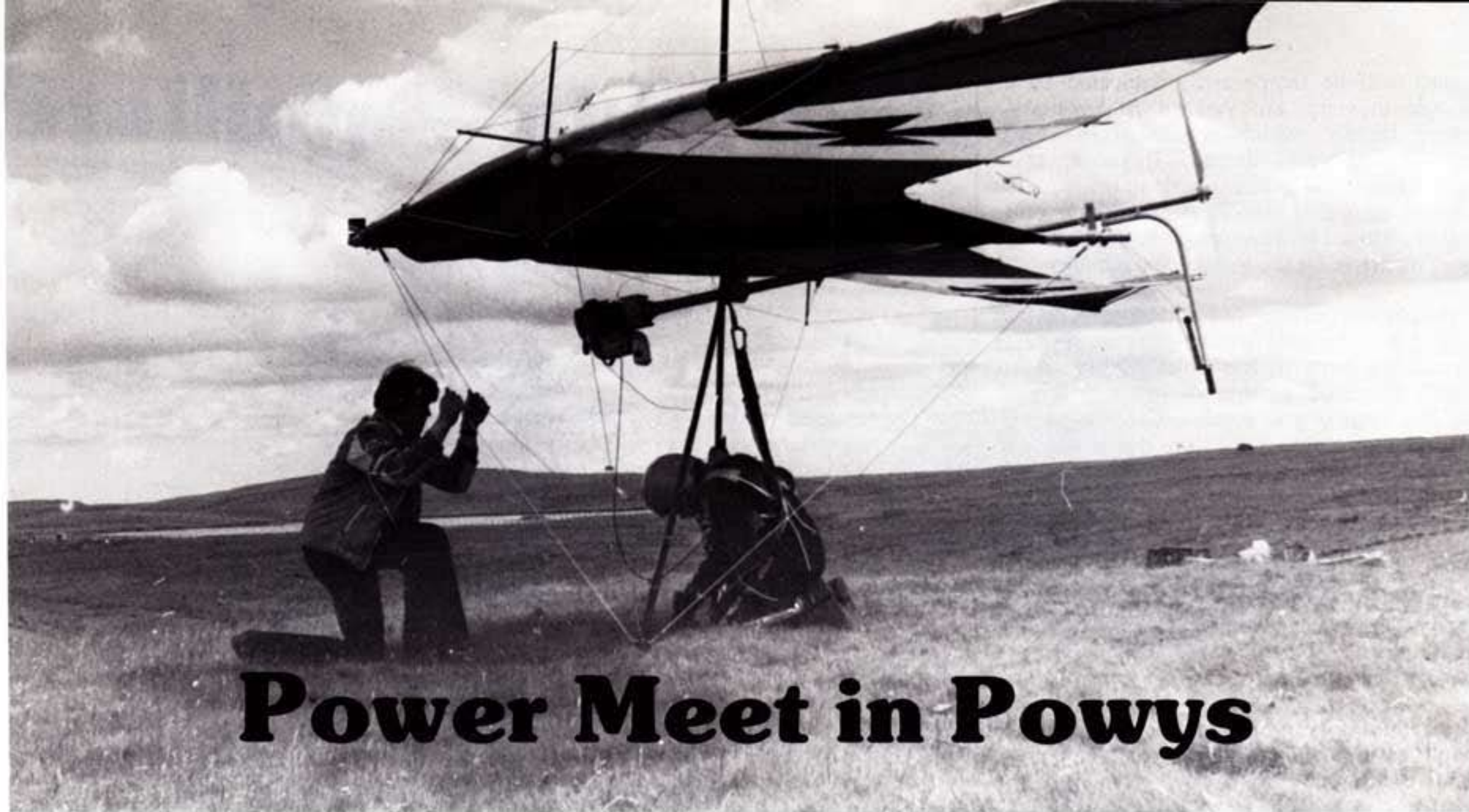


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Power Meet in Powys

Crickhowell was the venue for the first meet of the British powered Hang Gliding Club over the weekend of 28th and 29th October. Despite the short notice the turn out was encouraging.

Len Gabriels and Murray Rose were sadly unrepresented and only the presence of Steve Hunt and Trevor Loxton saved the occasion from becoming a Soarmaster benefit day.

Saturday started with the inevitable demonstration by Gerry Breen of just what can be done with an Olympus/Soarmaster combination. At the top of Llangattack mountain the wind was very light and the site totally unsuitable for conventional hang gliding, being only a gentle north westerly slope, but conditions were ideal for power.

Steve Hunt rigged his Superscorpion/McCulloch combination complete with full instrumentation but unfortunately lost a flange off the back of the main drive pulley which resulted in the toothed rubber belt doing a good imitation of an over worked India Rubber. Having solved this problem, the electricians then developed a mind of their own and lack of available spares resulted in Steve remaining earth bound for the rest of the week-end. Much interest was expressed in Steve's mid-shaft mounted fuel tank which goes a long way towards solving the fire in the air problem but does add the potential problem of C of G

changes as fuel is consumed.

Lunchtime approached, and as the car convoy set off for the "Tunnell" on Merthyr Common, Tim Bowyer left into Gerry's Oly/Soarmaster and dropped in to the car park to order the first round of drinks.

The afternoon was spent on Merthyr Common in a light south westerly which was generally agreed to be unflappable for conventional kites except in skilled hands. John Long had arrived earlier with his Midas and much-modified Soarmaster. Of particular interest was John's elaborate silencer and king-post mounted fuel tank. In spite of exhortations by many of the spectators John resisted the temptation to demonstrate the superior noise qualities of his motor.

Brian Harrison duly arrived and proceeded to rig the "Red Baron" (complete with block crosser). Jim Potts clipped into the Cirrus V/Soarmaster and set off in hot pursuit of Gerry Breen for Crickhowell, a cross country of some ten to fifteen miles. Jim ran out of fuel on the way, a fate that also befell Trevor Caxton's Midas/Wayfarer, an incident that necessitated a long climb back to the road through thick fern covered country. No-one has yet fitted a fuel gauge but it may not be a bad idea!

Saturday night and Sunday morning consisted of some hard talking in establishing the British

Powered Hang Gliding Club but by 11.30, after many protestations to avoid the political bickering that appears to plague the B.H.G.A., we had ourselves a club and set off for the hills again.

The light south westerly dictated a visit to sunny Sirhowy heights and before long four powered kites were being rigged. Gerry gave a warm-up display on the Oly and then, after the customary power failure on my Cirrus 5/Soarmaster, Ashley Doubtfire was launched off on the kite to refresh his memory on what powered flying was all about.

With Ashley, Jim Potts and Chris Anthony all in the air at the same time it was soon apparent that the Soarmaster tune pipes would have to be improved upon to reduce the deafening level of decibels. The local residents justifiably complained and a cross country to Llangattock mountain was quickly organised. Dick Scates was the first away, flying supine with a home made 'B' bar on his Phoenix Junior 8/Soarmaster. After Gerry and Jim Potts had joined him it was more "same way, same day" than formation flying but they all made the rendezvous in spite of Dick imitating a porpoise most of the way. Ashley followed shortly afterwards but diverted due to low cloud and ended up 2,000 ft over Crickhowell where he eventually landed next to the Welsh Hang Gliding Centre.

Meanwhile, back on the mountain top, Trevor Loxton was drawing a lot of interest with his Wayfarer. In particular the degree of noise suppression was impressive but John Bamber's extended low climbout stimulated speculation. Was it under-powered, under-tuned or was the propeller too coarse? The variation in propeller types displayed over the week was truly remarkable and is obviously a wide open area for research.

What we have learnt from the weekend:

(a) powered hang gliding generates a new horizon of enthusiasm in both participants and spectators alike; (2) noise levels must be reduced and this field of research is the one with the highest priority; (3) Soarmaster Rules O.K. The configuration is right, it's enviably simple, and it works. We wiped out the opposition with our kites at the American Cup — we must get it together to develop a cheap, reliable, practical and *quiet* motor in the U.K. (4) The relatively carefree attitude of the conventional hang glider pilot must be tempered by an awareness of the restrictions of the Air Navigation Order; and (5) the questions and legion, those willing to answer them numerous, the answers themselves must be defined without delay.

Jonny Seccombe

My Accident and Others

BY TONY FUELL

In the very early days of hang gliding, John James published a newsletter called 'Flypaper'. A couple of weekends ago the weather was totally unflyable and so, by way of compensation, I got out all my old back numbers and went on a reading binge. Two things in particular caught my attention. One was an article by Nick Regan about the Selsey Birdman competition which ended with the words "painfully penned by . . .". The other was a short article from Bill Lehan in which he said, "having an accident is personal, very painful, and not at all funny".

Quite a coincidence really, since this article is "painfully penned" and I now know from bitter experience that Bill Lehan was absolutely and totally right. I'm writing this flat out in Eastbourne Hospital. It hurts every time I turn over. I've got to lie flat on my back for three weeks. I can't sit up, or move, or go to the loo, except in a plastic utensil. When I get out of here, I'll be strapped into a bloody great corset, and I won't be able to go flying for at least four or five months. And, with all that, I'm lucky. LUCKY, that is, by comparison with some of the other unfortunate souls who've had hang gliding accidents this year. As I write this, nine people have died in 1978, and at least two have lost the use of their legs. Having come close to being in that situation myself, let me tell you that it's something I wouldn't wish on my worst enemy, let alone any of my friends.

In the past, I've been as guilty as anybody else — someone thumps in, breaks a leg, or an arm, or something — give him first aid, call the ambulance, off to hospital with him, and back to the flying. The only way to go, right? But it's a bit different from the other side . . .

So, here's what happened to me. I had escaped from work for a day's flying at Beachy Head on a Tuesday. A perfect SSE day, blue sky, sun, wind 18-20 mph smack on the cliffs, six or seven hundred feet of glass-smooth lift there for the taking. Arch. One of the best day's flying I've had for months.

Anyway, come lunchtime, I went into the pub — one pint (only one!), a ploughman's lunch

and I left the glider on the grass outside. After lunch, conditions still looked good so I went out again to do some more flying.

At this point the mistakes started happening. Firstly — and this is a problem with all harnesses which have auxiliary parachute packs — the weight of the 'chute makes it easier to take off the harness after each flight, rather than wear it all the time, like I used to do. This means that there is more opportunity to put it on wrongly and, like Murphy's Law says, if something *can* happen wrong, it *will* happen wrong.

So I started to put the harness on, and then I saw that my crash helmet had rolled down the slope a bit, and went to get it. Then Eddie came up to me to talk about parachutes. And I picked up the glider and together we took it to the take off point. For those of you who don't know Beachy Head when the wind's on the cliff you take off in a bowl which leads you out the cliff edge, and provides you with lift without the normal cliff-edge take off problems.

Mistake number two happened then — no harness check. I'd had

several flights beforehand, I knew the harness was set right for my glider. So I just clipped in, Eddie held the front wires and I balanced the control bar on my shoulders in the strong wind, a method that I've used for three years (like Ian Trotter described in a recent Wings!)

WRONG, WRONG, WRONG! Sorry Ian, but that method is superficially attractive. It works well 99% of the time, but it is potentially **HIGHLY DANGEROUS**. The danger is, if you don't tighten the straps, you don't know that the harness will support you in the air. As I shouted, "Release", and started my take off, the harness pulled up right over my face. I had *forgotten to put my legs through the leg straps* and I was sliding backwards out of my prone harness. I couldn't get to the stirrup — it was up past my waist. I had let go of the control bar and I was only held in by my arms, and the friction of my anorak on the elastic straps across my back. Looking down in panic, I could see that I was already twenty feet above the take off point. In the strong wind, the glider had

risen vertically above the take off. All this, of course had taken about a second or so.

I took the only action I could — I couldn't let go at that height. As I slid further down, I abandoned all hope of controlling the kite, and tried to climb back up the harness. I was able to get back through and get one hand to the control bar my left hand. As soon as I pulled myself up further the kite turned sharply left and impacted on the slope at the top of the bowl. I could see it coming and concentrated all my training into making a good fall — relax the limbs, tense the body muscles.

I'll spare you the subsequent agonies — I knew my back was hurt as soon as I hit but, after two or three minutes, it dawned on me that I could still move my feet and that my spinal cord must therefore be OK. In fact I've cracked a lumbar vertebra and my spinal discs are a bit of a mess, too. But nothing that time won't fix, fortunately, and considering that I went in from thirty feet or so at about 40 mph, not as bad as it could have been.

Apart from the total em-

FATAL ACCIDENTS SINCE SEPTEMBER 1978

Date	Place	Pilot	Glider	Description
12.9.78	Merthyr Common	John Humphreys (Neath)	Wasp Falcon IV	2nd prone flight after 20 mins. soaring, pilot approached for a top landing, doing a 360 in the process. On the downwind leg, he was seen to push out. The glider stalled, impacted and the pilot suffered fatal head plus neck injuries. Accident attributed to pilot error.
13.9.78	Milk Hill	Robert Phillips (Reading)	Wasp Falcon III	This experienced pilot stalled shortly after take off, and turned back into hill, suffering fatal injuries to head and neck. Accident attributed to pilot error.
23.9.78	Stanage Edge, Derbyshire	Tim Gilbert	Manta Fledgling	Immediately after take off the pilot was seen to have problems getting into the stirrup. He turned along the ridge, and drifted in close enough to catch a tip on the hill — it is possible that the pilot allowed a mild stall to develop which might have made a quick turn away from the hill more difficult. The glider had been modified, but this is not thought to be a factor. As a result of the accident, the pilot received injuries from which he died ten days later.
1.10.78	Tredegar	John Randall (Luton)	Chargus Midas Super E.	This inexperienced (4 months) pilot took off in gusty, turbulent high wind conditions having been advised against it. He was seen to execute several whipstalls of increasing severity following which the glider inverted, breaking both leading edges and falling to the ground. The pilot was dead on arrival at hospital — multiple injuries. Accident attributed to pilot error.

barassment of one of the BHGA's Accident Investigation people having his own accident, the actual and implied I-told-you-so's of family and friends, and the inconvenience of being off work for an extended period, what can I learn from this accident that I can share with you?

I've been a fairly cautious and (I hope) competent flyer, for 4½ years now. I make no excuses for suffering from the 'it-can't-happen-to-me' syndrome. If I thought that what has happened to me

would've happened, I'd never have gone flying in the first place — I'm no masochist! But I was guilty of two cardinal sins:—

(a) *Inadequate pre-flight checks.* Your checks should be done EVERY time you fly. Never mind that you've been on the hill all day — approach each flight as if it's your first. Check your harness each time, too.

(b) *Don't get distracted.* When you're going to fly, concentrate on that and that alone. Save the conversation for afterwards. If

you see a pilot doing his pre-flight, leave him alone. Involved as I am in BHGA and Club affairs, I do tend to get talked to a lot on the hill. John Hunter, who is probably a lot more safety minded than me, has packed up flying on more than one occasion because of people talking to him (and sometimes physically hassling him) when he was out for an afternoon's flying. Anyone who's involved in Club or Council affairs has to watch this. You can't ignore the fact that Club

and BHGA officers do tend to have accidents more often than you might expect from flyers of their experience — this might be one explanation.

But I've had my accident, and survived. It's now my melancholy duty to present to you no less than FOUR fatal accident reports. My apologies for the delay in getting these into WINGS! I'd got the report almost finished when I thumped in myself, thereby delaying getting it finished.

The 'Nationwide' Crash

Luckiest Man Alive, says Angela Rippon.

"Maybe it was Nature's way of telling me to slow down," says Milton.

It's not evident on the Nationwide film, but I tucked BLUE-BIRD after a gust-induced stall, by forgetting to take the power off and reacting like a classical hang glider pilot. The tuck would have happened whatever the glider, so long as power was kept on. When upside down, the leading edges went, and I fell in a sort of controlled descent to the ground. From that height, my impact speed should have been 72 mph. It was less than half that on impact, into a newly-ploughed field. Thus, I survived.

I want to emphasize the reason for the tuck because of scurrilous stories originating from one source claiming the Safari is "divergent". That's cods. Making comments like that on the basis of a glimpse of TV film, while being typical of this source, is just ignorant. My accident occurred because I had not the experience of

turbulence, with power, to know I had to "ride" it carefully, otherwise — as happened — when I was hit by a piece of turbulent air, the power could tip the glider over.

If I stood down now, I know of two pilots who would immediately take my place on Len's machine. I find flying Safaris is a delight, both for performance and handling. With power, it remains a delight. But with any flex-wing, combined with power, there's always got to be caution when you hit turbulence. I learned the hard way, but I object fiercely to my lesson being used to put the boot into Len's hang gliders. So forget about rumours on how my accident happened. No flex-wing in the world, turned upside down, will carry on flying. The wings of all flex-wings will go when upside down and with power applied. I'm extremely glad Len's machines are so well built that enough of the frame survives an inversion to lower me safely to the ground.

Brian Milton
St. Albans.

Enclosed are photos showing load testing as done on a medium Safari which was the type shown crashing on "Nationwide".

A surprising number of people thought that the film showed a glider flying along normally and that it just broke up in straight and level flight.

This was not so, and there is no way this would be likely to happen. The Safari is BHGA approved, the prototype has been flown week in week out since it was built two years ago, often in weather which was bad enough to cause most fliers to stay on the ground, without the slightest sign of structural or divergency problems.

Structural load tests were taken to the point where it carried 1316 lbs. (positive) and 975 lbs. (negative) without permanent deformation or structural failure of any kind.

This represented 6.7 and 5 g's respectively due to severe gusting, and the engine should

have been cut at that point or before. It was not and in the resulting power dive the glider easily overtook Brian within a very short distance and then tucked.

The B.B.C. film shows that structural failure occurred when Brian fell into the inverted glider and not before.

Whilst this accident will make us think about ways of preventing a recurrence, we feel sure that it will always be necessary to avoid power stalls and flying in strong turbulent winds in the lee side of adjacent hills. The engine enabled this glider to get into a situation where it could not otherwise have been.

This was a powered hang glider accident not a hang glider accident. The glider/engine combination was a "one off" development job and is not on sale to the ordinary flier.

Len Gabriels,
Skyhook Sailwings Ltd.



From One Freedom to Another

An insight into powered hang gliding
from
Ashley Doubtfire

One gets big moments all through the line in hang gliding – the first solo – the first soaring flight – the first top landing – all amazing experiences! – Quite enough to keep one talking and thinking and comparing notes with others for a long time afterwards. The greatest feeling of all has got to be thermal flying: to leave Coombe Gibbet hill nine or ten miles away by doing one never-ending 360 made me totally insufferable at Birdman for at least a fortnight!

After a long involvement with the sport – on the hill most days of the week for over four years – flying all sorts of machines and teaching all sorts of people to fly, I ought to be fairly committed as a hang glider pilot. I am. But I've got to admit it . . . I'm pretty impressed with powered hang gliding.

A different sort of freedom

A lot of people have asked me what my first flight at Perran Sands felt like. My answers always reflected a fair amount of enthusiasm – but always with the final comment – “A lovely view for the price of an ‘orrible noise!’” It wasn't until the Crickhowell Meet that the penny dropped and I decided that the noise – if only from the pilot's point of view could be a sacrifice worth flying with. Let me tell you why by going back to Perran Sands in May.

It's a cliff/dune site in Cornwall. A lot of us were down there flying in a competition. When Steve Hunt of Hiway helped me off one evening on his Super Scorpion/McCulloch combination there was just about enough wind to soar (plenty to scratch!). I was taking off, therefore as per conventional hang glider – but with a bit more of a run. The urgency of getting all this weight moving and airborne reminded me of flying dual. The engine was idling and I opened up once I had 200ft of air safely below me – in other words 4ft from the cliff edge.

The experience was psychologically akin to hang gliding – for two reasons. Firstly the site created a typical hang gliding situation: although I was able to climb many times higher than the top of the lift band with the fuel I had at my disposal, I had still taken off from a cliff and I was going to be landing back on top of the cliff. Secondly and most important, I had there a new freedom – the ability to fly without using localised ridge lift, and four years of hang gliding was telling me that you just can't do that!

I caught myself gently tracking around in a fairly “sensible” area for lift off the cliffs which were about 900ft. below. Remember there was hardly any wind! Old habits die hard!

The breakthrough

Sirhowy, near Tredegar on the Sunday of the Inaugural Meet was a different story.

The site dictated it. It's a long short from a soaring site – just a grass covered slag heap of about 40ft. To give you some idea of the gradient, Gerry Breen and I used to see how many beats we could do before having to land and that used to be in a 25 knot wind.

Today there was a mere hint of 4 or 5 mph. Jonny Seccombe lent me his Cirrus 5/Soarmaster combination as my unit had not yet arrived from Len Gabriels owing to the latter's American visit. Jonny warned me that it was prone to cut-outs in mid-flight. Also while Steve's machine at Perran Sands had a twist-grip throttle on the control bar as per motor-cycle, the Soarmaster has a mouth throttle. After one dash and leap down the training slope, a grab for the throttle, a short climb and immediate engine cut, I walked it up for another go.

Brian Harrison of Scot-Kites (quote: I've GOO-ta-GET-a-PHOOTA-of-THIS!) and a couple of others got the mixture right and this time I dared myself to hold the throttle control in my mouth. Imagine: the wind very light, the slope very, very shallow and the glider very, very heavy and I wasn't allowed to clench my teeth! To open up too early or too much gets the glider overtaking you or worse still nosing in – bad enough in conventional hang gliding terms, but very bad news with a heavy, throbbing wild thing two inches above your helmet and a rotating scythe behind your legs.

She lifted off like a dream. So I climbed until I had enough height to try a circuit. One has to make a circuit at Sirhowy – a certain factory in one's flight path dictates it! (Suggested Ed. the new Hiway factory!) Two circuits and three 360's later I flew a downwind and base leg to line up on a clear space behind the take-off area. It was fun using the power to adjust height on the approach.

When I walked it over to Jonny and Brian H. (gleaming with his camera) all the talk was about flying cross country to Llangattock mountain, 4 miles away. Gerry was just about to take off, Dick Scates and Jimmy Potts were already airborne so Jonny said, “See you there” and climbed into his car. Five minutes later I realised that I had a practically empty tank.

Thank God for Dick Scate's fuel can which I noticed sitting on the ground complete with funnel. (I haven't told him yet!) This time I tried a flat ground take off – still about 4 mph – Epic. Turning downwind I couldn't see the others. They were obviously following Gerry who has done the trip before. I know the area well, but may I warn you – things look very different from the air. The A465 may be the Heads of the Valleys road but it doesn't

look like that from up there. By the time I got past Ebbw Vale and was heading over to Llangattock there was a lot of low cloud obscuring the mountain and I realised I would have to alter course to a heading more into wind to maintain my true track towards the check-point which was our rendezvous. I was probably getting low on fuel, the mountain had only one road which I had missed and the wind was blowing down Llangattock escarpment which itself is 1000ft above the valley floor. Not a good place to fly and not a good place to have to force a landing through running out of fuel! So I carried on down the familiar valley to Crickhowell leaving the cloud and the escarpment on my left. I remember flying around downwind of the escarpment debating for a few seconds whether to try an upwind leg round the other side of the mountain. I noticed the local School land-rover and kite-trailer which had stopped on its way down to Crickhowell. One guy was skate-boarding. On asking him later if he heard me above him he said he'd never known I was there! and I was on full power!

I idled the engine from 1700ft above Crickhowell and 360'd down to land near the river. I'm pretty sure nobody noticed me landing: the instructor and students having tea at the Welsh Hang Gliding Centre (I was soon to join them) certainly didn't and they were only 100 yards away.

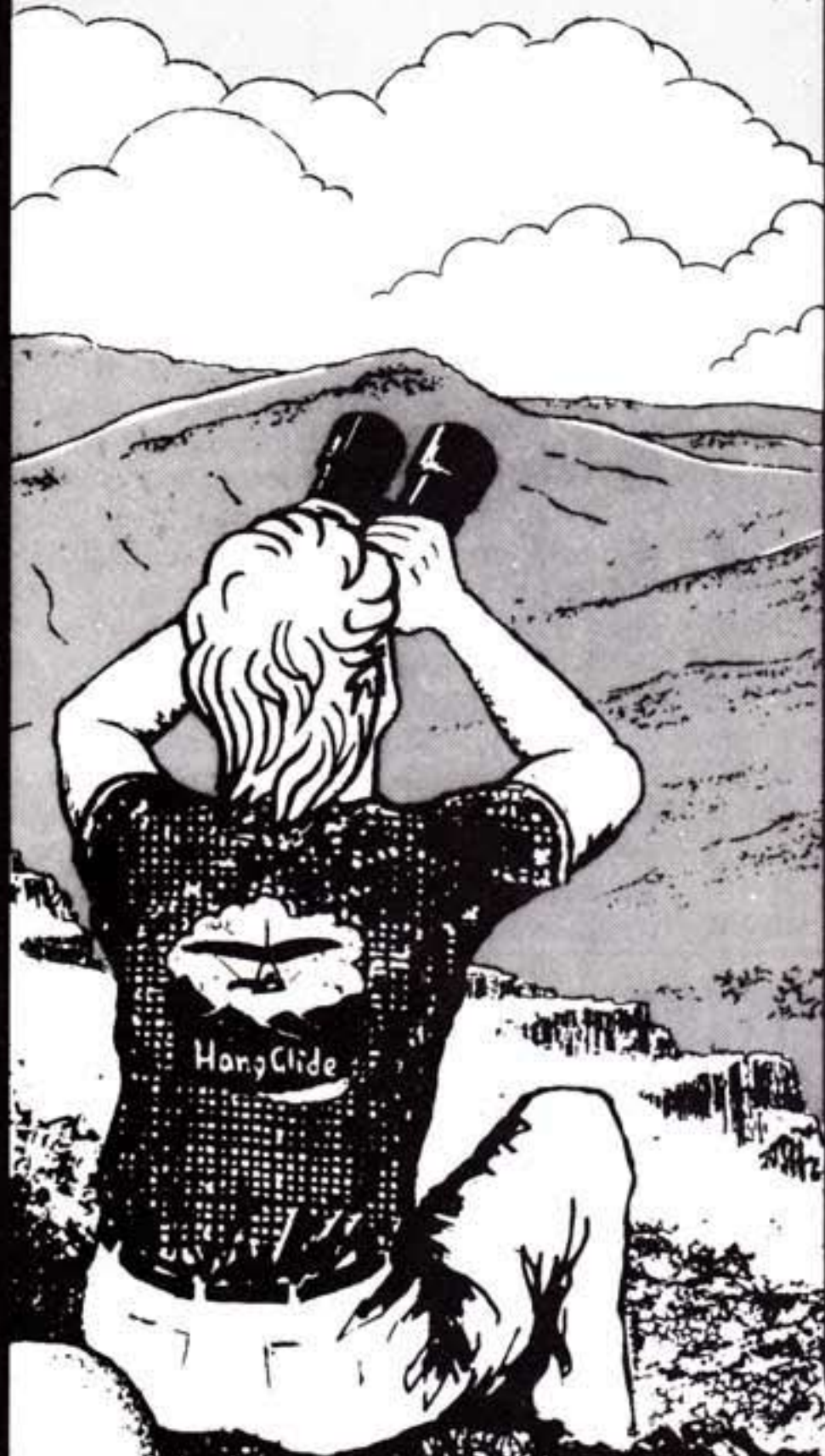
More thoughts

NOISE. Obviously (too obviously!) the biggest technical challenge of the Club is to develop good silencers. A quieter powered hang glider will come and when it does problems with the public will be hugely reduced. There have to be no secrets here amongst manufacturers or flyers: the clear object is to get them quieter. It's a challenge we've got to meet. So anybody who has any ideas please, please contact Steve Hunt, Technical Officer of the Club, and he'll relay them to the others of us involved with development.

GYROSCOPIC PRECESSION. Last “WINGS” contained an extract warning pilots of the gyroscopic effects which produce pitch-yaw complexities. A useful way of illustrating this is to hold a bicycle wheel by the axle as if your arms were the front forks. Ask someone to spin the wheel for you and now try turning the wheel – pushing with one hand and pulling with the other. You'll immediately find that there's an incredibly strong force trying to move the wheel at right-angles to the axle. Translated into a hang glider it means that with a clockwise rotating prop, when you pitch the nose

Continued from Page 35

LOOKING FOR A WINNER?



AMERICAN CUP SUCCESS

HEAT NO 1 - SPEED

1st	GB	- G HOBSON	- SKYHOOK SAFARI	- 2 min 9 sec
2nd	CAN	- A Starkey	- Seagull 10m	- 2 min 42 sec
3rd	USA	- G Pollack	- Oly 180	- 2 min 46 sec

HEAT NO 2 - SPEED

1st	GB	- G HOBSON	- SKYHOOK SAFARI	- 2 min 45 sec
2nd	CAN	- W Walker	- Oly 180	- 3 min 13 sec
3rd	USA	- D Rodreguez	Moyes Maxi (US Masters Champ)	3 min 22 sec

HEAT NO 3 - OPTIMUM TIME 15 MINUTES

1st	GB	- G HOBSON	- SKYHOOK SAFARI	- 3 sec dev.
2nd	USA	- S Dever	- Moyes Maxi	- 52 sec dev.
3rd	CAN	- J Duthie	- Lancer 4	- 1 min 47 sec

HEAT NO 4 - OPTIMUM TIME 5 MINUTES

1st	GB	- G HOBSON	- SKYHOOK SAFARI	- 2 sec dev.
2nd	USA	- M Jones	Sirocco 2 (Moab Champion)	- 54 sec dev.
3rd	CAN	- D Chernoff	Phoenix 8	- 1 min 5 sec

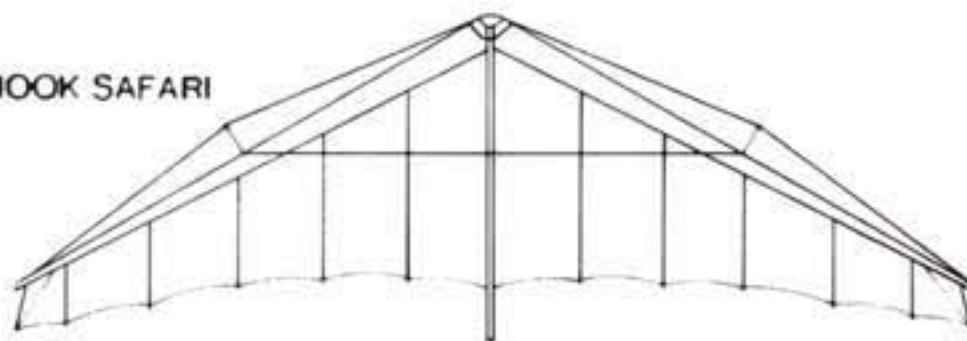
HEAT NO 5 - SPEED

1st	GB	- G HOBSON	- SKYHOOK SAFARI	- 2 min 7 sec
2nd	USA	- G Pollack	- Oly 180	- 2 min 21 sec
3rd	CAN	- A Starkey	- Seagull 10m	- 2 min 29 sec

HEAT NO 6 - SINK RATE

1st	GB	- G HOBSON	- SKYHOOK SAFARI	- 8 min 1 sec
2nd	USA	- D Rodreguez	Moyes Maxi	- 5 min 4 sec
3rd	CAN	- W Walker	- Oly 180	- 4 min 44 sec

THE SKYHOOK SAFARI



SAFARI! Over 18 months of intensive flying of the prototype Safari proved to us that we had a winner, and it is now in production. For light winds the medium Safari has an excellent min sink performance. It also has the penetration for strong winds and positive, predictable handling with immediate response which is so necessary for all kinds of flying.

Glide angle at speed is good. The reflexed preformed battens in every seam make the whole wing pitch positive without the need for locked up tips etc. Vertical dive recovery is positive.

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SET YOUR SIGHTS ON SAFARI

American Cup Report

by Brian Milton

Origins

I met photographer Bettina Gray at the 1977 Scottish Open at Minto. Bettina is a small blonde Californian lady with a twinkle in her eye and lots of energy and four cameras strung all over her. A tremendous charge went through all the British fliers when we heard Bettina was on the hill; maybe we'd appear in *Ground-skimmer* or *Glider Rider*, alongside the names of all the American legends we'd read about. Bettina also turned up at the British Open at Mere, and introduced me by phone to the *Glider Rider* publisher, Tracy Knauss.

During that winter, we talked occasionally on the phone. Tracy had bought a third share in a field in Tennessee, with Bill Bennett and Larry Newman; their company was called Air Space Park and it also owned a take-off ramp. Tracy wanted events to promote. During one conversation about the British National League I said I thought British pilots were very good but I didn't know *how* good. Most of them wanted to fly against the Americans. Our machines had also advanced a great deal and were now comparable with American kites. Tracy phoned back four days later and said he'd be willing to run an Anglo-American challenge match in which the whole British way of flying, pilots and kites, in a team, would take on the Americans. We agreed to call it the America's Cup, later the American Cup. I signed a challenge and all we had to do this year was find out if I'd been talking with a mouthful of foot.

The League

The key to the challenge, as far as I was concerned, was the National League. Watching people like Brian Wood, Bob Calvert, Bob Bailey, Lester Cruse, Johnny Carr, Graham Slater and at least a dozen others I couldn't conceive of fliers anywhere just walking into competition and thrashing them. I thought maybe Steve Moyes, maybe John Ogden or Phil Matthewson, would really be tough competition but in a *team* competition we really had strength in depth and the League was showing it up. I had hoped this year's League would be blessed with better weather than 1977 so that one could rake the best off the top for the American Cup. But as we learned more about how competition affected pilots — and became sophisticated, not just about raw flying skills, but temperament, commitment, the effect of one flier on the rest of the team — it became obvious that straightforward scores were not enough in team choosing.

As I said elsewhere, this year's League wasn't ideal. One was totally blown out, while some of the others were affected disproportionately by the weather. The fairest competitions were those at the Southern

Club (won by Lester), and the Atlas Final, (won by Bob Bailey). However, underlying the raw scores of the competitions I know the competitions committee was forming its own opinions about the commitment of pilots, how they coped with setbacks, whether they went to pieces under pressure or just kept pushing. That matters a lot when teams are picked. If one pilot hit bad luck and had a bad score we knew about the luck and made allowances for it. What we watched, though, was how *he* coped with it. International Teams

Three teams were sent abroad this year before the American Cup. The first was to Grouse Mountain backed either by individual manufacturers or sponsors or the pilots themselves paid. Bob Calvert was backed by Hiway, Johnny Carr by Birdman, and Brian Wood by Roy Beckett's Metropolitan Canister Company. Bob Bailey and Graham Slater paid their own way. This was the first time British pilots were matched with Americans and Canadians on *their* ground. It was a chance to compare skills and I'm deeply indebted to Hiway, Birdman and Metro for their help. Waspair sent out Keith Reynolds, backed by Barry Bourne (who became unofficial British team manager and was deemed invaluable by the other British pilots) and these six flew against nine of their subsequent opponents in the American Cup. Brian Wood and Graham Slater made the final at Grouse Mountain; Graham ended in 11th place, just out of the prize money, and Brian at 18th place. Bob Calvert was 34th, Johnny Carr 38th, Keith Reynolds 40th, and Bob Bailey 49th. Of the people they would subsequently meet, Randy Rouck was 4th, John Duthie 3rd, Sean Dever, 6th, Rich Grigsby 19th, Andrew Barber-Starkey 28th, Larry Croome 36th, Randy Cairns 39th, Dave Chernoff 68th and Dean Kupchanko withdrew. But, talking to the team after they returned, it was apparent that they'd done well in the *flying*; it was the target that lost them marks. Bob Calvert, for example, won five of his six one-on-one sink rate tasks, but missed the final and ended at 34th place.

The pilots themselves felt that certain American fliers would be very tough to fly against. On the other hand, with a weak USHGA and no League system, how could the Americans choose these fliers? Haggard, Price, Tudor and Greblo were all highly rated (amongst others). Yet the Americans would ultimately choose their team on on-off competitions; 1st and 2nd from the Nationals, plus the top three from the Moab World Invitationals, and the US Masters. These were decided on five, six or seven flights, and luck could play its part.

The second competition we sent British pilots to, which was eventually blown out,

was the Bleriot Cup in France. We reached further down the League for team members, seeing it as a test. The Kossen team was known by then and we wanted to see how other fliers would do. The team was Trevor Birkbeck (Capt.), David Squires (Manager), Mick Maher, Mick Evans, Lester Cruse, Geof Snape, Graham Hobson, Paul Baker, John Fack, Jeremy Fack, Bob England, Robert Close-Smith, and Jan Ketelaar. Bob England couldn't make it at the last moment so Keith Cockroft, who was going out anyway, stood in for him. In the free flying it was found the British were topping anything put up by the French and despite the blow-out we felt confident we would have won.

This was a BHGA-sponsored team, costing nearly £1,300 and it was done on the cheap. The Bleriot Team was a poor relation compared to the Kossen and American Cup teams. We learned a lot about what costs would come up and how a team should be supported.

Roy Hill has written about Europe. We spent nearly £4,000 on the team and sent two managers, Roy and Chris Johnson. No team prize was awarded which is sad — the British felt they would have taken the European team championships, as well as individual silver medals picked up by Bob England and Mick Evans, and Johnny Carr's fourth place. Again, one of the future American Cup opponents was in Europe. Rich Grigsby, at 86th position, was beaten by all the British team. Europe, in a way, was confirmation that the Americans could be beaten although we were all getting wound up about taking them on with *their* rules, in *their* territory.

American Team Selection

Because of the original nature of the bet with Tracy — *our* way of flying against *theirs* — the competitions committee felt back in January that the British team going to Chattanooga would be strongly biased towards those flying British kites. As the months went by there was occasional agonised discussion on this point. The Kossen team chose their own kites, regardless of where they were made, but the committee meeting at Hawes during the fourth league competition debated the subject head-on. Should we go for broke in the USA and all the British fliers take British kites? By a vote of 5–2, after a lot of heart-searching, the answer was yes. We believed then that the Americans would be on American machines, which didn't turn out to be true. By the time we found out, we felt committed anyway; why not go out there, fly British, so that if we won no one anywhere in the world could take the victory from us? The British-kite decision had a bearing on who went to the USA.

An American Cup squad of 16 (from whom the final squad of 10 would be picked) had been selected before Kossen. Later, in the USA, the actual competition team of 8 would emerge. We didn't want to select the 8, and name reserves, before knowing what the USA had in mind for competition. The squad of 16 included the whole Kossen team, plus Mick Maher (the Kossen reserve) the Fack brothers – who couldn't fly for Britain in an FAI competition because they had once flown for Holland – and Graham Hobson, who had done well in 1977, poorly at the beginning of this year, and had just won the competition at Hawes. He had also done well in Bleriot. Five of the squad of 16 normally flew foreign kites. Some of them weren't very happy at the fly-British decision, even when the reason was explained.

In the actual choice of the ten to go, team managers played a big part. How did so-and-so do in such-and-such a situation? How did he take losing? What did he contribute to the team? Johnny Carr couldn't afford the time for America, so he was dropped from discussion. Graham Slater, another committee member, left the meeting while his performance was discussed. Each of the 16 was discussed by each committee member, and at the end there was a "weighted" vote, each of us naming the team we thought best. In all, 13 names were put forward but the team chosen got through easily any way the votes were counted, either "weighted" or straight vote. The 10 who went were Keith Reynolds, Graham Slater, Mick Maher, Mick Evans, Bob Calvert, Bob Bailey, Bob England, John and Jeremy Fack, and Graham Hobson.

Organisation

Much earlier in the year John Hudson had started work to actually get the team, and a British contingent, out to the USA. He had sweated over the job and it was expected that, when the time came, he'd go out as one of the managers. He was going any way with his wife Eileen, but in September he said he thought he wouldn't do justice to the team and could he step down from the official job. Nevertheless, he made all the arrangements to get 39 of us, with 31 kites, safely out there and back again with no losses and we owe a lot of energy which would otherwise have been taken up on details of travelling to John Hudson's marvellous work.

Derek Evans, BHGA Treasurer, has been the lynchpin behind all the financial organisation of teams abroad this year, aside from a mountain of normal BHGA work. He was the League Appeals chairman, and beating the Americans became as much an obsession to him as to me. Derek did all the detailed work on uniforms, flying suits, badges, tee-shirts, hundreds of details which I am no good at dealing with and Derek (and his wife Audrey) is magic at. All the finances were handled by Derek, and it's a measure of his competence that at no time did we feel restricted by money.

I felt, myself, that I should go, and then for a while, I thought – like John – that

someone else would make a better job. I'd been particularly impressed with Roy and Chris at Kossen – by every report, they had been superb, and I didn't think I could match their work. We brought in Keith Cockroft, as coach, in place of John (Keith was also going anyway, paying his own way, until selected). If Derek looked after the detailed team arrangements, and Keith the actual coaching, there looked like a job for me in the politics end scoring – and as it turned out, we were right.

Finance

It's a working principle of the competitions committee to finance all competitions and teams *without using membership dues*. Some of the BHGA membership are positively antagonistic to competition and many others couldn't care less about it. The whole of the 1977 League was financed by the League pilots themselves, as was the 1978 League. That meant, bluntly, the League wasn't financially vulnerable if ever a Council was elected that took a strong stand against competition. That isn't the way the majority on Council feel at the moment but it always is a possibility.

Likewise, with international teams, we set out to find independent finance, but to do so we needed "front money". If we asked sponsors for money, they would reply, "How much are you putting up yourself?" BHGA Council provided £2,000 to the competition "float" The Sports Council has funds for overseas competition – and money from that fund is only for that purpose and no other. By forward budgeting Derek Evans and I managed to get backing of £4,579. As soon as they were appointed managers, Roy and Chris threw their energy into organising a draw for funds, although again it was Derek who did all the detailed work. That raised about £2,000, and another draw for the American Cup raised £1,500. Borrowing from Peter to pay Paul, and with sublime faith that something else would come up, we went ahead with the first two international teams, and Atlas Express arrived like a fairy goodmother to provide the final funding. The American Cup budget looked like a gigantic £7,500, and with Atlas, we could at last see the way through to independent competition financing. Winning the \$5,000 prize in Chattanooga would leave BHGA with a profit at the end of the year, which would be a relief.

American Cup Results											
	FLIGHT	1	2	3	4	5	6	7	8	9	PILOT'S TOTAL
CANADA	1 Kupchanko	10.25	9.00	5.75	7.00	5.50	7.50	9.00	5.25	7.00	66.25
	2 Croome	5.25	5.75	5.00	5.25	3.50	5.50	9.00	8.00	3.50	50.75
	3 Rouck	9.50	5.00	6.50	7.00	7.50	5.00	5.25	5.25	9.25	60.25
	4 Cairns	7.00	7.00	7.75	6.00	5.00	7.50	3.25	3.25	4.00	50.75
	5 Duthie	3.00	4.00	7.50	13.00	5.50	8.00	5.00	5.50	5.00	56.50
	6 Starkey	5.00	7.00	3.50	7.00	7.25	5.00	7.50	9.50	3.25	55.00
	7 Walker	7.00	7.00	9.25	5.75	9.25	7.00	7.00	8.00	5.25	65.50
	8 Chernoff	7.50	3.50	4.25	7.00	3.00	5.50	5.00	3.00	5.25	44.00
GREAT BRITAIN	1 Reynolds	4.00	5.50	5.00	4.00	3.25	3.00	3.50	3.50	7.00	38.75
	2 Fack	9.00	7.50	7.00	9.50	5.00	3.25	5.25	6.75	7.25	60.50
	3 Bailey	3.25	7.25	5.25	3.25	5.75	3.75	5.50	3.00	3.50	40.50
	4 Evans	4.00	3.50	3.25	8.00	3.50	6.25	3.50	7.00	5.00	44.00
	5 Calvert	5.25	7.00	5.00	3.00	3.25	7.00	3.25	5.00	3.50	42.25
	6 Hobson	3.25	4.00	3.25	3.75	3.50	3.75	7.25	5.25	6.00	40.00
	7 Maher	4.00	6.00	6.00	7.50	4.00	3.50	8.00	4.00	7.00	50.00
	8 Slater	3.00	5.25	3.00	3.50	4.50	4.00	3.25	3.25	3.00	32.75
JAPAN	1 Yamaziki	11.00	9.25	9.50	12.00	10.00	10.50	9.75	9.00	9.50	90.50
	2 Tadano	11.00	10.00	12.00	10.00	15.00	10.00	9.75	10.00	13.00	100.75
	3 Nishino	7.00	7.25	7.25	7.75	5.25	9.75	5.25	9.50	5.00	64.00
	4 Ono	10.00	9.50	9.50	10.00	7.25	13.00	8.00	11.00	7.25	85.50
	5 Naito	8.00	5.25	8.00	10.00	9.00	9.50	10.00	7.00	15.00	81.75
	6 Kawachi	15.00	9.25	8.00	6.00	10.00	10.00	10.00	9.25	15.00	92.50
	7 Kasufuku	13.00	13.00	13.00	9.25	8.00	12.00	11.00	10.00	15.00	104.25
	8 Yaegashi	13.00	10.00	15.00	13.00	13.00	11.00	10.00	12.00	10.00	107.00
UNITED STATES	1 Grigsby	3.00	3.00	7.00	3.25	5.00	7.00	7.00	7.00	3.25	45.50
	2 Huss	3.50	5.75	3.00	5.25	7.25	3.00	7.00	7.00	5.00	46.75
	3 Pagen	6.00	3.25	3.25	3.00	3.00	5.25	3.50	6.00	8.00	41.25
	4 Cocker	9.00	4.00	9.50	5.50	10.00	8.00	15.00	10.00	10.00	81.00
	5 Jones	10.00	3.25	6.00	5.50	5.75	5.25	6.50	11.00	7.25	60.50
	6 Pollack	7.50	7.50	9.00	7.50	5.00	5.00	3.25	3.25	7.00	55.00
	7 Dever	5.25	5.75	5.00	5.25	6.00	3.25	3.50	9.00	4.00	47.00
	8 Rodriguez	5.25	9.50	7.25	3.25	7.25	5.25	5.75	7.00	7.50	58.00
											449.00
											348.75
											726.25
											435.00

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America

Going out to America was like a dream. It was 2.30 am our time when we arrived, to be lined up against the wall for photographs, and then off to the hotel to look at the TV coverage of our arrival. We looked a bit flash on arrival, much to the relief of Tracy Knauss, and the press coverage that started the next morning stayed with us all the way through thanks to all the work Derek had put in on details. Next morning we got our 15-seat bus and flash estate car, plastered it with pre-printed posters like "UK PILOTS STAY UP LONGER" and "MAGIC BRITISH HANG GLIDING", picked up our kites and rushed off to Crystal Air Park for the first flights. That was 800 feet high, you went to the top by cable car. Trees had been cleared at take-off but there was a net to catch you if you nonked a take-off. One of the American fliers, Malcolm Jones, wondered why we were so excited. It's only 800 ft. high he said, "Surely you've got sites like that in England?". "Ah, but we're in America", we said.

Bob Calvert heard there was a ridge 100 miles long which had never been flown. All he wanted to do for training was get a new cross-country record. One day had been set aside for free flying during the training week. Tennessee has hills and ridges that stretch as far as the eye can see but they're all covered in trees and often inaccessible. Contrary to local belief there were hundreds of possible landing fields for a cross-country off Lookout Mountain, but for days the wind was in the south-east and we had to take our free flying day without the possibility of breaking the long distance record.

The whole British contingent flew Sequatchis Valley. It took hours to get there, led by the President of the U.S. Tree Toppers Club, Don Guess, a lovely fellow. We all stood on a ramp looking over 1600ft. of valley, and the wind at 90 degrees to the left. It was baking hot in the middle of October. Don Guess reckoned he could take just the British team by four-wheeled drive vehicles to a site nearby smack into wind. Three hours later having covered 14 miles by land and 3 miles in a straight line, those of the team who were not injured by whip-lashing trees and poking twigs were preparing to leap off a suicidal looking rock, surrounded by trees. John Fack had been poked in the eye by a twig, so badly he needed hospital treatment, and later became one of our reserves. No one nonked a take-off (not even me) and some of us caught thermals out over the valley before coming down. One flight was a day's flying.

Meanwhile, on the other ridge, John North had wound himself up looking at the ramp and finally rigged his Vector. "I can't stand it", he's reported to have told John Hudson, "I've just got to fly off that thing". In the end he did so followed by Len Gabriels, Mark Sylvester and other British fliers.

That was the only day we didn't train.

One on Four Competition

Position	Name		Glider	Penalty Points	1sts	2nds	3rds	4ths
1	G. Slater	GB	Superscorp	32.75*	8	1		
2	K. Reynolds	GB	Gryphon 3	38.75	7	2		
3	G. Hobson	GB	Safari	40.00	6	2	1	
4	R. Bailey	GB	Superscorp	40.40	5	3	1	
5	D. Pagen	USA	Sirocco II	41.25	6	2	1	
6	R. Calvert	GB	Superscorp	42.25	4	3	2	
7	M. Evans	GB	Gryphon 3	44.00	5	3	1	
	D. Chernoff	Can.	Phoenix 8	44.00	4	3	2	
9	R. Grigsby	USA	Seagull 10m	45.50	4	1	4	
10	B. Huss	USA	Moyes Maxi	46.75	3	3	3	
11	S. Dever	USA	Moyes Maxi	47.00	3	6		
12	M. Maher	GB	Gryphon 3	50.00	4	2	3	
13	L. Croome	Can.	Birdman MJ6	50.75	2	5	1	1
	R. Cairns	Can.	UP Condor	50.75	3	2	4	
15	A. B. Stark	Can.	Seagull 10m	55.00	2	2	4	1
	G. Pollack	USA	Olympus 180	55.00	2	2	4	1
17	J. Duthie	Can.	Lancer 4	56.50	2	4	2	1
18	D. Rodriguez	USA	Moyes Maxi	58.00	1	3	4	1
19	R. Rouck	Can.	Olympus 160	60.25		5	2	2
20	Jeremy Fack	GB	Superscorp	60.50	1	3	3	2
	M. Jones	USA	Sirocco II	60.50	1	5	1	2
22	M. Nishino	Jap.	Phoenix 12	64.00		3	4	2
23	W. Walker	Can.	Olympus 180	65.50		2	5	2
24	D. Kupchenko	Can.	Olympus 180	66.25		3	3	3
25	T. Cocker	USA	Phoenix 8	81.00	1	2	2	3

1 x disqualified

The remainder were Japanese

* "Perfection" is 27 points

Training

We were the first national team at the American Cup. As soon as the rules were published, all twelve pages of them, the whole team spent the morning analysing them word by word. There were three basic tasks: the first was speed plus 360's through a gate, then figures of 8, then a spot; the second was optimum time, say five, ten or fifteen minutes to go through a gate, plus figures of 8 and a spot; the third was a 20 mile race along a ridge and back again. But the rules were bizarre, they needed careful thought. The emphasis was on safety. For example a spot landing would give a pilot two penalty points, the best possible low score (all scoring was by penalty points . . . the more points you got, the worse off you were). But if you made an uncontrolled landing on the spot you lost 6 penalty points. All British pilots were therefore instructed to *forget the spot altogether*, and concentrate on making a perfect stand-up landing within the 400ft. diameter competition circle. Let others risk an uncontrolled landing trying for the spot. The real marks any way lay in the flying side of the competition.

Each flight consisted of 8 heats. Each heat involved one pilot from each of the countries involved; USA, Canada, Britain and Japan. The pilot first in his heat got one penalty point, if he came second he got 3 penalty points, third collected 5 penalty points, and fourth 7 penalty points.

All of this we understood because we were the only team to actually train using the competition rules. When the wind finally blew on Lookout Mountain, the

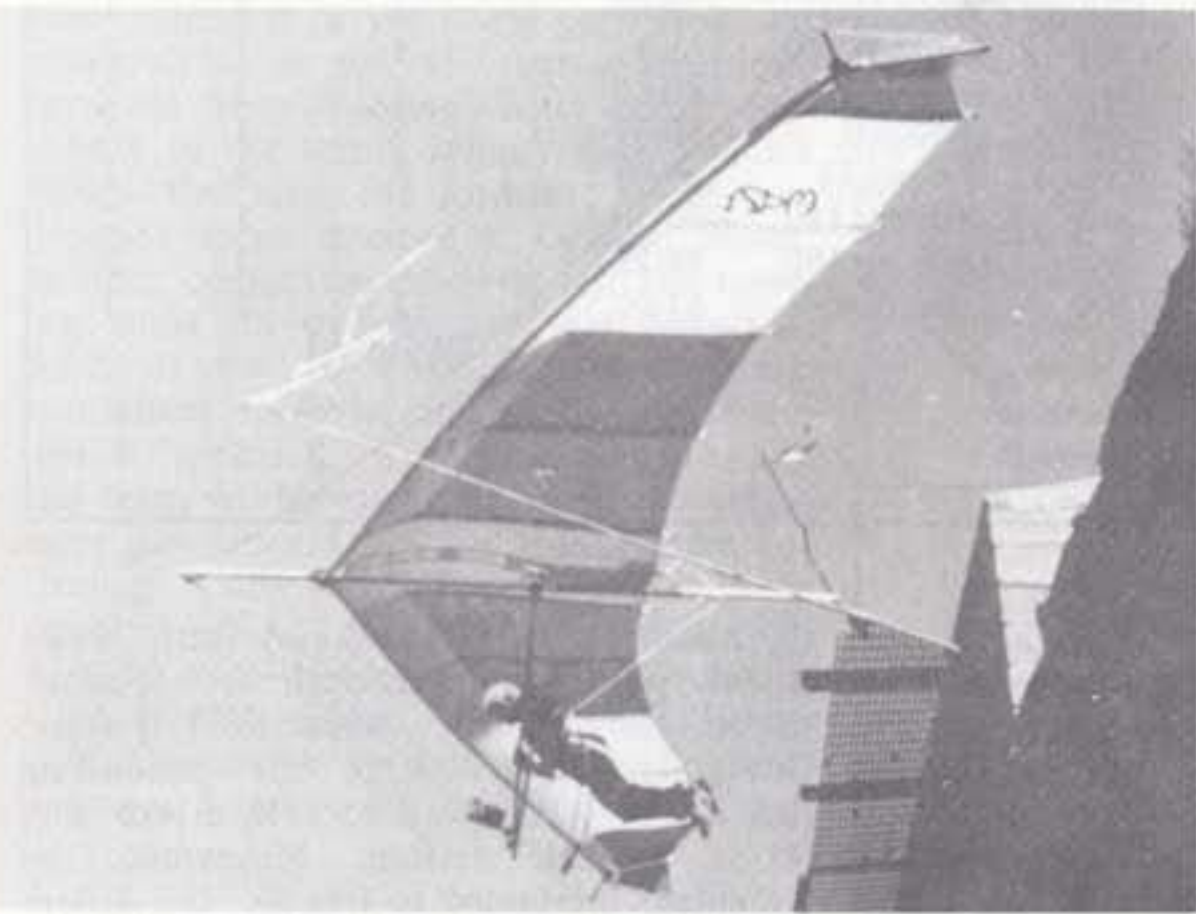
Canadian pilots were skying out, while British pilots went through each competition task until they understood it fully. Our pilots twice made the exhausting run to Point Park and back as a race, and learnt valuable lessons. Meanwhile the Canadians continued to free fly, the Americans turned up in ones and twos and the Japanese finally arrived two days before the competition began, all of them suffering from a 12 hour jet-lag.

Competition Strategy

On the advice of Derek Evans we played percentage hang-gliding. Keith kept the pilots informed at the top of the hill about the conditions in the landing area. He corrected any tendency towards "going for the spot". Most of the British pilots still had something in reserve which may come out in next year's American Cup. The scores for individual pilots are set out below together with their positions in the flying part of the tasks

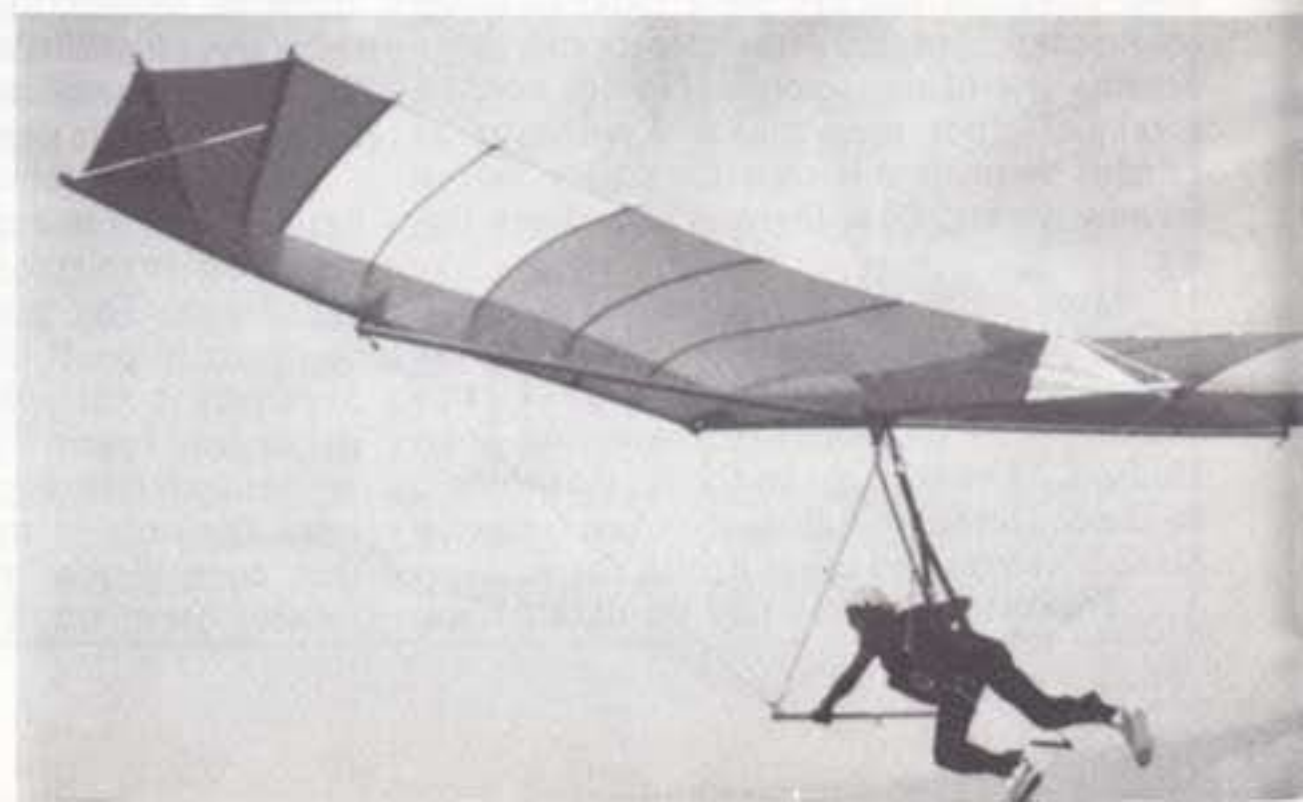
Landing Accuracy part of tests

	Landing accuracy	Landing style (stand up or fall over)
USA	104.25 penalty points	86.00
Can.	94.00	79.00
GB	104.75	77.00
	"Perfection" is 72 points	"Perfection" is 72 points



photos, except team photo, by RICHARD KENWARD

WE WON T





THE CUP!



Team Manager's Diary

BY DEREK EVANS

After what seemed a lifetime of planning and almost daily contact with John Hudson, the party of 38½ people somewhat surprisingly all came together at Heathrow Airport on Monday, 9th October. The team caused a stir in their swish white bomber jackets and the team captain an even bigger stir by announcing he had left his passport and money behind! Someone had some fast transport, however, and eventually we all managed to catch the same Jumbo to Washington.

Penetration problems produced a 7½ hr. flight to Dulles, passing over the grey, dead concrete blocks of New York at 32,000 ft, followed by a 2 hr. flight to Atlanta, Georgia. After about 18 hrs. travel we finally flared out at Chattanooga to be greeted by the local press and TV, Tracy Knauss, Don Guess and Dick Stern. Tracy was the prime organiser on the American side, Don and Dick run the local Hang Gliding club – The Tennessee Treetoppers – we discovered later the origin of this name! A London bus took us to our ten-storey, pseudo-Edwardian hotel, believe it or not, and by 23.00 hrs. that evening we were all on the local TV news.

DAY 2: A few tired faces at breakfast but perked up by the morning press coverage of our arrival. The local radio station is housed in our hotel dining room and some of us give impromptu interviews. Hire cars and team wagon picked up AM and John Hudson spends exasperating morning extracting 31 kites from inexperienced Chattanooga Customs officials. Finally start flying at 15.00 on Racoon Mountain, 10 miles from Chattanooga. Wind southerly 5 mph and team impress locals with spot landings. Cable-car to tree covered hill. A Moyes settles gently in trees at take-off! Don Guess takes us to 'Sizzlin' Steaks' for £2 dinner! We seem to be making a good impression on the locals who are very hospitable.

DAY 3: Racoon Mountain again – light south-westerly. Hot and sunny. Good team practise of reverse 360's, timed flight and spot. A Gryphon in the trees? Impossible! The pressure is on the lads. Ten flyers but only eight

can make the team. Keith Cockroft working hard tuning the kites (and radios) and coaching the team. Good competitive day's flying. Audrey (wife) has sussed out the mid-day food and drink problem and will organise it daily for the team. Some of the Americans and Canadians have arrived. MacDonalds for hamburger evening meal. Newspapers are referring to British as most likely to succeed.

DAY 4: Hot and sunny again but wind still not on Lookout Mountain where the competition will be held. Don Guess takes us up the Saquachee Valley hoping for soaring in the S/W wind. Team take 2 hr. trek by truck through forest and find only thermal conditions on 1,000 ft. hill. Some interesting flights down. Remainder of party stay on N/W hill where we see our first take-off ramp. John North is first to experience this bowel-moving take-off when winds die down. Braver members of party play with Praying Mantis! John Fack bruises eye and I make first use of Dunstan Hadley's first-aid box. Hamburgers for evening meal again.

DAY 5: My morning telephone calls rousing the lads are beginning to get some amusing replies. Dave Murchison, comp. organiser, has given us 12-page booklet on tasks and we spend morning in discussion and planning. A good few queries are raised but it looks as if fast kites will be needed. Front is coming through swinging wind onto Lookout so we have first look in the afternoon. Two of the Canadians get into trouble in pre-frontal turbulence and are lucky to get down. We do not fly but forecast is good for tomorrow. Don Guess takes me and my family out for the evening – the lads seem to be looking after themselves alright and a certain reputation seems to be growing around the British camp.

DAY 6: At last, the wind is on Lookout Mountain but it is gusting between 15 and 30 mph, vertically! Concrete ramp 1,350ft. above landing area. I decide to become expert in helping others off in three-man wire launches! Team sent off on the Point Park run which is one of the tasks in

the comp. Speed race, 22 miles of ridge, with power lines and gaps to contend with. Excellent results but two lose it en route. A great task. Our boys are looking really good but we guess we shall have the Canadians to beat. One local stalls on take-off and ends up suspended from a tree above a 100 ft. drop. The press are following us. One or two complaints from the lads at not yet knowing who the reserves will be.

DAY 7: Two days to go before the comp. starts. Still more of our lads don't seem to know which room they are in but they all eat a hearty breakfast. John Fack's eye is still giving trouble and I take him to hospital. All okay but cannot fly for a day. Practice on Lookout Mountain in front of huge crowds. Point Park run again but with a massed start for a change – all kites in the air and we get the crowd to roar "go" – what a sight! The Japanese have arrived with eight American kites and one Japanese. They have language problems telling the three launch men when to let go. "Come fry with me?". Canadians wind us up with aggressive interview report in local newspaper but they did not reckon on R.B.Milton, our secret weapon. Free late night film show to the accompaniment of buckets of popcorn.

DAY 8: Monday, 16th October – one day to go. Hot, windy and thermal. We put the team through one final practice task and give them the afternoon off – most of them go flying! Bob England and John Fack, our reserves, go cross-country with John North. 10 miles. Bob complains that a chipmunk ate the fingers off his glove. Brian Milton goes on TV – it seems we are going to win. Reply to Canadian wind-up appears in local press. Our lads really have got it together and we are all confident. First official meeting of all teams at hotel in evening.

DAY 9: Competition starts. No flying. Winds downhill. Opening ceremony with National Anthems at 13.00; decided no flying for the day and we move to Racoon Mountain where we beat Canadians and Americans 8–6 in informal duration and spot. Hopes rise still further and I make

swift calculation of \$5,000 divided by 1.97. I actually get some flying in. Official banquet in evening at the Choo Choo Restaurant. Talks and films by Francis Rogallo and Larry Newman. American steak is delicious.

DAY 10: Wind again in wrong direction but forecast okay for mid-day. Louise's (daughter) birthday. Team appear very calm, probably due to last evening's activities. At last comp. gets under way. Speed, reverse 360's, figures of eight and spot – our boys are magic and we win several heats but are placed third overall at the end of the day! Swift comparison of our scoring records and those of the judges reveals a few discrepancies. Eventually we are placed first, 14 points ahead of the Americans. We celebrate with Smorgasbord meal at Bob England's recommendation. We decide he is a better flyer than Egon Ronay! Cake and wine back at the hotel for Louise's celebration. Some touching gifts from the Japanese boys.

DAY 11: A little tension at the start but again there is that calm, glazed expression from the team. A great day's flying which ends with an increased lead for us. The landing area is turbulent however, and if one kite should end in the spectator area, one hundred penalty points are notched up and that is the end for the team. We continue to run a full check on all flights and I have to call on my family for stop-watch assistance. Keith Cockroft helps our flyers at take-off and we feed information to him by radio. The system is working and we seem to have our opponents on the run on all counts. Graham Hobson is flying beautifully and is in the lead individually. Free dinner at the Choo Choo to round the day off for some.

DAY 12: Euphoria takes over. We pick up 30 points on the day and end 46 points in the lead. We are actually beating an American team that uses Tom Peghiny as a wind dummy! Our pilots seem invincible. A pity we cannot have the Point Park run but the winds are not quite right for it yet. Brian Milton sets fire to the grass as he lays on his back recording flight times. It must be an American plot. "Rest & Relaxation" is

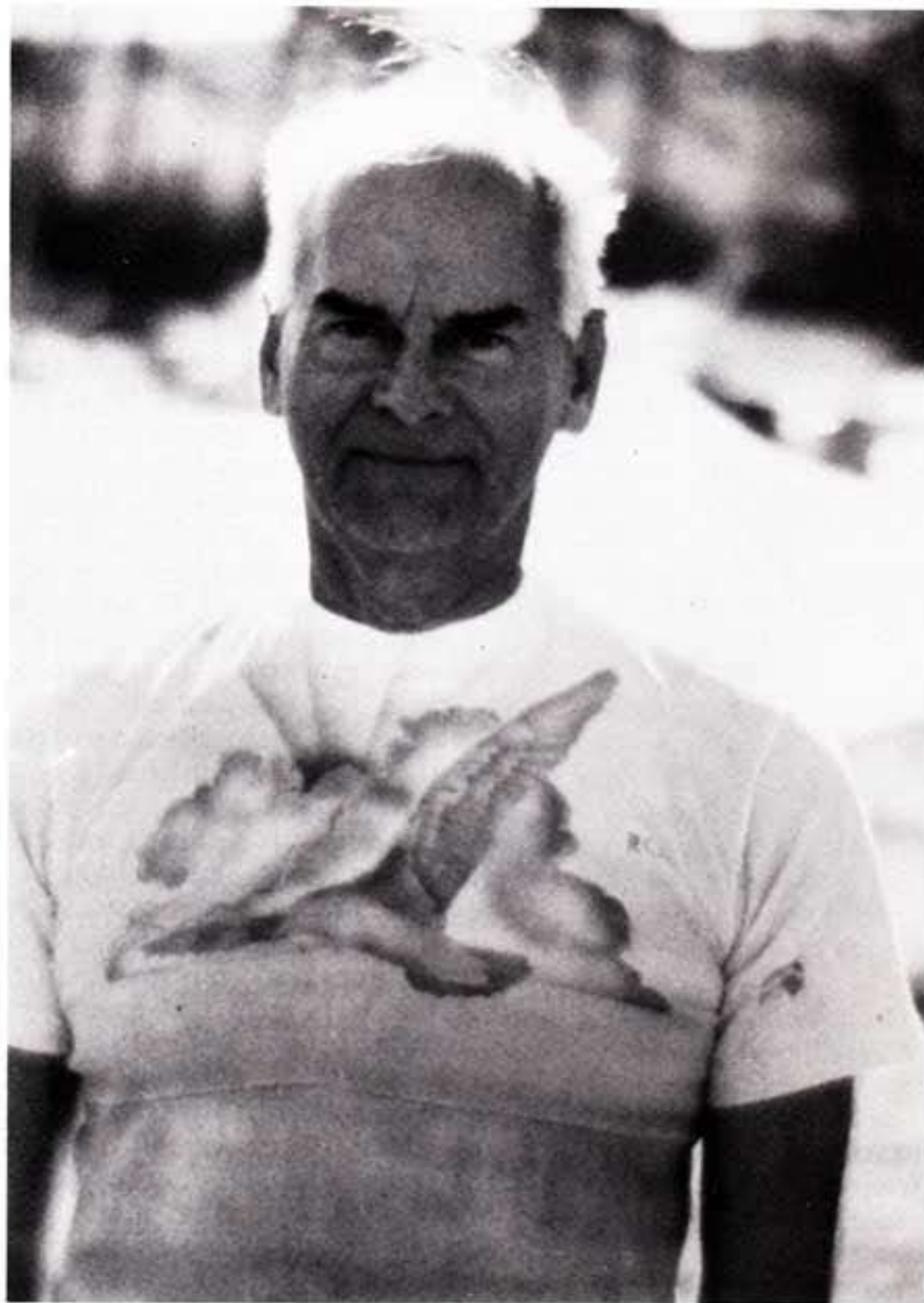
shown in the official programme for the evening but the British contingent seemed determined to ignore it.

DAY 13: Unlucky day for the Saturday crowds. No flying at all due to wind conditions. Some flyers are thankful and operate "Rest & Relaxation" part of programme today. Parachute demonstrations for the crowd's benefit and I learn from the P.A. commentator the true meaning of "Geronimo!" – it is Indian for "Who pushed Me?". Comp. site is a bit sparse as it lacks the tented village we are used to at Mere. But they have cracked the mirror pylon problem. Their's is 6 ft. high and you sit in it! Cannot see Keith Coles carrying two of those about for the League! Over to you, Miles Handley. A day for swopping badges and tee-shirts, and even the local police join in. John Lythgoe goes to photograph turtles in the local creek.

DAY 14: Last day of comp. and most of our team earn the "spaced-out" description at breakfast. Their shattered appearance seems to be our strength, however, because we add another 30 points to our lead as our opponents try to do a Jack Nicklaus "burn up" on the last day. A shortened flying day to give the scorers a chance to summarise but even then they quote incorrect scores. Final ceremony is a wow in front

of a large crowd and TV. The cup is handed over to Brian Milton, he wins his \$5 bet with Tracy Knauss, I get \$5,000 for my trouble and Bettina Gray, dear Bettina, is presented with a porcelain eagle by the pilots. She is official host at the meet and gave each team member a beautiful silver medalion. She must surely be the most popular figure in international hang gliding. Brian and Tracy each receive a Japanese Kimono from the smiling tailenders, but the only disappointing feature is Graham Slater's superb flying not being officially recognised. The Francis Rogallo Cup for "outstanding achievement" at the meet goes to Rich Grigsby despite Graham recording the best individual score amongst the competitors. Rich is a great flyer and personality but it was not his meet by any means.

Well done Graham and well done the team. Well done Brian and Keith for guiding them through this fabulous meeting and well done John Hudson for the travel and hotel arrangements which made for so many a wonderful holiday. And well done my family for feeding and watering the team and for running the British scoring system. No marks for the money market – the dollar rate drops following the American defeat and I now divide \$5,000 by 2.07!



DOCTOR FRANCIS ROGALLO – AN INVOLVED SPECTATOR AT CHATTANOOGA

Treasurer's Report

Financing our international competitions for 1978 started back in February when I applied to the Sports Council for help with our anticipated travel costs. Dennis Wade and his men turned up trumps and we got an immediate promise of £3,634. Hopefully some sponsorship and other fund raising activities would balance the books for us but with another £9/10,000 still to find at that stage, I recommended to BHGA Council that £2,000 of our reserves be made available to the Competitions Fund. This was seen by the majority of us to be an investment in British Hang Gliding at a time when we were about to place ourselves on the world stage. Most nations looked to the U.S.A. and Britain for a lead but, until 1978, we in the U.K. had not quite proved our case and, certainly in my view, our pro-

gramme this year would have to be completed in a professional manner or not at all. Great, £5,634 in the kitty.

THE BLERIOT CUP came and went and as there were no sponsors yet on the scene we had to fund that trip on the cheap – £1,283 worth of blown out comp. but our lads had made their mark in pre-Cup training. **THE KOSSEN DRAW** produced a profit of (approx.) £2,000, but it wasn't until mid-August that Flight Promotions secured Atlas Express as sponsors for the final League meeting and the American trip was on. Brian Milton eased another £1,045 out of the Sports Council for "preparation training" and I finally uncrossed my fingers when the *American Cup Draw* made £1,500 profit (approx.).

The icing on the cake, of

course, was the team prize money for winning the American Cup – £2,517 – and this means that the £2,000 previously ear-marked from reserves need not be touched. The whole of the 1978 programme was funded without drawing on the members' funds:–

Competition Costs:	
Blieriot Cup	£1,283
European Championships–	
Kossen	3,824
American Cup (approx.)	7,700
	£12,807

Financed by:	
Sports Council	£4,579
Kossen Draw	2,000
American Cup Draw . . .	1,500
American Cup Prize . . .	2,517
Part Atlas Express	
Sponsorship	2,211
	£12,807

I am sure the membership will join me in extending our grateful thanks to the **SPORTS COUNCIL** and **ATLAS EXPRESS** for their invaluable assistance – without them we could not have placed British Hang Gliding on its present pedestal. Special thanks are also due to *Protec* for sponsoring the American Cup team flying suits and to *Willeringhaus & Co.* for their generous donation. And what about the League too? The net profit of just over £3,800 from the Atlas Express League Final provided £2,211 for the Competitions Fund and £1,600 for membership reserves. Our tax-man will have to be 'sponsored' in due course, but, nevertheless, Competitions and the League can easily be seen to be adding to our national prestige and to our essential financial base. Well done, the League!

The George Worthington Column



THE REAL WORLD

It pleased me a great deal to cover the American Cup for Wings. It was my idea. I did not make the decision to attend the event until only 2 weeks before it began.

I must say that I was very impressed with the 20 to 25 people in the British contingent of 52, who I had an opportunity to meet and chat with. They were super ambassadors of goodwill and of Hang Gliding expertise. I was impressed with the quality and extensiveness of British hang gliding even before my visit to the American Cup, through my careful reading of the last 6 issues of Wings. After the Cup, however, I was even more impressed. The British victory was the icing on that "Cake".

On every level in the U.S., both locally and nationally, I have witnessed in hang gliding an over abundance of deviciveness, of ego clashing, of personal jealousies, and of bitter feuding. I don't know why it has been so. I have deplored it. I sensed, through careful reading of Wings, that these same ingredients are probably equally present in the British hang gliding movement. And yet, in spite of that, or maybe even because of that, the final product, the high quality of pilot skill, training, and proficiency and also the high quality of British gliders, was and is

simply outstanding in my opinion. I met and watched your pilots win and then I had the pleasure of flying four different British gliders. I learned all about your league competition system, your pilot selection system, and your successful and imaginative system of raising funds to pay all the expenses of a large and strong British team of fliers. All of the decisions which created such methods and such excellent strategy, such as having 10 fliers arrive a week early and have them compete at the Cup site for the final 8 berths, were I think sound, sensible, and important. It seems, in retrospect, almost inevitable that you would win. I'm hoping, of course, that the U.S. fliers will study your methods and copy them, so that the U.S. team can have a good chance of winning in 1979.

Let me tell you about my impressions of flying your British gliders. First of all, we must realize that just one flight doesn't give enough experience for any pilot to give a full evaluation. But one flight can still tell a great deal.

The first glider I flew was the Super Scorpion. What I'll do here is put down the comments, verbatim, which I wrote immediately after landing.

SCORPION

No deflexors. Will reduce drag but is it possible that it reduces strength or sail distortion at high speed?

185 square feet. Larger than average glider.

Pip pin in nose. Great British idea. Can save sail stretching by immediately placing glider flat on ground.

Defined tips-assures ample wash out for dive recovery.

Flying characteristics! Easy confident take off. Very steady and yet very responsive. Turns easily. Very flat turns. Did 5 consecutive 360's. Excellent sink rate. Can fly very slow. Easier than average kite to land. Might lack penetration, for areas like Cerro Gordo. Felt like a big kite.

MOONRAKER

One very heavy duty horizontal deflexer.

Trunkated tips.

All visible aluminium hardware beautifully anodized in gold. I think this looks very special.

1-1/8 inch diameter control bar — I like this.

Very strong looking kite, and yet only 55 pounds. 170 square feet—just right for my 160 pound weight.

Flying characteristics: The no-wind take off felt excellent. Very solid feel like my former ASG-21. Very nimble like a sports car but not skittish. Made 6 consecutive 360's which were very quick and flat. On landing the nose didn't seem to rise as high as expected just before stall, but landings would be easy to get used to. I had to run 2 steps in zero wind.

SAFARI

195 square feet.

Preformed battens—seems to be trend of the future. Very quick to assemble.

Nose pin-allows instant folding of control bar and sets kite flat on the ground.

Designer says defined tips aren't needed. Made beautifully carved turns in a gentle thermal.

Flying characteristics: Not as nimble as the Moonraker but with 195 squares, that is understandable. Control response excellent. Easy to turn but maybe not quite as easy as Scorpion.

Landing was same as Moonraker, I had to take 2 steps in no wind landing. This would change after I got used to necessary bar pressure required. Excellent machine!

GRYPHON

175 square feet.

No crosspar — naturally, from U.S. experience this makes me wonder about strength and tucking. When the Gryphon flies at Cerro Gordo, next year, we'll learn more about strength and potential for tucking. I'm not an aerodynamicist.

Cupped tips — I've always thought these should help.

Ground handling — noticeably tail heavy. "First-time pilots" should be warned to physically prevent the nose from raising on take off. It raised slightly on me in a 5MPH ramp take off. I immediately pulled in the bar on becoming airborne and there was no problem.

Flight characteristics: Ship was a little more yaw sensitive than the other British ships but in 5 seconds I was completely

used to this and it flew perfectly straight from then on.

Flew 5 360's consecutively, with very steep bank. Ship was very stable at about 2 G's. Pitch pressure on control bar is less than others. The kite didn't seem as nimble as the others, but seemed to have a definitely higher L/D and greater speed range. Had a good low sink rate. Felt more like a Mitchell Wing than the others. Might be a super kite for Cerro Gordo. Landing was a bit more ticklish than the others. Kite had small but definite tendency to turn in ground effect. Nevertheless I landed on the bulls eye, and needed only 3 steps to stop.

All in all, I have to state emphatically that I was very impressed with all four British gliders. I would honestly like to own one of each. For ridge soaring at Torrey Pines, in the smooth ocean air, I would particularly like to have a Scorpion with 210 square feet. It would be very easy to turn and should get above all the U.S. gliders — even the Condor.

I believe that the American Cup was very good for everyone in hang gliding. I was sceptical when I first heard about it. I felt that it would not be a test of the cross country capabilities of pilots or gliders. I was right. There was no cross country flying. It is possible however that next year there could be a type of limited cross country if the weather co-operates. I learned that closed course type hang gliding, such as that of the American Cup, can be a great spectator sport and thus be very good for hang gliding in general. I loved watching it. For my own favourite type of hang gliding I am still very partial towards cross country. Now I know that there is a need for both and there is room for both.

The American Cup should be even more exciting to witness next year. I'm going to be there, and I'm going to fly as a wind-condition-consultant (wind dummy) because in that way I can cover the meet and get in my flying also. My thanks to all the British pilots for letting me fly their gliders.

The Grand Delusion

BY MICHAEL JONES

There is a curious attitude in the United States that tends to label nationalistic feelings as being naive and unsophisticated. Perhaps it is a result of the growing corporate control of American politics or just post-Watergate fallout. Whatever the case, being an American just ain't what it used to be. Or, at least that's what some people would like you to believe.

And, being an American hang glider pilot certainly ain't what it used to be either. The British proved that at the first American Cup and now we have to live with that reality.

We are no longer the undisputed leader in hang gliding. Not in pilot skills. Not in glider design. Not in competition.

Until the American Cup, world competitions could easily be pooh-poohed by critics who felt the tasks were outdated and the competition unrepresentative of modern trends in hang gliding. And, indeed these observations were absolutely correct . . . until now.

The international team championship at Lookout Mountain for the American Cup changed that and opened the eyes of all who were present to the phenomenal abilities of the British.

It also opened a lot of eyes to the organization of their competitive system and team participation in international events. With the British, national pride has a lot to do with their success as does a precise, well-run organization.

They look like a team. They act like a team. They think like a team and it pays off.

American pilots, however, love the "laid back" image and go to great lengths to prove to the rest of the world that they are individuals. Basically, that is all well and good since our country supposedly functions on the concept of the citizen as an individual.

But, functioning as individuals in a team effort, just doesn't cut it. Unfortunately, these attitudes may not be something we necessarily agree with, but are an outgrowth of the certain non-competitive nature of the sport. The members of any American hang gliding team cannot be held responsible – there are just too many negative factors to overcome.

As competitors on a world scale, American pilots are hopelessly unprepared for winning. As a member of the World Team to the European Championships, it was a demoralizing realization that we, as representatives of the country that has for years been the driving force in hang gliding are the least capable of capturing a world title.

Why? The answer comes in two words – attitude and organization. First of all, it is difficult to take anything seriously when you show up to a world meet looking like refugees. Not so much that uniforms will make the difference in flying ability, but it is disheartening to think that no one back home cared enough to make sure that the United States was represented abroad in the best possible light. Thankfully, we at least had uniforms at the American Cup.

Nationalism and patriotism are feelings not often put to the test until you're competing in a foreign country. Suddenly, you want everyone to know that you're an American. In Kossen, for lack of anything else that physically identified us as team members, we were forced to buy colored tape in order to have the letters USA on our helmets. It was obvious that cultivating team spirit at the last minute was, quite literally, a losing proposition.

It was also apparent at the American Cup that the winning attitude of the British was a direct result of their organized approach to the competition. The team arrived together, practiced together, and received tremendous support from an entourage of formidable proportions. Scores were recorded and double-checked, as radio communication kept team pilots informed of the prevailing conditions over the course.

One of the English pilots, Mick Maher, made an interesting observation when he noted that the British, at one time, also had a very casual attitude towards competition until they realized that the only way to win was through careful planning and organization.

The British League competitions have seasoned the English pilots well and have provided them with an opportunity to hone their competitive skills. In doing so, these pilots have become a study in consistency, gaining the competitive experience necessary to keep from beating themselves.

Beyond that, there is a very obvious camaraderie and support that exists within the team framework. They are used to pulling together as a team and it shows.

If it had not been for Keith Nichols, who donated his time as manager of the USA American Cup Team, the final score might have been even more humiliating. Keith managed to borrow several CB radios to help negate the British advantage, kept careful score, and brainstormed during several much-needed strategy sessions.

Compared to the well-planned British, Keith's eleventh-hour efforts were just too little, too late. But, it was apparent that his leadership made an important difference.

The point is that in order to keep from embarrassing ourselves in international competition and to restore our number one position in the hang gliding world, we, as Americans, must develop a supportive attitude towards our national teams. Whether this is the result of efforts by individual pilots or by actions of the USHGA, the outcome will be a positive step for the sport.

The loss of the American Cup has put the American hang gliding world on its ear. The grand delusion is over. Perhaps, we will finally realize that it takes more than just saying we are the best pilots – because now we have to prove it.

REPRINTED FROM "GLIDER RIDER"

VISIT OF JAMES M. MEADE TO MALVERN

Earlier this year all Mitchell Wing Club members were sent a circular from James M. Meade, Managing Director of The 'M' Company, saying he would be in this country sometime in August. I replied to this circular saying Ian Gutteridge and myself were building a Mitchell Wing and would be pleased to see him. So I was delighted when I received a phone call from James Meade on 28th August saying he was in Ipswich and would like to come and visit us that day.

He and his wife arrived in Malvern around 2 o'clock and after the usual social chit chat, during which I learnt that only two people in this country had replied to his circular and I was the only one he had managed to contact, I took him up to Ian's home where construction was taking place. At this time we had completed the rudders, all the spar boxes, all the ribs and numerous other small items so we were able to show him a fair sample of the standard to which we were building our Mitchell Wing.

After James had had a look, and been kind enough to say that he would be proud if his factory turned out components to the standard Ian was building ours, came the moment we had been waiting for when he produced two movie films. The first one was an excellent film showing the Wings in flight in America with a good sequence of George Worthington soaring at Torrey Pines and many shots of take off and landings on training slopes.

After seeing these two films through twice we cleared up a few small points we wanted to raise

and James gave us some words of advice

Since this visit we have now virtually finished the Wing with only the hang cage, control runs, covering and painting left to do.

I should like to thank James Meade for giving up one of his only two days in this country to come and see us, and by saying that if anyone wants any help or advice about building a Mitchell Wing they are welcome to contact me.

Theo Willford,
Malvern, Worcs.

A Page For Christmas

(CARTOON BY KATEY THOMAS, "CAROLS" BY BOB MACKAY)

O - oh hell! O - oh hell!
 I have turned the wrong way,
 And have lost the best thermal,
 That I've had all day,
 I - it would have been best,
 To have turned to the right,
 Then I could have three-sixtied,
 All day and all night,
 O - oh hell! O - oh hell!

Silent stall, horrible stall,
 All is still,
 All is fall,
 Far too high, I have flared out to flop,
 Yonder wing tip, is starting to drop,
 Not a pretty de-sce-ent,
 Something is sure to get bent.
 Sl-ow-ly kite, luv-erly kite,
 All is lift,
 All is bright,
 From yon cornfield a thermal is born,
 (Thank you, Farmer, cor cutting the corn),
 In three-sixties we cli- mb,
 I - in three sixties we climb.

In the bleak mid-winter,
 Frosty winds doth blow,
 Earth stands hard as iron,
 Water like a stone,
 Snow is falling snow on snow,
 Sno-ow, o-on snow,
 I'm off to Rhossilli -
 Only place to go.

Get up you merry gentlemen,
 Let no-thing you dismay,
 For we are going hand gliding,
 This sunny Christmas Day,
 Cos I have bought a brand new harness,
 - (I'm a clever boy) ---
 I'll be soar-ing in co-omfort and joy,
 Comfort and joy,
 I'll be so-ar-ing in co-omfort and joy.

While pilots watched the thistledown,
 All seated on the ground,
 A twist of thermal whisked it up,
 'Twas chaos all around!
 As each one fell upon his kite,
 And thrust it in the sky,
 An Angel of the Lord came down,
 ... Cos he'd no room to fly.



Information

The Avon H.G.C. has decided, by majority vote, to ban powered hang-gliding from all established SOARING sites within their jurisdiction. Any pilot wishing to fly a powered machine within the Avon H.G.C. area is required to contact the Sites Officer, John Hunt at Bristol Royal Infirmary, Biochemistry Section, tel. no. Bristol 22041.

**Tony Tate, Secretary,
Avon H.G.C.**

Malcolm Hawksworth has had to resign from Council. Council accepts his resignation with regret and thanks him for his work over the past years.

Would any member who feels he could take on the arduous duties of a Council Member until the next A.G.M. please contact Chris Corston, B.H.G.A. Secretary.

The Welsh Hang Gliding Centre (S.Wales) at Crickhowell has been removed from the BHGA Schools Register.

"Anyone intending to set up a Commercial School should inform the BHGA Secretary, copy to the Training Officer, before equipping and starting to accept pupils. Entry to the BHGA Register of Schools will always be subject to inspection and proof of conformity with registration and training standards laid down. Moreover whilst certain requirements are laid down, there can never be any guarantee that any particular school would be entered on the Register. That matter is entirely a matter for Council's discretion."

Reggie Spooner

At the Mercian HGC Annual Disco/Social held at the Punchbowl, Lapworth, Warks. on November 23rd prizes were awarded in the recent Club Competition. Winners were: Prone section - 1st Paul Winteringham (Club Secretary); 2nd Tim Keen; 3rd Roy Douglas. Seated: 1st Jerry Byrne; 2nd Robin Billington (Safety Officer); 3rd Jack Rain and Rod Bird (Editor "Soar Point").

The new Secretary of the North East Hang Gliding Association is Harry Turner, "The Kennels", Newminster Abbey House, Morpeth, Northumberland. (Morpeth 57754).

Wills, Wing, Inc. is pleased to announce our newly formed association with John Hudson and Main Air Sports for the distribution of our entire line of accessories in the United Kingdom.

Main Welding Co. Ltd., have expanded their business under the new name of Mainair Sports. The telephone number of both companies has changed to Rochdale (0706) 55131-2-3 and the companies are now on telex No. 635091 - Main.

Numbers 9012 to 9180 are due for renewal on the 1st December, 1978.

KENYA HANG GLIDING ASSOCIATION

Tim Davis has contacted us to say that he would like to hear from anyone, especially experienced pilots, planning to visit Kenya. The Association has only recently been formed so help and advice through personal contact would be appreciated.

Tim's address is P.O. Box 42766, Nairobi, Kenya. Phone numbers are Nairobi 25110 at work and Karen 2211 at home.

STOP PRESS

The Editor is sorry this issue is late & also regrets the December issue will not be published until early in Jan. The Editor thanks Richard Fenward for producing the black/white centre spread prints from colour transparencies.



INSURANCE

THE FOLLOWING INSURANCES HAVE BEEN SPECIALLY NEGOTIATED FOR U.K. BASED BHGA MEMBERS

PERSONAL ACCIDENT WHILST HANG GLIDING WITHIN THE U.K. AND EUROPE

CAPITAL SUM IN THE EVENT OF: DEATH, LOSS OF LIMB, (OR USE OF LIMB), OR EYE, OR PERMANENT TOTAL DISABLEMENT

Code	Cover	Premium
A10	£10,000	£13.00
A15	£15,000	£19.50
A20	£20,000	£26.00

WEEKLY BENEFIT IN THE EVENT OF TEMPORARY TOTAL DISABLEMENT (Totally unable to follow occupation - maximum 104 weeks excluding first 14 days).

Code	Capital Sum Benefit	Weekly Benefit	Premium
D20	£2,000	£20/Week	£10.00
D30	£3,000	£30/Week	£15.00
D40	£4,000	£40/Week	£20.00
D50	£5,000	£50/Week	£25.00
D60	£6,000	£60/Week	£30.00

NOTE: A10 can be added to any of the D Series.

MANUFACTURERS, THEIR EMPLOYEES AND INSTRUCTORS PLEASE ADD 50% TO THE ABOVE PREMIUMS.

No Proposal Form is required, provided you are between 16 and 65, warrant you are fit and declare any serious accident or illnesses during past five years, we can normally give cover immediately we receive your NAME, ADDRESS, AGE, OCCUPATION, GLIDER DETAILS, B.H.G.A. OR LOCAL CLUB MEMBERSHIP NUMBER AND CHEQUE.

GLIDER ALL RISKS - INCLUDING THE AIRBORNE RISK

As notified in last months *WINGS!*, it is now possible to cover Hang Gliders for the airborne risk as well at a premium of £10 for each £100 of value, but with a £25 excess. Please send details of your Glider for quotation.

GLIDER ALL RISKS - EXCLUDING THE AIRBORNE RISK

Full Ground Risks but excluding flight risks and first £5 each claim (£10 whilst Glider is rigged). Includes 30 days use in Europe each year.	£300	£ 7.00
	£350	£ 8.00
	£400	£ 9.00
	£450	£10.00

EACH ADDITIONAL £50 VALUE - ADD £1 PREMIUM

RATES FOR CLUBS, MANUFACTURERS, SYNDICATES AND WORLDWIDE COVER ON APPLICATION

LIFE AND ENDOWMENT ASSURANCES

There need be no premium loading to cover the Hang Gliding risk for your Life Policy, your Endowment Policy or House Purchase Policy. Just tell me your requirements.

CLUB LIABILITY POLICY

B.H.G.A. Master Policy provides £500,000 Public Liability Cover for the flying activity of every B.H.G.A. Member. However Clubs are required to have their own Policy to cover Club Committee and Members, Wives, Girl Friends, Associate Members etc. and to meet National Trust, Landowners and Local Authority requirements. Cover is valid throughout Europe.

REGGIE SPOONER

INSURANCE BROKER FOR THE B.H.G.A. CLIFTON HOUSE, BATH ROAD, COWES, I.O.W. PO31 7RH TELEPHONE: COWES 2305

Competition News

MERE '78

Saturday morning and early risers among the campers reported that things looked hopeful—while there was not a lot of wind at least there was a perfect blue—not a cloud to be seen. By about 8.30 the wind had arrived—all of 5 m.p.h. and about 45° off the slope. Unfortunately it did not improve at all as the day went on. Notwithstanding this it was agreed that flying was possible and Mere '78 got underway.

There were two events organised for Saturday with a possible third, a cross country if conditions improved. Event number one was billed as a "Timed Precision Flight." The landing area was an equilateral triangle whose sides were approximately 35ft. At the apex of the triangle sat the judge who sighted along the sides of the triangle and gave points for the number of times the pilot could cross the extended lines of the triangle sides.

As the event's title suggests, flight time was important, pilots losing points if they exceeded the time allowed and also if they landed other than inside the triangular landing area. Event number two was a rather more straight-

forward k.o. distance contest.

Competition got underway but by mid morning take-offs were becoming so hairy that a temporary halt was called. Early afternoon saw flying restarted and by the evening the distance competition had completed 3 rounds with a large number of precision flights having been made.

Saturday night was carnival night in the village and with bands playing in the streets and the pubs well stocked with beer a good time was had by all. Flyers had plenty of opportunity to exercise their right arms, feet and wits in the three most popular pastimes of drinking, dancing and chatting up the local girls! Staggering back to their tents at the bottom of Cowards Bowl competitors were cheered to hear that the forecast for Sunday was South Westerly 15 m.p.h.—perfect conditions.

In fact Sunday was a beautiful day but once again the wind let us down a light and variable all day. The take-off was the South West spur and while the optimists attempted to catch thermals for the cross country the two events from Saturday continued. In addition there was a new distance event for those who arrived on Sunday. Although

MERE '78 PRIZE WINNERS

Timed Precision Flight

- | | |
|----------------------------------|-----------|
| 1. Mike Stainer — Super Scorpion | 60 points |
| 2. Mark Sylvester — | 50 points |
| 3. Tom Knight | 45 points |
| 4. Steve Moss — Vector | 43 points |
| 4. Doug Hayward | 43 points |

Saturday Distance

1. Dave Thomas — Gryphon
2. Tom Knight

Sunday Distance

1. Tony Williams — Vector
2. Mick Gregory — Home Built Crossboomless

Cross Country — Dave Thomas

Special Awards —

- John Ivens — longest carry up and shortest flightdown
Mike Collis — Special award for spot landing on the judge

occasionally pilots about to take-off were heard to complain of the breeze on their back, by and large the competitions weren't held up too often and for too long.

The spectators saw plenty of flying and some very close duels in the k.o. distance contests, some very accurate flying in the precision event, some intriguing nil or down wind take-offs and a dramatic flight by Mike Collis which ended with him knocking the judges out of their chairs! The cross-country event was decided by one of the flights in the distance competition when a Gryphon and an Olympus

took off into a thermal which helped them fly about 4 fields further than anyone else.

As well as watching the flying the spectators could browse among the many second-hand kites displayed for sale and two manufacturers, Skyhook and Eclipse, were showing off new machines. Powered gliders were also in evidence, a short hop being undertaken by a powered Skyhook and a rather longer flight by a Midas fitted with a Soarmaster unit.

Overall the verdict from spectators and flyers seemed to have been that it was a real fun event. The organisers made the best use of wind conditions which were far from perfect and organised competitions which were both interesting and enjoyable to fly or to watch.

REPRINTED FROM AVON
H.G.C. NEWSLETTER

BLERIOT BLOW-OUT

by Trevor Birkbeck

The Bleriot Cup team made a rather inauspicious start by missing the ferry; however, the next was not long but less fortunately the ticket collector changed and the new one decided to rip us off £35 extra for glider overhang. Lester had to be almost forcibly restrained from punching the bloke's head in!

The major part of the team travelled over in a hired Transit and the Hobbitran, owned by one Graham Hobson. We comprised Lester Cruse (Fledgling), Mick Evans, Mick Maher and Robert Close-Smith (Gryphons),



PETER HARRIS

Graham Hobson (Skyhook Safari) Geoff Snape (Vector), Paul Baker (Maxi), Jan Ketelaar and myself (Captain!) on Moonrakers. Following on were John and Jerome Fack in their own vehicle. Bob England was to have travelled with them but sadly his father died and he had to stay home.

Dave Squires from Scotland came as team manager and Keith Cockcroft (though initially paying his own way, as self-appointed thermalling adviser) was pressed into Bob England's place. Other (paying) fellow travellers included Dick Boone (hot-shot from Delta Wings), Kim (Mick Maher's girlfriend), and Phil Robinson on his Super Scorpion.

The long haul down to the Alpen Maritime was noted for the failure of our many navigators to prevent us getting lost in Paris, the noshing of French rolls and butter and the dossing overnight in a motorway petrol station (camp sites shut).

After establishing ourselves in a pleasant camp site with a swimming pool, we drove to the top of Lachens Mountain, the proposed site for the competition with the French. This magnificent hill has North, West and South faces (the wind rarely

blows from the East), with about 2,200 ft. drop to the landing fields. It's top landable and Mike de Glanville (who runs a local thermalling school) lost only 7 days flying during this summer season! We had five days before the competition in which to hone up our thermalling techniques before doing battle with the French.

Mick Evans beat Mick Maher into the 15 mph southerly and paid the price by hitting turbulent sink and going down. I caught a blob and managed to cross a valley onto another mountain called Brouis and spent the next 1½ hours ridge/blob soaring up and down the range. This, in fact, was to have been the out and return course for one of the comp. days. Meanwhile, the cloud had clamped down suddenly on Lachens, forcing Jan and Geoff to top land in cloud. The last fliers to come down - Graham, Mick M. and Tiery (a Swiss on holiday there) - found themselves kept up by amazing evening lift which filled the whole valley.

The next day brought no ridge lift and many of us went to the valley floor though Keith, the two Micks and Paul (after taking off in sink and battling for an

hour) made it back to the top. A superb demonstration of how the Americans strength test their kites was given when Dick Boone had an unscheduled parachute opening whilst coming in for a top landing and demolished an A-frame on his Phoenix 12. Lester managed a long flight on his Fledge before succumbing to the sink.

Flying that day taught us the importance of timing one's take off when there was no ridge lift. Keith (our thermal tutor) showed amazing form by thermalising back from the valley bottom to top land. We threw Paul off on the last flight of the day with a keel push (45° cross wind) and a 180° wind change on landing caused him to execute one of his amazing head level 360's which nearly annihilated the whole team.

On the 3rd flying day most of us decamped to Monaco for a flight down to the beach. This could not be accomplished until 8 p.m. so we were forced to spend all day on the beach. As 50% of the women (all the ones with nice knockers) were topless, no objections were lodged. Lester, not being able to chat-up in French, became most frustrated

and needed an operation at the end of the day to put his eyes back into place.

Of those who flew down to the beach, Keith scored maximum entertainment value by landing Robert's Gryphon in the sea. The glider settled on the surface of the water, rested there for a few moments, then slowly rose as Keith walked over with the glider on his shoulders! No panic there.

Jan and Dave stayed behind and experienced amazing flying 2 miles over from the ridge at 2,500 ft. above take-off. Later Tiery, our Swiss friend, achieved a 4-mile-sided triangle at 5,000 ft. above take-off.

The following day proved to be most memorable. Tiery was first off the North face, flying dual prone with his girlfriend. Dave and Jan followed, the latter working a smooth blob to 3,000 ft ATO. The rest of us took to the sky and suddenly the thermals became amazingly powerful but so violent that all were experiencing rough rides. I personally had no fears for the strength of my glider but during the rough patches was worried that the bar might be wrenched out of my hands! I watched Mick Maher screwing up one to 4,400 ft ATO

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and have never seen such a fantastic climb rate.

As conditions got heavier, fliers one by one went down to land, often with various pegged on 1,000 f.p.m. down, except for Keith who top landed. Down near the valley floor the air was very turbulent and Lester, 360ing down, was "eviled" into a spiral spin right into the ground. The rest of us flew down, fearing the worst as he was not moving, but were relieved to find him only knocked out and with just a cracked jaw. Another of his nine lives used up! However, he had to be hospitalized for observation and eventually flown home on the insurance.

The Facks arrived and later we flew in very smooth evening lift from the trees. Many tales were told in the bar that evening, of fliers going weightless for many seconds, of Paul's kite falling out of the sky with the sail luffed, of those fliers' feelings who had no parachutes when it got rough and so on. What a day!

The wind took us round to the West face on the next day, this having a shallower take off with a line of trees to clear if you muffed a launch. All fliers took off in light wind using blobs to stay up for 1½ hours or so with the exception of Keith who skyed out above a sailplane. Graham also reached a great height but got a nasty whoopsy and flew down. I managed a superb spot landing in the middle of a huge field right on top of Mick Maher's king post (oooh!). Jeremy Fack looked to be enjoying his flying on the new Phoenix 12 brought over by Dick Boone and Paul showed normal landing form

by utilising a new "tree arrest" technique.

By now the standard of thermal flying in the team was showing considerable improvement due in part to Keith's tutoring influence and, of course, mainly to the regular practice. During that afternoon, we all "free flew" with the French teamfliers and generally felt that the standard of our flying gave us a good chance in the competition (due to start the next day) and we went to bed that night in a mood of confident anticipation.

Then it happened! In the early hours of the morning we were awakened by a furious storm which nearly collapsed the tents. All the next day it blew up to 60 mph on top of the mountain. This was the mistral, a curious wind common to Mediterranean areas which is reputed to drive people mad which, when it comes, blows for 3, 6 or 9 days at a stretch. The next day was just as bad and so, feeling most despondent, we had to call off the competition. One couldn't argue with the fact that the whole area was totally unflyable.

We looked at the Bleriot Cup trophy, said thanks for the memento tee-shirts and, sadly went on our way home. There is little that can be more disheartening than a blown out competition but, in retrospect, much had been learnt on this trip about the organization, about thermalling in mountains and I imagine experience gained helped those Kossen fliers amongst us to better their flying standards. BHGA money, which paid for the transport and insurance, would therefore have been well spent.

LEAGUE ENTRY 1978

League Entry was different this year because the competitors came to the competition having earned their place there in area leagues all over the country. These had provided the top 3-5 fliers from each area and their scores from these competitions counted towards their place in the final.

The competition was over two days at the end of October plus a day in September when the previous attempt had been blown out. Despite the high risk of being blown out again both days were flyable and we ran four tasks.

Trevor Birkbeck and Roy Hill, the organisers, set some demanding tasks for pilots and gliders over the two days. The pilots had to 360 round pylons, fly within defined areas and land on spots cunningly placed on slopes. Over the whole weekend only four stand up landings on the spots were made out of 96 flights. Most pilots did not even get the chance to fall over on them!

Dave Thomas took 1st place with consistently good flying, never dropping out of the top four in any of the tasks. Consistency was the name of the game for the top places, although it was possible to do well with average scores if you could turn it on and max one or two tasks.

The top ten become the new intake for the League to replace the bottom fifteen who are dropping out. This fresh blood every year in the League should keep the standard of competition high. High enough to cuff the Yanks again next year?

Finally, on behalf of all the pilots who took part, a big thank you to the organisers Trevor and

Roy, the Bridges for the use of their club's sites (again) and all the marshalls for doing a splendid job.

Results

1.	Dave Thomas	14672
2.	Dave Garrison	13836
3.	John Bridge	12993
4.	Carl Ford	12991
5.	Bob Harrison	10323
6.	Jim Pedroza	10240
7.	Richard Iddon	10126
8.	Brian Edmeades	9913
9.	Greg Burgess	9896
10.	John Burgess	9771

David Squires, Glasgow

AVON v THAMES VALLEY HANG GLIDING CLUB'S ANNUAL COMPETITION

The Avon Hang Gliding Club and the Thames Valley Club met for the second annual competition at Spencer's Bowl, Mere, on Sunday October 22nd.

The first event, a figure of eight and spot landing was won admirably by Steve Pionk (Thames Valley) flying a Gryphon. John Milburn (Avon) missed the spot by inches on his sponsored Wisp (yes Wisp).

The second event was flown in light rain and consisted of a speed run along the ridge and back to take-off, followed by a 90° turn away from the ridge and fly for distance. Mike Hibbit won this flying the best looking Gryphon in the country. Although Thames Valley took the first three places, the Avon team won the competition by a margin of 23 points, a really close match.

The trophy winners were:-
1st STEVE PIONK (GRYPHON)
2nd JIM PEDROZA (GRYPHON)
3rd MIKE HIBBIT (GRYPHON)
Mike Hibbit,
Reading, Berks.

Peachy by HARDMAN.



Hang Silver



One of the strangest prototypes in hang gliding—a Falcon Three with Sunspot written on the sail—has led to an increasing demand for the talents of 26-year-old Dave Posner. The prototype was an experimental silver

pendant created by Dave, who used to work for the largest manufacturing wholesalers of jewellery in Britain.

The idea was borne on the South Downs, where Dave has

been flying for three years. He is a member of the Southern Hang Gliding club and lives in Ilford, Essex. During his time on the hills he noticed the complete lack of jewellery relating to the sport. He decided to put his creative talents to work and the first prototype emerged earlier this year.

Since then he has made pendants of different sizes in both gold and silver—all to the plan-form of the glider requested by the customer. A new venture in anticipation of Christmas is the design of charms in gold and silver.

"I have made everything from a £5 silver ring to a £50,000 diamond necklace, but I wanted to do something for hang gliding," said Dave, who has had the distinction of working on a brooch for the Queen Mother.

He started out in jewellery nine years ago, giving up his college studies of Pure and Applied Mathematics, Physics and Technical Drawing for something where the creative element of the trade appealed to him more.

He has his own workshop where he works on the pendants, which require the basic skills of jewellery making. He makes a pattern from a scale drawing,

which is scaled down and uses a jewellery saw with millimetre blade to cut out the metal.

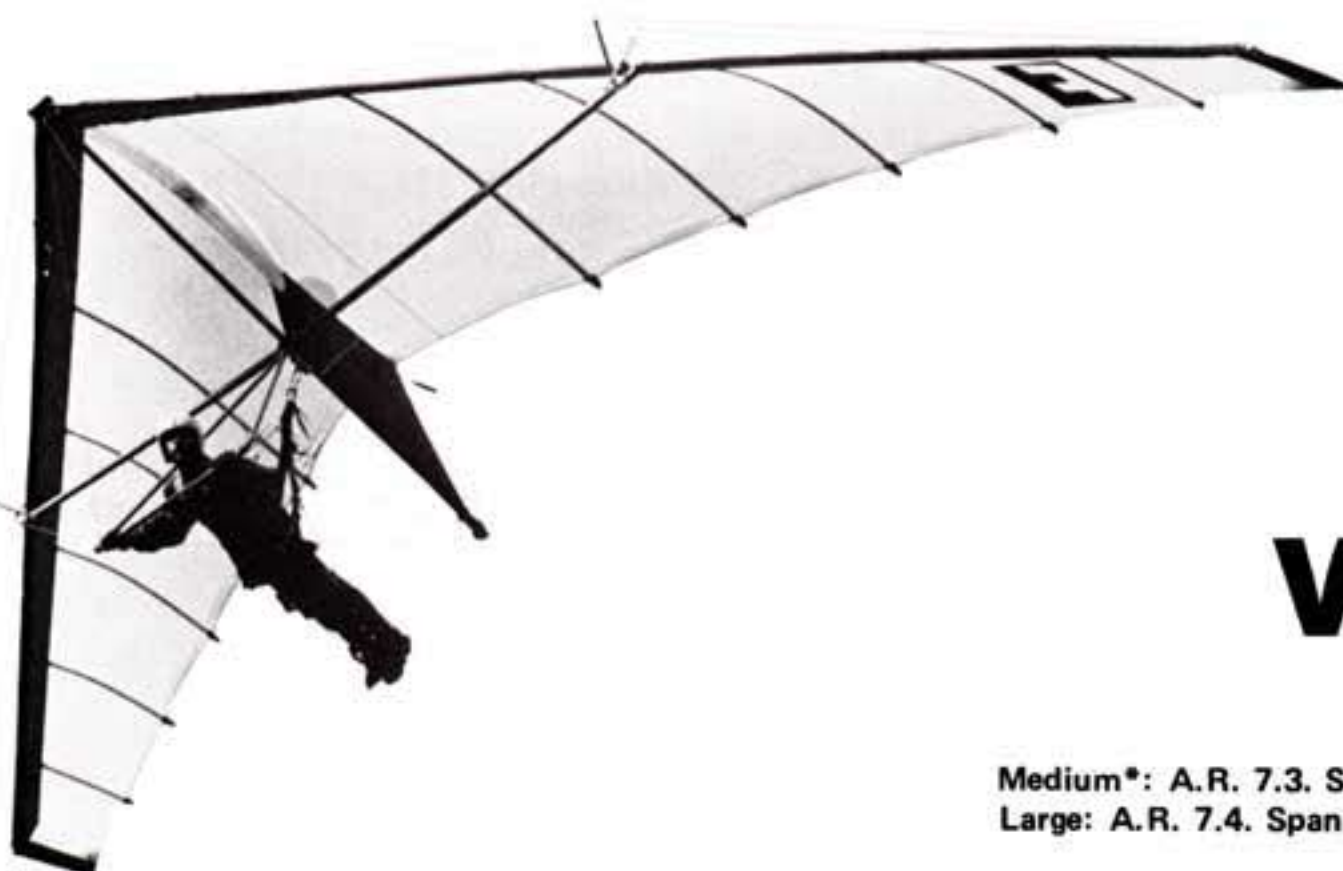
"I've been making the pendants in three sizes because some of the girlfriends and wives of flyers have wanted smaller designs, while the flyers themselves seem to prefer larger ones," he said. He makes them all with matching chain.

He intends to produce gold and silver badges, which will be exactly like the pendants except there will be a pin instead of a chain. Meanwhile he has one ambition, which is to produce a three dimensional model in silver to one-twelfth normal scale.

This would mean each boom would be about a foot long—the maximum size that he feels could be coped with. The finished model would cost about £1,000 and would be ideal for trophy use or some special award. He is looking for a sponsor so that he can start work on it—any offers?

Footnote: All products are available from Jeannie Knight, 10 Spring Gardens, Washington, Sussex. Prices are: Gold-Pendants, large £35; medium £33; small £30. Charms £15. Silver-Pendants, large £10.75; medium £10.25p; small £9.75p. Charms £5.50p.

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*27 miles G. Snape (NSHG) Sept. '78. 1st L/D Knockout, A. Williams, Mere, Aug. '78.

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V



Falcon V

Designed for the beginner through to intermediate and is a slow flying easy to handle, easy to land glider that puts the fun back into hang gliding.

It sports a cambered sail (no wing wires) with billow shift to allow you to float around the sky with ease a completely anodised air frame with defined tips that can be rigged either seated or prone without any fuss, ideal for the beginner, essential for class 1 competition pilots. The Falcon V comes in 2 versions, a full length glider and a breakdown version folding to just 2 metres, that's just over 6ft. for even easier transportation and storage. The Falcon V is simple, neat, and complete.

Dimensions

Leading Edge	18'7"
Keel	12'0" Effective
Area	190 sq.ft. 17.65 sq.mtrs.
Sail Billow	2°
Weight	46lb 20 Kilos
Nose Angle	102°
Span	28'6" Aspect Ratio 4.45

Air Mail

Dear Garth,

Mark Woodhams' letter in the last issue raised points that I would like to answer.

In spite of Councils wish to hold a public event at Mere in August several factors were against this. Two vital car park fields were sold during the year and their availability for our use was not guaranteed. They were needed as they were alongside the only part of the site (S-NW aspects) available to us. The best slopes (NE to NW through South) in the rifle range bowl could not be used as the fields below were planted with maize which is harvested in October.

A public event is primarily to raise money for the Association. Currently it costs £5,000 to stage one and this amount is at risk especially if the weather is bad or the winds are from the wrong directions.

No sponsor was forthcoming and Council reluctantly decided there was no justification for risking a large amount of the Association's Funds. This decision was taken only when the deadline, beyond which there was insufficient time for preparations to be completed, had been reached. The facilities that had been provisionally booked were cancelled.

I have organised three public events for the B.H.G.A. and in doing so have gained the impression that they are only popular with a few members. This being because the emphasis has to be on keeping the public happy with the welfare of members and competitors a secondary consideration.

Mere '78 was therefore staged as a members only event and the mood was relaxed and friendly. There were no hassels over, Toilets Toilet Cleaning, Car park manning, Road blockage, Policing, P.A. breakdowns, litter and all the other problems that arise when thousands of people attend. It is unfortunate that only two manufacturers accepted the offer of free display service.

The arrival of Atlas Express and their sponsorship offer came after it was too late to complete the necessary preparations for a public event. A non public event, such as the League Final, required no advance advertising or posters. The time needed for poster design, printing, distribution and display was therefore not a factor. Neither was it necessary to book a P.A. system, Toilet units, or do the 101 other things necessary before

a public event.

The B.B.C. have a policy that they only cover public sporting events but in spite of this they were persuaded to send a "Grandstand" team to the League Final. I don't think that there can be any doubts that the highly prestigious film that resulted was the best publicity we have yet had on T.V.

Chris Corston,
Secretary BHGA

SCOTLAND

Dear Garth,

With reference to recent correspondence in your columns re the development of our sport in Scotland I would like to present some of my own views which are shared by a large number of fliers up here.

My philosophy on *ab initio* training is that it should be *safe* and *good*. I see no substitute for safe methods and no unfaier way of introducing newcomers to the sport than to give them inferior tuition. Only by ensuring that tuition is only provided if it satisfies these criteria can we hope for a secure future for our sport. This is obviously BHGA policy also as we employ a full-time officer, one of whose duties is to maintain a high standard of tuition and safety in the registered schools. The many excellent, professional schools that this policy has fostered all over the country amply cater for our training needs. The costs are reasonable and compare very favourably with other sports. I certainly do not subscribe to the view that hang gliding is the form of aviation you go into if you can not afford the others. It is a sport in itself with its own attractions, only one of which is its cheapness.

The intermediate (ie. post-EPC) pilot is often said to be on his own but, at least in my company and that of my usual flying companions, this is not so. Any new (or old) pilot who needs help or advice need only ask us. Only a fortnight ago we taught two pilots new skills, top landings and prone flying. The BHGA Pilot Rating System is designed to aid this progress by providing a guide to the compulsion to enter it and any pilot who wishes to stay at one particular level of proficiency is perfectly at liberty to do so. As

well as exchange of information on flying technique news of new equipment and safety matters are spread this way.

I feel that most, if not all, of the problems of Scottish hills are or have been caused by insularity of clubs, individuals and Scotland as a whole. Opening up to other fliers, clubs and countries and the subsequent interchange and spread of knowledge will alleviate and/or eradicate them. I have personally tried to do this and have encouraged my friends to do so also. We are starting to see results and will continue to do so. I suspect that similar problems exist down South but with the larger numbers and events such as the League they are probably not as acute as here where you can usually fly for most of the time without another soul in the sky.

"WINGS!" provides a vital part of this communication and I know that I look forward to it every month. I often look through back copies for technical articles when I want to mug up on a particular subject and usually find most of the information I want. May I take this opportunity of wishing you every success as the new Editor. Long may contributions pour through your door!

David H. Squires
Chairman, Scottish Sailing
Association

P.S. I was delighted to see Mark Woodhams of Brighton offering to run the 1979 Nationals. May I wish him every success in the venture.

CENSORSHIP?

Dear Garth,

With the appointment of a Council Member as Editor, perhaps the general membership now regret the folly of rejecting my motion of some 3 years ago, wherein I proposed that certain Officers of the Association be elected by the general membership rather than appointed by the Council.

In the past, under all previous editorships, we "dissidents" have always been afforded a fair amount of space in the magazine in which to air our views. I have no reason to suppose that this will not continue under the editorship of Garth, who I am sure will be able to wear his two hats on different days with equal justice. BUT, a very dangerous precedent has

been established, and the "government" have now achieved total control of the "press".

Since Wings! is the only medium for the dissemination of hang-gliding news and views on a National scale in this country (unless one goes to the trouble and expense of obtaining Stateside publications), I think it essential that the editorial office should remain free and independent. Otherwise, added to all the Ratings and Certificates and Approvals with which we are already burdened, it will lead to

such ns accelerating exodus from the ranks that very shortly it will be all Chiefs and no Indians.

How about it Garth? In all sincerity, can you really remain on the Council?

Tommy Thomson
West Drayton, Middx.

IGNORANCE ISN'T BLISS

Dear Sir,

Reverting to your request that you be advised of all proposed new flying sites, in order that the Air Ministry be notified of the possible hazard, I should like to relate an incident that casts some doubt on the effectiveness of such procedure.

On Monday, November sixth, I was on the pimple at Malvern's Castle Morton site with a friend and our two kites. Very approximately the time was 12.30 p.m. and the wind was 14-16 m.p.h. south easterly. We had finished rigging and were standing discussing conditions for an attempt to soar the rather marginal (for standards) lift when we were startled by the sudden noise of a jet engine. We turned round just in time to look down the intake of a small military jet as it rose over the hill to overfly us at about 100 ft. above our heads and within 50ft. laterally and travelling fairly quickly (certainly in excess of 200 knots). It then dipped down over the common and vanished into the south east so low down that we were able to view the far horizon considerably above it.

Now this site is well established and presumably the Ministry have long known of our activities there, but had a kite been airborne at this time the surprise and turbulence would almost certainly have caused an accident. Had anyone been soaring I very much doubt whether either pilot would have seen the

other in time to avoid a collision.

I have first hand experience of the severity of such turbulence since I once wrote off a radio controlled model glider in an almost identical incident with a Phantom on the edge of the Radnor Forest. The model was fully acrobatic and much more able to cope with strong winds and turbulence than any hang glider, but in spite of it being some 200 ft. above the Phantom I was totally unable to maintain control of the six foot model which was snatched into the slipstream and flung into the side of the hill.

Returning to the recent incident, it is unlikely that the pilot was lost, since flying a jet at these altitudes would seem sufficiently hazardous that even the most foolhardy would go back "upstairs" immediately they were less than certain of the situation. This suggests to me that the flight was carefully planned and officially approved, in which case inter-departmental communication has failed to advertise our activities or we are considered too insignificant to care about. In either case I feel we should pursue the matter since otherwise when the inevitable tragedy does occur "we" already judged irresponsible dare-devils by the press, and not "they", the all powerful military, will be the villains of the piece and natural scapegoats.

J. Worrall
Stourbridge, West Midlands

The dangers from low flying military aircraft at Castlemorton have been known for years. Air Ministry certainly knows of our activities there and the RAF do not include Castlemorton in their low flying route at weekends. If you choose to fly there on weekdays there is an established procedure for warning the RAF of your presence—believe me they want to avoid you as much as you want to avoid them—so get "clued-up" on the site rules.

DOVER AND FOLKESTONE

Dear Sir,

Further to Ivor John's very complimentary article on the Dover and Folkestone H.G.C. I would like to elucidate on a couple of points for the benefit of visiting fliers.

Firstly, although the situation at our Crete road site has eased this must still, unfortunately, remain a 'members only' site.

Secondly, flying at the Warren, whilst unrestricted by the club, does not meet with the approval of British Rail whose main line runs at the bottom of the cliff. Although apparently unable to prevent us from using their airspace "with flying apparatus attached to our members" (their words, not mine) B.R. insist that if we land on their property and are not electrocuted or run over by a train we will be prosecuted. As if this were not enough, at high tide there is very little landing area accounting for two deep water landings recently, one nearly fatal.

This letter is not written to deter visitors but merely warn them of some of the problems to be encountered. As Ivor said, any visitor will be made most welcome but please bear the latter points in mind as an accident of any nature can only do harm to our delicately-balanced reputation.

Derek Austin,
Chairman D.F.H.G.C.,
Lympne, Kent

USSR DEATHS

I just return from Crimea, where was since 12.5.1978 and thank you very much for your letter from 22.5.1978, "Wings!" and other very useful information

about orders of British Hang Gliding Association.

During last months we had two fatal accidents on 24.8 and 12.9.1978. Both accidents took place during soaring on mountains of Planerskoye in the Crimea, finishing stall with experienced pilots, who had over 250 flights. The first was Alexander Duchovskoy of 26 from Minsk, the second was Andrey Radzivill of 33 from Lvov.

In this year it took place some more 5 fatal accidents, incl. col Vadim Yegorov. We are also getting far too many serious injuries including my own. The second of them was in the middle of July, when because of two broken left ribs I began flying only 9.9.78 (being in hospital 11 days, owing to starving during one week for rapid recovery. Do you know about this method?).

I send you the newspaper "The victory" with the article about the beginning development of Hang Gliding in the Crimea. There are many nice mountains there, where we'll be to fly together with you and other fellows—pilots from England, US, etc in nearest future.

Yours sincerely
Konstantin Kobizev

THANK YOU

A special word of thanks to several members of the Dover and Folkestone H.G.C. On a recent visit to the club's coastal site (Warren Road) my lack of flying experience landed me in the sea. Release from the glider was quite quick but there was no chance of towing the kite ashore as the sea was rough and my clothes water logged. I swam to the sea wall where I found a number of helping hands. After several attempts to retrieve the glider I gave up seeing it again in one piece. I

made up my mind to dash home for dry clothes and come back at low water for the wreckage. On my return I was amazed to find half a dozen smiling faces waiting for me with glider fully intact. Apparently they had spotted it just before dark. Many thanks to Derek, Ann and son, Peter, Robin and especially Andy who actually rescued the kite, one of the most helpful and friendliest groups of people I have every met.

Peter Cook,
Gillingham, Kent

MORE ON MERE

Dear Sir,

I would like to make an appeal to the powers that be, in order to get "Mere" reinstated to its original form, with a few added attractions. Namely, have it on a Bank Holiday, so more people can attend, and get all the League flyers there. "Mere Open Championship" was the only event which brought together all aspects of hang gliding, and it was an event at which Mr. Nobody could enter and try his skill against the top boys. If he beat a few he was on "cloud nine" for the rest of the year. But most of all the top boys gave us a lesson in flying, which we are denied just now as the public are not allowed at League meetings (sadly).

There are not many sports in this country that do not have an Annual get-together. So come on—think of all members of the BHGA not just the chosen few. Remember, we all helped to make the BHGA possible.

Terry Aspinall,
N.H.G.C.,
Saxmundham, Suffolk



**Malvern Club Invitation Day
October 21st 1978**

One of the recent events in the Malvern Club 1978 calendar was an 'Introductory Day' for would-be hang-glider pilots.

Invitations had been sent out to around twenty people, who through Club members, friends and other contacts, had expressed a desire to see the sport at close hand and to 'have a go' under supervision and without obligation. The hopefuls were invited to phone the Club Chairman, Theo Willford, early on Saturday October 21st - and, if the weather was okay, the event would be on that day. If not, we would repeat the procedure the following day, Sunday. As it happened the forecast on the Saturday sounded encouraging, promising 12-15m.p.h. south-westerlies, and so the event was on.

All assembled at a local hostelry outside Malvern (unfortunately before opening hours) and then made their way to a small training slope between Worcester and Hereford. One or two cars bearing hang gliders and proceeding through narrow lanes and isolated villages is almost guaranteed to attract attention - but when there are about fifteen.

The queue arrived outside the vast and crumbling Georgian Farmhouse belonging to the Landowner, only to find that a shooting party were out on the hill that day. After a hurried committee meeting it was decided that the two sports were unlikely to mix and the queue moved on to site number two. This proved

to be suitable and more important, available, and we unloaded our gear.

The weather forecast turned out to be optimistic, the wind speed being less than the promised 12-15 m.p.h. Thistledown released at the top of the slope made a discernible movement upwards. The gathering were given an explanatory talk on the principles of the hang glider, the construction and why it flew - and all were invited to pick up one of several 'standards' available and let them freely on the flat before the serious business of harnessing some in. No one was forced or cajoled into "having a go" against his or her better judgement but six volunteered and were pulled down the slope on the wires until they felt confident enough to go it alone. Had there been any breeze at all, we had planned to start the function with tethered flight but this was clearly not on.

At the end of the day we finished with a number of completely 'knackered' wireman, a slightly less than straight A frame, and six jubilant trainees who had somehow or other managed to fly - albeit in some cases just two or three feet above the ground.

An added bonus was provided by the B.B.C. during the lunch break. Our event coincided with the 'Grandstand' coverage of the League Finals, and we all stood around John Bevan's portable T.V. to watch, giving the newcomers an insight into what might be in store for them if they persevered. Hope it didn't put them off!



A range of fairings designed to streamline the cross boom and king posts of most gliders has been introduced by the Dunstable Hang Gliding School Ltd. Manufactured from tough plastic sheet which resists impact and abrasion, yet has a very low weight, the fairings can, with care, remain attached to the glider when de-rigged. Cross boom fairings have a 7½" chord and cater for diameters from 1½" to 2". King post section is 5" and can accommodate 1" to 1½" tube. Sections are 4' long for cross booms and 5' for king posts. Attachment is by pressure-locked plastic clips engaging on tabs on the ends of the section and preventing sliding or rotation.

Theoretical tube drag reductions of 90% at normal airspeeds are claimed. Normal retail price per set is £18.00 but the Dunstable School is offering free sets with all new gliders because they believe pilots are "sceptical of the advantages of streamlining". Fuller details from 55 Spring Lane, Gt. Horwood, Milton Keynes. Tel: Winslow 2086 or Hitchin 52103.

(We'll test these and let you know our views if they let us have a set - Ed.)

**ULTRA
SPORTS**

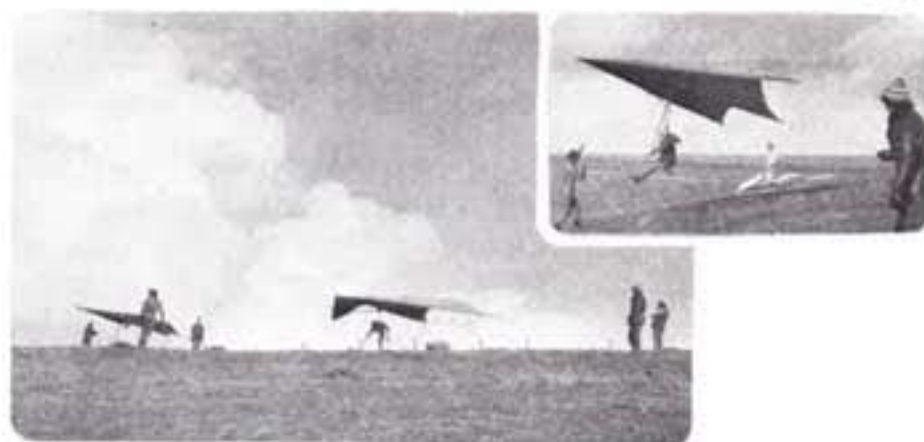


CRASH HELMET

Lightweight, stylish and designed specifically for hang gliding.
£14.00 including VAT.

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BHGA Registered, using CAA approved radios, Static and Gliding tether, Keel assist, Dual soaring; and running two-day and four-day courses for novices to Elementary certificate/Pilot 2. One-Three day soaring and top landing courses to Pilot Badge/3 level - reduced rates for glider owners. Refresher courses at all levels available at special rates. We are 8 miles from M4/Exit 15.



small ads

For your own safety, if you are purchasing a second-hand glider, check that it is a registered BHGA model, see it test flown, test fly it, and inspect it thoroughly for damage or wear to critical parts. If in doubt seek advice from the Club Safety Officer.

All small ads should be sent to Lesley Bridges, Commercial Editor, Wings, Yard House, Wentnor, Nr. Bishops Castle, Shropshire. Ads sent to any other address will be redirected and therefore delayed.

21ft. CLODBASE DE LUXE. Excellent condition, chordwise battens with superb sail. Beautiful machine, outflies Falcon III's etc., and a good deal cheaper. £250. Chris Martfield, Brighton 503783.

HIWAY SPECTRUM—small. Bright multi-colours. B bar and seated harness. Almost new. £450 Returning to Aussie. Tel. Wentworth 2691 or 3427

ELECTRA FLYER OLYMPUS 160. Bought in USA, never flown. Superb high performance cross-country machine. £550 ono. Also Price harness and 1 BALL 500H & 1 THEOTEK vario. Plus unused WINDHAVEN parachute. please contact Claudio at Lancaster University, Tel. 65201 Ext.4619, Room No. D75.

WASP C4, green, yellow, red. Ideal for beginner, very forgiving, with seated harness. £100 Tel. Corsock (06444) 267 S.W. Scotland.

Brand new SUPER SCORPION C, only flown once. Colours are the same as shown in the Hiway colour ad shown in May Wings! £510 ono. Phone between 9.30—5.30 Ecclesfield 64800.

Brand new HIWAY

prone harness £35, THEOTEK vario £55 ono, PARA VENTURE flying suit red with white stripe £20. To fit person 5' 10" tall. Phone Ecclesfield 64800 between 9.30—5.30.

1978 HUSTLER 210ft. Coloured sail, excellent condition, flies well. £300 ono Leigh Sinton 32880

MIDAS C white sail with stars. £195. Telephone Barry Holloway, Bicester 2718 (evenings)

SST 100 C White, yellow, green. Condition as new. Financial circumstances force sale £400 o.n.o. Tel: Lynn, 025882 (Marnhull) 383.

Galaxy Flier Helmet now with the new British Standard 5361. £16 plus £1 p&p. Frank Acton. 53 Royston Park Road, Pinner Middx. HA5 4AB Tel: 01-428 2686

IDEAL CHRISTMAS PRESENTS 'T' Shirts. Sky riding hang-gliding motif around hang glider printed in royal blue on quality white shirt. Special clearance price (only 150 left) £1.65 each or £3 for two including P&P.

B.Judson, 28 Hawthorn Road, Woking, Surrey **VECTOR** — medium size. Pleasant colour scheme. Very good condition. Factory overhauled. £420 inc. bag. Flexiform skysails, 061-707 1389. Also second hand spirits from £280.

PHOENIX 6B. White with keel pocket. Offers around £300. Phone Dudley (0384) 231686.

ELECTRIC VARIOMETER WITH AUDIO. Lightweight (back) parachutes. Miniature Barograph. Contact flow technology 2000, 126 Welham Road, Malton, N.Yorkshire. Tel. Malton (0653) 2469.

IDEAL CHRISTMAS GIFT. A year's subscription to Glider Rider, the world's finest hang gliding publication with up to 75 pages monthly, of news, views, tec tips and power info. Send £14—(Airmail delivered) to Scot Kites, 19 Camphill Avenue, Glasgow, G41 3AU.

GRYPHON III Break-down model excellent condition. Beautiful flyer 6 months old. £550 o.v.n.o. Tel. 01-856 4722 working hours.

PHOENIX 6B/6c copy. Fully approved and registered. Outstanding handling combined with excellent performance makes it suitable for

pilots from elementary to advanced. Good condition. £255. Mike Batchelor. Thornbury 414729

SCORPION B white with blue leading edges £300. Phone Howard Pentith, Swansea 25678 ext.7059 or leave message at ext. 667. **PHOENIX 6B.** excellent flier made even better by uprating, keel pocket, re-worked sail etc. interested? Phone Dave on Mansfield 34002.

HIWAY 220. Excellent condition, complete with seated harness, also carrying bag. Ideal for beginner. £80 Tel: Stevenage 61393 after 5.30 p.m.

'Dragon Hotel' Crickhowell, Central for all South Wales best soaring sites. Already popular with hang glider pilots. Tel: Crickhowell 810362.

Spirit, Vector Skyline. One of our gliders is right for you. Contact us first, for the best. Flexi-form Skysails. 061-707 1389

HIWAY CLODBASE DE LUXE (20ft) for sale. Good condition, multi-coloured sail. Handles and soars well £250. ono Also HIWAY 220 standard. £100 ono. 5 Ridgway Place, London SW19 4EW

BREEN CUSTOM KITE (large). Best offer required. Graduated to Super Scorp. Ring Tony Booth on Nottingham (0602) 603938 **Bargain. WASP FALCON III**, beautiful condition, beautiful colours, very good soarer. Only nine months old. Complete with bag, spares and AGV helmet. Only £290 Phone Freddy 01-589 0656

FLEXIFORM SPIRIT. Large size. Good soaring intermediate glider. £280. John Slack, Disley (Cheshire) 4189 before 6 pm.

SUNSPOT, large, 10½ stone up. Red on white, good condition, always on or near the top. The best of intermediates? £340 ono. Also ICARUS V plane, unused £8. Scarborough (0723) 582108

MIDAS E in beautiful condition. Superb all-round kite. £325 complete with preformed battens and seated harness. Tel. Ashtead 74041.

MOONRAKER 77. Excellent condition with all white sail and gold anodised frame. Great sink rate with 'Go places' L/D. C/W

bag. Will rig seated or prone. £325 ono for rapid sale. Tel. 031-443 8925

Black ARION, in very good condition. Very forgiving, and has soared for hours. Suit pilot up to 10½ stone. £80 ono. Contact Lorraine Evans, Suckley 341 or write Flat 13, 20 Lansdowne Place, Cheltenham, Glos.

SCORPION B including B bar and Hiway seated harness. Perfect £380. MIDAS SUPER E only flown 3 times. Genuine mint condition. £395. Ring Chesterfield 451803.

HIWAY SPECTRUM. Prone rigged with B-bar and seat, for pilot weight below 11 stone, flown four times. £425. Medium SPIRIT with harness £220. ARBEE audio vario £25. Phone Judy Gilbert, Doncaster 855700.

McBROOM ARGUS. Yellow/red. Good, forgiving glider in excellent condition. Would suit hard-up beginner. £50. Phone Lesley or Paul at Linley 322.

AMPLIFIER aerobatic hang glider kit. 140° nose angle, 28" wing span. 60p each. Also simplifier standard 40p, or one of each 80p. Prices include P&P. Send to R.Keddie, 41 Townsend Pl., Kirkcaldy, KY1 1HB.

There have now been 12 issues of "A4" Wings! You will appreciate them even more if they are bound in a dark walnut simulated leather Wings! binder with gold blocking on spine and motif of hang glider on front. £2.95 for A4 (Hang Glider also fits). £2.50 for A5 (original Wings! and Club magazines). Livingstone Promotions, 2 Timberyard Cottage, Herstmonceux, Sussex.

BREEN 19ft HI-FLI. Beautiful harlequin sail, good condition. Ideal kit for beginner or intermediate flyer. £200 Contact the Welsh Hang Gliding Centre.

Large VECTOR, good all round condition. New 1¼" leading edges recently. £300, must be sold. John North, Tel. 025 485 2578 (evenings) Preston 725943 Day. **BREEN HI-FLI.** 19ft, up to 13½ stone, little flown, excellent condition, carrying bag, seated harness, can be rigged for prone. £190. Coventry 416841.

SUNSPOT, red, white and blue with seated harness, immaculate condition, less than 5 hours, well looked after £380 Blackpool 0253 886183 Dave.

WASP C5. Perfect, quiet, multi-coloured terylene sail. Reversible rigging for prone or seated, plus new bag and seated harness. £180 ono Phone 01-778 2423 evenings or 01-764 7408 evenings. **MIDAS E**, excellent condition, multi-coloured sail, super flyer. Must sell as buying locally made kite, so offers over £300 for quick sale. Test fly this real bargain. Tel. 0278 4513.

WASP FALCON III S (sports model) Excellent flyer, seated or prone. 12 months old. Low mileage. Perfect condition. Very clean. Completed with seated harness and spares. Inspection invited... £310. Tel. Dave, 021-353 5048

SST All white sail. As seen at Parlick. Heavy duty bag. £290 for quick sale. Ian Ferguson, 52 Derby Road, Lancaster, Lancs.

SKYFLITE prone harness, new and unused, blue with screw-gage carabiner. £30.

Tel: Dave Orrock, Stevenage 66561 ext. 219 between 9—5.

GRYPHON III for sale. All white sail. A dream machine for £500. Ring Jim Pedroza, Brookwood (04867) 80033 daytime, or write to 58 Claremont Road, Surbiton, Surrey.

GRYPHON III, 9 months old. This glider won the Northern & Midland Area League, and came second in the Scottish Open, winning the cross country event. £475. Tel. John Bridge 077 473 3186.

WASP FALCON III. Very good condition, has been higher than 2,500'. Carefully tuned for prone. Tasteful colour scheme. £400 inc. extra cross tube for dual, plus other spares. Phone Roger King between 7pm & 10 pm, Weybridge 47177.

GRYPHON 3. Beautiful red, yellow and blue sail. £490 or nearest. 3503 Workington, Cumbria.

DON'T BUY BEFORE YOU FLY!

The Peak District Flight Training School has facilities to enable you to test fly several different models before laying down the cash. All good breeds of glider can be supplied. Part exchange always possible. Second-hand gliders available.

FLEXI-FORM SKYLINES & VECTORS ALWAYS IN STOCK! IMMEDIATE DELIVERY!

Ring 053834 231 or 308 and speak to Alan Hetherington or Malcolm Hawksworth.



Peak Hang Gliding Ltd. Leek
Tel. Blackshaw 308/231

up the glider will yaw to the right. If you pull speed it will yaw left.

There was a fair amount of pretty strong turbulence over Crickhowell and as the glider was being pitched and rolled, I'm sure that the yaw effect was feeding itself back into the other planes. In practice I had to shut down the power and let my reflexes take over; it was too much to try and work out!

TRAINING AND SITES. Minimum requirement for entry into the training Scheme has to be Pilot 2. The Power Endorsement therefore automatically includes Air Law, appropriate knowledge of navigation and meteorology. Theory of powered flight, engine maintenance, pre-flight checks, Code of Practice and emergency procedures are the obvious extra requirements of the theoretical side.

As with all learning processes slow progression is the most effective. The whole

syllabus involves learning how to operate from lower slopes and eventually flat ground—a reversal of initial hang gliding tuition where the student is worked up to *more* height for take-offs. In the interests of hang gliding PHG training will take place generally from new sites, freshly negotiated—chosen (until the advent of quieter machines) for their geographical situation well away from local housing.

Turns with power; mild stalls with half power; 360's full power; half power take-off and climb out from gentle slope; circuit planning; powered approaches; engine failure after take-off; mid-air restarts; take-off full power; all these tasks lead to the ability to operate safely from level ground.

CODE OF PRACTICE. A Draft Code of Practice has been written and is being studied by BHGA Council members and all BPHGC members. Its purpose is to ensure that the training on and the flying of powered

hang gliders takes place in a safe manner and that all cross country flights disturb the public as little as possible and are made within the same Air Law as applies to non-powered and powered aircraft.

IN CONCLUSION. There are as many aspects to Powered hang gliding as there are to Hang Gliding and we can't discuss them all this month. The main thing is that the Club is a member club of the BHGA. This means that those interested in powered hang gliding today can benefit from the work that has been done and the lessons that have been learnt during five years of active hang gliding in this country. Whatever we may sometimes feel, a great deal has been done over these years to establish the sport against what has often been very strong opposition.

Let's hope that none of us forget that.

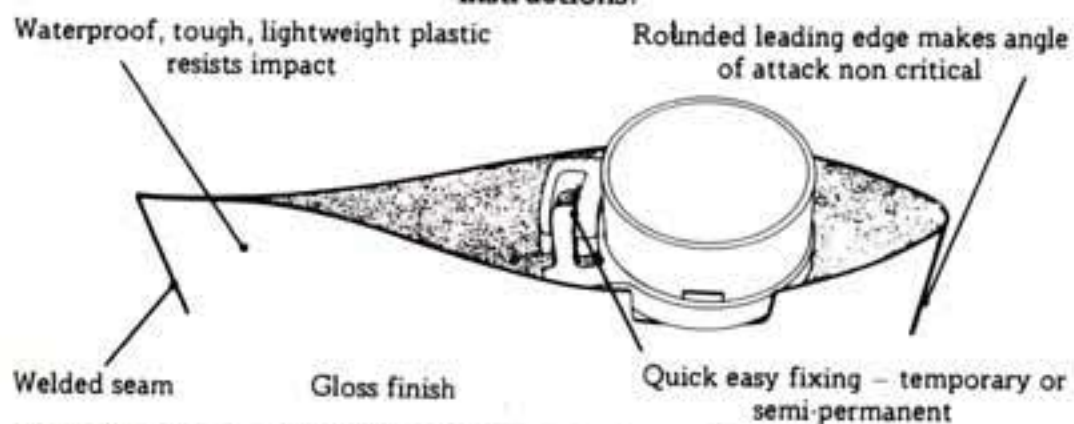
Ashley Doubtfire
Marlborough, Wilts.

GRYPHON III superb condition, hands off tune, flies beautifully. £420 ono. Hitchin (0462) 52103 after 6 pm.
22ft.SPIRIT with pulley system. Yellow

and green. Excellent condition. 6 months old, tuned well. Ideal 11-14 stone. £300
Phone John Wilkinson, Nottingham 0602 205435.

Dunstable Hang Gliding School Limited

At normal flying speeds the drag produced by king post and cross boom on modern hang gliders represents between 10% and 15% of the total drag; at higher speeds a great deal more. Fairings which streamline the flow around circular sections reduce that drag to less than one-tenth. That means a 9:1 glider becomes 10:1, and top speed increases. Practical trials on two otherwise identical gliders have proven that the advantages of fairings are astonishing. Dunstable Hang Gliding School produce high quality fairings suitable for cross tubes up to 2½" and king posts to 1¼" available in 4 x 4' lengths complete with fittings and full instructions.



Complete set comprising 4 x 4' cross boom sections and 1 x 4'6" king post section plus all fittings and instructions **£18.00 inc VAT**

Howard Edwards
55 Spring Lane
Gt. Horwood
Milton Keynes
Tel: Winslow (029671) 2086

Dave Simpson
13 Portman Close
Bedford Road
Hitchin, Herts
Tel: Hitchin (0462) 52103

POWERNATICS - JOIN THE BRITISH POWERED HANG GLIDING CLUB

FULL MEMBERS £8.00

Open to B.H.G.A. members who have flown a powered hang glider.

ASSOCIATE MEMBERS £3.00

Open to anyone else.

Apply to:

Jonny Seccombe,
34 Nevern Place,
London SW5 9PP
Tel: 01-370 5177

WELSH K.O. DISTANCE EVENT/ DECEMBER 16th, 17th 1978

The South West Wales Hang Gliding Club has organised the 1978 Welsh Distance Event which will be held on December 16/17th. This year entries have been restricted to the top 8 manufacturers, as outlined below. This should provide for a spectacular, entertaining (and, of course, competitive) weekend. Any W.H.G.F. Club member interested in coming to South West Wales for that weekend to watch or fly (uncompetitively!) will be most welcome.

As in previous years the ties will be flown over a simple straight or "dog-legged" distance in a limited time. The first round place allocations ensure that each major manufacturer has his entries fairly spread.

The event will be based on the Countryman Hotel, Scurloge, Gower. First briefing at 9 a.m. on Saturday December 16th. The Hotel have assured us that there will be no repeat of last year's poor service over breakfasts etc. and they are fully alerted to our requirements. A room has been reserved (with bar) on Saturday evening for a film show (America's Cup, Kossen and League Final) followed by an informal "Christmas Party".

An Open Event will be held in the Spring of 1979 in the South West Wales area. The arrangements have yet to be finalised, as soon as they are a notice will appear in WINGS!

Manufacturer Allocation of place numbers in first round

Birdman	2	8	14	20	26
Chargus	3	9	15	21	27
Flexiform	4	10	16	22	28
Hiway	5	11	17	23	29
Skyhook	6	12	18	24	30
Wasp	7	13	19	25	31
Moyes	1				
Wills	32				



Vortex 120 being flown by Heinz Dörler at Cossen, Austria

Chargus/Vortex

The 'VORTEX' 120 heralds the advent of a new breed of high performance hang gliders and incorporates two totally unique features, 'VORTEX' generators and a permanently attached minimum washout control, known as the 'Bow String'. The 'VORTEX' takes a step up in performance and a step down in cost/complexity. No wing wires mean no tuning problems, the tuning is built into the sail and stays there.

Although aimed at the intermediate/advanced market, EPC holders will readily take to the 'VORTEX' 120 with its light/coordinated pitch/roll control, stable slow landings (one of the benefits of 'VORTEX' generators) superb sink rate and a very wide speed range ('VORTEX' generators make possible the use of an efficient elliptical plan/form with its inherent low induced drag).

Dimensions	120
Span	32 feet 8 inches rigged
L/E	19 feet
Root Chord	11 feet
A/R	5.23
Billow	.68
Area	204 square feet
Knock Down length	13 feet
Normal packed length	19 feet 1 inch

Cost

'VORTEX' 120 — £465.00 including bag and VAT

Delivery

3-4 weeks upon receipt of £100 deposit.

The following items are supplied at no extra cost

Fully anodised Air Frame — Quick knock down facility — Push Pins — Fibre glass tapered battens — Howe and Bainbridge sail material. Fully zipped bag

Chargus Gliding Company Limited,
Gawcott, Buckingham, Buckinghamshire.
Telephone Buckingham 028 02 4321