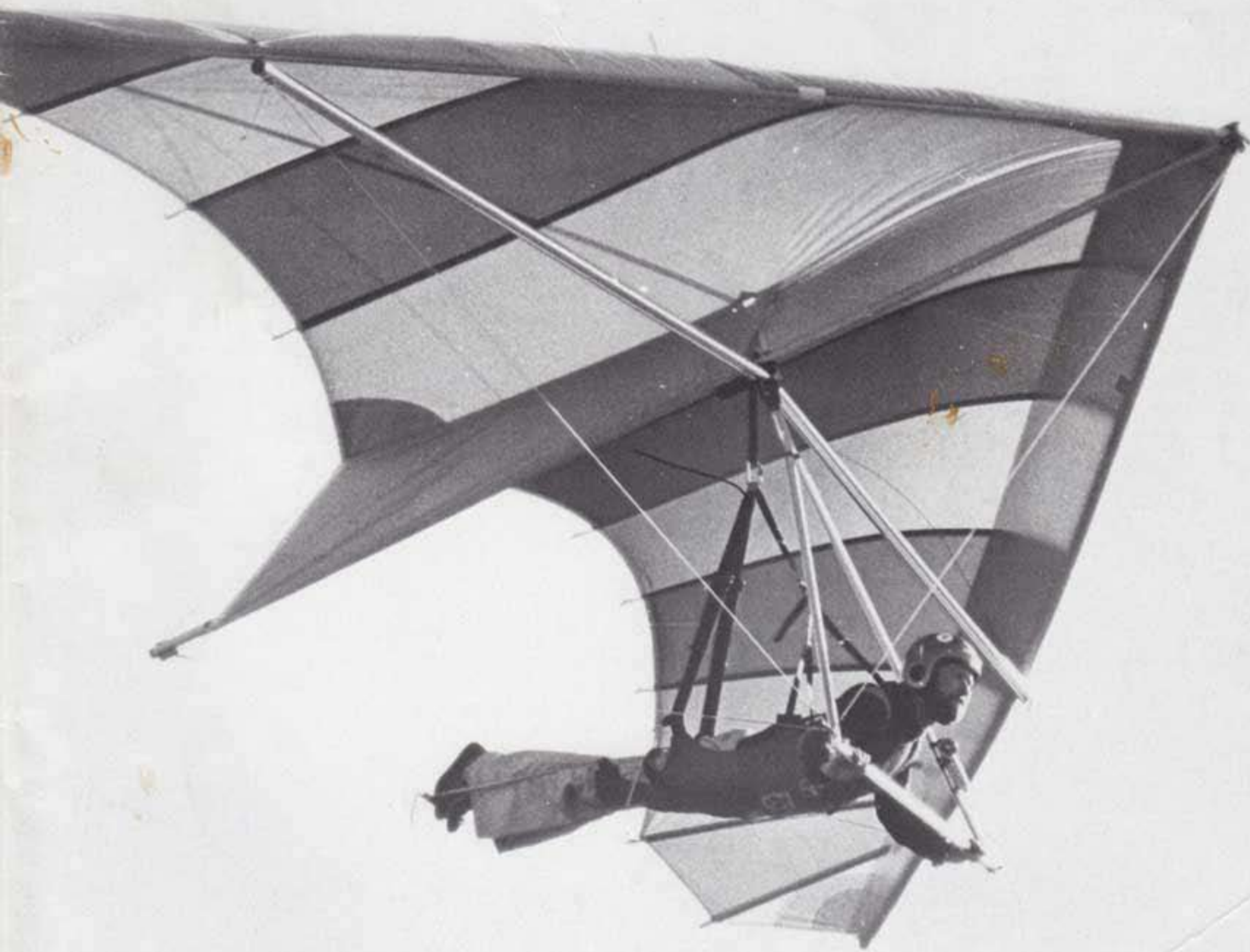


WINGS!

JAN/FEB 1979

MAGAZINE





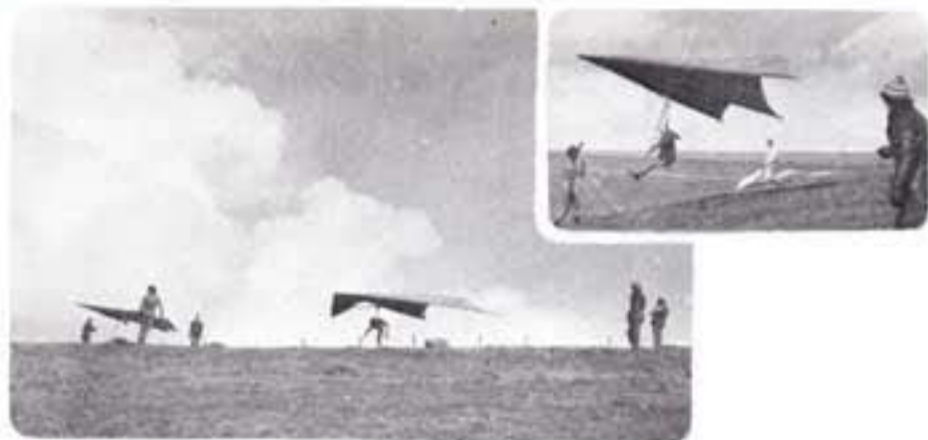
Where else can you get the high performance and quality of a **Vortex 180** for as little as £465 including VAT and bag

The only **really advanced glider** that can be enjoyed by flyers of all skills

Chargus Gliding Company Limited
Buckingham 4321

Richard Kenward Photography

Flying comes easy



at Ashley Doubtfire's

Tel: 067-25-3021

Birdman Flight Training School

MILDENHALL

MARLBOROUGH

WILTSHIRE

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.



OPEN 7 DAYS A WEEK

mainair sports

presents

The Mitchell Wing

With all this talk about power going round, it's not surprising that the more cautious pilot is hanging back from the power scene for the time being. The sort of questions you are probably asking are: Can hang gliding and power survive the safety requirements? Will flexwings under power prove a safe combination? What are the limitations of flexwings under power?

We at Mainair Sports are also keeping our eye on developments and feel that power is soon going to become a major part of the ultralight flying community. Despite our enthusiasm for power, we won't be offering power units for sale until safety requirements have been clearly understood.

We aren't however turning a blind eye to the future because we can now offer plans and kits for the fabulous MITCHELL WING, happy in the knowledge that when power does come to stay we will have the right wing for the job - rigid construction, three axis controls, high speed max. glide etc.

The reputation of this world renowned wing has preceded its use, not least by record making cross country flights. What better recommendation can there be. If your imagination is fired by the thought of owning the world's highest performing foot launched hang glider (to the best of our knowledge) then you will probably want to know more.

Send £2.95 for a complete information pack (fully refundable against purchase of kit or plans)

Full set of plans, instructions and blueprints £48.00

CGS  **Chiltern Glider Supplies**

MAIN AGENTS FOR;

ELECTRA FLYER (Scot-Kites)

Olympus 140, 160 and 180 £614

Cirrus V in four sizes £560

NEW Intermediate Nimbus now available POA

CHARGUS GLIDING CO.

Vortex 120 £460

Cyclone (Pilots only) £590

ECLIPSE GLIDERS LTD.

Eagle II in two sizes £405

Super Eagle - single deflexors £433

ACCESSORIES

CGS Instrument Pods; two types available. Fitted with Air Speed Indicator, Audio Visual Vario, Altimeter, Compass and Stop Watch... P.O.A.

Instruments by; ArBee, Diplex, Bolam, Theotech, Sunto & Ball.

Helmets; Britax Roma and the Everoak.

Harnesses; Proneweb and Proneweb 'S'. Arriving soon; the strongest Prone Stirrup Harness available.

Parachutes. Back up hang point straps.

Kite Boots made in half sizes.

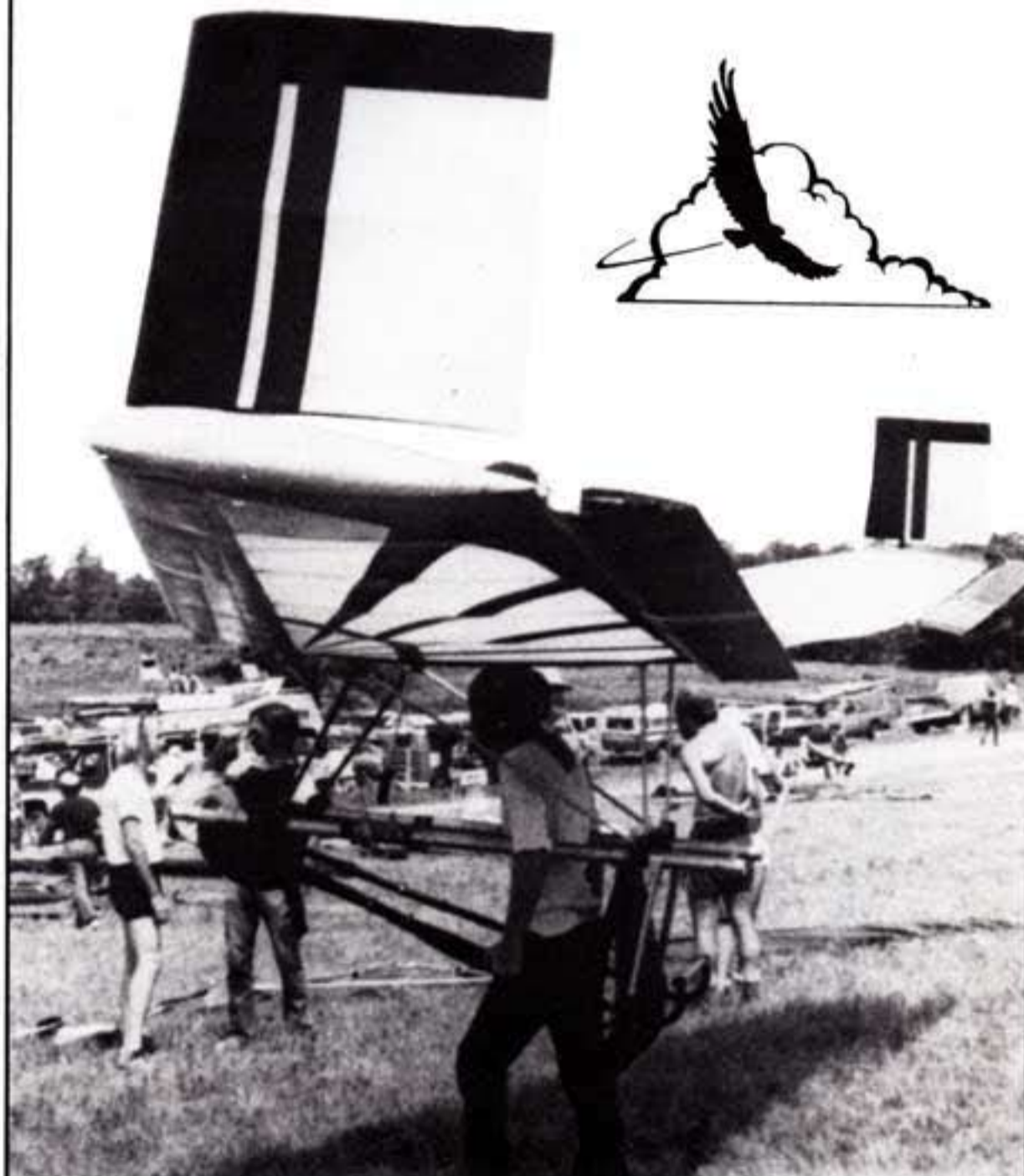
New Parra Boot, very light and comfortable.

Spares always in stock.

SECOND HAND KITES

Stock always changing. Phone for details or call...


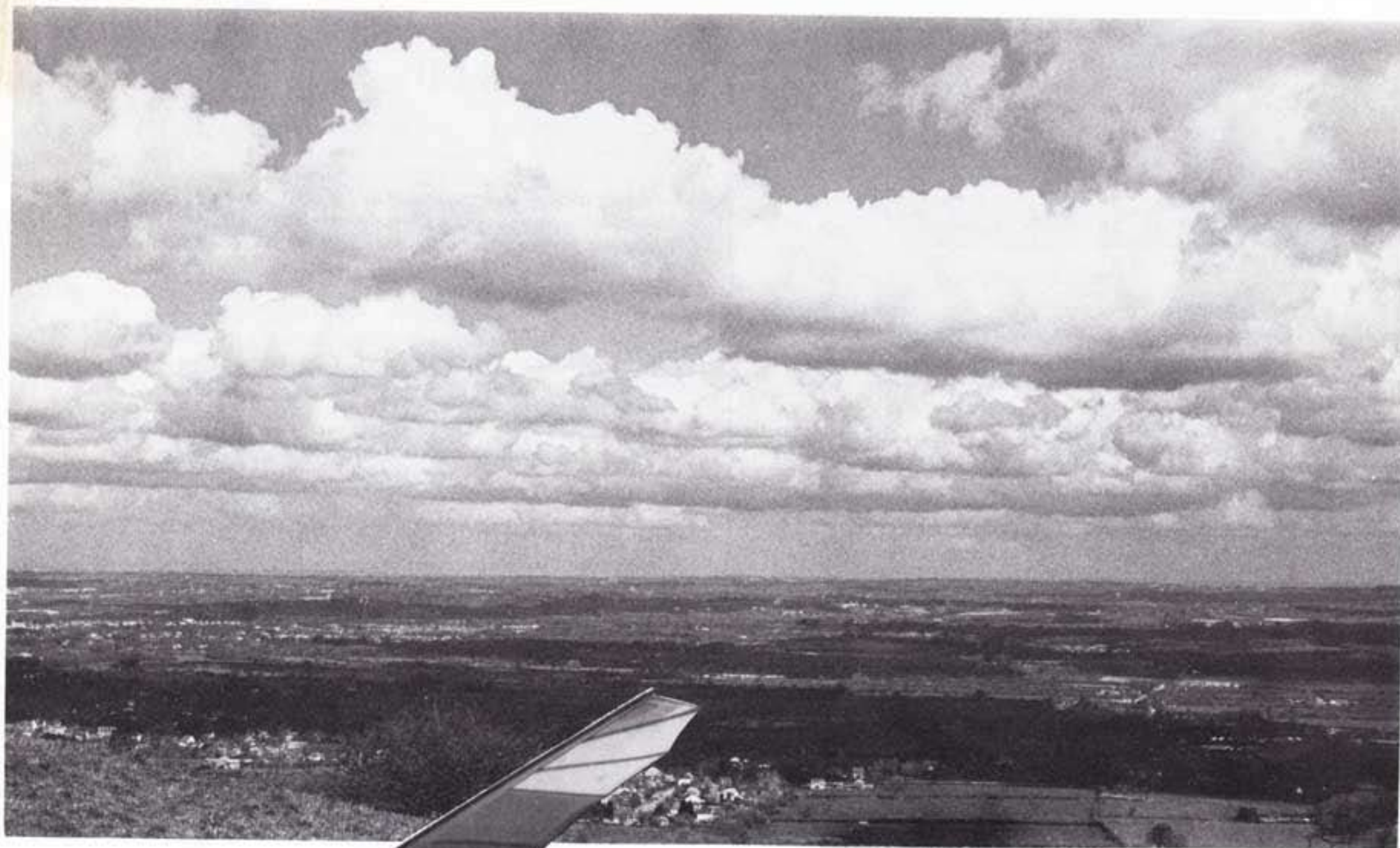
Dunstable (0582) 601768 46 Princes St, Dunstable, Beds.



Mainair Sports, Shawclough Road, Rochdale, Lancashire OL12 6LN
Telephone Rochdale (0706) 55131/2/3. Telex 635091 MAIN



Hiway territory.



The sky becomes your playground when you fly one of the new range of Hiway hang gliders.

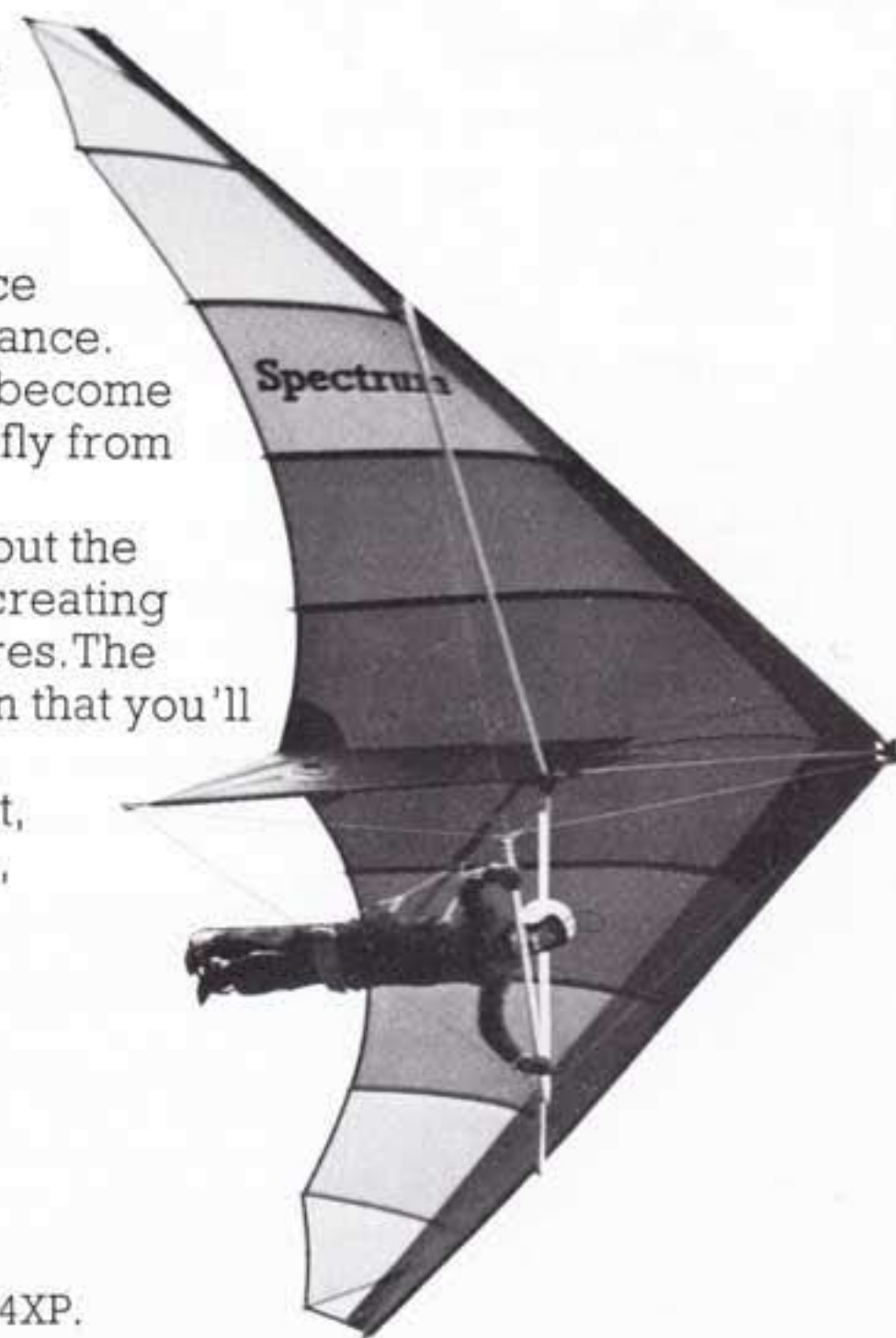
No longer need you sacrifice handling to gain high performance. Super scorpion and Spectrum become your obedient servants as you fly from thermal to thermal.

And you get all this without the cumbersome and drag creating deflexor arms and wing wires. The simplicity of the new machines mean that you'll be first to rig and first to fly.

Whether you're a cross-country pilot, competition flyer or just gliding for fun, Hiway have the machine for you.



Hiway Hang Gliders, Sirhowy Hill, Tredegar, Gwent NP2 4XP.
Telephone: Tredegar (049 525) 4521.





WINGS!

The official magazine of the BHGA

Editor: Garth Thomas, Bole Hall Cottage, 15 Amington Road, Boléhall, Tamworth, Staffordshire. (Tamworth 65854)

Commercial Editor: Lesley Bridges, Yard House, Wentnor, Nr. Bishops Castle, Shropshire. (Linley 322).

Editorial Board: Jeannie Knight, Tony Fuell, David Worth. **Area Reporters:** Scotland: Ian Trotter, North: John Hudson, Eire: Roy Hammond
South West: Steve Moss, Wales: Rob Symberlist. Printed in Great Britain by Blackburn Print Ltd. Hove, East Sussex.

BHGA Council: President of Association: Ann Welch, OBE., Chairman: Reggie Spooner (Coves 2305), Treasurer: Derek Evans (Sevenoaks 59995)
Brian Milton (St. Albans 55231), Jeannie Knight (Ashington 892770), Jeff Marvin (041 334-6892)

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

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

Training Officer: Keith Cockroft (Halifax 882883), Registration Officer: Terry Dibden

(Wimbourne 886464), Medical Advisor: Dr. Dunstan Hadley, BHGA Solicitor: Anthony McLaren (Halnaker 457)

Radio Communications Officer: John Westcott

Secretary: Chris Corston (Taunton 88140)

British Hang Gliding Association, 167a Cheddon Road, Taunton, Somerset, TA2 7AH

Cover: Tom Knight on the Super Scorpion at the Dyke. Photo: Alan James.

-
- | | |
|----|--|
| 7 | Council Matters |
| 9 | “Winning” by Rod Bird |
| 12 | AGM Notice |
| 13 | Food for Thought by Trevor Smith |
| 14 | Power Discipline by Brian Harrison |
| 16 | Accident Reports by Tony Fuell & Bob Mackay |
| 18 | Airmail |
| 19 | E-e-e-sy Take-Offs ? ? ? |
| 22 | Information |
| 23 | Sites Guides Pros & Cons by Pete Anstey |
| 24 | “Nonking It” In The Alps by Martin Lamport |
| 25 | International With A Difference by Bill Cowell |
| 27 | List of Major Clubs |
-

EDITORIAL

Questions for the AGM

In last month's Chairman's Letter, Reggie Spooner accepted that Council "is almost free for a whole year to go its own way" and asked whether there was "a case for Government and direction of hang gliding affairs to be vested in Member Clubs" with Council responsible only for executing the policy. In somewhat similar vein Gordon Wyse wrote to me personally expressing his concern that Council should seek to appoint a Development Officer" without first getting the approval of the general membership" and pointing out that if the person was found who could fulfil all the requirements set out by Chris Corston "we will no longer need Chris, the Flying Training Officer, or Council!" (nor WINGS! Editor, presumably!)

Tommy Thomson suggested in November WINGS! that "certain Officers of the Association (including WINGS! Editor) should be elected by the general membership".

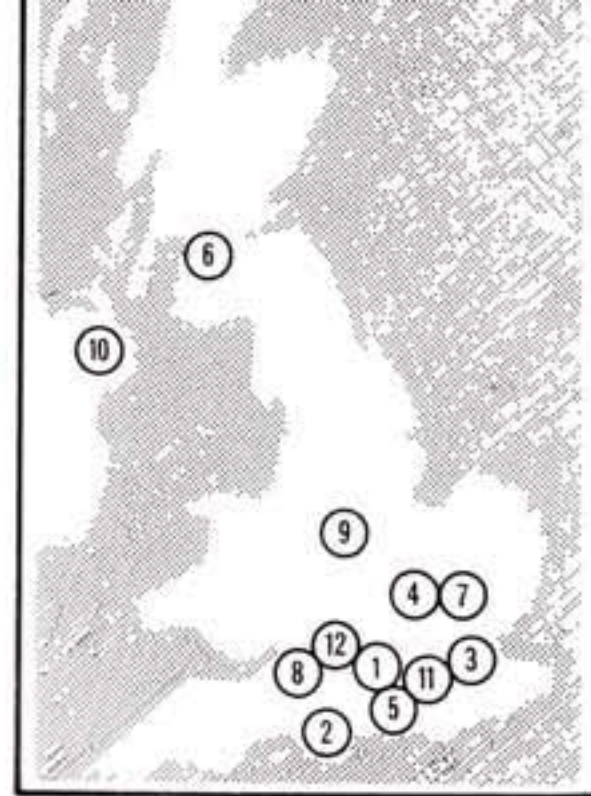
Question 1: Does the membership want Council to seek its approval for changes in policy, including staffing policy? Q.2. Should all Officers of the BHGA be elected directly by the membership? Q.3. Should Officers be precluded from standing for Council?

The Welsh Federation has pointed out that the average Welsh flier can't afford to give up one day every month to attend Council: what's more, they question the need for a monthly meeting. Robin Billington wrote, on behalf of the Midlands Federation, to make

known their view that "representatives elected by the regions would more faithfully reflect the views of members rather than (of) the privileged few". A quick glance at the map showing where Council Members live shows that the South West, East Anglia, North East, North West and Wales can fairly claim not to have a local member: indeed, Council members can be said to represent various hang gliding interests rather than geographical areas.

Question 4. Should Council members be elected by regions? Q.5. The Constitution calls for a minimum of one meeting each 3 months. Is there a genuine need for more?

Garth Thomas



1. Ann Welch, President. 2. Reggie Spooner, Chairman. 3. Derek Evans, Treasurer. 4. Brian Milton*, Press Officer. 5. Jeannie Knight. 6. Jeff Marvin. 7. John Hunter, Accident Prevention Officer. 8. Ashley Doubtfire. 9. Garth Thomas, WINGS! Editor. 10. Chris Simmons*, Co-opted member. 11. Malcolm Honeychurch*, Co-opted member. 12. Roy Hill*, Co-opted member. * Retiring and eligible for re-election.

OUR NEW COUNCIL

Several Council Members are retiring in March and you personally will be responsible for electing the new Council members (you will be equally responsible - whether you vote or let your vote go by default). The object of this note is to detail what is required of Council members - so that you can select dedicated, committed Council members - who will know before they come that they have a lot of work to do.

Once our membership has given its policy direction to Council at the A.G.M., responsibility within the general guidelines laid down in our Constitution will rest almost entirely with Council. Council will direct and control Hang Gliding for a full year - the day-to-day execution resting with our permanent staff and Council members in their individual capacity. You almost give Council a free hand - no one of us members can complain if we do not give it the policy direction it has asked for.

Council is not just a Body which sits and pontificates. It is very much a number of individual BHGA members, who

collectively do the most enormous amount of work for Hang Gliding. Our permanent staff are tremendous workers but can only do so much and there are still great gaps in what needs to be undertaken. Council members have to fill that gap.

John Hunter, who with several colleagues does a tremendous amount of investigative and preventive work, will be the first to say that we need a very strong, active, inspired, dedicated Accident Prevention organisation.

We need an equally dedicated person, actively promoting our prime activity - *and that is to provide flying fulfilment for 3,700 members*. That means a crusade to create the facilities required - for example, rights to fly at sites all over the country. Local clubs have responsibility locally - but there is a need at national level, within the Department of Environment, at the Headquarters of the National Trust, Land-owning organisations, Farmers Union, etc. to influence their policy directives - to get ahead, too, of the "Anti-Hang Gliding" groups who are active, especially at national level.

We also need a very active person to work to ensure that, not only is the air space available to us now but it will continue so to be - and to convince the one or two in authority who might think in terms of having our present freedoms curtailed. This has happened already in other countries. We have had notice that it might happen here.

We need people on Council, not to protect, but actively to promote Club interests. People to take the lead in organisation of Club flying and National fun events. We need to co-ordinate with the British Gliding Association, the Balloonists, and the other sporting aviation enthusiasts. To put it at its lowest level, to protect that air space, which at the moment is ours as of right - but which is under threat. We need better Airworthiness, Registration and Repair systems. We need to develop training within Clubs. Your Council member will not wave a magic wand - but he can take the lead to satisfy some of these urgent needs.

On only one front have we really gone ahead, and that is in

the enormous improvement in the standard of our aircraft and the standard of excellence of our best fliers - let us make the same strides in these other areas.

Seek out that person among you, who will be dedicated, active and determined to achieve something for hang gliding. Put him up for election and do make him understand that there is an enormous job of work to be done - and get his commitment first - what he would personally achieve, as part of a team, for the good of hang gliding.

Finally, when you find this committed person ensure that he will serve hang gliding as a whole. It would be intolerable that any individual should come to Council to represent a purely sectional interest. Council members must have interests in and will be experts in particular subjects, but must never forget that they are elected by our whole membership and must never serve the interests of only one part. In the final analysis they must work for the good of hang gliding as a whole.

**Reggie Spooner,
Chairman BHGA**

Council meeting of 10th December 1978, held in London.

The Chairman reported on a formal meeting with the Sports Council, who had reacted favourably to the need for a Development Officer. He, and the Secretary, had met Jack Blanchard who had taken over from Ken Drew at CAA.

The Treasurer's proposal that the Secretary and the Training Officer should each be given salary increases was accepted unanimously. It was decided that an annual review of all BHGA employee salaries would be presented to Council by the Finance & General Purposes committee for Council to place before the AGM each year.

Council accepted the Secretary's Report. On the general questions raised it was decided: (a) not to authorise financial aid to Briforge Club, Germany to send members to the AGM, (b) to promote an event at Perranporth similar to that organised by the Kernow Club last year, (c) to accept the British Powered Hang Gliding Club as a Member Club, provided their constitution required every flying member to be a full member of BHGA, and that their membership remained open.

Garth Thomas expressed reservations about continuing as Chairman of the Training Committee. Consideration was to be given to using the De Havilland Trust fund for the training of Club Coaches, whose prime duties would be to raise flying and safety standards. Council had already earmarked £1000 of BHGA funds to augment the donation.

The main points of Brian Milton's Competition Committee Report were: (a) a UK cross-country championship was planned for 1979, but he estimated a sponsorship of £20,000 would be needed, (b) the League entry system would change. Next year only people who had made three 10 km. cross-country flights out of ridge lift could qualify, (c) he anticipated a clash between the amateur circuit in the UK and the professional circuit in the USA which he intended taking an interest in through Flight Promotions. He assured Council that if a conflict of interests arose between his roles with Flight Promotions and Council he would immediately resign as Competition Committee Chairman. (d) he intended to sell the League to the BBC and

Atlas Express and/or other interested sponsors, (e) he would make a case during the year for a full-time Competitions Officer, (f) Competitions Committee recommended that the Sports Aid Foundation be approached for means tested grants for pilots in the top ten who were preparing for international competition and needed financial help, (g) Tony Fuell had been appointed to the Committee and would write regularly for WINGS! on League competitions. Council endorsed Brian's proposal that all aspects of British competition flying had to remain within the auspices of BHGA. At the end of the discussion the Chairman, whilst applauding British success in major competitions, expressed concern at the continuing trend towards commercialism of competitive flying, the implications of which had to be studied and put to the whole membership.

Reporting on the completion of two fatal accident investigations, John Hunter told Council that of the nine fatalities in 1978 all but two had involved gliders that had been modified. John underlined the need for clubs to be more aware of the flying capabilities of members. A definite link had been established between fatal accidents and previous problems. Closer observation – and perhaps supervision – might have prevented some deaths. He also reported on the danger of pilots concentrating on getting into the stirrup after take-off, rather than on maintaining sufficient airspeed. Council noted John Hunter's findings and agreed there was a need to create a list of approved hang glider repairers. John would act on this immediately.

Jeannie Knight (Editorial Committee) reported that although WINGS! was late in publication in November normal publication date would be regained by the end of January. Dave Worth was continuing as a member of the committee. The reading section had recommended that all three books by Denis Pagen should be stocked and recommended by BHGA. Garth Thomas reported he had refused an advertisement from Ibis School on the grounds that the book advertised was not acceptable by Editorial Committee or the Accident Investigation Officer. Garth also pointed out that editorship was a full-time

Council Matters

job for two days of each week. Council invited the Committee to recommend an appropriate scale of payment. Committee also undertook to examine the practicability of charging for "small ads" in WINGS!

Council considered the Powered Hang Gliding Report tabled by Ashley Doubtfire and accepted the criteria contained in it. Council invited BPHGC to lay before it, and update from time to time, the Standards for Airworthiness of Powered Hang Gliders. It was agreed the report should be laid formally before CAA.

Council heard that HIA had reported on a proposed system of classifying gliders in terms of pilot ability. HIA recommended that these standards should be adopted when gliders were sold. Council asked HIA to carry out a full investigation, with the Training Officer, including all types of gliders, even those no longer manufactured.

Council noted that BJGMF members had declined to pay for airworthiness certificates, did not want a member on the Airworthiness Board, and wished to leave airworthiness approval entirely in the hands of BHGA. Garth Thomas undertook to discuss with BHGMF their request that advertising in WINGS! be confined only to members and associate members of BHGMF, and also undertook to provide a breakdown of advertising costs.

It was agreed that an event, the "UK Open '79", should be held at Mere in August or September on the general lines of Mere '78. Garth Thomas

undertook the organisation.

The Training Officer's revised draft terms of reference were accepted in principle, the detail to be worked out between the Chairman and Garth Thomas.

The Chairman underlined the vital importance of the AGM to the whole membership. The Secretary should immediately inform clubs and WINGS! of procedures for nominations and encourage all members to initiate proposals. AGM would open at 2 p.m. on Saturday, 31st March with the introduction of candidates already nominated. That should be followed by discussion on the many subjects it was hoped would be raised. Council welcomed the suggestion that a film competition should be run. Voting for Council, etc. would commence at 2 p.m. on Sunday. Council asked Mercian HGC to host the conference and be responsible for AGM arrangements.

After studying the Sites Guide compiled by Barrie Annette, Council agreed BHGA would publish it provided that various conditions and safeguards were met. Only material approved by Clubs would be included.

Council agreed to co-opt Roy Hill.

Ann Welch reported on progress with the Observer & Pilot handbooks.

Jeannie Knight reported on the "Women in Sport" conference.

Brian Milton (Press Officer) stated that press coverage of hang gliding had changed from sensational accident reports to normal coverage in the sports sections.

PRONE HARNESSES

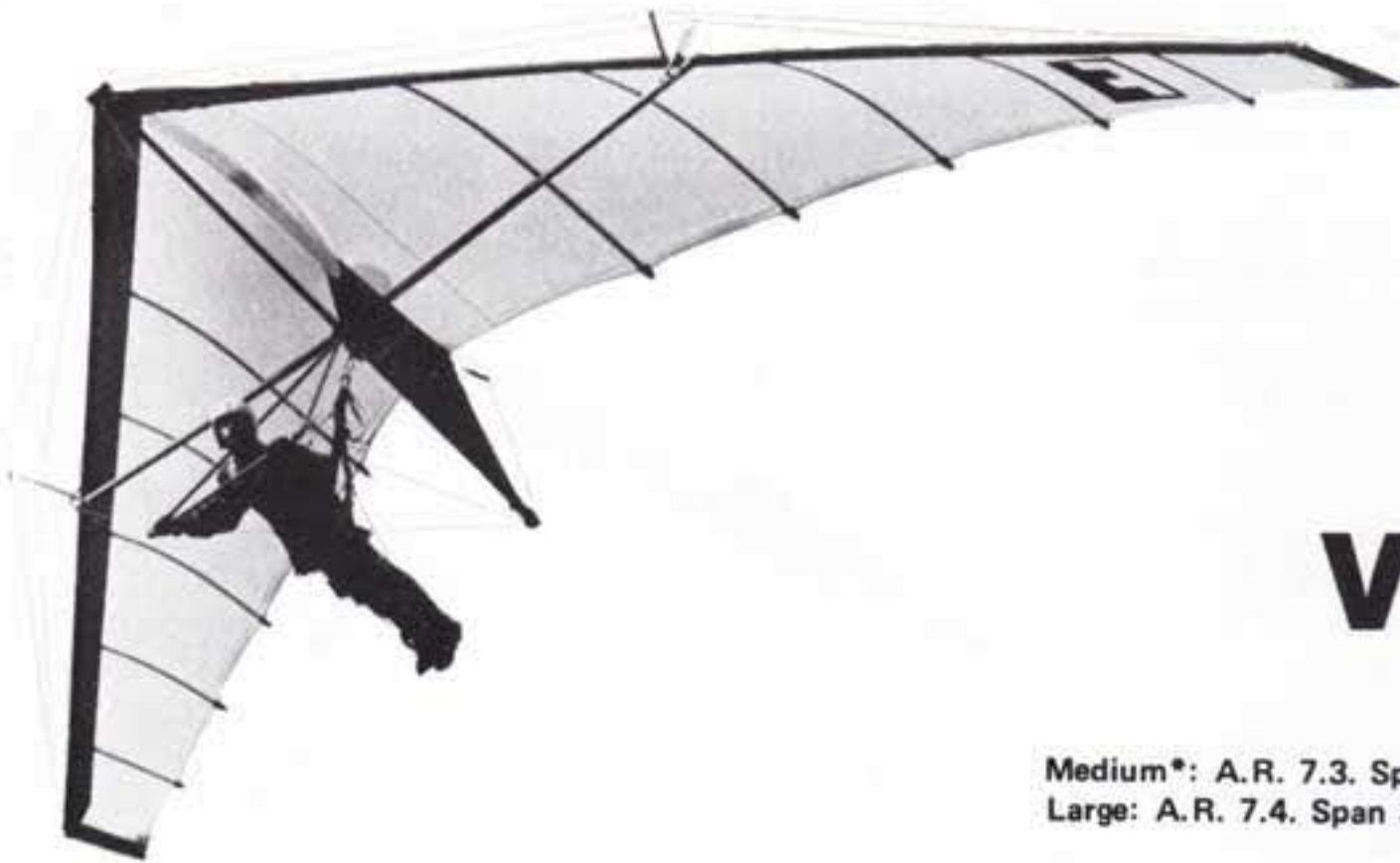
for just £36 including p & p

Skyflite Harness
56 Littlewood Street,
Rothwell,
Northants.

Telephone: Kettering 711636

Superbly comfortable swing seat
and stirrup design.
Continuous main support.
Fully adjustable.

when only the very best is good enough...



VECTOR

Medium*: A.R. 7.3. Span 35 ft. Area 170 sq. ft. £540 inc. VAT & Bag.
 Large: A.R. 7.4. Span 36.5 ft. Area 170 sq. ft. £550 inc. VAT & Bag.

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

FLEXI-FORM SKYSAILS

U.K.

FLEXI-FORM SKYSAILS. Unit 24, Nassau Mill, Cawdor St., Patricroft, Manchester. 061-707 1389.
 Mainair Sports, Rochdale 47728. Midlands, Malcolm Hawksworth, Blackshaw 231.
 Scotland, John McConnochie, 066-76 2414. S. W., Tony Williams, Bristol 35449
 Cumbrian, Northern and Yorkshire Hang Gliding Centres.

FRANCE

ÉOLE 2000. 55 rue de Charenton - 75012 - Paris. Tél. 555.42.59. Importateur exclusif.

SPECIALIST SAILMAKERS AND HANG GLIDER MANUFACTURERS.

ULTIMATE FLIGHT
 —DESIGNS

TO CAPTURE
 THE SPIRIT OF FREEDOM



PILOT and KITE

as brooch in pure silver — £17.00
 as pendant with 18" chain in silver — £21.00

(both items shown in actual size)



ICARUS PILOT

as brooch,
 in pure silver — £12.50
 as pendant,
 with 18" chain — £15.50

each of these fine pieces is handcrafted by an established silversmith, working in rural Wales. original designs that embody the 'spirit of hang gliding'

Please send your cheque to ULTIMATE FLIGHT DESIGNS, 30 Bridge Street Aberystwyth, Dyfed allowing 3 weeks delivery, all work guaranteed, inquiries phone 097-086-538

WE SPECIALIZE IN CUSTOM MEDALLIONS, PLAQUES, AND TROPHIES —

WINGING!

A TRUE STORY by Rod Bird

Illustrated by Bill Lehan

Rod Bird's other claim to prominence in hang gliding is the unending epic tale "Gone With The Wind" which ensures that each month's issue of "Soar Point", Mercian HGC's magazine, is snatched eagerly from the postman's hands. "Gone With The Wind" has now reached its thirteenth (lucky for some) episode and still shows no sign of developing a plot. So, the Editor *specially commissioned* Rod to write this piece for WINGS! . . . and is now stuck with publishing it!



"Fred, now look", implored Dave, "We need you there".

"Yeah, well I ain't coming so stuff - - -".

"- - - and of course WINGS! might like to hear about you and that bird at Mere. She was only a Hiway seamstress but she knew when she'd made a sail, know what I mean".

Pause. "I'll be there in twenty minutes".

At Splatter Hill, the activity was intense. Shortly, however, people started turning up and the sheep moved elsewhere to graze.

First to arrive was the Sites Officer, closely followed by a hangover so splendidly opaque that he demolished a five-bar gate on the way in before locating the brake pedal. He didn't stop, but continued across the field and up the side of the hill. Halfway up he halted, climbed unsteadily out, threw up, took a chain-saw from the boot, and in no time had felled two prominent oaks. Arriving back at the bottom he could vaguely discern the committee, deciding the course and scores.

"Getting up t'hill" ruled the Chairman, with a curt nod at the summit, nearly 200 feet away, "twenty points. Vortex fliers forty. Rememberin' harness ten, rigging t'kite fifteen. Another ten for bringin' helmet, minus twenty for each pee precedin' take off. Any questions?"

J.B. Biggles Messenger, the club ace, a handsome young man referred to with affection by the rest of the committee as "Face-ache", eagerly interjected.

"Yes, if I'm going prone and - -"

"No phones," said the Chairman.

"Not phones, I said prone - -"

"Committee's decision's final, son. I'm sorry".

"But, but" persisted J.B. "I - -"

"Shut it son or you'll be out. Oh aye, and five points for landing on spot".

"Anything for 360's" asked the Safety Officer.

"No rigids".

Less than four hours later all the kites

were rigged on top. Pilots scurried about, discussing tactics, unknotting mildewy harnesses; anxious eyes flicked over fluttering altimeters, families of spiders were shaken from long-disused helmets, and a rutting pair of ferrets were evicted from the keel of a rusting Skyhook. Around one kite a fierce argument centred on whether a kingpost constituted an unfair technical advantage, while the scrutineers scrooted in disbelief at a Wasp with strange wires down the front wing-bit-things. The pilots had been briefed. The only girl pilot was desperately trying to avoid being debriefed by the treasurer, who was clutching a fistful of fivers and whispering something about getting into prone. Excitement was reaching fever pitch.

"Wonder what's on telly," yawned Daffydd 'Llyddfch' Rhys-Evans, who was Welsh, and once knew a man whose brother almost had a trial for Llanelli.

"OK lads", echoed the booming voice of the chief marshal. "Get yer 'arnesses on, watch the flags. Let's have a clean contact—no shuin', no bitin', no 'anky-panky. Windspeed, Steve?"

"Five - - - five - - - six - - - five - - - thirty three - - - six - - -", reported Steve. "Bit gusty, OK though. Shame I didn't bring my kite".

Down in the field a savage gust lifted the spot over the heads of the Chairman and Secretary, dumping it fifty yards away. The former looked worried.

"I reckon it's a bit on the gusty side, y'know," he said. The Secretary took the bottle from his lips, stood up, and thought about it. He belched pensively. "Maybe — we're not flying though," he opined.

The Chairman gazed at the spot which was again cartwheeling across the field, and came to a decision.

"No. I'm calling it off". He waved the flag frantically and yelled, "It's off! It's off!"

Unfortunately this was interpreted by those on top of the hill as "Take off! Take off!", and the first two competitors were

"Ring Ring", said the telephone.
"Gerrup", said Fred Bulstrode's missus.
"Sod off", said Fred Bulstrode.
"Ring Ring", repeated the phone. "Ring Ring".

Wheezing like a steam engine, Fred stabbed his feet into a pair of doggy slippers and clattered down the stairs.

"RING RING RING RING", the phone was chanting moronically as Fred snatched up the receiver.

"Uh".

"Hi Fred, it's me, Dave — It's south-west — smack on for Splatter".

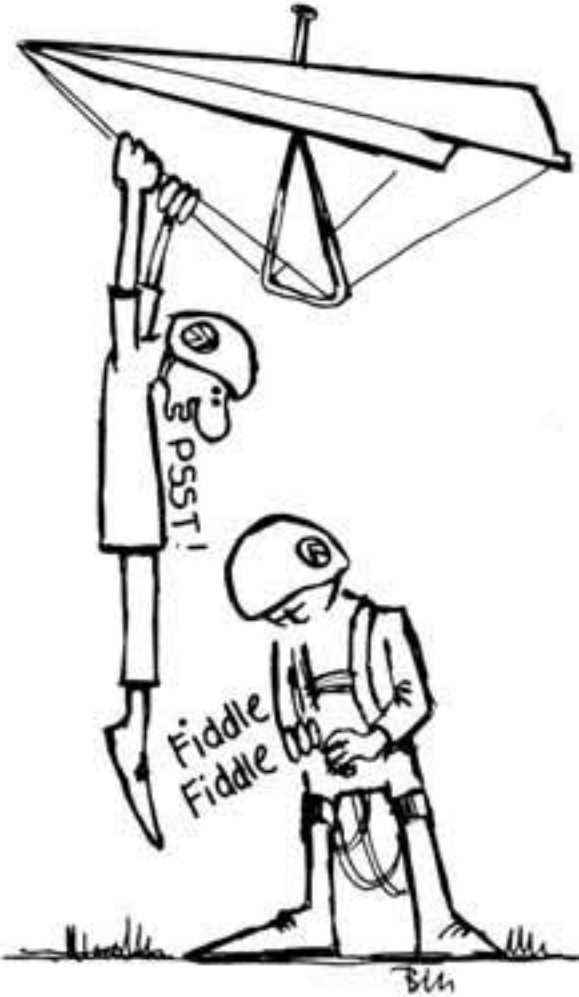
"Halle-bloody-luyah. Have a nice time", grunted Fred, depositing the receiver in the cradle. He set off for the bedroom. Six stairs from the top the noisy little chappy again chirped up.

"Ring Ri —"

"Lines to the Midlands are engaged. Please try again in six hours," gurgled Fred, in an embarrassingly amateur attempt to impersonate a telephone operator. "I know you're there, Fred. Listen — the competition's on. How soon can you get there?"

"Er, sorry Dave. I, er, I bust my leg".

enthusiastically launched into the air. One kite, a homebuilt speculatively constructed from polythene and bits of an old greenhouse, climbed steadily to three feet, where the sail blew off. The other, Fred Bulstrode's ageing Grasshopper, rocketed skyward at a rate its constructors would never have thought possible. Unfortunately, however, the competition had begun with such urgency that Fred remained astride the start-line, trying to unjam his carabiner, while



J.B., still clutching the front wires, cruised overhead. A minute later he made a stylish top landing through the patio windows of the landowner's house, two fields away. He had come round and was picking fragments of Spode porcelain from the sail, when the door burst open and Sir Peregrine Crumple-Trumpet himself charged in.

"Who the - - - what the - - - hell the - - -?" he thundered.

"I've - - - b - b - brought the site fees." gulped J.B.

"SITE FEES?" quivered the incredulous Sir Peregrine.

"Site Fees? I'm going to give you impertinent young whelps site fees once and for all." He whistled up Rajah and Colonel, his two red setters, selected a pair of matched Purdey 12 - bores, and stormed out.

J.B.'s unusual flight, with its violent landing, had caused a shocked silence back on the hill. "Oh my God - - -" gasped Fred, tears welling in his eyes.

"OK, easy, easy," comforted Daffydd Rhys-Evans, laying a soothing arm on Fred's shoulder. "You can borrow mine".

The wind had dropped to a manageable 15/20 and flying had resumed. The next flier to go was the competitive but short-sighted Fuzzy Smith, we encountered some minor turbulence just after take-off, and went three miles downwind searching for the target before landing on the penalty spot amidst a Sunday League match. Fuzzy, nevertheless, was one of the early leaders, along with a local plumber called P.B. Bender who'd have established a clear points advantage, had he been able to shun down from the pylon in which he'd landed to report to

the Chairman within one minute of landing - an arbitrary regulation, introduced without notice by the Chairman when his personal score seemed threatened. So at halfway he led with 120 points (including ninety for landing on one leg - another impromptu and unannounced twist in the scoring), followed by Smith and Bender, both on 55 and J.B. whose notable flight had earned him 20. The chasing pack came in the 10 to minus 40 region, with two backmarkers on minus 160.

Sir Peregrine, like a massive purple-faced hedgehog prickling with ordnance, stampeded through the undergrowth towards the hill-top. Rajah and Colonel, sensing action, pounded on ahead. Suddenly both dogs stopped. Sir Peregrine burst into a small clearing and was confronted by the awesome sight of Hymie Rosenblatt, the Treasurer, and Farrah Fawcett-Spooner, engaged in activity visually, if not emotionally, much removed from hang gliding. And they weren't playing Scrabble either. Sir Peregrine's eyes bulged like over-ripe conkers; his colour darkened to deepest magenta. Instinctively, he loosed off two rounds from the hip. Hymie yelped, leapt to his feet, grabbed Farrah's hand, and disappeared into the forest.

Bender's second flight was peachy. A masterful take off, superb control, clever use of the available lift: all the ingredients were there. He was just two feet above the orange spot when the Chairman broke from the hedgerow, grabbed the canvas, and plucked it from beneath Bender's feet.

"Hard luck son," he panted.

"Yew bugger yew moved it!" complained Bender.

"Right, disqualified! I'll have your £5 disqualification fee please".

Bender whipped a stiletto from his flying suit and lunged at the Chairman, who swung the red starting-flag at Bender's head, inflicting no serious injury but launching another two kites. Bender was narrowly saved from being hoisted on his own club's pethard by the appearance of Hymie Rosenblatt, clad in nothing more than a Hiway



knee-hanger harness, being apparently pursued by Farrah Fawcett-Spooner, wearing even less. Another five kites took off.

Mr. & Mrs. Charles Ffoulkes, Miss Potts, the Misses Pringle, Mrs. Sidebottom, the Rev. Hopkins, and the rest of the Keep These Flapping Monsters From Our Hills committee strode into the field.

"Gate Absent. Now on Cortina Bumper," scribed Miss Potts. Fred's dog, contentedly chewing the head off a freshly slayed sheep, looked up without interest and wagged his tail.

Mr. Ffoulkes cleared his throat. "Ladies", he began, "we are here at the invitation of the local, uh, Hang Flying Club. Our task is to evaluate for ourselves their claim that hang flying is completely safe, clean, quiet, does not trouble animals, damages none of our precious flora, not even the tiniest blades of grass, is practised only by sporting gentlemen with private means, who refrain from blasphemy, the evils of alcohol - - -".



He was stopped short by a cry of "Out of my road you stupid bastards!" A motorised Wasp 229 bludgeoned its way through a barbed wire fence and lurched, a few feet above the ground, towards the group, who turned and fled. Straight into the path of the virtually naked Hymie Rosenblatt, sprinting for the cars before the snapping canine canines of Rajah and Colonel. Gunfire exploded from the forest and Miss Potts' clipboard disintegrated in her hands. This tranquil, everyday scene was ruined, however, as the Chairman - his kilt torn but his turban undisturbed - staggered backwards through the gate, viciously smiting Bender over the head with a red flag and dodging his stiletto-thrusts. The landing spot was draped round the Chairman's neck. Overhead, the seven kites still airborne banked violently as the target dashed from field to field.

Everyone was standing round, watching what promised to become an interesting knife-fight, when they were floored by an ambitious downwind pass by Fuzzy Smith, who then dug in a tip and groundlooped. In the space of ten seconds five other fliers took five points each by landing on the spot, which was still around the Chairman's neck. An impressive performance, marred only by Daffydd Rhys-Evans, whose attempted 360 over the road knocked out

Continued at foot of next page.

News received on 19th January—
more details, hopefully, in next
issue.

A British hang glider is walk-
ing on air after making the first
flight from the top of Africa's
highest peak — 19,348ft Mount
Kilimanjaro.

Fifty minutes after take-off
and 17 miles away from the
launch point 30 year old Ashley
Doubtfire landed safely and with
his head still in the clouds Ashley
has set his sights on going higher
still.

Over an echoing telephone
line from the small town of
Moshi, at the foot of Kiliman-
jaro, he would not deny today
that Mount Everest is in the
back of his mind for his next
record attempt.

Ashley believes that his Kili-
manjaro flight was from the
highest ever starting point for a
hang glider. "I had to find my
way down through the clouds, it
was so high", he said.

The 17 mile glide was made
on Thursday morning after a
two day climb with five other
fliers, all members of the British
Hang Gliding Association. Three
of them had to turn back with
altitude sickness but the other
two followed Ashley down five
hours later.

KILIMANJARO CONQUERED!

29.1.79. ASHLEY, MOMBASA.
MONDAY.

Hi there Garth!

Seven fliers, including
myself started off on
16th Jan (TUES) for Summit
of Kilimanjaro (19,340ft)
4 of us made it to the top.
One crashed on take-off
(no injury). 3 of us
flew. I landed at
Moshi (18 miles from
Summit). Other two (very
lucky) flew through cloud
— but made it. See you.

EAST AFRICAN WILD LIFE - WILDBEESTE

soon - I'll send you artill³⁵⁰
as soon as I can! - Ash. P



GARTH THOMAS,
BOLEHALL COTTAGE,
15, AMINGTON RD,
BOLEHALL,
TAMWORTH,
STAFFS B77 3LM
ENGLAND.

NYLON RIPSTOP and TERYLENE
(P.U. coated) for sails. All weights and colours. For Hang
Gliders. Hot Air Balloons. Stunt Kites. Largest retail stocks
in England.

Please state your particular interest.

Immediate delivery. Safety webbings. Sewing threads, etc.

First send S.A.E. for full range of samples, before calling.

Free sewing instructions.

Edward Barnes (wgs)

Hawksfold House,
Fernhurst · Haslemere · Surrey · (Established 1928)

MINIATURE BAROGRAPH



7½ × 5½ × 3 inches.
Weight 32 ozs.

Also
Electric Varios A.S.I's
and Lightweight
Back Parachutes etc.

**FLOW
TECHNOLOGY
(2000) LTD**

126 Welham Road,
Malton, N. Yorks.
Tel: (0653) 2469.

Continued from Previous Page

the two main London-Birmingham hyper-
groups, and left him swinging gently from
the telephone wires.

"Duw, I feel like buzby up by yer," he
called. No-one laughed. No-one spoke. The
wind hummed through the rigging of the
crashed kites. Shadows dissolved, as a

watery sun dribbled towards the horizon.
Eventually, Ffoulkes spoke.

"Well, gentlemen. From what we've seen
here this afternoon, I'm afraid that, as
Chairman of Micklethorpe Council, I have
to inform you that we can no longer see fit
to grant your club the use of this land to
pursue your activities. Furthermore,—"

Without so much as a fig-leaf's cover,

Farrah scampered from the bushes and flung
her arms around Ffoulkes.

"Charlie, my love," she sobbed. "Take
me home."

"Oh dear," said Ffoulkes, stroking
Farrah's satin-soft shoulder. "Oh blimey. Oh
crikey. Listen lads, put the gate back on and
we won't say any more about it, O.K.?"

THE 1979 ANNUAL GENERAL MEETING AND CONFERENCE - 31st MARCH and 1st APRIL AT WARWICK UNIVERSITY

BHGA Council Members needs your views and ideas to guide their decision making over the next twelve months. If you care about the sport's future be there or make sure that your club sends a delegation to represent your views.

The meeting will be hosted by the Mercian Club and starts at 2.00 p.m. on Saturday with the introduction of candidates standing for election to Council. (At the time of writing it was known that there will be at least three Council vacancies). After this, until 10.30 p.m., there will be discussion on all subjects that members want discussed. If necessary the meeting will split into groups. Bar facilities will be available from 6.00 p.m. During the evening a competition will be held to find the best 10 minute long amateur hang gliding film.

On Sunday nominations for Council will close at 10.00 a.m., followed by a report and conclusions reached on each of the subjects debated on the previous day. Lunch (pre-bookings only) and a bar will be avail-

able at midday. Voting to fill Council vacancies and on any other proposals will commence at 2.00 p.m.

The proceedings are scheduled to finish at 6.00 p.m.

Topics of Discussion

Whether or not you can attend these should be notified to the BHGA Secretary A.S.A.P. So that they can be sorted easily, please send a SEPARATE SHEET OF PAPER FOR EACH SUBJECT with a brief outline of your views on it. The person leading the discussion on a subject can then make known these submitted views. Currently subjects that will be discussed are Training, Sites, Air space usage and Airworthiness.

Nominations for Council

Will those wishing to nominate members for election to Council please send their nominations to the Secretary. Each should be seconded and accompanied by the nominee's written agreement to accept office if elected.

Council Members are not just expected to attend Council Meetings. They become *responsible* for one or more of the Association's fields of activity and must therefore have at least one day a week to devote to the work entailed in getting things done.

This Preliminary Notice should have appeared in the January Issue of WINGS!

Further details appear in the AGM Insert and Agenda/Voting Papers which are the pink pages stapled into the centre of this magazine.

IF YOU CARE ABOUT YOUR SPORT IN THIS COUNTRY PLEASE MAKE EVERY EFFORT TO ATTEND THE AGM AND CONFERENCE!

Sky a Safari

Fly next year's machine this year

Safari Winner of the 5th league, Graham Hobson — 17 miles. Over 18 months of intensive flying of the prototype "Safari" proved to us that we had a winner to follow "Sunspot" and it is now in production. For light winds the medium "Safari" has the min. sink performance to equal the large "Sunspot" and that is saying something. It also has the penetration for strong winds and positive, predictable handling

with immediate response which is so necessary for all kinds of flying.

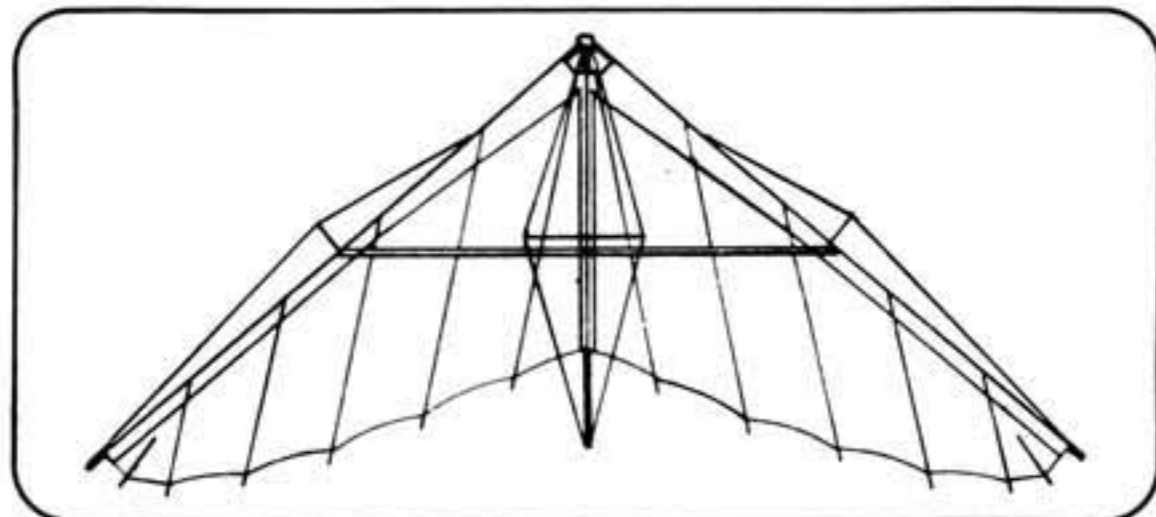
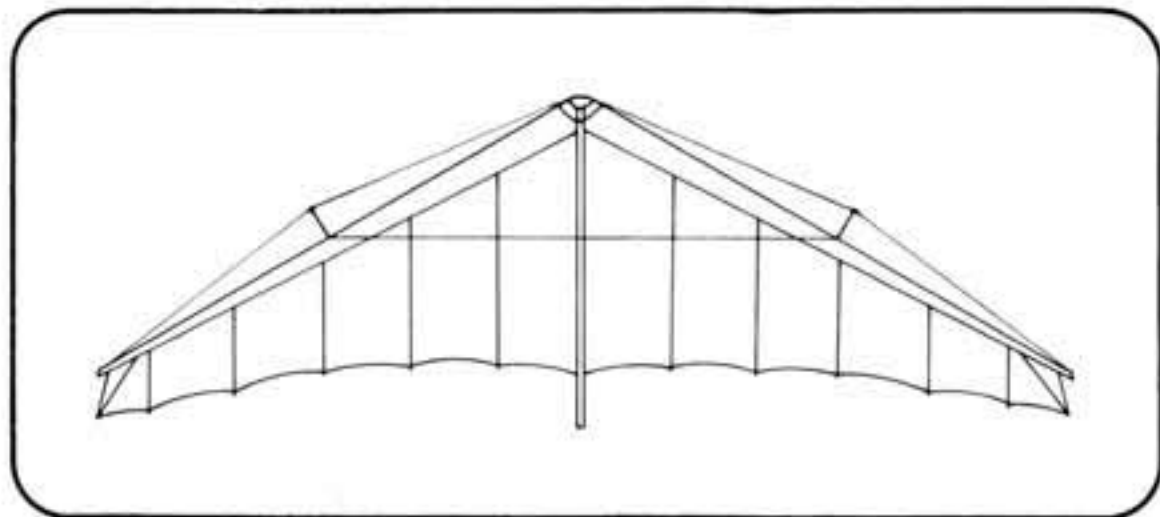
Glide angle at speed is good. The reflexed preformed battens in every seam make the whole wing pitch positive without the need for locked up tips etc. Vertical dive recovery is positive.

Safari is a real cross-country machine which easily makes use of thermals and handles the strong turbulence which often goes with them.

For the experienced pilot who demands the best performance but still wants outstandingly good handling.

Sunspot. Still one of the best all rounders next to "Safari" for fliers of E.P.C. standard.

104° nose angle. A/R 5. Available in two sizes. Prone harnesses and parachutes also available.



Skyhook Sailwings Ltd.

Vale Mill, Chamber Road, Hollinwood, Oldham, Lancs.
Tel: 061-624 8351/3427 Telex: 667849 HOLMES G.

FOOD FOR THOUGHT

by TREVOR SMITH

Recent events suggest not enough people realise that the development of the flexible wing glider over the last 10 years has involved as radical a change aerodynamically as that from, say, Tiger Moth to Concorde, instead of the simple progression in small steps it appeared to be. These differences become more obvious on the application of a power unit.

Some aero-historian will write it all down one day, I hope. It's a fascinating story. In the meantime a brief look at it may help.

The original Rogallo, the simplest aircraft ever invented by man, is not a flying wing (in spite of its 'all wing' construction). The conical wing sail, when flown through the air slightly sideways to the cone axis, produced a 'curved plate' lifting section, which washed out naturally towards the tip, enabling this aircraft to fly slower than any other without tip stalling. But the wash-out was on the C.G. axis (virtually) so had no effect on pitch stability. Therefore, that part of the wing behind the tips is flown at negative incidence to the 'mainplane' and is therefore a stabiliser or tailplane, its approx. 90° dihedral also 'doubling' as a fin (as in 'Vee' or 'Butterfly' tailed aircraft).

Viewed in plan form the evolution appears to be one of stretching spans to increase A.R. and therefore efficiency. The really fundamental changes took place at the keel. As the keel got shorter the tips effectively moved behind the C.G. (and therefore could exert a pitch-up moment on the wing), the reflex disappeared, and somewhere around Swallowtail to Phoenix 6B they became flying wings. The aerofoil however was still partly derived from the conical sail form as before. When the sail left the keel altogether resulting in a *cambered* sail for the full span, the conical Rogallo became a distant cousin to the modern flexible wing hang glider.

OK? So the flying wing, so long the 'Cinderella' of aircraft, has perhaps at least found its 'niche'. Great. But when considering a power unit it must be remembered that the 'curved plate' wing section is very unstable and the modern glider is short moment, necessitating large washout at the tips to ensure that that section pitches up. (That this reduces tip stalling is a happy 'spin-off' of this washout, *not* its reason for being there.)

In glider form this 'twitchyness' in pitch can be an advantage. After all, we have the best control system — the birds have been using it for 70 million years or so! (They *have* — you know — you watch 'em).

The addition of a power unit, however, could have re-invented the 'luffing dive',

or

The development of flexible wings and effects of the application of power, and choice of power units and their exhaust systems.

(that terror of early Rogallo days, evolved out by tight sails and battens as outlined above). Certainly I feel that no glider with free floating tips should ever have a power unit added. Any powered hang glider of this flying wing type, should have mechanically-retained washout. Also the engine thrust line relationship to camber line (keel) needs thought. I favour the latter at a few degrees positive incidence to the thrust line. Both the above points would perhaps not matter at low powers and consequent high angles of attack (power-on), but extra power applied for better penetration and climb could cause problems. Some of this I feel applies to a recent accident.

In short the standard Rogallo would be 'easier' to power than a modern machine, not that I am suggesting we do this — the power-men want efficiency like everybody else.

Incidentally I don't see this pro-power/anti-power argument. The two sports will develop independently like motor boats/sailing boats. I agree with those who want the BHGA to control both, though.

The other aspect of my misspent life which applies to powering gliders, is that of many years involved with the development of the two-stroke engine to its current position as unbeatable in virtually all forms of motor cycle sport. This type of engine is therefore the only one to consider as its power/weight ratio far exceeds any other.

I am not suggesting use of a 'full race' engine, but it is surprising how people fail to use 'sideways thinking' and look at other sports, when looking for equipment for a new development, like powered hang gliding.

The point about the two-stroke engine is its total reliance on a correctly designed exhaust system to be anything remotely like efficient — to be accurate — its 'resonant expansion chamber exhaust system'. Engines without such a system are prepared to give away half their power to some special purpose like portability (i.e. chainsaws).

Under the 'excuse' that all aircraft are unsilenced, people seem to be fitting two-stroke engines to gliders with either an unsuitable exhaust system, or none at all, as a consequence throwing away half their power and getting a bad public image to

boot. Happily, the two-stroke engine is the only one which actually *gains* from an exhaust system which has the 'spin-off' of *reducing* noise. Hence the weight of a system will 'earn its keep' in terms of power (it is a *ratio* remember — power/weight), and reduced public 'aggro'.

The subject is an extremely complex one (computers are usually used in their design) so I don't expect a flyer to design a system from scratch. So — adapt or copy an existing design. I do not suggest a road motorcycle exhaust system which is heavy and silenced to urban standards, but, since all competition motorcycles have to be 'silenced' now and competition motorcyclists are as weight conscious as you are, this type of system would seem to be ideal and also will keep oil off your prop and sail!

A system is shaped by three main parameters; peak power rpm, peak torque rpm and size of cylinder it serves. Therefore, do not use a road-race system designed for 1,000 rpm on a 6,000 rpm industrial engine! Indeed, both engine and exhaust system from a 'cross-country' type of competition machine, i.e. all-alloy, air-cooled, about 100 BHP/litre standard of tune (so not requiring special tuning techniques or care) would seem to offer great promise, until a purpose-designed motor is available. (I have designed one if anybody has a factory lying idle!)

'Sports' road motors also fit this specification, but as noted earlier would require the lighter competition exhaust system. Such a motor would have gears and excess generator, coils, etc. "ditched" to save weight.

Another possibility is that all these motors have a gear primary drive to the G.B. mainshaft giving a useful ratio of about 3½–4 : 1. This feature could be retained to enable the engine to spin happily at its best speed of say 7–8000 rpm. whilst a propeller on the 'old' gearbox mainshaft position could be made much more efficient and quiet revving at less than 2000 rpm.

I hope the foregoing is food for thought. Some motor hang gliders will be used for ridge or thermal hopping, others will become serial motor cycles, and in so doing will carry on the tradition of the 'Flying Flea' Yes, unlike Mr. Seccombe (September WINGS!) I regret the passing of the 'Flea', banned by officialdom for a fault that the French (designed out), and some are still flying there. Ironical, isn't it, it was *pitch-stability* fault at certain angles of attack which caused the 'Flea' to be banned in this country, the very fault and resultant reaction, I fear for the powered hang glider.

POWER DISCIPLINE

by BRIAN HARRISON

It is now just over a year since Larry Newman, President of Electra-Flyer Corporation, telephoned me to say that he had just returned from two days in Arizona during which he had flown for a total of 12 hours on a Cirrus 5. Larry further explained that a new company had devised a powered unit for hang gliders which worked so well that he reckoned it would be the major hang gliding innovation in 1978. The fact is, of course, that the Soarmaster Power Unit did achieve tremendous popularity during the year and powered flexwing flight became the most controversial subject yet to develop in hang gliding. Immediate polarisation of opinion took place and hang gliding will never be the same again.

It was only a matter of weeks after Larry's phone call that we acquired our first Cirrus 5 together with a brand new Soarmaster Unit. Since its arrival our factory flyers Jim Potts and Andy Fawcett have achieved over 60 hours flying time on both Cirrus 5's and Olympus' without any accidents. There have, however, been plenty of incidents which have broadened our experience and our close liaison with Electra-Flyer, and avid reading of American publications, have helped to minimise the problems which exist in powered flight.

It is the unfortunate 'nature-of-the-beast' that most powered hang gliding accidents in America and recently in Britain have been subject to the full blaze of publicity since there always appear to be television or movie cameras around when the incidents occur. The purpose of this article is to make those pilots who are embarking upon powered hang gliding aware of the

problems which exist and thus minimise risk to themselves and, perhaps more importantly, to the whole hang gliding community. Already we are in a position where two gliders are in the possession of the Board of Trade and thorough investigations are being undertaken. This never happened during the development period of conventional hang gliding and, therefore, it is important that all those embarking on powered hang gliding understand the tremendous responsibility which they hold, and the need for safe flying at all times.

Powered hang gliders have obvious advantages. Undoubtedly, the two most important are hours of flying in light or no wind conditions, and the ability to fly near to home without the need to travel vast distances to sites. It should be obvious, therefore, that there is no need to fly powered hang gliders at or near conventional hang gliding sites, in fact a lot of fun can be achieved flying 'boldly where no man has gone before'. Pilots who get 'high' on whip-stalls, tight 360's, wing-overs, etc. when embarking on power should entirely re-assess their own motivations and make every effort to rechannel their thinking towards what are considered safe and unsafe manoeuvres in powered flight.

Now let's look at the problems. No pilot should embark on powered flying unless he is in possession of well co-ordinated skills; in other words if you are not thoroughly confident in your ability to control your glider through all normal flying manoeuvres even in difficult conditions then you should not consider power at this stage. Similarly, you should be thoroughly conversant with the characteristics and performance of the glider which you are to fly powered before bolting on the engine. Having said that, it is not really necessary to have a high performance 'uptight supership' for powered flight. It is better to power a forgiving and pleasant handling, well-pitch-roll co-ordinated machine to achieve enjoyable weekend flying. Local flyer Jim Potts - the Red Baron - had been flying an Olympus 160 for six months prior to bolting on his engine. On his first flight, therefore, he had only to concentrate on the difference which the engine made to his wing and in a 3 mile-an-hour wind, took off on flat ground, climbed to over 3,000 feet and thermalled around for half an hour, the engine running time being only 12 minutes. This, of course, was an ideal situation where a skilled pilot, fully aware of his wing's capabilities, had only to concentrate on one additional item, the engine. The engine, of course, had been run and flight tested on a Cirrus 5 for a number of hours so everything was brought together properly for the first flight. Conversely Andy Fawcett, also an Olympus flyer, transferred to a Cirrus 5 but before flying powered had several hours soaring time on

the glider, and consequently he had no difficulty in flying it powered.

Andy Fawcett's experience with racing 2-stroke motor cycle engines, and my own experience in motor racing engines, meant that we had an immediate awareness of the need for thorough engine inspection and maintenance. The Soarmaster uses a light-weight Chrysler 2 stroke engine of just over 100 c.c. and if owners of power units do not have a thorough understanding of 2-stroke engines then this should either be acquired immediately, or a friendship established with your local go-kart or motor cycle mechanic. It is surprising how people with this type of knowledge wish to become involved with a sensational new device such as a powered hang glider; therefore, there is no excuse for the owner not having some means of acquiring the expertise to maintain his engine properly. 2-strokes are extremely temperamental and need careful maintenance, none more so than in an aircraft application. A throttle which does not open fully or which has a sticky cable can cause, and has caused, an accident. An engine which has not been properly warmed up, an oily plug, the pilot's inability to understand why the engine should be fully revved just prior to take off, can all present unnecessary difficulties to the flyer. Regular engine maintenance to the manufacturer's recommendations is absolutely essential and since 2-strokes always have a capability to seize suddenly, all flight should be made assuming that the engine could cut, and consequently landing areas should always be within reach should this situation occur. At the recent inaugural meeting of the British Powered Hang Gliding Association, we were disappointed to observe two pilots endeavouring to take-off with out-of-tune engines and obviously without the awareness or the knowledge to rectify the situation. Before leaving the engine, there is one very important factor in my opinion that must be discussed, and that is the throttle control and kill switch. The minor 'incidents' which can occur during powered flight in conditions which may not be considered ideal, demand immediate control of throttle response. Given any situation in which the pilot has to react quickly to a change in pitch or roll attitude, the first instinct is to grip the control frame more securely and initiate the correct response to rectify the situation. Obviously this takes time, albeit perhaps only a second, but without a simultaneous throttle reaction, and the power left 'on', the 'incident' can become a full-blooded accident, particularly on the Soarmaster where there are 80 lb. thrust and 26 lbs. torque. At full throttle, a situation can develop almost as far as you can blink and a control frame mounted throttle lever is ABSOLUTELY USELESS. This point cannot be better illustrated than when a glider enters a turbulent situation where the

Andy Fawcett powers upon Cirrus 5/Soarmaster.

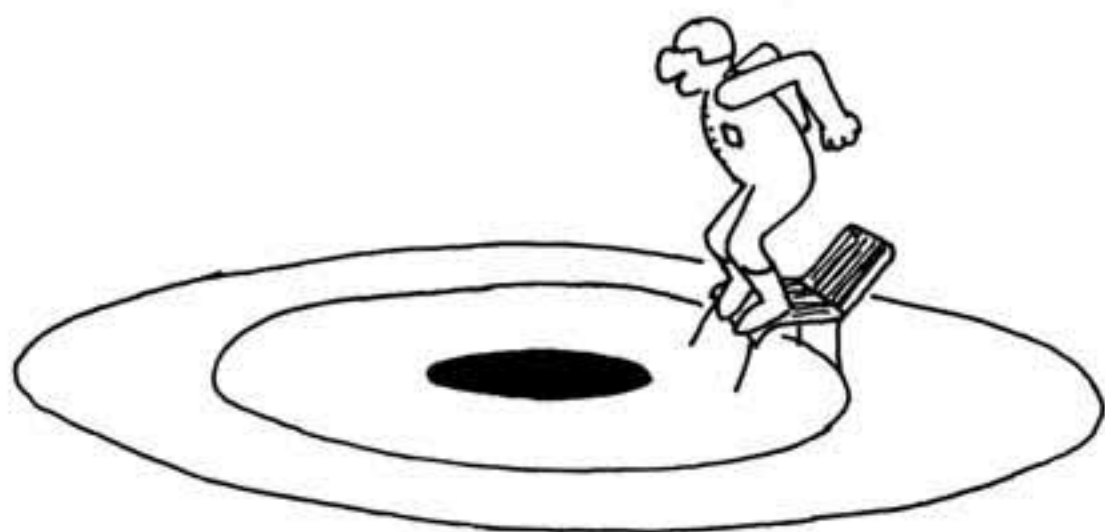


pilot's straps suddenly become slack. When this happens, particularly on full throttle, the pilot's weight obviously has no more effect on the glider and the thrust ensures that the glider will fly over the top of the pilot, start pitching down, and the control frame will move away from the pilot. The instinctive reaction of the pilot is then to pull in, which only serves to exaggerate the downwards pitching of the glider encouraging a full dive and tuck. Depending how aware the glider designer has been of this and how much he has done to minimise its effect by the addition of locking tips and other devices to create reflex, will determine whether or not the glider will recover before tucking. The effect of being left behind with the consequent instinctive need of the pilot to pull the bar 'in', is peculiar to high-powered flexwing flight and may not be apparent to pilots flying gliders with lower thrust figures. Obviously the higher the thrust – and the Soarmaster is perhaps the most powerful unit currently around – the faster the flexwing can be forced to fly, the more tips and washouts are flattened and the more the pilot can be left behind with the consequent undesirable downward pitching moment. On the Olympus and Cirrus 5, both gliders possess exceptionally positive pitch, and when the glider accelerates in this manner instead of pitching down as speed increases, the gliders tend to mush, pitch up and start climbing, and this is one of the major factors which have contributed to our safe flying in, at times, very difficult conditions. There is absolutely no reason why other gliders of other makes cannot have such devices as are necessary incorporated for powered flying, thus ensuring the greater safety of the pilot.

Several other factors can influence pilot safety. Since a powered glider can average higher airspeed than in conventional flying, cold weather can result in a much faster loss of body heat from the pilot. Andy Fawcett has had to land in cold weather after only ten minutes flying due to an alarming loss of body heat and co-ordination, even when wearing proper underwear and a ski-suit. Obviously in this situation good goggles and gloves are essential. At anything above 1,000

ft. an airspeed indicator is strongly recommended, not only because the wind is higher with the consequent possibility of a stall downwind, but also from the point of view of conserving fuel. 2-strokes at full throttle are notoriously thirsty and, if the airspeed of the glider is controlled and the throttle opening optimised, then an amazing conservation of fuel can result; for example, flying on full throttle two pints of fuel can last 11 minutes, but with careful throttle usage the same fuel can last 20 minutes. Physical well-being is absolutely essential in powered cross-country flying. You should be warm enough, comfortable enough and there should be no physical exertion required at cruising speed, in other words the glider must be properly trimmed so that when accelerating hard the glider is climbing, and when cruising the bar pressure is neutral.

From all of this several conclusions must be drawn. Firstly powered flexwing flying can be both safe and enjoyable provided that the pilot is fully aware of the virtues and vices of his craft, and has a comprehensive knowledge of both the flying environment and air law. The disciplines and judgments required are more critical and a mature and objective approach to flying must be taken particularly when there are spectators or cameras around. Skying out 3,000ft above your local site when there is practically no wind, catching a thermal and flying perhaps 15 to 20 miles is a real kick. Similarly, flying to your local site from home, unbolting the engine and having a day's soaring in good conditions, bolting the engine back on and flying home is quite fantastic. Zapping around 50 feet above the ground at 50 miles per hour over the heads of your local club members will thrill both you and them momentarily, but will probably guarantee a wooden overcoat at some stage of the proceedings. A thoroughly mature approach, a strong awareness of all things structural and mechanical, and above all a full knowledge of your wing's limitations, and the flying environment, will promote your safety. An indisciplined approach, flying in the wrong conditions, will not only endanger you, but it could jeopardise one of the greatest sports in the world. It's up to you!



... IRISH SPOT-LANDING PRACTICE

AMERICAN CUP T-SHIRTS

In Tennessee OUR flyers won the First American Cup against teams from USA, Canada & Japan.

We all made it possible and can be proud of the team effort that showed hang gliding expertise in the UK leads the world.

To mark the event we have produced a souvenir 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 UK's leading suppliers.



Send £2.90 (inc. p. & p.) AT ONCE to: BHGA T-shirts, 167A Cheddon Road, Taunton, Somerset. State size required 30", 32", 34" (S), 36" (M), 38-40" (L) 42-44" (EL).

Don't forget to give your address. Allow up to 3 weeks for delivery. Make cheques/P.O.s payable to BHGA.

Accident Reports

Tony Fuell writes:

You read in the December WINGS! that I'd had a fairly serious accident. Fortunately, things are much improved now, and by the time you read this I hope to be back to normal. My thanks to all the people who have sympathised, sent cards, offered to help and generally rallied round - it's nice to know what a really good bunch of people hang gliding folks are.

While I was laid up, I had a number of letters, and one in particular from Bob Mackay was so good that I felt it was too

useful to be seen by me alone, and so I hand the rest of the column over to Uncle Bob:-

Bob Mackay writes:-

Dear Tony. About the same time as you had your accident I had mine! Oh yes, it was a bad one and, although it was only a "moment" and I didn't get hurt *physically*, it was mentally shattering. I'll tell you all about it not because what happened is important, but because the "lead up" fits into the jigsaw you have started in your article. I've concluded with some "Warning Signs".

Here is a table of thoughts contrasting my "normal-day-going-flying thoughts" with my "special-day-going-crashing thoughts". All the warning signs stand out in flashing red lights . . . I just didn't look at them.

NORMAL DAY

9.15 On the phone, "I don't know, Pat, it's a little bit strongish . . . maybe this afternoon . . . let's just monitor it and I'll ring you about midday . . ."

10.00 It is South West and I'm not feeling switched on - still, I'll put the roof rack on just in case.

11.00 Seems to have dropped off a bit. It may shift to the west - clearing too. I'll ring Pat.

12.00 "You've got it more West down there. OK, see you about one o'clock on the top."

1.00 On the ridge - it's South West. "I don't fancy it, Pat, let's sit it out and chat."

2.00 Still sitting it out.

4.00 It goes a bit more West and is 16 mph. We get a nice 30 minutes in and land in time for tea.

CRASH DAY

9.15 Nobody phones, God, they are a lazy shower. It's bloody perfect for Bryncaws and by midday it'll be too strong. I'll get up there myself - to hell with the lot of them.

10.00 Not a soul here. 16-18 mph straight on - Oh hell, I'm going up and rig - if anyone comes I can take off straight away.

11.00 It's getting stronger - over 20 now and then. If I wait any longer it'll be too strong. I'll self launch!

12.00 **Crust!** it's bumpy, almost evil - the lift should be better than this, Better get it down - (there followed a really hairy top landing wing tip first but no damage - worse to come!)

1.00 "Jesus, Bob, we saw you up. Thought everyone was here but you are on your own then!!!"

2.30 "Our Hero" (Bob Mackay) - the only one to brave it - takes off again to show 'em how it's done. Neil and Allister follow and go straight down battling all the way. On the crest it's going from 6-26 mph in seconds. "Our hero" top lands.

4.00 Allister and Neil go up and go straight down again - it's not so strong but still varying widely from 10-25 mph. They don't like it and they are very wise. "Our hero" decides to show them *and* the schools (flying down at the bottom end) how it's done.

4.10 After awkward take off and a few beats up the top wind I think I will try the bottom end by the ledge where the schools operate. I've got about 150 ft. above the ridge and can keep fairly well out. Going South I slide in behind the crest directly over the schools doing "Tethered Walks" and turn to go back about 100 ft. in hand. Then I make the big mistake and turn parallel to the slope going North.

a) UP GOES THE OUTSIDE WING. FULL CORRECTION. (I've hit this before, count to two and she'll come out).

b) FULLER CORRECTION - all outside the upright. (I'm too old for this sort of thing).

c) SHE KEEPS GOING ROUND MORE SPEED! NO EFFECT!

I am now heading straight for the back of the ledge and have lost about 30-40ft. . . . the classic downwind stall position, all options getting less and less, SO I HAVE TO GET ROUND THE REST OF THE

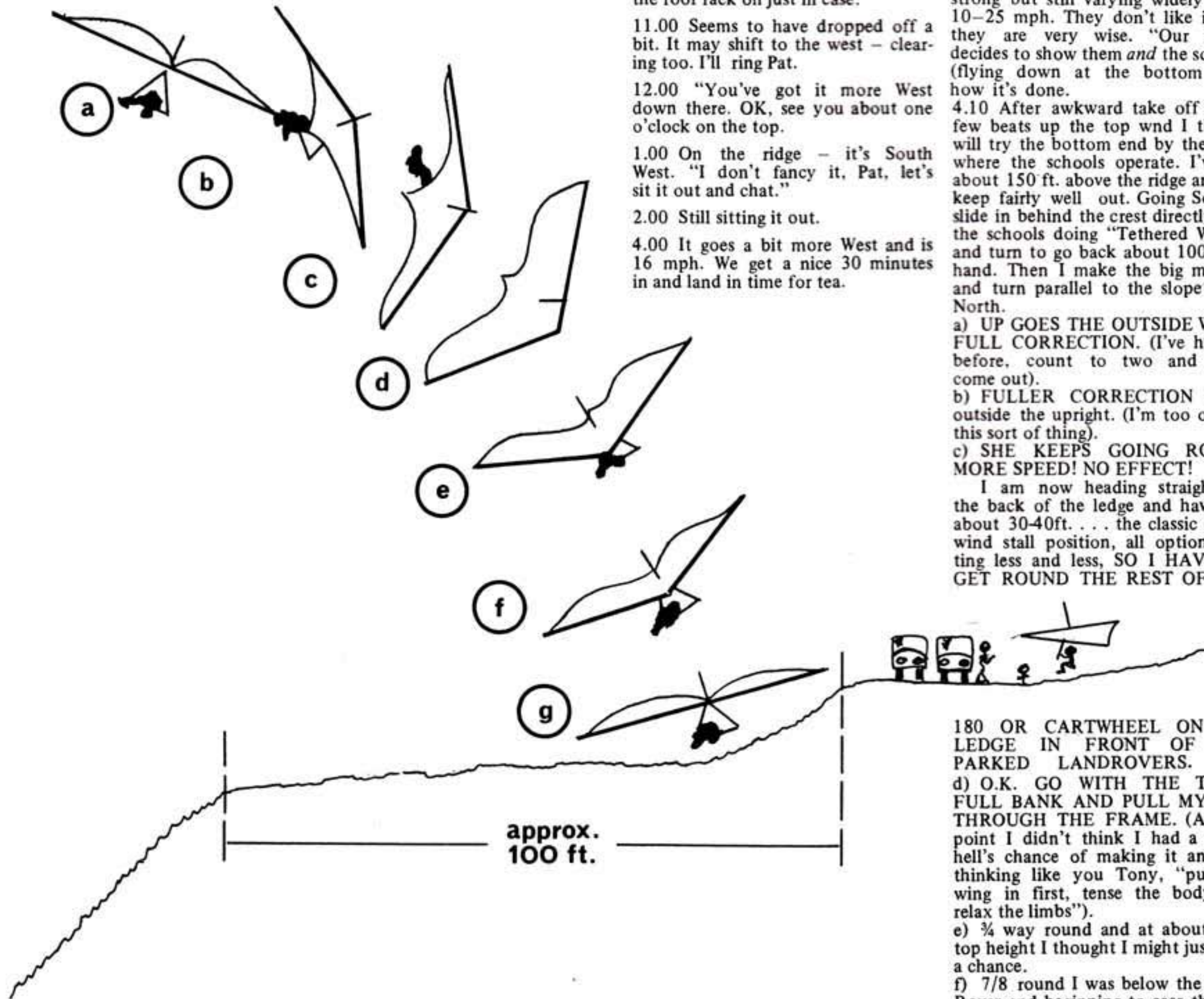
180 OR CARTWHEEL ON THE LEDGE IN FRONT OF THE PARKED LANDROVERS.

d) O.K. GO WITH THE TURN. FULL BANK AND PULL MYSELF THROUGH THE FRAME. (At that point I didn't think I had a cat in hell's chance of making it and was thinking like you Tony, "put one wing in first, tense the body and relax the limbs").

e) 3/4 way round and at about rooftop height I thought I might just have a chance.

f) 7/8 round I was below the Land-Rover and beginning to ease the bar.

g) FOUR FEET TO SPARE.



BRITISH HANG GLIDING ASSOCIATION



DETAILS AND VOTING SLIPS

Annual General Meeting and Conference

Saturday 31st March and Sunday 1st April 1979

Warwick University, Nr. Coventry.
Hosts — The Mercian Club

Saturday 31st March

2.00 pm AGM OPENS
Candidates standing for election will introduce themselves.

3.00 pm DISCUSSIONS TO ESTABLISH POLICY GUIDELINES.

This is an opportunity for all to have their say and to influence decisions that will be made by the Council, on behalf of all in UK Hang Gliding, over the next year. Subjects so far scheduled are:-

Accidents
Publicity
Competitions
"Wings"
Airspace Usage
Technical Standards
Flying Standards and Pilot Rating.
Public Events
Towing
The Role of Clubs
Amateur and Professional Status
Power
Sites and Site Fees
Training
Ancillary Equipment

If you are very interested in these or any other subject and are prepared to lead a discussion please advise the Secretary as soon as possible.

6.00 pm BAR OPENS and during the evening a competition will be held to find the best 10 minute amateur hang-gliding film. During the evening there will be adequate opportunity for members to talk informally.

Sunday 1st April

10.00 am AGM RESUMES and Nominations for the Council close.

10.15 am CHAIRMAN'S ADDRESS, TREASURER'S REPORT. REPORTS ON DISCUSSIONS AND CONCLUSIONS REACHED.
CANDIDATES FOR ELECTION TO COUNCIL will be able to introduce themselves and explain their ideas and policies.

12.30 pm LUNCH AND BAR
A further opportunity for members to talk informally and to see displays of gliders and equipment.

LUNCH WILL BE AVAILABLE AT NOMINAL COST.

2.00 pm VOTING to Elect new Council Members and on any other proposals.

6.00 pm FINISH.

(A more detailed programme will appear in the March Edition of "Wings"!)

Council Vacancies and Candidates

Brian Milton, currently Competitions Committee Chairman, will stand down and seek re-election. Malcolm Hawksworth and Will Jones resigned from Council during 1978. Roy Hill who was co-opted to Council, in Malcolm Hawksworth's place will stand for election. Roy accepted responsibility for Training on 21st January 1979. The Treasurer has to be elected each year and Derek Evans is standing for re-election. At the time of writing no other Candidates had been notified to the Secretary.

A Council Members Duties

To be responsible for one or more of the Associations fields of activity and have time to devote to this as well as the necessary energy and enthusiasm. We need members on Council who can provide leadership to co-ordinate the efforts of members to run and advance hang-gliding for all rather than those who wish to represent a specialist or local interest.

In particular we need Council members who will accept responsibility for Training, Competitions, Airspace Usage, Technical Standards and Airworthiness, Sites. Remember the BHGA Council is as good as its members and as we are responsible for their election the Council is as good as we deserve it to be.

How to Stand or Nominate a Candidate for Election

Members wishing to stand for election or to nominate a candidate must send, or hand, written nominations to the Secretary before 10.00am on Sunday 1st April 1979. It will be in candidates' interests to get nominations to the Secretary, as soon as possible. The proposed candidate must agree, in writing, to serve if elected, and the nomination must be seconded, in writing by another member. Every candidate and his/her proposer will be able to address the meeting prior to the elections.

Voting

We will again be using the Single Transferable Vote system. This means you can list candidates in your order of choice and your preferences are all taken into consideration. All other proposals to be put to the vote will require a simple yes/no decision. Yes, if you agree with a proposal, No, if you disagree.

How to get your Vote at the AGM





1. Be there.
2. If you cannot attend and belong to a Member club, entrust your voting slip and instructions to the representative your club will be sending to the AGM.
3. *By post*, post your completed voting slip to:
The Secretary,
167A Cheddon Road,
Taunton,
Somerset.


Those of you voting by post and those wishing to have an up to date list of candidates prior to the AGM should ring BHGA Offices Taunton (0823) 88140 between 21st and 29th March, excluding 24th and 25th, during office hours, preferably in the afternoons.

Family members will be sent voting slips by post during March.


VOTING PAPERS FOR B.H.G.A. 1979 A.G.M. Single transferable votes in elections for Council Members and Treasurer. You have ONE vote. Use your vote by entering the name of your first preference, and if desired, the name of your second preference and so on until you are indifferent. The sequence of your preference is crucial. You should continue to express preferences only as long as you are able to place successive candidates in order. A later preference is considered only if an earlier preference has a surplus above the quota required for election, or is excluded because of insufficient support. Under no circumstances can a later preference count against an earlier preference. Votes on proposals - write "YES" if you agree with the proposal, write "NO" if you disagree.


USE BLOCK CAPITALS. TEAR OR CUT ALONG DOTTED LINES. SCISSORS MAY BE USEFUL!


Order of Preference	Voting Paper for the Election of COUNCIL MEMBERS 	Order of Preference	Voting Paper for the Election of TREASURER
1		1	
2		2	
3		3	
4		4	
5		5	
6		 PROPOSAL 15	
7			
8		 PROPOSAL 14	
9			
10		 PROPOSAL 13	
11			

 PROPOSAL 12

 PROPOSAL 6

 PROPOSAL 11


 PROPOSAL 5

 PROPOSAL 10

 PROPOSAL 4


 PROPOSAL 9

 PROPOSAL 3

 PROPOSAL 8

 PROPOSAL 2

 PROPOSAL 7

 PROPOSAL 1

Topics for Discussion

Should be notified to the BHGA Secretary by Monday 26th March. So that they can be sorted easily please send a SEPARATE SHEET OF PAPER FOR EACH with a brief outline of your views and ideas. The person leading the discussion can then make known these submitted views.

Other Proposals

None had been submitted to date at the time this was written. All formal proposals that members want to submit should be sent to the Secretary at the Taunton Office preferably by Monday 26th March.

Overnight Accommodation

For a list of Guest Houses and Hotels send an SAE with 7p or 9p stamp to: The Coventry Information Centre, 36 Broadgate, Coventry. The phone number in case you forget to write is Coventry (0203) 20084 or 51717.

Film Competition to find the best 10 minute amateur hang-gliding film

Standard 8 and Super 8 projectors and Screens are available at the University. If you are entering or want any other information on

the competition please contact Rod Bird, 5 Station Avenue, Warwick. Telephone Warwick (0926) 46314.

The Mercian Club

Council wish to thank the Mercian Club for hosting the meeting and for their help with its organisation. Especially Chris Freeman.

If you have any queries on the locality or the venue please contact Chris at 53, Jacklin Drive, Coventry. Telephone Coventry (0203) 416841.

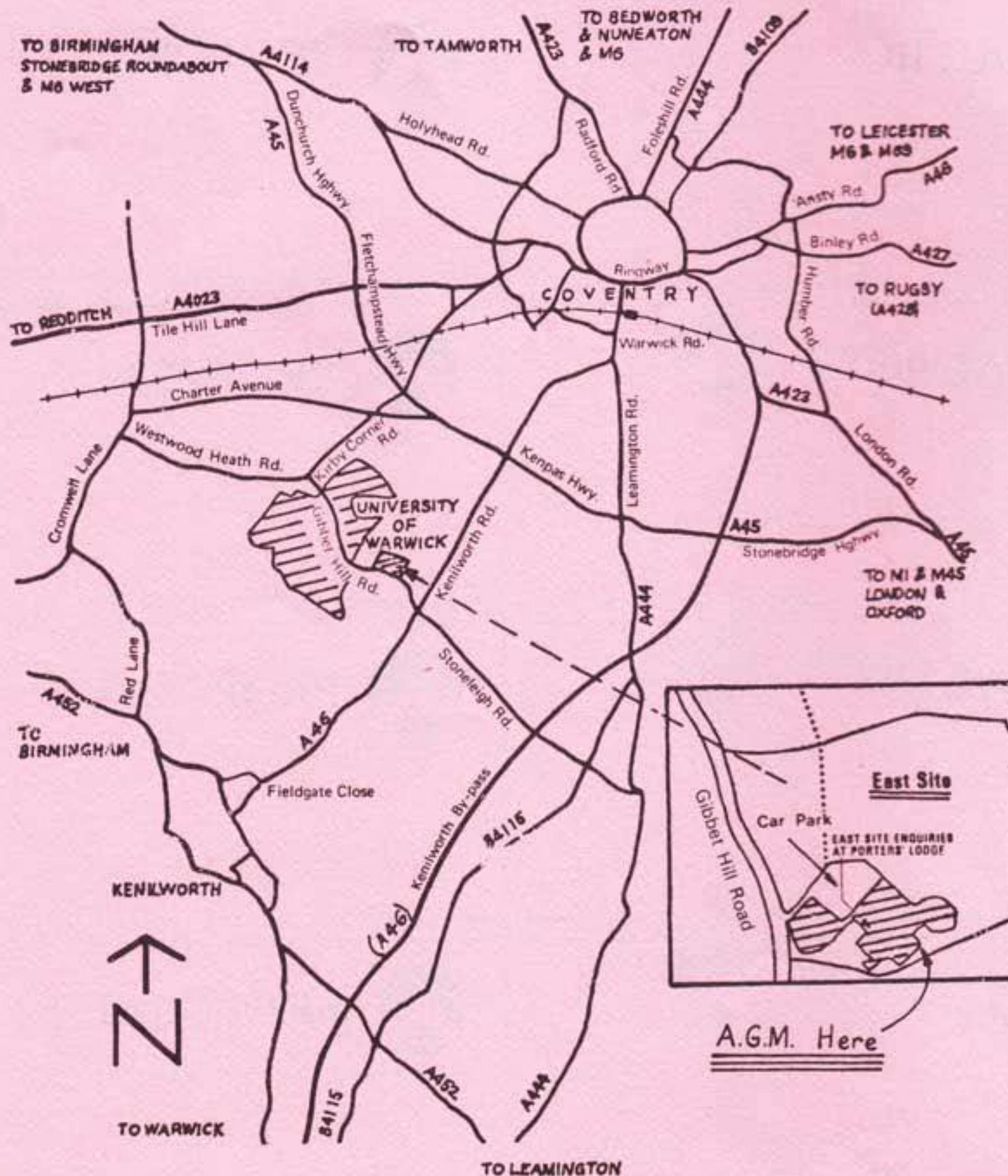
Information for Member Club Representatives:

Will Member Club representatives please contact the Secretary at Warwick before 2.00pm on Sunday 1st April, to obtain Validation Slips to allow them to present more than one vote. This precaution is to ensure that only Member Clubs get a block vote.

Note to all Members:

Members are reminded that they cannot vote at the AGM without a voting slip. Do not ask for voting slips to be issued at the Hall because you have lost yours. You will only be able to obtain a voting slip at the meeting in exchange for a membership application form with fee and before 2.00pm on Sunday 1st April.

The University is situated three miles south of Coventry and 1 1/2 miles north of Kenilworth, in Gibbet Hill Road off the Kenilworth — Coventry section of the A46.



A.G.M. Here

Sorry to bore you all with a classic situation that has happened to most of us at one time or another, but it's not what happened in the last 10 seconds that's half as important as what had happened earlier in the day. An accident starts to happen long before you hit the ground and my point is *it starts to happen long before your pre-flight check.*

We all know (by now, if we didn't 2 years go) that we get "switched off" periods (in my RAF flying I started getting switched off during my early Squadron flying. Training was great, a real joy, but when you have to fly "hail, rain or snow" with long gaps in between so you become "de-tuned", it gets more of a strain). I digress - sorry. We all have experienced times when we didn't feel much like flying and other times when (like the old days) we were "champing at the bit". Instead of analysing conditions and making judgments we were unconsciously modifying the situation to suit our desire to fly.

So Warning Light No. 1 is:— IF YOU FEEL REALLY KEEN try to step outside yourself and take a good honest look at conditions.

Warning Light No. 2 is:— As you rig and prepare for take off

ARE YOU THINKING WHAT YOU ARE GOING TO DO WHEN YOU'RE UP? If so - stop! and concentrate on what you are doing. Pre-flight planning should be over before you start to rig - or have a special section between rigging and clipping in.

In the infinitely more complicated business of flying an operational powered aircraft, I invented mental shutters. I used to really visualise (and even hear) them clang shut. The phone at dispersal would ring, and I was next on the list - so *Clang* went the shutter - no more reading the book. *Clang* went the second shutter - no more thinking about far away home, girlfriend, etc., and *Clang* went the third shutter to forget about being ***** scared of flying the bloody thing . . . It really became a psychological exercise converting from a human being to a pilot in 10 seconds but this is what you have to do, and I don't think half the hang gliding world would believe *they* have to. The first part of the problem is; its so easy to fly a hang glider! What I wrote 4-5 years ago is still true:—

"Any fool can fly a hang glider! . . . but not for very long. The required skill can be attained fairly quickly so what is so hard to learn? The

answer is "THE RIGHT MENTAL ATTITUDE". For most of our lives an awful lot of people are looking after us - so - we make an awful lot of mistakes and get away with them. Take off in a hang glider and you are on your own; make a mistake and you will pay for it! It may only mean loss of height, a premature landing, a bruise or two or a bent glider but you never get away with it.

It takes a fair number of poor flights or a bad crash or both

before this sinks in ~~but~~, until it does, you are a fool in a hang glider and you will not be flying it much longer. You should always know what is going to happen next -if you don't, you are taking a chance. DON'T TAKE CHANCES.

So Warning Light number 3. If you're "taking Off" still feeling like your old self RELAXED AND CONFIDENT, YOU'RE HEADING FOR TROUBLE. You should be tensed and concentrating.

ACCIDENT REPORT

Fatal Accident: 28 December 1979
Pilot: Christopher K. Read
Site: Mill Hill, Shoreham, Sussex
Glider: Wasp Falcon 4
Equipment: Prone Harness, crash helmet, boots.
Nature of accident: Weather conditions during the morning had been poor, with low cloud and rain. When the rain cleared the pilot took off into a moderate SW wind. He was seen to fly normally for 5 minutes or so until, when approaching the south end of the hill, the glider was seen to turn in towards the hill and dive steeply to the ground, impacting on the southern side of the reservoir. The pilot received multiple injuries and was found to be dead on arrival at Worthing Hospital.

Comment from Tony Fuell: This accident brings the number of fatalities in 1978 to 10 - far too many. Discussion of the causes of this accident must wait until after the inquest on 7th February, but all pilots are reminded of the need to ENSURE THEIR AIRCRAFT MAINTAIN ADEQUATE AIRSPEED.

DAMN NEAR DEAD!

by JOHN HUDSON

How thorough does your pre-flight have to be? A bad experience recently left me very cold and very uncertain.

After ½ hours soaring on a high lakeland fell during Christmas, I landed too far around the fell to allow an easy walk back to the launch. A strong wind and knee deep snow drifts made walking impossible with a fully rigged glider, and after a struggle I gave up and elected to de-rig and re-rig at launch.

This was soon accomplished and after a rest I lifted the glider for another flight. One of my rear wires had caught around the keel and I called to another

pilot to release it for me. He walked over, released the offending wire and in a calm, detached voice suggested I view the rear wire fixing before launching.

What I saw horrified me! In common with many gliders, the Vector rear wires are held in a shackle and attached to a small adjustable channel with a clevis pin and split ring. The ring was missing and the pin had worked out until only ¼" was inside the channel. The shackle had twisted slightly and the pin was through one leg only - had I flown, any load at all would have resulted in the loss of my rear flying wires with catastrophic consequences.

I know all about pre-flight checks. However, I'm also an honest man and admit that, although I'm pretty careful on the initial rigging, I don't always check with the same care on subsequent flights.

It was fairly windy, I was half frozen and intended a quick soar and flight down. I know that had my wire not caught on the keel I would have missed that fault. I have no idea how that ring came out. I would not have believed that a ring could come unclipped out of a 3/16" dia. pin, with a hole only fractions larger than the ring wire itself.

I believe it now. Murphy's Second Law:— "Anything can and does happen".

It's no use people sighing and saying, "Ah, well, what do you think pre-flights are for?". I've watched hundreds rig and fly and the meticulous and careful pre-flighters are in the twos and threes.

I made a resolution a day later on New Year's Eve. From now on whenever I launch anyone, I'm going to ask if they've pre-flighted. I'm going to try to make it a habit, just as I always say, "Release", when I want to go. If everyone in the country does that, maybe more emphasis will be placed on pre-flight checks and perhaps serious accidents, yet to happen in 1979, will be averted.

Air Mail

Dear Sir,

I hope there will be many more letters in the same vein as this one. In case there are not enough, I am writing on behalf of all British Hang Gliders and Followers of the Sport but especially from all of us at the Dover and Folkestone HGC.

Well done the British Team — We are proud of you and in a way proud of ourselves. The Continent and the America's may have the Grandest Sites — The Breathtaking Soars — The Endless Flights; or so it appears to our envious eyes, on the odd Continental visit, or film of how it happens in the States.

Our little sites still have the challenges and variety to produce Great Fliers and Kite Designers.

Three cheers to you all, for encouraging the rest of us.

All Members
Dover & Folkestone HGC

Dear Sir,

And you in Britain have the cheek to laugh at the Paddies . . . At least we don't allow our flag's Green, White and Gold to be flown the wrong way round. (I'm on about the Union Jack flying upside down in America, as depicted on the cover of WINGS! (November)). Three minutes work with a child's paintbrush would have corrected things.

Isn't it treasonable in Britain to insult the National Flag? Perhaps we'll need a new Editor for WINGS! after the incumbent is executed in the Tower.

Another story for our book of Englishman jokes.

Kind regards,

Roy Hammond,
Editor,
Irish Hang Gliding Journal

So, by right of reply . . .

To Mr. Thomas,

I sometimes watch my Dad hang glide and it looks exciting seeing him fly through the air. It looks lovely watching it and I might fly if some one would carry the hang glider up the hill. Some people think it is dangerous and in some ways it is. But lots of things in life are dangerous.

From Katy
Leeds postmark

To Mr. Thomas,

Hang gliding looks very exciting. It sounds dangerous but doesn't look it. It is nice for people to watch and for those doing it. The only thing wrong with it is carrying it back up the hill again.

From Sara
Leeds postmark

Dear Sir,

A few weeks ago I stood watching a pilot waiting to take off. The wind was light. He hesitated for a long time as he wished to make a top landing, and not fly to the bottom and have to carry the kite up. After about twenty minutes his friends could bear it no longer. About six of them seized him and pushed him into the air, laughing loudly at his protestations. It seemed funny at the time. He was a league pilot of considerable skill and no harm was done.

However, it might have been a tragedy. He was greatly upset at being hustled off in this way. Take off is a dangerous time and a small misjudgement can lead to an injury or damage to the kite. It is of course very frustrating waiting for someone else to take off although in this case no one else was waiting.

It does however provide an excuse to make one or two general observations. A pilot waiting to take off must be allowed to do it in his own way. He may be a nervous beginner or he may only be waiting for someone to land to make a little space in the air. When the sky is crowded it is good manners only to have a short flight to allow others to fly. For the same reason do not take off too close to a kite soaring along the ridge. You may have the skill to avoid him but the other pilot will not know this and will have to turn away to avoid a possible collision, thinking that you have not seen him.

A pilot making a top landing must be sure there is enough space for it. It is irresponsible to land amongst parked kites. Some pilots like to demonstrate their skill by doing this and many kites have been damaged by pilots not so good as they thought. If there is no room to land on top, go down, the exercise will do you good.

A good pilot can get away with a lot of selfish flying simply because he is good. A very good pilot is considerate where others are concerned. There have been a lot of near misses and a lot of accidents ascribed to pilot error. A number of these accidents have in fact really been due to selfishness or sheer lack of care.

After ten fatal accidents last year a general increase in a sense of responsibility is needed, urgently.

Dunstan Hadley,
Itchenor Green, W.Sussex

Dear Garth,

In the motor car world, kits for hotting up a car, or reducing fuel or streamlining, or improving comfort, or adding life to the vehicle can be purchased. I wonder if it is time for 'safe' modifications to be described through WINGS!

One that interests me is the Vortex generator system which it is claimed helps to enable kites to land slowly and be more stable in landing. Could you persuade some of the designers to get together to approve mods. of this nature?

Yours sincerely

G. L. M. Jones
Bramhope, Leeds

Dear Garth,

I read with great interest and no less concern the article on stalling by our president Anne Welch. As we would have expected, it was to the point and full of good advice.

However, I can't help feeling that knowing about stall behaviour is not good enough. I know from my own experience, when I suffered a gust induced stall, that it can sneak up on you without much warning. I managed to take corrective action to suffer only a hardish landing and a dislocated elbow; as we know, others are dying. I would accept that my experience was pilot error and that the same is always the case for this type of accident.

Nevertheless, it is time we recognised that we need help! The visual indications that we are used to basing judgement on are completely misleading, whilst the important signals like noise, mushiness, wind on face, etc., are very imprecise. So much so that a new glider, strange site or other can be enough to catch out even experienced pilots.

I think it is time we accepted that the consequences of stalling are so serious that we should all have a stall-warning device fitted to our glider. Could BHGA offer a prize for the most appropriate design and then recommend each and everyone of us to fit one.

I could think of three alternative physical principles, (i) electronic, (ii) stretched membrane giving audible tone, (iii) whistle (ie, like penny-whistle). The last one is particularly attractive involving no moving parts and virtually maintenance free.

The only complication is the variation in performance depending on glider and condition but this could be accommodated in a number of ways.

S. A. Fisher
Dorking, Surrey

A prototype stall-warning device is due to be tested by John Hunter, BHGA Accident Prevention Officer, in the near future. We will publish the test report as soon as possible.

ED.



Easy Take-Offs ? ? ?

In the September 1978 issue of WINGS! Ian Trotter's article on the merits, as he saw them, of a "loose straps" take-off ended with the question, "Might this not be the best way?". In Tony Fuell's accident report in the November '78 issue Tony answered Ian's question very positively from his own painful experience, "... that method is superficially attractive . . . but it is potentially HIGHLY DANGEROUS. The danger is, if you don't tighten the straps, you don't know if the harness will support you in the air."

Between the dates of Ian's article and Tony's accident Keith Cockroft, BHGA Training Officer, had written to Ian. The reservations which he expressed, had they been made known at the time, might well have prevented Tony's accident. There is still considerable doubt in the minds of members whether they should take off "loose" or "tight" — hence this feature.

Dear Ian,

With reference to your article:

(1) You say "balance glider on shoulders" yet the left hand photo shows you balancing the glider on your neck (and the seat on your prone harness is twisted).
(2) in the right hand photo the straps should already be tight, which they would have been had you started with the control frame on your shoulders, and, because your hands are too far up the control frame you will get "jerks on the harness". If you use the proper technique, i.e. glider on shoulders, hands almost at bottom of side tubes, initial forward movement inflating the sail — lifting the glider, tightening the straps — easing in on the bar to gain full airspeed for take-off, you will experience a smooth, co-ordinated, jerk-free take-off.
(3) You say, "It works as well on free floating sails as it does on enclosed keels, fast kites or slow, seated or prone, nil wind or howling, gentle slope or steep." What you have said is *positively* dangerous. It is bad enough in strong winds to run with an "enclosed keel" glider, with the sail luffed, then rotating the glider causing it to pitch and snap the straps tight — this causes a momentary loss of control at the most important point of the flight. If you attempt this strong wind, unloaded sail, take-off technique on a free-floating-sail glider the momentary loss of control will seem even more dramatic.

Keith Cockroft,
BHGA Training Officer

Dear Garth,

With horror I have just finished reading Tony Fuell's article about his accident. Now I know it's easy to make recommendations and pull holes after the event but I would just like to mention how we in the Norfolk Club get over this hazard. All our take-offs are cliff launches so we don't have the problem of how to balance the kite when we run and take off. On a cliff launch we have two or three assistants, and when released we usually go straight up. About 99% of club members *always* have a hang in their kites before *every* take-off just to check their harnesses for twists, etc. and, to prove my point, we in Norfolk have never had an accident or near-accident connected with a harness. (I wish Tony a speedy recovery.)

Terry Aspinall,
Saxmundham, Suffolk

Dear Sir,

As a new E.P.C. holder it is with some trepidation that I cross swords with such an experienced flier as Tony Fuell. However, in his article describing his accident, he attempts to lay the blame on the method of take-off advocated in a previous WINGS! article by Ian Trotter and as taught to me on my EPC course at a BHGA registered school.

However, Tony condemns himself in his own article, "Mistake Number Two happened then — no harness check". No, I'm sorry, Tony, nothing wrong with the method of take-off. Just plain old-fashioned carelessness on your part.

Ken Sheaf,
Woolacombe, Devon

Dear Sir,

Ian Trotter's Wing Tips article (Wings! Sept. issue) asks why people insist on straps tight during take off, and goes through several pros and cons. However, he misses out what I consider to be one big disadvantage of the 'shoulder' take off method, and that is that during the period between the kite lifting off your shoulders and the harness going tight, your control over pitch, roll, etc. is drastically reduced. This is particularly noticeable when flying seated where the kite may have to move up 2 or 3 feet in order to tighten the harness. In addition this period often sees the beginning of the transfer of hands to the bottom bar, further reducing control at this critical phase of the take off. I personally, feel that beginners (flying seated) should use the conventional method (they are not used to maintaining the correct attitude in this transition period), experienced seated flyers may find Jan's method easier if it is always repeatable successfully (do you ever get inexplicable stalled take offs?), and prone flyers will find Jan's method easier due to their greater experience and less movement of the kite to tighten the straps. I use shoulder take offs when flying prone and tight strap take offs when flying seated. One further advantage of tight straps is that you won't take off without clipping in!

Dave Wilkins,
Stevenage, Herts.

Dear Sir,

Best wishes for Tony Fuell for his speedy recovery, and thanks for sharing his experience. I, for one, will never take off if conscious of not having done a harness check, after reading the article.

However, one point I do disagree very strongly with is his stating that the Ian Trotter method of take off is "potentially HIGHLY DANGEROUS". I suppose that since every hang gliding fatality has occurred after a take off, all take offs, this method included, are "potentially HIGHLY DANGEROUS". So's the sport!

But my point is this. Number one in the take off procedure is

the pre-flight inspection. In this inspection you make sure that you and your glider, as a unit, is airworthy. This includes a harness check. Once satisfied that you are ready to fly, you choose the take off technique that you feel best with. I use the Ian Trotter method, and teach it, because it gives by far the best control in all axes on the ground. This means that in the take off run you can achieve flying speed, accurately increase the angle of attack, and an instant after the kite leaves your shoulders, you are airborne. The argument for "straps tight" type method is that you can't exert weight shift control on the kite unless your straps *are* tight. But who wants to exert weight shift when you can control the kite directly?

Tony says that the Ian Trotter method is potentially dangerous because it is not a secondary harness check. My view is that there is no reason for a take off method to be a secondary harness check.

No take off method is a secondary check for any other part of the kite, so why should the harness be an exception? Besides, a straps tight method is not a complete harness check — at the least, the shoulder supports could be defective or twisted, so a complete pre-flight harness check is essential anyway.

I feel that given that the glider and pilot are airworthy, the Ian Trotter take off method is one of, if not *the*, best ways of getting off the ground, and in any case, should not be considered any more dangerous than any other method.

If blame has to be put anywhere other than an incomplete pre-flight check in Tony's case, I feel it should be put on prone harness design. There are a large number of straps and ropes to accurately guide one's legs through in a typical prone harness, and it is an understandable mistake to miss the leg straps. I have a friend who was far luckier than Tony — he made the same mistake, but was launched in prone! He had an uneventful flight, came in to top land, swung out of prone, fell through like Tony — at the same moment that he landed. He just breathed

LASER 190



LASER

A full bodied intermediate/advance glider for the pilot with ambitions, whether it be competition, cross country, thermaling or just plain ridge soaring "Laser" fits the bill.

Laser has taken us a full year to develop and this extensive work has produced at last an intermediate glider with good sink rate glide angle and *penetration* so that when the winds freshen you won't automatically be grounded. "Laser" slices through turbulence with its cambered fully floating battened sail (no wing wires) and its strong easy to rig airframe allows you the maximum time possible in the air. Beam on to a Laser and light up the sky. Laser is available in two versions, a full length glider and a breakdown version folding to around 3 mtrs, that's just 10 ft. for storage and transportation. As with all Wasp gliders Laser comes as standard with a fully anodised airframe.

Leading Edge	20 ft.
Keel	8' Effective
Area	190 sq. ft. 17.65 sq. mtrs
Nose Angle	120°
Aspect Ratio	6.2
Span	34'6"
Sail Billow	0°

Waspair Limited

Restmor Way, Hackbridge Road,
Wallington, Surrey SM6 7AH. England.

Telephone: 01 - 647 4343
Telex: 943763 Crocom.G.Waspair

LASER, THE DIRECT PATH TO PERFORMANCE

a sigh of relief and took his harness off and put it back on again correctly. That's fate! Anyway, back to harness design – it wouldn't be too difficult to make something resembling a baggy pair of shorts out of light sailcloth, and sew the legs onto the leg straps. Not many pilots can't put a pair of shorts on correctly, and if a bright colour will provide a good visual as well as tactile check on the fact that the legs are properly through the straps. It'll at least be immediately obvious to the nose wire man.

Ed Hui
Swansea

Dear Garth,

In response to all of the readers who write in following the appearance of my accident report in the November issue of WINGS!, I would just like to make the following points:

1) I am under no misapprehension that my accident was caused by anything but my own stupidity. In order for me to have the accident at all, it was necessary for me to make three separate and distinct mistakes; these were:

a) failure to put the harness on properly b) failure to carry out pre-flight checks c) failure to pull the straps tight before launching.

2) It seems to be item c) which has caused the most comment. I am not suggesting that resting the control frame on your shoulders is, in itself, a dangerous thing to do when taking off BUT I would advise anybody who uses this method to lift the glider up as high as possible before thinking about a take-off run; this will ensure that you have a 'fail-safe' built into the system, which will let you know if anything goes wrong.

3) I quite admit that having an

Dear Garth,

Two points. The "Trotter T/O" (and I'm not sure I welcome the nomenclature!) is, I believe, the right one for nil (or low) wind and in my experience works in all conditions which allow the pilot to do without a wireman - i. e. all except cliff launches. The straps-tight T/O is almost certainly better in 16+ and I'm working towards adapting myself to it.

Regards,
Ian Trotter.

accident was a very silly thing to do but at least within two days of it, WINGS! had a full report and an analysis. This was written while I was still in hospital. I have been amazed and slightly horrified by the number of people who have subsequently said to me that they had made the identical mistake at some point in the past but had not bothered to write it

up for the magazine. Some while ago I put into one of my articles that if you do have an accident and manage to survive it, you should "study it, learn from it and DON'T REPEAT IT". Perhaps I should have added "REPORT IT"!

Yours sincerely,

A. Fuell,
Brighton

The conclusion seems to be that there are positive dangers to the method promoted by Ian Trotter, and using his method could contribute to accidents. Use the proper method approved by the Training Officer . . .

Glider on shoulders, hands almost at bottom of side tubes, initial forward movement inflating the sail – lifting the glider, tightening the straps – easing in on the bar to gain full airspeed for take-off.

... DO IT THIS WAY

WHERE DO WE GO FROM HERE?

by John Hudson

There must be many current members of the BHGA who do not remember the days of a 4 to 1 glide being the ultimate in hang gliding enjoyment. How we have advanced since then! However, this advancement means we now demand each 6 monthly period bringing a 15% increase in both performance and pleasure. Unfortunately, hang glider development seems to be levelling out. Each new model is slightly better in performance, although the great strides have now become small steps. No longer do we see staggering increases. Remember the days when we waxed lyrical about soaring in 12 mph?

Sure, handling characteristics have altered dramatically, but I feel I'm not alone in believing that we are going to see no more than a 20% increase in flex wing performance over the next 3 or 4 years. Where will we be then? We will still only be able to soar from hills and will still be limited to fixed sites. It's true that we will gain permission to fly new sites, but we are also sure to lose some of the ones we now have.

If our sport is to continue to develop we must find new paths to follow.

I once thought that power was a way out of our fixed location dilemma – free to take off from flat ground, no necessity to use a hill with the all important wind speed and direction. However, it's now obvious that powered hang gliding can only develop as a separate entity. Hang gliding is hang gliding and powered hang gliding is something else. It's important that power should be encouraged because it's a branch of ultra-light flight and can contribute a tremendous amount of knowledge.

For hang gliding to develop to its full potential, we have to re-think our future.

To eliminate the necessity for hill launching, we have to follow conventional gliding and look to tow launching as a means of "getting up there". I did a double take the other month when on the tail end of an article in 'Glider Rider', two pilots talked about spending a "few hours towing up and releasing at 2,000 ft". Wow! which club in the whole of England can even think about a 2,000 ft vertical flight. Being able to tow up would free us from so many problems. One site would handle all wind directions and good thermal producing terrain could be selected. Competition flying could be so much easier to organise, and for those who want it, true club facilities could be organised

around a site and club house. This would be bound to improve the influence, power and structure of the hang gliding movement. Just think what a better flier you would be, and how much more you would learn if you could launch off a 2,000 ft mountain every day.

With this kind of freedom, hang gliding skills would dramatically improve.

There are of course many technical problems to tow launching a flex wing glider, both from the ability of the pilot and from aerodynamic and structural difficulties. These will eventually be overcome. Many people have made great strides in this direction, notably Bill Bennett with his "Bennett Mountain". This towing device utilises a friction over-run release to reduce tow loads being transferred to the glider. Many top towing pilots regard this development as being one of the most significant ever in the whole field of hang gliding.

Surely this is the way to go. Britain now leads the World in hang gliding competition, and perhaps also in glider design. We should now fully investigate tow launching as a key to freedom, and one of the first steps should be to align ourselves more closely with the gliding movement in order to learn.

Information

Council has decided that the post of Editor of WINGS! should be advertised again. The previous Editor (before Nov. '78) received fees for artwork each issue of £80, and the present Editor is receiving £100.00 per issue for his editorial/layout work. The Editorial Committee has recommended that this be increased to £150.00 per issue. Council has decided that, at this level of remuneration, other members might wish to be considered for the position. Applications to: Jeannie Knight, 10 Spring Gardens, Washington, West Sussex.

MALVERN HGC FLYING FROM SWINYARD HILL ON THE MALVERNS

There is to be no flying from this site during March and April, because of lambing.

NORTH YORKS

The secretary of the North Yorks Sailwing Club is now Gerry Stapleton, 12 Low Church Wynd, Yarm, Cleveland. Telephone Eaglescliffe 780533.

1979 Full and associate membership fees are now due, £10 and £5 respectively. Monthly visiting membership is also available.

MERE '79— "The U.K. Open"

Neither Coward's Bowl nor the Rifle Range Bowl will be available for August Bank Holiday '79 because the crops planted there won't be harvested until the end of August. WINGS! has been asked to organise Mere '79 — The U.K. Open and the Editor is keen to start compiling a list of people who will help. The likely dates for the meet are Sept. 1st & 2nd, or Sept. 8th & 9th. As far as is known these dates do not conflict with League or International competitions.

MEMBERSHIP RENEWAL

Memberships numbered 9553 to 9801 inclusive were due for renewal on 1st February 1979.

Memberships numbered 9802 to 10134 inclusive are due for renewal on 1st March 1979.

Please renew your subscription promptly.

AGM & CONFERENCE

31st March & 1st April 1979 at Warwick University, Coventry. Information elsewhere in this issue.

THE OBSERVER HANDBOOK

Official Observers will shortly be receiving copies of the new BHGA OBSERVER Handbook. This sets out their responsibilities and duties for the checking out of pilots who are working their way up the Pilot Rating System, as well as those going for records or the advanced FAI badges. The Handbook has been designed for easy reference out on the hill, and it also contains a summary of the FAI Sporting Code requirements and definitions — though the Observer should check with the FAI General Code and Section 7, Hang Gliding (in course of revision) when dealing with record claims.

It may be felt, at first reading, that the paperwork for the PILOT 3 cross-country flights seems excessive. It is not intended to be, but it is *necessary* that the evidence proves that the flight was made as claimed. Nothing is less desirable than for a pilot to be accused later of not having properly made the flight, or an Observer of signing off something that he cannot substantiate. Nevertheless, for those rating cross-countries (provided that they are not also the subject of a record claim) it is acceptable if all the necessary information is contained in a single Claim Statement, instead of a number of separate certificates; further, that if a barograph is not available the Observer arranges for visual or other means of ensuring that no intermediate landing was made, as

described in the Handbook.

A second BHGA Handbook, for the intermediate pilot, intended to help him progress through the rating system, should be available during March.

It will be sent free to every pilot on entering the Pilot Rating System. The PILOT Handbook is illustrated with photographs, diagrams and drawings by Bill Lehan.

Additional copies of the Observer Handbook (£1) and the Pilot Handbook (£2) are available from BHGA. Orders for 10 or more from clubs or hang gliding associations abroad may be obtained at a bulk price by arrangement with BHGA.

Ann Welch
President BHGA

CROSS-COUNTRY COMPETITION, 12-13th MAY: Free Flying, 11th May.

The Winner(s) will receive a Trophy. Entry is £1 and will be limited due to the size of the hills. State three furthest flights when applying. A recovery vehicle will, we hope, be available.

Send entries to: BOB CALVERT, 390 Preston Old Road, Blackburn BB2 5LL, Lancs. Tel: (0254) 21615.

STEYNING BOWL

This site should be open again from the beginning of February. It was very nearly lost completely because of the failure of pilots to pay the flying and parking fees. The price of subsequent re-negotiation has been high — an advance payment of £2,000 has had to be paid to the landowner in order for the site to be re-opened.

The money has been got together with the help of a £1,300 loan from BHGA, £300 from the Southern Hang Gliding Club and £200 each from Knight Hang Gliding and Ultra Sports. The BHGA money has to be repaid and a Steyning Bowl Management Committee has taken over the running of Steyning to ensure that this is done.

Arrangements for Steyning will be as follows: Season tickets including flying and car parking for a year will be available at £10; Flying and car parking on a daily rate will cost £1 per day; car parking only will be 50p per day. Season tickets will be available from Jeannie Knight, 10 Spring Gardens, Washington,

West Sussex, and Graham Slater, 11c Denmark Terrace, Brighton. Anyone applying for season tickets should make cheques payable to BHGA (Steyning).

On one occasion last year, 35 gliders were on site and only the four school gliders in use had been paid for. If Steyning had been lost completely it would have forced pilots at an elementary stage on to other sites, there would have been accidents and sites would no doubt have been lost. Re-negotiation has been a lengthy procedure and now that the site is back as an official open BHGA site, please help to keep it by paying for your flying and parking there.

CARLTON BANK — NORTH YORKSHIRE

Due to the number of fliers using this site the landowner has withdrawn his permission to use the secondary, westerly ridge, and any of his fields at the bottom. The site can, therefore, now only be flown from the top and must be top-landed. Please do not fly regardless, as what may now only be a temporary setback could become permanent.

The top of the Bank is leased by a Gliding Club from the same landowner and our continued use of this site depends very much on their goodwill. The North Yorks. Sailwing Club has an annual agreement with the Gliding Club to use their land and they insist that all fliers must be North Yorks. Sailwing Club members. Visiting membership is available at £1.00 per month.

GERMAN LAW

For those fliers planning to drive in or through Germany Capt. Jim Taggart of the Bridforge HGC has sent the following extracts from the German Traffic Regulations.

Verbatim Extracts from Sections 17 & 22 of the German Traffic Ordinance (St. VO)

SECTION 17 LIGHTING

1. From the onset of darkness, during darkness, or if the visibility so requires, the lighting devices prescribed shall be used. The lighting devices must not be dirty or obscured.

SECTION 22 LOAD

1. The load and any loading equipment must be stowed in compliance with traffic safety

and be secured against falling or any noise which can be avoided.

2. Vehicle and load together must not be higher than 4m or wider than 2.5m.

3. The load must not project beyond the vehicle in front (Ed. That could lead to an amusing interpretation) and in the case of vehicles with trailers not beyond the towing vehicle.

4. If a load is transported over a distance not exceeding 100 km it may project beyond the rear. If more than 1m beyond the rear lights of the vehicle, this shall be made recognisable at least by:

a) A bright red flag not less than 30x30cm held and extended by a cross bar.

b) A bright red sign of the same size suspended at right angles to the direction of travel or

c) A vertically attached cylindrical fixture of the same colour and height with a dia. of at least 35cm.

These means of safety must not be mounted higher than 1.5m above the roadway. If necessary (Section 17, para 1) at least one lamp with a red light shall be attached at the same place and in addition a red rear light not higher than 90cm.

So, in summary:

a. You may only travel up to 100km with an overhanging load.

(You'll need intermediate friends!)

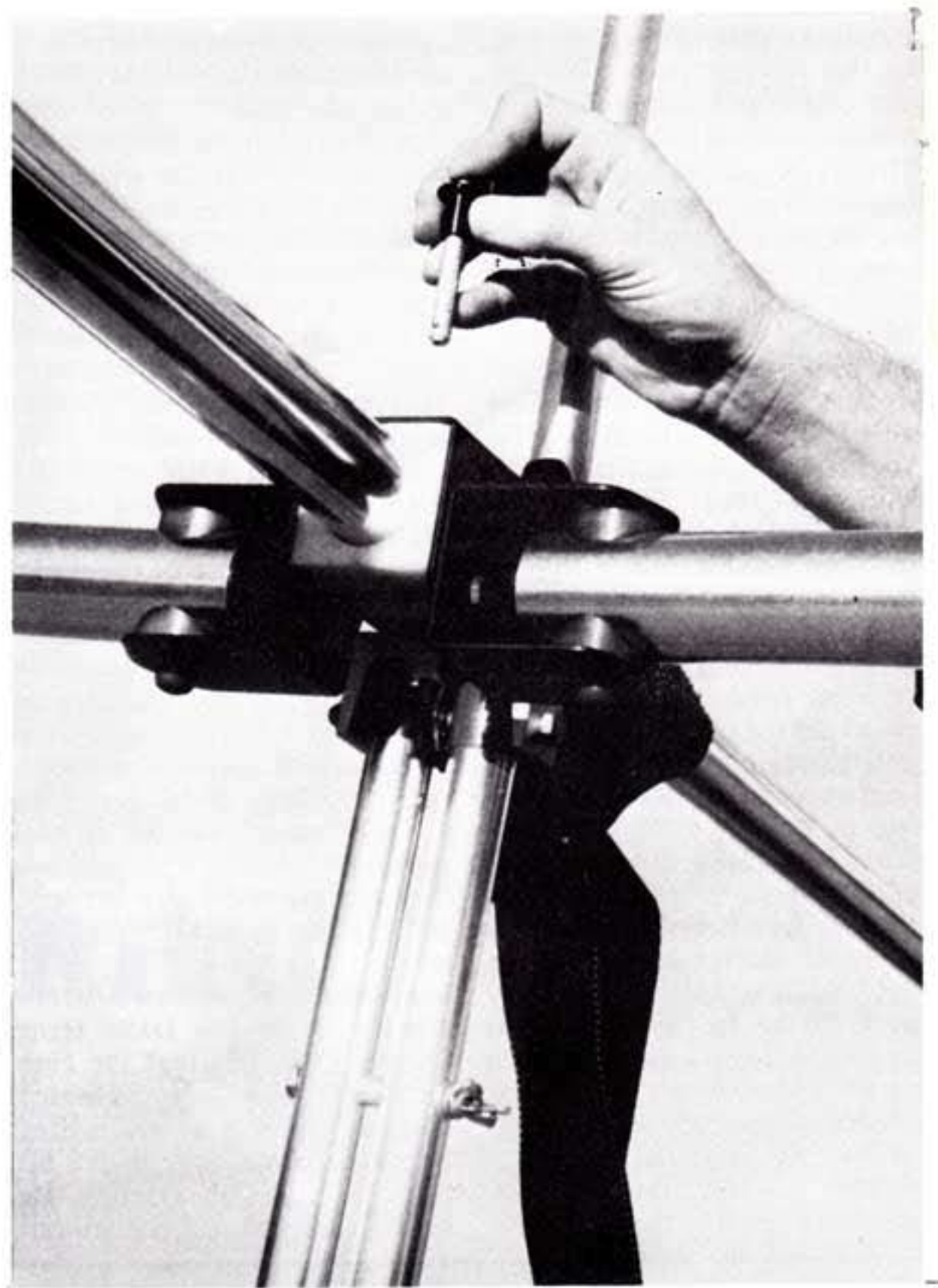
b. The load must not overhang the front.

c. If the overhang is over 1m you must display a red flag or sign 30x30cm or a red cylinder 35cm dia x 30cm high.

d. These warning signs must be mounted no higher than 1.5m mounted no higher than 1.5m above the road.

e. In poor visibility, you must also display a red rear light with the warning signs. If the load is higher than 1.5m it must also carry a red light.

Photo shows the new Quick Set Up slide arrangement on 1979 Phoenix 12 and Phoenix 6D gliders from Delta Wing Kites & Gliders, Inc. The brackets are 70 75 T6 Aluminium, bent in the zero harness condition and heat treated to a "Rockwell" 34 condition. The nylon slide is extruded or machined to a nice sliding fit on the keel. In most models the cross bar folds back to lock into an OVER-CENTRE position, when a 5/16 ball lock pin is used for added security. When fitted to the glider exclusive plastic covers are used to protect the leading edge from damage, when glider is folded during shipping



by PETE ANSTEY

SITES GUIDE PROS & CONS

Are you one of those people referred to in Barrie Annette's article in September WINGS! who, when, flying around the country find yourself landing in the dense foliage of hang gliding club bureaucracy? Read on.

A hang gliding club is a group of enthusiasts who feel the necessity to organise themselves into a corporate body for their mutual benefit. By this means, they can present themselves to land owners/users as a responsible body which can be seen to control the activities of its members as and when so desired. Without the intolerable inconvenience of having to deal with individual fliers, landowners are much more likely to look favourably upon requests for the use of their land as flying sites. The clubs also protect the landowners against his liability in law for

any claims made against him of a third party nature, as a result of hang gliding accidents.

Through the clubs, which should meet regularly, newcomers to the sport can be introduced to those with more experience and can benefit from those who have "seen it all before". Regular club meetings are a chance for hang gliding professionals to come along and for members to pick their brains. Clubs have a responsibility towards future generations of hang glider pilots. It would be a sorry state of affairs if, through the careless mismanagement of sites, the pilots of tomorrow were denied the use of good hills because of the "original sin" of their forefathers.

The club system then, being such a necessity to each fliers' interests, must be protected and

respected. Individuals who do not wish to be "one of the crowd", and who seek freedom in their sport, therefore can only work towards the loss of everyone else's freedom to use other people's land. Just as a chain is as strong as its weakest link, so a club depends upon the total support of all local flyers. After all, if a club is asked to stop using a particular part of a flying site by the landowner, and each member is told about the change by post immediately, then the poor old club secretary's work is all in vain if one or two non-club fliers subsequently turn up and, maybe in complete ignorance, break the new rules. The club loses its credibility with the landowner, who then loses patience and to save the future inconvenience of having to go out and put offenders

right in the future, he decides to ban hang gliding from his land altogether. At the very least he will charge people to fly in future. We all know that once cash is handed over, it becomes part of the landowners income, which like most people's, he expects to rise each year, but not at levels of 5% or 10%, instead in convenient multiples such as 50p in daily charge agreements and maybe £50 in annual agreements. Total commitment to a responsible club minimises landowner inconvenience and therefore saves sites and money in the long term.

Representatives from the Northern area clubs met some-time ago to discuss ways of easing the pain on the purses of those fliers who used the sites of more than one club. It was generally agreed that some sort

CLUBS

associate membership scheme should be offered by each club. In this way, for a nominal fee, one could be sent all the information, and updates published. The fee would be sent to cover expenses only, each club drawing its funds from its full members.

The situation is envisaged where a pilot living in, let's say, Scunthorpe could be a full member of one club, e.g. Penine, but wants to fly in the Sheffield and Dales area also, or with the George Caley club. It would cost the earth if he had to finance full membership in the clubs each year. So our friend decides in which club he is to remain as a full member and then takes out associate membership with other clubs, purely in order that he can be kept up to date with site developments.

At the meeting some clubs felt that a fee of £2/£3 p.a., was all that was necessary to cover expenses, but others felt that if the situation arose where they were having to pay large sums of money for the use of certain sites, which were those that associate members would want to fly any way, that a contribution towards the site fee should be included in the associ-

ate membership fee.

Some clubs offer temporary membership to visitors which entails the issue of site information and club third party liability insurance. Visitors are welcomed by clubs as long as they contact that club first, and arrange (a) to meet someone on site, (b) to borrow a set of site details, (c) to take out temporary membership.

Should the visitor, though, intend to visit the area on more than a one-off basis he should be expected to take out associate membership, if only to save himself the trouble of telephone calls and detours to secretaries' houses. It is unfair if clubs should have to finance visitors third party liability insurance on more than a one-off basis. It is more than unfair; it is unacceptable if a visitor should return to a site sometime in the future, probably midweek, without there being members present, and fly, risking breaking changed rules.

After reading Barrie Annette's article, we in the Dales Hang Gliding Club felt that the club scene had been misrepresented in some respects so we invited Barrie to come and discuss his plans at our club meeting. He kindly accepted and conclusions

were drawn as to what information should be included in the guide, regarding sites in the Yorkshire Dales. Barrie appreciates the problems of detailing our sites in the guide and we agreed, therefore, to include information on the types and classes of sites, XC potential, to outline the problems we have regarding land use, and to give a long list of contacts for the visitor to contact should the secretary and officers be unobtainable. This information would be updated as necessary.

If we were to publish our specific site details in a national handbook, the club would no longer be able to maintain credibility with landowners for two reasons. Firstly, we would not be able to effectively change site rules or add to them at a moment's notice. Secondly, we would be breaking a trust with landowners who have given us permission to use their land, providing fliers are members of the local organised club. After all, it would be unethical for us to offer the nation the use of sites which in no way belong to us.

I believe that the club system as outlined above is right for all fliers and must be seen to work by landowners and fliers alike. It

is up to each club to make the national hang gliding fraternity aware of its existence, and what better way to do this than through a BHGA guide. I would suggest, therefore, that BHGA Council should back the publication of a guide, and see to it that any specific information regarding sites submitted by clubs is kept up to date on a regular basis, maybe through a revision sheet mailing list, or, less satisfactorily, through WINGS! If this specific information cannot be kept up to date, then the guide can only work towards the loss of sites. This will entail more work, I know, but here is Barrie Annette, seemingly with the time and enthusiasm to get the ball rolling, so can the BHGA not capitalize on this available asset. Maybe a BHGA sub-committee can be formed to handle the publication, research and continuity of the guide.

Through a club guide as I would prefer to call it we will have at our fingertips all the information necessary to enable us to travel outside our locality to fly with maximum ease and minimum frustration, and without upsetting clubs and being branded as pirates.

OVERSEAS

by MARTIN LAMPORT

"NONKING IT" IN THE ALPS!

If, like me, you have always logged your flights in seconds rather than minutes, the word "Alps" probably conjures up images of spine-chilling cliffs and turbulence which even a jumbo

jet would do well to avoid. This is not necessarily the case, in fact the French Alps offer some excellent flying where the relatively inexperienced can put in much valuable air time in

safer conditions than usually prevail on our windswept hills.

I stayed in Grenoble, where the local hang gliding crowd proved extremely friendly and only too keen to welcome a visitor to their sites. The local equivalent of Dunstable was a sloping field above a wooded hillside 400m above the Isere valley. Yes, my stomach did sink metre by metre as we ground up the zig-zag road, and every turn revealed an even more impressive view of the country beneath. By the time I had rigged up, I was feeling very hot under the harness and cold about the boots; but the honour of the country was at stake and the better French pilots were slowly skying out on the 6 or 7 mph evening breeze. It was not an elegant take off, but once up the pine trees fell away and the tiny rooftops and cars passing

along a road had that unreal look which you see from an airliner. My battered Midas C felt about as stable as an airliner in the smooth air. Perhaps I will just go and do a couple of 360's over that little wood before working out my landing approach, and oh! why not a practice syll or two? In short, everything you always wanted to do in the air but have never had the time for.

That was at a site called Montaud, near St. Quentin-sur-Isere and the Grenoble area offers several other choices in a 15 mile radius. St. Hilaire du Tuvet is a cliff, about 500m high, and the projected venue for the 1979 European championships. Chamrousse, a ski resort in winter, boasts a 1000m downhill flight. The landing field is uneven and tricky on a windy day, but the views are superb. Le Moucherotte is a very impressive



mountain with great flying potential, I did not visit it, but somebody told me they had seen another British flier there, so perhaps he will write in and tell us all about it.

Near Chambery is Chamoux, a venue for local fly-ins, where you had to try and catch balloons in the air, or kick a football off a post on landing.

Fifty miles further east Chamonix, long time Mecca for the climbing community, is rapidly being opened up as a hang gliding centre as well. The only trouble is, that to take gliders up in the cable cars probably works out pretty expensive, but every year they have a grand meeting and it is all free. I flew Plan Praz (1000m)

an awe inspiring take off down a rickety wooden ramp, and Les Grands Montets (2200m) which was certainly the most exciting flight I have ever done. You rig up in the snow, watch out for crevasses! The first thing to do after take off is clear the ice off your control bar, as you set off down the ridge and watch a small mountain (by local standards) pass 500ft beneath; then the ground just falls away, leaving you in the middle of 5000 ft of nothing. Twenty spaced out minutes later, "Ladies and Gentlemen, in a few minutes we will be landing at Chamonix, you *have* enjoyed your flight."

A word of warning, in August and early September the weather conditions are generally pretty

good, but our steady 18 mph peachy wind may well produce very nasty conditions indeed in the mountains. The French pilots are an anarchical bunch and when they say "Vol Libre" they mean no hassels and no site fees. Get to know them and let them show you where and when to fly safely. If any of them read this article, Allez-y mes amis, voler dans La France c'est le pied! As their English is probably about as good as your French, I have made a list of a few useful terms with which to discuss hang gliders. See you all over there next summer.

Delta Planneur	Hang glider
Aile	Wing
Cerf volant	Kite
Voile	Sail
Bord d'attaque	Leading edge
Transversal	Cross boom
Quille	Keel
Trapeze	Control frame
Deflecteur	Deflexor
Saumon	Wing tip
Decoller	To take off
Atterrir	To land
Piste de decollage/atterrissage	Take off/landing site
Pompe	Lift (well it poms you up doesn't it)
Degueuler	To sink.
Tubes, cables, harnais and "Merde c'est Degueulasse!"	are self explanatory.

INTERNATIONAL WITH A DIFFERENCE

OVERSEAS

by BILL COWELL

HAVE you ever seen what happens when you shove a Ferret down a rat-hole? There's one hell of a kerfuffle and sparks fly all over the show. The same thing happens after a fashion when you start getting people interested in competitions, especially when they're International competitions of a sort. I'm one of those blokes who loves getting a crowd of fliers together and putting them through the hoop. It is almost invariably a grand cockup, and again almost invariably turns out to be a great way of spending a weekend — no matter who wins the event. So it turned out to be when I broached the idea of a "Mini-International" to the German fliers down in Trier, near the borders of Luxemburg. Initially the idea was for the British Forces in Germany Club, otherwise known as

"BRIFORGE", to take on the German lads, but as the weeks advanced and news began to filter back to the organising genius ('hem) that about 90% of our members were on leave in UK, on exercise in BAOR, or just plain crooked or shy, it became apparent that a little assistance in numbers was going

to be needed. So we approached the Dover & Folkestone Club, being our nearest neighbours, and pitched the idea to them that it would be a lovely way to spend a weekend. Mind you, we had a bit of help in persuading them, since Dave Roberts of Brompton near Gillingham is a serving Sgt. in the Royal En-

gineers, and is still a member recently returned from BAOR. Dave did his stuff and convinced everyone that if they missed out they'd spend the rest of their lives regretting the opportunity they'd passed up, and bright and early on the morning of 29th Sept. the invasion started via Townsend Thorsen Ferry



DOVER/FOLKESTONE HGC participants in the BRIFORGE/TRIER Match
 Standing L to R:
 Ted Battersea, Bob Kelly, Peter Brenchley, Heinrich Schiffer (Chairman, Trier HGC), Martin Brenchley, Roger Honey, Phil Hart.
 Kneeling L to R:
 Dave Roberts, Robin Pattenden, Mrs Peter Brenchley, Mrs Jill Honey, and Mrs Sue Hart.



Left: Heinrich Schiffer (Chairman, Trier HGC). Right: Capt. Dave Taylor, RE.

Ltd. Naturally it hissed down all that day, and the next, but by pm on the 29th Trier had been reached and all were settled in somewhere or other. It looked a bit grim at times when accommodation for fliers arriving at midnight was demanded, but all spent a comfortable night I'm told and nobody was turned away from the Inn.

DESPITE the wind and rain which made us fly an alternative site, almost everyone got off, though three fliers made unscheduled stops in the trees on the almost sheer sides of the 600ft hill at Serrig. Nothing much, apart from a few 'A' Frames, was damaged, and day one ended with British fliers well up in the lists occupying most of the first ten places apart from the top two spots. An unplanned film show on the Friday night had sown the seeds of 'what the hell - fly' when a view of three Scottish Kites was seen, above and in-between a dozen Sail planes at Bishop Hill, taken when the author was on holiday the previous month. It had been blowing 40 mph and the kites were at about 2,000ft, which impressed the Germans no end and encouraged our fliers to uphold the reputation so established for Brit pilots. Saturday night was given over to a hooley in a wine cellar, when one of the locals hosted a Wine tasting evening. A touch of Tyrolean music, candlelight and bags of bottles between the barrels sealed it, and every head slept like a log when all had finally wended their respective

way home. Sunday saw three intrepid fliers again trying Serrig while the rest waited patiently for the wind to change - as it did - and then flying again recommenced where it should have done in the first place, at Riol where we were all staying. Points were fairly evenly shared until the last task was started, bombing a 50 metre target from about 500ft with bags of flour, together with a spot landing, and then the Germans forged ahead when one after another the British fliers were gulled into thinking they'd got it made. Riol has a peculiarity in that you can be in moving air 15ft. up, and in dead still air below it. Belly landings became commonplace (and the language was simply shocking!) and though Jim Taggart tried to turn the air a nicer shade with his smoke trails of yellow and green, it

didn't help. He did end up however in 3rd place overall, with Robin Pattenden of Herne Bay 4th, but nothing short of a stick of dynamite would have shifted the Zimmer twins, Harald and Horst from 1st and 2nd places. Ted Battersea, Peter and Martin Brenchley, Bob Kelly and Phil Hart all did their best, but the choice phrase Phil came out with on stalling just short of the spot summed it all up. Roger Honey didn't fly, but ferried kites up the hill like a good 'un. Jim McMenemy who takes such lovely photos would have made a marvellous one himself when ploughing through some chest high weeds like a hovercraft, then spoilt it all by stopping flying all of a sudden just short of the Zielkreis. Mick Appleby flogged his bogrog into producing flying miracles, but finally became so disheartened that he ended the weekend ordering a new kite. John Cockshott started the match with a pile of pieces, and ended it with as much flying time as anyone, and John Clark moped around from start to finish with a woebegone expression because his kite didn't arrive with the D/F boys, he having ordered it some weeks before for delivery on that day. The German fliers' wives kept the records and produced hot coffee for nearly everyone most of the time, and British wives waved flags like good 'uns. Rita Taggart is getting to be quite an expert, she had some practice a few weeks before in Kossen with Jim, when he took over at the last minute from yours truly who had been supposed to have been there with Wolfgang Giebtmanns. Ulrich Pohle, who ended up in 5th spot in the match did it on a Gryphon he'd never seen

before until the start of the day, and said it made quite a change from his old much-modded Adler. The second day ended with another hooley in the Rosengarten pub. HQ of the Trier Club at Riol, and Lieutenant Colonel Maurice Young, Commanding Officer of the VSD at Monchengladbach, ladled out the trophies to the winners.

The first four fliers each collected a Cup, and Jim Taggart also annexed the Plaque for the best British flier. The Challenge Shield went, of course, to the German team this time, and everyone is saving like mad for the return match to be held in the Dover/Folkestone area next summer. Knowing German thoroughness it won't surprise anyone to see several of them there a few weeks early, getting to know the feel of the place. We look forward to renewing acquaintance with so many friends, and Artur, Milko (who provided the music with his wife), Gerd, Berndt, Max (56-y-o) and the rest - not least of them Heinrich Schiffer who produced so many miracles - will, I am sure, meet with a Her'os welcome. Dave Taylor has promised to try landing on the ground as opposed to doing spots halfway up a cliff, and yours truly will definitely remember to put his feet down next time, the trouble is that flying is such fun I keep trying to squeeze the last inch out of my kite. Dave Blinkhorn says he will stay longer than a couple of hours next time, and Ian Roy just promises to come. Next time just has to be a landslide!

Peachy by HARDMAN.



List of Major Clubs

AT 31/1/79

Secretary's Tel. No.

(Exchange shown in capital letters)

1. POWER HANG GLIDING CLUB ENGLAND	Jonny Seccombe, 34 Nevern Place, London SW5	01-370 5177
2. AVON	Tony Tate, 37 Sheephouse Caravan Pk., PILL, Bristol BS20 0NL	2051
3. CUMBRIA	Dave Weeks, High Keld, Chestnuthill, KESWICK	72315
4. THE DALES	Peter Anstey, 82 Rastrick Common, BRIGHOUSE, W.Yorks.	716069
5. DEVON & SOMERSET CONDORS	Brian Smith, 16 Hayes Rd., BUDLEIGH SALTERTON, Devon.	5253
6. DOVER & FOLKESTONE	Ted Battersea, 64 Beksbourne Lane, LITTLEBOURNE, Nr.Canterbury, Kent	614
7. DUNSTABLE	Dennis Munn, 94 Cowley Road, UXBRIDGE, Middx.	39896
8. GEORGE CAYLEY SAILWING	John Archer, 10 Parkside Cl., Park Av. HULL, N.Humberside, HU5 3EZ	48745
9. ISLE OF WIGHT	Peter Scott, 'Belle Vue', Nettlestone Gr. SEAVIEW, I.of W.	2334
10. KERNOW	Roger Full, St. Dominic Cott., Norway Lane, ST. IVES, Cornwall	7651
11. MALVERN	John Bevan, 'Blackthorn', Plough Rd., Tibberton, Nr.Droitwich, Worcs. WR9 7NN	SPETCHLEY 420
12. MANX	Bill Roberts, Signpost Cott., Cronk ny Mona, Onchan, Isle of Man	DOUGLAS 3439
13. MERCIAN	Paul Winteringham, 117 Sellywood Rd., Bourneville, Birmingham 30	021-472 6019
14. NORFOLK	John Sharpe, 32 St.Peter Rd., STOWMARKET, Norfolk	4598
15. NORTHAMPTON	Tom Yeomans, 76 Crispin St., Rothwell, Northants.	KETTERING 711054
16. NORTH DEVON SAILWING	Ted Cray, 'Copper Beeches', Torrs Pk., ILFRACOMBE, N.Devon.	64047
17. NORTH DOWNS	Roy Beckett, Flat 1, 1/8 The Paragon, Blackheath, London SE3	01-852 1471
18. NORTHUMBRIA (was N.E. HGA)	Harry Turner, 'The Kennels', Newminster Abbey House, MORPETH, Northumberland	57754
19. NORTH YORKS. SAILWING	Gerry Stapleton, 12 Low Church Wynd, Yarm, Cleveland	EAGLESCLIFFE 780533
20. PEAK	Roger Green, 11 Keldholme Lane, Alveston, DERBY	73877
21. PENNINE	Kevin Moloney, 45 Empress Way, Buxton Nr. CHORLEY, Lancs.	71079
22. READING CIVIL SERVICE	Harry Prestidge, 15 Winchester Rd., READING, Berks.	862970
23. SHEFFIELD & DISTRICT	Richard Kulig, 317 Brincliffe Edge Rd., SHEFFIELD 11	53204
24. SKY SURFING	Ray Wheeler, 39 Firgrove Rd., N.Baddesley, Hants.	ROWNHAMS 732865
25. SOUTHERN	Tony Fuell, 74 Eldred Av., BRIGHTON, Sussex	502952
26. SOUTH ESSEX	Dave Lewis, 59 Moore Av., Sth.Stifford, Crays Essex.	
27. THAMES VALLEY	Bill Nunn, Old Post Office, Peasemore, Newbury, Berks.	CHIEVELEY 288
28. WESSEX	Peter Robinson, 4 Spring Gardens, Broadmayne, Dorset	WARMWELL 852136 BOURNEMOUTH 745840
29. WESTERN COUNTIES	Peter Johnson, 5 Greenway Av., Woodford, Plympton, PLYMOUTH, Devon	333639
SCOTLAND		
In Scotland the Scottish Sailwing Association is the BHGA Member Club. SSA Clubs are Branches of it. The Secretary of the SSA is Robin Laidlaw, 105 Clermiston Rd., EH12 6UR. His home telephone number is 031-334 6356		
30. ABERDEEN	Ivor John, 19 Mount St., Rosemount, ABERDEEN	630077
31. ANGUS	Simon Ogston, 5 Morgan St., DUNDEE (Day) 60111 (Ext. 2426)	
32. LANARKSHIRE	David Whitelaw, Creachann, 10 Murray Rd., Law, Carluke	WISHAW 70033
32. LOMOND	Alan Keddie, 41 Townsend Pl., KIRKCALDY, Fife LY2 6JE	62086
33. LOTHIAN	Steve Cuttle, 11 Temple Pk. Cres., Edinburgh EH11 1JF.	
34. OSPREY	Victor Cameron, 22 Murray Rd., Smithton, Culloden, INVERNESS	791522
35. STRATHCLYDE	Robin Craig, 96 Norvar Dr., G12 9ST	041-334 5435
36. WEST FIFE	Ian Wilson, 25 Sycamore Grove, Dunfermline, Fife	

NORTHERN IRELAND

37. ULSTER John Tremer, 33 Drumlane Park, Newry, Co. Down, N.I.

WALES

In Wales the Clubs listed below are nearly all Member Clubs of BHGA. They all belong to the Welsh Hang Gliding Federation. The Secretary of the Federation is Doug Powell, Dan yr Ogof, Craig yr nos,

ABERCRAVE, Powys		*287
38. BEACONS PARK	Ewart Jones, The Quarry, CRICKHOWELL, Powys	810681
39. LONG MYND	Nick Bishop, Shipton Hall, Shipton, Much Wenlock, Salop.	BROCKTON 225
40. MID WALES	Rod Lees, Troedriwlas, Cwmrheidol, Dyfed	CAPEL BANGOR 229
41. NORTH WALES	Diane Hanlon, 37 Kings Mount, Oxton, Merseyside	051-652 5918
42. SOUTH EAST WALES	Martin Hann, 6 Churchill Close, Llanblethian, COWBRIDGE, Glam.	2953
43. SOUTH WEST WALES	Rob Symberlist, 539 Gower Rd., Killay, SWANSEA	26729

IRISH REPUBLIC

Enthusiasts should contact the Irish Hang Gliding Association through Tom Hudson, 60 Hillcrest Rd., Glenageary, Co. Dublin

MEMBERS OF THE FORCES are advised to contact:-

HMS Dolphin Club and Forces Rep. - Cdr. Mike Collis, M.B.E., R.N., 90 Oval Gdns., Alverstock, GOSPORT, Hants PO12 2RD.

Brigforce Club: - Capt. Jim Taggart, HW., REME, 2 ARMD. DIV., BFPO 22

This list gives details of clubs who do not restrict membership. There are many other clubs in existence but their membership is restricted to employees of firms, members of a branch of the Civil Service, to members of the Forces or of a particular unit.

HANG GLIDING for ADVANCED PILOTS

by DENNIS PAGEN

£4.30 + 20p postage:-

Robin D. Laidlaw, 105 Clermiston Road, Edinburgh, EH12 6UR.

When the flag is on the hill and the wind in its late forties, improve your flying by soaring your armchair in some fireside thermals with Dennis Pagen's latest and best.

Dennis is currently U.S. National Champion, Vice-President of the USHGA, and came third in the recent American Cup competitions - so he should know what he is talking about! The text covers 113 pages of solid meat - no space wasted on side issues or waffle, and there are 77 illustrations and diagrams by the Author.

BANG UP-TO-DATE, first published in the USA September '78.

CONTENTS:-

CHAPTER I - STRAIGHT FLIGHT
Pitch Control
Maximum Safe Flying Speed
Best Glide Speed
Minimum Sink Speed
Stall Speed

CHAPTER V - DESIGN CONCEPTS
Stability
Handling
Performance
Structure

CHAPTER II - CURVING FLIGHT
Roll Control
The Turn
The Yaw
The Limits of A Turn

CHAPTER VI FLYING EQUIPMENT
Emergency Parachutes
Miscellaneous Equipment
The Glider
Trimming Your Glider
Performance Tuning

CHAPTER III THE PERFORMANCE MAP
Plotting the Curve
Speed to Fly
Performance Factors

CHAPTER VII - COMPETITIONS
Preparing for Competition
Taking Off
Landing
Handling Tasks

CHAPTER IV THE ART OF FLYING
Instruments
Flying at Altitude
Flying in Turbulence
Flying in Ridge Lift
Thermal Flying
Flying Cross-Country

CHAPTER VIII POWERED FLIGHT
The Engine
The Propeller
The Complete System
Flying Under Power

BY THE SAME AUTHOR - At the same price: HANG GLIDING AND FLYING SKILLS - Novice to Intermediate instruction.

HANG GLIDING AND FLYING CONDITIONS - Micro Meteorology for the hang glider pilot,

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.

HIWAY SPECTRUM. 3½ months old. Bright colours with "B bar" & seated harness. Good intermediate kite, complete with bag. £465. Phone Fareham 281631
CLOUDBASE 21' De Luxe. Red and yellow pattern. £240 including seat and bag. Good condition, thermalled and soared since Feb. 78. Now bought Gryphon. Mike McGowan, Eaglescliffe, Cleveland. (783752 after 6 pm & W.E.)
HIWAY SCORPION 'B' bar - £15. Super comfortable seated harness with screw gate caribiner - £10. Also Kneissl skis - 205cm with bindings - £75 ono. Phone Martin Hann. Day - Aberdare (0685 872515. Evenings - Cowbridge (04463) 2953.
20ft. CLOUDBASE. Good condition. Flies well. Suitable for beginner - intermediate flier. £220 ono. Tel: Matt Jayne 031-447 5707.
SUPER SCORPION B. White and blue dacron sail. Bought in Sept. £565. Five flights only. Phone Skelmersdale (Lancs) 20601
COBRA 200. Orange with black and white tips. Seated or prone. Two seated harnesses. Good condition. £200. Phone Tunbridge Wells 22458, ask for Jack.
VEGA IIA. Good intermediate machine. Very good condition. £330. Laurence Bourne. Tel: 427 6148.
SKYHOOK 3A 13ft. Very strong beginners kite for the lightweight pilot, with blue and white terylene sail. All in good condition, never bent. (Owner buying larger kite). Quick sale £40 . . . No harness - hence price! 53 Burman Road, Allerton, Liverpool.
THERE HAVE NOW BEEN over 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, Herstmonceaux, Sussex, **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.
SPIRIT, VECTOR, SKYLINE. One of our gliders is right for you. Contact us first, for the best. Flex-form 061-707 1389.
WINDHAVEN - Mainair Sports are the U.K. agents. Send a 9p stamp for a copy of their catalogue. Mainair Sports - Shawclough, Rochdale, Lancs. - Tel: 50436.
INSTRUMOUNT - vario mounting stalk - fully anodised "kick-up" feature - secure and instant fixing - £9.95 inc. VAT & postage - Mainair Sports - Shawclough - Rochdale - Lancs. - Tel: 50436.
BEFORE YOU BUY a vario from anyone ask about repairs and back up service and don't be fooled - buy with confidence - Contact Mainair Sports - Shawclough - Rochdale - Lancs. - Tel: 50436
WILLS WING - Colver Soaring Variometer and Chad AUT flight deck - Price prone harness and a great deal more - Mainair Sports - Shawclough - Rochdale. Wills Wing Accessory Agents.
PELLET VARIOMETER We are the U.K. agents for Makiki Electronics. - Self-contained variometer model 2 is only 4inx5½in and weighs 15ozs. - Just as sensi-

tive as electronic variometers - £36 inc P&P. /VAT. Money back guarantee. Mainair Sports - Shawclough - Rochdale - Lancs. **ROBERT ED. BAILEY'S** Yorkshire Hang Gliding Centre. Booking now for '79 Beginners courses. Agent for Hiway, Wasp, Skyhook, Flexiform. Test fly the latest models. Part exchange your old glider. Used gliders for sale. Parachutes, Varios, Altimeters, compasses, Helmets, etc. in stock. 2 Denton Av., Leeds 8 Tel: 662518
YOUNG ATTRACTIVE CHEROKEE, moves in high circles, wishes to meet hang glider pilot with similar interests. Telephone Birdman Sports, Marlborough 53021
FARMHOUSE TO LET, 1 mile from Rhossili, sleeps 6. Contact Mrs. B. Howe, Old Farmhouse, Middleton, Rhossili, Swansea, W.Glam. Phone: Gower 560 for further details.
SKYHOOK SUNSPOT (small), three shades of blue, white and orange, immaculate, rigged seated or prone. Plus seated harness and bag. £395. Kevin May, Sittingbourne (0795) 70297.
SMALL SAFARI App. 20 weeks old. Attractive sail colours. Reason for sale: put on weight and parachute: purchasing larger version. Offered for sale @ £395 inc. bag. Tel. Guisborough 36658
LARGE SPIRIT, good condition. Black and gold sail, soars well, prone or seated. For any trial ring Phil Gilson, Bristol (0272) 422100. £260 secures.
McBROOM ARGUS 230. Less than 20 flights, no prangs. 1 flight of 1hr 35min. Good clean sail, seated harness, bag. Ideal beginners kite. £90. Tel. Tony Slater, Shrewsbury 55016.
FALCON 4B. New A frame. Breakdown glider, good condition. Also Wasp CB flown only 3 times £60 - with seated harness. Phone Geoff Walker, home 229 2372, work 624 2184 (London).
HT30TF Alloy tubing 1.5" o.d. 18 and 16 swg. 18' and 20' lengths. Three of each type. £25. Also 5 kg of polyester resin with hardener and 5m of 280 g/m² woven roving £7. Write to D. Robertson, York House, York Place, Cullen, Scotland.
SUPER GRYPHON. Definitely one of the

best examples of this now classic machine in the country. Therefore cannot sell for less than £500. Worth every penny! Beautiful condition. Contact Mike Hibbit. Reading (0734) 864543.
PHOENIX 6B. Superb beginner to intermediate machine, but gets up with the super kites. Light green, dark green & white. Plus spares. £280 ono. North Shields 75337.
McBROOM COBRA 200 sq. ft. Floats with the best of them. Ideal beginners kite, strong but light. Red, white and blue chevron cut. £180 ono. Cramlington 712220 ask for Mike.
VW Caravanette, 1970. 12 months MOT. Cooker, sink, etc. Sleeps 3 comfortably. £900 ono. Phone Burton Latimer (053-672) 5661.
FOUND ON HAY BLUFF, Sun. 26/11/78 either a deflexer post off a Moonraker 78 or truncated tip? Will arrange postage. Contact S. Baker, 57 Brisbane, Stonehouse, Glos. GL10 2PX or Tel. Nailsworth 3575.
WASP FALCON IIIB, multi-coloured sail, good condition, flies very well. £300. Tel. Oxford 40292.
VEGA IIA in very good condition, ideal intermediate glider. £275. Phone Laurence Bourne 427 6148
FIREBIRD, good condition, soars well. £200. Amesbury 2222. Ask for Pete Wilson or leave phone no.
MIDAS SUPER E. Break down model. Blue, red, gold, yellow and white sail. Good condition. £410 ono. Ring 0900 3503 after 6 pm.
MIDAS SUPER E, good condition. Red and white sail. £300 ono. Tel. Blagdon Hill 651 (Somerset)
MIDAS E, good condition, flies beautifully. National Panasonic as seen at competitions and on TV. £300. Tel. Blagdon Hill 651.
COBRA 22. BHGA colours. Good, strong, light to carry, intermediate. Soarable and forgiving kite, immaculate condition with seated harness. For quick sale £100. Needs to be seen. F. Williamson, 28 Green Lane, Widnes, Cheshire. Phone 051-424 6583
CHARGUS VEGA I, good condition, 2 years old. Ideal for pilot who is eager for his first

taste of soaring. £210 ono. Tel. Owen Williams on 01-837 3636 ext.155 (weekdays).
SMALL SPIRIT, pulley system. In excellent condition. £275. D.Clinch, Weatherby 63881.
COBRA 200, strong intermediate kite, good condition and seated harness. £100. Phone 051-424 6583 or call 28 Green Lane, Widnes, Cheshire
22ft. FLEXIFORM SPIRIT. 5 months old, pulley system, with seated harness. All in good condition. £300. Keith Dickenson, 9 Theatre Street, Preston, Lancs. Tel. Preston 51957 (office) or Houghton 3425 (home)
CLOUDBASE 21ft. Excellent sky blue/white Dacron sail. Flies beautifully, the ideal intermediate kite. Very good condition throughout. £230. 01-998 1342
OSPREY ELITE. High performance American glider, imported sail, built by Sailwings Scotland Ltd. 2 hours airtime. Cost new £595 could be yours for £350 ono. Marriage forces sale. Phone 0636 4581 ask for Mick.
WASP FALCON IVB floater. An absolute gem, beautiful condition ripple free sail well cared for since new, never ever pranged. Must go to good home £360. Also HIWAY harness £30. Interested? Tel. Howard Rockcliffe, Maidenhead 34588
AMERICAN full length hammock type harness to fit a pilot 5'6" to 5'10" tall, only used twice £45. Tel: Rob Close-Smith, Buckingham 2325
GRYPHON III, I won the League Entry Competition 1978 and Mere '78 Cross Country and distance on this excellent glider £480 ono. Dave Thomas, 38 Grosvenor Road, Barton Seagrave, Kettering, Northants, Barton Latimer 5661.
GRYPHON III, immaculate condition with latest mod. to sail fastening for improved handling, with an absolutely ripple free sail in attractive colours. Phone Dave Jones on Rickmansworth 75381 during working hours or Little Chalfont 4705.
LARGE HIWAY SPECTRUM (as new). Ideal intermediate machine. Soars and handles with ease. Rigged for prone or seated flying. Sensible offers to John White-

head, 32 Broad Green, Woodingdean, Brighton 31383 or contact 'Frankie' at Hiway.
LARGE XC. This beautiful glider is in immaculate condition and has flown less than a dozen times. Bad knee forces removal of temptation. £375. Phone Graham Driscoll Telford 55216
SUNSPOT £350 ono. Come and try it. Paul Bullock, phone Church Stretton 2884
WASP C4 221. £50; Phone Lindsay, Brownhills 77808
MOYES MAXI, rainbow colours and flown by Steve Moyes to win at Grouse Mountain. Very good condition. £545. Robert Ed. Bailey, 2 Denton Av., Leeds 8. Tel. 662518
WILLS WING XC American built. British distance record holder 24 miles in '77 and now 29.6 miles in '78. Let it take you for a ride in '79. £545. Robert Ed. Bailey 2 Denton Av., Leeds 8 Tel 662518
HIWAY 220, seat, harness, bag. Not flown since winter 75/76. Offers: D.Ketteman, Woodall-Duckham House Social Club. Tel: Crawley 28755
SUPER SCORPION C. Bainbridge dacron sail. Production model. Beautiful sail. Heavy duty crossbooms. 11st. pilots upwards. As new. Part exchange? Price negotiable. Please call Phil, Blackburn 58924.
HIWAY SPECTRUM. Small, bright colours, "B" bar & seated harness. 5 months old. Good intermediate machine in good condition. £425. Phone Fareham 281631
MOONRAKER 78. Assymmetric sail pattern. Only 5 hours airtime, superb condition, particularly clean sail. Going abroad so must sell. Offers around £500. Stephen Hicks, 8 Rosscourt Mansions, 4 Palace Street, London SW1.
HIWAY 220. Good condition. Ideal for beginner, very forgiving with new seated harness. £90. Stevenage 61393.
Blue and white SUPER SCORPION B with dacron sail. £530. Phone Skelmersdale 20601.
ICARUS V flies well. Complete with harness, weatherproof trailer, spares, plans, tools, etc. Cost £600. No reasonable offer refused. Shoeburyness 6222 evenings.

BIRDMAN FIREBIRD 'S' 220. New June 1978, vaubvrudge sail, never dinged. Must sell have purchased new Cherokee and harness. £350. inc. seated and prone harness and bag. Phone Ted Frater, Corfe Castle 634 Dorset.

McBROOM ORION. Good standard glider. £60 ono. Ex RAF altimeter. New but date expired. £18 inc. p.&p. Typr 14c. Phone Ted Frater, Corfe Castle 634 Dorset.

BIRDMAN FIREBIRD 'S' 190. Excellent condition, good intermediate glider. Includes bag, harness, spares, helmet. Will deliver. £350 ono. Rod Release, Essex. Tel. Danbury 2646 evenings.

EMERGENCY PARACHUTE SYSTEM.

Standard military reserve chute modified by Len Gabriels for hang gliding. Utilises deployment bag and drag chute. Can be sewn onto any harness. £120. Tel. Mark Woodhams at Brighton (0273) 501043.

SUPINE HARNESS. Suitable for any glider that can be rigged seated. In flight adjustment from seated to fully supine. As new. Tel. Mark Woodhams

at Brighton (0273) 501043.

LANCER II, with new prone harness, in excellent condition. £400 ono. Knocks down to 8ft. Includes bag and spare control bar. Phone David Simpson 01-709 9166 Ext. 346 (work) or 01-748 1371 (home)

FLEXIFORM VECTOR & bag. 10 months old in excellent tune. Try X country next spring with this excellent performer. Only experienced pilots please. £395. Jim Glithero 0829 (Bunbury, Cheshire) 260844.

CHARGUS VEGA I. Prone or seated, sail black with gold tips. Excellent condition, suit beginner/intermediate. Bargain at £200. Phone Cheltenham 29921 after 6 pm.

CLOUDBASE 21ft. Lovely plumage. Large kite 11-14st. Excellent condition. Part exchange with medium sized Spirit or will sell at £250. Mark, Loughborough (0509) 213324

GRYPHON III. A Gryphon was first in the League Entry Competition, and the League. This excellent example is green, white with red tips. £575 ono. Contact Mario on 0536 516778.

SKYHOOK 3A standard good condition. Must sell. £50 ono. 6 Roxholme Grove, Leeds 7. **LARGE SPIRIT**, v.g.c. with pulley system, 6 months old, never pranged. Nicely tuned, could be detuned if required. Any trial £330 ono. Includes bag and seated harness. Paul, Witney (Oxon) 71269, write 117 Apley Way, Witney.

FALCON IV. Superb floater, light weight sail, anodised frame, reversible rigging wires for seated or prone flying. Colour: white with red wing tips. Will demonstrate if required. £330 no offers. Tel. Chris, Gravesend 58966 after 5.

LARGE MOONRAKER 78. Brand new, hardly flown, lovely colours (black L/E & centre, mid-blue, pale blue, white tips) £490. Contact Pete Anstey, 82 Rastrick Common, Brighouse, West Yorks. Tel. Brighouse 716069

SKYHOOK SAFARI, break down model, hardly flown £450. Chargus **MIDAS C**, the best performing kite for a light pilot. £175. Tel. Robert Close-Smith, Buckingham 2325

NORTHERN SCHOOL OF HANG GLIDING

B.H.G.A. Reg.

H.I.A. Ins.

Sheffield Branch Spring Sale

VORTEX 120 - Brand new at last year's price -	£415.00
VORTEX 110 - Ex Demo. -	£360.00
SUPER SCORPION C + Dacron sail -	£495.00
SUPER SCORPION C - Ex. Demo. -	£465.00
SAFARI Med. - Ex. Demo. -	£445.00
VECTOR Med. - Ex. Demo. -	£395.00

Large and small secondhand Sunspots and Spirits in stock.

Skyhook parachutes £175.00 (sewn on to harness free).

Going abroad? 12 ft. breakdown any make of glider - £15.00.

Full repair service

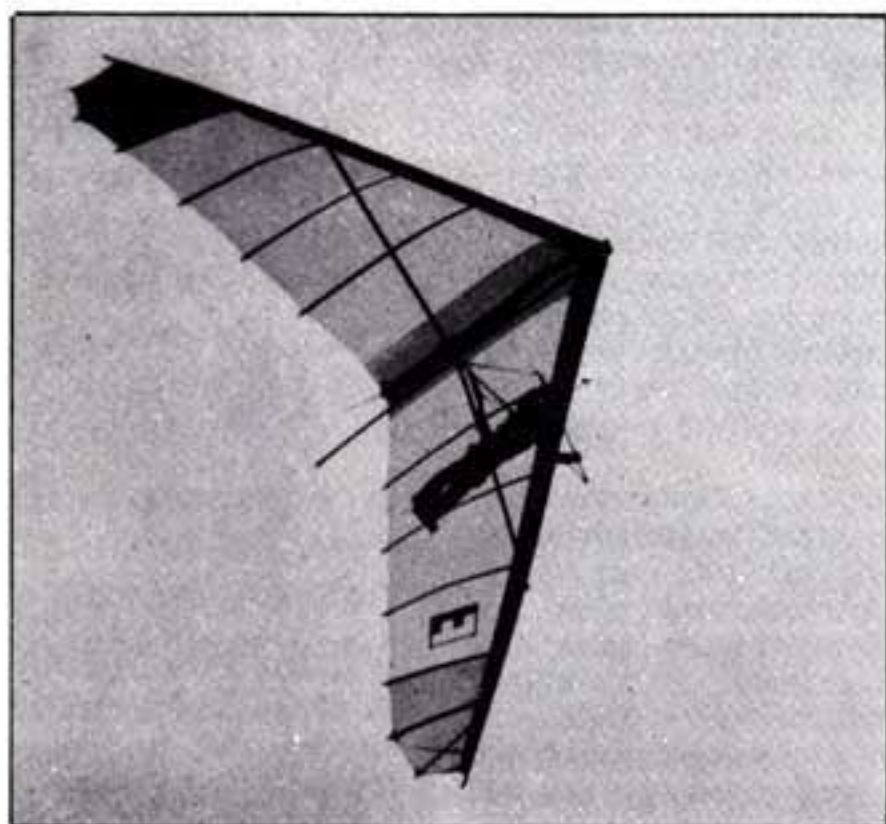
GRAHAM HOBSON
8, BRECON AVENUE
BROOKLANDS
MANCHESTER 23 9HL
TEL: 061 973 4085

PETE JACKSON
52, CRESCENT ROAD
SHEFFIELD
S7 1HN
TEL: 0742 585644

There is no truth in the rumour that Graham Hobson has gone back to the U.S.A. to marry his American sweetheart, he's promised to bring her back here first. While Graham's away any urgent enquiries regarding Manchester branch contact Geoff Snape C.F.I. Blackburn 885909.

SKYLINE

- simply better -



Skyline	small	medium
Aspect Ratio	6.4	6.4
Area	170 sq. ft.	175 sq. ft.
Span	33'	33' 8"
Keel	8'	8'
Weight	46 lb	49 lb
Pilot Weight	8 - 10 st.	10 - 12 st.

Skyline	large	super large
Aspect Ratio	6.0	5.9
Area	195 sq. ft.	215 sq. ft.
Span	34'	35' 6"
Keel	8' 6"	9' 6"
Weight	53 lb	54 lb
Pilot Weight	12 - 14 st.	14 - 16 st.

£475

FLEXI-FORM SKYSAILS
Tel: 061-707 1389

incl. VAT
& Bag.

The Skyline has no wing wires, just a simple rugged airframe and a carefully cambered sail. Low weight and advanced sail technology give a superbly light 'inertia free' feel to the handling - so important when flying close to the hill or thermalling. Roached tips, short keel and high aspect ratio contribute to the performance whilst mellow slow speed characteristics add to the pleasure.





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

Fly Better with a New Kite

Contact us for the best trade in, and delivery time and after sales service.

Consider these advantages!

1. Free trial flights on the kite of your choice.
2. Four days free tuition (prone conversion, soaring etc).
3. If not completely satisfied with your kite, we will take it back (if undamaged) within one month of purchase. (Full credit given).
4. Good secondhand kites available, harness, altimeters etc.

(Send for free price list)

Our hills are unexcelled for initial training or for converting to more advanced machines.

Our hills are within a few minutes walk - we are at the foot of our main soaring ridge Penylan (1,000 feet up) - in fact you can fly right over the centre!

Don't waste time travelling around looking for hills - we have them on our doorstep.

(Bed/Breakfast and packed lunch £4)

IF YOU WANT TO LEARN TO FLY - write or telephone for our free 32 page handbook and find why we consider your time and money will not be wasted with us.

Self catering holiday accommodation at Rhossili, Rhigos and Merthyr - from £2 per person per day. Telephone Mike Adam between 10 a.m. - 11 a.m. or 6 p.m. - 10 p.m. or leave your message on Ansaphone.

SOUTH WALES HANG GLIDING CENTRE

67 Cardiff Road, Troedyrhiw, CF48 4JZ
Telephone: Merthyr Tydfil (0685) 3780 or Rhossili (044-120) 460

AIRBORNE WITH EASE

The Paraglider Mark 8 is a purpose built ascending, slow descent parachute glider. It will fly with stability in winds from 0-30mph, altitude range 50-2,000ft. Airborne after a few paces forward. Particularly suitable for prolonged flights, with tow driver keeping pilot airborne by tacking or circuit towing. Equally suitable for high released flights, the Mark 8 has a slightly slower performance than a deployed sport jump parachute.

It is gentle enough to fly the family and has enough lift for dual kited flights. Each Mark 8 has a revolutionary quick releasing fully adjustable bucket seat harness, with dual flight attachment points. The Mark 8's low drag makes towing behind motor boat equally as easy as land vehicle. The equipment weighs 20lbs and packs into a small kit bag.



PARAGLIDING SCHOOL

Open to the general public for one and two day flying courses, single or group bookings, mixed classes, small groups, each pupil spends plenty of time in the sky! Bring the family for a flying visit to the countryside!

Send for our free illustrated booklet on Albatross Paragliding and other Albatross aviation services and products.



Trowley Bottom Farm.
Trowley Bottom.
Flamstead.
Herts.
Tel: Luton 840196

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, Clothholme 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"

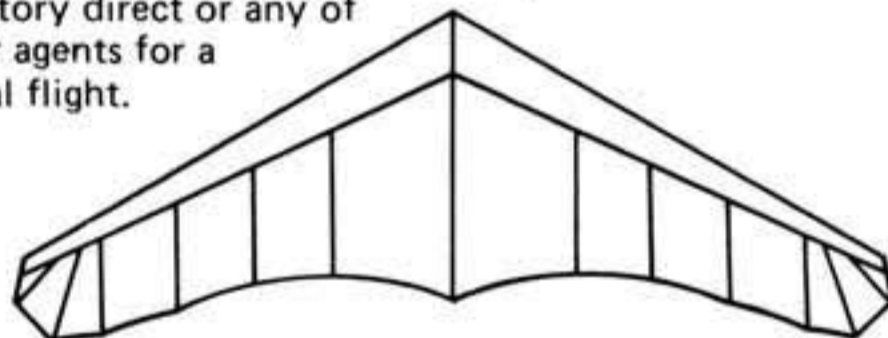
The "Cherokee" is a new intermediate/expert pilots glider. Built to our usual high standard of construction and finish. Because of its mellow handling characteristics it is suitable for new E.P.C. holders right through to expert pilots who want performance with a relaxing easy to fly glider.

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.

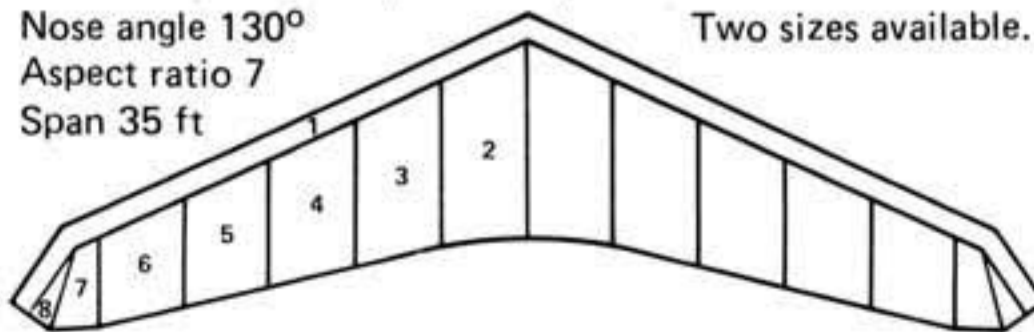
Basic specifications are as follows:-
"Cherokee" 170 Nose 120° Span 30.5 ft.
Aspect ratio 5.47 ft. Area 170 sq. ft. Root chord 10.5 ft.
If you are seriously interested, contact either the factory direct or any of our agents for a trial flight.



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°
Aspect ratio 7
Span 35 ft
Two sizes available.



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

Cyclone **by chargus**

Interested flyers with a Pilot Rating
contact Buckingham 4321 for further information

Photography Richard Kenward

