



THE MAGAZINE OF THE BHGA

Wings!

MARCH 1981



Flexi-Form's latest product

**THIS GLIDER HAS
NO BRITISH C. OF A.**

FLEXIFORM SKYSAILS SEA-LANDER

Flexiform Skysails Beddingate Mill, Leigh Street,
Patricroft, Manchester, Lancs. phone 061 707 1389
This glider has no British C of A.
Midlands 0455 32931 or 32526 P Bennett



GLIDER PILOT
Geof Ball

THE BEST IN EUROPE 1981

HANG GLIDING PERSONAL ACCIDENT INSURANCE INCREASE IN PREMIUM RATE

As a result of Claims experience over this last seven years in which Underwriters have paid claims exceeding £110,000 in return for premiums of £67,580, Underwriters have most regretfully (*and we all regret it too — Ed.*), insisted on an increase in insurance rates for this year.

However, these apply only to Temporary Total Disablement section, that is the section which gives a Weekly Benefit for up to 104

weeks, excluding the first 14 days after any accident.

These increases of 25%, so that a Weekly Benefit of £60.00 will in fact cost £45.00 to insure, are mitigated from those already insured, by Underwriters agreement to introduce a "No Claim Bonus" to the Temporary Total Disablement section in the same way as they do for the Capital Sum Section. This means that those previously insured and

who have not had a claim will not have to suffer any increase at all. Thus, it will be new entrants to the Scheme who will be called upon to pay the rate, which Underwriters consider appropriate to the risk.

I had hoped that we would have held the rates, but Underwriters insist that they cannot go on subsidising our Scheme at the rate they have in the past and bearing in mind the basic principle: the "Insurance is

the pooling of a sum of money by each of a number of people with equal risks, so that the unfortunate can draw from the common pool" it is clear that we should be self-supporting.

Obviously, we must all work towards safer Hang Gliding — not just to improve our premiums — but to reduce the risk of killing and maiming our friends.

Reggie Spooner

INSURANCE

The following Personal Accident Insurances are placed at Lloyd's and are applicable to United Kingdom based BHGA Members. They are effective throughout Europe. Extensions beyond that can however be arranged.

Claims experience has forced underwriters to increase premium on all new Personal Accident Insurances — but a lower renewal premium applies to those previously insured without claim.

PERSONAL ACCIDENT BENEFITS IN THE EVENT OF A HANG GLIDING ACCIDENT

CAPITAL SUM

IN THE EVENT OF DEATH, LOSS OF EYE/LIMB (OR USE THEREOF) OR PERMANENT TOTAL DISABILITY

Code	Capital Sum Benefits	New Premium	Renewal Minimum
A5	£ 5,000	£ 25.00	£20.00
A6	£ 6,000	£ 30.00	£24.00
A10	£10,000	£ 50.00	£40.00
A15	£15,000	£ 75.00	£60.00
A20	£20,000	£100.00	£80.00

WEEKLY BENEFIT

PAID UP TO 104 WEEKS (EXCLUDING FIRST 14 DAYS) FOR SO LONG AS DOCTOR CERTIFIES YOU TOTALLY UNABLE TO FOLLOW NORMAL OCCUPATION

Code	Weekly Benefit	New Premium	Renewal Premium
D20	£20 per week	£15.00	£12.00
D30	£30 per week	£22.50	£18.00
D40	£40 per week	£30.00	£24.00
D50	£50 per week	£37.50	£30.00
D60	£60 per week	£45.00	£36.00

NOTE: Benefits are normally paid at end of Disablement period — but in cases of hardship we can normally arrange a cheque each four weeks after benefit starts.

FOR COMPETITION PILOTS i.e. THOSE TAKING PART IN NATIONAL OR INTERNATIONAL COMPETITIONS OR THE LEAGUE — OR COMPETITIONS ABOVE CLUB LEVEL, UNDERWRITERS HAVE INSISTED ON THE ABOVE RATES PLUS 25%

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

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

PLEASE GIVE YOUR WIFE'S FULL NAME IF YOU WISH HER NAMED AS BENEFICIARY IN THE EVENT OF YOUR DEATH.

GLIDER ALL RISKS (GROUND) COVER U.K. ONLY

Policy excludes Flight Accidents but covers every accidental ground risk that we have yet thought of, e.g. Theft, Damage resulting from Car Accident, etc. (Excluding first £5.00 each claim. But £10 when rigged for flight). Includes 30 days in Europe each year.

GLIDER VALUE £300	PREMIUM £8.00	GLIDER VALUE £400	PREMIUM £10.00
GLIDER VALUE £350	PREMIUM £9.00	GLIDER VALUE £450	PREMIUM £11.00

EACH ADDITIONAL £50 VALUE — ADD £1.00 PREMIUM. RATES FOR SYNDICATES CLUBS ETC., ON APPLICATION

LIFE, ENDOWMENT, HOUSE PURCHASE AND PERMANENT HEALTH INSURANCE

We can still offer normal terms for most Life, Endowment, House Purchase and Permanent Health Insurance. Do come to us first if you contemplate any form of Life, Endowment, Unit Linked House Purchase or other insurance.

THERE NEED BE NO PREMIUM LOADING TO COVER THE HANG GLIDING RISK.

We have arranged special terms for BHGA Members and we will gladly quote if you will write or telephone:

REGGIE SPOONER INSURANCE BROKER FOR THE BHGA, CLIFTON HOUSE, BATH ROAD, COWES, I.O.W. PO31 7RH. TELEPHONE: COWES (0983) 292305

POWERED HANG GLIDING AND TOWING QUOTATIONS GLADLY GIVEN ON REQUEST.

HOLIDAY COVER — including the Hang Gliding risk — readily arranged. Details on application.

TOWING and/or POWERED Hang Gliding is NOT COVERED by any of the above, except by previous written authority. If in doubt, ring REGGIE SPOONER on 0983-292305.

NOTE: In contrast to Personal Accident rates, two or three major Life Companies, with good Profit Records, are now offering Life, Endowment and House Purchase Policies at normal rates. DO LET US QUOTE.

Wings!

Editor: Mike Hibbit, 2 Mitford Close, Shinfield, Reading, RG2 8JQ (0734-864543)

Layout: Mike Hibbit

Commercial Editor: Sylvia Howard, 4 Somerwood, Rodington, Nr. Shrewbury, Shropshire (Upton Magna [074374] 365)

Printed in Great Britain by Blackburn Print Ltd, 27A Arthur Street, Hove, Sussex

BHGA Council: President: Ann Welch OBE; Chairman: Roy Hill (0865-735204); Treasurer: Percy Moss (0926-59924)

Members: David Bedding (08444-7186), Howard Edwards (029671-2086), Diane Hanlon (051-652-5918), John Ievers (049-525-4521), Clive Smith (092-73-61270), Colin Lark (0453-46592), Bob Mackay (0792-813318), Ted Frater (0929-480634).

Council Officers and staff: Principal Executive Officer: Barry Blore (0235-834033), Secretary: Chris Corston (0823-88140), Training: Bob Harrison (0706-53755), Medical Adviser: Dr Dunstan Hadley, BHGA Solicitor: Anthony Maclaren, Registration Officer: Terry Dibden, Membership Secretary: Janet Hayes, Record and FAI Award Claims: Rick Wilson, Welfare Adviser: Liz Squires, Radio Communications Officer: Dave Smith, Overseas Travel Adviser: Len Hull

BRITISH HANG GLIDING ASSOCIATION: 167A Cheddon Road, Taunton, Somerset TA2 7AH

CONTENTS

- 3 Insurance Increase
by Reggie Spooner
- 6 Chairman's Statement
- 7, 8, 9 News
- 10, 11, 12 Ballast, Buckshot and Bubbles
by Robert Bailey
- 13 Safety/Opinion
- 16, 17 Hang Gliding Photography
by Steve Thompson
- 19 The Met Office, the weather and you
by Ted Frater
- 20 Daedalus Oddments
- 22 Overseas News
- 23 Flying Sites in Spain
by Alan James
- 24, 25 Letters
- 26 Flight Report: Last Cross-Country
by Len Hull
- 27 Power Page
- 30, 31 Small Ads

COVER: Chris Ashman at Newhaven during abandoned First League - photo J.H. Wadsworth

WINGS! may be obtained regularly by joining the BHGA, or on a subscription of £10pa in the UK. Those outside the UK are requested to send Sterling International Money Orders - £12 (surface mail) or £22 (airmail) for an annual subscription. Details of membership will be sent on request. IN ALL CASES WRITE TO TAUNTON. Wings! is published by the British Hang Gliding Association. The views expressed in it are not necessarily those of the BHGA Council, its Officers, Members or the Editor.

Contributions are welcome. Articles should be typewritten if possible. Photographs and cartoons should be accompanied by the appropriate captions, and any material which is to be returned should be accompanied by a stamped and addressed envelope.

The Editor reserves the right to edit contributions where necessary.

If members or subscribers change address, or copies of Wings! do not arrive, please contact the Membership Secretary at the Taunton Office. In all correspondence give your full name, address and MEMBERSHIP NUMBER (if applicable). Please give five weeks notice for changes of address if possible. If you, your club, or any local hang gliding activity gets written up in a local paper, national paper, or magazine, please send a copy to the Taunton Office for the BHGA Press Cuttings collection. This applies to the UK only.

Editorial

Brian Milton has been suspended as editor of Wings! following a decision made by BHGA Council on 7 March. I won't go into the facts surrounding this move as Roy Hill has made an official statement, which is printed on the following page.

There is no doubt that Brian has established Wings! as a leading hang gliding publication; in fact he was recently credited via the pages of Glider Rider for his literary contributions to the sport. So, current issues apart, our thanks are due to him for the time and effort which he has given to the Editorship of Wings! Thanks also to Ian Butcher (layout) and Stanley Pottinger (letters).

I have agreed to act as caretaker editor and layout designer, having had a previous involvement with the production of Wings! two years ago when Jeannie Knight was in the hot seat.

The position of Editor for Wings! is advertised elsewhere in the magazine, so if you feel qualified, competent and patient enough to handle the job then apply to Barry Blore, Chairman of the Editorial Committee.

All contributions to the magazine are, as always, gratefully accepted and should be sent to my address below.

I apologise for the fact that this edition is late (due to production problems created by Brian Milton's suspension) and regret any inconvenience to advertisers and readers.

M. Hibbit

Mike Hibbit
2 Mitford Close,
Whitley Wood,
Reading,
RG2 8JQ

OUR STOCK MAY SURPRISE YOU

BOLTS
TUBE
PINS
CHANNEL
UPRIGHTS
GLIDERS
CATCHES
HANGLOOPS
HEATSHRINK
WIRE
SWAGES
TOOLS
VARIOMETERS
COMPASSES
BATTERIES
VENTIMETERS
PARACHUTES
GLIDERS
SKY TRIKES
BOOKS
HARNESSES
TEE SHIRTS
KARABINERS
BUNGEEES
ROD
BAROGRAPH
BAGS
HELMETS
TANGS
BADGES
CLIPS
SPARES
ENGINES



BOLTS
TUBE
PINS
CHANNEL
UPRIGHTS
GLIDERS
CATCHES
HANGLOOPS
HEATSHRINK
WIRE
SWAGES
TOOLS
VARIOMETERS
COMPASSES
BATTERIES
VENTIMETERS
PARACHUTES
GLIDERS
SKY TRIKES
BOOKS
HARNESSES
TEE SHIRTS
KARABINERS
BUNGEEES
ROD
BAROGRAPH
BAGS
HELMETS
TANGS
BADGES
CLIPS
SPARES
ENGINES

Mainair Sports Ltd.
Shawclough, Rochdale, Lancashire
Tel: (0706) 55131
Telex: 635091 MAIN

I enclose 50p plus large S.A.E.
Please send your illustrated accessory catalogue

NAME _____

ADDRESS _____



STATEMENT BY THE CHAIRMAN

11th March, 1981.

Brian Milton/Newton Aycliffe Development Corporation

On Saturday, 7th March, prior to the A.G.M., Council suspended Brian Milton as Council Member, Editor of *Wings!* and Chairman of Competitions Committee. This decision was subsequently endorsed by the A.G.M. There will be considerable speculation about the circumstances leading up to such drastic action and therefore I thought it wise to set out the official position.

Brian came into hang gliding in 1974 and soon became a Council Member with a special interest in public relations and competitions. He was made Chairman of the Competitions Committee and, with his usual drive and enthusiasm, built the Competitions circuit into an international force with a considerable reputation. In 1977 he realised the potential for sponsorship and a company called Flight Promotions was established under the control of his wife, Fiona Campbell and Arthur Puffitt. To ensure there was no conflict of interest, Brian gave an undertaking that he would not be directly involved in the operations of the business.

The B.H.G.A. entered into a three-year contract with Flight Promotions on 5th August, 1977, appointing them as an agent for sponsorship. That contract was due to terminate in August 1980 but continued on a monthly basis until such time as either party cancelled it. It therefore continued in force. In about November, 1979 Arthur Puffitt left Flight Promotions and Brian assumed control.

In about September, 1980 The Newton Aycliffe Development Corporation approached Peter Hargreaves with a view to sponsoring him following his record-breaking XC flight in the North of England. They also indicated that they were prepared to extend sponsorship to the BHGA, subject to suitable agreement. The sum of money involved that might accrue to the BHGA was reported to be £25,000. Peter put Les Coles, the Newton Aycliffe Development Corporation Public Relations Officer, in touch with Brian and at this stage it is claimed by Newton Aycliffe that there was no indication that the discussions would be through Flight Promotions. Brian reported briefly to Council in December that he thought he had a major sponsor but it was subject to his arranging T.V. coverage and he would not be able to give any details until January 9th. Negotiations had apparently reached an advanced stage by January and included press publicity of the sponsorship deal. Derek Evans, BHGA Competitions Treasurer, was called to a meeting with the sponsors to present budget proposals. Included in these figures was a sum of £5,000 (20%) payable to Flight Promotions. The Newton Aycliffe Development Corporation took great exception to this, claiming to be unaware of Flight Promotions' involvement. They understood they were dealing with the BHGA and they did not see how a 'finder's fee' of £5,000 could be justified when they had approached the Association through Peter Hargreaves and Brian as Competitions Chairman. They promptly withdrew from the deal and considerable adverse publicity resulted, including articles in the press.

Council received this information officially in the form of a letter from Stan Abbot, Press Officer N.Y.S.C. and Peter Hargreaves, Committee Member N.Y.S.C. on Saturday, 7th March, prior to the A.G.M. and interviewed Brian at Warwick University.

Brian explained his difficulties in trying to respond positively to Newton Aycliffe and yet having nothing positive to offer them in return in the form of television coverage and other publicity and said: "In conducting a 'fan dance' to attract sponsorship, I blurred the edges."

He went on to say that, so far as negotiations were concerned, he was in little doubt that Newton Aycliffe Development Corporation were under the impression they were dealing with the BHGA. He freely admitted that he had made a fundamental error of judgement in this. As Chairman, I asked Brian what his intentions were. (It had been reported to me that Brian was resigning as Editor and from Council some time before this problem developed). He confirmed to Council that he intended to resign as Editor and as a Council Member but he wished to remain as Competitions Chairman.

Council gave very careful consideration to the latter, which they had to regard as a formal complaint and which had been circulated to all Clubs and Council Members. They also gave careful consideration to the recommendation of the Competitions Committee — following their own consideration of the matter — and various press articles and, in particular, Brian's own explanation. They unanimously agreed that, in order to re-establish the credibility of the BHGA amongst its members and organisations with which we have contact, Brian should be suspended, as already stated.

Council's decision was reported to members at the discussion sessions on the Saturday afternoon of the AGM, and a debate lasting about two hours took place, with Brian taking a full and active part. This resulted in a formal proposal to the A.G.M. proper on Sunday, 8th March, 1981.

"In the matter of the Newton Aycliffe sponsorship, Brian Milton made an error of judgement, freely admitted, in failing to make clear to the promoters the difference between BHGA and Flight Promotions when Chairman of the BHGA Competitions Committee. This meeting endorses Council's suspension of Brian Milton as Council Member and Editor of *Wings!* and considers that he should no longer remain Chairman of the Competitions Committee."

An amendment from the Competitions Committee was also proposed:

"Whilst the Competitions Committee agree to the resolution, i.e. *Wings!* and Council, we recommend that Brian Milton be retained as Chairman of the Competitions Committee, provided that the BHGA terminates its relationship with Flight Promotions."

The proposal and amendment were both fully debated on the Sunday morning, but Brian was not present. Members voted overwhelmingly in favour of the proposal and the amendment was defeated.

In retrospect, Council was unwise to allow the Chairman of Competitions Committee to also conduct a sponsorship business. Proposals passed at the A.G.M. should ensure that this cannot happen again.

It may also be tempting to re-instate Brian subject to his disassociation from Flight Promotions, but Brian himself has set very high standards on previous occasions when others have been found wanting, and I am sure he would be the first to admit that the credibility of this Association has taken a severe knock which requires positive action.

No-one will dispute the contribution Brian has made to hang gliding in this country. He has taken the pipe-dreams of many of us and turned them into reality. I hope his energy and enthusiasm will continue to be felt in whatever activity he now becomes involved. I believe I speak for the majority of our members when I say that Brian has given more to hang gliding than many will give in a lifetime. Our regret is that his enthusiasm may have taken him beyond the limits that he would himself have set for others.

Our grateful thanks and support must now go to Mike Hibbit, who has agreed to edit *Wings!* at very short notice, and Derek Evans, who will be taking on the Chairmanship of Competitions in a year when the programme includes the World Championships in Japan, The Bleriot Cup in the U.K. and The American Cup.

ROY D. HILL,
Chairman.





Bettina Gray photo by Alan James

CATCH THE WIND

Windsport, a new magazine about hang gliding, ultralight and radio-controlled sailplanes, windsurfing and related motorless sports will be published bi-monthly in San Diego. The first issue, scheduled to appear in late March or early April, will have "slick" color covers. *Windsport's* editors are W. A. Roecker and Bill Liscomb, whose combined hang gliding experience is over sixteen years. Roecker has been a writer and editor since 1965.

Retailing for \$2.00, *Windsport* will be available at some local newstands or by subscription for early delivery. San Diego pilots Don Betts and Barbara Graham direct production and art, and Bettina Gray is photography editor. *Windsport's* initial coverage area will include California and Arizona.

Subscription rates are \$12.00 per year. During hang gliding competition season *Windsport* will appear immediately after major meets with accurate, comprehensive, personalized reporting. The magazine is not supported by any interest group, manufacturer or organization. *Windsport's* editors promise exclusive coverage, unbiased reporting, quality scenic and action photography, and humor.

Address all correspondence to: WINDSPORT Magazine, P.O. Box 32, Rancho Santa Fe, CA 92067.

NEWS

ARMY HANG GLIDING

1. The Army Hang Gliding Association (AHGA) has been invited to send four three-man teams to the RAF Lossiemouth Hang Gliding Competition, 14-16 May 81.

2. The tasks over the three flying days will be difficult and may include open cross-country flying being set, either as the task, or as an option, when minimum distances may be required to be flown or the 'on-site' task completed for any points to be scored. Thus, the skill level required will be BHGA pilot 1

3. All entries are being co-ordinated by the OC AHGA Centre, the team being selected by the AHGA Committee. Anyone wishing to be considered for the Army Teams, should send a full resume of themselves and their flying experience to:

AHGA Centre
c/o HQ Wales
The Barracks
BRECON Powys LD3 7EA

4. Applications should be accompanied by a £5.00 cheque made payable to 'NONPAS RAF LOOSIEMOUTH'. Unsuccessful applicants will have their cheques returned.

5. The competition coincides with the AHGA's first EXPEDITION, 11-22 May 81 and is immediately after the first ADVANCED course, 2-9 May 81. The Expedition will be centred in the North of Scotland, whilst the Advanced course will take place on the Isle of Wight, as part of their National Hang Gliding Rally over the May Bank Holiday week.

6. The Aim of the Expedition and the Advanced course is the BHGA Pilot 2 Certificate. Further details about these and the other courses being run at the AHGA Centre may be obtained from the above address.

7. TA, OTC and Junior members of the Army are also eligible.

NOTE The resume is not required from those who took part in the Army Hang Gliding Championships, held near Marlborough, 17-19 Oct 80.

DEMOCRACY WINS AT MILL HILL

The saga at Mill Hill continues, but perhaps 'saga' is now the wrong word. Rational submissions are the order of the day. Logic has overtaken emotion in the best traditions of democracy, which is based on examining issues fairly with representations considered from all involved before decisions are taken.

The Home Office has decided not to approve Adur District Council's proposals to introduce new byelaws to control hang gliding. You may remember that the Lord Chief Justice of England ruled in the Spring of 1980 that their old byelaws were invalid, when the High Court was considering an appeal by Adur against an acquittal of Frank Tarjanyi in a Magistrates Court.

The Home Office decision is to consider any new proposal put forward by Adur to prevent nuisance or annoyance to those on the ground. That fully reflects the High Court judgement and will require Adur to identify and quantify any nuisance caused. The Southern Club will be seeking consultations over this so that a factually correct proposal can be put forward by Adur, if they find that it is necessary to make any proposals.

Elections have substantially changed Adur District Council, and it is to be hoped that the decisions of the old Council will be reconsidered. We have changed beyond recognition since the Public Enquiry in 1976, and byelaws are no longer justified. (There was only a marginal case in 1976).

My only flying visit to Mill Hill was tranquil and pleasant. Everyone seemed to be enjoying themselves. Exclusive use of land for recreation is rarely justified. Problems can arise, but a little discussion can soon resolve them. The BHGA agreement with The Society of Model Aeronautical Engineers is a good example of this approach.

Government is concerned about freedom and is unwilling to introduce controls unless they are really necessary. As long as we organise our activities so that they harmonise with society generally, they will be reluctant to introduce further limitations on individual freedoms. I have no doubt that all our members fully support this approach.

Our thanks to the Sports Council and to CCPR for their valuable representations to the Home Office.

David Bedding

HASTINGS EAST CLIFFS

All B.H.G.A. pilot one members welcome. There are no site fees, but you must phone Peter Harris (0424) 432042 and/or Hastings Council Office (0424) 424242 before flying.

OTHER INFORMATION: Flying possible in S.W. wind, but pilot two only. Lift over cliff railway area only with room for two fliers at most.

*Phone Peter Harris for carnivals, competitions, camping, bed and breakfast or any other information.

Local tides, wind and weather conditions from Peter Harris or Council or Coastguard or Beach Cafe or (0424) 8091.

FINALLY: Flying eastwards the 1st Glen (Ecclesbourne) is the *Nudist Beach*. Any fliers landing here should de-rig and take off every item of clothing.



SPONSORED DURATION FLIGHT

The Devon & Somerset Condors are organising a sponsored duration flight. Proceeds will be split between Jimmy Savile's Stoke Mandeville Appeal, and a children's charity based in the South West, Spectrum Trust.

The flight will be undertaken by the club Chairman, Simon Murphy, who will be using a Cyclone. Sponsors are being asked to pledge a sum of money for each complete hour flown, up to a maximum of five hours. The date has been set for May 23rd, or the first day in the following month on which conditions are satisfactory. This date was selected because it is the tenth anniversary of the first organised hang gliding meet, held in the United States.

To maximise media coverage the Condors have appointed a Public Relations Officer:- Brian Smith, 12 Hayes Close, Budleigh Salterton, Devon. The flight itself will be timed and observed by Condors members. The club hope to attract favourable publicity for the sport and highlight the tremendous advances made in Hang glider design over the last ten years as well as earning some money for good causes.

Anybody wishing to support this venture should contact Brian Smith or Simon Murphy (Turf House, Luppitt, Honiton, Devon). Sponsorship forms are available to those who are prepared to collect sponsorship.



Simon Murphy

NEWS EXTRA



JOHN HUNTER FIRST LIFE MEMBERSHIP

John Hunter has been recognised for his outstanding services to the BHGA by receiving the first honorary Life Membership.

John has served as Accident Investigation Officer since February 1976 and has given his time unstintingly to the tasks (sometimes very unpleasant ones) asked of him. He has been highly commended for his thorough and detailed analyses of all hang gliding accidents, fatal or otherwise, reported during his term of office. Last year John received an award from the Royal Aero Club for his outstanding work.

Congratulations and sincere thanks from all BHGA members.

SHANKLIN ISLE OF WIGHT HANG GLIDING RALLY

The programme for the Shanklin Isle of Wight Hang Gliding Rally is now taking shape. This Rally is to be held on the Isle of Wight from **May 2 to May 9** and includes the May Bank Holiday weekend. All pilots and their families are cordially invited.

There are four main flying events as follows:

1. Powered hang gliders and microlights : Cross country

navigational tasks, aerial treasure hunt, round-the-Island navigational event, 'Concourse d'Elegance' and 'Attackers and Defenders'.

2. 'Everyman's' Competition : a series of flying competitions to suit allcomers on the most pleasant of sites, including tasks similar to those encountered at Mere.
3. Pilot 2 Competition : when conditions are suitable a separate series of competitions are to be held using our most challenging sites. Entries limited to Pilot 2 rated pilots.
4. The Airwave Comet Level Chance Competition: this is a new type of competition intended to test the skills of ten of the best pilots in Britain. All ten pilots will fly the same type of glider (Comet 165) and will be ballasted to the same wing loading. Entry by invitation only.

During the week the **Shanklin Hoteliers Association**, who is sponsoring the Rally, has laid on a wide programme of side shows, displays, parties and other activities, including the following:

**Parascending
Parachuting
Sailing
Windsurfing
Military displays
Water ski-ing
Children's events
Red Arrows
Wartime Aircraft
Hovercraft displays
Films
Seminars
Discos, dances and barbecues
and lots more!**

Concessionary rates have been negotiated with Red Funnel Services (operating from Southampton to Cowes) and hoteliers. These concessions are only available through the Shanklin Hoteliers Association — for details contact Viv Rayner on Shanklin 863364 (24 hour answering service) or write to her at 61a, Regent Street, Shanklin, I.O.W. Contestants will be sent, on request, a voucher entitling them to travel on

MALVERN HILLS COMPETITION

In association with the Malvern Hang Gliding Club, the Worcestershire and Herefordshire Association for work amongst the Deaf (WHAD) are holding a Sponsored Flying Competition from April 1st 1981 to September 30th 1981.

WHAD are organising Sponsors and Prizes for the following categories:

- 1) Longest XC from the Malvern Hills
- 2) Longest duration flight on the Malvern Hills
- 3) Most money raised for charity

All flights must be properly witnessed on Forms available from the Malvern Hang Gliding Club.

For details and forms, send entrance fee of £1.00 and S.A.E. (Profits will be donated towards the Deaf as our contribution to 'The Year of the Handicapped') to: John Bevan, Malvern Hang Gliding Club, 'Blackthorn', Plough Road, Tibberton, Nr Droitwich, Wores WR9 7NN. Tel. Spetchley (090 565) 420.

CALLING ALL HANG GLIDING INSTRUCTORS — SCHOOL OR CLUB

The Hang Gliding Instructors Association is holding a get-together of all instructors on **SATURDAY APRIL 25th** at the **BEAR HOTEL, MARLBOROUGH** at 10.15 a.m.

All instructors, including those who have recently qualified on BHGA courses, are requested to attend. Anyone who is interested in undertaking instruction is welcome.

One of the aims will be to formulate a series of lively and interesting meetings for all instructors. School administration matters will be dealt with separately by a Schools Proprietors Sector of the Association at a separate meeting in the future.

PROGRAMME

1. There will be a general discussion on the new BHGA instructor rating scheme, approved early in March.

1. There will be a general discussion on the new BHGA instructor rating scheme, approved early in March.

2. Establishment of format for future meetings of HIA.

3. Should the Hang Gliding Instructors Association be renamed The British Hang Gliding Instructors Association, to come into line with other bodies such as British Manufacturers Federation, etc.?

4. Any other points on instruction within hang gliding to be discussed.

Membership of H.I.A. is open to anyone involved in instruction and applications should be sent to the Secretary, **JEANNIE KNIGHT, 10 Spring Gardens, Washington, Pulborough, West Sussex.**

any Red Funnel ferry for which they have booked, for a flat rate of £17 return, irrespective of car length, number of hang gliders or number of passengers!

The opening event is a reception and briefing at the Clifftops Hotel in

Shanklin on the evening of Saturday May 2nd. For the safety of all air users, pilots are strongly advised to attend the daily briefings at times and places to be published in the programme of events.

TRAINING

3rd CLUB INSTRUCTORS COURSE

The next of these successful courses will be held at the end of April, Sunday 26th-Thursdays 30th inclusive. The course is open to 10 experienced pilots who have a genuine interest in the safe progression of newcomers to our sport. There are only a few places vacant, interested persons are invited to contact **Colin Lark (0453-46592)** or **Bob Harrison** urgently.

course but cannot due to employment commitments, especially those from the teaching profession with fixed holidays.

If sufficient interest is shown i.e. we get 10 or more applicants, we may run this course over 2-3 weekends. When considering the above please bear in mind your travelling costs, then if you consider this type of course the answer to your problem, get in touch now and we shall see what can be arranged — it's up to you.

Bob Harrison

4th CLUB INSTRUCTORS COURSE

No fixed date has yet been arranged for the last of the 4 courses allocated for 1981.

The previous 3 courses have all been midweek, causing obvious problems to potential students in arranging time off from work etc. We are aware that several pilots would dearly like to attend an instructors





COOL CLIVE'S SPECTACULAR ESCAPE

Clive Betts, well known in the Southern HGC for his radical flying had a narrow escape recently, when he inverted a Southdown Lightning 170 and broke the leading edge tube.

Flying at the Devil's Dyke, near Brighton on a weekday, Clive had apparently gained a considerable amount of height before he started an aerobatic routine. Attempting a plus-90° wingover, Clive was apparently caught out by the slowing of the roll response which happens when the Lightning is flown in the upper region of its speed range. Instead of allowing the roll to become established before giving a pitch input, Clive weightshifted, and immediately pushed out. The glider immediately did an almighty whipstall, and went into a stabilised tail-slide.

Witnesses said that the glider lost over 100 feet, falling backwards with the keel vertical before the fin caught, flipping it inverted. The pilot then fell onto the sail, and the lower LE tube broke outboard of the cross-tube junction. Continuing to fall inverted, the nose then fell through, and the glider came right-side-up. The air-pressure on the broken wing then caused the tube to assume an angle of about 30° to the rest of the wing.

Fortunately, the sail tension kept the two broken ends of the LE tube butting up against each other, and even with its broken wing, the glider continued to fly, descending in a spiral dive. After a few more or less out-of-control 360°s, Clive was able to establish sufficient control for a top landing to be made. And while onlookers were still trying to get the teethmarks out of their hearts, he was back in the air on a different machine!

A later examination of the Lightning showed that it was in remarkably good condition, considering the stresses it had been exposed to. The sail was torn at the junction with the keel, and most of the rigging thimbles had been elongated. But with these faults

attended to it would still be flyable.

There is no question that the machine was being flown way outside its approved flight envelope. The pilot was (it is said) wearing a parachute, but didn't attempt to deploy it. Are there any lessons for BHGA members in this accident? Comments please

Tony Fuell

Clive Betts, 20, a Southern HGC pilot, survived without injury an extraordinary incident on the Devil's Dyke on Sunday, February 15th, after he broke the leading edge on his Lightning following a radical manoeuvre. Sail tension on his hang glider held the leading edge together long enough for Clive to recover from a loop, make two 360's and land safely back on top.

Keith Reynolds, the 1978 National League Champion, was in the air at the same time as Clive, when the incident happened. He says he was behind Clive, about 200 feet higher, and they were at between 800 and 1,000 feet above the Dyke. Keith was watching Clive, as it was a blobby day, and he wanted to remain in the best position to get in on any thermal Clive picked up. Keith saw Clive pull the bar in and go into an intentional steep dive. Then Clive pushed the bar out, as if to make a radical wingover, but "he didn't put in any roll". Clive told Keith later that as soon as he'd made the manoeuvre, he knew he'd "baked it". The kite tail-slid, then flipped over backwards, with Clive falling hard into the sail.

The Lightning came out the right way up. Clive, who was wearing a parachute (but not a helmet), is reported as saying he decided not to use the 'chute, because "it was pretty windy and if I pulled my parachute I knew I'd get hurt". His glider had a slight turn and made one 360 involuntarily. Clive, having by then regressed the bottom bar, made another 360 and landed safely.

Another witness, former Wings editor Tony Fuell, said that "while the rest of us were still reeling with shock, Clive grabbed hold of another glider — a Predator — and took off to make some radical manoeuvres". The Lightning Clive had been flying was found to have a broken leading edge, there were tears in the sail, the control bar and keel were bent, and it was deemed a write-off.

Keith Reynolds said later that Clive, who's a former National League pilot, "has been doing more and more crazy things to get noticed. One day he's going to kill himself. What he did was a nutty thing to do."



Keith Reynolds

Ian Grayland, designer of the Lightning, has written to Wings! to give his views on this particular incident. Ian was actually flying at the time, and saw the whole episode, as he describes here:-

I am writing in order to give an accurate account of a fairly spectacular incident that occurred at Devils Dyke on February 10th. These things have a way of becoming somewhat distorted — typically much to the detriment of the manufacturer concerned.

In fairly smooth, mixed ridge and thermal lift, Clive Betts took to the air for his second flight ever on a Lightning 170, and his first on this particular glider. After getting used to the machine's flight characteristics for a few minutes, he attempted a radical wingover. He adopted the normal procedure for this manoeuvre: a gentle whip-stall followed by a fairly vicious dive, feeding in a little roll towards the end of the dive, then re-centring and pushing out. Unfortunately the amount of roll he achieved was so little as to be negligible, and by the time he realised his error he had insufficient airspeed to pitch out and loop.

The machine was at this stage climbing vertically with ever diminishing airspeed and Clive hanging off to one side of the control bar, in an attempt to roll out. The glider stopped completely, somewhat past vertical, and tail-slid about 10 feet, gaining considerable speed.

It flipped over forwards slightly right wing low, and the pilot fell onto the keel of the glider, breaking the right leading edge, outboard of the leading edge/cross tube junction.

The glider then pitched nose up, and after two high speed 360 turns losing energy, returned to straight and level flight, permitting Clive to make a normal top landing outside the Dyke Hotel.

Examination of the damage revealed that the right leading edge had been completely broken vertically downwards and was held in place by sail tension keeping the two jagged ends butting together. No other structural damage or deformation was evident.

I was lucky enough to witness the entire incident from the air at very close proximity, and as the designer of the machine in question feel several points warrant discussion.

I am please from an engineering point of view that the structure failed in precisely the predicted fashion. With the leading edge spar to cross spar junction at 62.5% and using stress relief slits on the inboard side only of the leading edge oversleeve, there should be no tendency to fail inboard of the crosstube joint — a totally catastrophic state of affairs.

Aerodynamically the incident was even more interesting. The glider's past vertical attitude in the tail slide was absolutely ideal to maximise the rate of descent. With no lift being produced, only the machine's form drag slows it down and the speed is every bit as fast as a normal vertical dive. (Surprisingly there was no failure of the battens at this point.)

The speed of forward rotation was startling, and the violence of impact of the pilot with the keel unbelievable. The glider also recovered smoothly from the ensuing steep negative angle of attack dive, despite its now non existent reflex wire system.

I cannot emphasize strongly enough that this kind of activity is way outside the flight envelope of any current hang glider. There are no hang gliders produced which may be flown upside down or backwards, and there is absolutely no need whatever to add to the list of deaths through so called aerobatics, by attempting to do so.

I thank Clive Betts for his supplying me with some extremely useful information, but cannot condone aerobatic manoeuvres exceeding 90° Bank or 60° nose up or down on any hang glider. I design hang gliders on which people should have fun, not commit suicide.

Should any designer or manufacturer wish for further details of the structure or materials used in the Lightning, please contact me at Southdown Sailwings.

Good Flying,

IAN GRAYLAND

BALLAST, BUCK-SHOT & BUBBLES

BY ROBERT BAILEY

Robert Bailey, British team captain at last year's Americas Cup, takes us up alongside him on a cross-country flight along the Sequatchie Valley in Tennessee. Robert and three of the other team members broke the existing XC record from Whitwell (Take-off point) on the day before the competition started. The previous Whitwell record was 25 miles.



Bailey at Americas Cup - photo © Bettina Gray

Practise day before the American Cup.

Southerly at around 15/20 miles per hour. We decide to go to Whitwell after sewing on ballast bags at Crystal Air Sports and filling with sand and gravel. The idea is to practise using ballast, as it might become necessary in the competition.

On arrival at Whitwell conditions are looking good and we rig quickly, looking at the sky occasionally as local pilots, and the British free fliers Noel Whittall and John Wilkie, put up the usual 'top of the stack' show. Then the fun begins. Get the harness and the ballast on (and its a real sweat walking around in 85° with 50lbs round your neck!), and struggle onto the ramp — a massive wooden structure at Whitwell which reminds me of Blackpool pier. The task for the day is to go cross country, and to get as many miles under our belts as possible, as well as learning the peculiarities of flying with ballast. The French are here practising, but there are no signs of the Americans. I take-off and head along the ridge in a S.W. direction, making for a good looking street. The wind is 45° off the S.E. slope of Sequatchis valley, blowing in from the south and penetrating into wind with the extra weight certainly gives me that 2/3 miles an hour more speed. Its a good ridge at take-off, 1,500ft above the valley floor, which comes fairly tight into the hill at this point. The fun fliers are stacked well up by now, a couple of thousand feet above. I'm nearly at my cloud street now which is coming across a place called Joans Point. The glider is moving faster around the sky — is stalling quicker, tightening into turns, and generally feeling rather difficult to handle under the extra weight. The lift is getting good now. I'm under the street, 6 and 8 ups, so I head out into the valley, glancing round to look back behind me to T/O where the gliders look to be scratching. I'm now 1,000ft above take-off and climbing straight out under the street, pushing out in the lift and cruising in the 'mushy' parts.

The day is getting late, it's 3pm, better head off up the valley and get some miles done. I find a 6 up core, tighten into it and it takes me just short of cloud base at around 5,000ft. Circling is definitely tiring with the ballast on. Back across T/O and cruise on leaving the street with a ¼ tail wind which really ups the ground street. Get to the end of the first part of the ridge and the first gap approaches near Red Hill. I hang around and catch a good thermal bubble which takes me to just short of cloudbase again! This proves enough height to easily glide across the gap, Griffith Creek below just shining through the thickly wooded gorge in the now dwindling late afternoon sunlight.

Reach the far side of the gap a couple of hundred feet above the top and cruise on, floating through weak lift on the way, a straight glide across Hicks Creek onto a steep part of the ridge, and work on some height, looking all the time, expecting the team van to be following (found out later the van didn't set off until hours later). At this point, I'm joined by Bob Calvert. I look behind and see all the pack following whilst Hobson is coring it slowly over Red Hill somewhere. We heard

later that Hobo followed the cloud back over the top and landed on the plateau in a small spot, one of the only fields available to him. I carry on down the ridge working any available bubble that blows up. Able to maintain 2000ft above the top of the ridge now. Its a really good day. (Ed. you're not kidding). At this point I'm pushing on to try and get up the valley, north east to an area where the sunlight is stronger.

There is a Cirrus cover above me which is being pushed in, in front of a warm front. Its blocking off the sun significantly and the thermals are becoming weaker, so pushing on, to get the miles, becomes the order of the afternoon. Another gap looms up. I'm high, so

USA's Jeff Scott at Sequatchie Valley Photo © Bettina Gray

I head for the far side at somewhere between min-sink and max L.D. I can see Dunlop down in the valley now. On down the ridge and after Dunlop there's a very big gap. I'm going to need some extra height for this one, so I slow up, working every available ounce of lift on a face just downwind of the town. The wind is still across from the south. As I wait patiently a very strong thermal drifts in and I take it back over the top and over the plateau following highway III which winds up Little Brush Creek (cute name eh!). I take it up to 5,000ft and 2 miles behind the ridge but going so far back nearly proves my undoing. As I penetrate east 45° to the ridge edge, I cross the gorge OK but I'm getting very low and there's

continued over page





Bob and autograph group — photo © Bettina Gray

still 1/2 mile to go. I've got fields picked out for a possible forced top landing. I squeeze across and make the edge with 200ft to spare. The next few miles prove relatively easy. Gliding on up the valley, picking up height and climbing as I go. Up past College station where the ridge looks to be shallowing out a bit now. It's at this point that I decide flying with ballast is a real pain and pick a quarry — looks quite spectacular falling away below in the sunshine — just like confetti!

I'm working a weak thermal at a place called Cannon Creek when I hear a gun-shot. It's very loud and distinct like he's just below. Naaa — can't be shooting at me. People don't do that. I look down and 600ft below there's a guy in his back yard (Ed. I think he means garden) and he's got a gun. Suddenly there's a cloud of smoke followed by a crack. "I think he's having a pot at me" and my heart beat picks up to 2000 a minute. I pull the bar to the waist, then down to the knees as a couple more shots ring out — I'm off! As I get clear I glance up to inspect my beautiful new Atlas, and there are no holes.



It is drawing on now. The sun is not as high in the sky and the thermals are much weaker. I'm moving on to a section behind Pikeville which looks like the end of the road. Its very shallow and there's a small hill in front of the main face (a spoiler). We nicknamed that one Lobden, after the famous Pennine training site. To make matters worse the trees stretch out to the valley floor which means the bottom landing is impossible. This is where another thermal is needed to cross the shallows, and I hang about on a small section of ridge hoping for that last evening bubble. After 1/4 hr on this small section I can see the other gliders coming on down the valley and I realise its going to be

busy here soon. Sure enough the first glider arrives. It's Mike De 'Glanville, who has cottoned on to what I am up to and is shooting along on his new super wizzer. He's there, hanging around and I can see Mark Sylvester Graham Slater way back low, about 4 miles behind — they're all on the way! A couple of hawks start to move out from the back of 'Lobden', so Calvert edges out first and I go with him. It's working! Heart in mouth we glide, maintaining height, round the back of 'Lobden' and if we go down now we're in Shnuck. It's good lift and we are able to cruise round the back in weak rotored air.

We move on and cross highway 30 just above Ridge Top where the hill firms up again and the lift gives us 200ft. The ridge is now shallowing out considerably and is only just providing enough lift to min-sink along. Bob pushes on a little bit quick, loses it, and has to head out early to land at Cold Spring.

I'm cruising on and I can see the end of the valley — it must be the 40 mile mark D'Glanville is scooting out in front and I'm following on in a leisurely way. This is great — reminds me of the Bleriot Cup, although the odds are more even in this one! Then it was the Solar Storm V The Fledge, now its the Atlas V The Vampire. So it's just the two of us and Mike is getting low as another gap looms. He goes straight for Rocky Branch gap on to a little slope on the far side, has got low and cannot make it back. He's down.

I decide I need more height and play it cool around Cold Spring, working a big 50ft. I'm on my own here and determined to make the end of the valley. Its getting late — 6.30pm. I go across Rocky Branch and make the other side below the top. The min sink on this big Atlas is amazing. Then with a lot of scratching I'm able to make it back to the top. The glide on to the end of the valley is fairly straightforward as the ridge is steeper now.

I park myself right at the end of Sequatchis valley on a southerly face, smack into wind. It's fantastic — nearly made it. Then I am joined by 8 red tailed hawks and we glide together. Occasionally they would drop their

wings to the sides and fall like rocks to the trees below. Hot flyers these birds. Out towards the middle of the valley there is another hill, the road coming between it, up through a gorge and on to the top plateau. I've got a few options here. I can either hope for some wave to set up and then glide off across the plateau for some more miles, or glide behind the hill which lies out in front, leave the main road, and head towards the bottle-neck of the valley in the direction of a place called Burke. I decide I'll wait around on this section of ridge. It really is a clean hill; the thermals are very smooth and till wafting out of the trees. I'm able to make 400 A.B.L. (altitude above Bailey level) — sea level in effect, a few times. It doesn't seem enough to head off across the plateau and I decide to wait for the team van to arrive, then just glide up the valley towards Burke and get another 3 miles in the bag, hopefully making it a 50 mile flight.

Darkness is drawing on as a van arrives 1,000ft below. Figures walk into the field and I can just make out what looks like a glider on the roof — GREAT — I'm ready for a rest and a drink. I've been at the end of the valley for over an hour and the wave I'd hoped for has not materialised so I glide off, up into the bottle neck of the valley. I land as darkness falls and, in fact, at ground level its surprisingly murky. As I walk to the gate in the field a pick-up truck arrives, guns displayed at the back window — not another for a pot shot! Friendly farmer this and he offers me a lift back to the main road.

As I start to de-rig, the team van arrives 5 minutes after landing. Fantastic, quickest pick-up ever. All the gang are in the van. Mark and Calvy made Cold Springs (41 miles), Slater and D'Glanville, 45 and 43 respectively. I've made 50 miles — the longest flight of the day for a new Whitwell record. Looking back on it I could say it was easy, but everything fell into place just as it does on a long cross country. When I needed a thermal to cross gaps, they seemed to pop up on cue.

It would be a fantastic task for future American Cups to race the length of the valley!

R. E. D. Bailey



'Just like that' — photo Mark Junak

ARE YOU AWARE?

This article is aimed at both the novice pilot who is struggling with take-offs and the "progressing pilot", i.e. pre-Pilot 2, both of whom are learning to cope with situations where events are still happening just a little bit too fast. Let us consider these two scenarios.

Firstly — it's peachy, smack on, 15-20 mph and smooth. You take off expecting a beautiful, relaxing flight only to find that the glider feels stally and no matter how far in you pull the bar, it makes no difference. So you spend the day tearing around the sky. Secondly — two gliders are soaring at Rhossili; again it is peachy. One glider is directly above the ridge, the other is a way out. He turns to fly back to the ridge straight at the other glider — neither takes avoiding action and seconds later a clang is heard from the ground 200ft. below as the wingtips clatter together. Fortunately they separate and all is well.

Now, my main question is how we explain these strange occurrences in perfect conditions? It's easy. . . **air awareness.**

In the first example you have probably not flown for a while or you are just having an off day. One explanation is that you are less sensitive on your off days to the glider's feedback. In the second scenario neither of the pilots were expecting any problems and were basically just unprepared.

As the problem developed they were still too busy flying to pay any attention to solving it.

If you are anything like me then most of your learning comes from watching and talking to pilots better than yourself. However, have you ever

noticed that often when you ask Joe Ace how he can take off in less than 6 mph without even one step forward, the ensuing answer takes at least half an hour and contains more do's and don'ts than you could possibly cram into one minute's flying, let alone the two seconds spent taking off. What's more, Joe Ace seems to be thinking of anything but the take-off as he performs this "miracle".

I would suggest a very simple reason for this seemingly magical ability. Joe Ace has drummed into every fibre of his body the necessary bar movements and air speed considerations. He has also checked the hill for possible turbulence sources and any airborne obstacles — even HG's. He is merely supervising his body while it performs the task. His brain is working on what to do next, even as he performs his hang check.

Remember the days when you learnt to fly? There you are on the top of the training slope with an instructor by your side giving you last minute instructions — "Now, remember, a good hard run. Ease the bar out as you achieve flying speed, check the horizon every few seconds and fly straight down to the landing area. A good hard flare. . . etc., etc".

The result was usually an ignominious stall after three paces, a sore backside, red face and the inevitable question "Why?" Yet now you perform this exercise every time you fly — and you usually get it right. That mad rush which accompanied take-off seems to have disappeared. Your mental last minute instructions consist of: "Wait for a clear spot. Make a clean take-off. Turn right. . ." You have reduced your instructors long list of instructions to your own — "Make a clean take-off". Your

body knows what to do without you telling it and you've freed your mind to think of higher things, such as soaring.

My belief is that all your day to day flying should become like this, so allowing you to solve any problems without the burden of normal flying infringing on your problem solving ability. I feel you should be thinking at least 30 seconds ahead of your flying. In this way you are giving yourself that life-saver — TIME. Having used this method most consciously for the last few months I would suggest a few tips:

(1) Always make a decision as to **which way you are going to turn on take-off well before hand.**

(2) **Don't be inflexible.** If you have turned right and found the ridge to be working better to the left, turn back. Do not flit, however, from sink area to sink area — it is often better to plough on through the sink.

(3) When flying **always have a goal**, i.e. fly to point A and then back over take-off. However, remember tip (2).

(4) When **landing be prepared well in advance.** We are all careful at new sites or after an X.C. but even bottom landing at Rhossili when the tide is out can have its surprises. I have developed the habit of pulling in quite hard for the last 30ft., this gives me speed to fight any unexpected turbulence. As we all know, speed converts to height, which gives you time, which is the life-saver. (As a side effect it also ensures that you have made a decision — "OK, the flight is over. Prepare for landing".)

Finally, if you think ahead, then you don't have to "Think Up" so. . . become **AIR AWARE.**

OPINION

THE SAFEST FORM OF AVIATION?

Yes, hang gliding? In my view we are potentially the safest form of aviation. It takes a little grasping doesn't it? Those BHGA members who fly hang gliders for the danger it involves rather than despite it may not like the statement. The devil-may care image may slip a little.

I'm not going to quote lots of statistics at you as I have little doubt that they would quickly date. We are progressing incredibly quickly as our knowledge increases and as this is spread to members through improved training standards and improved communications. Our flying machines and equipment are improving rapidly too.

We have acquired the art and science of flying slowly, and we have survived despite flying in the most dangerous air. I doubt that we really appreciated what we were attempting in the early days not very long ago. The most dangerous air? We soon learned that height was safety as it gave room for recovery from mistakes and from turbulence. The most turbulent air close to the ground is found around hills. We are only just beginning to get away from them and they are still our principal take-off points. If we can fly safely in the most difficult conditions we must be very safe as Cross Country takes over.

In many ways we can be compared with pedal cyclists. Our weights and speeds are very similar. They occasionally hurt themselves too, but then they have to survive amongst all the traffic confined to our road system. We have an incredible amount of space open to us and only need to co-operate with the movements of other aerial machines.

We are already the safest form of aviation as far as third parties are concerned. A little more knowledge and a little more application of it and I have no doubt that we will be safer flying hang gliders than any other aviator is. Road transport will be a long way behind!

David Bedding



David, a BHGA Council member, flies a Hiway Demon which he also partners with his Skytrike when winds are light.

The following is extracted from an article spotted in one of the more obscure scientific journals under the title — **Research into the sink rate of the standard L.B.C. Module.**

reprinted from D.&S.C. Newsletter

Basic research into the stabilised sink rate of the **LBC module** carried out by the Long Marston Facility has resulted in some unlikely 'spin-off' applications. One of these has been of interest to the **hang-gliding community** in that it has been found very easy to use the module's sink rate as a standard against which the performance of hang-gliders can be related. In the short history of this fascinating sport a tradition of 'optimistic' lift/drag and sink rate claims by manufacturers has been established with little chance for the ordinary pilot to verify the actual performance figures of the glider he buys but the **LBC module** may change all that.

The physicists at Long Marston used several hang-gliders (referred to as 1st, 2nd and 3rd generation types by the pundits) from different manufacturers to establish comparative sink rates in relation to the standard **LBC module**. The sink rates of the gliders is expressed in the following chart as a percentage of the **LBC module** sink rate.

Glider	% of LBC module sink rate
Wasp Standard	127
Hi Way Cloudbase	112
Vortex 120	93
Falcon 4	91
Cyclone	87
Gryphon	87
Atlas	83

The technique used to establish the above figures is both straightforward and effective, for the pilot of the hang-glider simply drops the **LBC module** whilst in flight and observes whether it rises or falls in relation to him. For any hang-glider pilot wishing to verify the sink rate of his glider to compare with those on the chart **LBC modules** are readily available from the London Brick Co.



Ashley Doubtfire Microlight Aircraft

THRUXTON AIRFIELD NR. ANDOVER HANTS
Tel Weyhill (026477) 3472

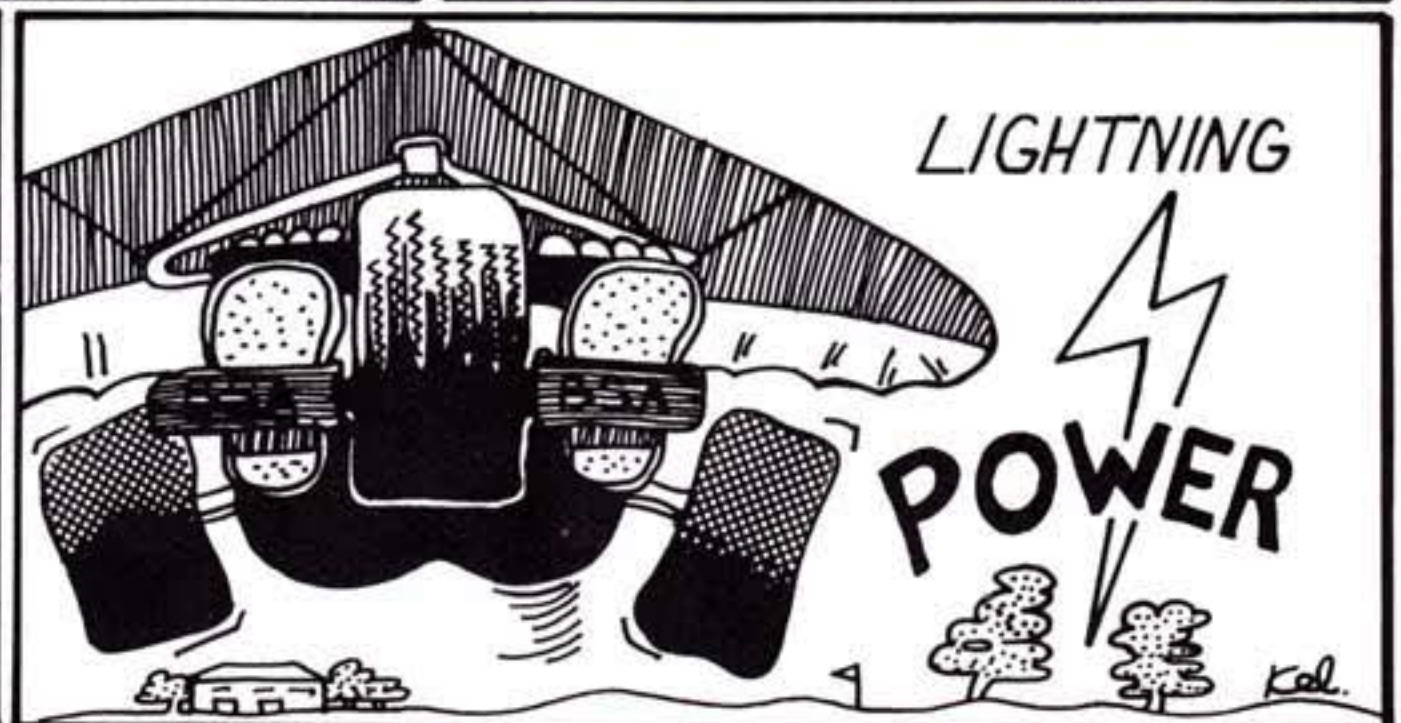
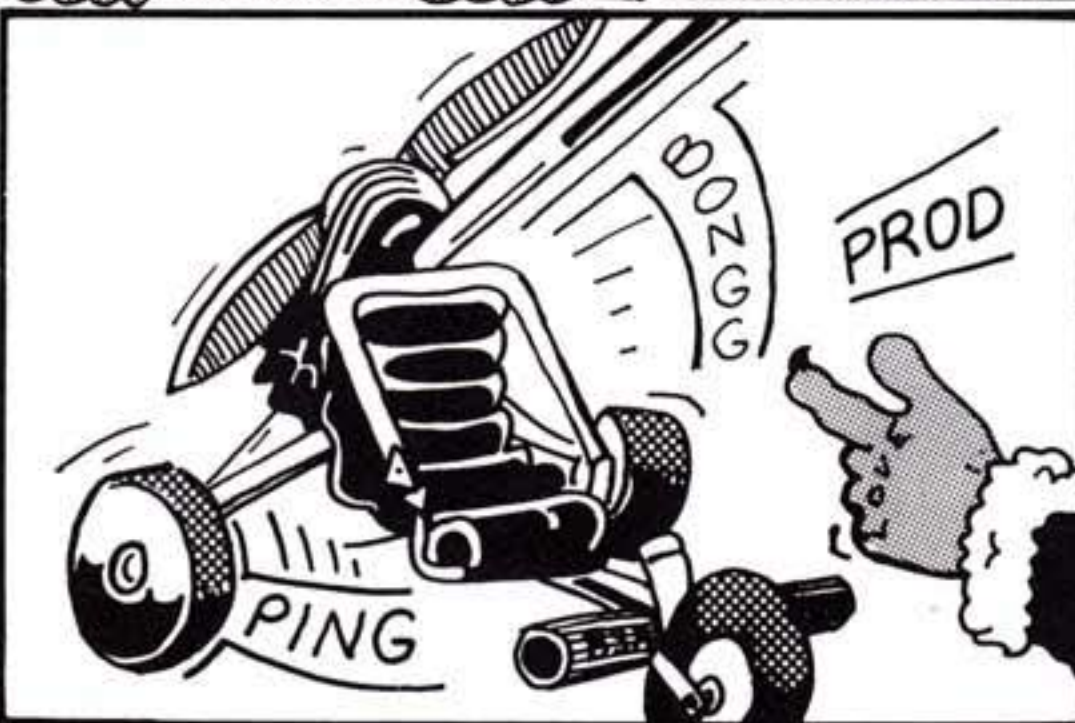
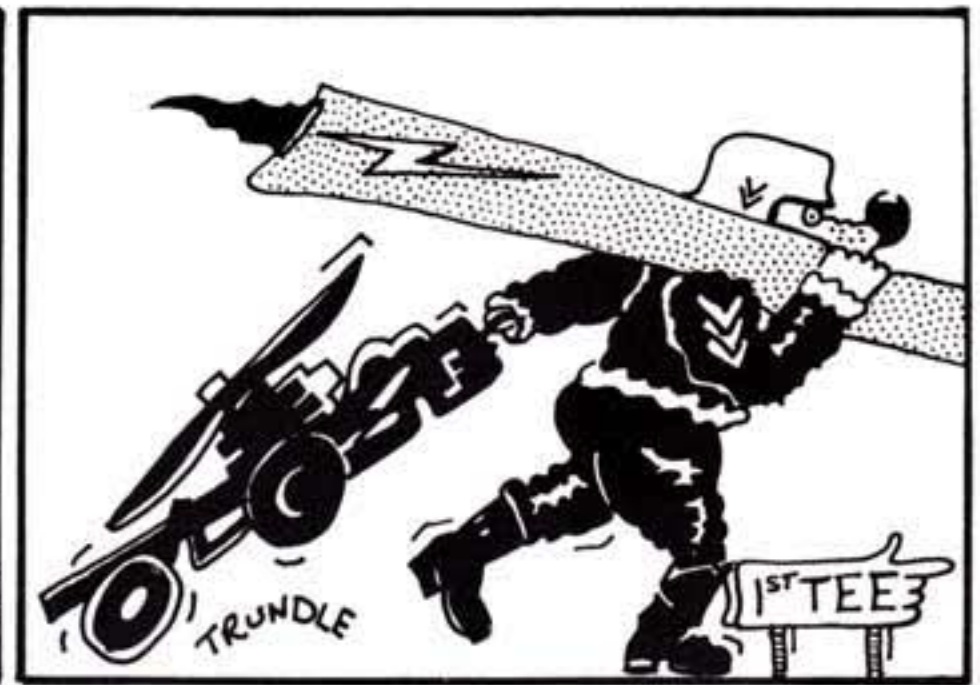
**Trike sessions £15 - T250
Cherokee combo - Excellent deals on all trikes, 5th gen. wings - instruments - free-flight refresher, ridge soar 'n top land session**



Hang Gliding Tuition From Novice To Competition Standard

Birdman Flight Training School

GRIZZLY



ASK FOR INFORMATION SHEET & FREE CAR STICKER:
SOUTHDOWN SAILWINGS, 82 GOLDSTONE VILLAS, HOVE. BRIGHTON (0273) 732007.

GET INSURANCE HANG GLIDING PARACHUTES



WINDHAVEN
Low profile Superlight 21ft £152.18
Low profile TSO 24ft £191.31
(Technical Standard Order)

BENNETT
4 way opening BUS IIA 24ft £196.
4 way opening BUS IIB 26ft £200.

EMBURY RDP (BENNETT)
Super fast-opening 22ft £195.

NEW MAINAIR LIFE PACK

Fully tested TSO. Canopies packed inside our own deployment system. Clean opening-secure pin closure.

Life Pack 210 (Non TSO) £169.50
Life Pack 240 TSO £195
Life Pack 260 TSO £200
Life Pack 260 Power System soon to be available.

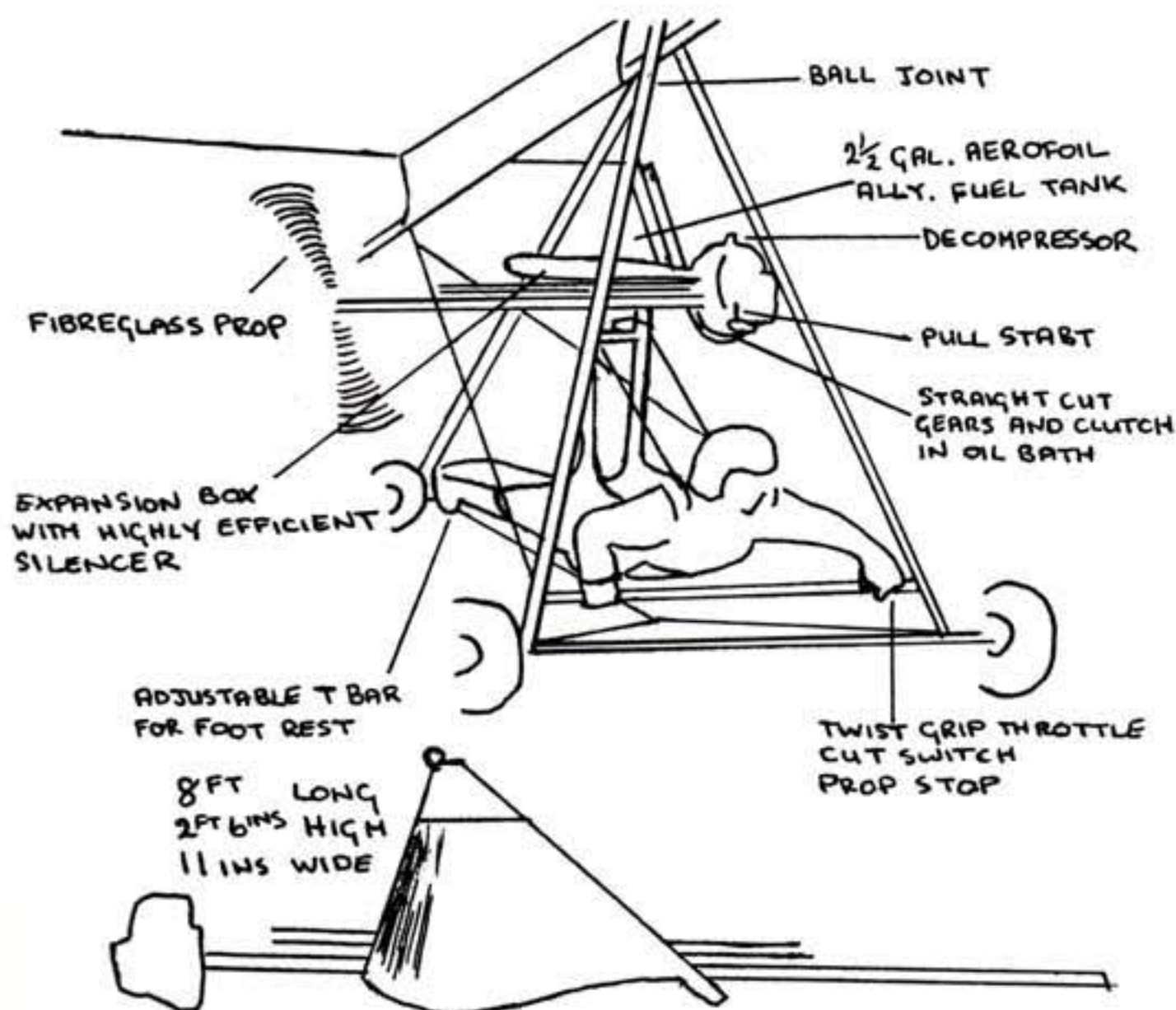
Quantity discounts available
Overseas dealer enquiries invited
Prices ex VAT.

The Foremost experts in the UK.

Mainair Sports Ltd.,
Shawclough, Rochdale, Lancs.
Tel: (0706) 55131 Telex 635091 MAIN.



THE TRIDENT PRONE POWER UNIT



Do you want a bolt on unit that has a good climb rate and handling characteristics under power, yet with the power off, has the light weight and low drag essential for perfecting thermalling techniques.

Add to this controls that allow you air starts, carburetor adjustment and prop. stop?

We have 4 such units for you to try, fitted to Vortex's and Cyclone's.

Write or phone for test flight to

Dunstable Hang Gliding School Ltd,
55 Spring Lane, Great Horwood,
Milton Keynes, MK17 0QP.
Telephone: Winslow (029671) 2086.

It was about two years ago when I was badly stricken by the Hang Gliding obsession. Since then I've joined the BHGA and a couple of clubs, spent a lot of time and money on the sport, met amazing characters, had magical days on the hills, like most of you I suppose (except that I've never flown and don't particularly want to.) My obsession is photographing hang gliding.

There's no need for loads of expensive equipment to photograph hang gliders. Basic cameras can be very good. With cameras with fixed lenses, a hang glider will fill about a quarter of the frame area at 100ft., so you can get good shots of take off and landing, and ridge soaring, for a fairly modest outlay.

For more serious photography a 35mm single lens reflex (SLR) is the best choice, as you can choose the lens for the picture you want, see exactly what will be on the film, and focus accurately. There is a wide choice of these cameras at around £100, practically all of them having through lens metering, and many cheaper models can take power winders. A fairly modest selection of lenses will cover most situations in hang gliding. Powerful telephoto lenses are not essential; a zoom covering 70 to 200mm is pretty versatile. A hang glider will fill the frame at about 250ft with a 200mm setting, and 70 or 100mm settings are useful for take off and landing shots... and you can frame the picture as you want it. Another useful lens is a 24 or 28mm wide angle which gives spectacular take off and landing shots if you are close to the glider, with a strong perspective (big glider, tiny distant hills).

EXPENSIVE GEAR

If you are an active pilot you won't want to stay on the ground taking pictures when conditions are flyable, but a lot of pilots I've spoken to are interested in putting a camera on their glider to get ego-boosting pictures of themselves in action (to show to their grandchildren?). Some incredibly expensive gear can be used for this (like, for example, a motor-driven Nikon, fisheye lens, and infra red beam fired from the ground to trigger the camera!) but any camera with a cable release socket will work with a long squeeze bulb air release. The snag is that you have to land to wind on, so a camera with a power winder is almost essential. Once this meant expensive professional equipment but you can now get a 35mm SLR plus winder for about £150. These cameras can be remote-controlled with a length of twin cable and a push button switch, or an electronic control unit to give programmed bursts of shots.

A camera can be fitted almost anywhere on a glider, wing-tip, nose, back of the keel, but I like the end of the cross-boom. It's also a safe place, for the camera, if you pile in! (As a photographer I think Comets, Typhoons, Demons etc. are a retrograde step!) You just have to make some sort of clamp to fit the tubes, with a heavy duty ball and socket head for aiming the camera. If the camera is any distance out from the keel it needs to be counterbalanced; my gear weighs 3½lbs so a lump of lead goes on the opposite wing. Unless the camera is on the wing tip a wide angle lens, say 18 to 24mm is needed. Fish-eyes are popular but the effect can be a bit gimmicky if its overused, or you can use wide angle converters (about £20) fitted to a standard lens... they have limitations but can be very good.

Colour first attracted me to photographing hang gliding, so for me there is no choice but to take colour slides. Colour prints seem to suffer from processing labs determined to produce dreadful results, and black and white - well you just lose so much. Colour slides are universal, you can project them,



Camera mounted on the cross boom of Tony Hague's Silhouette. Olympus OM10, winder, 18mm. Sigma lens.



Remote Control Unit.



Take off from Mam Tor E. face using a 50mm. lens plus an Astron semi-fisheye converter.



Take off shot using a 75mm lens. Graham Hobson, Atlas, Lords Seat.



Shot using a cross boom mounted camera during a turn. Pete Jackson, Atlas, Bradwell Edge. Olympus OM1, 18mm Sigma lens and winder.



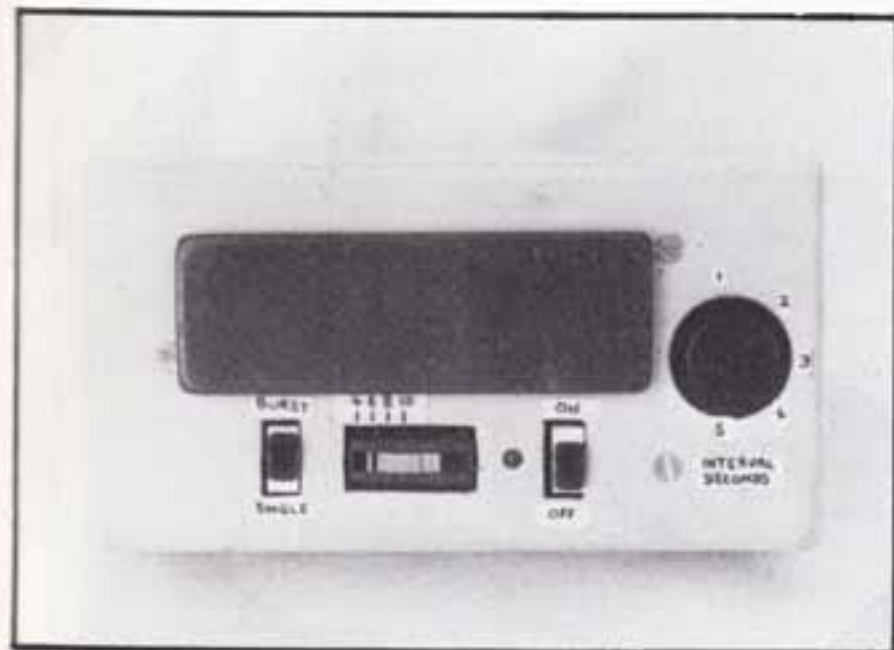
An orange filter increases sky/cloud contrast in black and white photographs. Clive Brooks, Scorpion, Higgat Tor.

HANG GLIDING PHOTOGRAPHY

BY STEVE T...

GLIDING GRAPHY

HOMPSON



Remote Control Unit.



Glider mounted camera assembly posing on a piece of tubing. Olympus OM10, winder, 18mm. Sigma lens.



Try to be ready for almost anybody doing almost anything! Len Hull and Emu, Lords Seat.



atrast



Wide angle lenses make impressive take off pictures. Shot with 28mm lens. Pete Best, Atlas, Stanage Edge.

use a viewer, make colour prints (Cibachrome prints from slides are best for display as they don't fade), and rephotograph them if you want black and white. A fairly fast film, about 200 ASA, is the most useful, though which brand of film to use is mainly personal taste. I use Ektachrome 200 for its good colour quality, latitude, and it prints well.

THERMAL SPOTTING

The best weather conditions for hang gliding photography are sunny, with a clear blue sky, and a few clouds. Sunlight shining through the sail gives the colours a beautiful luminous quality. With black and white film, an orange filter enhances sky/cloud contrast, and a polarizer will do the same for colour film (and help you spot thermals forming?). A pale pink (81A) filter is useful with colour film to reduce blueness when the sky is overcast. Exposure measurements are best made with an incident light meter, but using a through lens meter and reading off a patch of grass usually works very well. Automatic cameras can be confused by the very bright background of the sky, but are useful for in-flight photography in case the light changes while airborne.

The best way to learn the technique and develop a style is take loads of pictures and throw away the garbage later! Take off is always good for spectacular pictures. If you have an automatic winder, then shoot sequences; they are much more effective than single shots. Use a wide-angle lens, lie down to one side of the take-off line, start shooting as the pilot starts running, and roll over still shooting as he goes past. Ideally, try to judge it so that the glider takes off level with you, and you are under the wingtip. Close landing shot with a wide angle are pretty good, but arrange how close beforehand. Distant shots of the hills and gliders show the scale of the sport well, half to one mile away with a 200mm lens is probably about right. Try to be ready for *anything* to happen. If you can get pictures of one of a club's better pilots nonking it, you'll become very popular with all the members (except one).

If you do take pictures, make use of them. Give slide shows, put them in local competitions and exhibitions, send them to the local paper. It can all help educate the public about our sport (no, the pilot isn't pregnant, its a parachute - that sort of thing).

Finally, thanks to all my mates in the Sheffield Club for taking pity on a disreputable-looking character with his thumb stuck out going to Mam Tor, and buying me drinks when I've spent my last quid on film. I'd never have developed my interest, or my overdraft, without you!



Landing shot with 75mm lens. Mam Tor top landing, Easterly.

The photographs illustrating this article were taken using:-
 Olympus OM1 and OM10 cameras with winders.
 50mm f1.8 Zuiko lens.
 18mm f2.8 Sigma lens.
 28mm f2.8 Soligor lens.
 75-205mm f3.8 Vivitar zoom lens.
 Astron semi-fisheye converter.
 Original transparencies on Ektachrome 200, monochrome copies made on Ilford FP4 using a BPM slide copier.

ADVERTISING RATES FOR WINGS!

(1) Applicable to all advertisements except those for hang gliders which have not yet received a British Certificate of Airworthiness.

Single leaf insert £120.00; Double page insert, stitched into magazine £180.00; Back Cover £144.00 258mm × 197mm; Whole page £120.00 258mm × 197mm; Half page £66.00 across 127mm × 197mm, upright 258mm × 96mm; Quarter page £38.00, upright 127mm × 96mm.

(2) Applicable to all hang gliders which have not yet received their British Certificate of Airworthiness.

Single leaf insert £168.00; Double page insert, stitched into magazine £250.00; Back Cover £200.00 258mm × 197mm; Whole page £168.00 258mm × 197mm; Half page £92.00 across 127mm × 197mm, upright 258mm × 96mm; Quarter page £54.00 upright 127mm × 96mm.

Colour advertisements — rates on application. Classified Ads 12p per word. Minimum charge £2.40. Business Ads 15p per word. Minimum charge £3.50. Spot Ads (Classified) £4.25 Size 28.5mm × 30mm (maximum 25 words). eg.

SUNRAY

excellent condition
Multi-coloured sail
£250 o.n.o.

Tel: Upton-Magna 365
after 6pm.

10% discount for three adverts in different editions, paid in advance. All adverts must be accompanied by full payment.

Publication dates are the 1st of each month, and all camera-ready artwork, with full payment, should reach me no later than four weeks before publication. Artwork that needs preparing should reach me at least 10 days earlier.

Anyone requiring an insert can have a loose sheet included provided that they arrange their own printing and have supplies at Blackburn at least 10 days before publication date booking. Payment must also have been completed prior to this.

A double leaf insert can, by arrangement, be sewn into the magazine.

The magazine is prepared by offset litho and has a screen of 122.

Mrs S.M.J. Howard

Commercial Editor
4 Somerwood
Rodington
Nr. Shrewsbury
Salop
England.
Tel: Upton Magna (074377) 365

FIRST LEAGUE

The first League held in the Brighton area was blown out, although free flying was enjoyed by some hardy pilots.

*Comet over the sea at Newhaven
photo by John Wadsworth*



VACANCY

WINGS! EDITOR

The BHGA wish to appoint an Editor for Wings!

The Post is open to ALL

CONTACT:

BARRY BLORE 40 CASTLE STREET STEVENTON
ABINGDON OXON OX13 6SR TEL(0235) 834033

The Met Office, the weather and you

A chance remark to the duty forecaster at the Met Office at Upavon whilst asking for a weather outlook for the Manufacturers' Competition resulted in a visit to see him and discuss how he could be of better service to us, and how we could help him in his Hang gliding forecasts.

The met office at Upavon provides primarily Aviation forecasts for Military and Civil flying on a regular basis and by prior arrangement, for sporting aviation such as cockpit gliding at weekends, and popular flying. This requirement takes up most of their time but they do provide help to the general public when planning garden fetes and farmers who have a harvest planning problem with useful forward planning information.

From the mass of information they receive at Upavon on the complexities of the atmosphere in the 1,000 mile radius around Upavon, they are able to predict the visibility and winds at various altitudes up to the highest used by aviators. They receive satellite pictures in the infra red day and night with details of cloud cover, several hundred land stations and weather ships provide hourly reports of surface conditions, and radio sound information of wind speed and direction up to 50,000 ft. All this information is collected and sorted at the Met office central office at Bracknell and that which is relevant for Upavon is sent by telex and facsimile to them around the clock.

In addition to this, at Bracknell there are two computers that plot on a 500 kilometre and 50 kilometre grid areas of equal pressure. These plots are the basis of the synoptic charts that are prepared by the staff at Upavon every six hours and are the basis of the forecasts you get when you ring up. For

some reason places like the London and Southampton weather centres do not set out to provide aviation forecasts though for our purposes they can be of help since we can use the same data as the sailors.

Whatever system you use to forecast the winds at your favorite site any other information you can get will improve your chances of getting it right more often. The met office has no experience of forecasting surface winds for a specific location and are not equipped to do so. That is why you may not have had the cooperation you expected, nor the accuracy you wanted. There is nothing more annoying than going 100 miles to a site and finding that the forecast was inaccurate. What they can do for you is to give you a wind speed and direction for the 2,000 ft level above sea level. This they can read right off the charts in front of them and is a much better guide to what you will have on the hill. With the average hill size in the south of England, by taking a fifth off the wind speed at the 2,000 ft level will give you a good guide to the wind on the hill top. Obviously for somewhere like South Wales your windspeed adjustment will have to be different to suit the hill size. My guess is that no reduction will be necessary when due allowance is made for the factors of wind gradient and speed up over the hill top.

Obviously, it is better if you follow the weather on a daily basis, by watching the synoptic chart on BBC1 at 9.25 p.m., listening to the shipping fore-

casts, the inshore forecasts, that come on radio 3 after the general forecasts and by studying actual conditions. Putting all this together you will have a good idea every day where it is flyable so when you can take time off work you will get it right more often than not.

If you phone any of the Met offices, do so between 6 and 9 in the evening, and up to 10 in the morning. This will ease the work load on the forecaster and do ask for wind speed and direction for the 2,000 ft level above sea level for the site you have in mind. You will get a quicker and more accurate forecast this way. All information on wind speed and direction is given in the geographic true direction, not magnetic, and the wind speed the met office uses is knots not miles per hour but its no problem to convert the scale. If you get good results from this new suggestion do let them know, at present they get no feed back from us as a group nor from the gliding clubs. If you can help them in this way the next time you phone up you will get a better forecast. They do not have a map of all the major sites in the south, the areas covered by the Avon, Thames Valley, Wessex, Sky Surfers and South Wales clubs.

I'm sure that other met offices elsewhere will be pleased to cooperate with your Club. Its well worth going to see them. They know so little about our way of flying, any information you can offer will be repaid time and again. Let's hope that 1981 will be a good flying year.

Ted Frater,
Airspace Coordinator



Waiting to take-off during the Manufacturers' Competition at Hay Bluff. Photo Mark Juhak

DAEDALUS ODDMENTS..

... **Icarus** is taking a rest this month but knowing how popular this feature is has asked his father **Daedalus** the famous inventor (Dad) to supply all the gossip this time round ...

... **The First League** event of the year on the South Downs was abandoned due to adverse weather at the beginning of March. **Beachy Head** was the venue for the first day of the competition but predicted winds decided not to visit this famed coastal site. The second day saw league pilots flying the cliffs at **Newhaven** early in the morning but the southerly winds quickly freshened and attempts to get a task under way proved unsuccessful. The final day saw a continuation of the cold, gusty, inclement conditions, and with gale warnings forecast for the rest of the day the decision to declare the weather overall winner was announced ...

... **Joe Binns** completed a short XC flight from Merthr Common on Thursday 19th March, landing at Abertysog four or five miles down wind. He left his glider (without bag) unattended and hitched back to Merthr. On returning to Abertysog he found his glider missing, believed stolen. Joe's glider is a **Hiway Demon**. It has a very distinctive customized sail of blue and white with a **Gold Sun Design** on one wing.

If you can help with the return of this glider please contact the police at Tredegar or phone the Hiway factory on Tredegar (049 525) 4521 ...



Joe Binns

... **Space Age Technology** is already around in hang gliding. A hang glider harness was apparently the perfect solution for NASA personnel who have to work suspended in confined spaces servicing the space shuttle rocket motors. Could have other applications? ...

... **Charlotte S. Murchison** who was one of the financial backers for the **American Cup** has written a strong letter to **Hang Gliding** magazine editor **Gil Dodgen** complaining that the coverage by the magazine was grossly one-sided, ignoring the foreign teams' performances and even omitting any mention of **Graham Hobson** winning the Individual Trophy. She points out that without the foreign teams, the competition is nothing and to ignore them is an insult, describing the article as juvenile ...



Graham Hobson

... **Graham** is off to **Israel** for some flying experiences in April and has promised to write about his adventures for Wings! Don't forget Graham. And bring back some good photos ...

... the weekend of 14/15 March saw westerly and northerly facing sites packed to the hilt for the first time this year as good flying weather returned. Many weekend pilots had not flown since October or November of last year and were making up for lost time with a vengeance! At **Roy Hill's** local hill (sorry about that) **Combe Gibbet**, his son **Andrew** looked down from 2000'+ as 20 or so gliders and 2 sailplanes jockeyed for top honours ...

... **Michel Carnet** zat Frenchman from ze South Downs has been busy replacing the straps on his harnesses with wires for added strength and a reduction in parasitic drag. After the emergence of the cocoon harness can we now look forward to the **total body harness** with arm, hand and hood piece to further reduce drag? ...

... overheard at the recent abandoned first League event ... "Well, **Keith (Cockcroft)** we were level pegging when we reached the Marina then **Andrew (Wilson)** and I turned to race back to Newhaven, and ... well .. there's no doubt about it, his glider is definitely faster than mine. Keith replied in his usual dry Lancashire tone: "Well now **Trevor (Birkbeck)**, the way I see it, it's all down t'technique lad, not t'kite! ..."

Keith Cockcroft



... down under in New Zealand at the recent **NZ HG Championships** in Queenstown, a British made **Lightning**, flown by **Allan Gerard** streaked to victory. Apparently the **new double-surface gliders** had a distinct advantage as less than five single surface machines finished in the top 25 ...

... **Electra Flyer** Corporation of America, 'the world's leading manufacturer of hang gliders' is to phase out production of all flex wing gliders this year, although they will continue to supply parts until Spring 1982. The reason given for this decision — "vacillating requirements for equipment and the economic slowdown of hang gliding in general". Electra Flyer is, of course, heavily involved in the production of **powered ultralights** via their sister company **American Aerolights** ...

... **Skydiving** and hang gliding, although separate sports in their own rights, are drawing closer together day by day; Hang glider pilots using more sophisticated emergency parachute systems, parachutists jumping with 'chutes that, when opened after free-fall, suddenly become flying wings capable of L/D ratios resembling early rogallo, and people like **Rich Pfeiffer** making the transition from a leading American Skydiver to a leading American Hang Glider Pilot. Those crazy jumpers are even beginning to work thermals on their inflatable wings! **Alan James**, regular photographic contributor to Wings! is another man who has combined the two sports recently. He has been out to California (paradise for skydivers as well as flyers) and packed in as many jumps as the day is long. Alan, now into relative jumping, has promised to send an article to Wings! about his transition between the two air sports. Look out for this feature soon. Dirt diving, Sequential freefall, **Balloon suits** and Donuts. Alan will elaborate ...



Dear Icarus,

In answer to your comment regarding the naming of the Harrison XC League. Though I am very flattered by this suggestion I feel that the correct title should be **THE NATIONAL XC LEAGUE**, run by **Dave Harrison**.

This is exactly what it is, National, and for the benefit of all XC fliers.

Thankyou
DAVE HARRISON
ED. So be it.

ULTRA
SPORTS

MOYES MEGA MAKES IT!

THIS GLIDER HAS
NO BRITISH C. OF A.



The Moyes Mega II has proved itself as a thoroughbred and a 'classic' glider. Its all-round performance and safe handling enable pilots of all abilities to fly it to its maximum.

The large Mega has a floating cross tube for ease of handling, and an unsurpassed sink rate. It is the ideal glider for the heavier pilot.

Contact Ultra Sports for a test flight.

Graham Slater, Flight Director,
Southern Hang Gliding Centre,
22 Albany Villas, Hove, East Sussex. BN3 2RU.
Telephone (0273) 25534.

THUNDER BIRD TOTAL ENERGY VARIO



- TOTAL ENERGY CORRECTION ELIMINATES BAR THERMALS
- CHIP ELECTRONICS STABLE OVER WIDE TEMP. RANGE
- AIRCRAFT TYPE VISUAL INDICATOR
- SCALED IN METRES/SEC (KNOTS OPTIONAL)
- FOUR RESPONSE RATES
- CHOICE OF AUDIO SYSTEM
- DIVE WARNING TONE AT 5M/SEC
- AUDIO OVER-RANGE
- BATTERY AND CHARGER INCLUDED
- ALTITUDE CORRECTOR OPTION
- DUAL RANGE OPTION
- SHATTERPROOF CASE IN RANGE OF COLOURS
- FULL SPARES AND SERVICE AVAILABLE

1 YEAR GUARANTEE
FROM £220 inc. V.A.T.

S.A.E. THUNDERBIRD ELECTRONICS LTD.,
20 Buttgarden Street,
Bideford, North Devon
Telephone 02372 79037

Demon! Sabre Typhoon.

THIS GLIDER HAS
NO BRITISH C. OF A.

TEST FLY BEFORE YOU BUY

on our magnificent mid-Wales sites.
Come for a day or two and fly them
all, no obligation.

Why not make a weekend of it?
(Free accomodation if you buy).

Try one of our sky-trikes too!

AIRSPORTS

Cwm Rheidol
Aberystwyth Phone Aberystwyth 86 397

AUSTRALIAN XC CHAMPIONSHIPS

Mount Buffalo in Victoria (Dec. 28th-Jan 3rd).

There were 60 competitors, 59 men and Val Wallington, a British girl now living in Australia who was, in fact, the first and so far only, woman to ever fly off Mount Buffalo. She placed 19th which, considering the opposition, was an extremely good place. The competition was restricted to a 50 kilometer radius around the mountain and the winner would be the person with the highest accumulated mileage from his five best flights during the week, each flight being allowed only one turning point.

As you can see from the photo, conditions at the launch were extremely crowded because of the nature of the site which was small with uneven surfaces, and surrounded by trees and bushes. It was however, visually very dramatic when all 60 kites were rigged and waiting for conditions to improve. Of course once they were right everyone wanted to go at once before it overdeveloped which happened most days, but it was only possible to launch one person at a time. Despite this though it only took on average two hours to get everyone off. In fact only two days were lost due to unflyable weather, although the competition was with-held a further day whilst police and mountain rescue teams recovered the body and kite of a local flyer, not in the competition, who had taken off on his own the previous evening and had apparently forgotten to clip himself in. It was a very tragic and needless accident and can only stress the importance of being checked over before take-off.

The competition itself placed a strong accent on safety with variometers and altimeters being compulsory, a prize going to the safest flyer and the threat of disqualification for any dangerous take-off, because



of the rather more hazardous than usual launch point. Mount Buffalo is a vast chunk of granite rising a precipitous 5600 feet a.s.l., although the launch site was at about 4600 feet. But even when conditions were good and blowing straight up the face it was never very strong and a good, hard, well controlled run was required for only about 10 metres. However, the 2000 foot sheer drop to nothing at the end of the run left no room for errors like dropping the nose, although a couple of people did manage this and were somehow miraculously pulled to safety inches from the edge. Once you were off, of course, it was a matter of finding a thermal and inevitably with so many flyers some of them became very crowded, and it was interesting to see how the really experienced flyers would stick with a

weak thermal and get everything they could out of it rather than lose height looking for something stronger.

As the week went on and only mediocre distances were achieved the competition became more intense until real excitement stirred the Porepunkah Pub being used as a base at the foot of the mountain, as news came in of the first flight over to Albury about 50 kilometers away. The next day many people made it to Albury and beyond, much to the frustration of those that did not, and one poor guy was left to spend the night under his kite when they forgot to pick him up. In fact, finding a suitable landing place around there was quite a skill in itself, for if you did not make it down near a road — which were frequently few and far between — it could mean an extensive trek through scrub and trees, often in very high temperatures, to the nearest sign of habitation. There was then a considerable wait while your pick-up crew hunted you out, although of course it was easier for those with radio contact.

Almost inevitably, I suppose, first prize was taken by Steve Moyes with his new Mega III, and not only did he walk away with the trophy, but also the prize for the longest flight of the competition. It was an impressive 98 kilometers which, considering the 50 kilometer restriction was just about as far as he could go. Two other competitors whom many readers in this country may remember were Paul Murdoch (see Wings issue on Mere last year) and Steve Blenkinsop who taught last summer at the Welsh Hang Gliding School in Crickhowell. I believe both were placed in the top twenty.

Well I hope you find this an interesting account, if not very technical, but then I was only there as a cook, pick-up crew and general dogs-body, even though I do dream of being the second woman to fly off Mount Buffalo!

Cherry Salter

THEVENOT ZAPS RITHNER "COPYING" BEFORE SWISS COURT

Etienne Rithner has been notorious amongst hang glider manufacturers for several years now for his practice of producing exact copies of other people's designs for sale in Switzerland. Not only did he pinch the design, but in most cases, he pinched the names as well.

In an epoch-making test case, the Thevenot brothers, manufacturers of the ATLAS gliders sued Rithner in a Swiss court, and have won substantial damages for plagiarism. The way is now open for the other manufacturers who were affected by Rithner's activities — notably WASPAIR (with the Gryphon range), and LANCER — to bring similar cases.



Thevenot © Bettina Gray

Reporting the case in the March issue of the French H.G. magazine "VOL LIBRE", Didier Faure notes that Rithner is a controversial figure in Switzerland. He is widely known as an excellent pilot, a founder of the sport, and one who has played a great part in its development. The gliders he copied were manufactured to a very high standard:

"Rithner is to gliders", says Didier, "what Mercedes is to cars . . ."

Also his prices were up to 35% lower than the original item. Not surprisingly they were very popular. It is tempting to speculate that if Rithner had confined himself to copying the designs, and calling them something different, he would have got away with it indefinitely. But when he marketed the "SwissAtlas", the Thevenot brothers, who now have enough financial resources to make a court case possible, lost patience.

At one time it seemed as if everything was going Rithner's way. He won in the lower court, the Cantonal Tribunal. He even appeared to gain the right to the ATLAS name, in Switzerland. Comments Didier, "It seems as if these judges don't go flying . . ."

But, on appeal to the Federal Tribunal (the higher court) the Thevenots won and damages, together with all the costs, were awarded against their opponent. The case is bound to have considerable repercussions in an era when wings are becoming remarkably similar, and the practice of capitalising on other people's research and development is very widespread. Other manufacturers considering importing their copies — such as COMET copies — into Switzerland, would do well to think about it VERY carefully.

"The question is", concludes Didier, "why, with all his good qualities, didn't Rithner design his own wing? Free flight is incompatible with free copying."

But the affair isn't finished yet. VOL LIBRE's editorial reports mournfully that Gerard Thevenot had refused them an interview because he didn't want to appear in a magazine which accepted advertising from a copier. And, indeed on the back page of the March issue, there is Rithner again, offering his versions of the Lancer, SwissAtlas and Gryphon.

Pointing out that under French law it's an offence for a public magazine to operate a discriminatory advertising policy. Hubert Apetit (the editor) reckons Thevenot's action is a bit unfair. "What do you want us to do?" he asks his readers . . .

Sounds familiar? Any connection between this, and all the bitching you'll undoubtedly hear at the AGM about WINGS! advertising unlicensed gliders, copies, et cetera, is of course, ENTIRELY coincidental . . .

Report by Tony Fuell

Flying Sites in Spain

by Alan James



Valls, nr. Barcelona

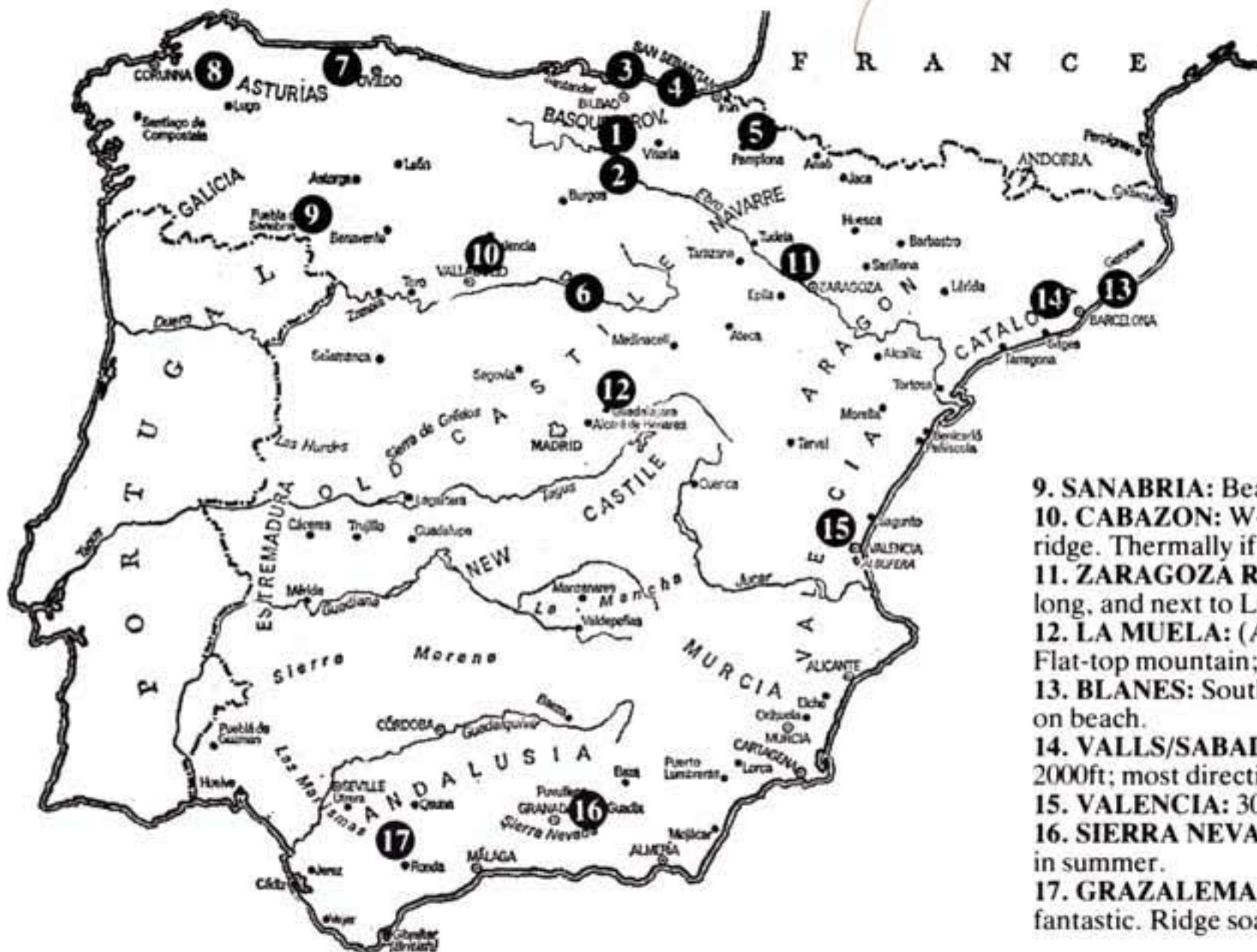
I've had quite a few people asking me about flying in Spain recently, and this is intended as a more accurate description of some of the better sites outlined in my article in WINGS No. 4 1979.

I must emphasize that these are only the sites I know and have flown; there are many more. Names and addresses of clubs and pilots can be obtained by writing to José-Maria Garcia-Planas, at QUEVEDO, 1, P.O. BOX 102, SABADELL, SPAIN.

If you go, hang-gliding is called "vuelo libre" in Spanish, and that's all you'll have to say when you arrive to find a site, because the Spanish take a great interest in the sport, even though the majority think we are totally mad!

1. **ORDUÑA:** NW-ENE (best NNE) 2200ft x 45km. Not normally thermally, takes NW'y sea-breeze summer afternoons. Best ridge site. Absolutely no top landing behind T/O.
2. **PANGUA:** ESE-SW (SSE) 400ft ridge with 2 spurs. Thermally; 20km south of VITORIA.
3. **SOPELANA:** WNW-NNE (NW) 180ft x 2km. Excellent cliff site.

4. **ZARAUZ:** Smaller version of Sopelana.
5. **PAMPLONA:** A new site worth investigating. No information yet.
6. **LA PINILLA:** NW-NE 5000ft x 20km. Skiing site. Difficult ridge-soaring. Very thermally. XC potential.
7. **ASTURIAS (nr. OVIEDO):** Takes sea-breeze. 1500ft x 5km.
8. **MONDOÑEDO:** WNW-NE 1800ft mountain. Gets thermally in valley.



9. **SANABRIA:** Beautiful area of lakes and mountains.
10. **CABAZON:** W-NNW (NW) 450ft x 5km. Part of an 85km ridge. Thermally if you can jump gaps. XC potential is good.
11. **ZARAGOZA RIDGE:** Similar to 10, but takes SW. Very long, and next to LOGRONO/ZARAGOZA Highway.
12. **LA MUELA:** (All directions, best NW) 1100ft, 300m faces. Flat-top mountain; good ridge lift, thermally.
13. **BLANES:** South 300ft. T/O is from a ramp on castle! Land on beach.
14. **VALLS/SABADELL/MONTSENY:** Similar sites, 1500-2000ft; most directions. Valls especially good; thermally.
15. **VALENCIA:** 3000ft mountain behind town.
16. **SIERRA NEVADA:** 7000ft mountains, very thermally in summer.
17. **GRAZALEMA:** 3200ft, very thermally; XC potential fantastic. Ridge soaring in northerlies.

GRUMBLE

I feel I should object to Southdown's continued assertions that gliders like the Sigma and latterly the Lightning are suitable for P1's.

Contrast this with Murray Rose's responsible attitude with the Cyclone. He realised that when it first came out it was unflyable in the hands of a novice and so restricted sales to P2's, yet the Sigma, which is much the same, and the Lightning, which I assume to be even more of a handful, are supposed to be safe for a novice. What is the point of airworthiness certificates when a learner fresh from a school with a P1 can buy an airworthy Lightning which he can't handle? The Wings! advertising code of practice puts notes saying "this glider has no C. of A." so what about "this glider is unsuitable for P1's"?

CLIVE EAMES
Cheltenham

Ed. Southdown Sailwings have been criticised by the BHGA, and Colin Lark in particular, as Training Officer, for the wording of their first Lightning ad. Subsequent ads have not mentioned P1 suitability.

FOOLS RUSH IN . . .

Dear Sir,

The other day I was working at a firm in Bristol where I was introduced to a chap with a limp and a walking stick. "What happened to you?" my colleague enquired. "Oh, I did it hang gliding," was the reply. It transpired that our friend was a sky-diver and he thought he'd "try his hand" at something different. "What school did you go to?" I asked. "I didn't," he said. After a short lecture from me on his solid-headedness, he went on to tell me that he thought hang gliding was so similar to parachuting he didn't think he would have any trouble. After reading a book, he took to the air at Mere, flew low over the trees and stalled, impacting with the ground from about 40 ft.

What I would like to know is what the hell was he doing flying a glider without prior professional tuition and without a P1. It was plain to me that, by what he was saying, he just went off and did his own thing. It has occurred to me, many times, that if we are going to try and regulate anything in our sport we should start with the newcomer's ignorance and overconfidence, which quite often can lead to accidents such as these. I don't wish to sound a bureaucrat — far from it, I believe in as little regulation as is realistically possible — but at the same time I think we are all going to have to come to terms with the fact that sooner or later there are going to have to be some rules enforced, if not effectively within the BHGA, then by law.

I'm not talking of flooding our sport with laws and bye-laws etc. In fact, I think there is only one regulation which must be enforced one way or the other: it should be illegal for manufacturers and private individuals to sell to a person a hang glider, without the production of (a) a P1 certificate or (b) evidence that he or she is under regular supervision from the qualified club coach. I realise that most manufacturers, with the exception of one particular firm and he knows who he is, are quite sensible about the sale of gliders to individuals but I have heard of several cases of people who have bought second-hand gliders privately, without even attending a school or holding a P1. Granted, these are few and far between but nevertheless I believe it shouldn't occur. Let's face it, chaps, I believe most of us are responsible pilots and like any other sport we have our cowboys. The thing is, the word to wrap ourselves and our sport in, for the future, is *responsibility*.

Howard Rockliffe,
Portishead, Avon.

*Howard Rockliffe
photo by John Wadsworth*



THE OTHER SIDE OF THE STORY?

Sir,

My view of the "slagging" George Worthington has received in *Glider Rider* is at odds with *Icarus* (*Wings!* Jan. 81). The fact is that, on the day Worthington claimed his official world record of 111 miles, Eric Raymond set an unofficial world record of over 120 miles. Both Worthington and Raymond carried barographs but Raymond indicated he would not apply for the official world record due to the expense and official sanction requirements. On other

occasions, Tom Kreyche (115 miles) and Larry Tudor (112 miles) have both flown further than Worthington's official world record.

It would appear none of the pilots (except Worthington) gives a toss whether the record is official or unofficial, what matters is the distance flown. They were happy for George to claim the official world record and for the rest of them to try and better the unofficial record. However, Worthington has now suggested in a letter to *Glider Rider* that some of these unofficial record distances have been enlarged at the request of the glider manufacturers so as to beat his official world record. That is what annoyed the other pilots in general and Mike Jones in particular. I trust this clarifies the matter for *Icarus*.

P.B. HENRY
Berkhamstead

SUFFER TO SOAR

Dear Sir,

I should like to make a few comments on Dunstan Hadley's point of view in December's *Wings!*

Of the 4,000 members of the BHGA there must be more than 5% who do more than top to bottom flights. It would be very interesting to do an accurate survey to find out how many regular fliers there are.

Improvements in glider performance and handling are part of the natural growth of the sport and are of benefit to all fliers. Gliders like the Super Scorpion have become very simple and quick to rig and the most time-consuming part of rigging is often putting the battens in. Gliders have increased in weight as a result of more refined design and manufacture aimed at improving the strength of machines. It is hard work to carry a rigged or de-rigged glider up a hill but if this slog encourages pilots to make greater efforts to improve their flying so that they can soar and top land, the effort is well worth it.

A hang glider is an aircraft and is subject to the same laws of aerodynamics as any other. By negating the laws of flight by incorporating the characteristics of parachutes into hang glider design would surely encourage pilots to develop bad habits in their flying.

As a pilot who has just taken her glider apart for an annual overhaul, I found that sorting out all the nuts and bolts etc. that go to make up a hang glider was a valuable lesson. However, with the fine engineering that is part of a modern hang glider there are few pilots who have the equipment or desire to build their own. A good handbook with each glider sold would be more practicable.

JO BURTON
Fareham, Hants.

MEANWHILE, BACK AT THE RANCH . . .

Dear Sir,
Greetings! All you hairy-arsed h/g pilots; all you buggers who can invert B bars whilst washing out your min. sink.

So! You think you're Jack the Lad of the hillside — Ha! Hang gliding from hillsides is a piece of p . . . compared to what the real heroes of the sport get up to. "Who are they?" you cry. These hard men of the lift band are the hang glider pilots of Holland;

in particular, Ex-Patriot Hang Glider Pilots of Holland.

Holland! The very word brings to mind kilometres of not-hilly bits and Amsterdam's red light district (discussed in next month's Wings!). You can tell the dutch XPHGP by the furtive way he buys his Sealink ticket, not mentioning the fact that his Mini has three metres sticking out each end, thereby not paying for extra vehicle length — hee, hee, hee — cunning, eh? Another give-away sign of the XPHGP is his amazing ability to discover "up bits" in a land of "straight-along bits". As you

know if you have ever been to Holland, standing on your car roof instantly qualifies you as one of the country's highest points.

Now, I don't want to bore you with war stories (swing the lantern) but I have even jumped (you couldn't say flown) off a motorway embankment (the road was above me) because the frustrations got so bad.

DUNES! Holland has tons and tons of dune coastline; dunes between 10' to 150' high. Now, dunes face West.

West/Southwest prevailing wind. QED you think: theoretically possible to soar entire coast South to North. Make record, write Wings!, get famous, get girls, etc., etc.

SEAGULLS!! Seagulls have reserves on dunes. Not nice, pretty, rare, Peter Scott type seagulls but . . . ing great, big, evil buggers that swarm about and scream like hell — millions of them. Retire quickly from dunes carrying 7 metre banana whilst explaining to the nice Dutch policeman (whose experience of Englishmen is limited to Millwall fans)* that you know what "seagull reserve" is in Dutch.

If you stay in Holland long enough, one, of course, makes friends with Dutch people. They are all very interested in hang gliding — as it involves hills! My particular friend knew a great site, next to the Nuclear Reactor Centre — a dyke along the North Sea, facing West, 18 metres high, smooth lift band, etc., etc. I stroll down and start to set up machine. ZAP! A million small boys and other onlookers appear. "Wassat, why, how, when (all in Dutch)". Naturally, they don't respond to "Put that down." or "Piss off." so one gets on with the job. The glider is set up, nose into wind, then the crowd assume "Strange white man needs help." One wing is lifted too high and — Wheee — one Moyes Maxi, minus me, is airborne and the afternoon is spent back home straightening out bits of wing.

However, the story ends well, and I have finally found an Instructor / Designer / Builder of hang gliders in Holland, who has put me wise as to the flying sites, some of which are very good — mostly coastline soaring. They are there, if you look, but to save you the trouble when in Holland, write, 'phone or visit; ALEX ENGEL, COALA SPORTS, BREEDWEER 2, 1541 AC, KOOG a/d ZAAAN, NORTH HOLLAND. (Tel. 075-164407). He speaks excellent English and has helped me with various problems (brain transplant etc.) throughout my time in Holland.

I have taken the liberty of including enough Dutch vocabulary, sufficient for a 6 month stay (though why you should want to stay here 6 months is beyond me).

Pancho Fastbender
XPHGP

* Ed. I used to be a Millwall supporter till I discovered Smirnoff Vodka.



DUTCH	PRONOUNCED	TRANSLATION
Godverdomme	Hodverdomer	. . . ing hell
Klootzak	Glowtsack	Self-abuser
Patats met	(as read)	Chips with mayonnaise
Twee bier austebliet	Tvay beer owstewbleef	Two beers, please
Goi avond schat. Ik ben een ace hang glider pilot. Wil je wat drinken van mij?	(couldn't be bothered)	Hello, Darling. I'm an ace h/g pilot. Fancy a drink?



THE END

Flight Report



LAST CROSS COUNTRY

BY LEN HULL



View of Lords Seat from Mam Tor NW face

photo by Steve Thompson

After windy and wet conditions over the Christmas break, Saturday 27th December dawned perfectly clear, with new snow, low temperatures and higher pressure.

The forecast was NW, but the direction of the clouds indicated a light northerly and since these conditions were an exact duplicate of New Year 1980, when we have some spectacular wave flights, I decided to leave very early for Lord Seat's before the wave clouds (to be seen near the horizon) started to decay.

The long walk up from Mam Tor was hard going with new snow knee deep in many places. The temperature was well below zero, with a clear blue sky giving superb definition of all the hills around. One large wave cloud was visible high over Kinder plateau, probably 3 miles upwind, and very likely out of reach.

I was surprised to be completely on my own at take off — presumably even the walkers must be getting over their Christmas excesses. I was slightly dismayed when the wind appeared almost to have died, and was doubtful whether the 6-8mph remaining would allow me to soar (I couldn't face THAT walk up again if I went down). So, I carried the Atlas to take off just to see if there was enough life in the sail to stay up. No sooner had I stuck the nose over the lip, when one wing went very high and I nearly groundlooped. Both feet on the bottom bar saved the situation, but I'd buried my instruments in the snow in the process. Blast!

Now, even I find it difficult to groundloop in 6mph, so I realised that 'something' was not normal, brushed the snow from the altimeter, clipped in and dived off — SMACK into WAVE. The Atlas bucked a couple of times, and as soon as I let some speed off it cruised steadily to 650'ATO, in perfectly smooth air. I turned along the ridge in zero sink towards Mam Tor and then continued in 2-3 up until 2100'ATO. At this stage I was crossing the gap at Mam Nick as if it wasn't there, obviously the wave at this height had nothing to do with the ridge proper. I could now see other members arriving (at last) and noticed several kites moving rapidly along the path.

I continued to Loose Hill (about 2 miles from t.o.) still at 2100' and flew out of the wave, the vario pegged at 3-4 down but still in very smooth air. At 1600' I turned and flew back into the lift, tracking straight back over the ridge and into the Castleton Valley. It felt weird to be so far behind the ridge but climbing steadily I approached Mam Tor 'over the back' and made 3200'ATO as I did so.

Cloud was now forming and disappearing rapidly beneath me, but since it appeared to be at least 1000' below I wasn't unduly worried because I still had my bearings by looking down through the large gaps. One patch of cloud appeared briefly just below me, and for a few seconds I could see the shadow of the kite with the pilot underneath and the image was surrounded by a double halo of

rainbow colours — the so-called 'glory' which is seen so infrequently by high level mountaineers.

Take off was now completely obscured by cloud, and since I had been flying for well over an hour, I was mildly surprised that no other pilots had come up to join me. I now decided to explore the wave upwind, and way out over Edale at 3300' the vario showed lift again and I climbed steadily for minutes on end until I reached zero sink at 4300'ATO.

The view was now unbelievable, with lenticular clouds spreading across the sky to the horizon on all sides. At this stage I was unable to distinguish any movement on the valley floor, since I was almost exactly one mile above it.

I was now 2 hours into flight, and feeling extremely cold, despite moving my feet constantly and putting my hands inside my harness. I didn't think about it at the time, but assuming a normal lapse rate the temperature at that height (5800'ASL) was probably around minus 10°C.

Being unable to gain any more height, I did not consider going down to land because a) that would have been a waste and b) no-one else was in the air, so conditions on T.O. were obviously unsuitable. I checked my chute and turned downwind to see what wave turbulence was all about. 2 miles of heavy sink, followed by a perfectly smooth 2 down. I flew on hoping to find another 'crest' in the

wave. On 2 occasions I thought I had found it when the vario steadied on zero and turned crosswind each time, but couldn't find any more lift. Eventually I turned in to land near the village of Monyash, 11-3 miles in all.

On landing I could not use my hands properly and had the greatest difficulty in unclipping from the glider. I also noticed that the snow clinging to the altimeter at takeoff was now a hard, clear diamond of ice. The pain of returning circulation when it came was unbearable, and when the blonde girl on the tractor stopped to offer me a lift/cup of tea/telephone etc, she was slightly bemused by a silk hooded figure cavorting round his glider with his hands between his legs, hooting like a demented barn owl.

For three days afterwards my hands and fingers were bruised and painful signifying severe frost nip; I met no wave turbulence either because I was above it, having been in the highest 'peak' or because the system was weak and decaying. The decision not to top land proved to be a good one — other frantic, wound up and disappointed pilots had been amazed to find that the wind at takeoff was blowing southwest instead of north, and there was a strong flow of air DOWN the hill. They realised they were in wave rotor, and tried to decide how they were going to warn me of what was happening if I should appear out of the cloud on approach. Thanks for the thought lads — I would certainly have needed your help.

Later in the day the wave disappeared and the wind became a weak north westerly with marginal lift and plenty of strong sink — great was the gnashing of teeth that afternoon.

**Kite: LARGE ATLAS
FLIGHT TIME: 2 and half hours**

Reprinted from SHGC Newsletter.

SHEFFIELD SITES

Due to the actions of a number of visiting pilots it has now been decided that anyone flying any of the Sheffield Club sites has to be a full or associate member of our club. This will ensure that they receive a full site guide and are then updated through our newsletter of any changes in site rules.

**Full Membership £10 p.a.
Associate Membership £8 p.a.**
Membership Secretary: A. P. Reast,
39 Highfield Rd., Doncaster, Yorks.

Stanage Edge

This site is now closed for the lambing season until May 14th.

POP & Power

THE FIRST AVON BUILT SKYTRIKE

After visiting the Microlight flying weekend at Popham last September, Mike Batchelor and I decided to build our own skytrike. Money left over from our last power unit, a SoarMaster, was used to purchase a Fuji Robin engine and tubing for the basic frame. There was much discussion between Mike, myself and also Frank Marshall. Frank, virtually unknown in this country, was well known in South Africa where he designed and built several hang gliders and numerous powered machines. He felt that most commercial units were too complicated, and that we should use a wire braced framework in the form of a T as used by Frank in his final prototype, but using square section tube. This would be lighter and stronger than the round type, and would be easier to work with. After much persuasion he agreed to design a propellor to match our power unit, and this has proven very successful in practice.

Mike now set about the more detailed design work, whilst I started searching for the more difficult items such as the wheels, suspension point rose joints, and exhausts.

It was at this point that we discovered how misleadingly easy a skytrike is to build. i.e. It Isn't! As the weeks turned into months, with Mike and myself spending several hours each night working on it, we began to wonder if it would ever be finished.

One particular time consuming task was the propellor. Problems developed during the glueing of the wood and it took several weeks to finish. However, on a sunny afternoon at the beginning of December we were at Whitchurch Airport complete with skytrike and modified Atlas.

We had already spent some time the day before driving the machine — minus glider — around a large car park and so felt prepared straight away for the test flight. The wind was negligible and I decided that the first flight would be a straight climb and landing, bearing in mind I had not flown a skytrike before.

Opening the throttle the machine picked up speed across the grass football pitches and within 50 ft. I was climbing away. At a height of about 50 ft. I cut the throttle and glided down to a perfect landing. Another flight took me to a height of about 250 ft., and one complete left hand circuit was completed finishing with another good landing.

Mike's turn now, and he flew it away for several circuits of the field and again a good landing. The rest of

the afternoon was spent with several really good flights each to about 2500 ft. and travelling up as far as Dundry Hill and back. At the end of this day we had our first problem — the breaking up of one of the pressed steel bearing houses used on the prop shaft.

Back to the garage for improvement and next weekend we were out again with the strengthened unit having substituted the pressed steel cases for cast iron pillar blocks.

This time we were flying from a field at Mangotsfield Golf Club and I eventually flew down to Westbury White Horse, covering some 20-25 troublefree miles at heights of up to 2500 ft. and going into the bottom of several clouds en route.

The next outing took us to some fields at Thornbury where we were bedevilled with bad luck. In one afternoon we broke two exhaust manifolds off, and had to return to the garage prematurely. However, Norman Millhouse, who up until now had been a sleeping partner in the trike, had his first opportunity to fly and seemed impressed.

Norman and I flew again on the Monday from Ashton Park during the afternoon on which a new Cameron airship had its maiden flight. Norman finished the afternoon by flying from Ashton Park to Shirehampton Golf Club where he landed on the first green. I arrived about half an hour later in the car, to find an enormous crowd had gathered including two policemen, and felt that trouble lay ahead. However, this was not the case, as all they were interested in was seeing a takeoff and landing.

Not wishing to disappoint I duly took off through a small gap between the Clubhouse and some newly planted trees. Although I considered flying to Filton and landing on the local playing fields, I thought better of it and landed back on the golf course.

The next Problem was beginning to show up as quite bad damage to the propellor tips and some reinforcement with glass fibre was now necessary. The following week Mike flew from Tog Hill to Westbury White Horse where I had some more flying before setting out for Bristol. Unfortunately, it was getting rather late and was obviously going to take too long, so I decided to land just outside Trowbridge. Reducing throttle I noticed we again had a problem with the exhaust bracing, and came in to land by the side of the road just as Mike arrived in the car.

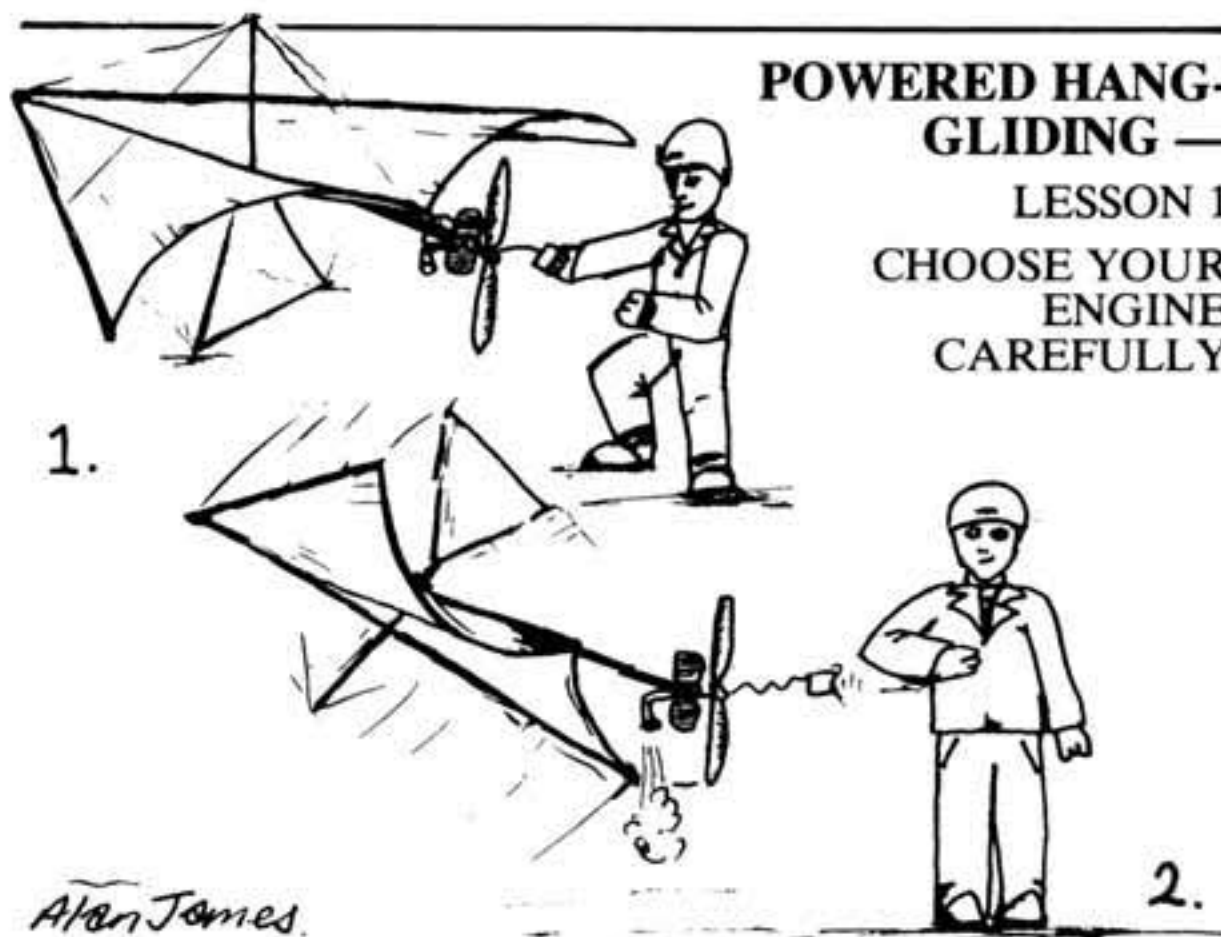
The end of the story, till the present, was a really good days flying near Derreck Targett's home at Chilcompton. Whilst everyone else

complained of the thick fog in Bristol, we flew for some 3½-4 hours all over the Mendips, along with Andrew Billingham and Ray Willis complete with Skytrike.

Well, that is the story so far. We have learned a great deal about the problems of vibration effects, particularly upon the exhaust system — hopefully we have sorted this one out for good now. We are not the only ones with this problem, however, as on the last outing Andrew's Trike also cracked off an exhaust manifold, but by sheer luck was able to fly again the same day thanks to the help of an onlooker who just happened to have a welding set in his van!

We have also found that the propellor is very easily damaged by mud and stones being thrown up by the back wheels, and the next modification will be mudguards.

Most of all we have discovered that



POWERED HANG-GLIDING — LESSON 1 CHOOSE YOUR ENGINE CAREFULLY



During a recent visit to East Kilbride, Minister of State for Industry, Alek Fletcher, attended a demonstration of the 'Electra-Flyer' Eagle which EuroWing are distributing in Europe. L-R. Angus Pinkerton, Alex Fletcher, Paul Coppola and Brian Harrison.

a lot of fun can be had with these units and we look forward to much more enjoyable flying — hopefully with less problems. It is interesting to note that we are not the only ones getting teething problems. Andrew's Hiway built unit has so far, (a) Had a hole put through the propellor on the first outing, (b) Slipped a shaft which moved backwards and went right through the fuel tank whilst taxi-ing, (c) Broken an exhaust manifold, and (d) Badly marked the propellor for a second time.

Derreck Targett and Geoff Rogers' Chargus unit — although getting off to a good start — has subsequently (a) Had some small amount of engine trouble caused by inadequate petrol tank venting, (b) Completely wrecked the shaft bearing mounts as a result of the bolt retaining flange coming adrift from the tooth belt pulley, a further result of which was a chip out of the propellor, (c) The replacement propellor developed a large crack at the hub after only half an hour of flying.

See you in the air,
John Hunt



THE TYPHOON

Continuing the tradition of high quality wings, designed and built by professionals, this new double surface flyer will amaze you with its sink and speed. Solar Wings have captured the essence of true flight, and if you don't want to be left behind in the race, ring today for a test flight.

*National League pilots qualify for a special discount.

Mainair Sports Ltd.,
Shawclough, Rochdale, Lancs.
Tel: (0706) 55131 Telex 635091 MAIN.



NORTHERN GLIDER SALES

Because **N.G.S.** accept **PART EXCHANGES** they have probably the biggest stock of good quality & tested **SECOND HAND GLIDERS** in this Country.



If you want a good Wing but don't want the expense of a new one, THEN

CONTACT US AT —
061 973 4085 or 061 434 3364

8 BRENCON AVENUE, BROOKLANDS, MANCHESTER

New and second-hand gliders in stock from every British Manufacturer. All our gliders are guaranteed to be test flown and tuned to suit by C.F.I. and British Team Member Graham Hobson, whether for the beginner, intermediate or advanced customer.

'No deposit finance' scheme available

Part exchange and enquiries for new and second-hand gliders are welcomed and demonstration flights are invited.



NORTHERN GLIDER SALES

NORTHERN GLIDER SALES

8 BRENCON AVENUE BROOKLANDS MANCHESTER 23 9HL Telephone: 061 973 4085 061 434 3364

Main Dealer for  in the North

Sole importers for the amazing Atlas. Large stocks available.

THIS GLIDER HAS NO BRITISH C. OF A.

Demon and Skytrike

a devilish combination



The combination of Demon and Skytrike represents the industries' first truly high-performance ultralight powered flex wing.

Remember, the Demon you use for conventional soaring fits unmodified straight onto Skytrike.

THIS GLIDER HAS NO BRITISH C. OF A.



The high speed and low sink rate performance of the Demon make it the ideal partner for Skytrike Mk 2.

The 250cc engine develops over 130 lbs of static thrust giving an impressive climb rate, quiet running and 1½ hours duration.



Skytrike folds simply for car-top transportation. The entire structure is anodised; tubes bright and fittings black.

Front forks are strengthened and the nose wheel sports a mudguard. The petrol tank is detachable and has a lockable filler cap.

Write for details and information about your local agent to:

Hiway Hang Gliders Limited
Sirhowy Hill, Tredegar, Gwent NP24XP
telephone: Tredegar (049 525) 4521



SMALL ADS

All small ads should be sent to Silvia Howard, Commercial Editor, *Wings!*, 4 Somerwood, Rodington, Nr. Shrewsbury, Salop. Ads sent to any other address will be redirected and therefore delayed.

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.

WASP LASER 190.

Excellent condition — 18 months old, complete with seated harness. Must sell — £350. Phone 658 2541 after 6.30 pm.

EMU. Large. Excellent condition. Knockdown to 12ft. 6in. for easy storage. Reason for sale: Returning overseas. £295. Phone Gower 631.

High performance at low cost: **CYCLONE 180**, clean sail, very good XC machine. Tel. Robin — Paulerspury 678 or (0604) 858812.

Hiway **SUPER SCORPION C+**, £420 for quick sale. Immaculate condition. Ring Mark Woodhams on Brighton (0273) 501043 evenings.

HANG-ON-HARVEY CLEAROUT! HILANDER (Medium). Absolutely immaculate condition. Suit beginner to expert. £500. Also **SUPER CYCLONE 180**. Superb, quick-rig, factory maintained supership. Light responsive handling with floating keel, etc. £380 ono. Will deliver, demonstrate and explain rig, etc. Peter Harvey, Shenley Church End. Tel. (090853) 304.

CIRRUS 5B Clyde built. Superscorp eater. Ideal first glider to first XC. £375 ono. Phone Joe, days 061-773-5803; evenings 041-632-6933.

SIGMA 11 Meter in white with red trailing edges. In as new condition with very little airtime. Must sell due to power commitments. No reasonable offer (around £500) refused. This must be the ideal opportunity to buy a Supership at the price of an ordinary kite. Telephone Bill Sinclair on 0242-28989 anytime.

SAFARI Medium. Good condition. Break down model. Hardly used. Triple deflexors. Also **SKYHOOK** prone harness. £375. Tel: Mike on Camberley 27878.

GOOD HOME wanted for **CIRRUS 5**. Sponsored glider white. Blue leading edges and keel pocket. Ideal for power. £300 ono. Ring Jim, Kilmarnock (0563) 37356. Sick Aunt forces sale.

SUNSPOT. Small. Red, blue, white sail. Excellent condition. £295. Hiway Prone harness. As new. £40. Phone 0670 712220.

SKYLINE Medium. Attractive colours in excellent condition. £310 ono. Phone Stan, Marshalls Cross, St. Helens 811054.

Medium **STORM**. Spectacular Spectrum sail. Must sell quickly as buying a Typhon! Offers! Please ring Lambourn (0488) 71737 anytime. Delivery possible.

Medium **SKYLINE**. Approx five hours airtime, mostly at Rhossili. Excellent condition. Scorpionitis forces sale, hence price £400. Only e.p.c. or above, need apply. For details ring Dave on 0270-811895.

FLY IN THE ISLAND. 100 yards to the sea, lawned garden, sun and tv lounge, licensed. Use of workshop for the pilot. Phone or write for brochure. Keith Brettell, Saunders Hotel, Coastguard Lane, Freshwater Bay, Isle of Wight, PO40 9QX. 0983 752322. Party bookings, children and pets welcome. Any day, any stay.

BAILEY'S Y.H.G.C. are running thermal and XC flying courses this summer in beautiful Yorkshire. £5 a day. Make a holiday of it. B & B or camping arrangements taken care of. Details: 2 Denton Avenue, Leeds 8. Tel: 662518.

COMET at **BAILEY'S Y.H.G.C.** Test fly or any other 81 hang glider. Free tuition and after sales service from Robert Bailey, 2 Denton Avenue, Leeds 8. Tel: 662518.

Calvert's old **CHEROKEE 200**. Good condition. £400 ono. Also **MIDAS SUPER E** — pleasant kite for P1 pilot £130 ono. Bristol 313697.

SIGMA 12M. White, orange tips, red trailing edge. Approximately 30 hrs flying time. Excellent buy at £475. Tel. Greenham (Som) 672046 (and keep trying!).

WINDHAVEN Parachute on superbly comfortable 'PRICE' prone harness. £200. complete. Tel: 0772 600582.

ATLAS medium, breakdown, hardly flown, £600 ono. Also **GRYPHON 3**, £150 for quick sale. Ring 0254 885909. Geoff Snape.

SIGMA 12M. factory tuned special. Applied leading edges, composite battens. Sail colours, white with red leading — trailing edges, gold keel tips spectrum. Low air time. £480. Phone Brighton 602562.

ATLAS 16 Medium. April 1980. Very good condition, never bent. Several XC's. £500. Possibly deliver. Tel: Dave Bluett, Maidstone 831215 (work), 831004 (home).

SUPER SCORPION C+. White with red L.E. and keel pocket. Bainbridge. New type nose catch. £380 ono. Bill Newton, Newhaven 6444.

SUPER SCORPION C+. White and red L.E. and keel pocket. Bainbridge. New type nose catch. £380 ono. Bill Newton, Newhaven 6444.

Hiway SCORPION C, 1978. multi-coloured, excellent intermediate glider with B bar and seated harness, all for £235. Tel. Home 0264 772741. College Hatfield 69848.

STORM Medium, hardly used, tasteful sail colours, two spare uprights. £490. Phone Crawley 515676 after 7.30 pm.

Large **SUNSPOT**, excellent condition, £325. Must sell due to nagging pain in the neck! Tel. Nick on Bradford (0274) 392943.

CHEROKEE. Large. Good condition. Tasteful mauve and blue sail. Spare upright. £395 ono. Phone Lewes 5821.

VORTEX 120 — beautiful colours, completely new airframe and bottom rigging. Sail immaculate condition — good flier — large control frame. Bargain at £335. Bob, (0706) 53755.

HILANDER Med. — the Atlas eater but at ½ the price. Flown and thrashed the opposition throughout the world. New bottom rigging. Very good condition. £375. Bob, (0706) 53755.

MAX OUT on hg information. Take an annual subscription on **GLIDER RIDER** or **HANG GLIDING MAGAZINE**. Mainair Sports. 0706-55131.

FALCON IVB, excellent condition, ideal P1, spare 'A' frame upright, seated harness, rigs seated/prone. £195. Phone Piddletrenthide 431 (Dorset).

SUPER SCORPION C+, multicoloured sail, £450. Also **FALCON IV**, £130. Both in good condition. Phone Alan Woodford, Polegate (Sussex) 4581.

FLEDGE 2B, 9 months old, good condition, l/blue, d/blue, white, easy to fly, still the fastest — ideal for power (finances force sale). £700. Phone Mulben 351 (Morayshire).

SIGMA 12M. All white sail, red tips/trailing edge. £585 ono. Dave Weeks, Keswick. (0596) 72315.

Skyhook **CUTLASS**. Low airtime but high XC mileage. Competition winner. Immaculate condition, pretty sail. £600 ono. Rod (097084) 229.

SUNSPOT (large). Later model with tip rods and triple deflexors, knocks down to 14ft. Soars well, the ideal beginner to intermediate kite c/w, seated harness £320 ono. Tel. Rugby 4181.

WILLS WING SST 90. Ideal first glider. Blue/white sail. Spare battens and seated harness. Suits 8-12 stone pilots. £150. Reading 413722.

12M SIGMA. Immaculate condition. Sale due to Lighting. £475 ono. Tony Fletcher, Swansea 49825 (home) or 468500 (work).

SUPER SCORPION B. Rainbow coloured sail. Handling is still the best. Ideal for the lightweight beginner/intermediate pilot. V.g.c. £385. Phone: 01-673 8293.

VULCAN, sky blue, yellow and tips, 7 months old. XC glider, won Scottish Open on this one. Phone Colin Lark, Dursley (0453) 46592.

SIGMA 12M. Excellent condition, only £545 ono, as new glider is on the way. Phone Kendal 27803 evenings.

BREEN Hifly, 19ft. and seated harness. Good condition. Suitable for beginner. £70. Contact Adrian, Tel. 021-445 3041 (Birmingham).

Medium Birdman **CHEROKEE**, 1 year old. Hardly flown. Custom gold tan sail. One ace of a bird. £475. Phone Holmes Chapel (0477) 32002, after 7pm.

CYCLONE 165. Excellent condition, low airtime. Phone Mike, Winslow 2586.

US made **DELTA WING** Hang Glider complete with swing seat and container. Used twice. Offers invited. Phone Pershore 5747 or Upton on Severn 2695.

PHOENIX 8 medium. New and unflown but stored 3½ years. With bag. Will accept any reasonable cash offer. Ring (0733) 66963 or 242701 evenings.

165 CYCLONE. Probably the best one around, never been bent or damaged in any way, nice clean genuine buy. 1 owner. £350. Tel: Sittingbourne (Kent) 25627. Reason for sale, going powered.

Get the glider you always promised yourself at a price you can afford. **12M SIGMA**. £450 ono. Yet another struck by Lightning. Dave Grey, Dursley Glos. Tel. (0453) 46495.

STORM Medium. Suit P1, very good condition. £495. Will demo and deliver. Phone Phil Head on Warrington (0925) 64605.

Triking, cross-country, or ridge soaring? You need an altimeter. Buy the best. The **THOMMEN 1,000** and **2,000** or the **DIPLEX**. Phone Huntingdon 72225.

DRAWINGS and construction notes for **WING WAGON** (Tricycle power unit for hang glider) £5. 123lbs. thrust. Lord antivibration mounts available. McCulloch 101 engines (12lbs. 4ozs. 12h.p.). S.a.e. for details. Ernie Patterson, 95-87 Killyleagh Road, Killinchy, Newtownards, BT23 6TR.

GLIDER MART. We have hundreds of s.h. gliders. Send s.a.e. for copy of our list. Mainair Sports, Shawclough, Rochdale, Lancs, OL12 6LN.

At **CHILTERN GLIDER SUPPLIES*** in 1981 find your **POWER** unit, or you could observe a dazzling **COMET** from up above; try streaking on a **LIGHTNING**, it could be illuminating; You could also find a **DEMON** high above your Way; If we haven't touched you cosmically, we could lure you with a ghostly **SPIRIT** (by Euro Wing). Try switching to a **SABRE** or we'll blow you away on a **CYCLONE** two: Catch your dream machine at **C.G.S.*** We offer a 90 day warranty on new glider sales, with parts replaced at cost: H.P. and part exchange available . . .

C.G.S.

CHILTERN GLIDER SUPPLIES* second-hand gliders. Looking for a reliable glider at a fair price? We have a long list and can save you time and money. Ring us, we can help you!

C.G.S. HAMPSHIRE FLIGHT TRAINING CENTRE — offer two day, four day and up to P1 hang gliding courses; we teach prone on intermediate prone gliders: **FROM THE START**. Private training slopes. H.I.A. and B.H.G.A. Registered School. For details contact Hants Flight Training Centre, 21 Penns Road, Petersfield, Hants. Tel: (0730) 4467.

CHEROKEE Medium. Good condition. Blue, yellow and white sail. Rugged for prone but seated wires and harness included in price. £400 ono. Rog Hilliard, 4 Kersley Crescent, Oldham, Basingstoke, Hants. Tel. Odiham 2625.

G.G.S. & HAMPSHIRE FLIGHT TRAINING CENTRE. What other companies offer so much to new people into the sport and pilots who have been around a while. *Cato. 16 and Goldwing. Eagles. Trikes. Training available. H.F.T.C.

MAGNOLIA HOUSE, 27 Dyke Road, Brighton BN1 5AE (East Sussex) on ring road A23 to London. Small select (3 stars) hotel at budget prices, located 10 minutes by car to the Devil's Dyke and the sea front. Easy free parking. (Town Map E4). Tel: 0273-552144.

QUALITY WINGS AND ACCESSORIES: Typhoons in stock, Hummingbird varicos from £95.00, Willis combination vario/digital altimeter £225.00, Chutes from £165.00, VLD helmets £22.00, Stirrup and Cocoon Harnesses, limited quantity. Sony Stowaways £85.00, repair shop.

SECOND HAND, 2 Atlas 16s, 1 Hiway Skytike (never flown) £780.00, details and prices from Windcraft Co. Sion Lane, Clifton, Bristol 8. 0272-37870 or 30242, 01-870 6577 (evenings).

Hiway **SUPER SCORPION 11C+**, £375. **STORM**, Large, mint, 6 months old £475. **STORM**, Medium, Very good, 1 year, £425. **CHEROKEE 200**, Mint, superb, £400. **VULCAN**, Excellent. Perfect tune, £495. **DEMON 165**, Early chordwise. Beautifully coordinated. Superb foretrike, £500. All these machines are suitable for free flying or triking. 160cc Skytrike, 3 hours running; ideal for any of the above machines. £800. 160cc Skytrike, 10 hrs running, £750. London Ultralight Ltd. are main agents for the Hiway Trike/Demon, Solar Typhoon, Eurowing P16/Goldwing, Terradactyls. We offer impartial advice on performance, control characteristics and training requirements for these machines. Midweek demonstration available. BHGA P1s+ converted to trikes/free. P1s and others as required. Phone (day) 09273 61270; (evening) 0462 52103 or write, 13 Portman Close, Hitchin, Herts.

Vince Hallam's **SUSSEX COLLEGE OF HANG GLIDING**, 18B Queen's Road, Brighton. Sales, Spares, Teaching, Sigma, Hiway, Chargus, Quad pod. One **STRIPLIN FLAC**, Sigma 12M, new, £450. Sigma Floater, New, £575. Incredible **NEW SIGMA** Mini Floater for girls. 26ft. 140ft. 35lbs! Main agents, Sussex College of Hang Gliding, Brighton 609925/24151, ext. 171.

ACCESSORIES from **CHILTERN GLIDER SUPPLIES:** Altimeters by Dipsex and Thommen. Vario's from Helio's, Ball, Arbee, Thunderbird (total energy). Air speed indicators and instrument pods with altimeter. Helmets Roma and Everoak. Parachutes from £170.00. Kite boots, kit bags, stirrup and cocoon harnesses with or without integral chute packs from £57.50. Available from C.G.S. 21 Penns Road, Petersfield, Hants. Tel: (0730) 4467.

SOUTH WALES HANG GLIDING SCHOOL offers inexpensive accommodation, excellent tuition, lovely hills, gliders, sold/loaned. Telephone Michael Adam, Ynysowen (0443) 690787, 67 Cardiff Road, Troedyrhiw.

ULTRA SPORTS GLIDER MART. STORMS from £450. **SUPER SCORP C's**, £450. **SUPER SCORP B's** £350. Two as new **SUPER SCORP II's** £550. **SOTHDOWNS FLOATER**, as new, £450. Much more. Ultra Sports, 22 Albany Villas, Hove, East Sussex. Tel: (0273) 25534.

BARGAINS in the N.G.S. 2nd Hand **CLEARANCE**. Atlas 18, mint £670. Atlas 18, very clean £640. Atlas 16, very clean, £550. Super Scorpion C, £320. Super Scorpion C, very clean, £440. Small Skyline, £280. Medium Skyline, £330. Large Skyline, very clean, £330. Vortex 120, very clean, £340. Vortex 120, mint, £360. Medium Solar Storm, very clean, £465. Large Sunspot, £220. Large Sunspot, £250. Falcon 4, very clean, £175. Large Vector, old type, £50. Large Vector, new £175. Cloudbase radial, £50. Skytrike 160, £750. All the above gliders are in sound condition and have the N.G.S. guarantee of having been thoroughly checked and test-flown. Contact N.G.S. 061-973 4085, 061-434 3364.

FOR GLIDERS FROM

Hiway Hang Gliders
Solar Wings
Southdown
Sailwings
Flexi-form Skysails
Skyhook Sailwings
Give us a call
Good Deals and
Fair Offers
Finance - HP -
Part Exchange
Second Hand Ships

Mainair Sports Ltd.,
Shawclough, Rochdale, Lancs.
Tel: (0706) 55131 Telex 635091 MAIN



BIRDMAN Flight Training School has vacancy for full-time instructor. Must have been flying for at least three years and instructing with registered school for minimum of one year. Possible promotion to C.F.I.

ASHLEY DOUBTFIRE Microlight Aircraft offer £15.00 Flex-wing Trike Session for all P.2 holders. Half-hour airtime assured. Write to A.D., Microlight Aircraft, Thruxton Airport, Andover, Hants. Tel: Weyhill (026 477) 3472 for application form.

SITES GUIDE to most of UK and Ireland. £2.75. B.H.G.A. Membership required for UK orders. Barrie Annette, 133 Twickenham Road, Isleworth, Middlesex.

MAKE MONEY FROM HANG GLIDING
WE REQUIRE

SUB-AGENTS

YOU MAY NOT GET **RICH**
(OR EVEN WELL OFF!!)

BUT YOU WILL HAVE CHEAPER FLYING AND LOTS OF INVOLVEMENT. CLUBS AND INDIVIDUALS IF YOU ARE INTERESTED WRITE TO US.

Mainair Sports
Shawclough Road, Rochdale, Lancashire OL12 6LN
Tel: (0706) 55131 Telex: 635091 MAIN



ULTRA SPORTS
New! Cocoon Harness with stream-lined parachute container **£75.00**
Without container **£69.00**
New! Swivel stirrup **£48.00**
Normal stirrup **£55.00**
Tel: (0273) 25534

ULTRA SPORTS STOCK 175 DEMONS! STOCK 175 TYPHOONS!
Don't wait for your **NEW SUPER-SHIP** contact us now!
Tel: (0273) 25534

ULTRA SPORTS POWER!
Fuji Robin 250cc complete with prop, exhaust, reduction, engine mounts, choke and throttle assembly. **£475.00**
Much more available!
Tel: (0273) 25534

ULTRA SPORTS POWER! NEW! TRIPACER 250cc
Fuji power, single tube less drag, easy and quick assembly.
Contact us for a demonstration.
Tel: (0273) 25534

ADVANCED FLYING COURSE CFI
Bob Calvert,
Calair,
390 Preston Old Road,
Blackburn.
Tel: (0254) 21615
(8-9 a.m. Saturdays)

SUPERSCORPION B
Good condition, sweet handling. Beautiful performance. **£300**
Stratus vario, RAF altimeter in pod £50.
Demon forces sale!
Tel. Mark - Cardiff 35284

CGS

CHARGUS T250

Versatile, quiet, efficient microlite aircraft for less than £1500 ex. VAT from

CHARGUS Full three axis control. Capable of S.T.O.L.s even from unprepared grass. Highest rate of climb of any comparable minimum aircraft. Send S.A.E. for details to: **PRYCARDAN LIMITED, 28 BAGDALE, WHITBY, NORTH YORKSHIRE. TEL: WHITBY 604353**

LIGHTNING 195. Brand new. Factory test-flown and tuned only. First cash offer over £700 secures (0273) 732007.

SIGMA 12 Metre and 11 Metre "S". Various in stock, second-hand and new. Ideal gliders for mixing it with sailplanes! From £375 (0273) 732007.

Lightning

THIS GLIDER HAS
NO BRITISH C. OF A.



THE REVOLUTIONARY NEW GLIDER

- ★ Superior Sink rate
- ★ Better glide
- ★ High stability
- ★ Aerodynamically ideal for power
- ★ More penetration
- ★ Superb handling

Also available in 3 sizes for the intermediate pilot:
the unique **SIGMA FLOATER** unbeatable at £500 + VAT

THIS GLIDER HAS
NO BRITISH C. OF A.

Southdown Sailwings, 82 Goldstone Villas, Hove, Brighton
Tel: Brighton (0273) 732007