

SAILPLANE & GLIDING

October-November 1991

£1.90



World Championships' Results

Competition Enterprise

15 Metre and Standard Class Nationals

CENTRELINE SERVICES PROVIDE YOU WITH THE COMPLETE SERVICE – TO GET YOU IN THE AIR AND KEEP YOU IN THE AIR



Photograph by Terry Joint



CENTRELINE
Services

**Our Competitive Insurance and Financing Facilities
are available for:**

- ▶ **GLIDERS** ▶ **MOTORGLIDERS**
- ▶ **POWERED AEROPLANES**
(special glider tug insurance scheme)
- ▶ **TRAILERS AND EQUIPMENT**

Call us now and find out what we can do for you

P.O. Box 100
Sarisbury Green
Southampton
Hampshire
England SO3 6YJ
Tel: 0489 885998
Fax: 0489 885889

SPECIALISTS IN
AVIATION INSURANCE
AND FINANCE

In association with
Edgar Hamilton Ltd.
Lloyd's Brokers

TEL 0489 885998 FAX 0489 885889



Magazine of the
British Gliding Association
Kimberley House, Vaughan Way
Leicester, LE1 4SG
Tel Leicester 0533 531051

October-November 1991
Volume XLII No. 5

EDITOR

Gillian Bryce-Smith
281 Queen Edith's Way, Cambridge, CB1 4NH
Tel 0223 247725 Fax 0223 247725

CONSULTANT EDITOR

Rika Harwood
66 Maisemore Gardens, Emsworth, Hants, PO10 7JX
Tel 0243 374580

SUBSCRIPTIONS

Bev Russell, BGA Office

COMMITTEE

A. W. F. Edwards (Chairman), M. Bird, M. F. Cuming,
B. Rolfe, B. F. R. Smyth

ADVERTISING MANAGER

Helen Ritchie
Cheiron Press Ltd

Hillview, Heathfield Road, High Wycombe
Bucks HP12 4DQ
Tel 0494 442423

ADVERTISING COPY DATES

To make it easier for our advertisers we are listing the advertising copy dates. Editorial material is needed considerably earlier.

Issue	Display	Classified
Dec/Jan	Oct 21	Nov 1
Feb/March	Dec 18	Dec 30

Please note: If advertising copy has not been received by the due date, any space booked will automatically be cancelled and a cancellation fee may be incurred.

S&G Annual Subscription: Send £13.50 to the BGA. (See advertisement in this issue.)

PUBLISHER

British Gliding Association
(Barry Rolfe, BGA Administrator)

**SAILPLANE
& GLIDING**



World Championships / Nationals / Coupe de France / Coupe de Grande-Bretagne / Coupe de France / Coupe de Grande-Bretagne / Coupe de France / Coupe de Grande-Bretagne

Cover: Steve Parker, winner of the Western Regionals' Class A at Nympsfield crossing the finishing line in his LS-4 on the first day. Photo: Steve Bicknell.

SAILPLANE & GLIDING

231	YOUR LETTERS G. Bennett, C. Hughes, C. Batty, P. A. Taylor, I. H. Shattock	252	STANDARD CLASS NATIONALS E. R. Lysakowski
235	BOOK REVIEW S. N. Longland	254	THE GEC 15 METRE CLASS NATIONALS T. Joint
236	WORLD GLIDING CHAMPIONSHIPS Angela Sheard	257	FINAL RESULTS
238	FINAL RESULTS	259	TRAVELLER'S TALE N. MacLean FIRST EUROPEAN JUNIOR CHAMPIONSHIPS
240	TAIL FEATHERS Platypus	260	ANNO DOMINI R. H. Prestwich
242	COMPETITION ENTERPRISE L. E. N. Tanner	261	MORE ON SEA-GLIDERS C. Pikros
244	THE PARIS AIR SHOW R. R. Rodwell	262	BGA & GENERAL NEWS OBITUARY P. M. H. Treadaway by P. C. T. Whitmore
245	FLYING THE STEMME S-10 A. D. Piggott	263	GLIDING CERTIFICATES BGA ACCIDENT SUMMARY J. Shipley, D. A. Wright
246	WIND SHEAR AND WAVES PART 2 T. A. M. Bradbury	268	CLUB NEWS
250	GETTING MOTIVATED Liz Veysey	280	WAY OFF TRACK Penguin
251	A RETURN TO GLIDING H. W. Whelan		



Member of the
Royal Aero Club and the
Fédération Aéronautique
Internationale



Leicester Printers Ltd, Leicester.

DELCOM AIR-960

Portable air band transceiver

The Delcom Air-960 is a keenly priced portable air band transceiver with many of the functions and accessories found on more expensive models.

- CAA Type Approval for Gliders and Light Aircraft.
- A full 5 watts transmitter output.
- 25kHz channel spacing from 108MHz-136.975MHz on receive 118MHz-136.975MHz on transmit
- A large choice of accessories including matching intercom unit, headsets, charger and others.
- Tried and tested by thousands of satisfied users.

Phone, FAX, write or visit to get more details on this excellent transceiver before deciding which radio to buy.

£199 +VAT & delivery

Dealer enquiries welcomed



See a DELCOM AIR-960 today at any of these Lowe Centres

BARRY (S WALES)
251 Holton Road
Tel: 0446 721304

CUMBERNAULD
Cumbernauld Airport Foyer
Tel: 0236 721004

BOURNEMOUTH
27 Gillam Road
Northbourne
Tel: 0202 577760

DARLINGTON
56 North Road
Tel: 0325 486121

BRISTOL
Unit 6
Ferry Steps Ind Estate
Tel: 0272 771770

LONDON (HEATHROW)
6 Cherwell Close
Langley, Slough
Tel: 0753 545255

CAMBRIDGE
162 High Street
Chesterton
Tel: 0223 311230

LONDON (MIDDLESEX)
223/225 Field End Road
Eastcote
Tel: 081-429 3256

LOWE ELECTRONICS LTD

Main Showroom and Head Office:

Chesterfield Road, Matlock

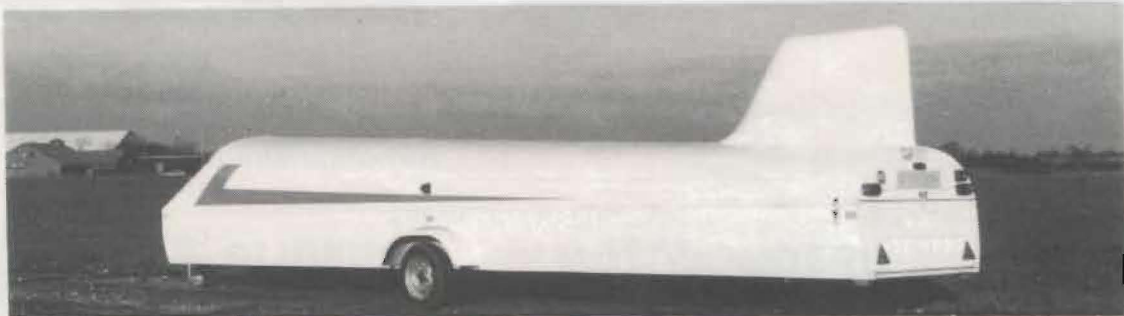
Derbyshire DE4 5LE

Tel: 0629 580800

Fax: 0629 580020

The voice in your pocket

NEW CONCEPT FOR ALL 15 METRE GLIDERS THE GT2000 RO-RO LIFT TOP GLIDER TRAILER



Comes complete, Fully-fitted with adjustable fittings • Etch-primed & painted synthetic white gloss • Light alloy roof skins prevent ultra-violet penetration • GRP aerodynamically-styled nose and fin box • Recessed rear light array • Powerful gas struts • Internally-stored 7-pin plug • Capacious storage area • Concealed tie-down points • 'Roll-off Roll-on' for neighbour-friendly rigging/de-rigging away from trailer • **£4,050 + VAT**

SAVE! DEMONSTRATOR FOR SALE £3750 + VAT

Comprehensive stocks to keep your METAL, WOOD or GRP Trailer roadworthy, dry, secure and well-maintained.

FULL REPAIR, RE-PAINT, UNDERSEALING and MAINTENANCE SERVICE for Metal, Wooden and GRP Trailers. Prolong your Trailer's active life – Book it in for an AMF Winter Overhaul – you may leave the glider inside.

Now is the time to order AMF's Specially-designed rigging aids, trailer fittings and solo Towing-Out Kit. (We will also refurbish your existing AMF equipment).

AMF ENTERPRISES, MEMBURY AIRFIELD, LAMBOURN, BERKS RG16 7TJ.

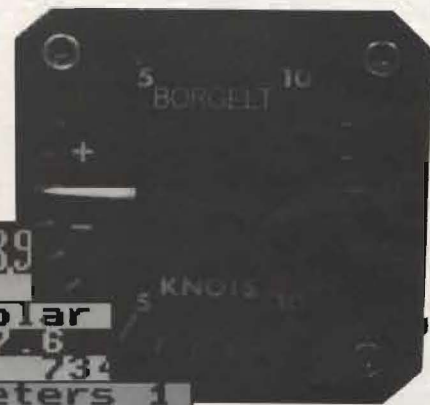
Tel & Fax: 0488 72224

INTRODUCING COMPUTER GRAPHICS TO THE COCKPIT

BORGELT B-100 FMC

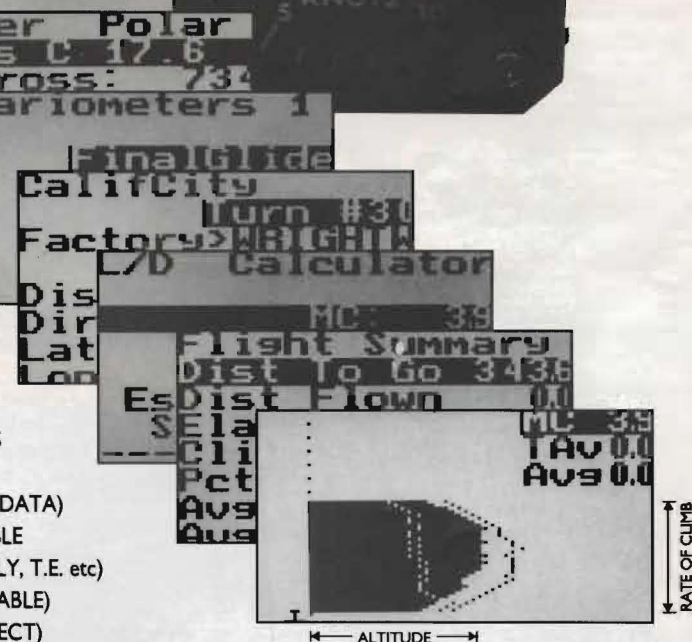
FLIGHT MISSION COMPUTER

A POWERFUL, COMPACT AND PRACTICAL
COMPUTERISED SOARING SYSTEM FOR
TODAY'S DEMANDING PILOTS



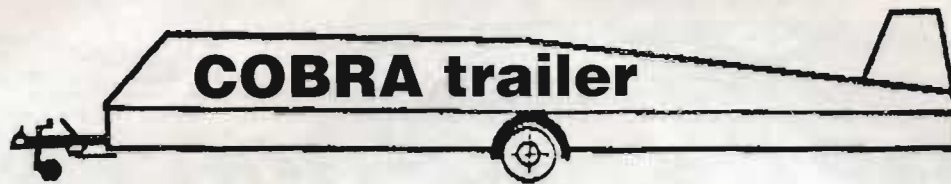
**AN EXCITING NEW SOARING
COMPUTER INFORMATION &
GUIDANCE SYSTEM FEATURING:**

- FULL SCREEN DIGITAL/GRAPHICS DISPLAY
- EASE OF PROGRAMMING WITH ON SCREEN HELP
- INCORPORATING THE WELL PROVEN BORGELT PRESSURE TRANSDUCER TECHNOLOGY
- GRAPHIC DISPLAY OF LAST TWO & CURRENT THERMALS SHOWING ALTITUDE vs RATE-OF-CLIMB GRAPH
- FINAL GLIDE DETAILS (GRAPHIC GLIDESLOPE & DIGITAL DATA)
- OUTPUT FOR UP TO 5 METERS, ALL PILOT CONFIGURABLE (IE: DISPLAY - REL. NETTO, NETTO, LIFT COEFF, S. TO FLY, T.E. etc)
- FULL ON BOARD UK TURNING POINT LIBRARY (UPDATABLE)
- IN-BUILT SETTABLE G-METER (AUTO CRUISE/ CLIMB DETECT)
- REMOTE COMPASS INTERFACE FOR AREA NAV (PROVIDES 'WHERE TO LOOK FOR TURNING POINT INFO')
- IN-COCKPIT REMOTE UNIT FOR EASY PROGRAMMING
- STATISTICS DOWNLOAD TO PERSONAL COMPUTER
- UPGRADEABLE SOFTWARE
- EASILY SET TO ANY POLAR & WEIGHT



PC DEMONSTRATION DISK
FOR FULL EVALUATION

FOR FULL INFORMATION ON THE CAPABILITY OF THIS IMPRESSIVE & INNOVATIVE SYSTEM, PLEASE CALL FAX OR WRITE
FLITE LINES 32 Brislington Hill, Bristol, BS4 5BD Tel: (0)272 710043 Fax: (0)272 721923



- **Perfect road handling**
 Low profile
 Low centre of gravity
 Aerodynamic design
 Optimized chassis
- **Excellent protection**
 Large opening angle
 Tip-proof wing dollies
 Automatic locking of
 all sailplane parts
- **Longlasting**
 Galvanized chassis
 Aluminium bottom
 Aluminium top or
 fibreglass top

Our distributors in UK:

**John Jeffries
 JJ Associates**
 PO Box 61
 Dunstable, Beds LU6 2LB
 Tel and Fax: 0525 222111

McLEAN AVIATION
 The Aerodrome, Rufforth
 YORK YO2 3QA
 Tel: 0904 83653
 Fax: 0904 838146

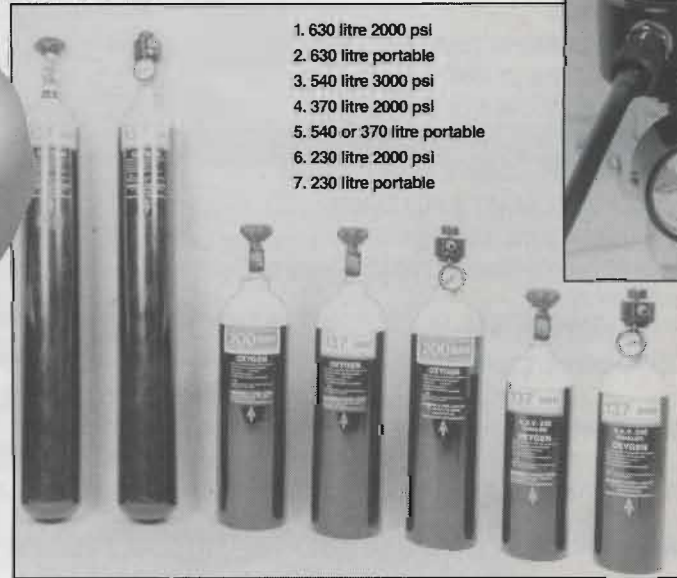
SOUTHERN SAILPLANES
 Membury Airfield,
 Lambourn, Berks. RG16 7TH
 Tel: 0488 71774
 Fax: 0488 72482

WELLS DESIGN LTD.
 Brailes, Banbury,
 Oxon OX15 5JW
 Home Tel: 060 884 217
 Workshop Tel: 060 885 790



The Sabre-AAV range of oxygen equipment for gliders

◀ A.I.R. 2.4 glider mask set



1. 630 litre 2000 psi
2. 630 litre portable
3. 540 litre 3000 psi
4. 370 litre 2000 psi
5. 540 or 370 litre portable
6. 230 litre 2000 psi
7. 230 litre portable



Exclusively distributed by

RD AVIATION LIMITED

Unit 25, Bankside, Kidlington
 Oxford OX5 1JE
 Telephone (0865) 841441 (24 hours)
 Fax (0865) 842495 (24 hours)

We are open to callers:
 Monday-Friday 0930-1830 hrs.
 Saturday 1030-1230 hrs.
 Other times by appointment please.

VISA Access E MasterCard

The Complete Glider Service

▶ SPARES ▶ INSTRUMENTS ▶ PARTS ▶ MATERIALS ▶ SERVICE

HIGH QUALITY MAJOR REPAIRS: in all materials.
Schleicher gliders a speciality.

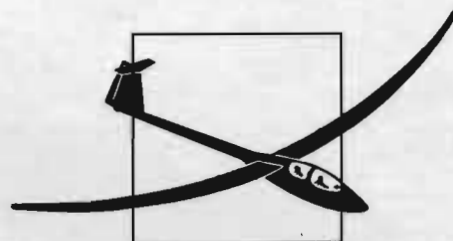
TOST: Wheels, tyres, weak links and release hooks.

DOPE AND PAINTS: Main stockists for Neogene products.

INSTRUMENTS AND RADIOS: Winter agents – most other makes available.

MATERIALS: For all your repair and re-build needs: GL1 Finnish birch ply, German steel tube, glass cloth and ceconite.

INSTRUMENT CALIBRATION AND SERVICING COUNTER, POSTAL AND CARRIER SALES SERVICE: All items competitively priced.

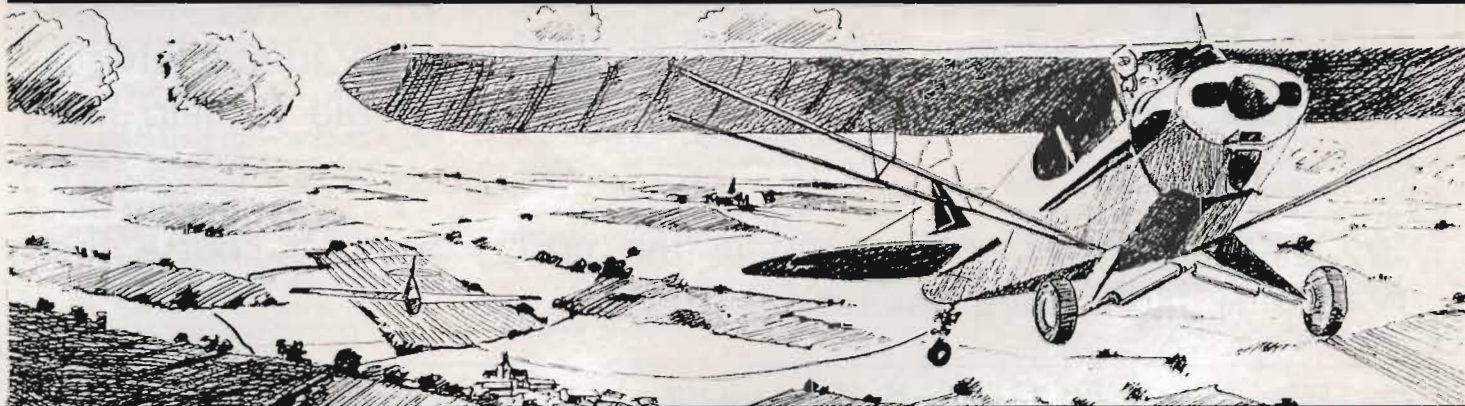


**London Sailplanes
Limited**

Open Monday to Friday 9am to 5pm
Saturday 9am to 4pm

Tring Road, Dunstable, Beds LU6 2JP
Dunstable (0582) 662068

CLACTON AERO CLUB



FEEL THE PULL OF POWERED FLIGHT

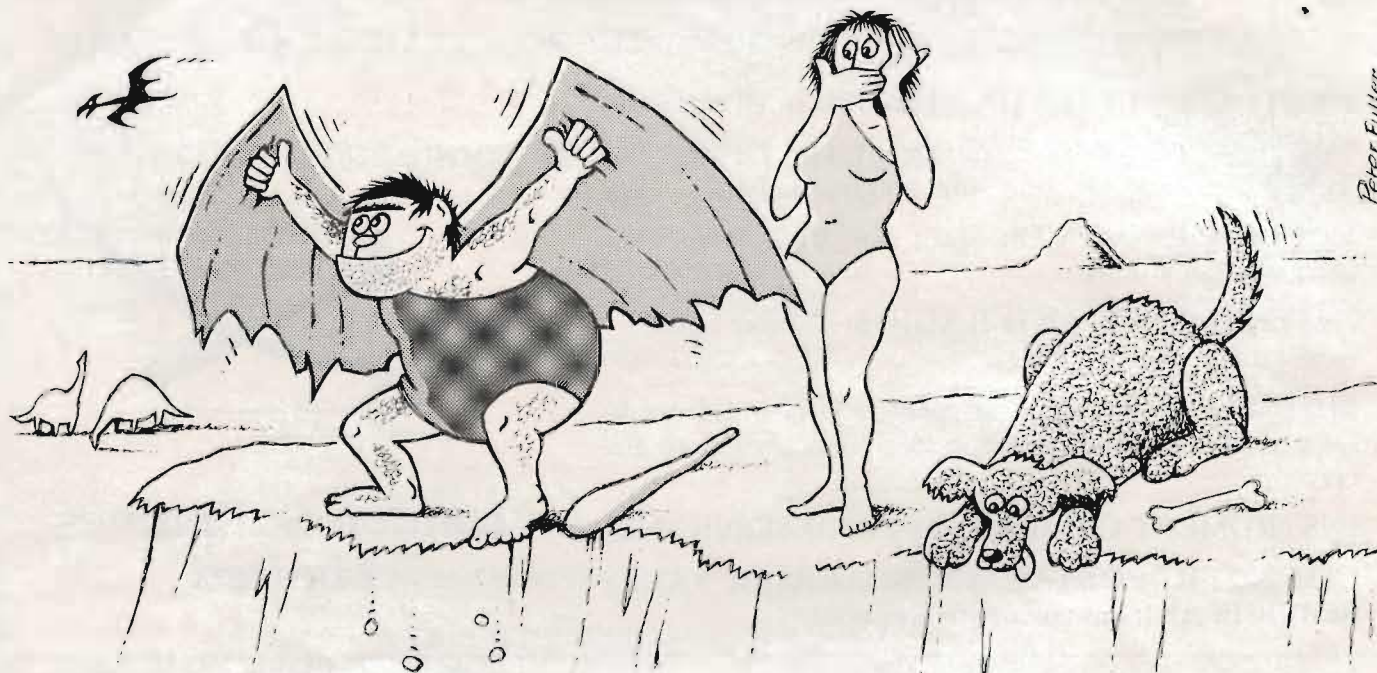
AB-INITIO, BRONZE AND SILVER 'C' CONVERSIONS TO PPL (A)
ON OUR THREE PA-18-150 SUPER CUBS, THE ULTIMATE TAILDRAGGER.

Years of experience in residential courses.

ALSO AVAILABLE; Tailwheel Conversions and Farmstrip Special:
Cessna 152/172 for PPL, IMC & Hire. Phone for Details & Prices.

CLACTON AERO CLUB, CLACTON AIRFIELD, WEST ROAD,
CLACTON, ESSEX CO15 1AG. (0255) 424671.

From the word go . . .



The human race has been obsessed with flight. Unfortunately, early man's ability seldom matched his enthusiasm!

Nowadays, man has become very good at take off, landing and the bit in between; and even if he should inadvertently try to emulate his ancestors, he knows he can rely on Mowbray Vale to help him out.

Too bad we were not around in the early days—Of course the premiums might have been a bit steep!

*Contact Carol Taylor or Stephen Hill on
Thirsk (0845) 523018 – 24 hr. Ansaphone Service.*

Or write to:

MOWBRAY VALE INSURANCE

8 Castlegate, Thirsk, North Yorkshire YO7 1HL.

Telex: 587470

Represented at Lloyds

Fax: 0845 525483

YOUR LETTERS

DISABLED PILOTS

Gary Bennett wrote this letter before reading wheelchair bound Steve Veness's article in the last issue, p186

Dear Editor,

I think all gliding clubs should be fully aware that they are missing out on a vast market of potential members. Disabled people have been flying for about six years and I ought to know because I'm confined to a wheelchair.

I am just as dedicated as any other member and perform just the same jobs, ie tractor and winch driving, paperwork, rigging etc. Please don't fall into the trap of thinking the disabled would be a burden on your club – you will find they are an advantage because everyone else redoubles their efforts being inspired by someone less fortunate than themselves.

Quite a few clubs, and not just the big ones, have modified a two-seater so that it can be flown by hand controls. The disabled are as able as anyone else while they are airborne. They can fly cross-country and land in a field, communicating by using a Cellnet telephone, a 720 radio and a CB radio for backup. High altitudes aren't a problem as long as they are wrapped up well. As yet there are no disabled instructors but it's only a matter of time.

Club evenings could be arranged for the disabled. Think about it; gliding takes place on a flat site, which is good for wheelchairs; there are a lot of people around if anyone needs help; most clubs have reasonable facilities and, most important of all, the disabled can fly on equal terms.

Equality is such an important point because at almost no other time are we equal. So with the freedom of the sky and a little help from members, you could have more *ab-initios* and a fully integrated community pulling as one like never before.

If you are disabled, then ring the BGA and ask for your nearest club. If you have any problems with controls or finding a club, then ring me on 0603 72002. I will be sure to help.

As it isn't easy or practical to modify single-seaters, we are trying to raise enough to buy a glider for the disabled to use throughout the UK for more advanced flying. If you would like to help, please send cheques payable to



Gary, paralysed from the waist down since a hang gliding accident in 1979, has been flying for six years. He has 250hrs, wants 300km to complete his Gold badge and hopes to be an instructor by the end of the season. He also has 75hrs power with the only unrestricted PPL (he can fly on his own unlike other disabled who have to have a safety pilot) in the UK. He says he has been considerably helped by a grant from Norwich City Council to help research and broaden his flying skills and also a sponsorship by Cellnet with a phone for out landings.

Sportability Glider Appeal (a registered charity), c/o A.D.Musk, Sheenash, Ashwell Thorpe, Norwich.

GARY BENNETT, Norwich

MORE DESERVING GROUPS THAN WOMEN

Dear Editor,

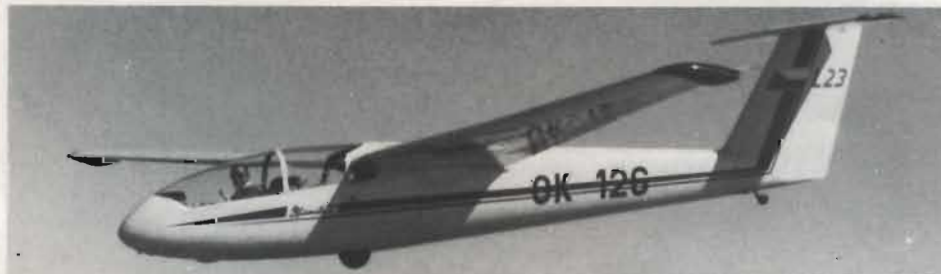
I was appalled to read in the June issue, p132, that precious BGA funds have been directed to the WWG (Women's Working Group). Surely, there are many much more deserving groups that suffer discrimination within the gliding movement? Take, for example, the BEGA (Balding Elderly Glider-pilots' Association). Such items as research into PPP (Puce Pate Problems), and SCH (Skylark Centre-section Hernia) urgently need

cash. When a BEGA member appears in very short shorts, do all the club hunks rush to help him rig? If not, why not?

There is the terrible tale of the all three Diamond BEGA member, who had managed to persuade his (slightly) younger wife to take up gliding. When they were on a visit to another club, the local young and dashing duty instructor immediately offered to give her a check, asking at the same time whether her grandfather would like a passenger flight. One member has even had to resort to taking his parrot with him to do the navigation. There are BGA competitions for Juniors, Women, but not for BEGA members. Occasionally, members let the Association down, like the one who regularly goes to Oz for Christmas, does 575km "in a Garblamince" and then insists on writing about it!

Actually, last January I managed to persuade

THE LET L23 "SUPER BLANIK" FROM CZECHOSLOVAKIA

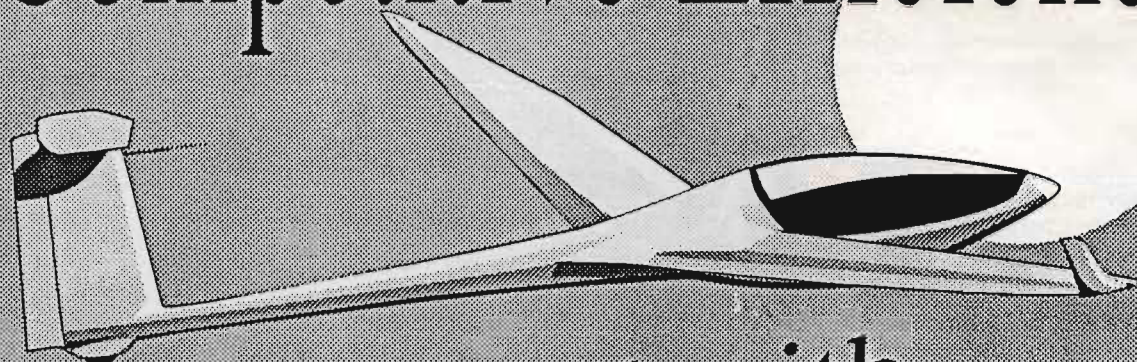


A superb trainer
All metal construction
Easy ground handling
Empty weight 310kgs
Fully instrumented
Certified to JAR 22 and OSTIV-X
Delivery ex-stock
or within 4-12 weeks
Demonstrator available

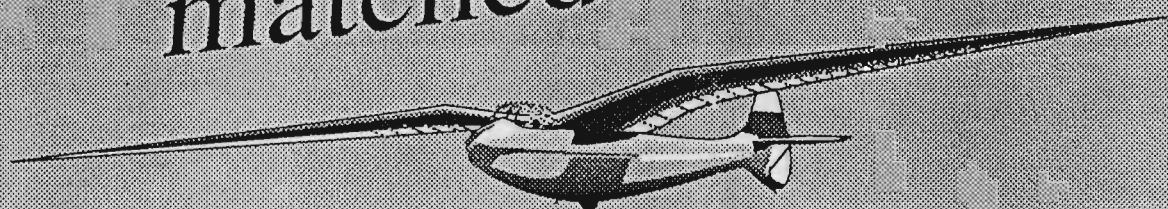
SOLE UK AGENT - PETER CLIFFORD & Co.,

15 Home Farm, Crowmarsh Gifford, Wallingford, Oxon, OX10 8EL. Tel: 0491 39316/680420 Fax 0491 39316

Competitive Efficiency



matched with



Experience and Reliability

Sedgwick Aviation

I n s u r a n c e a d v i s e r s t o t h e
B r i t i s h G l i d i n g A s s o c i a t i o n

0603 660202 Ext 7703

Chris Durrant

Sedgwick Aviation Limited - Victoria House - Queens Road - Norwich NR1 3QQ

Telex 882131 . Facsimile 0603-760826

A Lloyd's Broker acting as agent of SG Services Limited



Sedgwick Aviation Limited

a young lady to help me retrieve my Cirrus from a field at the bottom in the mud, rain and snow, so perhaps I might not, for the moment anyway, be eligible for membership.

CHRIS HUGHES, *Nympsfield*

IT'S OUR ATTITUDE TO THE SPORT

Dear Editor,

I agree in every way with Bill Scull's article on connecting all the controls before every flight. (See the April issue, p71.)

I offer a further observation. A few years ago I made a second brake paddle installation for my glider. While ground checking the system I noticed to my horror that every time the over-centre lock snapped shut in each wing it shot the nicely lubricated wedge of the hotelier connection right open.

The connector always shut again and remained connected, but it gave me such a fright that I now always pin the brakes as well as the elevator. As for pinning the other controls, it is definitely worthwhile if you cannot trust yourself to verify that the check hole is visible. I don't like the "hold the surface" checks because this will work with the ball *on* rather than *in* the connector.

However, I feel that the problem of going with the glider partly rigged is one of attitude and philosophy, not of detail design. Gliders are getting easier to put together yet we are seeing an upward trend in these accidents. Some of the older glass gliders and many of the wooden ones have some horrendous control and structural attachment mechanisms. Most of them are still being flown regularly, but they don't feature in these accidents.

I believe it all boils down to attitude to the sport. If we are non-aviation people who drift from fishing, through gliding, on the way to photography then we have little chance of learning the attitude of mind which is needed to keep us safe through the gliding phase.

Years ago only the dedicated people stuck

the cold, the pushing, the waiting, all for a five minute flight at dusk, training system. Now we say "This is a big white glider, how fat is your wallet?"

Somehow we need to get back the pride and professionalism in our airmanship, which of course encompasses screwing the glider together.

CHRIS BATTY, *Blagnac, France*

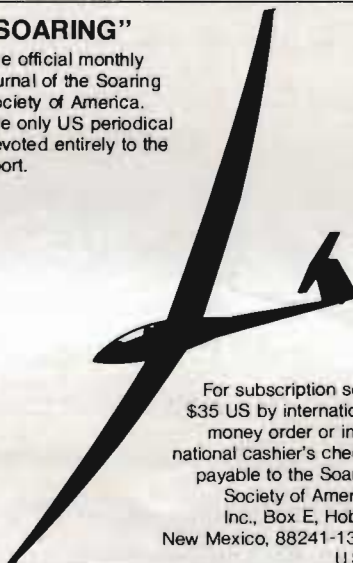
IMBECILIC RADIO CHATTER

Dear Editor,

We all occasionally throw a wobbly within the confines of our plastic cockpits when others choose to whittle on about irrelevances on one thirty decimal one. Many clearly need some tactful advice and guidance, on the ground I

"SOARING"

The official monthly journal of the Soaring Society of America. The only US periodical devoted entirely to the sport.



For subscription send \$35 US by international money order or international cashier's cheque payable to the Soaring Society of America, Inc., Box E, Hobbs, New Mexico, 88241-1308, U.S.A.

suggest, not a spate of derogatory remarks over the air waves. I personally find that approach far more irritating than the perpetrators of the primary misuse.

My letter is, however, prompted by the embarrassment I and others at Husbands Bosworth felt on July 29, when two of the German girls got airborne to practise for the European Women's Championships. Yes they did chatter, and in their native tongue! But the reaction of the young (?) male glider guiders that afternoon was frankly disgusting. I was airborne for over four hours listening to the childish drivel about Spitfires, Messerschmitts, questions about who won the war, and other equally inappropriate and, I suggest, offensive remarks.

Those responsible will I trust reflect on their own misuse of the radio? Is it they, not the charming German girls, who need some basic guidance in radio usage. It was they who fouled the channel and caused me to throw another wobbly as I cruised around Lincolnshire at near VNE. It was they who spoilt my best afternoon's gliding this year. I'm sorry that most of "they", flying south of Watford Gap, were forced to land out. Could that be the explanation for their unbelievable reactions to foreign ladies having the audacity to use their "personal" frequency? PETER A. TAYLOR, *Daventry, Northants*

A BRITISH INVENTION

Dear Editor,

Seeing the article in the June issue, p137, on an American experiment to improve aerofoil performance I was both pleased and surprised. As it happens I have been pursuing the possibility myself to the extent that I am in touch with the Patent Office and am actively engaged in assembling the first prototype for full scale tests. It is electronic and does not alter the glider's hull or wings so that it can be fitted in minutes.

It is hoped for an initial 4.7% improvement in ➡

SOUTHDOWN AERO SERVICES LTD.

SPECIALIST GLIDER REPAIRERS SINCE 1954

Repairs and major overhauls undertaken on all glider types and most PFA aircraft

Main agents for 'Aerolene' light heat shrink fabric

LASHAM AIRFIELD, ALTON, HANTS GU34 5SR

Telephone HERRIARD 0256 381359

Congratulations **Alister Kay**

on winning the British National Open Class Championships
flying an **ASH 25**

This is the fourth consecutive UK Open Class Championship where the
ASH 25 has been the glider type in 1st Place.

Congratulations too **Janusz Centka**

on winning the 1991 World Open Class Championship
flying an **ASW 22B**

Naturally ALEXANDER SCHLEICHERS have a right to be proud to
have contributed to these results by the careful and patient design
and constructional expertise that has gone into these winning gliders.
But they know they cannot rest on their laurels.

So it is with the same care and patience that ALEXANDER
SCHLEICHERS now embark on their latest designs – the **ASH 26E**
for the pilot who wants high-performance soaring without launching
or retrieving hassle – and the **ASW 27** for the out-and-out
performance seeking 15 Metre Class competition pilot.

Waiting for such new designs to reach series production also
requires patience. But by our forward ordering policy we try to take
the agony out of waiting. In fact we are presently able to offer a
limited number of gliders of each type out of the current SCHLEICHER
range of **ASK 21, ASK 23, ASW 22B/E, ASW 24/E** and
ASH 24/E for delivery next year.

Give me a ring or drop me a line with your requirements:-

John Jeffries
JJ Associates
PO Box 61
Dunstable
Beds LU6 2LB
Tel & Fax (0525) 222111

Sole UK Agent for



**ALEXANDER
SCHLEICHER**

ENJOY THE TIME OF YOUR LIFE UNDER SOUTHERN SKIES...

COME TO NEW ZEALAND WHERE THE FUN ISN'T ALL IN THE AIR!

Visit the spectacular South Island – host to the 1995 World Gliding Competition – and see for yourself what every-one's talking about...

- marvel at some of the worlds best scenery
- fly at Omarama, site of the '95 Championships
- try your hand at NZ's famous trout fishing

... and while you're flying your family can take a tour with the chance to enjoy jet boating, a steam boat cruise, bungy jumping, a ski plane landing on NZ's highest mountain, and mile after mile of scenery that leaves even the most worldly traveller breathless in awe.

7 Day Luxury Coach Tours

depart monthly
ex Christchurch
(starting
January 1992)

Includes 6 nights accommoda-
tion (share twin basis) plus
morning and evening meals.
Prices and details subject to
confirmation on booking.

**SEND THIS COUPON
NOW (WITHOUT
OBLIGATION) FOR
MORE INFORMATION**

YES!

I WANT TO HAVE THE TIME OF MY LIFE!

Please send me all the information
I'll need including details on how
to book.

Mr/Mrs/Miss

First Name _____

Surname _____

Address _____

City _____

State _____ Zip _____ Phone _____

No. of people likely to be
travelling _____

**Post to:
Southern Soaring Tours,
P.O. Box 17581,
Christchurch, New Zealand**

performance but refinements and experiments may improve on this.

By the time this appears in print I should have more data as work progresses. At Talgarth I have the facility of long flight times without large expense so that comprehensive tests will be possible.

I look forward to issuing further bulletins.

IVOR SHATTOCK, *Bedwas, Gwent*

We welcome your letters but please keep them as concise as possible and include your full name and address. We reserve the right to edit and select.

BOOK REVIEW

Basic Briefings for Glider Pilots by Harold Dale

To look at this "book" is the kind of DTP plastic-strip-back that could make even an overheated erotic novel seem straight out of the fridge. Don't be put off by this initial impression. The book is a goldmine.

The text is clear and straightforward and the best way to describe exactly what it covers is to quote the very first sentence of the author's introduction; "These notes are intended for the absolute beginner and the pre-solo student. They cover those topics that should be included in the briefings for holiday courses. Many points seem so trivial to the initiated that they are omitted from the usual books on gliding, yet a lack of this basic knowledge can lead to silly, and sometimes expensive mistakes". Couldn't have put it better myself.

Just in case you were wondering if this is one of those laborious and boring "and here's another interesting fact" sort of books, it isn't. Some of the author's brief sketches of what happens at most, if not all gliding clubs, are wryly amusing. Comments on ground-handling like "Owners and club members are ... likely to be anxious when you help them move gliders. (But this will not put them off asking for your assistance!)" are probably lost on the really green member – but they'll learn soon enough!

The book is illustrated, though not profusely, and there is a glossary of gliding terms for the newcomer that includes esoteric words like "stonking". There were a few points in the text which I wondered about. The old chestnut about ASI lag, for example. I would have thought any lag in the instrument *itself* would have been completely insignificant in comparison with the time it takes a glider to accelerate to any speed, even vertically. But so what, I enjoyed reading a publication which directly and to my mind successfully addresses areas some other books and far too many instructors fail to reach.

The book, at £6 plus postage, is available from Harold at Applegarth, Leconfield, Beverley, East Yorks HU17 7NQ.

STEVE LONGLAND, *CFI of the Cambridge University GC*

Uvalde may be just a speck on the map of the Lone Star State. It hasn't even got its own gliding club (yet) but its 1991 World Gliding Championships will be remembered for day after perfect flying day, when the cu obligingly moved into place as the grid launched.

Local people turned out in force to enjoy the spectacle, besides offering enthusiastic support and unstinting hospitality in so many ways. An army of non-gliding helpers pitched in and learned fast about soaring and its ways.

On the downside, such strong conditions can overbrew into storms of considerable violence. We had a foretaste during practice and on Day 7. First the airfield was choked by a duststorm and then the entire Open Class was washed out of the sky. Denmark's Stig Øye passed that night, sustained by his little fire, watching his Discus floating on the stock pond which was his touch-down point.

Stig explained in the *Uvalde Leader News*: "I landed in a field but the usable part was too short. I rolled over the embankment and ran into the pond with a splash.

"The glider floated nicely but I could hear the water and then it started running in. I was in the middle of the pond," Øye said. He then swam, pulling the glider along with him. Once on dry land he took the photograph on this page.

The OSTIV plaque with the Klempere award went to Cedric Vernon for "his outstanding contribution to the technical development of sailplanes through an uninterrupted activity over about 40 years."

Cedric, who is an aeronautical engineer and been a glider test pilot, is on the BGA Technical Committee, the OSTIV Board for 23 years and since 1966 has edited the congress papers. He has also been on the OSTIV Sailplane Development panel since the early 1960s.

He plays a major role in setting and writing airworthiness requirements for gliders and motor gliders, giving a decisive contribution to the content and up-dating of the "OSTIV Airworthiness Standards" which some countries have adopted as legal requirements.

Gaggles tended to form at cloudbase and I counted 18 in one!

The Japanese and Finnish teams went stochastically on, despite the tragic midair collision in which the 25 year-old Finnish aeronautic student Anssi Passila lost his life. Atsushi Kodama ejected to safety from his inverted and tailless Discus.

The POST task which pilots love to hate, was set for one Class per day and was, as usual, the subject of much debate.

Crew work was quite trying in the dust and sizzling heat, but only three rattlesnakes came to join in! Clouds of monarch butterflies, dragonflies, soaring buzzards, the crystal rivers and ever changing skies were a bonus.

Launching from two hard runways simultaneously was at a cracking pace. The first day saw 114 gliders airborne in 57min.

Long tasks became commonplace and the

WORLD GLIDING CHAMPIONSHIPS

Uvalde, Texas – July 28-August 1

The following is a brief report from Angela who will be writing a longer one for the next issue. Also on p240 we have some observations from Platypus, our spy in the back seat of the ASH-25 flown into 16th place by Robin May. Sadly, Platypus was called home half-way through the Championships due to family illness



Some members of the British team at briefing. Left to right, Dave Watt, Robin and Michael Bird. Photo: Tony Segal.

weather briefings with hourly satellite updates were very thorough, thanks to the team of energetic and helpful Met men. Daily pilot briefings, however, seemed too short by UK standards. There were no microphones to amplify questions from the floor and no tales, either cautionary or instructional, of how each day in the west was won!

The daily battle of the scales was an irritant. The highly sensitive equipment reacted to each puff of wind to the point where only the quickest eye could follow the needle's swing and decide on a weight.

Charlie Spratt on the finish line gave his verdict on the safest, most stylish finish each day and one morning brought in the armadillo who paused from airfield mining to help him do it.

Gliders which attracted attention were the prototype Polish SZD 56 (only 165-172kg it can uplift its weight in waterballast, despite, as the weatherman noted, having a "drinking straw for a fuselage"), the few sporting winglets and the four Nimbus 4s. Bug-wipers probably didn't rule

the day as my fingernails found fewer than usual bug heaps.

Robin May lost his co-pilot to a family crisis half-way through, but was allowed to fly his ASH-25 solo ballasted à la Platypus. Justin Wills (LS-6) had three day wins.

Regular reports went out on local radio and the *Uvalde Leader News* went so far in its coverage as to print the menus offered by the generous Uvalde citizens who hosted "Nationality Parties", while Marion Barritt from Minden worked through the night to produce the *Uvalde Express* with results and stories of the present and past Championships.

Overall, a competition which involved the whole delighted community and provided the finest flying conditions some pilots will ever experience.

After a nailbiting wait for confirmation due to very close final points, three very popular winners mounted the podium on Sunday, August 11 – three World Champions from Holland, Australia and Poland. Proof that the better supported teams do not necessarily nab all the prizes was very cheering.

Baer Selen (Discus), 1978 World Champion,



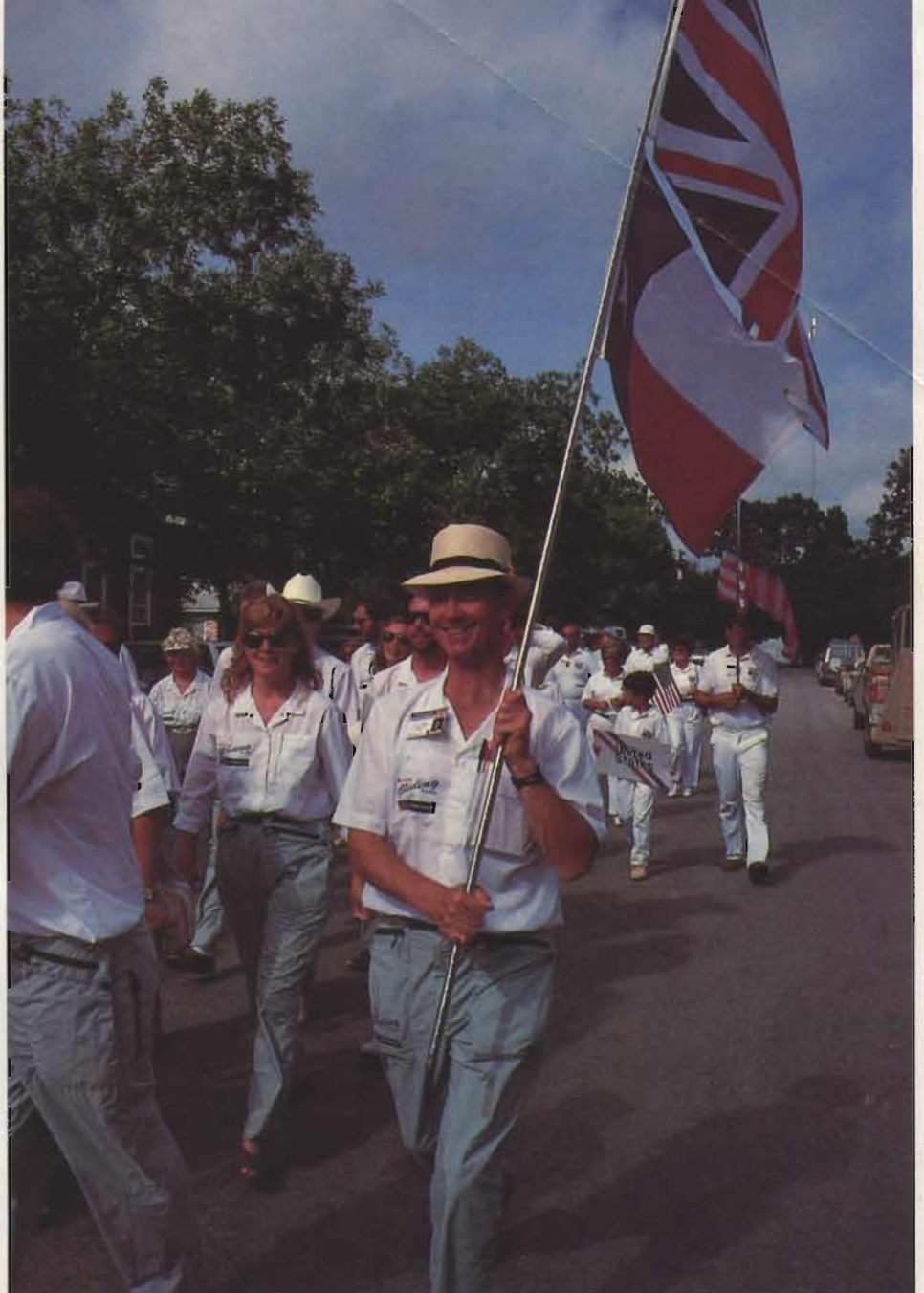
Andy Davis photographed by Michael Bird.



Gillian and Justin Wills. Photo: Tony Segal.



Motorola sponsored the British team.
Tony's photograph of Chris Garton.



Above: Ben Watson leading the British team at the opening parade. Below: The British contingent. Photos: Michael Bird.



won the Standard Class 176pts ahead of Janusz Trzeciak (SZD 55-1) of Poland who had only 6pts more than Eric Mozer (Discus A) of the USA.

The 15 Metre Champion is Australian Brad Edwards (LS-6b), 40pts ahead of the highest placed Frenchman, Gilbert Gerbaud (LS-6c). Doug Jacobs (LS-6b) of the USA was in 3rd

place with 51 fewer points than Gilbert. Justin Wills won day 12 (as did Trzeciak) but only made 8th overall.

In the Open Class Janusz Centka of Poland flew to a wafer thin lead of 10pts in an ASW-22b he saw for the first time on arrival here! Holger Back (Nimbus 3) of Germany was 2nd with

Gerard Lherm (Nimbus 4) of France in 3rd place. There was a wonderful fly-by of tugs after the last launch on the last day.

Humour – flags refused to fly. Medals were placed on the wrong necks and had to be swapped round.

Sadness too – memories of Anssi Passila.

FINAL RESULTS
Open Class

Pos	Pilot	Country	Day 1 Glider	502.9km	Day 2 POST	Day 3 476.4km	Day 4 634.3km	Day 5 POST	Day 6 679.1km	Day 7 632.8	Day 8 POST	Day 9 POST	Day 10 612.3km	Day 11 579.2km	Day 12 487.9km	Total Points
1	Centka, J.	P	ASW 22B	959	875	963	953	945	939	681	954	973	1000	986	883	11 111
2	Back, H.	D	Nimbus 3	941	1000	977	954	967	937	576	934	988	828	999	1000	11 101
3	Lherm, G.	F	Nimbus 4	964	988	941	945	960	937	581	981	1000	918	890	882	10 987
4	Holighaus, K.	D	Nimbus 4	896	894	988	965	945	979	914	915	986	793	795	895	10 965
5	Lopitiaux, J.	F	Nimbus 4	952	985	937	944	972	934	581	983	999	917	868	887	10 959
6	Renner, I.	AUS	Nimbus 3	1000	854	961	915	971	951	635	884	985	984	952	846	10 938
7	Gimmey, R.	USA	Nimbus 3	884	934	1000	970	933	986	581	965	929	932	943	880	10 937
8	Kurstjens, G.	NL	Nimbus 3	1000	913	991	934	964	963	615	866	965	753	981	884	10 829
9	Buchanan, J.	AUS	Nimbus 3	860	915	951	1000	916	1000	581	863	935	938	851	878	10 710
10	Wujczak, S.	P	ASH-25	954	875	906	919*	880	929	681	863	935	919	931	845	10 637
11	Lynsky, R.	NZ	Nimbus 3	971	927	914	817	913	834	863	823	936	920	963	944	10 543
12	Horvath, L.	H	Nimbus 3	885	882	924	914	866	965	1000	731	825	896	710	841	10 369
13	Pettersson, A.	S	Nimbus 3b	870	917	946	814	882	925	500	915	946	860	925	869	10 369
14	Laur, E.	D	Nimbus 4*	945	500	894	927	968	865	541	828	961	918	1000	971	10 318
15	Forssten, J.	FIN	Nimbus 3	849	868	970	892	885	854	581	905	939	906	834	767	10 250
16	May, R.	GB	ASH-25	732	886	760	935	896	921	58*	904	889	912	963	827	10 206
17	Bourgard, P.	B	Nimbus 3	798	935	957	846	864	948	308	856	877	911	753	867	10 120
18	Knauff, T.	USA	Nimbus 3	991	455	925	953	1000	940	548	805	905	971	744	777	10 014
19	Haggenmüller, R.	A	Nimbus 3b	710	892	906	866	850	781	581	967	874	750	831	720	9728
20	Blätter, F.	CH	Nimbus 3i	765	846	982	883	892	957	581	767	872	870	393	727	9535
21	Aboulin, L.	F	Nimbus 3b	911	360	928	855	892	803	581	824	840*	765	845	835	9465
22	Binder, H.	CH	Nimbus 3i	688	890	942	934	896	963	540	801	885	292	798	802	9431
23	Delore, T.	NZ	Nimbus 3b	786	861	910	937	888	718	581	772	908	788	339	761	9249
24	Sada Salinas, R.	MX	Nimbus 3b	195	386	679	749	807	639	581	375	863	709	310	762	7055

GPS price breakthrough!

Lat, long and altitude every second

for just **£1199***

THE WORLD'S BEST GPS IS NOW
THE MOST AFFORDABLE – BUT ONLY
FOR A LIMITED PERIOD

Flying associations, clubs, schools: special offer on group and educational purchases.

Plus £329 trade-in allowance.

Here's a price breakthrough from Trimble Navigation, world leaders in GPS technology. Trimble's rugged, handheld TransPak GPS receiver is now available for just £1199 plus VAT.

What's more, while stocks last Trimble will give you a trade-in allowance of £329 on any Decca, Loran Transit Satnav or non-Trimble GPS. This means that all the advantages of a Trimble 3-channel TransPak are yours for just £870 + VAT.

* excludes VAT. External antenna option just £235 + VAT

LOOK AT THESE FEATURES:

- ▶ Lat, long, altitude and time every second
- ▶ 99 waypoints
- ▶ Course and speed made good
- ▶ Cross-track error
- ▶ Bearing, distance and eta to waypoint
- ▶ Hand-held with external antenna option
- ▶ Land, sea or air modes
- ▶ No initialisation ever required



Trimble Navigation

More details from your dealer or from:
UK Sales, Trimble Navigation Europe Ltd, Trimble House,
Meridian Office Park, Osborn Way, Hook, Hampshire RG27 9HX.
Tel: 0256 760150 Fax: 0256 760148

TAIL FEATHERS

TEXAS NOTEBOOK

Platypus wrote these pieces for the Uvalde Express, the World Championships daily newsletter.

Great snakes

The best glider pilots are supposed to make a fresh decision every 30 seconds. This is supposed to illustrate what massive intellectual pressures our Champions are under as they battle with the elements. What it in fact means is that the greatest soaring brains in the world have the attention span of all of 30 seconds on a good day. A grasshopper could concentrate longer.



Killer bees.

This was well demonstrated by the response to the excellent lecture by Dr Cannon (one of the big guns in aviation medicine, as they say) in which he strove, against the collective will of the finest gliding minds in our globe, to get across the simple fact that the greatest danger to pilots flying in this neck of the woods was dehydration. Not snakes, nor alligators, nor the National Rifle Association, but plain lack of water. Dr Cannon's problem was that he addressed himself to the left-handed side, or rational and cogitative, side of the audience's cerebellum (or cerebella, since glider pilots can never be said to be all of one mind).

"So you can see from all these graphs and tables that you must drink lots of wa ..."

"What about cobras ...?"

"There are no cobras. As I was saying, drink lots of ..."

"What about coral snakes?"

"Forget the coral snakes, it's thirst you ..."

A long argument ensues in the audience about whether snakes kill their victims with anti-

coagulant or coagulant ... or by attacking the central nervous system.

"It doesn't matter, you won't die" explains a slightly impatient doctor.

"Not even from a rattlesnake sitting on your parachute?" asks an insistent pilot.

By now Dr Cannon is clearly wishing that his tormentors were sitting on rattlesnakes.

I was tempted to bring up the report I'd heard during three minutes of TV news – mixed in with 57 minutes of advertisements for haemorrhoid cures etc – that there were 200 swarms of killer bees loose in southern Texas. That would have prevented me from raising the key issue: "What happens to people who have had nothing to eat since breakfast and have to wait till past 9pm listening to a load of irrelevant questions?"

But, being neither a pilot (admired and respected for their ability and status) nor crew (cossetted, or at least tolerated, for their sacrifice and selfless labour) but an insignificant in-between, a back-seat-pass-the-pee-bags-and-please-don't-vomit-down-the-great-man's-neck-co-pilot, I kept silent.

Dr Cannon deserves a medal, it's his audience who should be fired.

Not quite praying for rain

The most depressing part of this competition, from a selfish point of view, was watching the solo Nimbus 3s and 4s sliding away from the ASH-25 when conditions were strong (more than 6kt or 3m/sec) and when cruising speeds between thermals went past 108kt (200km/h). I began to pray for a moderate to good English day when cruising speeds would come down to a civilised 80 to 90kt (150-170km/h) or even a max L/D day. It looks from the speeds achieved that rates of climb and cruising speeds must have dropped significantly in the days after the Big Wet Mass Landout on Day 7 that is, after I departed. I'm told that one day people were even dumping water during the race rather than on the spectators at the finish – I hope that was so. No flight is truly memorable unless you can remember the precise breed of chickens looking up at you from the pasture you nearly landed in.

Noted in Uvalde

- The friendliness and courtesy of all the people in Uvalde. They are really pleased to see us, and I do not just mean the shopkeepers.
- A talking pickup truck: as we came out of a restaurant and walked between two parked vehicles, one of them boomed in a Robocop



voice "Get-away-from-this-vee-hicle! You-are-too-close!" It's the only time I've ever wished to vandalise an innocent pickup truck, partly out of curiosity as to what it might have to say on the subject.

- The exceptionally good value for money of Uvalde's restaurants, which are easily half as expensive as the equivalent in Britain.
- The heat. One has to admire the pioneers who built Texas in the days before air conditioning – and wonder what the energy bill is for driving those ever-present machines in cars and houses and offices. As much as New York State uses to keep warm in winter?
- The domination of the automobile. I have seen no pedestrian crossings or "islands" half-way across those wide, wide roads. You just take your life in your hands and dash. Yes, Granny, that means you too. (So that's why the little of ladies all wear Olympic running shoes!)
- The perpetual sunshine. I could hardly believe the statistic that over 95% of days are good for cross-countries, but we are coming up to that ratio already since arriving here and no relief in sight. Nevertheless the yearning for a cool, wet English day is not strong: this last spring and summer in Britain – and I suspect Europe as a whole – has been the worst for 34 years, that is, since I started gliding. I recommend a spell here for Europeans who just yearn for the crowing of happy varios for a change.



Wouldn't bother with big wings.

- The speeds that little ships are doing are phenomenal. If I lived here I think I wouldn't bother with big wings. If you can do 140km/h in a Discus who needs 25 metres?
- "Andy Pybus flying a Discus from Australia at 138.5km/h ..." announced Mark H. at briefing today. Andy, Sir Charles Kingsford-Smith would be proud of you; his flight in the other direction in a Fokker Tri-motor could not have been much faster.

Progress? Hah!

In 1965 at South Cerney, England, I was the editor of the World Championships' daily newsletter. It was produced on a state-of-the-sixties-art duplicating machine, without benefit of today's technology. I'm now devoted to micro-computers and am trying to teach myself desktop publishing techniques – using manuals which literally weigh more than the computer itself – in any quiet moments during this contest. (There haven't been many quiet moments yet

but you just have to blame the relentless thermal machine that is Texan weather.)

However, I think that in one sense the old technology is less stressful. Inadvertently hitting the carriage-return on a manual typewriter could not send all your laboriously-gathered work to the great databank in the sky, never to be seen again; nor could it dump all your text in a jumbled heap of letters at the bottom of the page.



Any mechanically-adept person.

Duplicating machines could be fixed by any mechanically-adept person, but a modern laser-printer can suddenly refuse to take orders and start giving you stupid messages like "There-is-no-paper-in-the-printer" when it is chock full of paper, or sniffily "The word-processor and printer are not communicating."

Again the urge to vandalise the stupid insolent hardware, like the talking robocop truck, is almost irresistible – though the cause is usually diagnosed as a "software problem." That's technospeak for "I have no idea what's wrong – we'll have to ring the supplier for 24 hour service." Which means, hang on to the phone for 24 hours before discovering you are asking the wrong people the wrong question. Then they either say accusingly "You're the first person to cause this kind of problem" or admiringly "You're the very first person to discover that the Lasergrauncher IIx is not fully compatible with the latest Wordmangler III upgrade. Thanks for finding this bug in our system! We'll let you know in six months ..."

Feats of clay, or anyone here speak cuneiform?

Following the logic of these reactionary thoughts, the next edition of *Uvalde Express* will be produced on clay tablets and left in the Texan sun to turn into hard copy. If you want duplicates from this office, no problem. Just bring your own mud.

Is there a substitute for span?

I read a book of summaries of the OSTIV lectures on the way home, and despite the best efforts of the cleverest brains in the gliding movement to render their papers totally incomprehensible, I actually understood some of it, or I think I did.

By the number of papers, I guess that lots of theoretical work is going into the World Class glider of 13.4 metres, no flaps and a fixed wheel. I look out from my study and shudder at the 13.4 metres. To keep such a device airborne in northern Europe would not just require the combined talents of Heide and Holighaus at the drawing board but a World Class pilot at the controls. For Texas, yes, terrific! But in Texas wings are just ornaments. One of those ten-gallon hats would do the job.



Ten-gallon hats.

A thank you to the minds and hands that make soaring possible

What is remarkable is that the world's glider designers have produced aircraft capable of such a wide range of performance in all conditions, from soggy days in northern Europe to booming days in the desert. To name names would be invidious, but Klaus Holighaus must surely be the most remarkable man in gliding today: nobody else is both a top designer/builder

and top pilot of such stature. All the same, the day I stop wanting to buy my gliders from Gerhard Waibel or Martin Heide will be a sad one –

"I thought you said naming names was invidious?"

"It is; I write a very invidious column. It's the only reason people ever read the papers these days."

Cooling off

Coming home from abroad, you see your own country with new eyes. Texas skies are lovely, but the terrain (says he, now safely out of reach of his generous hosts) is fairly drab. In England it is the other way round. So green and undulating the land; so grey and flat the clouds. The European Women's Championships are currently taking place in the Midlands and they all have my deepest sympathy: the only consolation is it's great for your complexions, ladies! (Thanks for nothing, they all chorus.)

After the rectangular fields, grid-plan towns and arrow-straight roads of America, I was vividly reminded, on the approach to Gatwick, that most fields in England are any shape but rectangular, towns are a disorderly muddle and no British-built road is straight. I once said this to a Canadian airline pilot sitting alongside in the Caproni Calif – this was a year before I sold up and 18 months before the wings fell off, but that is another story. He contradicted me: "There's a straight road, from horizon to horizon." "That" I



Fairly drab.

said "was built by the Romans two thousand years ago, and since then someone has lost the piece of string."

GLIDING POSTCARDS

Two more glider pilots have published sets of postcards featuring their photographs (see also the last issue, p211). The *ASH-25 over the Alps* is by Jacques Noel of 16 rue Emile Boyoud, 04600 St Auban, France and the *Nimbus 2c at rest after a wave climb to 19 000ft* is by Steve Bicknell of 16 Lexham Mews, London W8 6JW.





Allan Alstead and Lemmy before a flight in the Puchacz. Photo: Glen Douglas.

COMPETITION ENTERPRISE

Aboyne – June 29-July 6

The weeks before the starting date of June 29 had been wet, with nearly double the normal rainfall. Very little soaring had taken place and the usual westerly wave had been conspicuous by its absence. Those of you who have been to Aboyne will well know that the dreaded wind is the one from the east. The north-east coast often develops a mantle of grey mist (the haar) and this can roll inland and cut off any heating which might cause the odd thermal. Low pressure to the south of Aboyne produces exactly these conditions

The long-range forecast for Enterprise week was for low pressure to the south and high pressure to the north of Aboyne giving easterly winds, a continuation of our unseasonal and unsoarable summer and the prospect of the cold and clammy haar.

But, Aboyne has that ability to produce soaring days if it is flyable and therein lies its strength. The opening day arrived and the sun was shining. The Competition was declared "open" by Allan Alstead, chief executive of the Scottish Sports Council, and the first task briefing got under way.

Day 1, Saturday, June 29

Met: A weak ridge would cross Scotland followed by a trough giving increasing cloud and rain.

Task: Multi O/R to any of the 28 listed TPs. Each O/R to be shorter than the previous one!

John Bally (Nimbus 3) was first away, taking full advantage of his previous two practice days to get organised. Soon there were no gliders left on site. About three hours went by before the first landing reports indicated that there were as many choices of TPs as there were pilots! John Bally landed at Banff after flying 332km. Good flights also by Ron Davidson (SB-5) and Dave White (Vega 17). Everyone got back in time for the barbecue and the rain stayed away for that too!

Day 2, Sunday, June 30

Met: Scattered showers, some heavy. Light winds.

Task: Distance round any three TPs.

This task caused some anxiety among some pilots who having landed back at Aboyne realised that "distance round" meant precisely that! As it was, substantial showers blocked many of the routes and no one managed more



Tony Smallwood took this photo of his Gull I and John Bally's Nimbus 3. Photo: Glen Douglas.



Lemmy with John Fielden (in the centre) and John Bally. Photo: Tony Smallwood.

than three TPs. John Bally again flew furthest (221km) but was beaten on handicap by Justin Wills (Vega) achieving 219km. Justin was at Aboyne fresh from his success in the Swiss Nationals but flying Mike Pope's Vega for the first time. Tony Smallwood in the Gull 1 departed in a clear patch and returned a few hours later just before a storm produced heavy rain and visibility of half a mile.

Some gliders did not get away and some that did could not be retrieved until the following day.

Monday, July 1

Low cloud, mist and drizzle. A rebrief was planned for 1400hrs. A lot of pilots and crews went turnip picking and came back with a trailer full. When they were shaken out a dishevelled K-6E appeared as well. Chris Nicholas said that as he had had little or nothing to do with the retrieve he could not understand how all those turnips had got in the wheel box! Neep picking seems to develop a thirst and the Lochnagar

distillery was chosen as a TP. Everyone that started got round but no one could remember what the task was, so the day was scrubbed.

Tuesday, July 2

More low cloud but a hint of better things in the afternoon.

Task: A triangle using TPs within a prescribed area. Some gliders managed to soar in the afternoon but did not find the low cloudbase good enough to leave the site.

Wednesday, July 3

Little change, still the easterly gloom. The Enterprise Club Committee met and discussed future venues and possible developments. The day was scrubbed at 1200hrs. A few hopefuls went to Feshiebridge and found some sun but no soaring.

Day 3, Thursday, July 4

Met: Early fog clearing by mid-morning. Wind ESE, light. These conditions often produce usable wave and hopes rose of some good soaring.

Task: Alternative O/R speed to any TP within a prescribed area.

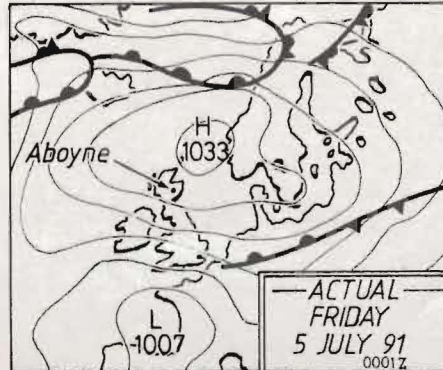
Ron Davidson was launched to see if there was any lift and as soon as he had said there was wave the rest of the field eagerly launched. It was apparent that although there was wave it was difficult to use in the blue conditions and was not going very high. Most of the pilots used the nearer TPs to get speed points but failed to beat Tony Smallwood who, with the Gull's handicap advantage, turned a 29km/h speed into a large number of points. Graham Keates (DG-200) completed the task then told his partner how to do it. Jim Davidson (DG-200) then put up the best speed for the day but did not get enough distance points to do better than 3rd for the day.

John Dransfield, (Deeside CFI), who had spent all day fixing the Kestrel airbrakes, took off at just after 6pm and managed to complete an O/R, landing just before 10pm. While all of this was going on Justin Wills took John Fielden

up in the club Puchacz for some local soaring. Some six hours later they re-appeared to the delight of the crew and the relief of the queue for the two-seaters. They had been to BR at Rannoch, the highest station in the UK, and on handicap beat even the Gull. They got a prize for being "Enterprising". This was a day of memorable flights.

Day 4, Friday, July 5

Met: East winds, some cu, likely wave. (See chart.)



Task: Cat's Cradle.

This was a very hard day. It was difficult to get away easily and the small thermals which developed around the site did not go high enough to contact wave. Only three people scored.

Ron Davidson landed 14km away and retrieved himself. John Bally who had launched second had said nothing all day, but Justin was heard frequently asking Gillian if this or that field was all right. Gillian herded sheep into corners and reassured Justin that rocks in some fields were only cow pats! By this process he slowly crept up the Dee valley using any rock which might produce a flicker on the vario. His long patience was rewarded eventually when the ridge lift at Braemar turned into wave. This enabled him to get round two TPs before he once again got low and had to resort to the ridges. A

tour de force of nearly 8hrs scraping for 151km.

John, meanwhile, had also had a session of difficult ridge soaring before getting well established in wave which, with perseverance, got him eventually to 15 000ft and a distance of 405km. These flights are unlikely to be forgotten either. John had by now built an unassailable lead but the minor placings were still wide open.

Day 5, Saturday, July 6

Met: Similar conditions again.

Task: Multi O/R using any of three TPs.

As briefing finished, the sky to the west displayed beautiful layered lenticulars. Small, ragged cu began to form over the airfield. Dave White (Vega 17) was first off and soon afterwards was followed by a number of others. However, the air was very rough and produced lots of sink. Some were on the ground again very quickly and there were some early landouts.

Ron Davidson, in a valiant attempt to reduce weight, slowly emptied his wallet with numerous aerotows but to no avail. Those who got into the wave were able to get round one or more TPs. The cloud cover, although thin, was making visibility poor and as there was a bonus for landing at Aboyne many opted for that rather than tempt fate. Justin and John arranged a formation fly-past to finish the day and yet another memorable Enterprise at Aboyne.

John Bally had been uncatchable

The prizegiving and barbecue were held in sunshine at almost the scheduled time (for once) and we were delighted to have Val Fielden to present the prizes. Dave White had won the day with just enough points to tie with Justin for 2nd place overall. John Bally had been uncatchable but got 3rd place for the day and the overall winner's trophies.

Aboyne had produced six soaring days, of which five were contest days, some exciting and memorable flying, all in the most unlikely weather. Next year Enterprise will be at Sutton Bank. Book your place!

Final Results

Pos	Pilot	Glider	1.29.6	2.30.6	3.4.7	4.5.7	5.6.7	Points
1	Bally, J. D.	Nimbus 3	255	195	501	341	236	1528
2=	Wills, T. J./Pope, M. H. B.	Vega 17	56	197	120	166	271	810
2=	White, D.	Vega 17	182	165	189	0	274	810
4	Smallwood, A.	Gull 1	DNF	81	513	DNF	DNF	594
5	Keates, G./Davidson, J.	DG-200/17	63	DNF	469	0	20	552
6	Housden, R. & T.	ASW-20CL	121	40	180	0	149	490
7	Dall, R.	ASW-19	40	48	202	0	148	438
8	Nicholas, C.	K-6E	100	65	233	0	0	398
9	Dansfield, J./Holloway, G.	Kestrel 19	101	39	65	0	153	358
10	Longstaff, W.	Dart 17R	121	63	DNF	0	172	356
11	Gaunt, N./Grainger, J.	LS-7	150	69	128	0	0	347
12	Davidson, R.	SB-5	202	48	81	15	0	346
13	Franks, H.	Libelle	94	45	137	0	14	290
14	Owles, C.	Dart 17	47	76	142	0	0	265
15	Moorhouse, K.	Ventus B	99	50	77	0	0	226
16	Poole, P.	Kestrel 19	43	0	56	0	0	99
17	Feakes, R./Eastwell, B.	ASH-25E	62	33	0	0	DNF	95
18	Harrison, T.	H-301	DNF	0	75	0	DNF	75
19=	Mossman, A.	PIK 30	DNF	DNF	DNF	0	DNF	0
19=	Sesemann, M.	Ventus T	DNF	0	SNF	0	0	0

SAILPLANE & ENG. SERVICES LTD.

C's of A
REPAIR TO GLASS-FIBRE
STEEL TUBE & WOODEN A/C

DART 17R - £7,550
K-4 - £2,300
SPARES K-13;
PIRAT and SWALLOW

WRITE OR PHONE:
KEN BLAKE
BUXTON 24365

SAILPLANE & ENG. SERVICES LTD.
HOLMFIELD RD., BUXTON, DERBYS.

THE PARIS AIR SHOW

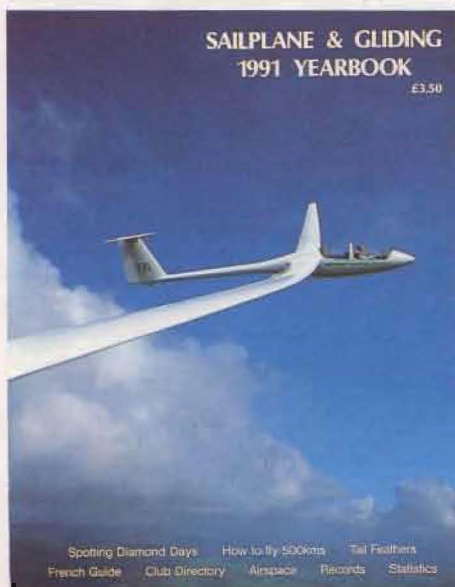
S-10s now wholly built and test flown in unified Berlin

The first Stemme S-10 high performance two-seater motor glider on the British register was displayed at the Paris show in June, following its UK certification under JAR 22 rules. It was about to be delivered to a Guernsey customer – the first of five British sales among more than 50 orders now booked, with some 25 S-10s already built. (See also the last issue, p207 and the February 1989 issue, p10.)

Stemme GmbH was founded in West Berlin in 1984 and began production under special dispensation from what was then the wartime Allies' four-power administration. But it was compelled to install the engines, and test fly aircraft, some 125 miles further west, at Braunschweig in what was West Germany.

Now, after German reunification, all such restrictions have been swept away. Production is still in Berlin's Wedding district but final assembly and test flying is done at the former East

HAVE YOU SEEN OUR YEARBOOK?



A lot of pilots have missed out, despite the publicity given this first issue which is packed with information and articles to form a valuable reference book. It is really a larger version of S&G with great articles and masses of important material. Get your copy now from the BGA at the special autumn price of £2.50 including p&p.



Above: Derek Piggott about to test fly the S-10 with Michael Rose of Stemme as P2. Photo: Mike Jefferyes.



The Flamingo. Photo: Photo Link.

German military field of Strausberg, 25 miles east of the city.

Three of the S-10s already delivered are specially equipped light surveillance versions, carrying in underwing pods sensors for such scientific purposes as pollution monitoring and control and for which their high fuel efficiency, long endurance and low noise level make them particularly suitable.

Sperber dons sombrero

Last on the market as the RF-5B Sperber and built in Germany, the classic French René Fournier two-seater motor glider is now available as the AJ1 Serrania and is built at Seguria, in southern Spain.

Manufacturer Aeronautica de Jaen SA, formed in 1989 and with a number of interests in

SCHEIBE "FALKE" SF25C 2000



Superb Touring and Training
Excellent Take-off Performance
Improved Handling
Classic Construction
Tricycle under-carriage available
Every School in Germany uses one

SOARING EQUIPMENT LIMITED
193 RUSSELL ROAD
BIRMINGHAM B13 8RR
Tel: 021-449-1121 Fax: 021-449-9855

FLYING THE STEMME S-10

Extracts from a test flight by Derek Piggott. See also George Lee's first impressions of this high performance self launching glider in the February 1989 issue, p10

The Stemme S-10 is one of the most elegant soaring machines ever designed, with superb surface finish and attention to detail throughout. Dispel any thought that this is an underpowered, low performance machine. With a best L/D of over 50:1 it is a formidable competitor to the best Open Class gliders. Under power it climbs at well over 5kt and can cruise 500 miles at 90kt.

A steel frame behind the cockpit mounts the engine, undercarriage and three-piece wing. Easily removable panels allow engine servicing without dismantling the wings.

The twin undercarriage is electrically operated with manual back up. Effective hydraulic disc brakes are fitted, and the steerable tail wheel gave easy control taxying in a strong crosswind over uneven ground.

Power Unit

The Limbach L2400 transmits 95hp at 3400rpm via a centrifugal clutch, flexible couplings, prop shaft and five belt reduction gear in the nose. The shaft is enclosed in a Kevlar tunnel between the seats. Certification required a broken shaft to be safely contained at wide-open-throttle about 5000rpm! Vibration is so low it is almost unbelievable that the shaft passes through the cockpit.

Gliding, the folding propeller is cleverly concealed by the nose cone. This moves forward to allow the blades to unfold like a penknife by centrifugal force when starting. At height, the engine is switched off and de-clutches automat-

ically. The windmilling prop is braked, the sprung-loaded blades fold inwards, the assembly is easily aligned and the nose cone closed.

The Cockpit

The canopy is hinged at the front and held open by two gas struts. The rudders and seat backs are adjustable and there is plenty of room. The side-by-side cockpit provides a very large instrument panel.

The minimum cockpit load is a very reasonable 70kg (140lb pilot + parachute). The maximum load is 214kg of which up to 180kg may be cockpit load. Although the cockpit looks complicated, in practice everything is simple and logical to operate.

The nose cone must be locked forward before the engine can be started; this also opens the engine cooling vents. The blades unfold as the starter operates, then the ignition is put on.

The take off is simple; the Flight Manual gives a believable ground run on grass of under 300m. The recommended 62kt gives a healthy climb of 5-6kt at full throttle. I was told that it was very quiet from the ground.

Fuel consumption at 3000rpm (95-100kt) is about 15 litres/hr. Each wing contains a 45 litre tank giving a useful range for Continental touring! Unlike most other high performance motor gliders, the four stroke Limbach will run smoothly at cruising rpm all day. In the cockpit the engine noise seemed very reasonable. I happily flew without the headset until needing the radio.

Gliding

Gliding, the aircraft becomes incredibly quiet,

is remarkably comfortable and the view all round superb.

The elevator is light and the ailerons and rudder become heavier over 80kt. At 55kt the ailerons are light with a pleasant progressive feel. It is easy to roll from 45 to 45° in 5sec, which is excellent for 23m span. Ten degrees of flap enables very steep turns at 50kt.

Performance

At 100kt the glide ratio is 1:30 (2°) and even at 146kt VNE the glide is remarkably flat. Min sink is just over 1kt and the weakest lift can be easily exploited. I was fortunate to fly it on a good spring day – flown dual it climbed well against other gliders.

The stall is a non-event with two pilots. Bringing the nose well up causes a gentle buffet and a gradual lowering of the nose at about 40kt. Large amounts of rudder and slow skidding turns had no real effect with little tendency to drop the wing.

The restart is simplicity itself: master switch on, nose cowl forward and locked, starter pressed and ignition switch on. On every occasion the engine fired up immediately.

Approach and landing

There seems no point restarting the engine for the circuit. The sideslip if ever needed is normal. At 60kt with full brake and full flap it comes down very steeply making spot landings a doddle.

A most attractive feature of the Stemme is the side-by-side seating – the drag of a well designed side-by-side layout should be very little different from the usual tandem.

The Limbach engine, VW derived, is incredibly reliable and the S-10 is never expected to end up landing out. However, should the worst happen, this configuration has the great safety advantage of minimal drag penalty from the engine and propeller – unlike gliders fitted with a fold-out engine.

The S-10 is being produced at two per month, with orders for the next year. The cost? With full instruments, trailer (just in case, but also to save winter hangarage charges) will approach £100 000. Still, what fun you could have with it! ✕

aircraft construction, maintenance and flying training, obtained a licence from Monsieur Fournier to put his elegant 80hp Limbach-powered tandem two-seater back into production.

The first one completed was exhibited at the show and was due for delivery immediately thereafter to the Aeroclub de Madrid. The firm will build another dozen or so this year as the production tempo builds up.

"We have five orders from Spanish customers, one from Egypt and will deliver two in kit form for home completion in Italy. If we get sufficient sales we will produce about 20-22 aircraft next year," Aeronautica de Jaen director-general Juan Garcia was saying at le Bourget.

Price of the Serrania, with standard equipment, was quoted at 7.5 million pesetas ex

works. The maker's UK agent is Soaring Equipment Ltd, of Birmingham.

Flamingo finery

French plastics specialists Rex Composites, of Issoire, displayed the prototype Flamingo ultra-light motor glider only ten days after its unpowered maiden flight.

In an imaginative paint scheme reflecting its name, the Flamingo has a retractable 12cv single-cylinder two-stroke engine delivering enough power for self launching.

With an airframe of Kevlar, carbon and fibreglass reinforced epoxy, the Flamingo spans 11.3m (37ft), with a projected optional extension to 14.8m. It weighs only 98kg (215lb) empty and max AUW is 250kg (550lb). The glide ratio with

the engine retracted is said to be 32:1, reducing to 24:1 with the unit extended. Min sink is 0.67m/sec; VNE is 140km/h (75kt) and stalling – accompanied, say the makers, by *une légère abatée* which is presumably a nice French buffet – occurs at a gentle 56km/h (30kt).

The powered endurance of 2hr 20min gives a potential cruising range of 200km (125mi). Design factors are +4.4 and -2.2g and aerobatics are forbidden.

Production plans are not yet firm but Rex Composites may market the Flamingo as a kit. "The mini motor glider liberates the soaring buff from all the habitual constraints of gliding. It permits pilots of ultra-lights and hang gliders to evolve rapidly into higher performance flying," the company says. ✕

In this part there are some examples of how the wind flows over hills and valleys. The low level flow depends on both the speed of the wind and the stability of the air. At first the waves aloft depend on how well the air follows the contours of the ground but after a time the wave pattern starts to change the low level flow. A small and fairly slow change in one factor may produce a large and rapid change in another.

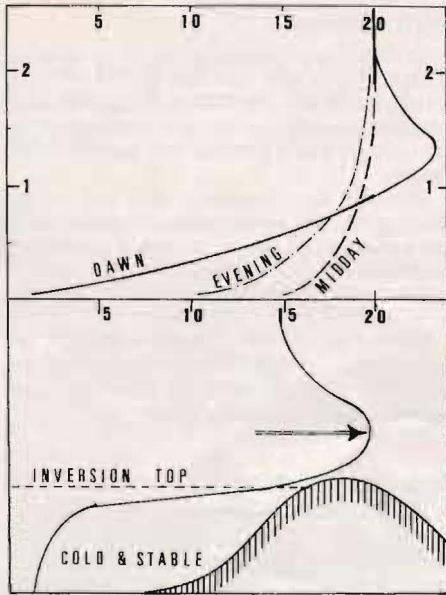


Fig 1
 Fig 1 is a reminder of how the vertical profile of wind (sometimes called the "wind gradient") can vary during the day. Wind speed is shown along the top of each figure, height in thousands of feet is at the side. In the top section there are three profiles. They are all based on a 20kt wind aloft. The full line (marked "dawn") shows very little wind on the surface but a big increase with height leading to a stronger than normal speed at about 1400ft (where the top of the nocturnal inversion happened to be). This excess of speed is quite a common feature. In some circumstances the speed at the top of the inversion is far stronger and then it is called a "nocturnal low level jet." Measurements from the top of very tall TV towers in the USA have shown wind speeds of over 50kt just before dawn. Such nocturnal jets disappear very soon after sunrise.

The pecked line marked "midday" shows the normal change of wind speed with height when the atmosphere is being stirred up by thermals. The dot-dash line marked "evening" shows the decrease in surface wind when the sun has set and the ground cools by radiating heat away into space. The colder the ground becomes the greater is this decrease in wind at the surface.

The lower half shows what happens when the inversion reaches almost up to the hill top. Then the air beneath the inversion is very slow moving and being so cold and stable is unable to clamber up the hill. Cold and stable air behaves in a very lazy fashion; it will never flow up the hill side if it can find a way round by following a valley. In this diagram the hill blocks the low level flow. If the low level air moves at all it will follow the line

WIND SHEAR AND WAVES

Part 2

The first part of Tom's article was in the last issue, p178

of the valley regardless of the winds aloft. At the hill top, just above the inversion, the wind may blow quite briskly but since it has been travelling almost horizontally above the inversion top there is no hill lift.

Fig 2 shows four types of flow across a ridge; the top example (1) is called a subcritical flow. Here there is a stable layer well above the hill top and a strong wind at all levels. The stable layer dips down where the air crosses the hill. It is rather like the aerodynamic flow due to a venturi. There is a fall of pressure and an increase of wind speed over the hill. On the windward side there is a region of higher pressure and a decrease in wind speed. A similar effect occurs on the lee side.

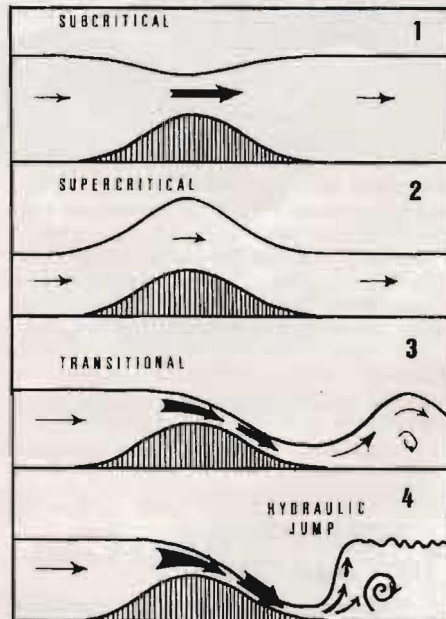


Fig 2
 The flow often breaks away from the ground beyond the ridge leaving turbulent eddies below the surface of separation. (2) This is a type of supercritical flow when the air curves high over the ridge line before dropping down the lee side. In this case the wind speed (at ground level) may actually slow down over the hill crest instead of increasing. On one occasion the Met staff carrying out an investigation at Great Dun Fell on the Pennines found the

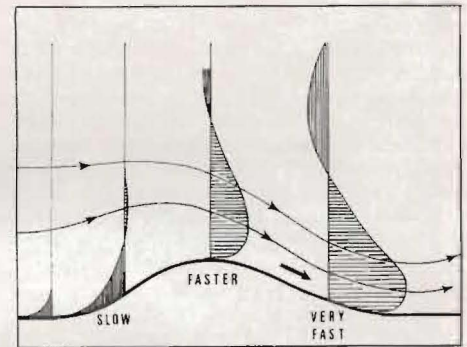


Fig 3
 hill top wind was less than 50% of the upwind speed. (3) Is a transitional flow when the air approaches almost horizontally but then dips down over the ridge and sticks close to the lee slope, producing unexpectedly high winds on the lee side. When this happens the flow does not break away beyond the crest line but follows the slope right down to the valley floor. It then swoops up to form the first of a series of lee waves.

(4) Is a more extreme example. Here the strong flow becomes very shallow and goes shooting down the lee slope like water down a weir. Then it suddenly leaps up to its original depth in a "hydraulic jump".

The hydraulic jump is (as its name suggests) normally seen as a water phenomenon but there are times when the atmosphere behaves very like water in the way it forms eddies, waves and jumps.

Fig 3 illustrates how the profile of the wind varies when there is a strong supercritical flow. The series of vertical lines represents the normal wind velocity. Where surface drag or hill effects slows the air down the effect is marked by vertical hatched lines. Where the air speeds up the horizontal hatching emphasises this acceleration. The main slow down takes place where the air starts to ascend the windward face. Here the usual effect of surface drag is increased; kinetic energy is converted to potential energy as the air climbs the hill. Pressure rises at ground level and the stronger flow lifts above the surface. Over the hill top the speed up is quite marked with a much increased flow. Then down the lee slope the streamlines converge to produce a very fast flow at low levels but a reduction higher up.

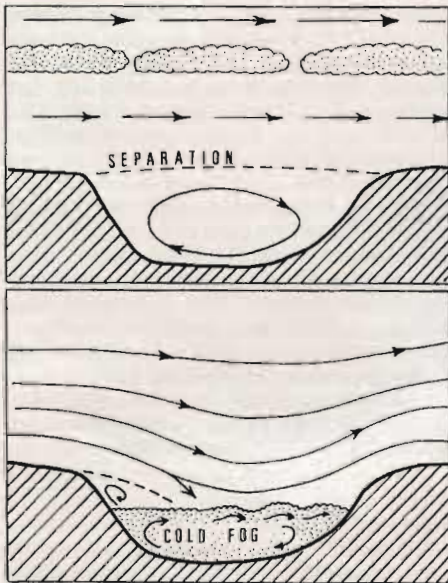


Fig 4

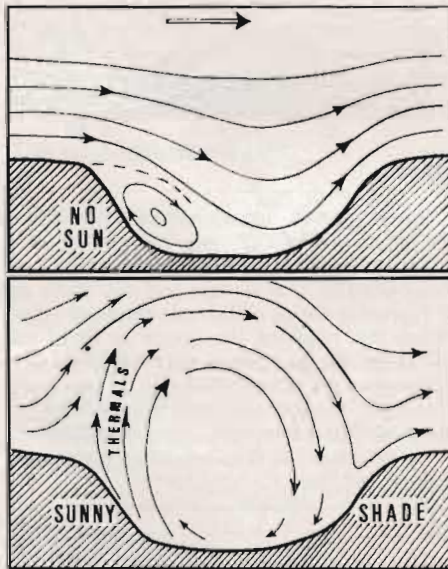


Fig 5

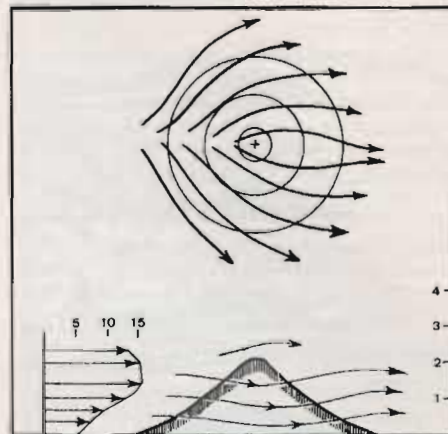


Fig 6

On the downward slope potential energy is being converted into kinetic energy as the air accelerates. There is a drop in surface pressure too.

On strong wave days this fall of pressure on the lee side of mountains is great enough to show up as a marked trough in the isobars. When the Scottish or Pennines waves are active one may find this trough on the lee side. When there is a full strength föhn wind over the Alps the lee trough is a major feature.

Valley flow

Fig 4 (upper part) shows how the flow can separate from the sharp edge of a valley and travel straight across without dipping down at all. A separate slowly rotating eddy fills most of the valley. A layer of broken Sc clouds can blow across without being affected by the valley. If the flow dipped down in to the valley the descent would tend to break up or disperse the Sc layer as it moved across. The lower diagram shows a slightly smoother rim to the valley with the cross valley flow dipping down to produce little wavelets on the top of the valley fog. The air beneath the fog is usually much colder and so stable that it is hardly influenced by the flow above it.

Fig 5 shows a day time flow. In the upper part the lee side eddy is now much smaller and there is a lift on the windward slopes of the valley. In the lower half the lee slope is in sunshine and thermals have been set off from the sunny lee slopes. These disrupt the flow across the valley. The horizontal flow is intermittently deflected over the valley by these thermals. The downflow from thermals may then kill most of the lift on the shaded windward slope of the valley.

Isolated hills

Fig 6 shows a plan and side elevation of an isolated conical hill. The flow was studied by putting up a number of anemometers on the hill side and by releasing a series of constant pressure balloons upwind. These balloons cannot expand so they tend to fly at a set pressure. They respond quite well to the up and down flow. In this first example the air is stable and the wind profile (shown in the lower left hand corner) has a maximum of 15-16kt over the upper part of the hill. The streamlines show the flow separating to go round the sides of the hill. The flow often descends as it goes round the hill side.

Fig 7 shows the same hill when the air was stable above 300ft but the wind was much lighter (only reaching 8kt and dropping off to 5kt above the hill top). Now there is a well marked eddy downwind of the hill and a line of separation going from side to side of the hill just down stream of the summit. This is shown by the pecked line on both plan and cross-section.

Fig 8 shows the flow when the air was unstable and the wind speed a good deal stronger. The plan view streamlines show a convergence on the lee side. The side view shows that the constant pressure balloons were caught in many rising eddies, probably mainly thermic in origin, and went high above the hill top. There is the beginnings of a lee eddy where some of the thermals turned into sink on the downwind side.

Fig 9 shows a conical island when the wind flow was very strong. Here the upper (plan) view shows the air converging to produce a sort of

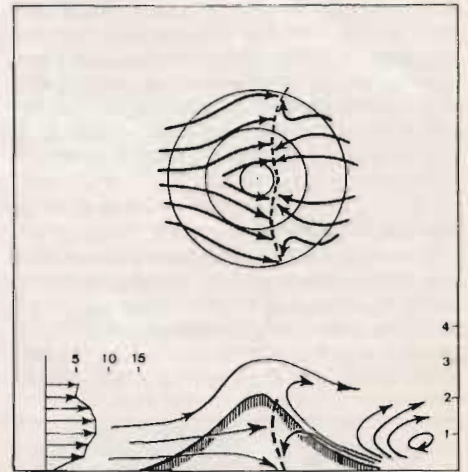


Fig 7

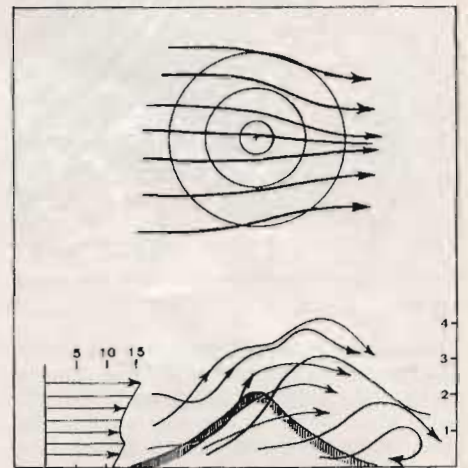


Fig 8

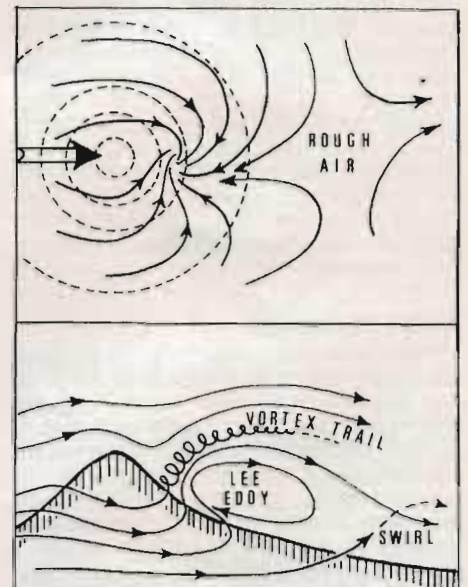


Fig 9

vortex to lee of the summit. At the foot there is another turbulent region where the various streamlines separate. The side view shows a

well developed lee eddy with the probability of some sort of vortex trail spinning away from the convergence zone shown in the plan view. Vortices like these have also been reproduced by laboratory studies of water flow over a similarly shaped obstruction. Aircraft found that in real life the turbulent region trailed far downwind of the island.

Vortex shedding

Much larger vortices are shed by islands several miles wide. A pattern of contra-rotating eddies have been seen when there was an inversion near the peaks of isolated islands. Fig 10 shows a sketch of this vortex shedding pattern to the lee of the arctic island of Jan Mayen



Fig 10

(marked here as JM). On either side are regular cloud streets aligned parallel to the wind but to the lee of the island the streets are broken into swirls which twist first one way and then the other. Similar swirls often occur to the lee of the Canary Islands.

This phenomenon occurs on all scales down to the size of chimneys. Some thin metal smoke stacks are fitted with a spiral strip winding from top to bottom. This spiral breaks up the vortices so that they cannot build up a dangerous resonance and shake the chimney to bits. I have been told that vortex shedding was held responsible for the collapse of a big cooling tower at Ferrybridge. Each time a vortex breaks away there is a pressure jump which switches from one side to the other. This can set up a resonant oscillation which grows large enough to destroy the downstream tower.

Vortex stretching

The air flow may develop horizontal vortex rolls in the strong shear near the ground. If there is an undulating ridge which has promontaries extending out into the wind these vortices may be tilted from the horizontal, lifted off the ground and stretched out. A thermal breaking away may help this process. Stretching a vortex makes it spin faster. The result has sometimes been made visible on a snowy slope. Here the vortex can lift up a swirl of snow like a dust devil. The danger for pilots arises when there is no visible sign of the vortex. It may only give a jolt to a large fast moving aircraft but slow flying ultra-light craft, like hang gliders, which often fly close to the ground could suffer a fatal upset.

Feedback between waves and hill flow

The way air flows over a hill depends very much on the tendency for waves to develop aloft. In part 1 the feedback between low level cumu-

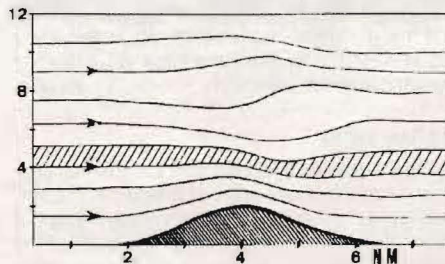


Fig 11

lus and waves aloft was described. This section describes the interaction between waves and hill flow.

Fig 11 shows a smooth ridge with the wind blowing from left to right. Distances are marked along the base line, heights in thousands of feet up the side. The shaded zone between 4000 and 5000ft is a weak inversion. As the flow takes the air across the ridge the inversion dips down on the lee side and then recovers. The streamlines come closer together over the crest showing stronger winds over the hill top and part way down the lee slope. A weak wave pattern grows above the inversion. Notice how the wave front tilts upwind so that the streamline starting out at 9000ft starts to rise ahead of the streamline from 6000ft.

With only a feeble inversion well above the hill top the wave is relatively weak.

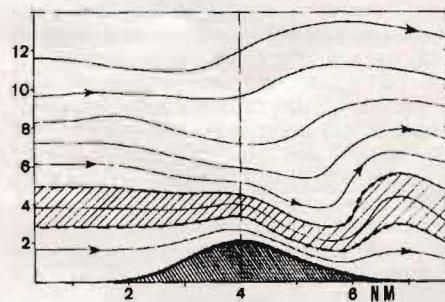


Fig 12

Fig 12 shows what happens when the inversion is both deeper and stronger and the base is lower down. This makes the wave much stronger. In this example the base of the inversion starts out at 3000ft upwind (on the left). It dips down to half this height on the lee slope and in doing so brings the streamlines much closer together, implying a greatly increased wind down the lee slope. The first wave lifts off from the foot of the long slope. The streamline associated with the top of the inversion becomes quite steep two miles downwind of the hill crest.

Once again the wave front slopes into wind with height. The streamline starting out at 12000ft begins its ascent nearly a mile ahead of the crest line while at low levels the lift lies some two miles downwind of the crest.

Fig 13 shows an extreme case when the

upwind side of the ridge is filled with cold stable air so that the low level flow is blocked and never ascends the ridge. This time the upper flow plunges down the lee slope producing very strong winds and then surging up sharply like a hydraulic jump over the downwind valley. This is almost certain to produce a severe rotor and very rough conditions.

In the USA wind speeds have been found to double between the crest of the ridge and the valley floor downwind. The flow is not very stable; the first blast of wind can arrive with a roar bringing speeds of some 100kt. Lulls and further surges may follow. Such exciting events are less common in the UK but many years ago Sheffield, on the lee side of the Pennines, suffered damage to a number of buildings by just such a wind. Further north there were many trees blown down in forests on the lee side of Scotland.

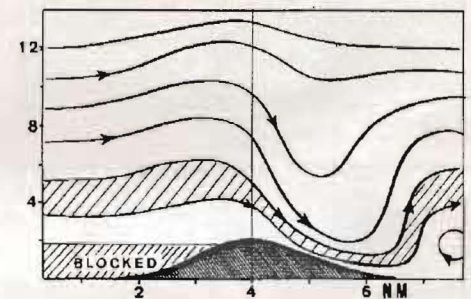


Fig 13

Blocking on the windward side is not essential but seems to encourage this kind of wind storm; blocks may also form on the lee side. Lee side blocks occur when cold and very stable air is trapped to the lee of the main mountain ridge. When this happens the upper air does not penetrate the very stable lower air. Instead it continues more or less horizontally at high level. The effect is to cancel out the mountain almost completely so that lee waves do not develop.

Fig 14 shows five situations which summarise the different flows.

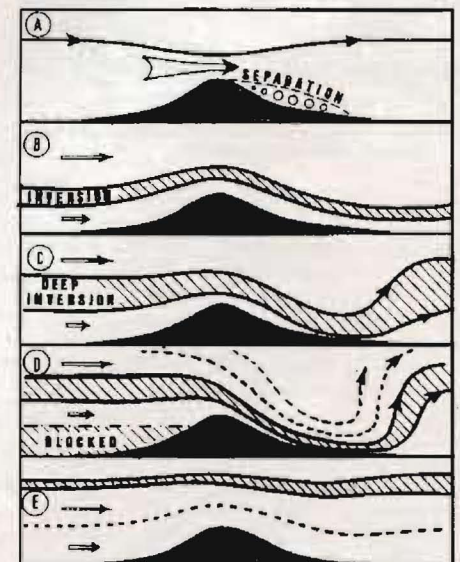


Fig 14

(a) is the subcritical flow when the air makes a dip down over the hill and recovers beyond it. The wind is strongest near the hill crest and the flow often separates downstream leaving eddies on the lee side. Subcritical flow seems more likely when the inversion is more than twice the height of the ridge. At the surface the wind speed is strongest over the ridge top.

(b) is a (just) supercritical flow with the shaded inversion layer rising and falling as it crosses the ridge, ending up rather lower on the lee side. The weak and shallow inversion reduces any wave effects.

(c) shows the difference made by a strong and deep inversion. The air plunges down the lee side and the strongest surface winds may develop down in the valley beyond, accompanied by a powerful wave. This plunge down the lee slope becomes more likely as the inversion becomes deeper and stronger.

(d) occurs when there is cold stable air upwind and the low level flow is blocked. Air from much higher up comes plunging down the lee slope producing a windstorm near the ground and a very steep wave, even a hydraulic jump, over the valley.

(e) shows how everything becomes much quieter when the inversion is weakened and lifted high above the hill. There is only a very weak, wave and the strong winds have died out on the lee side.

The one-bounce wave

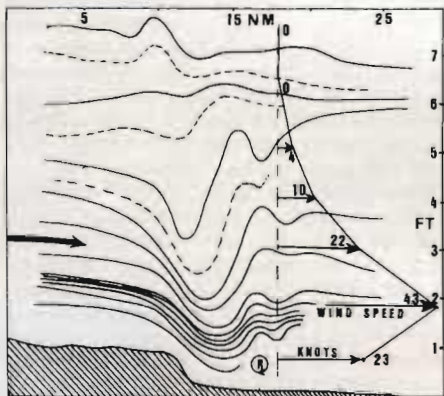


Fig 15

All the best waves seem to occur when the wind speed increases with height (positive wind shear) and there is good inversion just above the ridge top. However, if air blows down off a plateau it gains a good deal of kinetic energy during its descent and sometimes rebounds as a single lee wave. This may happen even when the wind shear is in the wrong direction (speed decreasing with height).

Fig 15 shows a one-bounce wave; it might be termed a hydraulic jump. The lines running across this diagram represent potential temperature. Provided the air is not saturated the potential temperature lines follow the up and down movements of the air. This makes it possible to plot the wave flow by making lots of temperature measurements from aircraft. In Fig 15 the profile of the wind velocity is shown extending from the pecked line just right of centre. The

actual speeds are marked near the end of the arrows. The profile shows the maximum horizontal winds occurred just below 2000ft where the speed rose to 43kt. Above this the wind speed decreased to zero near the 7000ft level. There was just one very steep wave close to the lee slope and it vanished at the zero wind level.

This example was observed in Western Australia but the effect has also been seen in the UK. In this country the air is much moister and such waves are nearly always marked by cloud which shows how steep the wave front becomes. Tony Crowdon drew a sketch of a vertical wave face near Talgarth for the April 1987 issue of S&G, p71. His wave gave a genuine 18kt lift but stopped at 7000ft. Clearly the air was going up almost vertically at this point.

Wave steepening

Lee waves are sometimes drawn as a smooth series of undulations rather like a set of SINE waves. Such waves do exist, especially a long distance downwind of the mountains, but many waves are far from symmetrical. Observations, such as those illustrated in Fig 15 and reported by Tony Crowdon at Talgarth show that the streamlines can become vertical. Indeed there are cases when the wave actually topples over and breaks. Once a wave does break like this it sets an upper limit to the wave flow.

Whatever the wind velocity was upwind of the mountain, the wave steepening will reduce the horizontal speed and may bring it down to zero just before the wave breaks. This makes it hard for anyone measuring the wind speed on the lee side to know whether the change is due to a general decrease of wind speed with height or just a local steepening of the streamlines.

One-bounce waves at cirrus level

On days when the wind speed increases with height up to 30000ft or more one may find a single wave jump occurring at high levels. Fig 16 illustrates this. The low level waves have not been added to this diagram because they are sometimes unsteady and rather mobile. However, at high level (around 30000ft and often extending into the base of the stratosphere) the wave flow steepens abruptly. It may jump several thousand feet and having surged up like this stays high for a long distance downstream. The frequency of this type of flow was not recognised before the era of satellite pictures. Now that Meteosat provides half-hourly infra-red pictures

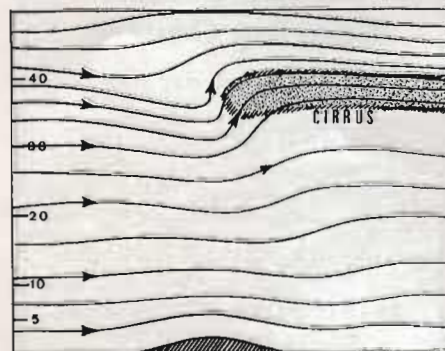


Fig 16

one may often see this kind of wave develop on time lapse loops.

Most of the wide areas of cirrus are due to frontal systems or the blow off from a Cb anvil, but the wave cirrus is different. It suddenly appears as a narrow strip of high cloud over the crest of a mountain range and grows downwind for several hours. The upwind edge of the cirrus remains anchored over the hill crest and usually has a straight leading edge. The tail grows several hundred miles downwind. When the upper wave collapses the cirrus detaches from the mountains and blows away downwind. I have seen Pennine wave cirrus extend to northern Germany before becoming detached and a Scottish cirrus trail reaching the Channel south of Devon. More spectacular wave cirrus extends from the lee side of Greenland when a west to north-west jet crosses the high ice cap. This has been sketched in Fig 17.



Fig 17

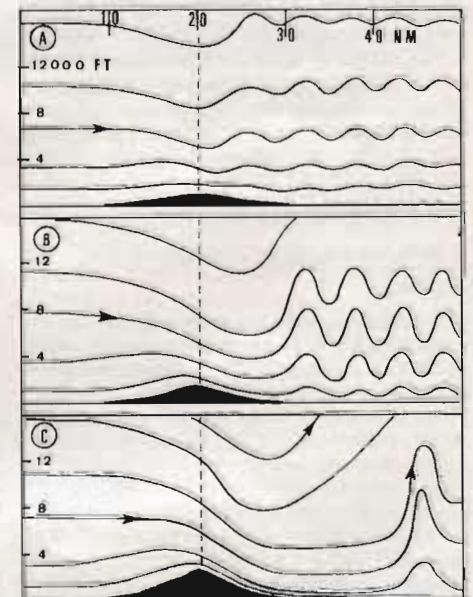


Fig 18

Hill size

Fig 18 shows how bigger hills can dramatically increase the size and character of a lee wave. In each of the three sections there is a very strong inversion with its top at 11000ft. The width of the hill is constant but its height is increased from 1000ft in (a) to 1600ft in (b) and finally to 2600ft in (c). In the first case the wave

amplitude (half the displacement) is about the same as the hill height. In (b) the amplitude increases to more than 2000ft, in the third case (c) there is a shooting flow down the lee slope and a severe wave resembling a hydraulic jump some 25 miles beyond the crest of the ridge. Notice how the highest hill produces a very strong flow down the lee slope extending out into the plain beyond. These patterns were generated by computer but similar results have been observed in nature; in particular the severe downslope windstorms have been observed to form a ferocious rotor cloud much further from the mountains than normal. These super-rotor clouds seem to be straighter than the average rotor cloud. They do not conform to bends in the ridge line upstream as most wave clouds do.

Summary

Wind shear, the shape and size of hills, the stability of the air and the type of wave flow aloft are all connected. Feedback between the various factors can iron out a promising wave or stimulate it to monstrous proportions. Almost anything seems possible, and given time the atmosphere can change the pattern from smooth waves to jagged breakers, even if the upstream conditions remain the same. A gradual lifting of the inversion can alter the tuning of the atmosphere to produce a particular resonance that stimulates a large amplitude wave; then further lifting may detune it and allow the waves to decline.

As the wave alters so it changes the wind near the surface. One usually expects to find the strongest wind over the hill top with lighter winds near the base of the hill or even a reverse flow on the lee side. Occasionally this may alter producing a decrease of wind over the ridge. On rare occasions when a very large amplitude wave develops the strongest winds occur down the lee slope or even over the plains beyond. ❏

OVERSEAS NEWS

A NEW MOUNTAIN FLYING SCHOOL IN FRANCE

Many readers who have already visited the French Alps will have met Jacques Noel, either at Sisteron or at La Motte de Caire. His latest venture (in partnership with Roger Biagi and Pierre Bonneau) is a new mountain flying school at Gap-Tallard.

The courses, which run from Monday to Friday, include 15hrs flying for 4500 French francs, (about £450), plus aerotows. Instruction is given in a Janus and a motor glider is also available. Each instructor has only two pupils at any given time.

The school operates from March 15, to September 30, but it will also be possible to make special arrangements outside this period.

Details and reservations from: Jacques Noel, 16 rue Emile Boyoud, 04600 Saint Auban, France. Tel: 010 33 92 64 28 63.

William Malpas comments: For a pilot making his first pilgrimage to the Alps, this is the best way to start. Take your own glider by all means, but before flying alone do at least five days with Jacques first. You will never regret it.

GETTING MOTIVATED

Liz Veysey follows on from her article in the April issue, p73, by stressing the value of stretching the abilities of early solo pilots and making their gliding fun

I got stuck in the doldrums two years ago. As a professional instructor that's bad news. I was bored with instructing and I was bored with flying. I rarely had the chance to do my own gliding anyway, and by the time I did I was so tired I couldn't be bothered. Even ironing began to seem more interesting.

Realising that I was no fit person to be an ambassador for the sport I began looking for jobs outside. Suddenly it all began to happen again and, thank goodness, I threw the CVs away and could once again promote gliding with genuine fervour.

Now, anyone who knows me, will I am sure agree that I am a pretty independent lady, a self-starter needing little encouragement. But that season I really needed help, and I found my salvation by attending a BGA soaring course at Booker.

I came to realise that unless you are one of the few really competitive go-getting pilots, we all need something to help us through those times – so that we are not lost to the sport forever.

In the April issue I recommended the practice of goal setting to help individuals through a trough. But don't we, as club instructors, have a responsibility towards nurturing the post solo pilot every bit as much as teaching circuits and spins to the *ab-initio*?

One way instructors can help is by encouraging a pilot whose interest is waning to try the goal setting exercise.

Often just the fact that we take an interest in a pilot's progress is enough to give him enough confidence in his own ability to reach out for the next step forward. Some years ago when I was on my instructor course I told John Williamson, the national coach, that I had yet to fly my Silver distance. He sat down with me and planned the route that I would take the next day, not for 50km, but to beat the women's distance record. No I didn't do it. But the point is, I *believed* I could.

There are all sorts of ways we can find to stretch the abilities of early solo pilots and make their gliding fun. Get them to sample as many thermals as they can in one hour, set a mini-task (within gliding range for the pre-Bronzes), a final glide exercise, a TP photographic exercise, a spot landing competition, simulated field landings, and oh, there must be endless more you can think of. (For any instructor stuck for ideas I have a sheet of fun and games for post solo people I'd be glad to let you have.) If you can get several pilots all doing the same thing you can make a competition out of it!

If you need a dose of motivation, I can think of no better way than getting on one of the BGA's soaring courses (this really isn't meant to be an advertisement for the BGA). No one is allowed to feel stupid however little experience they've got, and it's comforting to discover that others share the same fears as yourself.

All of us on the course were surprised at what we achieved, and to spend a week in the company of like minded people all helping each other and sharing flying experiences is what gliding is all about and one of the best tonics I have found to help rediscover the joy of soaring. And then, go back to your own club, and pass it on – not just your soaring skills, but your enthusiasm! ❏

Gliding's rich pattern. A comment from Francis May of Dartmoor GC: "Thank the Lord we have families in the club. I nursed a baby, looked after a lively two year-old and chattered up nervous temporary members in between my own flights last weekend. I enjoy the sheer variety of experiences. When one throws in the sheer delight of following a buzzard into his thermal (what beautiful birds they are) one is left with the feeling there is a lot more to gliding than just chasing awards. It has turned me and a few other old wartime flyers into OAP teenagers!"

**LAKE
KEEPIT**



**Australia's Holiday
Soaring Centre**

- ★ Superb cross country soaring 7 days a week Oct to April
- ★ Fleet includes LS7, LS4, Astir, Libelle, Hornet, & Twin Astir.
- ★ Friendly Club atmosphere
- ★ Kangaroos & birdlife abound in Nature Park
- ★ Home club of World 15m Champion Brad Edwards
- ★ Justin Wills' favourite site
- ★ Fly 1000km in LS7 & win \$1000 in prizes

**KEEPIT SOARING CENTRE,
via Tamworth, NSW, 2340**
Ph +61 67 697640 Fax +61 67 697681

The commitment to regular attendance which club membership and private ownership requires is very difficult to sustain in retirement when the chance comes to do all those other things work and gliding had prevented. More time for family involvement and recreation and lot of other hobbies to take up, as well as perhaps giving some time to the community, can create the gulf that finally brings an end to the maintenance of the art of co-ordinated flying and the ability to soar.

But you miss it! Whenever the weather is right the eyes reach for the skies and the heart goes sad. A few frustrating (and expensive) attempts to return to club life only serve to emphasise the widening gap. So eventually we (my wife Grace and I) lowered our sights and agreed that by going on a club course, for at least one week in the year, we could sample the life again in some form.

I felt that going anonymously to a strange club would be better than returning to the old ground where people might expect a higher standard than I felt capable of giving. And to choose a site the family could enjoy too would be some recompense for the return to the old ways of demanding a lot of support and tolerance of an obsession.

It worked out better than we hoped. We chose a Buckminster GC course at Saltby Airfield because of the quality of the response to our inquiries. We spoke to and corresponded with a number of members during a fortnight of research and decision making.

At Buckminster everyone knew what they were talking about; we were never referred to someone else to answer our questions and their attitude was completely flexible with a course tailored to suit the time I wanted to spend. I settled for five days and ten aerotows for £250, which included full membership (currently £99 with 2000ft aerotows at £11) until next May and credit held for flights not taken during the course. They even left a message on our answering machine to confirm the booking.

Caravan parked in a meadow fringed with shrubs and trees

We were allowed to park our caravan for free on the reserved part of the site in a meadow fringed with shrubs and trees and had free access to the clubhouse facilities. The gliding was great. The rabbits were numerous and lively, to the delight of our two border terriers. The pubs were many and the food was good.

The site has many attractions, not the least being its location in the middle of a picturesque area within cycling distance of many small villages, hamlets and Grantham, Stamford, the finest Georgian town in England, Oakham and Melton Mowbray.

The airfield is huge; it was a wartime base extended to take gliders and the 82nd Airborne Division went to Arnhem from here. The main runway looks a bit like a Heathrow for gliders.

A RETURN TO GLIDING

“Joe” Whelan, former CFI of Cambridge University GC, found that when he retired he had so much more time for hobbies and family life that gliding was crowded out. But he has discovered a way of keeping in touch



Joe at Duxford. The syndicate Skylark 3 he flew for many years is in the background.

Apart from the many rural and agricultural pursuits absorbed within the original airfield, gliding is the only other activity. Upwards there is pure sky – not a bit of controlled airspace in sight.

Well maintained peritracks lead to a large hardstanding apron housing the hangar, workshops and clubhouse and the kit includes three Falkes, a K-13, two Puchacz two-seaters, a K-8 and a K-6 and a Rallye tug.

The walking was excellent, with a long distance footpath, the Viking Way, crossing the north-eastern boundary of the airfield. Nearby there is the refurbished Grantham canal, the Rutland Steam Railway Museum, Belmont House, Burleigh House, Belvoir Castle, Rutland water, Twyford forest etc. Leicester is about 25 miles off and London two hours down the A1.

We all had a great time. The weather co-operated by being duff enough (so we could enjoy the offerings of the area) but not hopeless. The course instructor, Australian George Brown, and tug pilot Dennis Gliddon, ensured we were always ready for the good or not so bad bits of weather and we got in enough Puchacz flights for me to demonstrate an ability to recall how to be safe enough to go solo. It was really nice to out-soar Dennis during his second attempt in the K-6 at Silver distance.

We had chosen the worst week of the worst June in living memory but my previous gliding experience had taught me never to give up. If

you wait long enough in this country it will change, normally by the hour and almost guaranteed by the day. Anyway I was not at all certain that at the age of 64 and seven years since being in proper current practice I would be either capable or interested enough to bother whether we went to look at historic houses or struggled to make the old skills return.

I had reckoned without George, Dennis and Saltby. Given the opportunity we flew. If it looked marginal we hung on. If it was really duff we agreed to try again tomorrow, in time to go off and do something else.

The bluntness of the Australian training techniques (and the language) resulted in a crash revision course which shocked me into a response I hadn't thought possible. I began to enjoy the role of what is politely called mature pupil.

We progressed from exercise to exercise rapidly and although whilst getting familiar with a new site I had to convert to a new glider type, my errors were so well diagnosed and corrected by young George I went solo after six aerotows.

On this flight I soared for nearly an hour so once more experienced the old thrill of success.

Most BGA clubs run holiday courses and most are good: there can't be many better than Saltby, but freedom of the skies and freedom from the sea are two of its special flying qualities. They owe me three tows – and we'll be back to collect! ☑

At the prizegiving on June 23 Jed Edyvean and Warren Kay – the joint 1991 UK Standard Class Champions – stood beaming at the cameras and holding up high an impressive cup which was their trophy for a year. Irreverent suggestions that the hangar roof (overcome by the torrential downpour outside) sprang a leak at that point and that the cup was their best protection were largely exaggerated.

Rain dominated the competition and the final score was Weather 6, Pilots 3; we had to be content with one "normal" day and two days with mass landouts and highly devalued scores.

Tasks flown

Thursday, June 20
 250.2km polygon
 Swindon East, Bullington, A34/A303 junction, Headington.
 47 starters; 38 finishers

Friday, June 21
 202.9km ▲
 Caxton Gibbet, Kettering.
 47 starters; 0 finishers

Saturday, June 22
 250.2km ▲
 Six Mile Bottom (SE Cambridge), Newport Pagnell.
 47 starters; 0 finishers

The rain won the first two days hands down. On the third day we got to the grid. On the fourth day we got to the grid and it was actually dry until around 3pm. On the fifth day – Wednesday – it brightened up after the task was scrubbed and we could soar locally, with heavy help from the ridge.

The majority took off into a flat grey sky and had "downhill only" trips

Thursday proved to be the best day of the contest. A 250.2km polygon to the SW was set, but the cloudbase remained below 2000ft for too long and when launching started at 1pm the cumulus began to drift rapidly away, also to the SW. Some of those who launched early managed to stay up, but the majority took off into a flat grey sky and had "downhill only" trips for re-lights. Continued launching into those conditions was all part of an "understood" master plan: if those on the ground "refused" launches, the start line could be opened, giving those that remained airborne a chance to get underway and so gain an advantage. The tactics were further complicated by the fact that the "remote" start point was some three miles away from the airfield, close to Leighton Buzzard.

The weather that changed so quickly remained fickle: blue gaps developed and the overcast began to burn off – although grey high cover to the north-east suggested problems on the return journey.

STANDARD CLASS NATIONALS

Dunstable, June 15 – 23

With the apparent incentive to get underway sooner rather than later, those who were airborne grovelled on track in weak lift under low clouds until around Oxford where the base rapidly went up by 1500ft and a relatively straightforward day developed with good lift and long fast glides for much of the course. The re-lights' line was working flat out, but those who had to start some 20min later received a bonus: local weather improved rapidly and their run to good conditions was easier and faster so that many caught up with the leading edge of earlier starters.

But the day was not without its pitfalls: four pilots landed within 20km of Dunstable on the way out, Steve White (LS-7) fell to the ground on the last leg near Thame, while Chris Rollings (SZD 55) and Ray Payne (Discus) landed a few fields away from the finish line.

Key Officials

Director: John Jeffries
Deputy director) }
Chief marshal) } *Derek Sears*
Photo assessment) }
Met: Tom Bradbury
Task setter: Robin May
Control: Joan Bird
Start/Finish: Jeremy Beringer
Tug master: Nick Hoare
Communications: Tim Newport-Peace
Photo development: Tony Danbury
Comp Sec & PR: Suzy Mooring

Sally Wells (LS-7) was the fastest, but a 50pts photo penalty pushed her into 4th place for the day and Peter Sheard (Discus) took the lead. His score was 983pts and the results of that day eventually dominated the overall results of the Championships.

On Friday the weather delayed the first launch until 1.30pm, but then looked good for a task of only 202.9km. It continued to look good on the first leg to Caxton Gibbet, but then it rapidly went to worms as a wide band of clag with some drizzle appeared from the NW and blocked the into wind leg to Kettering. For many, the last usable lift was around Grafham Water, although there were heroic low level struggles further on, some into the area of Kettering and just past the wind adjusted distance Y which needs to be exceeded by at least one pilot to turn a day into a contest day. Warren Kay (ASW-24) got furthest, but in the confusion of low level flying near the 2nd TP he forgot to photograph it and so the day

went to Phil Jones (Discus). With most competitors landing out before Y – this was a "cheap" day, devalued to 57pts.

Saturday, June 22 did not look good and proved to be even worse. Strong winds, low cloudbase and frequent showers meant that an outlanding was a certainty and the only question was whether it would be possible to fly far enough into wind on the 2nd leg from Cambridge to Newport Pagnell to make it a contest day. Ralph Jones (Discus B) managed to do just that, earning 29pts for another heavily devalued day. Launching started at 2.35pm and continued – on and off – until 5pm. There was a lot of hanging around on the ground and more than half of the field did not manage to get away, with some not taking off at all. Ralph, Tony Pozerskis (Pegasus) and Warren were amongst the early starters, managed to stay up (separately!) and fly some distance on the 2nd leg. Jed (Discus) took a launch after 4pm and ended up far enough on the 2nd leg to overtake Peter Sheard in overall standings.

Jed's and Warren's overall scores turned out to be identical, producing a minor headache for the organisers and a "joint" Championship title.

On Sunday, June 23, the weather was so bad that the prizegiving was held at lunchtime and we were off home – until another competition.

For a good Championship it is necessary to have a large number of contest days and Championship weather, which should be varied – but good enough to allow tasks of at least 4 – 5hrs duration on each day.

By those yardsticks, the 1991 Standard Class Nationals were not a success, much to the disappointment of all those involved; weatherwise, they were being compared to the Standard Nationals of 1987 at Booker, which only had one contest day.

Gliders

<i>Discus</i>	17	<i>DG-300</i>	3
<i>LS-7</i>	11	<i>Pegasus</i>	2
<i>LS-4</i>	8	<i>DG-100</i>	1
<i>ASW-24</i>	4	<i>SZD 55</i>	1

But then not many competitions are blessed with ideal weather and this was a valid contest and the result was not a fluke: both Jed and Warren flew very well and consistently and were worthy winners.

Poor weather, re-briefings and long waits for go/no go decisions have been known to fray some nerves in some competitions of some



Jed Edyvean and Warren Kay, the joint winners sharing the Championship cup. Photo: Jo Jeffery.



Peter Sheard who was in 3rd place. Photo: Jo Jeffery.



Tom Bradbury, the Met man, assisted by ITV Met man Alex Hills who has recently taken up gliding. Photo: Jo Jeffery.



Above: The toll of Friday, June 21. Photo: Tony Danbury.

Below: Launching in 20min. Photo: Tony Danbury.

years back, but not in this one. The atmosphere remained very good throughout; even John Jeffries was impressed. But then his organisation team was very competent and ran the show very effectively and without fuss. We were all impressed.

As it turned out, Warren would of course have won outright had he remembered on Day 2 at Kettering that cameras are for taking TP pictures. But then Sally Wells would have won had she banked hard enough for a good TP photo on Day 1. On the other hand, Chris Rollings might have won had he not expired on the final glide on Day 1. And if only... There must have been at least 43 other "if only" stories and they will no doubt provide enough hope and motivation for most of us to turn up at another British Nationals this or next year. Only optimists need apply.

Full results on p257.



THE GEC 15 METRE CLASS NATIONALS

Lasham, July 13-21

The competition was opened on Saturday, July 13, by Major General Robin Grist, director of the Army Air Corps, and the Lasham Regionals was run at the same time. Like the Nationals, the B Class had five days but the A Class six.

The weather, as was expected, played its part this year. From the start the weatherman, Tom Bradbury, told us not to expect too much. The director, Peter Purdie, then said there was no hope of flying that day and the next briefing would be the following morning.



Brian Spreckley, the 15 Metre Class Champion and former World Champion, at the daily briefing.

Day 1, Sunday, July 14

Task: 197km polygon, Chieveley, Westcott, Chieveley

Photographs by Terry Joint

The forecast was for a wind of 280/15 and thermal strengths up to 2kt! Not a day to encourage anyone to fill us up with too much water.

Although two thirds of the Class did get back in difficult conditions, the day was won by Ralph Jones (Ventus C) with his son Steve (Ventus) 1.1km/h slower in 2nd place. Sign of things to come? Watch this space. Brian Spreckley (LS-6) came 3rd, 3km/h behind Steve.

Day 2, Monday, July 15

Task: 231.2km polygon, Didcot, Bicester, Didcot.

The pilots were to get used to Didcot this week and the Booker Boys complained they might finish at Booker by mistake.

The forecasted wind was again strong at 300/25 and with a rapid increase in cloud cover moving in, this in fact killed most of the thermals too early for anyone to get home.

Eric Smith (LS-4) won the day with 106.8km. Brian Spreckley was 2nd, having covered 106.4km to put him 1pt behind for Monday, and Ted Lysakowski (Ventus B) was third with 104.5km.

Day 3, Wednesday, July 17

Task: 246.4km polygon, Didcot, Newport Pagnell, Didcot. (Told you they would get to know Didcot.)

At last a day which looked full of promise. The forecast was for lighter winds and thermals to go to 4kt with a cloudbase above the launch height for a change. The day didn't go as promised with an approaching front coming in earlier than forecast, putting paid to thermals.

Simon Redman (ASW-20c) and Jed Edyvean (Ventus C) shared 1st place with a distance of 203km, George Metcalfe (ASW-24) was 3rd, .6km behind the winners.

Day 4, Saturday, July 20

Task: 289.2km polygon, Bicester, Pitsford, Bicester.

Now at last a forecast that looked like it might succeed. Light winds, a 3500ft cloudbase and 4kt thermals. Some of the early launchers came back for more water and then raced off only to land just past the first turn (not that Steve and Ralph pair fly of course). The more cautious did not have the same difficulty and fair thundered round with Brian Spreckley winning with 66.7km/h. Pete Sheard (Ventus A) was 2nd with 65.6km/h and Tim Scott (ASW-20c) 3rd with 64.6km/h.



Above: Paul Davis (Discus B) competing in the Lasham Nationals' grid.





Regionals held at the same time. Below: the



Eric Smith, who came 2nd, receiving his prize from the MP, Bill Walker.



Above: Don Spottiswood, BGA chairman.
Below: The briefing.

Day 5, Sunday, July 21

Task: 248.3km optional TP polygon.

Calm wind and sunny skies welcomed us all in the morning. Perhaps a proper racing task day at last. Well it did start out like that but rapidly the spread out overtook us and the thermals weakened again. The winners managed to find the sunny holes and some good 4kt climbs were to be had. Mike Young (SZD 55) came 1st at 59km/h followed by Sally Wells (LS-7) at 57.2km/h and Tim Scott at 56km/h.

The overall winners were 1 Brian Spreckley (4510pts); 2 Eric Smith (4339pts) and 3 Ted Lysakowski (4284pts).

The competition was closed by our friend in Parliament, Bill Walker MP.

Many thanks to GEC for their sponsorship. I hope it will continue for many years to come.

The Regionals A Class was won by Mike Jordy (ASW-20L) and the B Class by Derek Piggott (Astric CS).





McLEAN AVIATION



**THE AERODROME, RUFFORTH,
TEL: 0904-83653 YORK YO2 3QA FAX 0904-838146**

SOLE AGENTS FOR O/K BAROGRAPHS

DG-400

The best selling self-launching Sailplane with retractable power plant in the world.



*VAST stock of Ottfur hooks and spares
Reconditioning/Exchange Service*



T21, 31 + 38 spares

Stockist of:

Neogene Paints & dopes
Ceconite Fabrics
Aerodux/Aerolite glues
Lesonal Gel-Coat
Mecaplex tracks & window
Tyres & tubes
Tost hooks & wheels

Accelerometers - 80mm

£60.00 + VAT!

* * *

Ex Slingsby Aviation

Entire remaining stock of Vega & Kestrel parts including:

Complete under-carriages
Brunswick tubes
Tinted windows with scoops
Canopy frames
Water ballast systems
Harness
Hooks
Headrests
Bearings
Fairings etc. etc.

GLASER-DIRKS UK

**BOB McLEAN 0904-83653 JOHN ELLIS 0765-689431
FAX 0904-838146**

SOLE UK AGENTS FOR GLASER DIRKS SAILPLANES & SPARES

Please ask for details

DG-400 For Sale - Complete Outfit - good saving on New Price



HERKULES 4 WINCH FROM CZECHOSLOVAKIA

For Gliders up to 1760 lbs AUW
Twin Drum
TATRA Air Cooled Diesel Eng 185 HP
Fully equipped
Price approx. £23,000 plus VAT
Delivered UK
Delivery 12 weeks

Sole UK Agent

PETER CLIFFORD & CO

15 Home Farm, Crowmarsh Gifford
Wallingford, Oxon OX10 8EL
Tel: 0491 39316/680420 Fax: 0491 39316

Neogene Paints

**Your specialist paint
manufacturer**

C664 High Tautening Dope To
C/E DTD 753

C665 Aluminium Surfacers To
C/E DTD 753

C666 Scheme "Z" Type
Enamels For Unsupported
Fabrics

C667 Scheme "Z" Type
Thinners

C668 Low Tautening Dope To
C/E DTD 751

C965 Fabric Adhesive

C966 Fabric Adhesive Thinner

C762 Transparent N/C Non
Tautening Dope

*The above have been selected
from our range of Aircraft
Finishes.*

Contact our main agents:

London Sailplanes Ltd.
Tring Road, Dunstable,
Luton, Beds LU6 2JP
Tel: 0582 662068
Fax: 0582 665744

McLean Aviation
The Aerodrome
Rufforth, York YO2 3QA
Tel: 0904 83653
Fax: 0804 838146

Industrial Paint & Powder Ltd.
45 Lanark Road, Edinburgh EH14 1TL
Tel: 031 443 8793
Fax: 031 455 7806

FLY THE FUN WAY

Come
Paragliding
with us,
in beautiful North Wales

Paragliding, the latest craze
sweeping Europe – foot launched
like a hang glider, but carried in a
rucksack!

Simple to rig, easy to fly – the
paraglider is a wing and has
achieved distance records of over
64 kilometers in this country.

Sounds too good to be true?

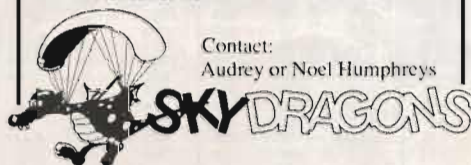
Don't just take our word for it –
come and try it yourself!

At Skydragons we can't pretend
we're a big company, because
we're not, but we are building our
reputation by offering friendly,
personal service.

**We do know a lot about
flying though!**

(9 years hang gliding & 3 years
paragliding experience).

- ◆ We use only the most up-to-date equipment and training techniques, ground to air radio, video, etc.
- ◆ Friendly, expert tuition. BAPC registered instructors. Uncrowded sites for all wind directions and we keep the groups small so you progress faster from Beginner to Advanced.
- ◆ And when you're hooked on flying we can supply the best wing and equipment to suit your needs: Maps, instruments, helmets, boots, suits, etc. . . .



Contact:
Audrey or Noel Humphreys

43 Tan Y Bryn, Pwllglas, Ruthin, Clwyd, North
Wales LL15 2PJ. Tel: Ruthin (082 42) 7171

Portmoak

Scottish Gliding Union Limited

**Post solo courses available from
April.**

- Ab-Initio & AEI courses also available.
- All year round soaring in thermal wave & ridge.
- Launching by winch and aerotow.

For Details Contact:
The Secretary
Scottish Gliding Union
Portmoak Airfield
Scotlandwell KY13 7JJ
059 284 543



GLIDER INSTRUMENTS

(M. G. Hutchinson)

Repairs and overhauls
carried out

P.Z.L. Sales
and Service

Barograph Calibration centre

Write or phone:

'Tanfield'
Shobdon
Nr. Leominster
Herefordshire HR6 9LX
Tel: 056-881-368
(answering machine)

Oxfordshire Sportflying Club The Premier Motor-gliding School

- ★ Convert your bronze/silver badge to a self launching motor glider ppl.
- ★ We teach and examine for bronze c field landing exercises
- ★ We coach in navigation for your silver c
- ★ Ab-initio training
- ★ Trial lessons.

Discover motor-gliding
and how it can help
you in the world
of pure gliding.



For details call on 0608 677208
Ray Brownrigg (C.F.I.) or Bobbie Ford

Open seven days a week

AMERICA

Neil MacLean describes gliding at three very different clubs in the United States

Neil, an assistant instructor, has been gliding at Lasham since 1973. He was secretary of the Surrey & Hants GC for two years and now owns one third of a Std Cirrus.



Every once in a while I visit some corner of the USA on business. I rarely have more than the odd day to spare and as a result have never got round to acquiring an American glider pilot's licence, but whenever I can I like to visit a local gliding site and perhaps have a flight as P2 in the two-seater just to see how things are done, and to view the countryside from the air.

On a visit to California and Washington State this April and May I was able to visit three sites, although I only flew at one. I found three rather different approaches to gliding.



Neil's photo of the Calistoga Glider Port. (Notice the downwind take-off. Landings are in the opposite direction, stopping ready for the next flight.)

The first was Calistoga Gliders, about 80 miles north of San Francisco at the north end of the Napa Valley. This used to be a well-known soaring and training site and has been described at least twice recently in these pages (June 1989, p141 and August 1990, p175). The original operation has moved, but the site has changed hands and is now rather unique in that it operates almost exclusively to supply passenger rides to paying customers.

They operate a fleet of the rather magnificent three-seater (so long as the two in the back are fairly friendly and don't weigh more than 340lbs)

Schweizer 2-32 gliders, and several Pawnee tugs, but to emphasise the fact that these are simply passenger rides the controls in the back seat have been removed. There is a rather elderly Schweizer 2-33 (a bit like a K-7 with struts) for occasional instruction, but the only single-seater I saw was a 1-26 doing duty as gate guardian.

From a glider pilot's point of view the most interesting thing to photograph was the price list which goes from \$75 for a 20min ride for one passenger to \$135 for a 30min ride for two. At the current rate of \$1.70 to the £ this is about £45 to £75, but there seemed to be no shortage of customers the day I called.

About 40 miles south of Calistoga I came across Lagoon Valley Soaring, near Vacaville, California. This is a more typical commercial gliding operation, offering basic and advanced training and the hire of two-seater and single-seater gliders. Glider hire and instruction can be booked in advance, and since the day I called was a Sunday all the two-seater slots had been reserved. During the week, however, there is usually an opportunity to fly on a casual basis.

Prices here are more like those in England, a 2000ft aerotow costing \$20, and glider hire between \$35 and \$42/hr, but you also pay for the instructor's time at \$22/hr. For training they use modern G103 and K-21 gliders, and you can hire Pegasus and SZD 51-1 (Junior) single-seaters. An 80min lesson including an hour's ground instruction and debriefing, and a 20min flight from a 3000ft aerotow, costs about \$66, which is not too bad, bearing in mind the rather higher level of incomes in America.

My third visit came about by chance as a result of a trip to Richland, in the State of Washington. The subject of light aviation crept into the con-

versation over lunch (as it does) and I was immediately introduced to the tug pilot of the local soaring group which operates from Richland Airport. This is a small private group who fly mostly single-seaters but also run a Blanik and a Super Cub.

No sooner had I indicated my interest in gliding (not to mention a certain enthusiasm for flying a Blanik, a type which had so far escaped mention in my logbooks), than 'phone calls were made and arrangements arranged, and I was invited to appear at the airport at the end of the working day. I duly turned up at about 1730hrs and found the tug pilot and an instructor waiting for me. We enjoyed a pleasant half hour of local soaring in weak thermals (it was only the beginning of May, after all).

FIRST EUROPEAN JUNIOR CHAMPIONSHIPS

Falköping, Sweden – June 23 – July 6

Steve Jones (Discus B) came 3rd in the Standard Class of the first European Junior Championships with Mike Miller-Smith (Discus) 10th and John Toon (Discus) 25th. John Garrity (ASW-19), also from Britain, was 24th in the Club Class.

There were 61 gliders in the two Classes of this seven day competition of contrasting conditions. It rained during the first week but the weather changed for the second half with temperatures rising from 15°C to 25°C.

The Standard Class had a struggle on Day 1 when only five made it back to the airfield from a 226km task to the south, Michael Miller-Smith landing 500m from the finish line.

The weather began to co-operate on Day 3, July 2, but the ground was very wet, especially around the second TP in both Classes, and only 15 of the Standard Class completed the 273.5km five leg task, Steve Jones coming third at 77.88km/h.

The next day, with a 5000ft cloudbase, the Standard Class had a 412km task and the Club Class flew 328km with only one outlanding.

On July 4 conditions were excellent with the Polish pilot Tomasz Rubaj (SZD 55) flying the 384km Standard Class task at 121km/h, which helped him win the Championships with 5786pts. Riccardo Brigliadori (Discus) from Italy was 2nd with 5613pts, and both pilots went on to fly in the World Championships. Steve Jones amassed 5432pts for 3rd place. Danish pilot Flemming Schneider (LS-1c) was the Club Class Champion with 5094pts; Kai Siebert (Germany) 2nd with 4867pts and Harri Janakka (Finland) 3rd with 4859pts, the last two pilots flying DG-101s. ✕

Unlike many American gliding operations this one is cross-country orientated, as well as giving some instruction, and a couple of weeks after my visit a group of four pilots from Richland flew a 300 mile O/R to the neighbouring state of Idaho. For a pilot from Lasham it was an interesting experience to fly out of a commercial airport, with one's comings and goings under air traffic control, and power traffic having to be advised of the glider circling over "the dump".

Everyone I spoke to at these three different types of gliding site was very friendly and welcoming to a visiting pilot, but special thanks are due to my friends at Richland for arranging the Blanik flight. Incidentally I have recently received from them a list of about 150 gliding sites in the USA affiliated to the Soaring Society of America. If anybody is visiting the United States and would like to see this list, contact me via Lasham Gliding Society or at home on 0734-429712 and I shall be happy to provide a copy. ✕

ANNO DOMINI -

and how to fly one

Ric Prestwich has returned to gliding after 18 years and is hooked again

There appear to be lots of people who know the answers about geriatric pilots, but few who put the case from personal experience.

I originally came into gliding in 1949 at Cambridge, when I was bitten by the bug let out of the bag by David Carrow. Twenty years later, after 950hrs and a similar amount of power, I fell foul of the system at the Mynd where the two-seater had total priority and everyone else waited. Deciding not to waste any more of my life at the CFI's whim, I sold my glider and bought a boat.

I had sailed since I was five, and early on found that fortunately I was a natural navigator. This was an asset both when flying in Africa and sailing round Europe. Eventually, however, I ran out of nephews, so I sold my beautiful boat and went sailing with friends.

Siren voices in the shapes of Ron Rutherford, Vic Carr and Tony Adams coaxed me down to Sleep, gave the old alcoholic a sniff of the gin

and I was hooked again.

This time I was 59, reasonably fit, but had not sat in a cockpit for 18 years. I had a tow to 4000ft with Vic in the Astir, and fortunately found that flying was like cycling, you never lose your balance. However, I overshot the landing by 200 yards and finished half way down the main Sleep runway. Nevertheless I felt reasonably happy and had two more tows, then a tow to 4000ft in a Mosquito B in which I bought a share.

Three-and-a-half years and 200hrs later it is interesting to take stock.

1. The modern ships seem incredibly easy to fly and cockpits are really comfortable.
2. There seems little free airspace left. In my previous incarnation I landed on Lyneham, Brize Norton, Fairford, Horsham and Manchester Airport in my Olympia 2 and was usually fed and offered a tow home.
3. Standards have risen dramatically. Whereas my Gold badge was No. 16, I notice that there are now over 400 all three Diamonds.

Previously tremendous efforts in a Skylark 4 and a Dart 17 got me over bits of Wales in waves. Now my ASW-20 takes me to Snowdon against 40kt in 1½hrs, and the classic "knight's move" of two forward and one sideways takes me to the Clwyd wave in under an hour.

Physically I am fortunate because my severe airsick problems have disappeared with the years and my flying time per launch has doubled. Otherwise I am akin to an elderly, high mileage, car which may continue to work provided you don't flog it to death. Nevertheless there are many ailments which can put a stop to any flying, but fortunately I've avoided them so far.

At Sleep there is a number of pilots in their sixties or more who fly regularly. The answer is in the statistics, namely that our hours and kilometres per launch compare with any club in the country.

However, none of us is immortal and the moral is obvious. Gather ye aerial rosebuds while ye may! We are all too old for the other type. ☒

AIR LINES

Like some exotic bird of passage the aerobatic pilot comes back to the airfield in the spring. Then throughout the good part of the year he stops here to refuel as he hustles his thirsty, sharp-nosed Pitts from one air display to the next. We feel flattered by his brief visits as you feel flattered when some wild creature makes its home in your garden, or a strange cat selects your lap to sleep on.

On the day that the midsummer storm swept across the airfield we all helped him to push his little aeroplane into the safety of the hangar. There was no real necessity for our help. The biplane was so light that the pilot could have managed it alone, but we wanted the excuse to touch it.

The Pitts stood in the gloomy hangar, its scarlet and cream paintwork beaded with rain, its nose raised primly, slumping it amongst our shabby Chipmunks. It was a machine that had the power to make even a Ferrari seem undistinguished.

We asked the usual questions about the aircraft, a little shyly because it, and what the aerobatic pilot could do with the performance, were far outside our experience. He answered seriously and politely, though the same questions must have been put to him a thousand times before. Like his aeroplane the pilot was small, neat and tough. You had to look very hard to see on him the marks of those tensions that forced him into regions where the rest of us dare not go.

We stood listening to the sound the rain made on the corrugated roof of the hangar and watching the dark edge of the horizon cracking slowly apart to reveal the pale oyster-blue above. From

Make Insurance problems just plane sailing . . .

CONSULT THE AVIATION INSURANCE SPECIALISTS

FOR A COMPETITIVE QUOTATION CONTACT: JOHN MARTIN

GLIDERS, SAILPLANES,
AND POWERED AIRCRAFT
FACILITIES AT LLOYD'S



Member of B.I.L.B.A.

LOWNDES LAMBERT AVIATION LIMITED

Lowndes Lambert House, 53 Eastcheap
London, EC3P 3HL
Tel (071) 283-2000 Telex 8814631
Fax 283-1970



a breast-pocket of his overalls the pilot took out a card marked with the hieroglyphs of a series of aerobatic manoeuvres. He paced out the sequence slowly along the horizontal line of the open hangar door, occasionally checking the card, frowning, muttering to himself, making tight, controlled movements of his hands. It made me remember being backstage while a dancer rehearsed the steps of a new routine. We were all there in the hangar with the pilot, but he was a long way from us and he was already alone.

TERRY HURLEY

RAMBLINGS FROM GERMANY

Our airspace situation has improved again – the two new ICAO maps for the former GDR were published at the beginning of May but are difficult to obtain. I had reserved a copy of the northern one which turned out to be a mistake since its too far north to be of much use – some say its more suitable for sailors since it maps the coastal region with all the islands and rivers!

There is a certain amount of confusion but it's not often that the authorities have a large amount of new airspace to manage. The results are that at all times VFR traffic can operate essentially unrestricted up to the eastern limit of the former buffer zone along the border, and at weekends (and Soviet holidays) the northern and southern "thirds" of the former GDR are also available. During the week there is a maximum height limit of 1000ft (due to the Soviet forces).

In fact, many pilots from our area are reluctant to fly over the new territory since the results of landing out can bring problems – such as trying to find a telephone and then achieve a connection. We have, however, made much use of the possibility to fly around Hamburg – the area to the east is quite good for thermals. We have had a rather poor season (the cross-country season is generally considered to run from mid April to mid June. Anything that comes after that is supposedly icing on the cake!) We had one really good day in April, one in May and a couple of so-so days.

On Sunday, May 13, there was a fly-in to Stölln-Rhinow Airfield (60km north of Berlin). This is where Lilienthal carried out many flights (and had his fatal accident). This fly-in (combined with prizes for the longest flight in the form of cat's cradle) was organised so that the actual date would be announced via the taped weather forecast for gliding – in principle this service is a good idea, marred by seemingly inaccurate weather forecasts for the cost of a telephone call! The weather on this occasion was not so helpful either – one member of our club had a most interesting flight managing to reach Stölln-Rhinow where a total of 148 gliders had arrived. Many more were scattered around the countryside.

We "Northerners" do not have the best situation for long cross-country flights – with the closeness of the North and Baltic seas combined with the Elbe and associated marshes we are somewhat limited. A "good" flight here is 300km; 500km triangles are rare.

HOWARD E. MILLS

MORE ON SEA-GLIDERS

In his introduction to Paul Minton's S&G Classic in the April issue, p69, Frank Irving mentioned an expedition to Yugoslavia in 1956 which was mainly to look for sea-gliders. The article has brought the following response from a Greek pilot who helped design such a glider



The Greek sea-glider.

Plato was the first to have the idea of flying a water sailplane on the Greek islands. But don't get the wrong idea. It wasn't Plato the philosopher.

Greece is a blend of rocks and water which is not a bright combination for out landings, so a water sailplane seemed to be a great project. Back in the 1970s Plato Κουρουβακαλης and I, both instructors with the Athens GC, decided to experiment.

My preliminary drawings were for a light single-seater but Plato preferred a heavier two-seater. As he was the one to build the glider, I had to follow and designed just the sea-going part (the hull's underbody).

The 33ft span was the result of oregon pine planks being available and the 3ft wide side-by-side cockpit was designed for very close friends.

After 3000hrs' work Swordfish was ready for the first tow from Athens harbour, using a powerful motor boat and a 200ft water-ski rope. The take-off and landing were very gentle but drag producing floats weren't installed for the first flights as the wings floated anyway.

We continued the trials for some months. The only peculiarity was just after take-off when you had to pay special attention to gradually lift the tow rope out of the water.

We stopped flying from Athens when a piece of driftwood drove through the hull on landing but tests continued for a while on a lake by one of the two gliding clubs in northern Greece. But the flights were glides without any soaring.

The main problem, and one we never suspected, was the immense drag of the tow rope in the water. A long rope wouldn't allow the motor boat to speed up at all but a rope wound on a drum in the boat could be the answer. After take-off you could unwind the rope as the glider climbed. But we never got this far as the operation was already complicated and expensive.

The Swordfish was abandoned to her fate – on a stormy night a rusty roof landed on the hull.

But for anyone wanting to soar with the seagulls, don't plan to use motor boat launches. A light water sailplane could be catapulted from the mountainous Greek islands to land on the sea. Is there anyone with 3000hrs to spare for the experiment?



PIGGOTTS

Fluorescent Orange Windcones made in Nylon or Ministry of Defence Hypalon®.

Flagstuffs suitable for Windcones supplied and fitted.

Landing Marker Sets in bright orange.

All types of Flags and Banners.

PIGGOTT BROTHERS & CO. LIMITED
Stanford Rivers, Ongar, Essex CM5 9PJ
Tel: 0277 363262 Telex 995457 (Piggott)
Fax 0277 365162

WORLD CLASS GLIDER COMPETITION

The international competition to choose a one-design FAI World Class glider is making progress. The judging panel have chosen 11 of the 42 designs to go through to phase 2.

They are from the Aero Club D'Italia (Italy); Imre Bano (Hungary); Christiano Borrelli (Italy); Christian Brondel (France); Vladimir Fedorov (USSR); Zdravko Gabrijel (Yugoslavia); Ulrich Horn (Germany); Donald Roberts (USA); Günther Rochelt (Germany); Roman Switkiewicz (Poland) and Vaclav Zajic/Marian Meciar (Czechoslovakia).

The prototypes will be tested next summer and the winner given a year to obtain the type certification. After that the drawings must be available to any manufacturer in the world willing to produce one or more gliders. Then for the first time all competitors will be flying the same glider type, so making pilot skill the only determining factor.

It is intended that this World Class glider, being suitable for all levels of experience, cheap, easy to operate and simple to maintain, will bring more people, especially the young, into gliding and help to contribution to the expansion of the sport.

NATIONAL LADDER

"The Ladder scores up to the end of July 19 make fairly sorry reading, both in number and size of scores," comments Ed Johnston, National Ladder steward.

However, he says there have been some fine achievements and was particularly impressed by John Parsons who flew a 303km triangle during a course at Bicester, gaining Silver distance, 5hrs, Gold distance and Diamond goal.

Open Ladder

Leading pilot	Club	Flts	Pts
1. A.J.Davis	Bristol & Glos	2	6645
2. J. Cardiff	London	4	6384
3. C.Pullen	London	4	6126
4. D.G.Roberts	Cotswold	2	2888

Weekend Ladder

Leading pilot	Club	Flts	Pts
1. R.Palmer	Avon	4	3053
2. E.Johnston	Cotswold	4	2947
3. A.Grimley	Avon	4	2403
4. C.Morris	Avon	2	1740

FATAL ACCIDENTS

There have been several further fatal accidents making the current year the worst on record.

On May 25 Jerry Odell, a serving RAF Squadron Leader, was killed when his 17m Vega suffered structural failure. The glider was launched from Cosford and the accident occurred some five miles west of Whitchurch. It had been climbed to 10 000ft, almost certainly in cloud, then descended rapidly to 5000ft before the failure which was evidently due to flutter. The extensive wreckage trail and the barograph confirm the height. There is medical evidence to suggest that the pilot was possibly incapacitated during the break-up. In view of the nature of this

BGA AGM/DINNER-DANCE

The BGA AGM, dinner-dance and prize-giving will be at the Post House, Crick, Northants on Saturday, February 22, so put the date in your diary. Full details will be circulated with the December issue.

accident it was investigated by the AAIB with BGA assistance.

On July 14 John Berry, a member of the Stratford GC, was killed while flying the club owned Club Libelle at Snitterfield. The glider was being winch launched and the wingtip dragged along the ground for a few feet before take-off. When the glider became airborne it rotated into a very steep climb and spun from about 80ft while still attached to the cable; it hit the ground wings level and slightly beyond the vertical.

On July 28 a Puchacz spun in at Rivar Hill, the site of the Shalbourne Soaring Society. The student, Derek Sproule, was killed instantly and the instructor, David Maleham, died from his injuries later that day. According to witnesses the glider was launched to approximately 1000ft and spun while still attached to the cable which detached soon afterwards. The glider made two turns to the left, recovered, then spun immediately to the right; the rotation had stopped at impact.

The glider also struck a parked car, the owners of which were picnicking near by but, fortunately, no third parties were involved.

W. G. Scull, BGA director of operations

PLAN TO INCREASE AWARENESS OF RISKS

Recent accidents (see above) have resulted in a number of endeavours to increase awareness of the risks. There has been a "safety flash" which should be on all club notice boards and an instructors' newsletter to emphasise some important teaching points. The newsletter will become a regular feature. Incidentally, if you did not receive the newsletter then the BGA does not have your correct address!

On August 12 there was a joint meeting of national coaches, the Instructor and Safety Committee chairman, chaired by Don Spottiswood, to address the subject of safety. The outcome was an action plan with target dates for a number of proposals. These include briefings for CFIs and Instructors, articles in S&G, the assessment of gliders with critical winch launch characteristics, advice on pilot experience for certain types of glider, revision of the type conversion card, training progress cards for pre- and post-solo and a review of certain Operational Regulations and Recommended Practices regarding cloud flying and the use of radio during the launch.

W. G. Scull, BGA director of operations

DISCOUNT FERRY FARES

A 20% discount on brochure prices with Sealink Ferries for those travelling for "sporting occasions" might well interest glider pilots. It is also available for competition officials or helpers and

applies to all Continental excursions for a minimum period of 72hrs.

For further information contact Mick Millane Motorsport, 18 Croxton Close, Stockton on Tees, TS19 7SW, tel 0642 587784.

OBITUARY

PETER MICHAEL HARLIE TREADAWAY



It is a small consolation to all of us left behind that when the De Havilland Rapide Pete Treadaway was flying crashed at an air display at Audley End he was doing what he loved most.

I think it unlikely that there are many people who were better known throughout the aviation world than "Tredders". Nobody can believe that this tragedy could have happened to a pilot of Pete's immense skill and meticulous regard for safety.

It is a tragic coincidence that his career started with the company who built the aircraft in which he died. His aviation life and work was closely woven with DH aircraft of all kinds. Even the BAe 125 he flew for a living was made behind the same factory gates at Hatfield he entered all those years ago.

With nearly 17 000hrs and countless types of powered aircraft in his logbook, Pete also truly loved gliding and there are many who are better glider pilots because he had taught them.

There was never a stronger advocate for bringing young people into the sport and he always had time to talk to and advise even the rawest of *ab-initios*.

Romping a K-13 round 300km triangles proved his cross-country skills but he was much happier soaring the Kestrel around East Anglia in the knowledge he would get home for opening time.

Albeit a modest and unassuming man, Pete

had a mercurial personality and any relationship with him would have its ups and downs. He was uncompromising in his views, particularly with regard to safety, and would never suffer fools gladly. If you were prepared to accept this, he was a staunch and true friend. I valued his friendship and am proud to have known him. His sons Peter and Paul are following him into aviation, Peter as a pilot and Paul as an engineer.

PETER WHITMORE

GLIDING CERTIFICATES

ALL THREE DIAMONDS

No.	Name	Club	1991
358	Craven, P. D.	Lakes	16.5

DIAMOND DISTANCE

No.	Name	Club	1991
1/523	Jordy, M. J.	Buckminster	9.5
1/524	Logan, M. W. B.	Bannerdown	9.5
1/525	Craven, P. D.	Lakes (in USA)	16.5

DIAMOND GOAL

No.	Name	Club	1991
2/1943	Atkinson, R. P.	Cotswold	9.5
2/1944	Grimley, A. P.	Avon	27.5.90
2/1945	Parsons, J.	Shalbourne	9.5
2/1946	Moore, G. J.	London (in Australia)	28.11.90
2/1947	Triplett, D. A.	Shropshire	9.5
2/1948	Gagg, M. H.	Wrekin (in France)	18.5
2/1949	McEllin, M.	Bristol & Glos (in France)	18.5
2/1950	Dent, F. M.	Bristol & Glos (in France)	18.5
2/1951	Brett, R. C.	BFGGC	29.5
2/1952	Law, M. J.	Deeside (in Australia)	25.2
2/1953	Fack, R. J. H.	Midland (in France)	31.5
2/1954	Partington, C. R.	Strubby (in France)	31.5
2/1955	Pinkerton, F. W.	Nene Valley (in France)	31.5
2/1956	Young, S.	Victoria (in Australia)	9.1

BGA ACCIDENT SUMMARY

Edited by JOHN SHIPLEY
Chairman, BGA Safety Panel
Compiled by David Wright

Ref Number	Glider Type	BGA No	Damage	Date Time	Place	Pilot/Crew		
						Age	Injury	Hr
1	Discus B	-	S	3.10.90 1210	Portmoak	47	N	894
The pilot rapidly descended into the circuit to land before an approaching heavy shower. On a somewhat lower than usual final approach ground observers noticed that the wheel was still up and radioed a warning. The pilot attempted to lower the wheel while only about 15ft and lost control of the glider. The left wing hit the ground and broke off.								
2	Pegasus	2841	M	12.10.90 1249	Aboyne	25	N	384
The pilot started his circuit in changeable wind conditions with a 10kt tailwind on the downwind leg. He continued with the circuit as the wind could have easily changed back. However, it did not and he was unable to prevent the glider running off the end of the runway where it hit a rock damaging the fuselage.								
3	Sport Vega	2758	M	9.10.90 1045	Aboyne	0	N	-
The fuselage was left on the dolly broadside to the wind while an oxygen cylinder was removed. When a strong gust of wind blew it on to the ground breaking the canopy.								
4	Std Libelle	1513	S	16.10.90 1050	Portmoak	68	N	340
At about 150ft on the aerotow the rope detached from the tug. Although there was a landable area ahead the pilot chose to turn back to the airfield. During the turn the glider lost height and hit the ground left wing first, breaking the fuselage in three places. The pilot escaped injury.								
5	DG-200	2368	M	11.10.90	Aboyne	57	N	865
As the visiting pilot joined the circuit he noted an aerotow positioned on the runway so selected the grass strip. He had, however, failed to appreciate the lack of any wind and, despite the use of full airbrake (but not sideslip?), overshot into a rough part of the airfield. The undercarriage collapsed as the glider landed heavily.								
6	Bocian 1E	1900	W/O	24.10.90 1445	Husbands Bosworth	67 P2 24	N S	1224 -
During the aerotow in poor visibility P1 had problems with low cloud and a misted canopy. Above cloud he released at 2000ft then descended through a gap to find cloudbase was only 800ft. He chose a good field and started a circuit but extended the base leg to land short, then spun in off a low final turn. (P1 experienced but not in field landings.)								
7	Bocian 1E	2325	N	11.10.90 1745	Husbands Bosworth	59	N	15
During the pre-flight checks the front cockpit airbrake lever was found to be somewhat "sloppy" but functioned correctly. After a dual check flight P2 took the glider solo. On base leg he "cracked" the brakes then found they would not close. He could not reach the airfield so landed in a field without damage. The lever had failed below seat level.								
8	Falke	M/G G-BHSD	M	18.11.90 1245	Lasham	36 P2 36	N N	354 ?
This motor glider accident occurred while the aircraft was being taxied in windy conditions. Turning slowly into wind, ready to take off, the downwind wing touched the ground and the tail lifted. The propeller hit the ground and broke a tip off, stopping the engine.								
9	K-6CR	3332	N	1.11.90 1530	Aboyne	50	N	206
After wave soaring at 12 000ft the wave slot closed and the pilot decided not to follow the 8-10 other gliders into that area of cloud and set up a cloud descent on a northerly heading. Reducing speed to a minimum, he finally broke cloud at 100ft above ground! He was able to turn into wind and made a safe landing in a field.								
10	K-13	2405	M	15.12.90 0900	Wycombe Air Park	47	N	49 min
The pilot on his third solo flight failed to recognise that he was too low on the downwind leg until he turned base. He flew straight to the airfield but could not clear a patch of rubble along the airfield perimeter. The glider's tailplane hit a fence picket.								

BGA MAIL ORDER

GLIDING MUGS No, not you lot! The kind you put your tea or coffee in. This is the latest line in the BGA Shop - white ceramic mugs with a dark blue glider design. £3.95 (inc. p&p).

TEE SHIRTS New this summer in the above mentioned white with dark blue glider on the front. One size only (XXL) fits all with the fashionable baggy look to match your eyes. £6.35 (inc. p&p).

GLIDING CLUB DIRECTORY Subtitled "Everything you wanted to know about British gliding clubs but didn't know where to look". Details of each club, site, operation, facilities, prices and fleet lovingly compiled by Bob Riddle. £4.25 (inc. p&p).

S&G YEARBOOK 1991 No self-respecting glider pilot can afford to be without a copy. £3.75 (inc p&p).



BRITISH GLIDING ASSOCIATION

SALES DEPT., FREEPOST, LEICESTER LE1 7ZB

or ask us to send you our complete sales list

Telephone 0533 531051

DIAMOND HEIGHT

No.	Name	Club	1991
3/1026	Nicholson, J. B.	Lasham	29.3
3/1027	Wilson, K. M. H.	Booker (in Spain)	18.4
3/1028	Townsend, F.	Derby & Lancs	9.4
3/1029	McNair, W. R.	Ulster (in Australia)	19.5

GOLD BADGE

No.	Name	Club	1991
1545	Smith, A. D.	Lasham	18.3
1546	Atkinson, R. P.	Cotswold	9.5
1547	Backes, N.	Midland	9.5
1548	Wooller, R. E.	Blackpool & Fylde	4.5
1549	Gagg, M. H.	Wrekin	18.5
1550	Dent, F. M.	Bristol & Glos	18.5
1551	Brett, R. C.	BFGGC	24.5
1552	Law, M. J.	Deeside	25.2
1553	Nicholson, J. B.	Lasham	29.3
1554	Fack, R. J. H.	Midland	31.5

GOLD DISTANCE

Name	Club	1991
Atkinson, R. P.	Cotswold	9.5
Backes, N.	Midland	9.5
Grimley, A. P.	Avon	27.5
Parsons, J.	Shalbourne	9.5
Moore, G. J.	London (in Australia)	28.11.90
Triplett, D. A.	Shropshire	9.5
Gagg, M. H.	Wrekin (in France)	18.5
McEllin, M.	Bristol & Glos (in France)	18.5
Dent, F. M.	Bristol & Glos (in France)	18.5
Brett, R. C.	BFGGC	24.5
Law, M. J.	Deeside (in Australia)	25.2
Nicholson, J. B.	Lasham	29.3
Fack, R. J. H.	Midland (in France)	31.5
Parlington, C. R.	Strubby (in France)	31.5
Pinkerton, F. W.	Nene Valley (in France)	31.5
Young, S.	Victoria (in Australia)	9.1

GOLD HEIGHT

Name	Club	1991
Ward, R.	Devon & Somerset	30.10.90
Smith, A. D.	Lasham	18.3
Richardson, J. W.	Blackpool & Fylde	4.5
Wooller, R. E.	Blackpool & Fylde	4.5
Boath, P. A.	Deeside	12.5
Kerby, B.	Stratford on Avon	20.5
Johnson, S. D.	Derby & Lancs	22.5
Williamson, Kerstin	Victoria	28.11.90
Ell, S. R.	Derby & Lancs	22.5
Mann, F. J.	Burn	9.4
Thornley, S. A. M.	Cambridge Univ	9.7

SILVER BADGE

No.	Name	Club	1991
8620	Warwick, P.	Midland	9.5
8621	Murray, A. W. A.	Cambridge Univ	12.5
8622	Gardner, P. A.	Trent Valley	28.4
8623	Cheoros, J. E.	Lasham	27.5
8624	Johnson, R. A.	Coventry	1.6
8625	Clark, H.	Portmoak	1.6
8626	Britton, N. A.	Avon	4.6
8627	Joesse, C. A.	Kestrel	3.6
8628	Maddox, R. J.	Avon	3.7
8629	Redhead, D.	Lakes	29.5
8630	Grimley, A. P.	Avon	28.8.88
8631	Morley, K. J.	Two Rivers	13.4
8632	Parsons, J.	Shalbourne	9.5
8633	Turner, Ann	Two Rivers	10.5
8634	Harrison, J. T.	Glyndwr	22.5
8635	Hamilton, J. D.	Bristol & Glos	9.5
8636	Edwards, S.	Lasham	20.6
8637	Hammond, B. R.	Lasham	9.5
8638	Dearden, A. R.	East Sussex	9.7
8639	Reece, J. R.	Blackpool & Fylde	20.6
8640	Emerson, K.	Aquila	29.6
8641	Atherton, I. D.	Burn	29.6
8642	McAulay, N. T.	SGU	29.6
8643	Graham, R. C.	Blackpool & Fylde	3.6
8644	Rouse, M. W.	Cotswold	4.6
8645	Roberts, A. M.	Blackpool & Fylde	30.6
8646	Ingham, R.	Blackpool & Fylde	29.6
8647	Johnstone, D.	Fenland	14.7
8648	Hoare, N.	London	29.6
8649	Ward, O. M.	Cotswold	3.7

Ref Number	Glider Type	BGA No	Damage	Date Time	Place	Pilot/Crew			
						Age	Injury	Hr	
11	K-13	2256	S?	21.11.91 1500	Saltby	P2	45	N	195
							64	N	1
P1 briefed the early solo pilot on cable breaks prior to some training. The first at 500ft was handled well but P2 did not react as quickly when the second was pulled at 200ft. P1 did not take control early enough to prevent a very heavy landing at low speed.									
12	YS-53	1197	M	9.12.90 1030	Lasham	P2	20	N	406
							34	N	350
During a spin recovery the front canopy broke at the frame and opened. The pilot in the rear seat took control while the other pilot restrained the canopy. Full aileron and rudder was required to maintain straight flight so turning right only a safe circuit and landing was made. Poor maintenance partly to blame. Pilots were not wearing parachutes!									
13	Bocian 1E	1843	N	16.12.90 1245	Aboyne	P2	27	N	669
							0	N	14
After entering the third spin of the sortie at 2000ft a crack was heard as the swaged rudder cable joint under the rear seat failed. P1 told P2 to be ready to bale out but the glider ceased spinning after 3-4 turns and was levelled out. At 800ft P1 decided that a straight ahead landing could be made and this was done. Cable was not proof loaded.									
14	Falke	M/G G-BODU	S	12.1.91 0935	Rufforth	P2	54	N	2964pwr
							44	N	0pwr
On a second motor glider circuit, carb heat was applied during the downwind leg and then de-selected on base leg. The throttle was fully opened on the go-around and, after taking off normally, the engine stopped as the aircraft reached 150ft. With little space ahead P1 lowered the nose, turned right then left, but hit the ground wingtip first.									
15	PA25 Pawnee	Tug G-BEII	N3	2.12.90	Burn		46	N	110pwr
						At about 150ft on the approach the tug pilot felt a slight jerk. Although he had only been about 50ft below the normal glide path the tow rope had hit 11000kV power lines and shorted them out. A 300ft rope had, unknown to the pilot, been used by mistake.			
16	PIK 20e	-	N	7.10.90 1425	North Hill		57	N	463
						After turning finals, in turbulent conditions, the pilot started selecting landing flap. The nose started to lift and the stick felt as if it was on the forward stop. As he reduced flap to recover speed the pilot had difficulty maintaining control in the turbulence. He then saw the ASI's speed-to-fly ring had fallen out and jammed the stick.			
17	ASW-20L	2589	M	20.1.91 1430	Saltby		44	N	1017
						After rigging and DI the pilot, after a normal control check, took a winch launch. The glider lifted off normally but as the cable developed slack the pilot lowered the nose. He was then unable to stop it dropping and bounced through three hard landings before coming to a halt. The elevator was not connected. No positive control checks!			
18	IS-30	3180	S	26.1.91 1300	Lleweni Parc	P2	51	N	643
							48	N	-
P2 was making an approach to an short uphill section of the airfield. He was allowed to approach too fast and when at 30-40ft he put the nose down P1 did not take over quickly enough to prevent the nose wheel hitting hard, bouncing the glider into the air. The right wing touched and swung the glider sideways for the final landing.									
19	Std Jantar	2151	M	19.1.91 1240	Lleweni Parc		34	N	159
						After pushing the canopy levers forward the pilot pushed upwards to confirm it was shut. During the winch launch he signalled "too fast" and the side wind opened the canopy and blew it off. He landed normally. This canopy locked by pulling the levers back and needed a firm push to check shut. His normal glider had forward locking levers.			
20	Not applicable	-	N	23.1.91 1230	Kitson Field		0	N	-
						At the top of a normal winch launch the weak link failed and a fast moving "snake" of cable fell on to the winch driver's cab. It found its way through a narrow opening in the wire mesh guard and hit the driver about the head, nose, jaw and teeth. Fortunately he was only marked and not badly cut. The club proposes to modify the guard.			
21	IS-28	-	M	3.11.90 1500	Nr Walney Island	P2	50	N	643
							46	N	-
P1 visually checked the canopy locking lever and pushed up on the canopy. After several manoeuvres P1 demonstrated a right hand spin during which the canopy blew open and became stuck, inverted alongside the cockpit. A normal recovery was flown and a safe landing made with P2 holding on to the frame. A firm push down was needed to overcentre latch.									
22	Pirat SZD 32	1933	S	17.2.91 1400	Connel		46	F	3
						This fatal accident occurred after the glider was seen to climb slowly on a shallow reverse auto launch then, after releasing at between 150-300ft, it flew ahead then turned left. A spin developed and the pilot was unable to recover before hitting the ground. The airbrakes were seen open which may have hindered any spin recovery.			
23	KA-8b	2418	M	2.2.91 1230	Morrige		47	N	7
						The glider touched down just short of a slight ridge which lifted it about a foot into the air. The second touch down was again normal but the glider hit another ridge while moving slowly. Some damage to fuselage longerons was found. The effect of the hard, ridged ground may have been compounded by structure weakened by previous repairs.			
24	Pegasus	3567	M	3.2.91 1430	Duxford		43	N	34
						In light wind conditions the pilot appears to have lifted off too early and allowed a PIO to develop. The glider climbed above the tug, made a shallow dive then climbed steeply before descending heavily on to the main wheel. The glider pitched forward on to the nose and the rope released.			
25	Bocian 1E	3529	M	16.2.91 1140	Halesland	P2	37	N	643
							42	N	1
On a check flight P1 pulled a simulated cable break at about 400ft. P2 started a "S" turn but turned back too early and was still high so carried on turning to land downwind. It became apparent that he was running out of room so P1 took over and turned back into wind. During the turn the wingtip hit the ground followed by the nose.									
26	K-7	1259	S	17.3.91 1425	Rufforth	P2	41	N	318
							39	N	12
After a briefing P2 attempted a full airbrake, sideslip approach. P1 took over on finals below 50ft but was unable to prevent the glider's left wing hitting a signpost near the runway edge. The glider swung around through 45° and touched down travelling sideways.									
27	Bocian 1E	1804	M	9.3.91 1503	Halesland	P2	25	N	439
							50	N	1
A simulated cable break was arranged for the P2 from an adjusted circuit, leaving P2 at 300ft over the centre of the cable run. P1 took over control as the landing ahead looked marginal. During this time a K-8 was launched, passed the two-seater, then released. The cable fell across the wing of the two-seater damaging the wing "D" box.									
28	K-21	3705	S	23.3.91 1240	Dunstable	P2	47	M	964
							32	S	50min
Following the first simulated cable break at 200ft the next was pulled at 20-30ft in a shallow attitude at 60k. The P2 positively lowered the nose, opened and then closed the airbrakes. P1 attempted to take control, but failed to prevent a heavy landing on the nose wheel.									



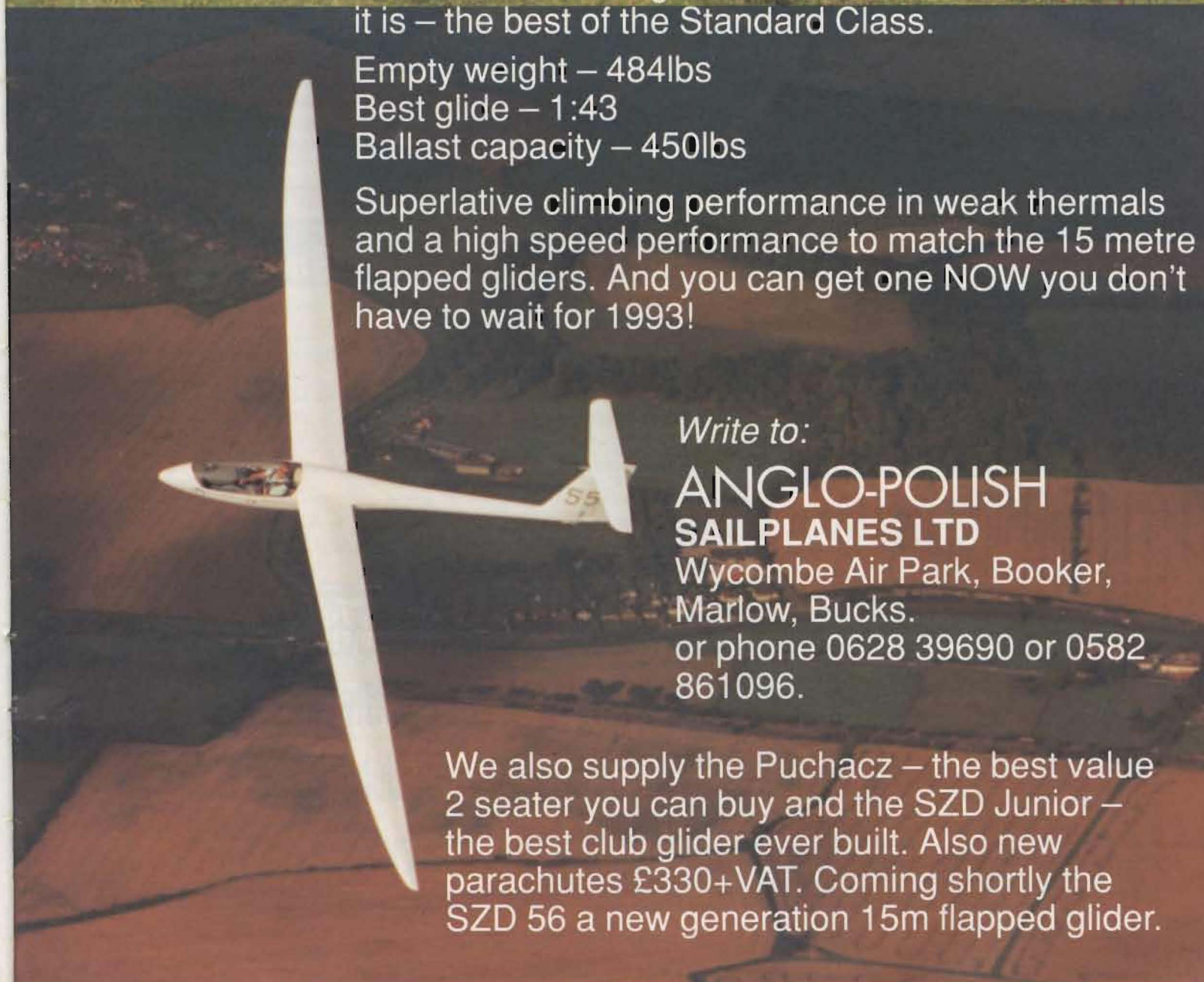
In the air or on the ground the **SZD 55** looks like what it is – the best of the Standard Class.

Empty weight – 484lbs

Best glide – 1:43

Ballast capacity – 450lbs

Superlative climbing performance in weak thermals and a high speed performance to match the 15 metre flapped gliders. And you can get one NOW you don't have to wait for 1993!



Write to:

**ANGLO-POLISH
SAILPLANES LTD**

Wycombe Air Park, Booker,
Marlow, Bucks.

or phone 0628 39690 or 0582
861096.

We also supply the Puchacz – the best value 2 seater you can buy and the SZD Junior – the best club glider ever built. Also new parachutes £330+VAT. Coming shortly the SZD 56 a new generation 15m flapped glider.



Gliding Safety

Derek Piggott

New from the recognised authority on gliding – a book which gives a positive approach to avoiding common gliding accidents. Derek Piggott examines some of the mishaps that occur on the ground and in the air – whilst launching and landing, aerotowing and cloud flying and he explains how to avoid them.

Derek Piggott MBE was formerly Chief Instructor at the Lasham Gliding Centre and has also served as an RAF and stunt pilot.

Published September 1991
£14.95 pbk

A&C Black



SOARING EQUIPMENT LIMITED

Exchange Propellers for Motor Gliders
Fixed price overhauls and repairs
Delivery and fitting included
Quiet Propellers for Towing
Leading-edge Protection Tape

HOFFMANN
PROPELLERS

193 RUSSELL ROAD
BIRMINGHAM B13 8RR

Tel: 021-449-1121 Fax: 021-449-9855

Sailplane & Gliding

The magazine can be obtained from most Gliding Clubs in Gt. Britain, alternatively send £13.50 postage included for an annual subscription to the British Gliding Association, Kimberley House, Vaughan Way, Leicester.

Red leather-cloth binders specially designed to take copies of the magazine and gold-blocked with the title on the spine are only available from the BGA.

Price £5.50 including post and packing.

OVERSEAS AGENTS

CANADA

T. R. Beasley, Soaring Supplies, PO Box 169, L'Original, Ontario, K0B 1K0.

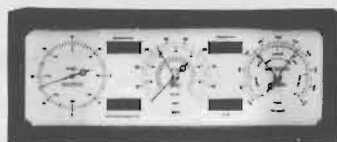
SOUTH AFRICA

Peter Eich, PO Box 82707, Southdale 2135, Johannesburg, Transvaal.

USA and all other Countries

Payable in either Sterling £13.50 (or US \$25.00 by Air Mail) but International Money Orders preferred, direct to the British Gliding Association.

Master the elements: with the Ultra-Pro Weather Station



Ultra-Pro Weather Stations give pilots all the vital information they need at a glance. *Features include:* wind direction, wind speed, wind gusting, barometric pressure, time of day, outside temperature, maximum and

minimum temperatures, dew point, rainfall, hours of sunshine, all clearly presented in a superb mahogany and glass cabinet. Units are powered by mains, 12V or 24V.*

CALL: (0926) 420200 or FAX: (0926) 450366 for more details, or write to:

Ultra-Pro, Toolcraft Building, Queensway Trading Estate, Leamington Spa CV31 3LX

A CHOICE OF MODELS FROM
JUST: **£160** . VAT

Parker SAILPLANES

FOR THE LOWEST PRICES AND
GUARANTEED-ON-TIME-DELIVERY! Write or phone;
The Airfield, Pocklington, York YO4 2NR
0759 306067 The Specialists in Wood and Fabric Aircraft

- ▶ Need your K6 re-covered?
- ▶ Has your Oly failed it's C of A?
- ▶ Is your club K13 Tatty?
- ▶ Broken your Skylark?

UK CROSS-COUNTRY DIPLOMA

Complete		
Name	Club	1991
Rae, D. A.	Bicester	9.91
Startup, P. A.	Bicester	10.5
Lovegrove, R. A.	Two Rivers	20.5

Part I		
Name	Club	1991
Heath, J. T.	London	10.5
Holt, D.	Eagle	25.5.90
Hammond, B. R.	Lasham	10.5
Richardson, J. W.	Blackpool & Fylde	5.6
Harris, C. I.	Midland	20.6
Ferguson, Lyn	Two Rivers	20.4
Treharne, G. J.	Southdown	1.6

Non-scratch sponge. As a spin off from the yachting world, the non-scratch sponge from the Mars Oil Company is ideal for gliders. Made of a new non-scratch abrasive material on one side and absorbent foam on the other, when used wet it doesn't scratch varnish, GRP, plastics or windscreens. It sells at £2.25.

The 1991 S&G Yearbook, with 68 pages of fascinating articles and information, is now available from the BGA office at £2.50 with free postage.

Ref Number	Glider Type	BGA No	Damage	Date Time	Place	Pilot/Crew		
						Age	Injury	Hr
29	K-13	2989	M	18.3.91 1130	Lasham	55 59	N M	338 68
The initial winch acceleration surprised the crew and the glider started a steep climb. At about 30ft the cable detached and P2 lowered the nose steeply to regain speed as the ASI was reading 35kt. He then was unable to round out and the glider made a heavy landing on the skid.								
30	K-6cr	3966	M	30.3.91 1500	Saltby	46	N	62
The pilot saw the K-8 on the runway while on the downwind leg and expected it to be clear of the runway in time for the landing. This was not the case and so she decided to land off one side of the runway rather than use the alternative landing area. Shortly after roundout the left wingtip hit a bush which swung the glider around.								
31	LS-7	3714	M	13.3.91 1400	Saltby	43	N	58
The pilot lowered the undercarriage but failed to lock it down and so it collapsed at touchdown, resulting in a belly landing on the runway. (This has now occurred to a number of the LS-7s in the UK.)								
32	K-8	-	M	23.3.91 1020	Portmoak	47	N	12
The pilot experienced repeated "diving turns", i.e. wing and nose drops during hill soaring turns. After deciding to land he entered a developed spin and jettisoned the canopy ready to bale out. The spin stopped and so he continued to land safely. The ASI's pipes were found to contain water - the pilot had not noticed the speed and altitude clues.								
33	K-13	2285	N	30.3.91 1206	Wormingford	54 34	N N	2000 50
During aerobatics at 70kt, the left airbrake opened. P1 opened the other brake to eliminate the initial asymmetric drag and landed safely. The left bell crank trunnion had fractured allowing that brake to unlock and open. Any pre-existing crack would not have been seen without removing it from the glider.								
34	Vega	2774	M	23.3.91 1245	Galewood	48	N	268
Thirty yards into the ground run the undercarriage retracted, trapping the tow rope in the doors in spite of the pilot being released. Eventually the rope pulled out and the glider stopped. The bearing at the cockpit end of the operating system shed its housing and operating lever. This was caused by poor mechanical security.								
35	Falke	M/G G-	M?	14.4.91 1200	Husbands Boworth	45 36	N N	800+120pwr 62+4pwr
P2 rounded out at 5ft, opened the spoilers and the nose suddenly dropped. P1 was unable to prevent it stalling in. (Falke's drop the nose when the spoilers are opened. The stall also produces an unannounced nose drop.)								

F=Fatal; S=Serious; W/O=Write-off; M=Minor; N=Nil



ROGER TARGETT

Sailplane Services



Sick Glider?

Then let us make it better!

Phone:
(0453) 860861 day
(0453) 860447 even's

or call in to our workshop at the Bristol & Gloucester Gliding Club.

CLUB NEWS

Copy and photographs for the December-January issue of *S&G* should be sent to the Editor, 281 Queen Edith's Way, Cambridge CB1 4NH, tel 0223 247725, to arrive not later than October 8 and for the February-March issue to arrive not later than December 3.

GILLIAN BRYCE-SMITH
August 14

ANGLIA (Wattisham)

Despite poor weather we have had some achievements. Congratulations to Chris Bret and Richard Salter on going solo, Richard at 16 years. The next day Richard's father, Mike, completed his Silver badge with a distance leg as did Jason Phelps with a 50km and Silver height. Stu Hammon leaves us for Scotland and we thank him for all his help. We have bought a trailer for our Astir.
J.R.C.

ANGUS (Arbroath)

Although the weather hasn't been brilliant we have had several good cross-countries. Congratulations to Martin Clarke on his Bronze badge.

We look forward to our 21st birthday celebrations in August.
D.A.P

AQUILA (Hinton in the Hedges)

After a slow start with CFI Duncan McKay and secretary John Rayment attending one of Chris Rollings' excellent cross-country courses, we are into a more successful phase with John Cooper, Richard Collings, Steve Blackmore and Karl Emerson gaining Silver distances and James Lancaster going solo at another site. And there was furious activity when we had wave over the site.

We were saddened by the death of George Scarborough who had been a good friend to Aquila over the years. George, who had heart surgery two years ago, seemed to be recovering.

Below: Shane Barnes (AEI) of Aquila GC with 74 year-old Dora Trew who had her first flight at their open day.



Alan Fry and his daughter Linda of the Newark & Notts GC who went solo on successive flights.

ing well and been displaying his inimitable talents with the Olympia he and his son, Ian, had just bought.
J.R.

BATH & WILTS (Keevil Airfield)

Our task week was again destroyed by the military but South Wales GC invited us to join theirs at Usk. Thank you. Despite the weather we showed the flag with Stuart North winning.

After a hard fight we ended up a close 3rd in the Inter-Club League. Congratulations to George Rowsell (going solo); Kath Jefferies (Bronze leg); Dave Smith (Silver distance) and Mike Chalmers (PPL and becoming an instructor).

The latest 1:500 000 chart has our new site marked as "The Park." It is hoped it will be open next spring.
B.H.

BICESTER (RAFSA Centre)

Cross-countries and kilometres are well down on the last few years but with numerous students our launch rate is high. Congratulations to all our new solo pilots and Steve Burchell on his Silver badge.

The Inter-Services Regionals had five days with 61 gliders competing. George Lee (Janus C) won the A Class and all but one day; Neville Weir the B Class, this being his first competition, and Alan Sommerville the C Class. It was an excellent Comp with superb organisation by Bicester. Well done "Spud" Hallam and Davy Rae for following them round the 300km task and to Gary Bennett flying a K-6E in the C Class - we believe he is the first paraplegic to fly a competition and he successfully completed three days.
C.A.D.

BLACK MOUNTAINS (Talgarth)

There was good easterly wave and some fine soaring for the Southdown GC expedition.

The clubhouse has been extensively renovated and is now entirely held together by a new coat of paint. We have had some considerable media interest and even the tug pilot was interviewed by Radio 4.

A 1948 T-21 has arrived. Congratulations to Godfrey Herrin for completing his Gold badge.
D.U.



"Doc" Dorothy Souper of Norfolk GC fame now lives in Derbyshire and visits the Marchington GC for some soaring. She is photographed by Peter Warren on her 2243rd glider flight in the Super Blanik with chairman Ray Steward.

BORDERS (Galewood)

Poor weather has meant few cross-countries, even for our August task week, though there were several climbs to 8000ft in wave. Our thanks to Robin Johnson for again organising and task setting this week.

We have a second Vega and a Libelle and a Pirat have joined the club fleet. We are grateful to Bill Fleming for selling us his glider after ill health restricted his flying and wish him a speedy recovery.
A.B.

BUCKMINSTER (Saltby)

Our open day/longest day on June 22 was very successful. We were lucky with the weather and flew from 5.15am to 9.30pm.

For the first time in many years we had two competition days for our Inter-Club League weekend and we are joint 1st with Coventry GC.

Nottingham Polytechnic GC took a club Puchacz and the K-6 to the Inter-University task week at Nympsfield and came 5th in the Glass and 3rd in the Wood Class. Graham Storford gained Silver distance in the K-6 on his first cross-country and won the final day.

Mike Calvert and Bill Morecroft have Silver

Below: Andy Chapman who landed a K-6cr at Sleep after flying Silver distance from Marchington. He was on a lead and follow task but his leader landed out! Photo: Peter Foster.



CLUB NEWS

heights. Bill Munns has retired as treasurer and we thank him for all his work, also our thanks to George Brown and Dennis Gliddon, the course instructor and the tug pilot.
M.E.

BURN (Burn Airfield)

The disappointing season was at last rewarded with some good soaring in July. On our popular cross-country course Brian Scothern completed his Silver badge with a 50km; Bill Jepson achieved the UK Cross-country diploma and there were 100kms for our two-seater crews – Chris Townsend, Martin Holland and Martin White.

The K-21 trailer is near completion – our thanks to all involved.
D.G.K.

CAIRNGORM (Feshiebridge)

We enjoyed expeditions from Blackpool, Aboyne and Portmoak which produced two Gold heights.

Our thanks to Alistair Morrison on running a successful course in August, assisted by Tish Johnstone and Andy Carter, which gave us new members and lots of flying, and to Tish for producing a club sweatshirt to commemorate our 25th anniversary.

Congratulations to Ray Lambert on his Bronze badge and for the club newsletter.
S.K.



Lindsay Bird of Glyndwr after her first solo on her 16th birthday.

CAMBRIDGE UNIVERSITY (Gransden Lodge)

You will see that our address has changed and we are operating from our new site at Gransden Lodge from October 1. Visitors are welcome both by air and road, although powered aircraft other than tugs retrieving gliders are not permitted under our planning permission. Access by road is only via B1046 between Longstowe and Little Gransden – the entrance is opposite Gransden Lodge Farm, about 2 miles from Longstowe.

If you fly in please keep well clear of Little Gransden airstrip 2km to the SW of our airfield (our own gliders do not overfly this area below 1300ft). There are three grass runways to choose from – approx N-S, E-W, and NE-SW.

We are very sad at the death of one of our instructors and tug pilot, Pete Treadaway in a fly-



Phoebe Bright and Suzanne Gurney of Southdown GC who were sent solo on the same day by instructors Dave Felix and Ted Palmer.



Marjorie Andrews of Culdrose GC who went solo at the age of 70.



Above: Dartmoor GC members, from l to r, Alan Holland (instructor), Norman Wood (aged 71), Richard Roberts (aged 16) and Don Puttock (instructor). Below: Chairman, Tim Bowles, and CFI, John Swannack, pour out the bubbly at the Dukeries GC's hangar warming party.



ing accident in a DH Dragon Rapide at Audley End recently – our sympathy goes to his family. (See BGA News.)
B.B-S.

CLEVELANDS (RAF Dishforth)

Summer has arrived at last and our competition pilots are busy. Our first barn dance was a great success and we tried our best with the longest day between the thunderstorms.

Congratulations to Benny Benedict on going solo and to Phil Thorpe on his Silver height.
J.P.

COTSWOLD (Aston Down)

Tim Macfadyen again won the Spanish Open/15 Metre Nationals at Huesca (flying *hors concours*). Mike Randle won our mini comp, organised by CFI Ruth and enjoyable despite indifferent weather.

Mike Oliver, Geoff Fellows and Simon Lucas have Silver distance and Chris Ashworth has distance and height. Congratulations on going solo to Paul Boylan, Dave Gardiner and Dave Lewis and to Sarah Lee on her instructor rating.
G.M.

COVENTRY (Husbands Bosworth)

The season finally picked up with Silver distances by many including Ian Freestone and Mike Hughes. Congratulations to Sonja Hornby, Peter Davies, Cliff Jones and Ann Wildman on their AEI ratings and to Brian McDonald and Peter Jones on becoming assistant instructors.

We are currently running the Women's European Championships and re-running our task week over the same fortnight. Well done to Jerry Langrick on winning his Class in the Northern Regionals.
T.W.

CULDROSE (RNAS, Helston)

We celebrated our 25th anniversary on June 29 with a dinner and disco and the acquisition of a new Puchacz.

The weather has played havoc with our flying – most trial instruction evenings were cancelled and the longest day.

Much work has gone into building a new truck for autotowing and the Bedfords have been repaired, serviced and one modified to carry the reverse pulley – many thanks to Roy Richards, John Smith and Dave Brown. The Pirat has been re-covered – particular thanks to Paul Williams and to Kevin Bridgen for acting as secretary.

We welcome back our CFI, George Kosak, from service abroad and John Beaty. Congratulations on going solo to Marjorie Andrews (at 70 years), Dave Brown and Steve Coulthard; Pete Green and Barry Fitzgerald (Bronze badges with an AEI rating for Barry) and Pete Pengilly (assistant instructor rating).
R.A.

DARTMOOR (Brentor)

The latest to go solo are "Stormin" Norman Wood, aged 71, and Richard Roberts on his 16th birthday. Norman is our oldest pilot without previous air experience who has learnt to fly with us and Richard joined as a nine year-old. Dick Toop (another septuagenarian), Phil Jarman and

Dave Hooper have Bronze badges.

Frank Maves has been with the Czech Air Force at Chivenor working with the grandsons of men he knew in 1940, while Alan Wright is leaving us for RAF Cranwell.

Our latest courses were hampered by fog and heavy rain but Alan Holland still made them enjoyable on the days when wave appeared.
F.G.M.

DEESIDE (Aboyne)

Competition Enterprise attracted good attention from the media including three minutes of prime TV time. (See the report in this issue.)

The wave season started well with Bob Dall riding the July wave to 29 000ft, Mike Surrey getting Diamond height and Dave Pirie (Capstan) stopping short of Diamond at 18 000ft for Gold height.

Congratulations to Jill Thomson and Steve Pirie (going solo); Paul Booth (Bronze badge); Peter Coward (2nd in the Western Regionals) and Dave White (2nd in Enterprise).

Our resident instructor Mike Law will provide launches for visitors during the winter, but phone in advance. We are also well on with 1992 spring and autumn wave season bookings. For reservations contact Fiona Bick at the site or on 05055 4382.
G.D.

DUKERIES (Gamston Airport)

After much blood, sweat and toil the completion of the hangar was suitably celebrated with a hangar warming party organised by Linda Taylor.

Congratulations to Mike de Torre on his duration with a 6hr flight and to Keith Gregory on his Bronze badge.

Beryl and David Clarke have bought a K-6CR, our third privately owned K-6.
J.C.P.

EAST SUSSEX (Ringmer)

The club has seemed determined to take the silly season to heart with incidents ranging from our novices outflying our pundits by a factor of 200, to the Sussex police marksmen using the field as a helicopter base for a real live lion hunt.

We are saving up for a two-seater to fit into our new T-hangar. The anniversary of the brilliant soaring day last year when both winches broke down simultaneously was celebrated in style this year with another good soaring day. We now have three winches, but guess what ...?
L.M.

ENSTONE EAGLES (Enstone Airfield)

The season's flying has been very good, despite some poor weather, with Simon Woodley flying both Bronze legs on the same day.

Belated congratulations to Eric Giles on being awarded the John Hands trophy for services to competition gliding at the BGA dinner – a richly deserved prize.

Club facilities are ready for the Open Class Nationals and our thanks to those who have

given so much time, energy and resources on our behalf.
M.S.

ESSEX (North Weald)

We have spent several weekends at our new site at Ridgewell when North Weald has been closed. These were quite successful, although the lack of suitable infrastructural facilities meant we couldn't do as much winch launching as we would have liked. By next season we hope to have good winch launching and some basic buildings (all offers gratefully received).

We regret that powered aircraft and motor gliders are requested not to visit us at Ridgewell.
G.W.L.

Obituary – Eddie Lipski

It is with profound regret that we announce the death of Eddie Lipski.

Eddie was our treasurer for some 15 years and his efforts on behalf of the club contributed in no small measure to the eventual purchase of Ridgewell. Unfortunately his illness prevented him from flying there, but he maintained strong interest in the project until the end.

His passing is painful to bear and his many friends will miss his infectious good humour. Eddie leaves a widow and three children to whom we offer our sincere condolences.
M.L.A.

FENLAND (RAFSGA)

The improved weather has increased our cross-country with a 5hrs for Don Johnson. Ian McTeer soloed on his 16th birthday with first solos also for C. Brown, M. Hubbard, Cath Kelly, Christina Mayo and Caroline George, giving us seven new female pilots this year.

"Bam Bam" Burston won a day in Class B of the Inter-Services Regionals and finished 8th; Paul Mclean was 4th and Ron Smith 11 was 11th. In Class A Rhod Evans was 16th after instrument problems and Kev Sharp learnt a lot winning every day in the back seat piloted by George Lee, triple World Champion.

**STORCOMM
TWO-WAY RADIO**

We are now accepting reservations for our NEW instrument panel mounting air set, model TR 9005. Main features:

- ★ Covers entire band 118-136 MHz.
- ★ Accepts up to 8 channels.
- ★ Offers cost saving narrow band receiver version.
- ★ Full power transmitter accepts both hand and boom microphones.
- ★ Sensitive and selective receiver with crystal filter.

Economic service for all our previous models plus most other air and ground radios.

Pye "Westminster" 6-channel ground sets available, fitted 130.1 and 130.4 Mhz.

Detailed information, prices and technical specifications from

GEORGE STOREY Tel. 0932 784422
H.T. Communications, P.O. Box 4,
SUNBURY ON THAMES, Middlesex, TW16 7TA

Please note the early deadline of December 3 for the Feb-March issue due to Christmas.

Ron Smith 11 and "Bam Bam" have been posted.

It is with deep shock and sadness we learnt of the death of Jerry Odell in a gliding accident. Until recently Jerry had been with us for many years and was best remembered for the inventions we sometimes had to test. The Rover car winch and the Vega wingtip extensions worked brilliantly. We will greatly miss him and his favourite saying "Let's commit aviation."
M.A.E.

GLYNDWR (Lleweni Parc)

Congratulations to Brian Allen and Lindsay Bird on going solo, Lindsay on her 16th birthday. Membership is growing quickly and our site potential for wave soaring and club expeditions is becoming more widely known with several Gold height claims since April, despite a lot of northerly and easterly winds, our poorest direction.

We have the use of a V8 powered Wild winch to supplement the Supacat.

The autumn wave season is booking up quickly, so contact the office as soon as possible.

D.A.B.

GRAMPIAN (Laurencekirk)

We now have a very comfortable large caravan, thanks largely to Dennis who did most of the work. Others have tuned our winch engine to give beautiful launches.

Amongst our many visitors was a member from the Grampian GC of Australia who made a video to show the difference between our operations.

R.J.S.

HEREFORDSHIRE (Shobdon Airfield)

Thanks to tug pilot John Warbey we have been operating on request during the week, resulting in some very successful flights.

Chris Rollings is bringing the BGA Janus on November 4, and possibly a Discus, for advanced training in wave soaring.

R.P.

MARCHINGTON (Marchington Airfield)

The long awaited DG-500, the first in the UK, looks set to be a popular addition to our steadily improving fleet.

Despite poor weather we have had a number of achievements – Phil Pritchard, Brian Pope, Bill Slater, Jeff Greatwood and Dave Treder have gone solo; Val Roberts and John Wale have Bronze badges and Andy Chapman Silver distance.

A.R.

MENDIP (Halesland)

Despite a poor season we have had a good crop of badge flights. Congratulations to Paul Edwards (a combined height and distance); Dave Townend, the younger, (Silver distance and duration); George Whitcombe-Smith (Bronze legs); John Alcock, David Lloyd, Pete Dunlop and Mick Longhirst (going solo) and Bob Merrit (5th in the Booker Regionals)

We had two very successful *ab-initio* courses but the two soaring courses suffered badly from

the weather. However, the Junior and Puchacz demonstrators were very popular.

Our longest day launches were down, again thanks to the weather. We had a fancy dress party in the evening. Our open day is on September 1 and we have the use of an immaculately refurbished T-21 from Joe Ackerman.

T.A.D.H.

MIDLAND (Long Mynd)

The last two months have been disappointing with maybe a dozen cross-country days. Some members have been gliding in France (Sisteron and Le Blanc) and Spain.

But we had two good days in August. On the 4th Charles Carter, Paul Stanley and Rose Johnson flew Silver distances, giving Rose her Silver badge, and on the 8th we had many cross-countries totalling 1667km. Gordon Kerr (K-6CR) gained Gold distance and Diamond goal and Charles Carter his 5hrs.

Martin Smith, Georgina Comins, Heidi Duncombe, Patricia Warren and Jamie Hamilton have gone solo. Chris Alldis flew in the Standard Class Nationals and Simon Adlard has entered the Junior Nationals.

We hosted the Inter-Club League Rockpolishers from July 13-14 with one good day.

A.R.E.

NENE VALLEY (RAF Upwood)

We had a very successful open day in July. Both club K-8s have been put to good use and we intend buying a SZD Junior for the club fleet. Congratulations to "Taff" Turner on going solo.

D.H.

NEWARK & NOTTS (Winthorpe)

At our AGM Mike Evans took over as secretary from Shirley Maddex. Our thanks to Shirley for the great job she did for us.

Our mini courses for monthly members are very successful and attracting some newcomers. We commiserate with Bob Patrick whose barograph failed on his Silver distance but congratulate Bill Griffiths (Bronze badge); Richard Jackson (Bronze legs); Andy Roe and Melvin Balogh (Silver heights); Mike Abrahams (completing his Silver badge with a distance leg) and Richard Keyse (going solo).

Our thanks to Bob Grant and John Cawrey

who quickly repaired a broken drum on our main winch.

Visitors are always welcome, whatever their mode of arrival.

M.A.

NEWCASTLE & TEESSIDE (Carlton Moor)

We are one of the oldest gliding clubs in the UK, founded 60 years ago as the Newcastle GC. We moved from airfields near Tyneside to Carlton Moor, on the N edge of the Cleveland Hills, 1200ft amsl some 50 miles S of Newcastle, about 30 years ago. The name was then changed to include Teesside, but for some years we haven't had any members from the Tyneside area so it was agreed to change our name again. We are now the Carlton Moor GC.

Congratulations to Peter Stevens on going solo and welcome to Mike de Vries from Holland.

J.E.

NORFOLK (Tibenham Airfield)

Congratulations to Roger Abrahams and John Gammage (assistant Cats); Peter Ryland, Peter Smart and Terry Cooper (full Cats); Ray Rawlings (Silver distance and 5hrs); Ray Hart (Gold height) and Neal and Phil (going solo).

A particular big thank you to Terry Jeffery and his team for continuing to make our clubhouse such a superb environment.

R.J.H.

NORTHUMBRIA (Currock Hill)

Two instructors and four other members attended BGA cross-country courses. We now have a Motor Falke which should be useful for field selection exercises and another glass machine (Cirrus).

The barn dance was a great success and we are exhibiting a single-seater at the Sunderland Air Show in August.

R.D.

OXFORD (Weston on the Green)

Congratulations to Dave Weekes and Donal Meehan (Silver badges) and Martin Cooper (Bronze).

Our cross-country book is looking rather sad this year with frustrated pilots including almost anything out of gliding range. Neill Lawson-Smith's first cross-country attempt finished in a field with retrieve details somehow being relayed back to base via a kindly airliner!

A senior citizen with a yen for a glider flight out-bid others for the mini course we donated to Radio Oxford's auction and enjoyed it so much she wants to join the club.


Neil Turner is organising a publicity display of gliders in the centre of Oxford.

F.B.

PORTSMOUTH NAVAL (Lee-on-Solent)

We have bought a Puchacz and sold off several older gliders – although our venerable T-21 is now owned by a club syndicate.

Congratulations to Graham Churton, Dave Kearns, Jackie Pearson, Beverley Kaye, Roger Perry, George Bell, Nick Boyd, Lee Barclimore (going solo) and to Graham Tucker, Nigel Gilkes and Dave Murray (Bronze badges). Also to Martin Heneghan who was 2nd in the Inter-

SUNSAIL (Andrew & Lyn Davis)	
	AEROGRAF - The Barograph - electronic seal, sailplans/motor glider, 6/12000 metre range, camera interface £548.00
	AEROGRAF BASIC - simple version of Aerograf for club use, hang-gliders and balloons, 6000 metre range £407.00
	FOTOTIME II - time recording camera - elapsed time resolves to within one second £266.00
	AT7 WING TAPE - 19mm x 20m £1.15
	JACKING BELLY DOLLY MECHANISM - 4 inch lift - with wheels £99.00 - without wheels £79.00
<i>Prices include delivery and may fluctuate with exchange rate</i>	
Clarebourne House, Shortwood Nailsworth, Glos. GL6 0SJ. Tel: 045 383 4931	

***In an emergency, would second best be good enough?
At TSE we put the experience of a lifetime into everything we do.***

TSE SAFETY 250 (INSET)	PRICE	INC VAT
WITH 26' CANOPY	£556.00	£653.30
WITH 28' CANOPY	£596.00	£700.30

TSE POP TOP	PRICE	INC VAT
WITH 26' CANOPY	£495.00	£581.63
WITH 28' CANOPY	£535.00	£628.63

AS USED BY:

BLACKPOOL & FYLDE GC
BRISTOL & GLOUCESTER GC
BURN GC
COTSWOLD GC
FENLAND GC
HUMBER GC
MARCHINGTON GC
MIDLAND GC
TRENT VALLEY GC
ULSTER GC
UNIVERSITY OF BRISTOL GC



Pop-Top Glider Pilots Parachute

- State of the art in-emergency parachutes
- The Pop-Top, External seated pilot chute providing the fastest possible deployment
- Fully enclosed risers resulting in a snag free parachute container system
- Steerable parachutes in a range of sizes to suit all sizes of pilots
- Soft, slim-line design for the ultimate in comfort
- British built, quality assured to BSI 5750
- Reliability, comfort and efficiency when it matters



THOMAS Sports Equipment Limited

Lofty's Loft • Pinbold Lane • Bridlington • North Humberside • YO16 5XS • Tel: 0262 878299

Services Regionals' C Class and won the Goodhart trophy for the best performance by a Naval pilot.

An expedition to Thouars, France, didn't yield many cross-countries but well done to Derek Ballard, John Hale, Claire Higgs, Yvonne Clark and Alan Clark (3rd overall) for winning prizes in a three-way competition with Thouars and Niort GCs. Also in France, Claire Higgs and Dave Hockings completed their Silver badges and Mick Budgen flew Silver distance.

RATTLESDEN (Rattlesden Airfield)

We hosted the Inter-Club League on August 10-11 when difficult conditions made task setting by the director, Martin Aldridge, an unenviable job. We all enjoyed the barbecue and barn dance organised by Mark and Karen Wright.

Congratulations to David King and Steve Wright on becoming instructors and to Reg Smith and Wilf Reynolds on going solo. Our new hangar is nearing completion.

M.E.

SCOTTISH GLIDING UNION (Portmoak)

A dismal June and July meant reduced activity. Our longest day was severely disrupted by the weather with only 62 launches and the recession seems to have affected course booking, but August has brought an improvement.

David Bruce led a very successful cross-country week which included a two-day expedition to Feshiebridge, where we were made most welcome, numerous field landings and the completion of their Silver badges with distances by Justin Kennedy and Angus McLachlan. Congratulations also to David Clempson (Gold badge); Drew Forrest, Ian Poole and Neil Macaulay (Silver badges); Julian Gibson (Bronze badge); Ed Murphy, Jim Miller and Dick Oostindie (going solo) and Brian Scougall (4th in the Northern Regionals).

Edinburgh GC, who fly with us, did well at the Inter-University task week with their K-8, flown by Stephen Blair and Jonathan Price, winning their Class against some hotted ships.

M.J.R.

SHALBOURNE (Rivar Hill)

At the time of writing our thoughts are dominated by the recent tragic accident which claimed the lives of two of our members, Derek Sprules and our chairman, Dave Maleham.

S.C.O.

Obituaries

Dave Maleham

I first met Dave in 1983 and we learnt to fly together. In those days he usually turned up at around 7am and stayed until we shut up shop. He could be found DI-ing cables, carrying fuel to the winches (we couldn't drive them around in those days), retrieving cables and winching. And at the end of the day he'd do it again, ensuring the equipment was ready for the next users.

That was typical of Dave. He never lost sight of the fact that people came to the club to enjoy themselves. Rarely, if ever, was his voice raised in anger. Dave's calming and tolerant personality cooled many an anxious moment. As an instructor his confidence and calmness spread to

countless newcomers to gliding which was his passion on which all his spare time and energy were channelled.

Dave renovated a number of gliders, in addition to doing a lot of work on the club fleet. It was all part of enjoying himself, both on the ground and in the air. His weekend of epic flights – over 17hrs in two flights – are still spoken of.

We extend our sympathies to his wife and children.

Jonathan Mills

Derek Sprules

Derek came to our April open day and promptly joined, loving every minute of his flying. He was an exceptionally nice man, quiet, but always helpful, willing and enthusiastic. He was phenomenally keen, almost obsessed with learning more, and put everything into his flying. His interests were all things sporting.

We offer our condolences to his family.

Roger Madelin

(Both obituaries are extracts from the Shalbourne's memorial issue of their newsletter.)

SOUTHDOWN (Parham Airfield)

We have a new Puchacz and are replacing our Grob Twin Acro with a DG-500. Our much loved K-8 has been re-covered and restored by a team led by Ron King with similar plans for one of our K-13s this winter. Our new Tost winch is looking resplendent on its prime-mover chasis and we are hoping for vastly improved launches.

Congratulations to Bob Adams, Richard Appletree, John Hawkins, Richard Loy and Graham Walker (Bronze badges) and Eddie Fitzgerald, Neil Passmore, Phoebe Bright and Suzanne Gurney (going solo). Phoebe and Suzanne joined on the same day and were sent solo on the same day by Dave Felix and Ted Palmer who completed their instructors' rating together.

C.M.R.

SOUTH WALES (Usk)

Despite the weather we managed to have a task week with visitors from Keevil (see also Bath & Wilts) producing the winner, Stuart North The task setter was Colin Broom.

Maureen Weaver and Mike Dunlop have AEI ratings; Stan Fenton (5hrs) and John Phillips (300km). Simon France and Dave Jeffries both climbed to 16 000ft in wave on August 10 while Cardiff was under rain.

We are planning a wave week in autumn. Contact the club for details.

N.S.J.

STRATFORD ON AVON (Snitterfield Airfield)

Steve Gale and Nigel Wall have gone solo with durations for Bob Berry and Mark Parsons and a Silver badge for Phil Pickett. Well done.

H.G.W.

Obituary – John Berry

It is with great sadness that we report the tragic death of John Berry on July 14. John joined Stratford GC in 1989 as a PPL holder and soon converted to gliding.

He was amongst the keenest of our members,

and an example to us all by invariably being one of the first to arrive to ensure that everything was ready for an early start to the day's flying. It says much about him that few members realised just how hard he worked on their behalf.

Our deepest sympathy goes to Gem and the family.

N.R.S.

STAFFORDSHIRE (MorrIDGE)

Our new Tost winch has been joined to its 16 litre Mercedes diesel engine and will soon be launching in anger. A DIY project to build a back-up winch based on a fire engine chassis is well advanced.

Expeditions to Sutton Bank, Galewood and Aboyne are planned. Proposals for a new site at Seighford near Stafford are awaiting planning approval.

B.G.

Obituary-John Timms

John, whose recent death has saddened us all, came to gliding late in life after wartime service on Lancasters and subsequent civilian power flying. He loved every minute of his soaring experiences and the banter of comradeship on the airfield; his selfless work on ground equipment and social activities help keep us flying and solvent.

Our sincere condolences go to his wife, Jean, who supported John in supporting us on so many of our barbecues and open days.

John's ashes were scattered, at his request, on Morrige Airfield on August 10.

Barry Gilman

SURREY & HANTS (Lasham Airfield)

Our new Ventus C is proving very popular. Last year five Gold distances, five Diamond goals and two Diamond distances were flown in club aircraft.

Much hard work has raised the standard of the fleet which consists of a DG-101, two Discus, a Ventus A and a Ventus B. Recently one of the K-8s was in a head-on mid air collision with an Astir in a thermal. Despite the K-8 losing 5ft of the port wing including half the aileron both pilots landed safely.

Mike Miller-Smith came 10th in the European Junior Championship; Alan Baker 4th in the Lasham Regionals' A Class and Glyn Bradney 2nd in the B Class, all flying club gliders.

P.R.H.

THRUXTON (ThruXton Airfield)

Alistair Caie has taken over from David Jarvis as chairman. David was thanked at a recent barbecue for his steady leadership in steering the club through some difficult times. Andy Mercy and Steve Lambourne are now assistant instructors.

Thanks to kinder weather, there have recently been a number of notable flights.

J.B.L.

ULSTER (Bellarena)

A lower key presence at the Ulster Air Show and our open day produced some new members with one, Kieron Sullivan, soloing in July. Brian Irwin has also gone solo and Jim Lamb celebrated his

Bronze badge by buying an Astir with Trevor Busby. One of the ex-RAF Motor Falkes is in its new T hangar.

Harry Hanna and Mick Wilson join the instructors and our favourite Hungarian, George, returned to do some tugging for the "Gliding for Schools" scheme and is spending August with the Dublin GC.

A TV crew has been filming us for a holiday programme to go out in January. Alan McKillen and John Lavery have PPLs and John an AEI rating.
B.T.

VALE OF WHITE HORSE (Sandhill Farm)
Well done to Dave Foster who helped us win the SW Inter-Club League and earned a place in the Junior Nationals.

Our second twin drum Buick powered winch is nearly finished.
S.J.W.

VECTIS (Isle of Wight Airport, Sandown)
Congratulations to Barry Pearce and Chris Waghorn on going solo. We have an expedition to France at the end of August and a syndicate Libelle has joined us.
L.T.

WELLAND (Lyveden)
Congratulations to George Davidson and Tim Harris (going solo, George also gaining a Bronze leg); Bob Rowland and Mick Esden (Bronze

badges with Silver height for Mick) and Andy Parrish (assistant Cat rating).

Alec Strachan is now winch master and the new pilot check system introduced by CFI Keith Scott is working well.
R.H.S.

WOLDS (Pocklington)
There have been some notable flights, despite the poor weather, with Alistair Bell, aged 17, a recent solo and Bronze pilot, completing his Silver badge in one flight. Many enjoyed the exceptional conditions on August 8.

Our longest day broke yet another record for visitors attending and launches due to fair weather and our new Supacat winch.

Fund raising for a new glass two-seater is going well due to great efforts by the Two-Seater Fund Committee.
N.R.A.


YORK GLIDING CENTRE (Rufforth Airfield)
Congratulations to Mark Rowntree, Alan Jolley, Chris Sturdy, Ben Walker, Cliff Burnett and Bob Gamble (going solo); Chris Brayne (Bronze leg); Dave Rowntree, Alan Wrigley, Geoff Barnham and Mike Cohler (Silver height with 5hrs for Geoff and Mike) and Alan Kilbride (Silver distance and a 100km triangle).

The longest day was from 0416 to 1802 with almost 14hrs of constant activity. We have a new Astir syndicate and a fourth K-6.
A.W.

YORKSHIRE (Sutton Bank)
The Northern Regionals proved to be the best competition of the year so far with seven contest days. Congratulations to Russell Cheetham on winning the Open Class and to Bob Fox who came 2nd. Also to Jerry Langrick and Mike Brook, 1st and 2nd in the Sport Class.

We will be hosting Competition Enterprise next June.

Visitors are always welcome, with or without their own gliders.
C.L.



**GLIDING HOLIDAYS
IN THE
SCOTTISH HIGHLANDS**

ARGYLL & WEST HIGHLAND GLIDING CENTRE
Connel Airfield, North Connel, By Oban,
Argyll, Scotland. Tel/Fax 059 284 288

Our Organisation is dedicated to the training of Glider Pilots. We give 5 day or 1 day courses of instruction which take pupils from abinitio to AE instructor level and onwards to advanced mountain/wave soaring.

Our school is based on a 1200m hard runway surrounded by the highest mountains in the British Isles. There is much to learn here about all aspects of the sport and our very experienced Instructors are here to help no matter what level of experience you have or require.

For information and free brochures, contact:
TRALEE BAY HOLIDAYS
Phone 0631 72 255

**COME
GLIDING**

with the
CORNISH GLIDING CLUB
Perranporth, Cornwall

5 day Courses £180
May to September

Under BGA instructors. Beginners welcome.

Trevellas Airfield is only one mile from Perranporth's golden sands, one of Cornwall's favourite family holiday centres.

RUTH PHILLIPS
BOSWENS, WHEAL KITTY, ST. AGNES
(0872) 552430

CULDROSE GLIDING CLUB

**25th ANNIVERSARY
DINNER/DANCE**

7th DECEMBER 1991

ALL PAST MEMBERS ARE INVITED
TO THIS PRESTIGIOUS EVENT

Contact:
Angi Toller, 20 Regent Terrace
Penzance, Cornwall
Tel: (0736) 67165



"CALLING ALL GLIDER PILOTS"

SILVER (C) + £1,450.00 inc VAT PPL 'A'	SLMG + £850.00 inc VAT PPL 'A'
--	--

YOU DON'T HAVE TO BE A MATHEMATICIAN TO SEE IT ALL ADDS UP TO A
GOOD DEAL

FULL TIME RESIDENTIAL COURSES FOR CONVERSIONS
Include: The Required Flying Training, Ground School, Examinations
and Flight Tests, Farmhouse Accommodation and Food.

- FREE FLYING TIME -

That's right! If you need an extra few hours of flying, we will not
charge you a penny more.

Ring Sue on 0327 62148 for details

* Private Airfield * Piper Warriors * One-to-one instruction *

BOOKER



All types of course from absolute beginners to experts • All aerotow launching for longer flights
 • We are open every day all year including summer evenings until sunset • Only 35 mins from London (M40 junction 4)

Write or phone for our colour brochure:

BOOKER GLIDING CLUB
 Wycombe Air Park, Marlow
 Bucks SL7 3DR
 Tel: 0494 442501

Cambridge University Gliding Club



The club is open to everyone.

We winch and aerotow from Gransden Lodge throughout the year, mostly at weekends. We run 3 day "Introduction to Gliding Courses" in April, and full 5 day courses for *Ab-Initios* and Solo pilots from the end of May to the end of August.

For general information write to
The Secretary, Chris Sullivan
 10 Kentings, Comberton
 Cambridge CB3 7DT
 Tel. 0223-263480

For Course details write to
The Course Secretary
 PO Box 16, Royston, Herts SG8 7TY
 Tel. (0763) 208021

LONDON GLIDING CLUB

Introductory

1 day courses

£80.00

• 2 & 5
Day
courses

• Women's
Courses

• Soaring courses

Full catering, licenced
bar and accommodation

Ring Val for details:
LONDON GLIDING CLUB
 Tring Road, Dunstable, Beds LU6 2JP
 0582 663419

THE LONDON GLIDING CLUB



IN RIDGE, THERMAL AND WAVE SOARING.

Soar the Cotswolds and into the Welsh mountains. Come for a day or a week. Clubhouse or caravan/camping accommodation. Holiday courses. AEI courses by arrangement. Easy access M4/M5.

Details and brochure from:

The Manager, Bristol & Gloucestershire
 Gliding Club, Nympsfield,
 Nr. Stonehouse, Glos. GL10 3TX.
 ☎ 0453 860342/860060

COVENTRY GLIDING CLUB



1-5 Day Courses for Ab-initio or early solo held each week, March-October

Advanced Soaring or Cross Country Courses held May-September

Field Landing and AEI Courses also available

Visiting pilots on summer camp welcome by appointment

COVENTRY GLIDING CLUB
 Husbands Bosworth Airfield, Lutterworth,
 Leics. LE17 6JJ
 Tel: (0858) 880521 • (0858) 880429

MIDLAND GLIDING CLUB THE LONG MYND



HOLIDAY TRAINING COURSES

March to October, to suit all levels from *Ab-Initio* to Advanced, including soaring training. Bungy launches when conditions permit.

Details from:

JANET STUART
 Midland Gliding Club
 Long Mynd, Church Stretton
 Shropshire SY6 6TA
 Tel: 058861 206

BUCKMINSTER

- Weekends & Wednesdays throughout the year. 7 days a week May-Sept
- 1-5 day courses from May to September
- Aerotow and winch facilities
- Club fleet - Puchacz (2), K13, K8 and K6
- Visitors always welcome - you will find us 5 miles south of Grantham and 3 miles west of the A1.

EAST MIDLANDS

Buckminster Gliding Club
 Saltby Airfield (Nr Grantham), Leicestershire
 Tel. Bill (0533) 303804
 or Martin (0802) 307737

KENT GLIDING CLUB



**Challock,
Ashford,
Kent
TN25 4DR**

Courses available for beginners and early solo pilots, April to October. Inclusive of instruction, meals and accommodation in fully licensed clubhouse.

For **FREE** brochure, write or phone:

**Challock 307 or 274
(Std 023 374)**



BLACK MOUNTAINS



**GLIDING
CLUB
(TALGARTH)**

**COME AND SOAR, WAVE
AND RIDGE FLY IN UNIQUE
CONDITIONS AT TALGARTH**

7 days a week, all year round
 Normal flight times 45+ minutes
 Excellent accommodation to suit all
 Flight training to all standards

Airfield 0874 711463
 Evenings 0874 711254

ENSTONE EAGLES GLIDING CLUB

Now open for gliding seven days a week throughout the year. New members welcome.

Launch by aerotow or motor tow and soar over the beautiful Cotswolds.

Mid week holiday courses from March to October for beginners or solo pilots tailored to suit your requirements.

Details from:
TOM MILLER

ENSTONE EAGLES GLIDING CLUB LTD
Enstone Airfield, Church Enstone, Oxfordshire
Tel: (0608) 678204 or 677535 (daytime)
(0869) 50767 (evenings)

MARCHINGTON GLIDING CLUB

Situated in the Midlands. Offers Holiday courses from April to September.

Good local soaring and cross-country.

Private owners welcome.

Please Contact:

Course Secretary
Marchington Gliding Club
Marchington Airfield, Morton Lane
Marchington, Nr Uttoxeter ST14 8LP
Telephone: 0785-51570

Norfolk Gliding Club



Holiday courses from June to September - beginners to Silver C. Book now!

Motor Glider Courses throughout the year - Bronze or Silver C to PPL (SLMG).

Visiting Aircraft welcome - ideal cross-country site - cheap aerotows and temporary membership.

Friendly club - accommodation on site - licensed bar.

Write to: The Course Secretary, Mrs G. Edwards, Gt Stones, Hare Street, Buntingford, Herts SG9 0AD. Tel: 0763 89460.



NORTHUMBRIA GLIDING CLUB

Currock Hill, Chopwell,
Newcastle upon Tyne NE17 7AX

Holiday Courses 1992 May-Sept.

Soar the beautiful Northumbrian countryside. Many local places of interest to visit.

Winch and aerotow launches.

Club expeditions welcome.

Contact:

The Course Secretary
5 The Oval, Houghton Park, Houghton-Le-Spring
Tyne & Wear. 091 584 3011



high flyers...

aerobatics

beginners.....

Lasham makes all the difference. With a large two-seat fleet, excellent aerotow and winch launch facilities and a comprehensive briefing room for lectures.

Lasham can help any pilot improve their skills. And we operate all week, every week. Find out about our full range of facilities: call Basingstoke (0256) 381322 or 381270.

Lasham Gliding Society
near Alton, Hampshire.

PLANNING AN EXPEDITION OR PERHAPS A WEEKEND AWAY?

Wolds Gliding Club

VISIT THE ...

The Airfield, POCKLINGTON
East Yorkshire YO4 2NR

Situated on the edge of the picturesque Yorkshire Wolds within easy reach of the historic City of YORK, the Moors and the scenic Yorkshire coast.

- EXCELLENT LAUNCH FACILITIES (winch/aerotow).
- ON-SITE ACCOMMODATION AVAILABLE.
- COMFORTABLE CLUBHOUSE, BAR &
- FLY YOUR GLIDER OR OURS. BRIEFING ROOM.

Write or give us a ring - 0759 303579

RANGE OF COURSES DESIGNED FOR BEGINNERS AND EXPERIENCED PILOTS

ADVANCED WAVE SOARING

SEVEN-DAY FACILITIES.

PRICES FROM £195 FOR FULL 5 DAY COURSE.

LEARN TO GLIDE AT THE YORK GLIDING CENTRE

RUFFORTH AIRFIELD
YORK · YO2 3QA
TEL: 0904 - 83694

JOHN EDWARDS

BGA Senior Inspector

*C of A Inspections
Repairs & Restorations*

Watermill Industrial Estate
Aspenden Road, Buntingford
Herts. SG9 9JS
Tel: 0763 71612 (works)
0763 89460 (home)

JSW SOARING

'Aquarius' (Dual Weight) Calculators.....£12.50
Wind Component Resolvers£6.50
'Gemini' Calculators
(Resolver on Reverse Side)£12.50
Flight Planning Rulers£4.00
Protective Wallets for Calculators -
or Rulers50p
'Dolphin' vario Conversions from.....£35.00

SAE for Product Details to:
34 CASWELL DRIVE, SWANSEA
W. GLAM. SA3 4RJ

The YORKSHIRE GLIDING CLUB

Our superb glass fibre fleet caters for absolute beginners or pundits. You can be assured of the best opportunities for gliding in this most beautiful county.

5-day courses for beginners & experienced pilots

With over fifty years of successful soaring at one of Europe's foremost panoramic sites, *the* YORKSHIRE GLIDING CLUB welcomes visitors from all over the World.

Residential and catering facilities.

The Yorkshire Gliding Club (pty) Ltd, Sutton Bank, Thirsk, N. Yorkshire
(0845) 597237

Anglia Sailplanes

Refabricating your glider this winter?

Why not consider using the CECONITE 7600 SERIES fabrics and materials?

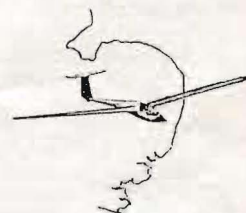
Using waterbased adhesive and filler coats there is no blooming on dope or cellulose finishes to contend with. Top coat in almost any paint you choose to give an excellent finish – or let us do the whole job for you.

Stockists of ALL your needs for recovering your glider including original Ceconite, glues and dopes (nitrate and butyrate) with a full colour mixing service available.

All this together with our servicing and repair facilities for all types of gliders and motor gliders.

Phone or write to **Stu Hoy** at:

Anglia Sailplanes Crown Cottage, Lower St., Gissing, Diss, Norfolk, IP22 3UJ. Tel: 037977 4114



ZULU GLASSTEK LTD

Sole UK agents for Peter Massak Winglets – Discus, Ventus, Nimbus 3, ASW-24, ASW-20 B & C and DG-600

Specialising in the repair and maintenance of composite construction sailplanes

We stock Bohli compasses, RC Allen horizons, hard seals, 6 way pneumatic connectors

All jobs completed on time

Office: 08444 3036

Workshop and Fax: 08444 4345



Grob G103 Twin III Acro now also available as a self-launching glider – both built to Grob high standards and ready for spring 1992 delivery.

Excellent for basic training through to performance training

Send for details:

JOHN ADAMS

SOARING (OXFORD) LTD

Hoo Mill, Ingestre, Stafford

Tel: 0889-881495 Fax: 0889 882189





Cair
Aviation Ltd.

"You can bank on us"

RADIOS

DELCOM AIR 960 Tx/Rx. £189.90 (Top control knobs for possible panel mounting).
ICOM A2 Tx/Rx. £289, ICOM A20 Tx/Rx, VOR £339, Inc. nicads and accessories.

GLIDER ELECTRONICS

12v converters for 28v turn/slips "Standard Model" £18.90. "High Tech Model" with selectable higher voltage outputs £22.90. Automatic charger for sealed rechargeable 12v batteries, two outputs with LED indicators £35.90.

INSTRUMENTS

Latest zero resettable PZL Sensitive Variometers complete with speed to fly ring and flask. Standard size £148, Miniature £178. PZL expanded scale sensitive ASI 0-140 kts in 1½ turns or 0-200 kts in 1½ turns £88. PZL TE Compensator £25.90. Reconditioned Sensitive IFR Altimeters 20,000' £149. 30,000' £169. Reconditioned 12V T/Slips £135. Reconditioned Miniature T/Slips £199, Reconditioned Bendix 3¼" Artificial Horizons with new inverter £299. Reconditioned Airpath Panel Mount Compasses £42. Ex Ministry Accelerometers Standard Size £82, Miniature Size £95.

THE NEW "XK 10" VARIOMETER

Standard or Miniature Instrument sizes. Dual Range, Dual Response Rates, Up and Down Audio with Variable Thresholds, Dedicated Continuous Reading Averager, No Flask required, Very low power consumption. £299. Repeater Meter £79.

NEW PARACHUTES

SP6, Steerable, 18 year life, Bag & Manual. Pack size length 540mm, width 340mm, depth 100mm. £330.

AIRFRAME SPARES

Cadet, Tutor, Sedberg, Prefect, T.31, Grasshopper, Swallow, Skylark including some large components.

ASH SKIDS

K-7 & K-13 £69, OLY 2B and other types from £62.

OTTFUR RELEASES

New "Ottfur" releases £99.50. Exchange "Ottfur" re-condition service £39.50.

TRAILERS

Superior well engineered metal trailers for the discerning glider owner. Complete or in kit form, from £1,850.

GLIDERS

Swallow, Foka Standard, Foka 5.

*SZD-51-1 Junior £15,500, with Trailer £17,800

*SZD-50-3 Puchacz £22,000, with Trailer £24,900

SZD-55 US\$45,000

*New gliders in conjunction with Anglo Polish Sailplanes Ltd. Prices subject to revision.

Prices shown exclude VAT and carriage.

COLIN D. STREET

"Yewdown House", 7 Sharpthorne Close,
Ifield, Crawley, Sussex, RH11 0LU.
Tel: 0293 543832, FAX 0293 513819 24hrs

WINCHING WIRE

- Available in stranded cable 4mm, 4.5mm and 5mm diameter
- High tensile galvanised steel
- Special coated wire for use on runway
- Tost release rings and weak links and splicing ferrules available
- Also cable parachutes and shock absorber ropes

*BEST PRICES for gliding clubs -
supplied by glider pilot*

DAVID GARRARD
Bridge Works, Gt Barford, Bedford
Tel: 0234 870401

CANOPIES & SCREENS



LARGE RANGE
OF SHAPES
AND SIZES
FOR GLIDERS
AND LIGHT
AIRCRAFT



EX-STOCK
IN CLEAR OR
COLOURED



Bob Reece
REMATIC
School House
Norton
Nr Worcester WR5 2PT
Tel/Fax Worcester
(0905) 821334

DON'T FORGET

the Dec/Jan edition
which is published
at the end of
November is our
Christmas edition.

Would your product
make a good
pressie?

Tel: 0494 442423
to book space asap
copy date 21.10.91

C OF A OVERHAULS

TO ALL TYPES OF SAILPLANES

FULL TIME SENIOR INSPECTOR

JOHN SMOKER

9 ANSON WAY
BICESTER, OXON

Tel: Bicester 0869 245422

RESTORATIONS


and repairs to wooden gliders
of all ages a speciality

SKIDS

Laminated ash skids
for most of the
popular gliders supplied
from stock.
Others made to order

TRAILERS

Aluminium sheeting
on steel frame



Cotswold Gliders

(Prop. T. Cox)

HIGH QUALITY SPECIALIST WORK IN

Glassfibre, carbon, kevlar, wood and metal inc. alloy
 All types of repair undertaken - Motor glider engine approval
 Kestrel/Libelle aileron drive rebuilds, also rudder drive NDT testing
 Full machining facilities for oversize wing pins, axles, control rods etc.

Phone or write

Tony Cox (Senior Inspector)

18 Stanton Harcourt Road

Witney, Oxon OX8 6LD 0993 774892 anytime

NOW APPROVED BY

UK Importers
 Peter Clifford & Company
 as sole UK Repair Agent
 for all Blanik Sailplanes

LLOYDS APPROVED

CAA APPROVED COMPANY

AI/9182/89



David Goodison

INSTRUMENTS

CALIBRATED, SERVICED AND REPAIRED

**PZL WINTER AND SMITHS
 BAROGRAPHS CALIBRATED
 CALIBRATIONS RETURNED
 WITHIN THE WEEK**

4 BROADACRES AVENUE
 CARLTON, Nr. GOOLE
 NORTH HUMBERSIDE DN14 9NE
 Tel. GOOLE (0405) 860856

BRONZE PAPER STUDENTS, AEI's, INSTRUCTORS and even CFI's will find

Q & A QUESTIONS AND ANSWERS for Glider Pilots

by Chris Robinson

an interesting and simple way to revise those vital facts or learn them for the first time

£8.50 inc post & packing

Credit Card Sales
 RD Aviation
 0865 841441

DESKTOP STUDIO
 92 TAYLER ROAD
 HADLEIGH SUFFOLK IP7 5HR
 TEL & FAX 0473 822866

Sportavia Soaring Centre



Situated in the beautiful Murray Valley close to Melbourne and Sydney.
 Director of Advanced Soaring - INGO RENNERT - 4 times World Champion.
 Full accommodation, Restaurant and Bar facilities on Site.
 Fleet of 16 Gliders including ASW-22, Discus, Nimbus-2, LS-4.

For further information please contact as below.



AUSTRALIA'S MOST ADVANCED FLYING SCHOOL
 PO Box 78, Tocumwal NSW 2714, Australia
 Ph: 61 (0)58 742063 Fax: 61 (0)58 742705

BRIAN WEARE - AERO

ALL TYPES OF GLIDER AND MOTOR GLIDER
 MAINTENANCE AND REPAIR. FROM SMALL TO THE
 LARGE INSURANCE REPAIR. REFABRICATING OF
 TUGS. VINTAGE GLIDER AND AIRCRAFT
 RESTORATIONS.

GLIDER WORKS
 DUNKESWELL AIRPORT
 HONITON, DEVON EX14 0RA

Phone:
 Works (0404) 891338
 Home (0404) 41041

DID YOU ACHIEVE YOUR AIMS THIS SUMMER?

Come and stretch your wings at
WAIKERIE
 Australia's leading soaring centre

Where the summer and the country go on for ever

Send for more information:

WAIKERIE GLIDING CLUB
 PO Box 320
 Waikerie, 5330, South Australia
 Phone: (085) 412 644,
 Fax: (085) 412 400
 ISD +61 85 412 644

If it's going to be

AUSTRALIA

The most comprehensive in the air:
 Daily weather and task briefing. Soaring & competition training courses. 14-glider fleet - Junior to Nimbus 2C. Day, week, month hire rates. High performance training available in Janus.

The most convenient on the ground:
 On-site budget accommodation. Easy walk to four motels. Pleasant country town, all activities. Mountain, river scenery one hour by car. Melbourne two hours train, car.

it's got to be

BENALLA

Write or phone John Williamson for details:
 PO Box 46, BENALLA, VIC. 3672, Australia.
 Tel: (0) 57 621058. Fax: (0) 57 625599

For discount travel and details of alternative Aussie Holidays quote 'Benalla Gliding' to:
 TRAVELBAG, 12 High Street, ALTON,
 Hants GU34 8BN. Tel: 0420 88724

WAY OFF TRACK

Top Spin

I was delighted to read Bill Bedford's 41-year-old account of his British National and UK local absolute altitude and gain of height record flight in an Olympia 2b, reprinted as the S&G Classic in the last issue, p192, for Bill has been my ultimate flying hero for almost as long as I can recall.

Anyone who has been to as many international airshows as have been Penguin's lot over the past four decades will know him as THE display pilot *par excellence* – his aircraft always positioned in exactly the right part of the sky and its attributes most engagingly displayed. Who else remembers his breathtaking multi-turn spins with a Hunter T.66A at the 1959 Farnborough? They began with eight turns, smoke pots trailing, on the Monday, had gone to ten turns by midweek and culminated on the closing Sunday with an apparently endless 13 turns.

I have a particular reason to hold Bill in high regard and a signed picture hangs on my office wall as a reminder as I write. It was with Bill Bedford that I first exceeded Mach 1, in a Hunter T.7, in a transonic dive over the Channel on May

10, 1957. When I – or, rather, we – recovered somewhere south of Brighton, Bill quietly asked if there was anything else I would like to do. Perhaps unwisely I mentioned that I was partial to hesitation rolls. We then proceeded to cross Sussex and much of Surrey, almost all the way back to Dunsfold, in a continuous eight-point hesitation roll.

Bill made a brief return to gliding ten years or so back when, near the end of his working life, BAe asked him to evaluate the then still Finnish-built Pik 20 as potential "offset" barter goods when the Finnish Hawk trainer deal was being set up.

If, and when, Bill ever writes his memoirs – and *the* definitive work on display pilotage as many of us have been urging him to do for years – that will be a book for every aviator's shelf.

I'm now for the birds.

After 56 years of sharing planet Earth with them, some 40-odd years of sharing its hills and over two decades of soaring with them sometimes in close company, I recently decided to learn something about birds.

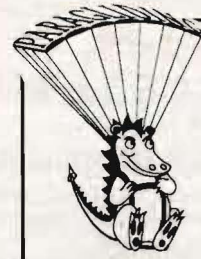
Feathered ones.

Last spring I signed up for a short course in birdwatching – actually six very pleasant accompanied evening walks – and I am now firmly hooked. A recent overnight stay at the Copeland Bird Observatory, on a delightful and otherwise uninhabited island off the coast of Co Down, confirmed me in a new addiction.

But I'm amazed how little even the most expert ornithologists know about aerodynamics and the theory of flight. (Perhaps I could take the reverse perspective and slam soaring pilots' ignorance of birds.)

Even handy phrases that I had wrongly assumed aviation had inherited from avian science are either unknown or are hardly used in that field. Say "aspect ratio" to any twitcher or birder and you'll be met with a blank and uncomprehending stare. They have no such convenient phrase to use when discussing the relationship of span to chord. Come to think of it, they don't use "chord" either while "leading edge" and "trailing edge", if not completely unknown, seem to be rarely used.

It was on the boat going out to the Copeland islands that I realised how little the study of birds



At last . . .
affordable aviation

Why not?
Learn to Paraglide



Open 6 days a week
for tuition and sales

Welsh Borders Paragliding Centre
Telephone: 054421 375 or 341



**GLIDING AT ABOYNE,
ABERDEENSHIRE THIS YEAR!**

Try the Charleston Hotel, Aboyne. Five minutes drive from the Club. Family-run Hotel, excellent food and comfortable accommodation. Also self-catering cottage to sleep 5 in Hotel grounds. We specialise in serving food until 10.30pm daily.

Tel: 03398 86475

involves the study of aerodynamics and flight. Two low flying cormorants went past the bow, going Hell for leather in ground effect. I was with my most knowledgeable birdwatching *guru*, who earns his living as a professional ornithologist, setting up tours, lecturing and so forth.

But he didn't know what the blazes I was talking about. For all these years he had thought sea-skimming birds flew that way simply to be as near as possible to their grub, rather than for the conservation of energy and cruising efficiency.

For a few fleeting moments, as I lectured him, I had the rare feeling of being a guru too.

CONVERT your SOARING SKILLS to POWERED FLIGHT this autumn with SECOAT's conversion courses designed for glider pilots who seriously enjoy their flying.

About the courses

- ★ Specially written for Silver C or Bronze C holders
- ★ integrated flying and ground school
- ★ experienced instructors
- ★ unique study guide
- ★ residential or part time option



For more information about this, our IMC courses, or our ground school training, phone 0679 21236 (fax 0679 21201) or write to:

**Lesley House
South East College of Air Training, Lydd Airport, Lydd, Kent TN29 9QL**

CLASSIFIED SECTION

TO PLACE AN ADVERTISEMENT IN THE CLASSIFIED SECTION, please send your remittance together with your wording to CHEIRON PRESS LIMITED, Hillview, Heathfield Road, High Wycombe, Bucks HP12 4DQ (Tel 0494 442423 or 0860 510407), before the 4th of the month of publication. Rates 70p per word with a minimum of £14.00. Black & White photographs accepted £6.00 extra. Box No. £3.00 extra. Prices include VAT. (For copy dates see front page.)

FOR SALE

GROB ACRO III, two-seater, owned by Centreline Services since new, 1 year ago. Complete outfit including trailer. Superior comfort and performance as well as fully aerobatic. Further details from Paul Potgieter. Tel 0489 885998.

NIMBUS 3. Hull Number 87. Numerous extras. £43 000ono. Tel 06284 83509.

ASW-22 complete with Komet trailer, instruments, wing covers, rigging aids etc. £35 000ono. P Pozerskis Tel 0858 467723 (home) 0536 85552 (work) Fax 0536 82603.

PROTECT your glider with lightweight custom made pyjamas. Waterproof or polyester/cotton. Soft Vyella canopy covers. Ann Woolf 0256 58540, (w) 843141.

G-109 motorglider, 05/81, 1660hrs, mot. 591hrs, prop. 28hrs, Com, Nav, Gyro. G-109B motorglider, 11/83, only 385hrs, mot. 450hrs, prop. 70hrs, Com, Vor, XPDR, Elt, Horizon, Gyro, stroblights, tinted cockpit. Privately owned. Top condition. Hangared Antwerp Airport. Tel Belgium 32 15 51 28 95.

TALYSMAN EMERGENCY PARACHUTES. New pack and harness with un-used canopy installed (12 yr life). Made to order, c/w bag. £350. New parachutes also available. Enquiries welcome. Call Bob 0432 275501 or see at Talgarth.

DART 15, good as new. Full panel, 4 channel radio, oxygen, parachute. Wooden trailer, covered glass-fibre. Third or half share at Talgarth or would consider selling £8000. Tel 0543 373045.

ASTIR CS. C of A April 92. Basic instruments + 720. Flight director etc. Good steel/glass fibre trailer. Only 330 hrs/200 launches hence excellent condition. Only £12 500ono. Tel 0760 24769 (eves) 0760 337261 (work) ext 229.

PIK 20D, New 1979. Immaculate condition, full history available. 750 hrs, 350 launches. Factory fibre-glass trailer. Available October. Scotland or Kent. £15,000 Tel 0303 268239.

JANTAR STD I, 1978. Excellent condition. Complete. closed trailer Costabel (steel-glass), radio, FS640, Westerboer E-variio, chute, tow out gear £12 000. Tel 010 49 4101 27874 (eves) 24061 (days)

BLANIK. Ex-RAF. Full panels, good condition. £5000ono. Tel 0983 872966 or 0983 403532 (eves).

NIMBUS 30T. Up to quarter share available in existing outfit, based Duxford but Gransden Lodge for 1992 season. Tel 0279 850713.

ASW-22. Full competition panel, covers, Cobra trailer. BGA Registered, flies in Holland. Whole outfit excellent. Mike Foreman (010 31) 41 32 54 277 (eves) or (010 49) 28 37 89 Ext 5676 w/e eves.

M-100S, 15m sailplane. Recovered in Ceconite 1988. C of A March 1992. Excellent wooden trailer. £5750ono. Tel 0745 591255.

T-61A FALKE Motor Glider. 1/6th share. Good condition, 720 radio, own hangar. £1300ono. Tel 0295 272397.

GLIDER STICKPINS, BROOCHES AND PENDANTS



Can be worn as tiepins, on lapels and hats, or as pendants and brooches for the ladies.

Chains for pendants can be supplied if necessary. Available in 9ct gold £34.95, and silver £18.95, inclusive of VAT.

All hallmarked and delivered to you in a presentation box. Price includes all above plus insurance and postage to ensure safe delivery of your gift.

Cheques payable to

BON ACCORD JEWELLERS
The Lodge, Pound House, Lapworth Street,
Lapworth, Warwickshire B94 6AX

Please allow 28 days for delivery. Urgent requests can be completed if requested in your application, (within a week if card number placed on reverse of cheque).

TAIFUN 17E motor glider 1986, 400 TTSN. One owner since new, always hangared. NDH, KX 155, transponder, many extras. £36 000. Tel Rhianon office hours 0295 257603 or fax 0295 261737.

MOSQUITO B. Rare opportunity to acquire a much sought after sailplane. Full panel, oxygen, 720 Decca nav. Trailer and rigging aids. To be sold as complete outfit at £1700. View at Sleep. Tel 061 980 7658 or 0457 762312.

LS-7. Well specified hull only plus Bohli compass, trailer fittings and low-out gear, 280 hrs. Excellent condition. Current cost of £28 000. Offers. Galloway 0592 620313.

ASW-20CL, plus Massak winglets, fin tank and full competition sealing. Cobra trailer with tow out kit. Also available full competition panel. Tel Tim Scott 0494 440192 or 0494 881665.

VARCOM SAILPLANE COMPUTERS

IMPROVE YOUR CROSS-COUNTRY PERFORMANCE THROUGH BETTER VARIOMETRY, BETTER INFORMATION



SYSTEM INCORPORATES: VARIO, AVERAGER, AUDIO-DIRECTOR, FLIGHT DATA RECORDER, DISTANCE AND FINAL GLIDE CALCULATOR

EASY AND INTUITIVE TO USE

BAROGRAPH AND STATISTICS PRINT-OUT NEWFOR '91: BAROGRAPH APPROVED BY BGA, CAMERA CONNECT, FINAL GLIDE AROUND A T.P.



LET US SEND YOU DETAILS OF: * SYSTEM OPERATION * BAROGRAPH * PRICE AND DELIVERY CONNEVANS LTD., REIGATE, SURREY RH2 9YR TEL: 0737 247571 FAX: 0737 223475

JOINT AIR SERVICES

T. A. and K. M. JOINT

GLIDER FINDER

Still having trouble finding the right glider for yourself? We can locate (at the correct price) the aircraft you want. I have contacts throughout Europe. Many happy syndicates so far, references available from them. You tell me the type and I will come back to you with a price delivered to UK with a UK CofA. No sale no fee. I do not buy and sell aircraft, only arrange, on your behalf the purchase of it. Promise of hassle free glider purchase, still got doubts? Give us a call - what have you got to lose? Some of the types located so far: Astir, K6CR, ASW-19, LS-3A 17 mtr, ASW-24, Nimbus 2C, Ventus BT, LS6C DG 200 15/17.

42 Anstey Road, Alton, Hants GU34 2RB. Tel: 0420 88664 (eves). Fax 0420 88664

**GET YOUR PPL
THIS WINTER!**

- ★ Bronze and Silver C conversions
- ★ Fly from Bristol Airport
- ★ Piper Warrior aircraft

Phone or write for information sheet:

ABS Aviation Ltd.,
Plot 10 Northside Road,
Bristol Airport BS19 3DP. Tel: 0275-474440



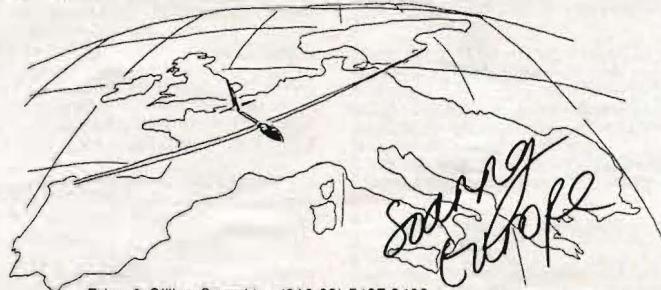
K-7. Sprung wheel, trailer, other extras, no serious accidents, good condition, new C of A. £6500ono. Tel 0902 372710

ASW-19b, excellent condition with lift up panel LX1000 720 Becker, parachute, baro and good but slightly tatty trailer. £17000. LS-1F. Beautiful condition. This excellent glider with Cambridge Mk 4 and 720 VHF, para and baro for £13000 without trailer, although trailer available if required. Tel 0477 34655 or 010 33 54 37 34 08

ASTIR JEANS (79) excellent condition, complete with instruments, (Dittel 720 channel, Westerboer vario), glass-fibre trailer, £7800. Netherlands Tel (31) 1719 83601/83886. Fax European Space Agency Mr D Klinge (31) 1719 84697.

THE EUROPEAN SOARING CLUB

SPANISH PYRENEES SPRING WAVE 1992



Brian & Gillian Spreckley (010 33) 5437 3408
or, Kiera Hibberd, 45 Sandiford Road, Holmes Chapel, Cheshire CW4 7BU. Tel: (0477) 34655

STD LIBELLE 1972, 2550hrs, radio, std instrumentation, £7700. STD LIBELLE 1974, 1000hrs, without radio, std instrumentation £7700. SCHEMPPHIRTH CS11, 1973, 4100hrs, without radio, electric vario, excellent gel-coat. £8000. LIBELLE covered trailer. £2200. UNIVERSAL open trailer £700. For the gliders without radio, the basic installation is complete. CIRRUUS CS1175, 1976, 2400hrs, electric vario, Blumenauer EFA1 £9400. Covered trailer £2800. M Andier, Tel 33 6928 1395. Centre Velivole Du Val De L'Eure, Aerodrome de Bailleau, Armenonville, 28320 Gallardon, France.

GROB 109B either as whole or will syndicate in 5 shares. Well maintained and fully airways equipped. Based near Dunstable. Tel 081 449 9346.

K-13 recently overhauled and recovered. C of A, instruments, no VAT. For details Tel 0494 535005.

KESTREL 19. Complete outfit in very good condition. Full panel, barograph, oxygen, new GQ parachute, wing covers AMF trailer and full rigging/tow out gear. £11 000. Tel 0905 371227.

IS-29D. This 37:1 glider is fully refurbished, in excellent condition, complete with trailer, oxygen, parachute £7800. Tel Tony Chalonner 0903 691753 (eves).

PIRAT at North Hill. Good condition, basic instruments, trailer £5250. Tel 0278 652843.

K-6E excellent condition, recovered Ceconite 1989. Good panel, year old aluminium trailer, parachute, oxygen, radio £10 000ovno. Tel Stamford 62501 (eves).

**A STITCH IN TIME SAVES NINE (THOUSAND?!)
A MESSAGE TO ALL CLUBS, PRIVATE OWNERS AND SYNDICATES FROM**

PROTECH

LEADING FINISHES

LEADING SPECIALIST IN PRESERVATION AND REFINISHING OF GELCOAT AND ACRYLIC FINISHES

A refinish is a laborious and expensive last resort on any glider despite a better finish being achievable due to skin shrinkage maturing. Gelcoats vary in their ability to suffer negligence but once crazing becomes visible to the eye action must be taken imminently. Just as a canopy is saved by spot drilling a crack your expensive finish can be redeemed by professional surface skimming using a mixture of fine abrasives and compounding tools. If the crazing is allowed to propagate, the manufacturers and repair agents will be more than happy to sell

you a new glider but less likely to advise you on how best to look after it. With a diploma in thermoset plastics we are FOLLOWING THEM FROM IN FRONT. Excellent references from Gliding Clubs, and Members of the British team not to mention Joe Bloggs and other ordinary folks.

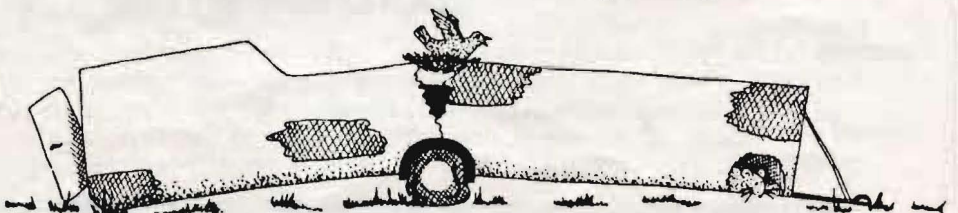
Truly at your service throughout the UK call 0494 438581 – you'll be glad you did. Finish life expectancy assessments on used sailplanes also available.

NICE GLIDER – SHAME ABOUT THE TRAILER!

Is it time you had a decent trailer? – then ring for details of New Aluminium Trailers to protect your investment.

Standard 15 metre units (DS-15) £2495 (No VAT)
Minimum part exchange allowance £250 for limited period
Superb trailer kits from £1700 include everything

David Schofield
SCHOFIELD AVIATION
The Hangar, Lotmead Farm,
Lower Wanborough,
Nr. Swindon, Wilts
0793 790160 and 0793 822300



NIMBUS 3: The ultimate 25.5m total package, no accidents, no gel cracks, low hours

Instruments: Alt, T&S, mini vario, A/H, Bohli, VOR, ASI, Westboer dolphin Nav vario computer, 720 ch radio, A12A oxygen, drag monitor, voltmeter, chronometer, camera mounts, Aerograph barograph

Extras: C of G shift, disc brake, large outboard tanks, reprofiled wings, turned up tips, P. tube

GRP trailer: Low line, easy load, anti-sway hitch, superb towing, jack, spare

Ancillaries: 70 gal waterballast trolley, tow out kit, trestles, waterproof covers, dust covers

The rest: Parachute, battery charger, batteries, hand held 720 ch radio, our cushion

Tel: Peter Redshaw for info. Would consider part exchange for LS6 or similar. 0229 54043 work, 0229 56336 home

STD LIBELLE 201B. No. 385, oxygen, parachute, no radio, control surfaces sealed. Wooden trailer, excellent. £12 300. Tel 0757 289065 (day) 0653 696583 (eves).

WOODEN TRAILER. suit 15m glider. May be seen Dishforth £450ono. Tel 061 761 5921.

DG-202/17 superb condition, metal trailer, tow out gear. LX1000, T&S, radio, barograph, 2 x 14v power supply £23 750. Tel 0453 544549.

BG-135. Excellent condition, well instrumented, recent C of A, purpose built trailer, parachute, radio £5100. For further details Tel Fareham 220686.

PZL vario with flask £25. "WINTER" clockwork barograph £150. AMF glass-fibre 40 gallon water ballast trailer, with electric pump £100. Tel Ron Dixon 0392 862344 (day) 0372 450665 (eves).

DISCUS B (75J), Cobra, full competition panel, all extras, low time, C of A, all excellent condition. Tel Chris Ebbs 0454 260 758

K-2. Based Cranwell, recently refurbished, excellent soaring two-seater, open twin-axle trailer, C of A to June 92 £4000. Tel 0529 303249.

DART 15R. Unique retractable undercarriage, normally only on 17m Dart. 840hrs, 690 launches, closed wooden trailer. Excellent condition £7000. Tel 0661 843608.

PESCHGES VP3E competition variometer just overhauled by manufacturers, complete with new wiring harness and temperature probe. Offers around £900. Tel 0453 766024.

OLY 463 rebuilt 4 yrs ago. Sleek canopy and wheel fairing, flattening colour scheme. TE audio vario and PZL. Good trailer £6350. Tel 0865 300518.

ROLLASON-CONDOR D62C 130hp. New C of A until August 1994. 3200TT engine 250 SMOH. £8500. No VAT. Tel 0694 723269/723601.

K-6CR, good condition, C of A, T/E electric vario + T&S, closed wooden trailer, radio £6500. Tel 0865 240735 (home) 0865 269647 (work).

DG-400, low hrs, with instruments + Cobra trailer. Tel 0663 763976 (eves).

ASW-22. Competition panel, all the goodies, excellent gel finish, Cobra trailer. P/exch. Discus/LS-7/ASW-24. Tel 0908 568171.

CROSS-COUNTRY SIMULATOR for Spectrum 48K. Uses joystick. Full instrumentation, audio, thermals/sink, position, cloud flying, aerobatics. Send £5.95 to Mike Butcher, Church Road, Wrenningham, Norwich NR16 1BA.

AMF Trailer 12 years old, new axle and jockey wheel in 1990 £1200ono (seen at Booker), PYE Cambridge radio 130:1; 130:4; volmet south magnetic car aerial; certificate of compliance £100ono. Tel 024 027 302.

DG-100G. Steel/aluminium trailer, rigging aids, tow-out gear, full competition panel, 720 radio, oxygen, maintained to a high standard. Tel Tony Cox 0993 774892.

STD LIBELLE 201B complete with instruments. Tinted canopy. Komet-type trailer and C of A £11 600. Tel 0522 790635.

ASW-20C 1984. Immaculate condition, one owner, never broken, only 413 hrs, new C of A, complete with full panel and metal trailer £24 000, no tips, no offers. Tel Redman 0223 290807.

DART 15 VGC. Complete outfit including PZL & Cook varios, horizon, T&S, oxygen, parachute, radio, trailer, cockpit vent, C of A to April £6000. Tel Martin 041 775 2853.

K-18. "Best ever" wood and steel ship, see Pp 127-129 Piggott on Gliding. Basic panel, tow out and rigging aids, superb condition. 3 yr old metal trailer. Offers? Tel 0752 790398 or 0752 703006.

RF-5B. 2 x 1/3 shares will be available in this superb motor glider. Please write, stating experience etc. to Steven Brown, 1 The Drift, Sutton, Peterborough PE5 7XA.

BERGFALKE 4. C of A, instruments, open trailer. Good cross-country trainer. Unbeatable two-seat performance at this price £11 000. Tel 0635 41803.

ARTIFICIAL HORIZONS with inverters. Czech made, electric 12v. Fast erect. £400 + VAT. • **MINIATURE T&S** 4 1/2v £150 + VAT. • **LAK 12** new and factory refurbished available now. Glass/carbon fibre 20.5m. L/D 48:1. Trailer, metric instruments and VAT included in price: new £18 000; refurbished £16 000 (approx). Demonstrator at HusBos.

BALTIC SAILPLANES Ltd.
Tel 0858 467723 (anytime) 0536 81777 (evenings)
0536 85552 (office) Fax 0536 82603

DART 17R with modern metal trailer, all in good condition £8200. Tel Steve Slater 0909 486305.

FAUVEL AV36 "Flying Wing". Vintage aerobatic single seater. No rigging required, with trailer and new C of A £2750. Tel 0485 600260.

VEGA, flapped. Instruments + T&S, audio vario and Dolphin, oxygen + spare cylinder, parachute, barograph, AMF trailer. Offers £15 000. Tel 081 549 3786 (eves) 071 240 0352 (day).

K-6E, excellent condition complete with covered trailer. Comprehensive instruments including A/H, T&S, aerograph, electronic barograph, radio, parachute £9000. Tel A White 0724 858597.

IS-29D very good condition, low hours, parachute, barograph, LX100 vario, trailer. Will accept any reasonable offer. Tel 0344 776627.

ASW-20. Superb gel-coat, panel remade 1990. Borgelt vario system, panel mounted radio, Horizon, aerograph/barograph, oxygen, parachute, one man tow out aids, renovated aluminium trailer £24 000. Tel 081 458 1871 (eves) 071 490 7171 (day).

WINCHES. One twin drum with Tost mechanics, one single drum. Both mounted on prime movers. Tel Bristol & Gloucs. Gliding Club 0453 860060.

STD CIRRUS 761. £13 500. Air brake mod. BOHLI, oxygen, Cambridge, vario, Dolphin, parachute, tow out gear, GRP covered trailer, Winter baro. All vgc. HusBos based. Tel 0780 54661 or 0604 845842.

TRAILER, glass-fibre and steel construction. Vgc. Fitted for single seat Astir. Tel Roger Andrews 0558861 447 (eves).

ASW-20L, German built, refinished in acrylic, instruments include DX1000 Avarger/Director and TR720 radio. AMF trailer. Tel 081 449 4386 (eves).

ROLLASON D-62C Condor 130hp and PA-25 150hp glider tugs. £14 000 and £17 500. For details tel. Richard Harris 0473 824607 (home) or 0473 718473 (work).

BLANK. Fuselage factory refurbished and reupholstered, new C of A, basic instruments. A/C now surplus to fleet requirements can be seen at Talgarth. Offers around £8000 to Black Mountains Gliding Club. Tel 0874 711463.

GLIDER WINCHES built to your requirements, new twin drum from £15 000. Send for details to Mervyn Gooch. Gooch & Sons, Tel 0449 740710 (day), 0473 822738 (eves).

WANTED

WOODEN GLIDER by new syndicate. Must have weatherproof, roadworthy trailer. Tel 0532 854260 or 0422 839817.

NIMBUS 2C - carbon wing preferred, glass considered. Tel 0489 877289.

STD JANTAR, DG-100, STD CIRRUS, etc. Complete outfit required, including trailer. Must be in good condition, private buyer, cash available. Tel 09467 88214 (work), 089081 400 (week-ends).

The "LS" Agent in UK - Sales • Spares • Repairs

MARTYN WELLS
(Wells Design Ltd.)
Brailes, Banbury, Oxon.
Home Tel. 060 884 217
Workshop Tel. 060 885 790

ORDER NOW:-

LS4, LS6, LS7

REPAIR MAINTENANCE C of A

**FACILITIES FOR ALL
GLIDERS IN OUR PURPOSE
BUILT WORKSHOP**

Norfolk Gliding Club



EASTERN REGIONALS

May 30 - June 7 1992
Tibenham, Norfolk

Brochure and entry form from:
Mrs Jenny Everett
Orchard Cottage
Trowse, Norwich
Tel: 0603 626471 (after 6pm)

SOAR THE UNRESTRICTED
SKIES OF EAST ANGLIA

DAMAGED GLASS-FIBRE glider by private buyer. Top price paid - would consider complete outfit. Will travel in Europe to view. Tel 081 998 1510.

SERVICES

20% DISCOUNT

ON FERRY PRICES
THE CONTINENT OR N. IRELAND
MICK MILLANE MOTORSPORT
0642 587784



C of A REPAIRS AND GLASSWORK

Motor glider maintenance from 50 hour check to three year C of A

Please call or write to **Tim Dews**, 49 Bratton Road, Westbury, Wilts. BA13 3ES. Tel 0373 827963

PENNINGTONS CHARTERED ACCOUNTANTS

For accountancy and taxation services.

11 Worton Court, Worton Road, Isleworth, Middlesex TW7 6ER

Telephone **John Gorringe**
Day 081 568 8745, Evening 081 948 3799

THE BRISTOL & GLOUCESTERSHIRE GLIDING CLUB

Nymphsfield, Stonehouse, Glos. GL10 3TX

The Bristol & Gloucestershire Gliding Club wish to appoint a full time CFI/Manager as of 1992. A suitable individual will have most if not all of the following qualifications:

- | | |
|---|---|
| Full rating, more than 1,000 hrs | BGA Inspector's ticket |
| Experience in a large Club as CFI or Deputy | AEI Coach |
| Experience in Gliding Club Operations | BGA permission to run Instructors Courses |
| PPL with aerotow experience | Restricted Motorglider Instructor Rating |

In addition to the above the successful applicant must be keen to improve instructional standards while operating a large gliding club as efficiently as possible.

Salary and conditions will be negotiable and commensurate with qualifications and experience.

Please apply in confidence to: The Chairman, at the above address, with full CV, covering both gliding and non gliding careers

WITTER
TOWBARS
TRUST WITTER

- First choice for safety-conscious drivers with over 3 million towbars supplied. ● Safety tested to B.S. and I.S.O. standards.
- Guaranteed for life.
- Fitting does not affect your vehicle's warranty.
- At motorway speeds and on busy roads you can't afford to risk fitting a 'cheap' towbar - fit the best, fit Witter.

See Yellow Pages for your nearest specialist fitter or stockist.

WITTER TOWBARS, CHESTER CH1 3LL
Tel: 0244 341166

CONGRATULATIONS
TO TERRY JOINT ON
HIS SPECTACULAR
DAY WIN DURING
LASHAM
REGIONALS,
FOLLOWING A
SUCCESSFUL
MARGINAL GLIDE IN
THE JANUS -
REFINISHED BY
PROTECH
Tel: 0494 438581

SITUATIONS VACANT

EUROPEAN SOARING CLUB requires an experienced, keen Instructor for training at all levels. From March to September. Conditions etc according to experience and circumstances. Minimum experience - hold C. ALSO person who can fly Robin and Bellman Scout for the season. Tel 0477 34655 or 010 33 54 37 34 08 or write to address on European Soaring Club advertisement.

MANAGER required for London Sailplanes Workshop. Must be a BGA Senior Inspector. Apply to Liz Veysey, London Gliding Club, Dunstable, Beds LU6 2JP Tel 0582 663419.

INSTRUCTOR AVAILABLE

With or without own K-21, also ASH-25E, and Christian Husky tow plane.
All on ad hoc basis.

Tel 0362 668924

COURSES

COVENTRY GLIDING CLUB - COURSES

GLIDING PPL HOLDERS. A tail wheel conversion course can be arranged for Bronze C holders during the winter season.

BRUSH UP ON FIELD LANDINGS. A course can be arranged to practice field selection and approaches to provide confidence in outstanding for next season.

?DONE YOUR STALL REINFORCEMENT EXERCISES YET?
Experience can be gained if required.

For details of any of the above at Husbos, contact **Phil or Harry. Tel 0858 880521**

MISCELLANEOUS

BRITISH MICROLIGHT AGM & TRADE FAIR. International Centre, Castle Donington, Sunday 10th November. Visitors welcome.

FOR HIRE AUSTRALIA VW CAMPERVAN based at Lake Keepit GC. Sleeps 2 + 2. TV, sink, stove, bedding, pop-top. For full details Tel Formby (07048) 78457.

ADVERTISERS' INDEX

ABS	282
A.C.Black	266
Aerospace Information Centre	Insert
AMF Enterprises	226
Anglia Sailplanes	277
Anglo-Polish Sailplanes Ltd	265
Argyll & West Highland Gliding	274
Benalla GC	279
Black Mountains	275
Bon Accord Jewellers	281
Booker GC	275
Bristol & Gloucestershire GC	275, 284
British Gliding Association	263
Buckminster GC	275
Cair Aviation Ltd	278
Cambridge University GC	275
Centreline Services	IFC
Charleston Hotel	280
Clacton Aero Club	229
Classifieds	281-284
Peter Clifford & Co	231-258
Connevens Ltd	281
Cornish Gliding Club	274
Cotswold Gliders	279
Coventry GC	275
Culdrose GC	274
Desk Top	279
John Edwards	276
Enstone Eagles GC	276
European Soaring Club	282
Flite Lines Marketing Ltd	227
D. Garrard	278
Glider Instruments	258
Goodison Glider Instruments	279
HT Communications	270
IMC	274
Joint Air Services	281
JJ Associates	234
JSW Soaring	276
Kent GC	275
Lake Keepit	250
Lasham Gliding Society	276
London GC	275
London Sailplanes Ltd	229
Lowe Electronics	226
Lowndes Lambert Ltd	260
Marchington GC	276
McLean Aviation Ltd	256
Midland GC	275
Mowbray Vale Insurance	230
Neogene Paints	258
Norfolk GC	276, 284
Northumbria GC	276
Oxfordshire Sport Flying Club	258
Parker Sailplanes	266
Piggott Brothers & Co Ltd	261
Protech Sailplane Services	282
RD Aviation Ltd	IBC
Rematic	278
Sabre AAV	228
Sailplane & Engineering Services Ltd	243
S&G	266
Schofield Aviation	282
Scottish Gliding Union	258
Sedgwick Aviation Ltd	232
J.L.Smoker	278
Soaring Equipment Ltd	244, 266
Skydragons Paragliding	258
Soaring Magazine	233
Soaring (Oxford) Ltd	277
Southdown Aero Services Ltd	233
South East College of Air Training	280
Southern Soaring Tours	235
Southern Sailplanes	BC
Spindelberger	228
Sportavia Soaring Centre	279
Sunsail	271
Roger Target Sailplane Services	267
Thomas Sports Equipment	272
Trimble Navigation Europe Ltd	238
Ultra-Pro Ltd	266
Waikerie GC	279
B. Weare	279
Wells Design Ltd	283
Welsh Borders Para Centre	280
C.P. Witter	284
Wolds GC	276
York Gliding Centre	276
Yorkshire GC	277
Zulu Glasstek	277



AVIATION LTD



For all your gliding requirements

- ★ C of A?
Basic Price **£150 incl. VAT**
which includes BGA fee
Rectification and parts charged in addition

- ★ Hard Wax Polishing
15 Metre Glider £120 inc. VAT
Large Gliders £170 incl. VAT

PROTECT YOUR INVESTMENT

- ★ Complete Avionic and instrument installation and Overhaul service

BOOK YOUR GLIDER INTO "RD" THIS WINTER

A NEW VARIO for 1992?

Purpose Built Workshops



Separate Avionics Workshop

S-NAV GLIDE SLOPE FLIGHT COMPUTER



Manufactured by:

Cambridge Aero Instruments

Warren Sugarbush Airport, Vermont 05673, USA
Tel: 0101-802-496-7755 Fax 0101-802-496-6235

THE NEW GENERATION OF CAMBRIDGE FLIGHT COMPUTERS IS HERE NOW!

S-Nav combines all the *complex functions* of the European Flight Computers with . . .

DRAMATICALLY IMPROVED EASE OF USE.

Cambridge "human engineering" makes the necessary, yet complex functions of flight computers easily and readily available to the pilot . . .

Less cockpit confusion – Better flying.

NEW Glide slope graphics

NEW Fibre optic compass interface option

NEW Electronic "G" metre climb/cruise switching option

NEW CONFIGURABILITY . . . Need a custom audio? Do it!
Custom polar? Easy! Both face configurable in seconds.

*Quality Supplies
and Service*



RD Aviation Ltd.

25 Bankside Industrial Estate

KIDLINGTON

OXON OX5 1JE

Tel: 0865 841441

Fax 0865-842495

24 Answerphone & Fax

SHOP HOURS

0900-1830 Mon-Fri

1000-1230 Sats

CONGRATULATIONS

TO

BAER SELEN – FIRST – WORLD CHAMPIONSHIPS STANDARD CLASS – DISCUS
JED EDYVEAN – EQUAL FIRST – BRITISH STANDARD CLASS NATIONALS – DISCUS
STEVE JONES – FIRST – JUNIOR NATIONALS – DISCUS
THE CHOICE OF CHAMPIONS OR MAKER
OF CHAMPIONS?

SCHEMPP-HIRTH DISCUS

Contact:

SOUTHERN SAILPLANES

Membury Airfield, Lambourn, Berks.
Tel: 0488 71774 Fax: 0488 72482

Barry Elliott in
"ROMEO 10"
wave soaring
out of Bicester
(photo by Terry Joint)

30mm f/8.0 depth limit.