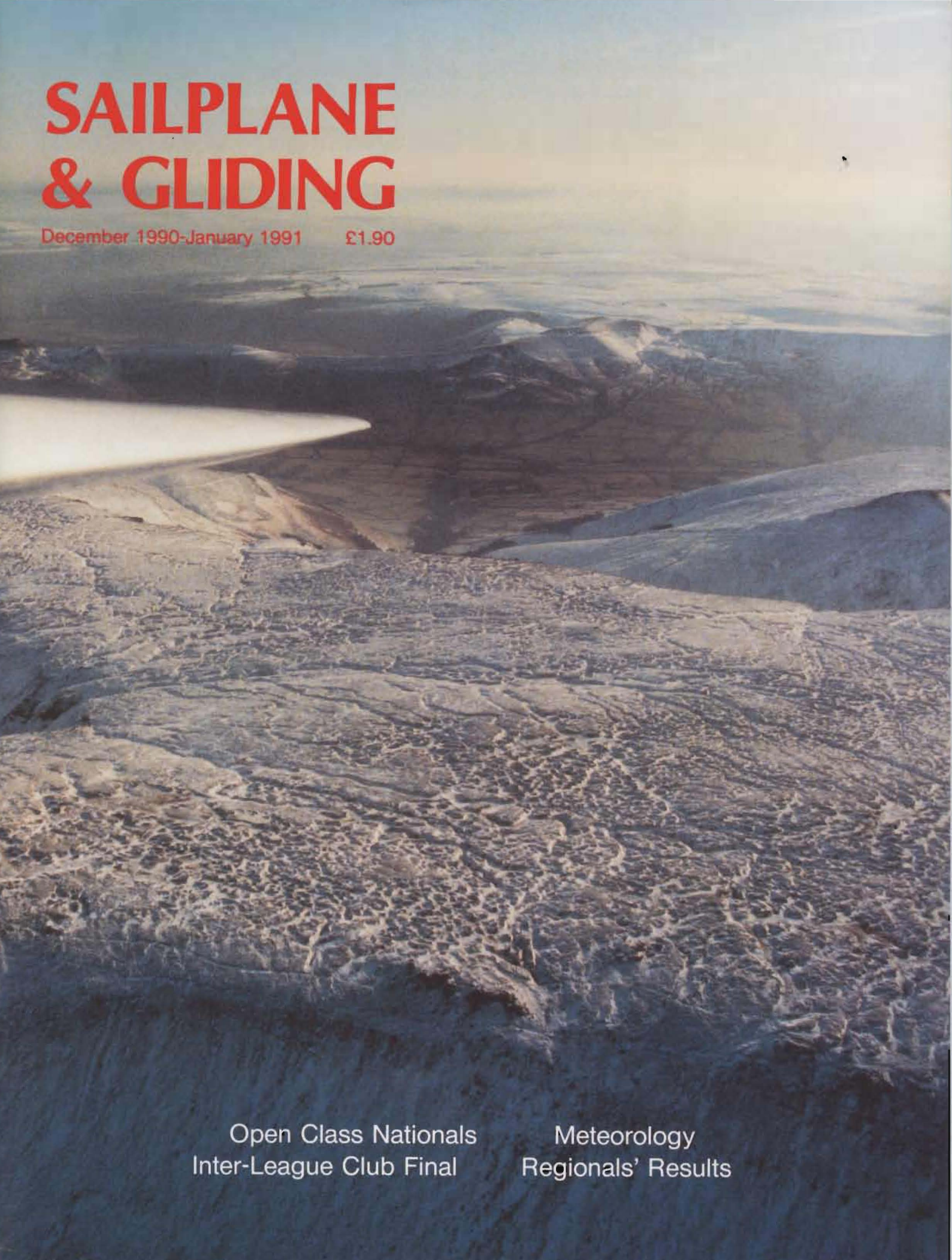
SAILPLANE & GLIDING

December 1990-January 1991 £1.90



Open Class Nationals
Inter-League Club Final

Meteorology
Regionals' Results

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



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

CENTRELINE SERVICES – THE RIGHT APPROACH

Magazine of the
British Gliding Association

Kimberley House, Vaughan Way
Leicester, LE1 4SG
Tel Leicester 0533 531051

December 1990-January 1991
Volume XLI No. 6

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

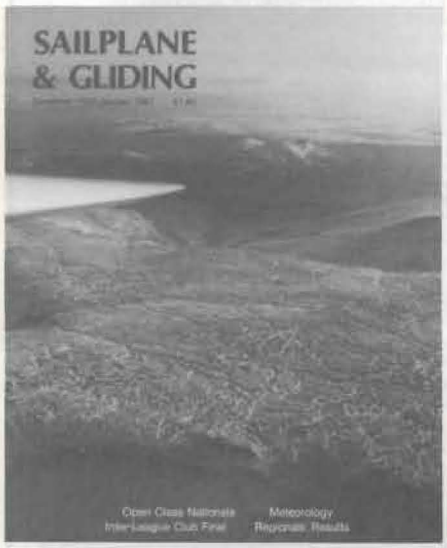
CONSULTANT EDITOR
Rika Harwood
66 Maisemore Gardens, Emsworth, Hants, PO10 7JX
Tel 0243 374580

SUBSCRIPTIONS
Bev Russell
BGA Office

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

ADVERTISING MANAGER
Helen Ritchie
Cheiron Press Ltd
Hillview, Heathfield Road,
High Wycombe, Bucks HP12 4DQ
0494 442423 or 0860 510407

PUBLISHER
British Gliding Association
(Barry Rolfe, BGA administrator)



Cover: Dave Smith of Derby & Lancs GC, flying an Astir, took this beautiful photograph of the Peak District with Mam Tor in the middle distance and Camphill on the left horizon.

SAILPLANE & GLIDING

285 YOUR LETTERS
H. C. A. Dale (reply by B. Morris), P. J. Stratten, M. Boydon, F. G. Irving, C. O. Vernon (reply by J. C. Gibson), C. White, C. A. P. Ellis, S. Ottner, A. M. Segal, H. G. Peters, V. Davies, M. Abrahams (reply by W. G. Scull)

290 TAIL FEATHERS
Platypus

291 FLYING TECHNIQUE AND WIND-GRADIENT
I. W. Strachan

292 WINDS ALOFT AND WEATHER BELOW
T. A. M. Bradbury

295 GOOD BEGINNINGS
T. Foxen

296 SPIRIT OF THE PLACE
I. Wright

298 A DREAM COMES TRUE
J. West

300 GERIATRIC RIGGING DEVICE
D. H. G. Ince

301 WINNING WAYS OF A TUTOR
N. James

302 INTER-CLUB LEAGUE FINAL
M. B. Jefferyes

304 TWO VIEWS OF THE JUNIOR NATIONALS
Karina Hodgson and Kerry Lomas

305 FINAL RESULTS

306 *S&G* CLASSIC
J. Torode, A. Cronin, J. Buntin, Ann and R. Procter

307 LOOKING BACK
W. E. Malpas

310 OPEN CLASS NATIONALS
M. Bird

314 FINAL RESULTS

315 THE 1991 COACHING PROGRAMME
C. C. Rollings

316 BGA & GENERAL NEWS

317 BGA ACCIDENT SUMMARY
K. Shipley, D. A. Wright

322 GLIDING CERTIFICATES

323 1991 NATIONALS QUALIFYING LISTS
C. G. Corbett

326 REGIONALS' RESULTS

328 CLUB NEWS

339 TO NURTURE A DREAM
R. Witter

340 THE BGA POLITICAL COMMITTEE
J. Holland

341 WAY OFF TRACK
Penguin

Member of the
Royal Aero Club and the
Fédération Aéronautique
Internationale

Leicester Printers Ltd, Leicester.



THE SUPER DIMONA HK 36
A REAL STRIDE FORWARD

16.2m span extendable to 17.6m

CHOICE OF ENGINES

For details

John Adams
Soaring (Oxford) Ltd

Hoo Mill, Ingestre, Stafford
(0889) 881495
FAX (0889) 882 189

Grob G103 Twin III Acro built to Grob high standards for spring 1989 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



BORGELT by FLITE LINES marketing

The Borgelt Flight Enhancement system is built to the highest quality and uses the B-21 as the basic building block unit. The B24/25 units are upwardly compatible and can be added at any stage to make up a full system. The Borgelt equipment is suitable for all levels of Glider Pilot and can greatly enhance flying skills by giving real time information to the Pilot in a readable presentation which can be interpreted quickly and put to use immediately in flight. Gluder polars can be changed easily should the Characteristics change or the equipment be transferred to another aircraft. The Netto information presented on the B-21 is 'Real Time' air mass indication and not approximated or historical. The units are easily installed and do not involve complex wiring or plumbing. Package prices available on request.



B-21 Vario - £225.50
Pressure Transducer Technology (No Flask) – Electronically Gust Filtered – 2 Speed Response – Altitude Compensated – No Radio Frequency Interference – Building Block Unit For B-24/25 – 58mm Standard Instrument Face (Available in 80mm to order)

B-21(R) Repeater Vario Unit - £127.95
Two Seater Additional Unit (mirroring Master B-21)



B-24 Averager/Speed Command/Netto/Audio – £339.75
Full Time Digital Averager – Full Time Speed Command – 4 Tone Audio signal – (2 Cruise/2 Climb) – User settable Quiet Band on Audio – Gives Real Time Netto Display to B-21 in Cruise Setting – Quick change customising Polar module – Three Settings for Different Glider Weights – Light Dependent Clear LCD Display – Auto Zero Electronic Drift Cancelling – No Screwdriver Adjustments – Cruise/Climb Switch (may be linked with Flap lever) – 80mm Standard Instrument Face

B-24(R) Repeater Unit - £184.95
Two Seater Additional Unit (mirroring master B-24)



B-25 Final Glide/Nav Computer - £415.00
Very Easy to Use – Programmable before flight – alterable in flight – 9 Turning Point capability – Large clear light dependent LCD Displays – Bug Polar Compensation – Head/Tail Wind Compensation – EPROM polar customising chip easily installed – DUAL Polar Chip (available for removable tip gliders) – 80mm Standard Instrument Face

B-20 Audio Unit - £55.00
For use with B-21 when not installed with B-24 – 2 Tone Audio with 'Up only Signal' option – Small lightweight self-contained remotable unit

HANDHELD TRANSCEIVERS

Narco HT870 incl. VOR	£325.00
ICOM ICA-2	£299.00
ICOM ICA-20 incl. VOR	£349.00
KING KX99 incl. VOR	£369.00

Most handheld spares and accessories stocked. *Also – Flying Clothing: Nato Style jumpers, shirts, gloves, jackets etc plus maps, flight cases and other equipment. All prices exclude VAT, Postage & Packaging.*

BARCLAYCARD VISA

Call us for a competitive quote on all your aviation needs. All prices exclude VAT p&p and ins. Write to:

P.O. BOX 488, BRISTOL BS99 1HS or call 0272 - 710043. Fax: 0272 - 721923

Access

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.

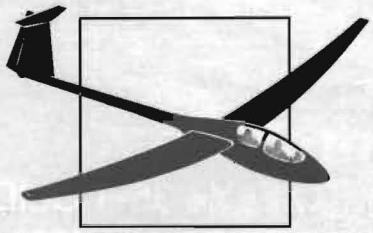
DOPES AND PAINTS: Main stockists for Neogene products.

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

CAMBRIDGE

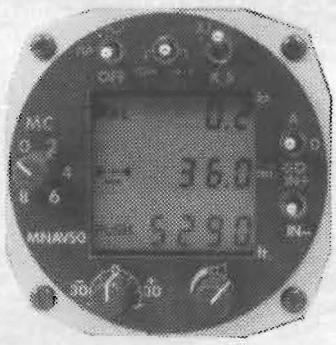
A SELECTION FROM OUR PRODUCT RANGE



CAV II

Vario – Averager – Audio

£329+VAT (£378.35)



M-NAV 50

Vario/Nav System – Four function audio
Speed Command – Final Glide Computer

£998+VAT (£1147.70)



snav

Vario/Nav system – Graphic final glide display
Programmable Tasks and statistics

£1674+VAT (£1925.10)

Our Record Speaks for itself.

E & OE

CAMBRIDGE AERO INSTRUMENTS
WARREN-SUGARBUSH AIRPORT
RR BOX 109A WARREN, VERMONT 05674 USA
PHONE: (802) 496-7755 FAX (802) 496-6235
ALL CAMBRIDGE PRODUCTS CARRY A FULL 2-YEAR WARRANTY.

Available from:
RD AVIATION LTD
UNIT 25, BANKSIDE, KIDLINGTON, OXON OX5 1JE
☎ 0865-841441 FAX 0865-842495
who will offer you advice on the merits of different systems. Full in-house service support

ANGLO-POLISH SAILPLANES LTD.



STD 51-1 JUNIOR

• EASY TO FLY • 35-1 GLIDE ANGLE • GLASS-FIBRE CLUB GLIDER
• DELIVERED TO UK WITH INSTRUMENTS

PUCHACZ

• GLASS-FIBRE TWO SEATER • LIGHTWEIGHT • CAN BE LAUNCHED BY ORDINARY WINCH

JANTAR STANDARD 3 &
JANTAR 2B

• STILL AVAILABLE

WILGA TOW PLANES

• AVAILABLE FOR SALE, LEASE OR HIRE

NEW PARACHUTES

• WITH NEW PACKS ONLY £320 + VAT

The most competitively priced performance gliders you can buy!



ANGLO-POLISH **SAILPLANES LTD.**
WYCOMBE AIR PARK, BOOKER, MARLOW, BUCKS.
0628 39690
TELEX: 848314 CHACOM G
OR PHONE CHRIS ROLLINGS TO ORGANISE A DEMONSTRATION
ON 0494 29532

YOUR LETTERS

NOT A GOOD IDEA

Dear Editor,

The other day while helping at the launch point I had a word with a visitor to our club who was getting ready for his very first flight in a glider. To my surprise I saw that his legs were stretched out flat. "Can you operate the rudder comfortably like that?" I asked. Before he could answer the AEI in the back seat explained that he had set the rudders fully forward so that the pupil could not reach them. "As an AEI I must not let the pupil touch the rudders. He moves the stick while I control the rudder."

I had previously heard of instructors in other clubs who did this sort of thing through ignorance, thinking that this way of breaking down the task might facilitate learning. But here was a perfectly sensible chap from my own club doing this because of orders from above.

As a psychologist with a long-standing professional interest in the acquisition of skill I am horrified to learn of this practice. When handling three-axis machines, the co-ordination of stick and rudder movement is the very core of flying skill. Pupils need to learn that whenever they move the stick sideways they must apply rudder pressure simultaneously. Such essentials need to be emphasised from the very start. To do otherwise is a grave disservice to the pupil. The practice must also create a serious bad habit among our future instructor population.

Whoever thought up this aspect of the AEI syllabus needs their head examining!

HAROLD DALE, *Beverley, North Humberside*

Bernie Morris, BGA Instructors' Committee chairman, replies: Mr Dale has identified one of the AEI compromises which caused considerable debate at the Instructors' Committee and which is linked to our methods of formal flying training. The sequence of formal instruction is – lookout, effect of elevator and speed control, effect of ailerons, aileron drag and need for rudder. Rudder is not for turning the glider and then turning. These exercises are abbreviated for the AEI who does not cover aileron drag, rudder and formal turning at all but introduces the ailerons which roll the glider and result in it turning.

The trial lesson conducted by the AEI is not intended to be a formal flying lesson, rather an overall flying experience which may result in a formal training course. The control handling is only a small part of the complete experience and is intended to persuade the "pupil" that he could easily learn to fly. The two day course for AEIs is insufficient to deal with more flying exercises and the trial lesson mostly too short for the pupil to have more than a "quick go" on the controls. The AEI's patter and demonstrations have been standardised to the formal training exercises as much as possible to reduce difficulties on upgrading to assistant instructor.

There is no argument that aileron/rudder co-ordination needs to be taught very early on, and it is, but should it be from the very start? Should it precede the effects of the controls individually and possibly even lookout and effect of elevator? There is no order from above that the pupil must not touch the rudder, only that the AEI will deal with the co-ordination of the rudder, since the rudder exercises have not been introduced. Any proposal for an improvement in our methods should also address the wider implications of that change and offer a practicable compromise. When can I arrange for my head to be examined?

THAT DIAMOND BADGE

Dear Editor,

Some details of Mike Cuming's suggestions in the August issue, p173, on how to rebalance the Diamond badge might not go down too well with those who don't have the luxury of more than 1:35 and a choice of 365 gliding days per year.

Perhaps a handicapping system would help put the goal and distance legs into perspective, especially now that some people are actually claiming the Diamond distance having flown 500km in an Open Class glider!

PETER STRATTEN, *Bicester, Oxon*

THE ANSWER IS TO COMPLAIN

Dear Editor,

I was intrigued to read the two letters (August issue, p177) by young pilots referring to the stagnant old fogey element in the gliding movement.

If the lads were upset enough to go into print why didn't they name the clubs involved to spare other youngsters the same misfortunes? I certainly would like to know where I am going to be cheated out of my money by geriatric old fools with the "we didn't do it so it can't be done" attitude.

I learned to fly at 17 and was positively encouraged to the extent that an instructor loaned me the money for my 50km. Maybe all clubs aren't the same but as usual only those with grievances write letters. I think I should have got my 16 year two week-old pilot with 30 solos and two Bronze legs or my 20 year-old assistant Cat with a Gold badge and two Diamonds to have written in praise of the way the young are treated.

If you don't like the food or service in a restaurant surely you don't go back. Reading between the lines of our "Dismayed Student" he has been going back for four years. At least Amir-Reza Amiri had the right idea. He went and flew solo somewhere else.

Clubs with bad attitudes to young pilots will soon realise that the average age of its members is increasing when they have put a stair lift up to the winch and they have bingo evenings in the bar. Eventually nature will take its course and these clubs will die out.

In short, do what you do with everything else in life – complain! If you don't get results, write a letter to the club committee naming the individuals who made your life unpleasant. Ask the club to remember your "stolen flying fees" and go and fly somewhere else. Maybe they don't realise what they are doing wrong!

MICK BOYDON, CFI, *Wrekin GC*

A "MYTH" REVIVED

Dear Editor,

In spite of (or maybe because of) John Gibson's kind reference to my slender monograph (ref 1) in his piece on Static Stability (see the August issue, p187), I cannot resist making a few comments.

He poses six questions and proceeds to argue that the answer to all of them is "no". I would agree that this is so for all except the first.

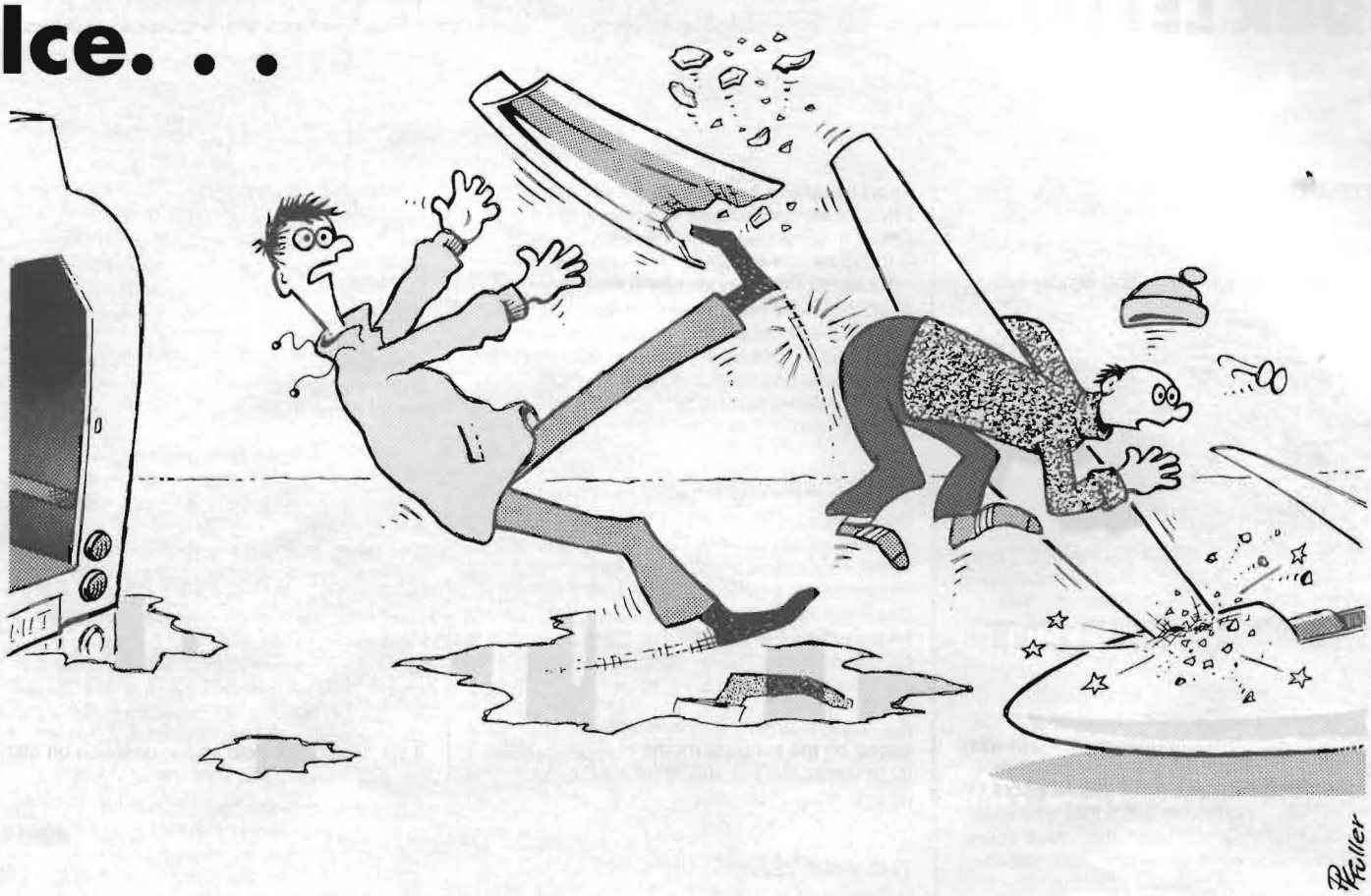
Most of what he says under the heading "Centre Of Lift" is only precisely true when viewed as a consequence of thin aerofoil theory applied to two-dimensional aerofoils (see ref 2). Under these idealised circumstances, an element of a 2-D wing will produce a lift force but no drag and one can deduce the results displayed in Mr Gibson's Fig 1. It is, perhaps, slightly surprising that real aerofoils of finite thickness in a real (low-speed) flow behave very nearly in the same fashion but with, of course, a small drag. The aerodynamic centre is typically located between 0.24 and 0.27 times the chord aft of the leading edge.

If one has a three-dimensional wing with taper and perhaps sweep (*eg* that of the K-13) it is possible to define an equivalent rectangular wing with the same properties, so far as moments are concerned, as the real wing (refs 1 and 3). This wing will produce curves much like those of Mr Gibson's Fig 1 provided that the lift is assumed to act at the mean aerodynamic centre, together with a moment about that point. The moment coefficient must be referred to an appropriate mean aerodynamic chord.

Let it now be said that there is nothing particularly sinful about the concept of the centre of pressure. The reality is that we have a wing with some distribution of pressure acting on its surfaces. The effect of these pressures, resolved perpendicular to the mainstream direction, can be expressed as a lift force acting through a point on the chord line whose location varies with angle of attack or lift coefficient. This point is the centre of pressure and it *is* the point at which the lift acts. There is no object in arguing that "Common sense says that lift which is generated by pressures on the surface of a wing cannot be centered so far away from it . . ." Common sense doesn't deal particularly well with concepts like infinity or infinitesimally small quantities. It is rather like arguing that common sense dictates that the centre of mass of an object must lie within the material body of the object. That of a horseshoe lies in the fresh air. The centre of pressure may lie between the leading and trailing edges of an aerofoil, but it may also lie beyond them and there is nothing outrageous about such a state of affairs.

Instead of having the lift act at some variable point on the chord line, it can equally be represented as acting at some fixed point, together with an appropriate moment about that point. As Mr Gibson explains, and as is elaborated above, if that fixed point is the aerodynamic centre, then the coefficient of the moment about that point is constant. The convenience of using this representation is that we ➡

Ice. . .



Is just fine in the right place – in a long, cool summer drink. When it's underfoot (or wheel), it can be less than pleasant!

It only takes a moment to make that fateful slip; rather like taking out insurance with the wrong company. If they think a Schleicher is a long, cool drink with ice, they are definitely the wrong company!

So if you are looking for insurance, don't let it slide – get your skates on and make tracks for Mowbray Vale.

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

have exchanged a variable centre of pressure location for a fixed moment coefficient, thus reducing by one the number of variables to be considered. The use of the aerodynamic centre is therefore a mathematical and conceptual convenience but nothing more.

The de-bunking of "longitudinal dihedral" as a contributor to longitudinal stability is long overdue. How sad, then, that a recent publication (ref 4) says "... it is the longitudinal dihedral that influences the production of a favourable restoring moment ..." as Mr Gibson so neatly explains, it doesn't.

The reader who has persevered this far may like to know that there is an excellent monograph, published by OSTIV, devoted entirely to the static stability of gliders (ref 5).

References:
1. Irving, F. G.: **An Introduction to the Longitudinal Static Stability of Low-Speed Aircraft** (Pergamon, 1966); 2. Abbot, I. H. & von Doenhoff, A. E.: **Theory of Wing Sections** (Dover 1959); 3. Yates, A. H.: "Notes on the Mean Aerodynamic Chord and the Mean Aerodynamic Centre of a Wing" (Royal Aeronautical Society Journal June 1952, pp461-474); 4. Barnard, R. H. & Philpott, D. R.: **Aircraft Flight** (Longman, 1989) and 5. Morelli, P. "Static Stability and Control of Sailplanes" (OSTIV, 1976).

FRANK IRVING, *Imperial College, London*

Dear Editor,

I was pleased to see John Gibson's article in which he debunks some of the curious legends which somehow grew up on the subject of longitudinal stability.

However, I have to disagree with him on one of his six points, and whilst writing I take the opportunity to comment on a couple of the others.

Question 1 says "Does wing lift act at the centre of pressure (CP)?" John says no, but oh yes it does, by definition! He also says "it is the point where a force equal to the lift would have to be applied to generate the observed pitching moment." Yes, certainly it is, but that pitching moment can be measured about any point one cares to select, and the term centre of pressure simply means the point of the chord line (or on some other defined datum line) about which the pitching moment is zero, or, as one usually thinks of it, the point through which the lift vector passes.

"Lift ... must act at a fixed distance from the measurement reference point." No - the thing that is fixed is the aerodynamic centre. This is not the centre of lift, it is the centre of the change of lift due to change of angle of attack, and it is the pitching moment about this point that is constant for a given wing section. This latter is what is called the zero lift pitching moment; its value is the same for all measurement reference points since for zero lift it is a pure torque.

Thus, one gets the correct balance by applying the lift at the aerodynamic centre and adding the zero lift pitching moment as a pure torque, as correctly shown in Fig 4.

For stability, of course, it is the above change of lift which counts so that the important thing is the position of the aerodynamic centre.

Secondly, question 4 asks "is a tail down load necessary for stability?" As John says, no, it is not. He explains why in Fig 5. I summarise it by pointing out that it usually works out that for many conditions, in particular at high speed (low lift coefficient) and/or C of G forward, especially with highly cambered sections, a down load is needed for trim, and this may be what has given rise to this particular myth!

Thirdly question 5 asks "does the tail setting angle affect stability?" Again as John says, no, it does not - it is chosen purely for trim (Fig 5 again relevant), *ie* as a suitable starting point from which the elevator does its work of controlling and manoeuvring. Incidentally it was years before I found out what was meant by longitudinal dihedral, and when I did I could never fathom why anyone had bothered to invent the term.

CEDRIC VERNON, *Guildford, Surrey*

John Gibson replies: At the level to which my article was addressed, it was naturally based on the simplest model of lift and pitching moment. This is still entirely adequate for the design of multitudes of aircraft and gliders without further elaboration.

I am perfectly happy to agree with Frank that the centre of pressure is a respectable concept, useful particularly for determining structural loads. In early texts, however, it was always expressed as the centre of the resultant force of all the pressures around the wing, not as the centre of lift. The latter was found to be at the aerodynamic centre, where all changes of lift can be expressed as forces at this fixed point and where therefore all lift effectively acts. It cannot simultaneously act at the centre of pressure, which includes the force effectively resulting from pressures causing moments but no lift.

Since complete misunderstanding of this distinction is the cause of the widespread stability mythology, it is essential to picture the lift and pitching moment separately. The CP causes total confusion. Even though it is mathematically respectable. It is simply too difficult to see through it to the reality of static stability. The answer to the first question must remain: "No, lift does not act at the CP".

As to where it acts "by definition", I regret that in my very compressed article I did not include Munk's 1924 theory in NACA TR 191. He showed that lift due to angle of attack acts at 25% chord and lift due to camber acts at 50% chord, an elegantly simple model which combines to give the standard lift and pitching moment at 25% chord universally used to define section characteristics. It firmly anchors the lift to the aerofoil in a physically sensible way. Its replacement by a single force at the CP which may be beyond the moon is mathematically exact but physically absurd.

Can we *please* never mention centre of pressure again?

PIGGOTTS

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

Flagstaffs suitable for Windcones supplied and fitted.

Landing Marker Sets in bright orange.

All types of Flags and Banners.

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

UNIVERSITY GLIDING

Dear Editor,

We at Bristol University are very keen to encourage communication and exchange visits between university and polytechnic gliding clubs all year round, not just at the annual Inter-University task week. I have compiled a fairly comprehensive list of these clubs which I am happy to send to anyone interested. Also, if you would like help and information on starting a gliding club at your university or polytechnic, please don't hesitate to contact me.

CHRIS WHITE, *captain of Bristol University GC, University of Bristol Union, Queens Road, Bristol BS8 1LN*

THE BGA'S LIMITED RESOURCES

Dear Editor,

In his article in the August issue, p217, Bill Scull quite rightly points out that the BGA's resources are limited and member clubs frequently expect too much from them.

Dare I suggest the solution lies in that part of the article that states: "There are really only two things that matter for gliding, airspace in which to fly and sites to fly from." If the BGA attempts to do everything that its clubs demand it must inevitably have fewer resources for these two vital aspects of our sport.

Consequently I should like to see the BGA Executive concentrate resources upon these essentials and make it clear to member clubs that other requirements can be covered only if they produce the necessary volunteers to man them.

The need to establish priorities for the BGA's limited resources was foreseen by the London GC many many years ago when at an Association AGM it successfully promoted a resolution which Barry Rolfe has recently confirmed is still extant.

CHARLES ELLIS, *Ilford, Essex*

GLIDING ON THE TELLY

Dear Editor,

Thanks to Channel 4's showing of "Lifting The Blues" 1.5m people are now more aware of gliding. Admittedly small by TV standards (in fact about 1 in 12 of the people that were watching TV at that time) but significantly more than are directly or indirectly involved with the sport. This can only be to the good of the movement, or is it? (See also the last issue, p231.)

➡

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.I.B.A.

LOWNDES LAMBERT
AVIATION LIMITED
Lowndes Lambert House, 53 Eastcheap
London, EC3P 3HL
Tel (01) 283-2000 Telex 8814631

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 83) 359

GLIDE ON

Automatic Electronic FINAL GLIDE Computer based on the powerful CASIO FX 730-P.

Stores full Wet and Dry Polars. Allows ' **WHAT IF** 'calculations.
Calculates Minimum Height required,
Optimum Height for minimum time,
Speed and Course to Fly,
Fully corrects for Wind and Variation
Resolves Wind into crosswind and headwind,
Screen updates in REAL TIME at 15 second intervals,
showing Time Remaining on Glide, Distance to go,
Height of Glide path at present, set of Polars
used, Course and Speed to Fly.
Very simple to use, single keystrokes
for main functions **ONLY £79**

NEW LOW PRICE £79 inc VAT

Q & A

QUESTIONS for GLIDER PILOTS

Hundreds of interesting illustrated questions. Topics include Theory of Flight, Navigation, Air Law ,Meteorology.
All with full instructional answers **£8.50**

Microsoft FLIGHT SIMULATOR V 4.0

Now with Gliding, Ridge and Thermal Soaring. Experiment with designing your own Glider! Random Weather and Dynamic Scenery. Superb comprehensive documentation **£45**

Prices INCLUDE VAT and P&P

92 TAYLER ROAD
HADLEIGH
SUFFOLK IP7 5RT
TEL & FAX 0473 822866

What did the viewer learn about gliding from this programme? Well, for a start, it is a sport that demands both knowledge and skill and it is one of the few remaining truly amateur sports. Also, you need to be an airline pilot to have the time and the money to take part. A slight exaggeration perhaps, but it did leave an impression that it is a sport for those with both spare time and money beyond the norm.

This lingering impression did have a direct effect in the case of the club to which I belong (Shalbourne). Within a couple of weeks of the programme showing our application for grant aid went before a local District Council. The chairman of that committee had watched the programme and knew that gliding is an exclusive sport for the well-heeled. So the application was rapidly passed over. Unfortunately the fine words in our application about making gliding affordable, a membership spanning the social spectrum and access to the public never really got considered. Had they been considered we may not have got the grant, but at least the application would have been judged on its own merits.

Without doubt, we need to increase the awareness of the public if we are to secure the future of gliding. With Channel 4's help we have raised the awareness of one end of the sport (reinforced also by Channel 4's "Equinox" programme). What we need is some balance to show that gliding is accessible to almost anyone with the interest. Unfortunately, "grass-roots" gliding is not as glamorous and takes more effort to promote.
STEPHEN OTTNER, *Newbury*

SURVIVAL KIT

Dear Editor,

I am writing to support Peter Williams' excellent suggestion concerning flying clothing and a survival kit in his letter in the June issue, p121.

RAF aircrew are sent aloft sitting on a comprehensive survival kit in their personal survival pack. They also undergo the rigors of survival training at RAF Mountbatten, Plymouth.

I recently attended a course in aviation medicine at the RAF Institute of Aviation Medicine. The eighteen doctors on the course were sent to RAF Mountbatten. The conditions on Dartmoor were extreme. Wearing ordinary aircrew clothing, not mountaineering gear, three of our group had to be taken off the moor with early hypothermia. We built shelters with the intention of sleeping out overnight. Again, in view of the severe conditions, we were taken back to Plymouth to our comfortable rooms and hot baths.

But, you say, you only fly locally and so would not meet these conditions. Several years ago a light aircraft took off unrecorded from Lasham and crashed in some woods. The wreckage was only found in the following spring. Supposing you landed in a remote field and injured your legs or back, could you survive until found?

When I flew in Aosta several years ago, each glider was equipped with a crash operated radio location beacon and a survival kit.

I suggest our RAFGSA members ask the excellent staff of RAF Mountbatten to kindly write an article on survival for *S&G*. Meanwhile, the principles of survival are - shelter, location, water and food. It you stay with your glider (in most circumstances) and use your parachute for protection, you will have provided yourself with shelter and increased your chance of early location.
TONY SEGAL, *Uxbridge, Middx*

WOMEN DOING THEIR OWN THING

Dear Editor,

Dave Watt (August issue, p173) wanted women to compete with him on equal terms and three replied in the October magazine, p229, that they would if only they had an equal start.

I was always taught that men and women are biologically different and can never be the same. Statistics abound. Gliding clubs are monopolised by males, pony clubs by females. Girls wiped the floor against boys in the old 11+ but none progressed to be grand masters in chess.

Interestingly women achieve higher science qualifications when they are taught in single sex schools as opposed to co-eds. Strength, size of lung and mechanical advantage of the leg/pelvis dimensions fail to explain these differences but may account for athletic inequalities.

In the West Country men must be doing some household duties. Women's Guilds, Institutes and clubs control society with their regular evening meetings, fêtes and jumble sales, to say nothing of the ladies' darts and skittle leagues taking over our pubs on two days a week.

Testosterones explain the differences. Present in only small amounts in women it is an additional drive for ambition, aggression or initiative. Depending on our prejudices it is argued that this leads to men being more successful or being promoted beyond their abilities and that is why the world is in such a mess.

Even with the national coach as a guide one week of the Lasham Regionals left me in no doubt that my driving forces could be better employed elsewhere. Less than 1% of the country join a gliding club and less than 1% of them compete nationally. Perhaps Dave is just getting lonely.

It was great to hear that some women want to do their own thing. Perhaps they will do it in their own way and come up with a less pedantic set of rules.

Vive la difference!
GORDON PETERS, *Wellington, Somerset*

WORLD RECORD FLIGHTS

Dear Editor,

Between July 14 and September 15, with my Taylor JT.2 Titch in the FAI International Class CIA-I, I was fortunate to establish world air speed records with flights to and from London, Paris, Brussels and Amsterdam.

As a glider and tug pilot at Southdown GC my thanks to officers and committee for their interest and encouragement, particularly on the London Amsterdam flight which was done as a challenge by the club during their Diamond Jubilee week and on behalf of the RAF Wings appeal.

My apologies for any airspace invasion or interference I may have caused at clubs on my London Brussels flight. We did have a chase plane for the O/R to Paris to make a personal video and during a breakdown in communications we used 130.1. My sincerest apologies to the glider pilot who threatened to take legal action against me for the alleged misuse of the frequency.
VIC DAVIES, *committee member of the Royal Aero Club Records, Racing and Rally Association*

GUIDE LINES NEEDED FOR PARACHUTES

Dear Editor,

Would the BGA consider clarifying the situation regarding parachutes. What is the difference between a parachute and an emergency parachute? What standards must they meet, *ie* is there a Kite mark as there is for motor-cyclists' helmets?

All this arises because I have recently bought a parachute that is regularly advertised in *S&G*. It is compact and comfortable to wear but only after buying it does one find it is only usable for five jumps (Heaven forbid there has to be even one!), and that another equally well advertised, and still more expensive, parachute has, so I am told, a life of one jump.

Our club packer says mine is "old technology" though this doesn't equate with inferior technology. I am finding it all rather confusing.

Could the BGA give a set of guide lines or even arrange for an expert (equipped with a safety 'chute) to test jump all those currently available and report on their suitability for glider pilots?
MIKE ABRAHAMS, *Grantham, Lincs*

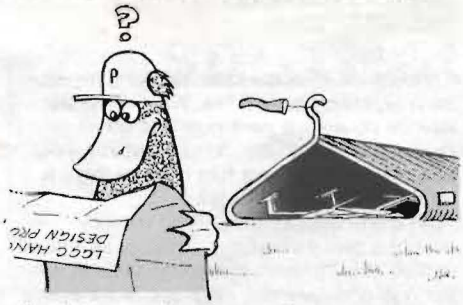
Bill Scull, BGA director of operations, replies: I have looked through my back copies of Which? for tests on parachutes! The problem of testing and evaluating 'chutes has market implications, to say nothing of the costs involved. The "life" is another matter as is the state of the art. Obviously a sport parachutist will want the latest kit. The BGA could only do what the individual should - make sure the 'chute gives a good chance of survival. Take good care of it.

Calistoga GC. Following the letter by Roger Grimes in the August issue, P175, about the Calistoga GC in California Jon Hall tells us that they are having some minor difficulties over registration and licensing. They were due to close down until the problem was resolved, which could take up to three months. Anyone planning a visit is advised to telephone 707 942 5592 to check availability. Jon says there is a similar site close by at Vacaville operated by Lagoon Valley Soaring, tel 707 447 4500.

TAIL FEATHERS

A pedantic Platypus on the horns of a dilemma

I shouldn't use a word like *dilemma* to this audience: I mean to people who cannot, despite endless badgering by this column, tell the difference between a *hanger* and a *hangar* (as wit-



The difference between a hanger and a hangar.

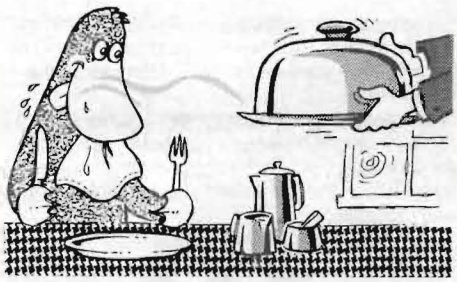
ness so many beautifully-designed posters in any clubhouse, quite obviously executed by professional hands) and who spell *marshal* – a person who, well, marshals things – as *marshall*, which with a capital *M* is a surname and without it is nothing at all; and people who cannot produce an advertisement for an £80000 glider without proving that what should have been their schooldays were spent truanting up and down the gentle green slopes of the Chilterns at somewhat less then hilltop height. A dilemma is not a puzzle or a mess or a riddle: it means a hard choice between two things. Dilemmas usually go around with horns on them, because the choice is painful: if you are not gored by one you are impaled on the other. Choosing between strawberry and chocolate on a summer's afternoon is not a dilemma – unless you are a brand manager at an ice-cream company and launching the wrong product could get you summarily fired. I can illustrate the meaning of the word easily, since I have a humdinger of a dilemma, horns and all.

Go on, Professor

I have received an invitation to a pre-Christmas dinner in a fine old country hotel, with a feather bed and big English breakfast all paid for, so that I can get stewed as a rat and not worry about the cops; and all I have to do in return is make a few light-hearted quips and amuse the totally squiffy, and therefore not too demanding or discriminating, audience for ten minutes.

What's the dilemma? Seems like a good deal.

I haven't finished yet. This thrash is the inaugural gathering of an association of all those people



Big English breakfast.

who slave away thanklessly on the ground organising gliding contests. It's called Competition Regulators & Assessors of Photographs. The people everyone ignores or insults until the routine boring speech by the director at the end of the Comp, calling for a show of appreciation, when they are briefly clapped.

They're lucky; I'm permanently clapped at the end of a Comp.

Please don't interrupt. Anyway, they want me to sing for my supper and make a few jokes about the enemy.

You mean about the CAA? Or the air traffic controllers? Or the Department of Trade & Industry?

No, no, about the contestants, silly. About their infantile tantrums and time wasting gripes and the impossibility of pleasing them: you know, if



Infantile tantrums.

they get back the task was underset and if they don't get back it was overset.

It sounds as if you'd have no difficulty working up a little satire on that topic

I wouldn't. But I've also had an invite from another new pressure group: Pilots Revolting Against Task Setters. They offer the same perks, except that after dinner I have to deliver a blistering attack on the bureaucrats and desk-aviators and rule-makers and photo-assassins.

Who?

Well, at the Nationals Peter Purdie said something about taking one's films to Photo-Assessing, and several people said they thought he said Photo-Assassin, which sounds like a clear case of Freudian slippage. (There is a distinct feeling of paranoia amongst those pilots, especially about turning point photo penalties.) In addition, I've been asked to write a column, unpaid –

So what's new?

– for their organ, *Whinge*, the soon-to-be launched broadsheet for contest pilots. The proprietor is an R. Jones and the editor is a J. Glossop.

Never heard of them

Me neither. All the same it will be a stentorian voice for better competition sites, more prize-money, and pensions for pooped and passed-over P1s.

Always thinking about yourself, Platypus. But where's the dilemma? Why not do both dinners?

Because they are on the same bloody night!



More prize money.

Oh

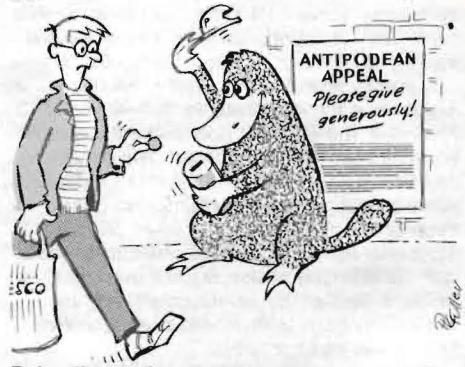
Oh, indeed. Whoever I turn down will instantly feel snubbed, miffed and generally put out; but later they will find out that I have spent the very same evening boozing with their enemies and making cheap gibes at their expense, and *then* they will be outraged. Either my wings or my scores will get shredded in 1991. The only way out is to have an alibi.

An excuse?

No. To have an *alibi* is to be proved (only Scottish juries are allowed to say *proven*) guiltless because one was somewhere else at the time in question.

Like Australia?

Brilliant! Now how do I raise the cash to get to Oz?



Raise the cash.

Dear me, that's a dilemma.

No it isn't. it's merely a problem.

Sorry, it's a dilemma: either you will have to work for the money and have no time to glide, or you will have to stick up a bank and risk watching the next twelve seasons' worth of cumulus stream past the bars of your cell.

You're right. The strange thing is, the prospect doesn't make me feel horny one bit.

FLYING TECHNIQUE AND WIND-GRADIENT

Ian Strachan was prompted to write this article after reading the August issue

The penultimate thought on wind-gradients by the Arm-Chair Pilot's daughter in the August issue, p189, sums up the thesis of the article and, as we might expect from her ancestry, is academically correct. This is the concept that **to hold a constant airspeed** when descending into wind through a wind gradient, the pitch attitude has to be more nose down than when flying at the same airspeed outside wind effects.

One of her conclusions from this was "fly by speed, not by attitude", but as a dedicated "fly by attitude" pilot, I must query this in terms of practical flying technique. Young Antonia was nearly there in an earlier remark: "But surely it's less windy (near the ground) and so the slower you can fly (safely)". Quite.

If we start an approach in a strong wind to a small field at, say, 70kt to allow for turbulence and wind-gradient, the one thing we do *not* wish is to still have 70kt just before round-out! Practical flying technique involves a decreasing-airspeed approach, setting the initial approach attitude sufficiently nose down to give an airspeed which allows for wind gradient so that you have at least threshold speed at round-out. Threshold speed (Vref or Vat in airline parlance) is an aerodynamic energy designed to give you sufficient control power to reduce the approach rate-of-descent to just above zero for touch-down.

For an airliner, initial approach speed is typically Vref plus 15kt. In civil operations, Vref is increased with wind speed to allow for gusts near the ground. In terms of wind-gradient you are through most of it by the time that you are rounding-out, and are left with allowing for turbulence and gusts (*ie* variations of the surface wind). You could regard Vref as the "last-look" airspeed, just before you begin to flare.

Vref is normally set in flight manuals at a safe ratio to the speed at which you lose nose up pitch control (the stall), and for airliners with conventional characteristics one of the principal factors in scheduling it is 1.3 times the stall speed (Vs). Vs, and so Vref, varies with weight, flap setting, airbrake setting and so forth. Control power in both pitch and roll is also fundamental, the former in order to flare, the latter so as not to land wingtip first.

Applying this to the glider case, initial approach speed and attitude should be set to ensure the speed does not drop below the glider equivalent of Vref at round-out, but conversely should not be a lot over it, or you will land long and have difficulty with pitch control near the ground. We have to ask ourselves: What are we setting approach speed *for*? It is not an end in itself, but a means to the end which is to have a safe round-out speed when you need to round-out. And "safe"does not mean "a lot faster than", for the reasons already stated.

The other key point, and where I disagree with "Antonia's Rule", is that making control movements to adjust *attitude* is a far better flying technique than using controls in response to short-term airspeed variations. Attitude reference gives smoother flying, minimum use of controls and better overall accuracy of flying, whether in a glider, fast jet or airliner. Attitude reference in the short term backed up by airspeed reference at suitable intervals, is far preferable to an over-concentration on short term airspeed variations. These lead to "pumping" of the stick, over-controlling and not looking out enough.



Ian has instructed on gliders since 1960, and is an RAF A1 QFI who has instructed on machines varying between Harvards and VC 10s.
Photo: Michael Bird.

This is particularly noticeable when in a two-seater watching one of these "speed-reference" pilots thermalling, watching pilots under training (and some others!) making "sinusoidal" approaches or ballooning on landing, or when conducting Instrument Rating Tests on power pilots who give you a rough ride by over-use of the stick in an attempt to fly an exact airspeed. Making these pilots fly by attitude by covering up the ASI for short periods causes a rapid adjustment to a much better and smoother flying technique!

You can practise approaches and roundouts at height

The RAF Central Flying School had a good phrase for attitude flying; "Fly the Picture". If you memorise the horizon attitudes ("pictures") relevant to your glider in most flying situations, you can use the controls to get the picture right, then check other indications such as airspeed, and invariably they will be very close to what you wanted. You can then "fine off" by a further small attitude adjustment. You can practise approaches and round-outs at height, and this should familiarise you with the various "pictures", including the changes that should be automatic on changes of airbrake setting.

My thesis is therefore different to Antonia's. It is "fly primarily by visual attitude, checking other cues at suitable intervals". The "suitable interval" for an airspeed check during an approach in a strong wind will be every few seconds, aiming for a safe "threshold speed" at round-out which is neither too slow nor too fast. Of course, the "picture" that is safe in normal circumstances may not be so in extreme conditions; a nose down attitude after a stall or after a cable break is not safe until airspeed has been restored.

In the absence of scheduled performance manuals from the CAA or the RAF (which give you a set of rigorously tested threshold speeds for all the different conditions), you can take your glider or aircraft to a safe height and check for the minimum speed in the landing configuration which gives sufficient pitch authority for round-out. Make sure you also have roll control. Ensure the speed is at least 1.3 Vs for the configuration and you have a glider equivalent of Vref for the weight, flap, airbrake setting and the approach angle tested. Add a margin in strong winds to allow for turbulence and gusts near the ground.

A further margin is needed for steep approaches; they need more round-out and so more aerodynamic energy to arrest the rate of descent; a Hunter or Hawk on a practise forced landing will start pitching nose up passing about 500ft; hopefully your glider approach will be less extreme! Using a lot of airbrake is also a factor, not only because of its effect on stalling speed and handling, but because the speed washes off faster in the round-out and there is less margin for error.

A final thought. When field landing in anything but flat terrain, or in the lee of trees or buildings, wind-gradient and turbulence will be greater than you are used to if you fly from a flat airfield. Make appropriate allowance in terms of selecting a safe nose down attitude at the start of the approach, checking airspeed frequently, particularly if you increase airbrake setting. But keep your eyes outside the cockpit most of the time in order to make sure that you avoid trees and wires, and make adjustments to your touch-down point as needed. Far better than staring at the airspeed, overcontrolling and failing to see that power cable!

TWO RALLIES

The Cumulus Rally Organisation of France have two rallies, one in collaboration with the Spanish organisation - the Andalusian Cumulus from March 24 to April 5. Open to motor gliders and gliders with retractable engines, each stage is a race from one airfield to another with local tasks. The starting point is Palma del Rio ending at Jerez de la Frontera.

The second is the Pyrenean Cumulus from July 7 to 20, launching from Bordeaux and ending at Oloron St Marie.

For further details contact the president, Jean-Jacques Couture, 37 rue Marceau, France 28700.

WINDS ALOFT AND THE WEATHER BELOW

Part 2

Part 1 in the last issue, p246, introduced the idea of contours instead of isobars and described some of the effects of jet streams aloft on developments lower down. Now part 2 describes more of the effects of high level winds on fronts and the weather.

Part 1 showed that the wind tends to speed up round an anticyclonic curve and slow down round a cyclonic curve. Fig 1 shows the two effects combined in a ridge-trough-ridge pattern.

Curving contours - upper troughs

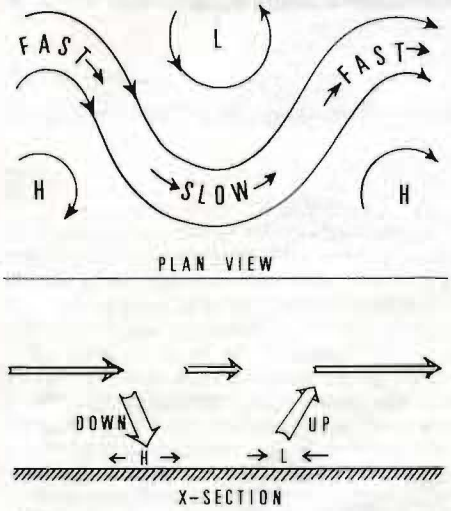


Fig 1

The plan view illustrates an upper trough bounded by ridges either side. The air travels faster round the crests of these ridges but slows down where it goes round the foot of the trough. The cross-section below demonstrates that west of the trough, where the upper winds slow down, some of the air is forced to descend from aloft. Beyond the trough axis, where upper winds accelerate, some low level air is drawn up into the stronger flow aloft.

Where the air descends one usually finds pressure rising at the surface (marked "H"). Descent also warms and dries the air so that cloud tends to disperse except at very low levels. Where the air ascends, a surface trough or low is likely to develop (the region is marked "L" on the cross-section). Ascent cools the air so that cloud forms and eventually rain falls. The little arrows near the "H" and "L" show that air near the surface tends to leak out of a high and converge into a low. To maintain highs or lows against this surface leakage there has to be continued activity aloft putting air into a high or extracting it from a low. If there is no such activity aloft the surface feature usually becomes weaker.

Upper troughs and instability

Since contour heights depend largely on the mean temperature of the air the heights are lower where the air is cold. An upper trough usually marks a region where the air is colder; being colder it is also more likely to become unstable. Fig 2 shows an upper trough; in the plan view the positions of surface fronts are shown by the usual symbols, blobs along the warm front and spiky triangles along the cold front. The cold front is moving out of the picture on the right while the next warm front is moving into the upper ridge from the left.

The cross-section underneath shows the basic cloud structure of the fronts and also the positions of the jet streams. Black arrows mark the main up and down currents. Notice that on the cold side of each jet entrance there is usually a counter current of sinking air. The most unstable area is usually along the axis of the upper trough; here the cross-section shows cu-nim.

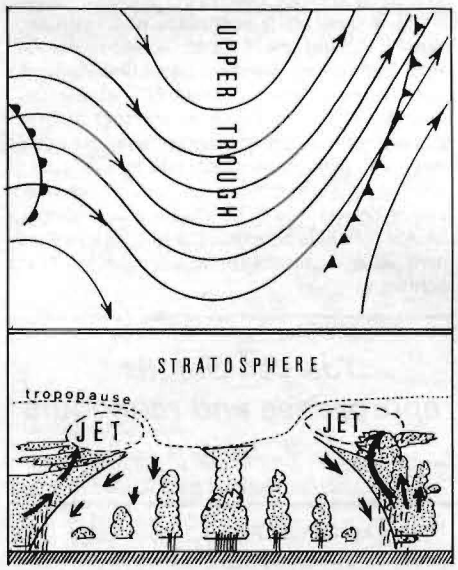


Fig 2

Another feature of upper troughs is that the tropopause (the surface above which the stratosphere begins) dips down over the cold air. On upper air soundings the tropopause is usually marked by a temperature inversion. When the tops of big cu-nim reach this inversion they spread out to form the well-known anvil of cirrus. This lowering of the tropopause is one reason why cu-nim do not grow so high in cold polar air as in warm moist tropical air.

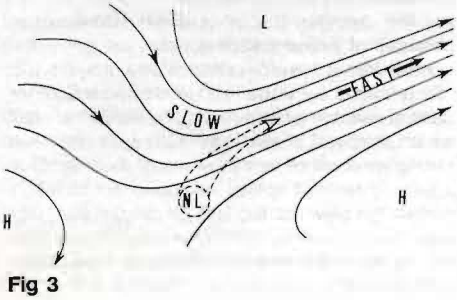


Fig 3

On the upwind (left-hand) side of the upper trough there is descent which makes the air more stable and flattens out the cu-nim before the next warm front arrives. A spray of little arrows marks this subsidence pushing the cloud tops down.

Asymmetric troughs

Fig 3 shows a trough where the winds on the eastern (downstream) side are much stronger than on the upstream side. Troughs shaped like this are called "confluent troughs" because the contours are flowing together as they round the axis of the trough. With such a pattern the development of a new surface low (marked "NL") is likely to be rapid. The air approaching the trough line slows down as usual but after rounding the trough it then works up to a much greater speed as it enters the jet. Thus the usual acceleration of the wind after passing round the trough line is boosted as it enters the jet stream.

Jet streams and frontal surfaces

Fig 4 show a 3D view of this process when the jet stream (shown by the hollow arrow) lies above

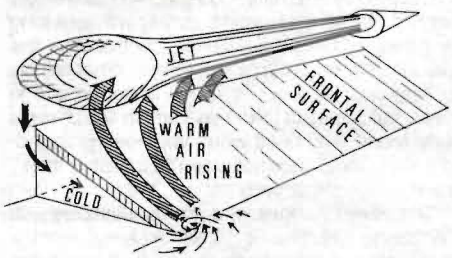


Fig 4

a frontal surface. The air rises slantwise up the frontal surface before being sucked into the jet near the right entrance. The left entrance of the jet has a counter flow with air descending. The descent is usually several hundred miles away on the cold side of the front. This descending air may come from the lower stratosphere; when it does it is extremely dry.

The ascending air starts a fall of pressure at sea level. As pressure falls a cyclonic circulation develops round it. This is shown by the swirl of little black arrows. This rotation then starts to twist the surface front into a wave like shape. This is the first stage of a developing low. As the depression deepens the swirl extends higher and finally, if the depression becomes very large, this cyclonic circulation reaches up to the lower stratosphere.

Satellite signs of a developing low

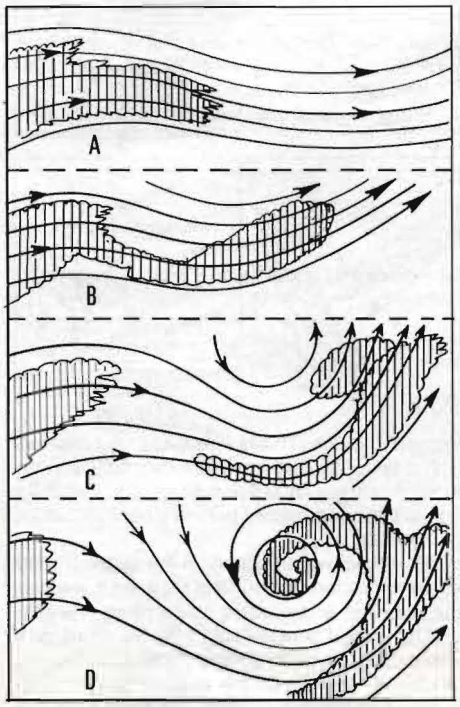


Fig 5

Fig 5 shows four plan views of the changing pattern of high clouds sketched from a sequence of infra-red satellite pictures. These clouds are at approximately the same level as the contours (about 30000ft). High clouds, which are very cold, show up best on these infra-red pictures. Low clouds, especially those whose temperature is almost the same as the underlying sea or ground, are much less prominent.

"A" shows a streamer of cirrus coming over the top of a rather flat upper ridge. When the ridge is more marked the descent of air downstream of the ridge axis tends to make the cloud dissolve. Time lapse films sometimes show this high cloud dissolving just as low cloud dissolves when it flows down over a mountain crest.

"B" shows the stream of cirrus just rounding the trough line. Now it is moving into a region favourable for new surface lows to develop. The cloud band, which tended to become thin as it approached the trough, starts to thicken after it has rounded the trough line. Warm moist air from below begins to be drawn up into the jet stream to feed this growing cloud mass. The widening area often develops a leaf like shape. The "leaf" may grow to be some three hundred miles wide and about a thousand miles long.

In "C" the circulation above the new surface low has reached high enough to distort the upper trough making it deeper. The "leaf" changes into shape more like a broad comma. The "comma" shape is a good indication of a deep surface low hidden beneath the mass of upper cloud.

"D" shows the final stage when the upper trough has deepened further and developed a closed circulation up to the base of the stratosphere. This circulation coils up the cloud pattern. The first sign is often a hook shape; this quickly grows into a spiral of cloud. When you see this spiral the surface depression has nearly always slowed down and become almost stationary. The jet stream, which played a major part in forming the new low, is now far away. Deprived of its source of energy the low gradually begins to fill up. This is usually a slow process. The system is like an enormous flywheel with billions of tons of air spinning round the centre; it takes a long time for it to run down and gales are often strongest during the first day.

Old upper lows as an attractor for new systems

These old upper lows tend to act like a magnet for any new lows. In the northern hemisphere the new surface lows usually form far to the south or south-west of the old upper low. At first they move east but then turn north-east round the perimeter of the old low. Most of their deepening occurs after they have turned on to a north-easterly track. Finally they swing back north-west and merge with the old low, giving it a boost and lengthening its life. (For the southern hemisphere substitute south for north in these directions.) Fig 6 shows the tracks of three successive lows spiralling in towards the old centre.

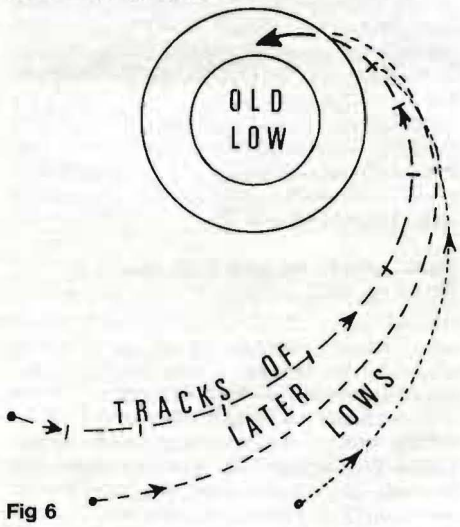


Fig 6

Upper lows and bad summers

Bad summers in the British Isles are generally those when a large upper low settles down close to the west of Scotland to produce a south-westerly flow over the country. Although individual lows do not last many days they are constantly being replaced by fresh systems which follow similar tracks over or close to the British Isles. This maintains a cyclonic circulation over us. One usually finds that the jet stream is directed across the British Isles during this spell of bad weather.

In contrast our good summers occur when Britain lies under an upper ridge or high. Upper lows are halted much further west in mid Atlantic and also over eastern Europe. The jet stream is deflected far to the north of Scotland but it then plunges south-eastwards towards eastern Europe. Thus a good summer in the UK is apt to coincide with a poor summer over Poland and western Russia. The reverse is equally true.

Blocking patterns

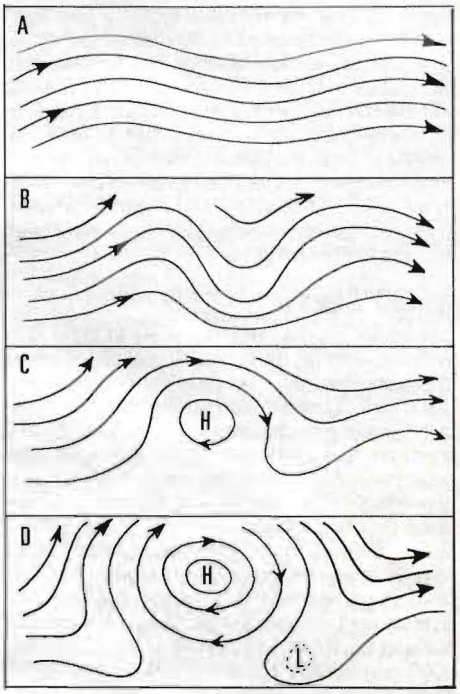


Fig 7

The sequence in Fig 7 illustrates how an upper ridge can amplify and grow into an upper high. "A"shows a contour pattern with only a slight undulation. At this stage the pattern is mobile; the troughs and ridges move across from west to east. These wave-like undulations extend right round both the northern and southern hemispheres but are not found near the equator. Although the waves have different lengths and amplitudes they generally keep moving eastwards provided that no individual wave grows too big. With a mobile pattern the weather forecast usually includes the word "changeable". There will be some hours of rain due to a surface front followed by a short lived ridge bringing fair weather and then another frontal system. Sometimes the cycle lasts 24 hours. If one is lucky the ridges come through by day and the fronts by night. Too often it is the other way round.

If a wave grows too large the mobile pattern is interrupted by the formation of "blocks". In "B" the wave moving in from the left has amplified too much. This may then develop into the pattern shown in "C" where the original wave has grown into an upper high. Once this happens the motions of the pattern slows down rapidly. In "D" this high has grown into a huge system with a strong easterly flow beneath it and deep troughs with separate low centres forming on either side. ➡

This is called a "a block" because it blocks the eastward progress of further troughs and ridges. On global charts a block looks rather like a knot in the grain of a plank. Once a block has formed it tends to remain in the same place for a long time.

Summer blocks

Blocks give a settled weather pattern. If a blocking high forms near us in summer we usually get a dry spell with lots of sunshine. The jet stream is deflected round the edge of the block. This results in frontal systems and their associated depressions being steered round the perimeter of the blocking high and so kept well away. Blue thermal days are common overland and the main problem for the Met man is predicting the height of the inversion. Just as old lows may be maintained by the arrival of newer lows curving in towards them. so highs can be revived by the growth of new ridges. These develop west of the old high and move in to merge with or take over the old system.

Winter blocks

In winter blocks are more likely to bring dull overcast weather; the sunshine is often too weak to disperse the low cloud. Only the mountain tops reach up into brilliant blue skies; most of us have to live under a murky grey pall held down by the inversion and made worse by industrial and domestic pollution. Any clearance of cloud leads to overnight fog. When the winter block settles down over Scandinavia much of Europe and the UK experiences a persistent cold spell with easterly winds which can last for many weeks. These blocks have relatively warm air aloft but a shallow layer of cold air near the ground. The inversion marking the top of this cold air is often between 3000 and 5000ft. When minor disturbances lift the inversion and the cloud becomes thicker we get spells of snow.

Cloud cover and upper troughs

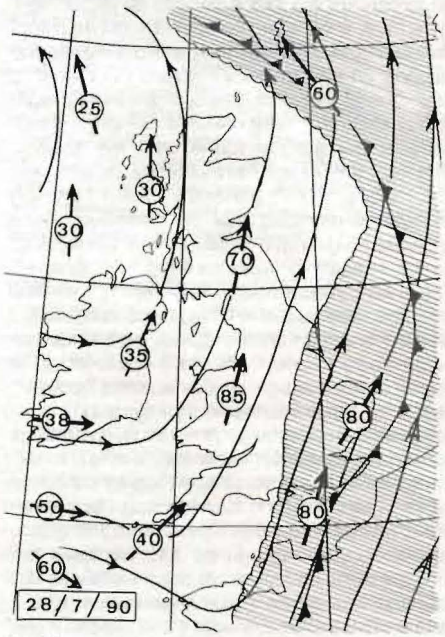


Fig 8

The BBC and the press only show us surface charts. These often do not tell the whole story. Fig 8 shows an upper trough which spoilt a previously fair soaring day. The contours show the 300mb (about 30 000ft) flow and the arrows are reported wind speeds and directions. The surface position of a cold front is indicated by the usual triangular symbols. This example occurred on the first day of the 1990 Lasham Competitions. A cold front had come to a halt near the Straits of Dover but left a layer of thin cirrus over much of England. This cirrus seemed to be dispersing and was not thick enough to stop cumulus developing. Competitors got on fairly well at first on a triangular task out to Cirencester and then north-east into the Midlands. Unfortunately the upper trough sharpened, backing the winds aloft and bringing a fresh tongue of upper cloud from the old front. During the late morning the half hourly Meteosat pictures revealed this new tongue forming near the Cherbourg peninsular. The tongue then extended across the Isle of Wight and into Hampshire, finally merging with the older belt of high cloud to form a continuous sheet covering the eastern half of England. This sheet was much thicker than before and it reduced the sun's heating to near zero.

Too late for the unlucky pilots

Many people commented on the remarkably sharp edge of this thick sheet of high cloud. For a time it lay almost NS and hung over the return leg of the triangle. Beneath it the cumulus collapsed and disappeared and all lift died out. In the sunny region further west cumulus developed very well. Competitors who had enough height to divert into the sunshine completed the task, though many arrived at Lasham from the west instead of from the north. As the upper trough moved slowly east the cloud edge preceded it and by early evening sunshine returned to Lasham. For the unlucky pilots this was just too late.

How upper ridges can make a front vanish

So far the examples have shown surface systems being developed or strengthened by changes in the flow aloft. A wave which forms on a front and then grows into a major depression is only one half of the process. The same front can equally well be weakened and eventually dispersed. Weakening can be due to an upper ridge catching up the front so that the subsiding air warms up, dries out and eventually evaporates all the frontal cloud. This is why many approaching fronts fizzle out during dry summers.

Fig 9 illustrates what can happen to a cold front. It is divided into two sections. On the left is the plan view of the upper flow and main cloud mass. On the right is a vertical section through the front along the dotted lines x . . . x. In the plan view the solid lines show the flow aloft at about 30 000ft. The surface front is shown by the usual triangular symbols. Shading indicates the zone of thick upper cloud. (Low cloud is not shown.)

"A" shows the cold front lying well ahead of the upper trough. (The pecked line shows the axis of the upper trough.) This is what one expects to see with a textbook cold front. The cross-section on the right shows an active cold front followed by unstable air with cu-nim behind it near the upper trough axis.

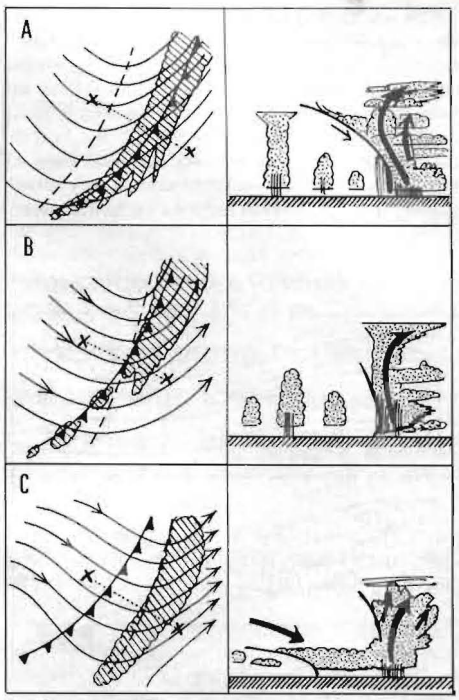


Fig 9

"B" shows what happens if the upper trough starts to overtake the surface front. As it reaches the front the air becomes much more unstable and for a short time the cold front becomes very active. There is nearly always a line of big cu-nim, often with thunderstorms extending very high and squalls near the surface. This stage is usually fairly short lived. The air behind is still unstable but less so than in "A", so the post frontal cu-nim are often absent.

"C" shows the front when it has been overtaken and left far behind the upper trough. The surface front now lies under a region where the air is descending. This warms out the air aloft and disperses most of the upper cloud. Only a band of low cloud is left on the old cold front. This cloud seldom produces more than some drizzle or a few spots of rain. However, the low level air at and ahead of the surface front is still warm and moist so low stratus may persist long after the rain belt has passed. The low cloud often does not break until the surface front has passed. The deep cloud with heavy rain has been carried far ahead. It too dies out when the upper trough fills.

Split cold fronts

The situation in Fig 9(c) has been termed a "split cold front". The thick cloud and heavy thundery rain has been split off from the original front and swept on ahead by the upper trough. These split cold fronts still cause many problems to people analysing surface charts, especially when satellite pictures are not available. This is partly because analysts are used to locating cold fronts by the band of heavy rain followed by a drop in dew point and lifting of low cloud. With a split cold

front all the severe weather has moved far ahead of this dew point change. The observer on the ground experiences the heavy rain but has to wait a long time before the low cloud breaks up and the clearer drier air arrives.

Warm fronts also go through strong and weak stages. If the region of subsidence associated with an upper ridge comes over a warm front the descending air steadily evaporates the upper cloud. Eventually all that is left is a band of low cloud. This usually persists over the sea but in good summers surface heating burns off this low cloud overland. Then we experience cloudless but hot and humid days. Fig 10 shows what can happen when an upper ridge builds over a warm front. The subsidence disperses most of the frontal cloud. As in Fig 9 the upper flow is illustrated on the left while vertical cross-sections of frontal cloud are on the right.

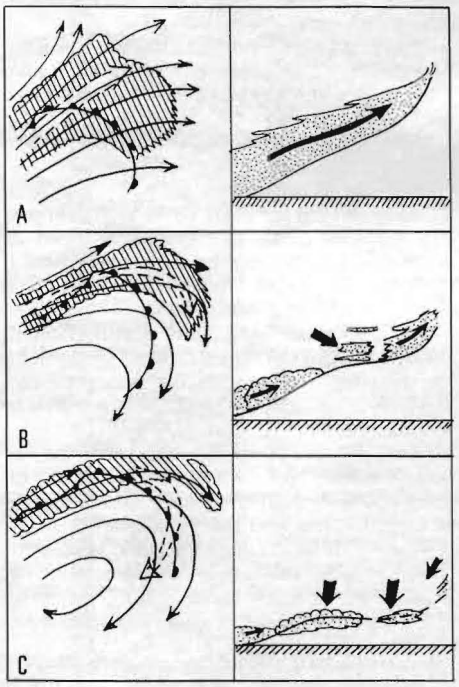


Fig 10

But can one get hold of these upper air charts?

At present these charts can only be obtained by radio fascimile, or by special arrangement with a weather centre. Weather centres can send all sorts of data by telephone fax. Naturally they make a charge for the service; in 1990 one could get about five A4 sheets of charts for the price of one aerotow. At present gliding clubs make little use of the service except during National Contests.

However, there are plans for a dial-up Met fax service which, if it is implemented successfully, may provide several kinds of "actual" and forecast charts without the need to make prior arrangements. Telephone fax could become very useful for many clubs. It should be much more cost effective than telephoning for the present AIRMET forecasts and ought to become a major factor both for competitions and daily route planning.

GOOD BEGINNINGS

Every so often we have letters from newcomers to gliding who moan about the treatment they get from clubs and Trevor Foxen, who runs a management consultancy and training organisation, thinks there could be vast improvements without too much effort from those already over-stretched club officials.

Obtaining and keeping good employees is really not too different from getting and keeping useful club members.

Ask yourself this question. Do you remember the first hour of the first day of your first job? Nearly everybody, whatever their age, will say "yes". Why? What were your concerns? Fear of the unknown. In both starting a new job and joining a club you need the answers to three basic questions:

1. Will I like them?
2. Will they like me?
3. Will I be able to cope?

In other words will I fit in and not make a fool of myself. Will I be happy doing this thing - gliding - which I've wanted to do all my life?

Think about this scenario. You have plucked up courage to have a look at the gliding club. You all know where your airfield is but as a stranger could you find it? You can see the gliders in the air but where the hell is the field or gate to get in. So after an hour driving around lanes you almost accidentally stumble on the field and drive in.

"Don't park that thing there."

"Do you mind going to the bottom gate to park."

"Cars aren't allowed on this part of the airfield."

Just three remarks I've heard at clubs. Yes there were signs but don't expect a nervous newcomer to see them.

Having parked the car how long is it before you can find someone to talk to? Even then could they help you? You should consider yourself lucky if you were instantly commandeered to hold a wingtip and possibly cussed for doing it wrong?

These are the low spots and some may well be getting cross at these observations but all are true. It doesn't exactly conjure up a welcoming mat. Do all clubs actually have a procedure for dealing with new people or just inquiries? Do clubs have a PRO? You are going to need one.

Now for a few ideas that do work.

All clubs should have a supply of one sheet handouts giving a brief run down on the club plus answers to the top ten questions always asked.

On each flying day someone should be detailed to deal with new members and inquiries. They don't need to be experienced pilots. Fairly new members who have just survived the first few months are ideal. They know the problems, who's who, how to keep out of trouble etc.

Give all new members a sponsor - someone to look after their problems in the terrifying first few weeks. This stops stupid errors and embarrassment and keeps the newcomer off the instructors' backs. And most important, it gets people involved very quickly. In industry the object is to get the employee happily up to an acceptable standard in the shortest, realistic time. So what's different in a gliding club?

To make sure it always happens have an induction checklist the sponsor can go through with the new member. To get an understanding and commitment it is important that people know why as well as what should or should not happen. It shows that someone cares, they relax, get happy, become confident and competent and in a very short time are contributing willingly to the club's well-being. It really is as simple as that and it's fun - in a thinking club!

As to instructors and club officers . . . It's taboo to criticise the elite. They mostly do a good job with little thanks and often at expense to themselves, but where are the lovely, patient, good mannered, consistently thoughtful instructors of yore?

They earned loyalty, respect and devotion to duty that is rarely seen today. Perhaps the BGA is a little to blame requiring an instructor to first become a pundit. Yet nobody surpassed Ron Lewis who as far as I know never did get his Silver badge.

He was far too busy doing an honest instructor's job giving the best to *ab-initios*, one of whom I remember saying "It's an honour to get a rollicking from Ron. He does it so well you never let him down again." Unlike two pundit instructors who ran a wager to see who got the most launches on a particular Saturday - never mind the students.

We really must look at the motivation of instructors and their attitudes to students and their ability to get understanding. Is there an analogy here with work - which boss gets most done easily? Does shouting at someone in the work place really make for good discipline? Is it even acceptable? Does it happen at your club? Oh dear!

Gliding is an individual sport where teamwork is only related to rigging - you help me and I'll help you; launching - well it's something to do while I'm waiting and retrieving - he'll have to buy us dinner. It breeds individuals of a tough, resilient, self-reliant nature but these qualities don't help when the chores want doing. These fall upon the few - always the same few. So involve the youngsters but give them points and cash reductions for their efforts - *á la* German mode - well 1992 cometh!

Finally, there should be a duty officer (no not a pundit) whose sole job is to ensure things run smoothly and inform firmly and privately those not pulling their weight, but only after having ascertained that they know what is required.

Remember, you can't have an efficient ship unless it's happy and you can't have a happy ship unless it's efficient.

I bet this hits a few corns!

IAIN WRIGHT

SPIRIT OF THE PLACE

In the tradition of all good Christmas stories you need to read this on a long winter evening, preferably by the light of a log fire

I can feel the cold creeping up my legs as the first wisps of cloud appear around me. I wipe the mist off the canopy and realise my fingers are cramping around the stick. So this is what the pundits mean by "the day" – that one special day of the year.

It's my first ever solo thermal and I had struggled to centre from the moment I released early to join the K-6 and the Pilatus already prowling in wide loops around the thermal. Only now as I approach cloudbase does the vario creep beyond 1.5 and I feel the aircraft settle stick-centre into the core.

I look along the wing around who's tip we are now pirouetting and see the hazy ground nearly a mile below. A field of rape in full bloom, the pub car-park and the road circling lazily. Above me on one side flashes the snow-white wall of the next cu.

Suddenly I'm in the cloud.

Disorientation. Switch on the T&S. Battery flat. Seat of the pants then. Level up and fly straight and level and I should hit that patch of sunshine between cotton wool. Vario says three up now. Full airbrake. A strange floating sensation: intense silence . . . speed 30: close to stall – nose down quick!

Oh no, it's that negative *g* they warned me of. A strange detachment wells over me as though I am fighting sleep. I seem to float away from the aircraft. Time stops.

Suddenly I'm out in the sunlight. Brakes in and look for the field. But how can this be? My palms go clammy for what I see is not as it should be . . .

The intense sunlight against the wall of cloud burns through the perspex yet a cold shiver rushes furtively around my spine. All is as it should be except the ground. Instead of a spring-time Cotswold landscape I see a landscape of rock and heather dusted with fresh snow. The shadow of my cumulus cloud slides like a grey veil over the white tops – the only movement in this wilderness.

Momentarily a shadow passes over me. Another glider? Curse these high wingroots. Then I hear it: the whistle of a trailing edge close by. I look round . . . and I'm back in the cloud before I can focus on the huge red shape. I reach for the airbrake and before I can grasp the handle I hear a massive **bang** right above my cockpit. I pull the handle and am relieved to feel the resistance in my hand followed by the dropping sensation.

I've had enough! Nose down and 60kt and get this lump of wood and canvas down out of this alien environment.

Out in clear air again I see the field right below me. I feel clammy all over and am shivering uncontrollably. Still with full airbrake I make a dive for circuit height and join the pattern.

"That was one hell of a flight!" calls my retriever.

"What? oh yes. First soaring flight. Funny thing though: could have sworn . . ."

"What's that?"

"Never mind. Does the wingroot look OK? Heard a hell of a bang up there".

Back at the launch the CFI comes over. "That was a lousy circuit. Let's do one together in the K-7". We'll take a normal launch and straighten up off the wire. "Just fly as though you were on your own. Are you going to ignore two up?"

I push the wing down and start to turn. In no time we're up at cloudbase again. But this one's blue and passes between the walls of white.

"My aircraft!" screams the voice behind me as we enter a fully established spin from 80 degrees of bank. As I look up the vertical side of the sun-drenched cloud I see the shadow. I look at the rotating ground. It's the mountains again.

We pull out and as the ground resumes its normal place again I see the field. We land without further comment.

"You must keep a look-out. We were within feet of that T-21. Did you catch a reg?" The CFI's voice sounds strained and a note higher than usual.

"I only saw the shadow," I confess. "Are you sure it was a T-21? The wings seemed much longer than usual. More to the point, er, did you see the mountains?"

"But I feel his answer a little hasty and lacking conviction"

"It was the trailers and the pig huts in the next field catching the sun. Everything looks strange in a spin". But I feel his answer a little hasty and lacking conviction. All I then get is a grunt as he wanders off to supervise the launch party packing up for the day. The conversation is at an end.

As I help push the two-seater back to the hangar a pundit drops out of the lowering sun and makes an abrupt and untidy arrival in the undershoot area. "What happened to your beat up?" I ask as we pass. "Thought that was your trademark". Could it be exhaustion that made his face so white and his answer unrepeatable?

Later in the bar he comes over. "Sorry about back there on the field. Out of character. Had a bit of a turn in a thermal".

"'Turn': I like that! What was it – a near miss?" I venture.

"No joke. Well yes there was a bit of a close thing – but that's not what got to me. I thought I . . . oh hell, never mind".

"No go on", I'm determined to hear what he saw. "You saw a shadow – just as if something flew really close in your blind spot and then there was a huge bang".

"Yes, that's right". He looked at me askance. "And just for a moment while he was there, it was as if – well maybe a trick of the light; reflection on the canopy . . ."

"You saw snow-capped mountains didn't you."

"How did you know?"

"Because I did too". I felt so relieved to know. That someone else – far more experienced in cloud than I would ever be – had seen what I knew I'd seen. "I think Fred did too but he won't admit it. He thinks it was a T-21".

"He saw it too?" My pundit friend seemed relieved that the CFI had also seen the aircraft. "Strange thing was as soon as I heard the bang and looked round, when I looked back the view was back to normal."

I realised I'd not updated my log. I checked the timesheets and saw a flying time for the day of almost seven hours. How could this be with only two flights? I checked the pundit's time.

"Mike, how far did you go today?"

"Barely out of the circuit. That damned ghost got me in my first thermal".

"Ghost? Oh, I see. Still you did a good time: six hours."

"Did I hell – I was back on the ground within the hour."

We walked together out of the bar. Neither spoke, engrossed in his own thoughts. On the wall by the stairs I saw a dusty black and white framed photograph. I'd not seen it before but today something about the outline of the aircraft in the picture caught and held my gaze.

"That's it! That's the plane. I didn't see it properly, only out of the corner of my eye. But those huge wings. Like a T-21 with a longer span."

"Impossible!" exclaimed the club's elder statesman squeezing past on his way to the bar. "That bloody thing disappeared in North Wales on it's first cross-country on Christmas Day 1957. Bill Perry was our Air Tech then. He designed those wing extensions for the T-21 to make it a cross-country bus. There's never been another since. The BGA banned the design after they found the wreckage. They think he was on his way back to the field when the wing broke off. We were all waiting in the clubhouse for the Christmas party to start. I stayed by the phone till midnight. Strange, thought. Although they found all the wreckage, they never did find his body."

McLEAN AVIATION

THE AERODROME, RUFFORTH, YORK YO2 3QA

Repairs in Glass, Carbon, Kevlar, Wood & Metal Structures

SOLE UK AGENTS FOR OK BAROGRAPHS

Telephone 0904 83653
Fax 0904 838146



DG 500M

GLASER-DIRKS FLUGZEUGBAU

GLASER-DIRKS UK

BOB McLEAN 0904 83653 **JOHN ELLIS 0765 89431**

SOLE UK AGENTS FOR THE COMPLETE RANGE OF DG SAILPLANES

Please ask for details

A DREAM COMES TRUE

There were a crop of 1000km flights from West Germany during the end of May and Julian West describes how he realised an ambition in 11hrs 5min from Burg Feuerstein in his Nimbus 3

Germany is well known for its large coniferous forests, but less so for its mountains. However, areas such as the Black Forest and the Bavarian Forest, to name but two, are situated on long ridges that are high enough to count as mountains. Both the distribution and strength of thermals is less homogeneous than we are used to in the UK, as high ground and forests usually generate significantly better thermals than elsewhere. Forests on high ground, provided any clouds there do not overdevelop, usually produce the very best thermals of all. Large tasks are therefore routed along as many afforested ridges as are practicable.

Within Southern Germany there are two distinct areas, one south of the river Danube, which is relatively flat with generally poor conditions, and another north of it, which is hilly and more heavily afforested and in which conditions are generally much better. Both are triangular, but the one to the north of the Danube is slightly bigger and just happens to have the proportions of a 1000km FAI triangle.

Large flights may still be possible if the eastern side is in the task area

The higher ground and conifer forests bordering the northern triangle mean that the very best conditions are to be found towards the edges rather than in the middle. Even when the good weather window does not exactly coincide with the northern triangle, large flights may still be possible if the eastern side of the southern triangle, which includes the Bavarian Forest, is incorporated into the task area.

This is the main reason why for the last five years my glider has been based at Burg Feuerstein on the eastern side of the northern triangle, rather than at an airfield near Munich, some 200km to the south where I live and work.

Burg Feuerstein is a small commercial airfield on the top of the 500ft high ridge at the western edge of an area of high ground known as the Fränkische Schweiz. This area, which for the most part is covered by coniferous woods, is divided by narrow winding river valleys with many picturesque villages and watermills. The airfield, at 49°48'N 11°08'E, is 1670ft amsl and has a 2800ft asphalt runway which runs east-west with a pronounced downward slope. Launching is by aerotow from a narrow asphalt taxiway to the south of the runway, and the landing area is a 100ft wide grass strip to the north. The control tower and hangars are to the south of the east end of the runway, and for convenience take-offs are uphill towards the east if at all possible. In holiday periods visitors, who are always welcome, substantially outnumber the locals.

The very best days occur, as in the UK, when a cold anticyclone forms behind a cold front. During Thursday, May 24, a cold front moved southwards across Bavaria, and so during the evening I drove up to Burg Feuerstein. On the way there was torrential rain at Holledau on the motorway some 50km north of Munich, but this is not unusual before a big day. By Ingolstadt about 100km north the motorway was dry again, and this is normally a good sign as it indicates that the cold front has crossed the river Danube several hours earlier. However, a further belt of torrential rain in the region of Nüremburg more than 150km north indicated that the frontal rain would clear the relevant area somewhat later than the ideal for a good first day following the front.



A map of the area showing Julian's route.

Early on the Friday morning there was a perishing cold north-east wind. The CFI, Siegfried Frank, suggested a straight downwind dash to France for 1000km, but the satellite picture indicated that clouds associated with the next low from the Atlantic would encroach on the intended landing area in Britanny before the day was out. A failed flight would also entail missing the second day following the front, which would most likely not only be even better but also suitable for a large closed circuit task. In the event I declared a 703km FAI triangle, which I had to abort after running into eight octas of stratocumulus at Aalen by the Schwäbischen Alb, a 200km long north-west facing ridge extending all the way to the Black Forest.

On the Saturday I arrived on the airfield at 7am to meet Rolf Hoerr, with whom I share a hangar, and together we put on the outer panels of our Nimbus 3s. As usual I completely filled two of the four tanks with water, which gives an AUW of about 650kg. This not only avoids problems on take-off, due to shifting ballast if a wing drops, but also enables an early start while the thermals are still very weak. Rolf suggested that a 1000km quadrilateral, 800km of which I had flown at 94km/h two weeks previously, might well be possible. I was rather sceptical at the time, as this particular task involved flying to Linz in Austria, some 300km to the south-east, which was rather near to the backside of the cold front where conditions were likely to be poorer. However, sheer desperation to reach the magic 1000km mark persuaded me to have a go.

After a 3100ft tow at 0855hrs local time I released into weak wave in the inversion and headed for the nearest clouds, some 25km away near Pegnitz, well to the east of track (120°). The zero sink in the wave soon gave way to pronounced sink and when I reached the first cloud it wasn't working. After further wave-like sink I contacted weak lift at 1500ft (all heights QFE) under the second cloud. At this time of day survival is all that counts, so I cautiously tiptoed 10km southwards to a large forest where the first decent thermal is usually to be found. There were a couple of nice looking clouds, but the thermals there were distorted by shear in the light northerly wind and I was unable to reach cloudbase. Back

on track I proceeded towards Amberg 60km out, getting down to 1500ft again before joining Rolf in the first 4kt thermal of the day directly over Amberg, which took me to cloudbase now at 3600ft.

Between Amberg and the Bavarian Forest is a flat sandy area containing a myriad of lakes. This watery area ensures the presence of clouds, but does not enhance the lift so I pressed on. By the time I had reached the Bavarian Forest, a series of conifer covered mountain ridges beside the river Danube, the clouds had overdeveloped leaving sunny patches only on the north-eastern slopes. Desperate for good climb, I threw caution to the winds and flew through a pass to reach the sunshine on the other side. Low down the thermals were still distorted by wind shear, but after a bit of a struggle I got 4kt and regained some height.

Unfortunately, the lure of a better climb further along the ridge, which was reported by Rolf, merely resulted in a repeat performance of my previous scrape. So this time I took the 4kt to cloudbase at 3600ft in order to benefit from the suction effect directly underneath the now unbroken black band of cloud along the mountains. Normally this would enable a fast straight line cruise, but this time I slowed down from 70 to 60kt and this tactic enabled me to reach the occasional 6kt thermals before climbing back to cloudbase. With mountains it is important to remain above ridge top height, and it is often necessary to fly much slower than the theoretically optimum speed.

The ridges of the Bavarian Forest end at Passau, where the river Inn joins the Danube, and in the relatively flat area of lower Austria the visibility decreased markedly and the overdeveloped clouds ahead appeared to be formless. Here the Danube no longer meanders through a plain, but lies deep in a narrow valley. The southward facing slopes of this valley would normally provide good thermals, but overdevelopment put paid to that and once again I got rather low over a plateau north of the Danube. After another low scrape near a patch of sunshine, I joined Rolf in a 6kt thermal under a particularly black patch of cloud. He had already rounded the first TP, which he reported was in rain, and was now about 25km ahead.

After regaining height to cloudbase at 3300ft I was able to reach Lichtenberg radio mast, which is on a mountain ridge near Linz some 275km out, at 1230hrs. Fortunately it was no longer raining over the TP, but the reported 6kt thermal had gone as well. My overall speed for the first leg, which had a tail wind component, was only 79km/h and at that stage there appeared to be no possibility of completing such a large task.

Conditions on the return track (300°) were no better until the first slopes of the Bavarian Forest were reached near Passau. From this point the flight was easier with well spaced but regular 6kt thermals under the continuous black cloud street along the ridge. The overall ground speed was at last starting to improve. However, it was only after leaving the Bavarian Forest that conditions really got going.



A self-portrait.

All the coniferous woods on the way back to the Feuerstein were giving 8kt and the sky looked fabulous with two octas of well developed cumulus and a 7500ft cloudbase. I increased the inter-thermal speed from a pedestrian 70kt to between 100 and 120kt depending upon the lift/sink situation. The second TP, Geisberg radio mast abeam of Bamberg, is 565km out and was reached at 1700hrs, giving a speed of 102km/h for the second leg. It now began to look as if the task might just be possible.

The excellent thermals continued unabated until I rejoined the slopes of the Bavarian Forest. There conditions were much as before until Deggendorf, some 50km short of my third TP. Here overdevelopment from the ridge had spread out so much that the entire area up to the river Danube was in shadow. After a last climb at 4kt to the lowering 4000ft cloudbase, I slowed down to best glide at 60kt and tried to conserve height as much as possible. This time my route was over the motorway beside the river Danube well away from the ridge, where I once again met Rolf who was returning from the TP. After a glide of about 35km, I slid under a large black mass of cloud that yielded another 4kt to cloudbase, now at only 3600ft. This enabled a run into the third TP, Ilz dam near Passau, with a return to the same lift afterwards. The speed for the third leg was a staggering 112km/h.

On the long glide back to Deggendorf I found absolutely nothing at all, and it began to look as if I was going to need the nearby airfield beside the river Danube. The whole area was in shadow, and although small whitish clouds had developed under the grey cloud mass there was no lift under them. Now down to 2000ft, my only chance was a small patch of sunshine at the entrance to a pass across the Bavarian Forest ridge.

I was now below the level of the foothills and at first the lift was very weak, but after gaining a little height I flew over a low ridge to connect with 4kt, which took me to cloudbase. Although the main ridge was no problem, I left it a little earlier than before on a more southerly route over some hills north of the Danube between Straubing and Regensberg. As before conditions here were much better, but it was now 1900hrs and the climb rates were significantly lower. Cloudbase, though harder to reach, was still a massive 7500ft, and I reached final glide height south of Amberg. However, having been caught out once before after a long flight, I took one more thermal than was strictly necessary to give a 3000ft safety margin.

If Burg Feuerstein is used for both start and finish points, then this particular task is only 1002km. So, to allow for possible measurement errors, I had pre-declared a remote finish at Köppishöhe radio mast, which is 8km north-west of Burg Feuerstein. This was rounded at 1945hrs, still with 3000ft in hand, giving a speed of 89km/h for the fourth leg and an overall speed of 92km/h for the task.

The sky still looked magnificent, and was probably good for another 200km. Back at Burg Feuerstein I rolled to a halt at precisely 2000hrs, some 11hrs 5min after take-off. There I was greeted by a crowd of well wishers including Rolf and the CFI with a bottle of champagne. My feeling was that of a dream comimg true - 1000km flown from my home club - who could ask for more?

Footnote: Three days later, on Tuesday, May 29, Rolf Hoer completed a 1067km FAI triangle, the first from Burg Feuerstein, and on July 17 Julian flew a 1003km from Fuentemilanos, Spain.

THE NEW L23 "SUPER BLANIK" FROM CZECHOSLOVAKIA



A superb trainer
All metal construction
Easy ground handling
Empty weight 310kgs
Fully instrumented
Certified to JR 22 and OSTIV-X
Delivery ex-stock
or within 4 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 CAIRFT G



Anne Ince took this cloud panorama from the road between Milfield and Kelso on Monday, August 6, as well as the photos below.

DAVID INCE

GERIATRIC RIGGING DEVICE

David Ince describes his new rigging aid which he tested on a visit to Milfield GC

Long before "Piggy" our ASW-20 went in for her C of A last January her two pilots - both well on the way to three score years and ten - (see the August issue, p195, "Old Pilots go to Sleap") - were suffering from rigging problems. Wing roots and aging backs are not good news!

At Membury, where Southern Sailplanes were dealing with "Piggy's" airframe, we talked with Ralph and Stephen Jones who suggested Angus Fleming across the way. AMF Enterprises was already working on a sideways moving, jacking, belly trolley for Ralph's privately hangared Nimbus at Lasham - and Angus seemed well placed to come up with a good solution.

On a Comet trailer the back end cannot be lowered to the ground and the fuselage must remain attached for rigging. Not a good start - or so we thought. But Angus was undeterred and enthusiastic. Within a matter of days he had produced a prototype GRD (Geriatric Rigging Device) which took care of all that. A raised, trolley mounted, wing support (photo 1) positioned at the semi-span C of G, which allowed some 90° rotation in incidence from leading edge nose down to horizontal.

Rigging trials and limited trailer stowage space resulted in a string of modifications. Getting the height and incidence right, making the undergear detachable (photo 2), adjusting the height of the outrigger jockey wheels, replacing the original plastic main wheels. The most important feature was a means of holding the wing firmly in place. Vital in gusty conditions. This went through a number of changes before being finalised as a rigid strap with over dead centre locking.

Angus did a splendid development job. Tolerant and creative - quick to grasp the necessity for each change and to find a solution - so that, within weeks, we had a working system. Tracking the wing in and out of the trailer (photo 3), rotating it flat (photo 4), and positioning it accurately to the fuselage (photo 5) was no sweat. **And there was no wing root lifting!**

Even better, GRD had unexpectedly presented us with a one man rig and derig, given reasonably calm conditions and a level tarmac surface.

Come the final test at Milfield, beside the Cheviots, in the Scottish border country. Ten days during late July and early August, four with wave (would have been five but for severe rotor turbulence over the site) and four thermic, including a fascinating sea breeze and decaying cold front convergence zone at the base of the mountains adjoining the airfield.

Milfield offers a wide variety of soaring and cross-country flying, mostly in sparkling visibility, over the mountains and flood plains between the Newcastle SRZ and the Scottish TMA. The airfield lies in the shadow of the Cheviots, a bare ten miles from the Northumbrian coast, protected from the east by a lengthy escarpment so that it is rarely sea breezed out. The sea air pushes a long way up the Tweed valley immediately to the north and forays towards the Lammamuir hills and the Firth of Forth should be made early in the day. Locals say that wave and sea breeze never occur at the same time. However Anne's cloud panorama taken from the road between Milfield and Kelso seems to suggest otherwise.

As for wave - it can be expected, at any time of year, with winds between north-west and south. In these wind directions there is almost always a blue slot in the lee of the Cheviots - around Milfield and the town of Wooler to the south-east - even when the sky elsewhere is completely overcast. Maximum height achieved so far is around 28 000ft. Wave has even been found in easterly wind directions - presumably generated by the escarpment mentioned above.

For those who want to go further afield Newcastle SRZ and the Scottish TMA/SRA are accessible in VMC, but radio and ATC procedures are required for the Edinburgh SRZ. However do make sure your maps are up to date. Apart from airspace considerations, reservoirs and forests have changed dramatically in recent years - and you might get lost up in the mountains where the landing fields are few and far between. Watch out for low flying Tornadoes and Phantoms too, for this is training territory.

All in all Milfield is different. It is certainly well worth a visit* in its own right or, even if you are committed elsewhere, as a stopover *en route* to or from Aboyne or Portmoak.

My trip there coincided with a relaxing task week run by Robin Johnson, who exploited the varied local conditions to the full. They are planning to do it again next year. So why not come along and join in?

Oh yes, and I almost forgot, our fully engineered GRD worked perfectly on the undulating, draughty, rigging area - part of Galewood Farm - where sheep still graze when the club is not flying. Angus Fleming, bless him, has produced a winner.

**Borders Gliding Club, Galewood Airfield, Nr Milfield, Wooler, Northumberland, NE71 6HW. Tel 066 86 284.*

Photo 1. GRD complete assembly with rigid strap in locked position.



Photo 2. Removing the detachable undergear. Note the narrow width of the main unit which simplifies trailer stowage.



Photo 3. Starboard wing being removed from trailer - immediately prior to fitting the rigid strap.



Photo 4. Rotating the starboard wing to rigging incidence.



Photo 5. Positioning the port wing accurately to the fuselage.





NORMAN JAMES

WINNING WAYS OF A TUTOR

(A modern fairy story)

Once upon a time, many years ago (1939 to be exact) a little Tutor was born to the great glider-making family of Fred Slingsby. It was one of a large number of gliders from this great family and duly went into the world to teach aspiring glider pilots how to fly. Up and down on the winch it would go bringing great pleasure to all.

After many years new and better gliders came on the scene and the poor little Tutor was used less and less and eventually ended up forlorn in the back of the hangar.

One day a wicked baron came along and seeing the little Tutor said "Behold, I will take that Tutor and fit engines on its struts and I will fly it around the skies." So saying he took it to his barn and left it there whilst he looked for suitable engines.

Now fortunately for the little Tutor this wicked baron couldn't fly, so he went along to Coventry GC to learn. Now it came to pass that this baron had little idea when it came to flying and the instructors were seen to throw up their hands in horror.

One night at the club bar the baron was proclaiming forth about his project with the little Tutor when he was overheard by a group of bearded noblemen who were participating in the religious practice of drinking Hoskins' real ale and were still standing.

"Forsooth, may we look at this little Tutor?" Now the baron seeing the possibility of making a quick bob invited them to the barn. After much jousting, a price of £500 was agreed and that great healer of sick gliders, Lou Glover, was consulted and heard to mutter "Yea verily it will fly again," and in so saying fitted it with a shining new aerotow hook and jury struts to match.

In the following years the group of noblemen had much pleasure from the little Tutor. One, a Norman James by name, had recently, had two cross-country check rides in the T-21 with Lou Frank, one to Plymouth and one to the Isle of Wight (see *S&G*, June issue, p138 and August, p199) and was now very eager to take the little Tutor cross-country. He also entered it in the club task week.

Now the little Tutor wasn't designed for prolonged periods in the air. In fact the cockpit was probably designed around Quasimodo, but it was found that a pair of trainer shoes wrapped inside a thick anorak and placed in the small of the back made the seating position just "uncomfortable".

In this task week only one flight was possible, 13km, which was sufficient to win a newly awarded trophy for the longest distance in a Cadet or Tutor. This was the only entry! A year later the little Tutor managed to achieve 46km to retain the trophy.

Then came 1989, the year of the good flying.



Norman James, the little Tutor and the many awards. Photo: Sid Gilmore.

There was a promising weekend forecast with a NW breeze and the little Tutor was wheeled out amid jeers from the big plastic gliders and shouts of "get it off the line", but it stood its ground and declared Duxford. On hearing this the big plastic gliders fell about laughing saying "You must be joking, it's 90km away".

The little Tutor gritted its towhook, flashed its spoilers, said "Take up slack" and was gone.

Pulling off in a good thermal the nobleman said to the little Tutor "I hope you know what you're doing. It's a hell of a long way." But the little Tutor said nothing but shot its little green ball on the Cosim variometer to the top.

On and on they went, stepping carefully from thermal to thermal. St Neots and getting low, 1000ft, picked a field but got away in weak lift. Drifted to Bourn airfield at 3600ft, looked at map, ten miles to go and not a thermal in sight.

The lift had gone and with a blank overcast sky the little Tutor set off for Duxford in a do or die attempt. At 35kt and 5ft/sec down on the Cosim and the pilot in the fully tucked position to reduce drag, the little Tutor flew on, thinking "I'll get as near as possible."

The stillness was nerve wracking but the hangars were getting nearer and nearer and at last they just crept in over the fence and landed at the launch point, owing to the fact that Duxford is 400ft lower than Husbands Bosworth.

Task week 1989

The little Tutor was entered once again amongst much protest from the scorers since it didn't have a program on the computer.

The goal was Nympsfield but with a maximum height of 2300ft and the selection of many fields they landed on the 18th at Cheltenham, just short.

The next day the task was the same with a

strong, unstable NNE airstream. The little Tutor was towed to a good thermal, crosswind to the airfield, climbed to 3500 but lost 3100ft getting back to the startline. On the circuit to land it hit 10 up and the pilot shouted, "Gate and start" over the side as the little Tutor soared away, much to the amazement of the onlookers.

It set off on a crosswind course with very strong thermals. At one point, close to Long Marston, the little Tutor entered a thermal at 4000ft and was promptly thrown out. After two more attempts, the pilot decided to find a weaker thermal. They got low just before Nympsfield but with good lift off the hills reached the goal - 116km and utter elation.

The next day the task was Dunstable and they set off with great gusto. Over-confident, they pushed too hard, getting lower and lower and only three miles to go. The nobleman pleaded to the big white godmother in the sky, "If you'll just give me one more thermal I promise I won't overdrink at the bar again."

A booming voice replied "You're a liar Norman James, but for the sake of the little Tutor I will give you one." And lo and behold a six knotter got us in at VNE (62kt) much to the pleasure of Chris Wills and the Vintage Glider Club who were holding the annual meet there.

It was here that I was asked if there was a final glide calculator, to which I replied there was a horizontal line on the cockpit screen just below the coaming, above which the word NO is written and YES below.

We relaunched and turned it into a race

The next task was Lasham in a north-westerly unstable 10kt airstream. We landed 25km out but on returning to the site found that the T-21 had set off, so we relaunched and turned it into a race.

In fantastic lift the little Tutor was soon at 5000ft and going strong. South of Bicester the thermals were getting larger and further apart, so we had to climb to cloudbase. But there was a new problem - when at cloudbase - with just an ASI, altimeter and Cosim vario it is easy to come out the wrong way. (On our return I bought a stick-on compass with a luminous dial.)

There were some long glides on this flight but with a final climb to 5000ft east of Basingstoke the little Tutor had another victory under its belt, beating the T-21 by 20min.

By the end of the task week we had flown over 500km and were 6th on the National Ladder. Could it be possible the little Tutor would win it? A close watch on the weather forecast was now paramount.

At last a northerly airstream after a cold front and a ridge of high pressure behind. A day off work was called for - it was the Isle of Wight or bust.

This was the big one but I had to get back for my daughter's engagement party that evening. Going well, we skirted round Upper Heyford to avoid hassle. (In the Tutor everything hangs about the pilot's neck, *ie* camera, radio, drink, sandwiches, map.)

We met up with Nick Hackett in his new LS-7 returning from down south and he reported that conditions weren't good. The thing is the Tutor can't turn back so we decided to press on anyway. It got more blue the further south we went but by waiting in the existing thermal small cu formed ahead. Progress was very slow but eventually we could see the coast and a cumulus cloud was forming over Portsmouth. We went for it and climbed to 3000ft - then depression. The cloud and lift disappeared and there wasn't another cloud in the sky ahead. At this height an attempted crossing would have been suicidal.

Norman is now working in France but the Tutor tradition continues at Coventry GC. In yet another Tutor, Keith Nurcombe achieved 726km in five flights at the May task week, including one to Snowdonia, and he has headed the National Weekend Ladder for most of the season, ending up as the winner.

Lee-on-Solent was within range so we went for it. On approaching the airfield a small wisp of cloud was forming over the Solent, but was it a thermal? I looked at the airfield and at the cloud and decided I could afford 500ft to investigate.

We tiptoed out across the water - a tremor or was it me shaking with fear! The red ball came down and they were both at the bottom. Looking back the airfield seemed a long way away. Then the green ball started to rise, 1ft/sec at first then 2up. I turned. This must have been the point of no return because with 2000ft on the clock it was doubtful whether I would have made either side.

By then I was doing the most accurate flying of my life. If I lost the lift I was in serious trouble. It seemed like an eternity to 3000ft but when I was relaxed enough to look around, Sandown was within reach. Utter elation which can't be described!

It was an expensive retrieve! Roger Goodman came from Husbands Bosworth with the Chipmunk and towed me to Lasham. We then continued home and I returned the next day by road for the little Tutor. And I was only 30min late for my daughter's party.

The little Tutor was way up the National Ladder with only an O/R needed.

The day came, a very light southerly airstream and high cloudbase. I declared Brickhill island on the A5, a 110km O/R. At 3500ft we set off into wind, but on the way back conditions deteriorated and it was only going for the sunlight gaps in the cloud that a return was possible. We had a tremendous reception and much more religious sacrifice at the bar.

It was at this point that it was thought that the little Tutor would win the National Ladder having got more points than ever accumulated before, but the great Andy Davis was not to be outdone by a little Tutor and topped the score with a flight so fast that it must have scorched his wings. (Norman won the Firth Vickers cup for 2nd place on the Open Ladder and with 920km flown during 1989 he collected eight other trophies from the Vintage Club and Coventry GC. ED)

Well folks that is the story of the little Tutor and how it rose from being an ugly duckling to a white swan never again to be scorned at by the big plastic gliders.

Goodnight glider pilots and I hope your fairy story comes true.

INTER-CLUB LEAGUE FINAL

The Inter-League Final was held over the August Bank Holiday weekend. Very many thanks to our hosts the Coventry GC at Husbands Bosworth who gave us what must have been the most cheerful event of the whole of the British gliding season.

Bannerdown (RAF Hullavington) arrived to represent the Southern League, intent on winning the final for the third successive year. Eager to ensure that they didn't were Nympsfield, representing the Rockpolishers, resolved to improve on their 2nd place the year before. Cambridge University GC from the East Anglian league, Lasham from the South Eastern, Wrekin (RAF Cosford) new members of the Midland League, Derby & Lancs from the Northern League and Coventry from the Eastern League all had strict instructions that Bannerdown were not to achieve the hat trick!

Tim Newport-Peace yet again gave up his Bank Holiday to handle all the scoring at very modest cost with his famous computer systems. T. L. Clowes, the Insurance Brokers, very kindly agreed for the second year to cover expenses for us, including all the prizes.

Hopes that Sunday would improve were low

The cold front which might have brought fresh soarability for Saturday turned back away from us leaving misty conditions. Hopes that Sunday would improve were low - we had to make the most of what we'd got. Claude Woodhouse set the tasks; alternative TP O/Rs for all Classes to maximise the chances of a contest day.

An impressive grid was formed and the early part of the afternoon was spent peering hopefully after a succession of snifters who were towed into the murk before sinking back to earth. At last one of them stayed up - though nobody could see him.

A three-pronged strategem was devised: a) Re-order the grid (Pundits to the front), b) Send the Intermediates on their fall-back (the Novices') task, c) Time all pilots from the start of their ground run (to avoid gaggling locally in poor viz). Despite earlier doubts we were finally able to launch all three Classes.

The first land-out was Chris Starkey, Lasham Pundit, in a Janus. He had made the fastest speed to the unsoarable weather near the Ely Cathedral TP and was soon joined by four other Pundits - with Andy Smart (Ventus) at 83.7km earning 3rd place for Bannerdown. Peter Baker

(ASW-20) from Cambridge chose the alternative TP of his home site and found it just sufficiently soarable to get him back to Hus Bos at 45.1km/h. Andy Smith (Discus) also turned Duxford and returned at 63.9km/h to win the day convincingly for Nympsfield.

The Intermediates flew O/Rs of about 130km around alternative TPs which included the A1/A604 roundabout near Huntingdon. Not sent so far into the unsoarable east five Intermediates completed - with Steve Crabb (Std Cirrus) for Coventry at 58.9km/h, Phil Walker (DG-300) for Nympsfield at 60.9 and the winner Paul Davis (Discus) for Lasham at 62.5km/h.

The Novices flew the same task but with less time available being the last Class to launch. Three completed - Robert Simpson (Std Jantar) for Nympsfield at 49.9km/h, Graham Thomas (Std Cirrus) for Coventry at 56.1 and the winner Al Cleaver (Astir) for Bannerdown at 72.2km/h.

Relative team scores after Day 1 had Bannerdown 3rd, Coventry 2nd and Nympsfield 1st.

To have achieved very successful contests in all three Classes after such pessimistic beginnings created a very cheerful atmosphere on the Saturday evening when we were handsomely entertained with a barbecue and a disco.

Sunday's weather was no better - in fact visibility was if anything worse. After the success of his task setting on Saturday Claude set triangles for each Class for Day 2. Just for a change the grid-squat took place at the west end of the field, otherwise the wait was very much as Saturday's.

Eventually the fall-back tasks were declared (138km O/R to Aylesbury for Pundits/Intermediates, 117km O/R Bicester for Novices) and in view (or lack of view) of the poor visibility the same starting arrangements as Saturday were announced - timing from the start of launch.

Kevin Neave (Std Cirrus) came 3rd for Nympsfield in the Novices having landed out after 78.1km. Two Novices completed - Graham Thomas for Coventry at 53.2km/h and Al Cleaver at 57.8km/h to win a 2nd day for Bannerdown.

There were five Intermediate finishers, with Clive Wilby (ASW-20L) 3rd for Derby & Lancs at 52.3km/h, Phil Walker for Nympsfield at 54.9 and the winner Richie Toon (Discus) for Wrekin at 78.7km/h.

Six Pundits completed their task with Andy Smart again taking 3rd place for Bannerdown at 65.4km/h. Andy Smith for Nympsfield at 70.5km/h gave away only 21pts to the day's winner Nick Hackett (LS-7) for Coventry at 71.7km/h.

After two days Nympsfield were still in overall lead ahead of Coventry, but now Wrekin had caught up Bannerdown to be equal 3rd.

Two successful contest days in all three Classes despite the weather was a great credit to Claude's task setting/resetting and to the efforts of the pilots - including their co-operation with the necessary "Time from Launch" policy. This put everyone into the right frame of mind for what was to follow - *the* non-gliding contest of 1990.

For the Sunday evening we thank in particular the Foxtons, first Jan for her dexterity in the kitchen - we wish her every success as permanent caterer at Hus Bos, and then Alan Foxton, ringmaster for the "It's a Knockout" contest.

After six games Essex were the winners - Hurray! What a tremendous evening - if you could measure collective enjoyment this would have been a new entry into the British gliding records. Andy Davis was one of the many to declare this to have been the most enjoyable social event of their gliding careers.

Monday gave us some improvement in the weather, the clearer viz permitted normal observed starts but several awkward areas prevented any spectacular speeds. All six Pundits completed their 198km triangle *via* Bicester and Norman Cross - Peter Baker was 3rd at 73.2km/h, making Cambridge University 3rd overall Pundits and Andy Davis only needed a moderate performance to retain the huge lead established for Nympsfield by Andy Smith on the previous days and his 73.9km/h was plenty. The day winner was Nick Hackett at 76.2km/h, putting Coventry into 2nd place overall in the Pundit Class.

Intermediates flew the same 198km triangle and four completed. John Wesley (LS-4) took 3rd place at 64.3km/h and made Coventry Intermediates 3rd overall; Phil Walker at 71.3km/h was 2nd for the 3rd successive day bringing Nympsfield Intermediates into overall lead. The day winner was Clive Wilby whose 78.7km/h was the fastest of the day, beating all the Pundits and putting Derby & Lancs into 2nd place overall in the Intermediate Class.

Two Novices completed their 191km *via* Bicester and Huntingdon A1/A604 roundabout. Kevin Neave flew 111.3km into 3rd place and made Nympsfield Novices 3rd overall; Patrick Naegeli (Discus) at 46.6km/h came 2nd for the day for Lasham; the winner for the 3rd successive day was Al Cleaver at 63.5km/h, keeping Bannerdown firmly ahead in the Novice Class and prompting the question - "When is a Phantom pilot not a Novice?"! The answer appears to be "next season" as he took his Astir round a 500km this year - Well done Al, no doubt a great relief to the rest of the Southern League!

This effort was enough to give Bannerdown 12 League points for 3rd place in the final scores behind Coventry whose 17 league points made them 2nd overall. *The winning team with 19pts was Nympsfield* - congratulations to their five pilots, to their crews and supporters for a tremendous team effort.

It was fitting that on two of the days the TPs included the birthplace of the Inter-Club League - the hotel beside the A1/A604 roundabout near Huntingdon. On that cold winter evening in early 1980 representatives of the Eastern League met with Brian Spreckley and Richard Blackmore (of the Yorkshire League). The result - 1980 was the first League season and both Eastern and Yorkshire Leagues had successful and enjoyable contests.



Steve Williams photographed the "It's a Knockout" contest which caused such amusement. From l to r: Alan Foxton, Alison North, Al Cleaver, Katya Koumandou, Toby Wright, Carl Buzzard (collapsed!), Andy Smith and Peter Baker.

This was the birth - but the conception had taken place around the Sutton Bank bar during 1979. How sad then that on this 10th anniversary with the final hosted by Hus Bos of the Eastern League and enjoyed by every League to have joined since that first year, that the only League absent was Yorkshire. You missed a huge amount of fun folks; we hope Yorkshire will be back in full action before long.

A few extra thanks you's - to Claude for giving us three contest days despite the weather; to Frank Davis for his efforts on photo assessing and as level headed air traffic controller when finishers were arriving underneath those on final approach; to Mick and Alison North who made most of the preparations for the weekend, were behind the bar to welcome us on the Friday night, cooked breakfast, manned the start and finish lines, and were still busy late on the Monday afternoon repairing a trailer for one of the visitors, and to everyone else at Hus Bos, most of whom played some part in giving us a super weekend.

By the time this is published we are likely to have agreed on a rule change. Anyone requiring a copy, or any other information or assistance, is welcome to contact Mike Jefferyes, Tanglewood, Fingrith Hall Rd, Blackmore, Nr Ingatestone, Essex CM4 0RU.



Steve Jones (Discus) finishing on Day 2. Photo: Andy Bushby.

KARINA HODGSON & KERRY LOMAS

TWO VIEWS OF THE JUNIOR NATIONALS

London GC from August 11-19

Booker pilots, Karina Hodgson, aged 19 (described as a hardened competition pilot) and 17 year-old Kerry Lomas, give their impressions of this competition which was generously subsidised by the Sports Council. Many clubs also donated prizes while others gave competitors reduced hire fees or the free use of gliders. The two girls were grateful for such generosity, Karina being loaned Mary Meagher's Pegasus and Kerry an SZD Junior by Chris Rollings, the Anglo-Polish Sailplane's representative.

Thirty-four pilots of 25 years and under competed, ranging widely in ability and experience from those who had just completed their Silver badges to National rated pilots.

Kerry: *As the pilot who had only just completed my Silver badge, the prospect of my first competition against Nationals pilots was fairly daunting, but I was determined to gain as much experience as possible during the week, and most importantly to enjoy it.*

Karina: Having surprised myself in the *Lasham Regionals, flying the BGA Discus, I was still on a high, although I was expecting this to be a tougher Comp. But as I was flying a Pegasus, a glider I was more familiar with, I was hopeful of a good result.

Our first task was on Saturday, August 11, a 152.1km triangle, Oundle church spire, Pitsford reservoir. The forecast was fairly promising, but we were warned of a front coming in from the NW.

Kerry: *Sitting at the back of the grid in my Junior I was very apprehensive. Of course my first problem was going to be finding the start point which was approximately five miles from the site. To my relief I spotted it whilst on tow. Unfortunately just after releasing things had already started to go wrong – my charger had been discharging my battery instead of charging it, and so just off tow I lost the use of my radio and electric vario.*

Karina: As usual on the first and last day of any Comp, I had an attack of the heebie jeebies, and this particular day they were going wild! However, I launched and things soon calmed down. I was familiar with both TPs and the area that we would be flying in, so I was really optimistic!

Kerry: *I was unfamiliar with the whole area and therefore was delighted when Oundle church appeared over the nose. I took my TP photo and set course for the second TP. Although I could see the reservoir, I knew the prospects of getting there were not good as the front was approaching. My fears were confirmed. as after climbing as high as I could I glid into a field at Burton Latimer. Distance for the day 105km; I was amazed not to be last!*



Karina (left) and Kerry

Karina: Although I came 11th for the day having completed the task at a snail's pace! I was disappointed because in retrospect I knew I had made quite a few mistakes, for instance turning in broken thermals when it would have been better to pull up and push on. Next day, at briefing, we were informed the conditions were due to wave interfering with thermal activity. Pity they didn't tell us before, not that it would have made any difference to a snail!

On Sunday the task was a 248.8km polygon, Devizes castle, Chievely M4/A34 junction, Calvert junction.

Kerry: *Now I had the first day out of the way I was a lot more confident. Unfortunately, the first day*

*Karina came 4th in Class B.

AIRBORNE COMPOSITES

For Cs of A and repairs in Glass, Wood and Metal structures.

Motor glider maintenance from 50 hour check to three year C of A.

Many years of experience including seven years as part of a team experimenting with HiTec Laminants on the Leopard.

Please call or write to
Tim Dews
49 Bratton Road, Westbury, Wilts. BA13 3ES.
Tel: 0373 827963



had only revealed some of my instrument problems! Little did I know that my compass was reading incorrectly due to being mounted next to a massive magnet in the electric vario, which also wasn't working on the first day - maybe it was being affected by the compass!! (A tip for anyone who has experienced similar problems, Halfords do a good line in stick-on compasses for only £2.84!).

Anyway, after setting course 55° off track, I soon became "temporarily uncertain of my position". I established my position near Croughton, and from then on made fairly good progress to Devizes, finally landing at Keevil airfield. I was met by natives of the Bath and Wolds GC who were very hospitable, pushing back my glider, taking me to the 'phone, making me cups of tea and chatting to me whilst I waited for my retrieve. Yes, it's a tough life being a Junior Nat's pilot!

Karina: The morning's weather was shaping up nicely and I was really looking forward to the task. Both Kerry and I were at the front of the grid and as first launch was 15min after briefing it had been a bit of a rush. Once I had launched I decided to wait until the cloudbase had risen. I kept hearing other competitors making starts. Some of them were far more experienced than I which almost tempted me to go - but I resisted!

When I did finally go I had a great day. The thermals were fairly strong and consistent. I found a gaggle of about five near to Didcot and we stuck with each other almost to Devizes. I had made a conscious decision to be fairly low at this into wind TP - but maybe 1000ft was a bit too low! I broke out in a cold sweat and headed for a little ridge with the sun on it - and much to my relief it worked and I quickly climbed away!

The entire flight was really good fun and I was quite pleased to have finished 7th, considering my mistake at Devizes.

On Monday we were set a 324.2km polygon, Caxton Gibbet, Mendlesham mast, Pitsford reservoir. Having been set such a large task, we were expecting the weather to be better than the previous days. We couldn't have been more wrong!

Kerry: *Having been low all the way up the first leg, I took a gamble and diverted east to Cambridge to a stubble fire which looked promising. In hindsight this was a big mistake, mainly because it didn't work, but also because it meant an into wind flight back to the TP. At this point I would have been very grateful for a quarter million map of this area to help me identify the TP, because as my photographs later revealed I had in fact taken a picture of a junction a quarter of a mile east of Caxton Gibbet. Unaware of this mistake, I continued down the second leg but was caught out by a front and landed out at Bury St Edmunds. In the end I was scored back to the first TP so I learnt a lot of lessons that day.*

Karina: When we launched the weather was looking just fine and a little bird had told me to make an early start so that I wouldn't get caught out by the day finishing early. I therefore set off as soon as I had sufficient height, having a good run to the first TP, but then wasted precious time looking for it not realising it was directly beneath me. Trying to make up for the time that I had now lost I put the nose down and made a beeline for Mendlesham. It wasn't long before I slammed on the brakes as a big blue hole loomed ahead. As usual my worry was uncalled for and a good climb half-way across set me up nicely for Mendlesham.

Half-way along the third leg I had to change gear completely as the sky had become overcast. Myself and another glider found ourselves tiptoeing along scanning the countryside for any signs of a stubble fire. I did eventually reach Pitsford to take my picture and landed shortly afterwards, but I was amazed to have got that far in what appeared to be such awful conditions.

After three days enforced rest due to poor flying conditions we next flew on Friday, August 17. This was destined to be the last competition day because of the weather, and another 300km task was set, a 306.7km triangle, Ely Cathedral, Stratford-upon-Avon. In the morning the wind was strong and although forecast to drop, it increased to 27kt.

Kerry: *With the exception of being at 400ft at Henlow, the leg went fairly well and I wasn't even lost! I had planned to be high at the TP ready for the into wind leg, however, 1500ft was the best I could do. From then on it was a struggle as a Junior doesn't go very well into a 27kt headwind! I had to reject any lift below 4kt as they only took me backwards, so for me to climb quickly my only useful source of lift was stubble fires. After spending 2.5hrs on the leg I had only gone 40km, so I decided to quit while I was ahead and landed near Grafham Water. Although the flight hadn't seemed very good at the time I was chuffed to have flown 180km and to come 24th for the day, my best result so far!*

Karina: I had managed to claw my way up to 6th place overall and was eager not to make any mistakes - but I did! Everything had been going just great until (wait for it . . !) I reached the first TP rather lower than planned (does this sound at all familiar?) and found myself waffling for ages, going backwards. But worst of all other gliders were catching me up, what horrors! So I took to my heels and fled, but things went from bad to worse, to suicidal! I wasn't getting anywhere very fast, in fact I wasn't getting anywhere at all! But I persevered. After all there were people far worse off then me. I wouldn't have liked to have been flying a Skylark 2.

In the end I came down near Daventry, not very good and I knew I really should have got back.

But with all the ups and downs taken into account, in our opinion the most important result was that. . .

IT WAS BRILLIANT FUN!

FINAL RESULTS
Junior Class Nationals

Pos	Pilot	Glider	Day 1.11.8 152.1km ▲ Oundle, Pitsford Speed (Dist)	Pos	Pts	Day 2.12.8 248.8km polygon Devizes, Chieveley, Calvert junction Speed (Dist)	Pos	Pts	Day 3.13.8 324.2km polygon Caxton Gibbet, Mendlesham, Pitsford Speed (Dist)	Pos	Pts	Day 4.17.8 306.7km ▲ Ely Cathedral, Stratford on Avon Speed (Dist)	Pos	Pts	Total Points
1	†Young, M.	Discus	98.4	1	835	96.0	2	990	77.8	1	1000	100.5	2	978	3803
2	Jones, S. G.	Discus	94.7	2	800	96.7	1	1000	73.0	2	986	84.2	4	930	3716
3	†Jones, P. R.	Ventus	90.7	3	762	90.4	4	914	68.3	3	972	108.1	1	1000	3648
4	Toon, R. J.	Discus	88.9	4	746	84.1	11	827	(360.9)	8	819	94.4	3	960	3352
5	Miller-Smith, M. J.	Discus	70.4	=13	573	89.8	5	906	(326.8)	=10	737	73.0	6	897	3113
6	Garrity, A. J.	Discus	85.8	5	717	91.4	3	927	(347.7)	9	787	(308.0)	14	616	3047
7	MacDonald, G. D. E.	Jantar	66.8	17	539	69.6	22	628	60.1	5	948	70.4	7	889	3004
8	Adlard, S. A.	Open Cirrus	*81.3	6	655	*89.9	7	887	63.8	4	959	(254.3)	22	501	3002
9	Hodgson, Karina	Pegasus	72.5	11	593	*88.8	10	842	(371.5)	6	845	(284.2)	19	565	2845
10	†Nicholson, B.	Discus	73.5	9	602	88.8	6	892	(186.3)	23	400	84.0	5	929	2823
11	Westgate, G. C.	Sports Vega	66.8	16	540	80.7	15	780	(367.8)	7	836	(315.5)	11	632	2788
12	Fritche, P. C.	Open Cirrus	70.4	=13	573	79.4	16	763	(305.0)	15	635	(344.4)	9	694	2665
13	Ashburn, C. J.	Open Cirrus	70.9	12	578	87.1	8	869	(217.1)	20	474	(308.9)	13	618	2539
14	Ebbs, C. P.	Discus B	79.0	7	653	80.7	14	781	(326.7)	=10	737	(151.1)	=26	281	2452
15	Marsh, B. C.	ASW-20FL	66.6	18	537	82.5	12	805	(218.8)	19	478	(313.4)	12	628	2448
16	Hazell, F. L.	ASW-15	*77.6	10	598	68.0	24	607	(187.4)	25	382	(343.1)	10	691	2278
17	Croote, P. F. J.	Kestrel 19	(70.5)	32	100	82.0	13	799	(324.8)	12	732	(306.1)	15	612	2243
18	Shelton, P. M.	ASW-15B	73.6	8	603	73.7	20	685	(168.1)	27	356	(295.2)	17	589	2233
19	Housden, S. R.	Astir CS	68.3	15	553	74.1	19	690	(168.8)	26	358	(287.2)	18	572	2173
20	†Browne, R. A.	SHK	63.4	20	508	65.3	25	570	(223.3)	18	489	(301.7)	16	603	2170
21	White, I. C.	Kestrel	65.7	19	529	*58.3	28	455	(309.2)	14	695	(220.0)	23	428	2107
22	Downham, E. H. C.	LS-7	45.9	26	375	85.8	9	850	(318.1)	13	716	(0)	31	0	1941
23	†Anderson, N. M., Tait, R.	Astir CS	63.3	21	507	*86.1	18	704	(253.6)	16	561	(100.6)	30	72	1844
24	Gardiner, J.	Pirat	*63.6	22	489	70.3	21	639	(0)	=33	0	(352.4)	8	711	1839
25	Lay, N. P.	ASW-19	(94.1)	31	147	76.2	17	718	(158.8)	28	334	(254.9)	21	503	1702
26	Truman, A. G.	Kestrel	(0)	=33	0	69.3	23	624	(185.2)	24	397	(266.3)	20	527	1548
27	Taunton, C. J.	K-23	(174.8)	27	308	59.6	27	492	(186.9)	22	401	(151.1)	=26	281	1482
28	White, C. J.	K-6CR	54.5	25	424	51.7	29	384	(200.5)	21	434	(116.8)	28	207	1449
29	Stephens, P. A.	Sports Vega	*43.3	28	291	*63.9	26	530	(168.4)	29	207	(17.9)	=31	0	1028
30	†Eyles, S.	Skylark 2	60.0	24	433	(53.7)	31	36	(241.4)	17	532	(10.2)	=31	0	1001
31	Lomas, Kerry	Junior	(105.3)	30	170	(172.6)	30	164	(46.0)	31	62	(180.7)	24	344	740
32	Hornby, Sonya	SF-27	(2.0)	=33	0	(36.4)	32	18	(94.8)	30	180	(162.4)	25	305	503
33	Holland, P. L.	K-6CR	(132.6)	29	224	*54.8	33	0	(35.6)	32	37	(91.1)	29	152	413
34	Slater, Julie	Zugvogel 3B	59.7	23	473	*(20.2)	34	−473	DNF	=33	0	DNF	=31	0	0
	Hors Concours														
	†Thomas, G. E.	Std Cirrus			*600			787			495			539	2371
	†Mills, A. M.	Astir CS			565			788			8			611	1972

†=25 years or over at 1.1.91; *=penalty; DNF=did not fly. **BGA Competition Scoring Program by Specialist Systems Ltd.**

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)

S & G CLASSIC

CHOSEN BY FRANK IRVING

THE CHEAP SYNDICATE PRESSES ON

The "prequel", as current parlance would have it, to this tale of poor but honest gliding folk told how the Cheap Syndicate acquired a Kite I from Bill Crease and got it into the air for a total outlay of £145. (See the *Spring 1955 issue of Gliding,* p5. In this follow-up, (*June 1956, p136*) they swap it for a Petrel.

There are two reasons for choosing this article, apart from its general fun value. First, it features the Petrel. When I first saw the drawing and photograph in Terence Horsley's book* I thought it was the most beautiful glider ever, an impression confirmed by the sight of the O'Grady machine at the Camphill Nationals. Today, it looks distinctly blunt, with a wing-root of amazing thickness, but in its day it was a miracle of grace and elegance.

The pilot seemed to have only marginal influence on the flight path

I was eventually given a flight in this particular one, perhaps as a reward for the minor services mentioned in the article. This was the one with the all-moving horizontal tail, devised before people worried much about stick-free stability, so it had precisely zero stick force at all speeds. Fortunately everything happened pretty slowly, so the risk of PIOs (yet to be invented) was negligible. Also, the tail suffered from an inverted stall during a winch launch. As if that wasn't enough, the enormous ailerons produced hardly any lateral stick force, and very little rate of roll either. One way and another, the pilot seemed to have only marginal influence on the flight path, a feature which greatly increased my respect for those who soared Petrels close to hills. There only ever were three, two of which - including the one featured here - survive to this day.

The second reason is that it is a fine tale of the birth of gliding syndicates. A few of the gentry owned their own gliders (they had to be quite rich, since a whole Olympia cost £850 ex-works, instruments extra), but there were relatively few syndicates. There may not have been a "healthy crop of such groups" then, but there certainly is now. Moreover, with an ex-ATC T-21B or whatever, Cheap Syndicates are still possible for about the same real cost as in 1956.

Terence Horsley: **Soaring Flight, published by Eyre and Spottiswoode, 1944.*

If you read *Gliding* (pardon, *Sailplane and Gliding)* from cover to cover like we do, you will have realised by now that the Druid syndicate had become the Petrel syndicate. If you don't want to know how this came about, we advise you not to read this article.

We had a successful winter with "Druid" (Kite 1), mostly at Dunstable, and by Easter had clocked some eighty hours and done another C of A. Then we took her to the Mynd rally, where we did *not* come out bottom. The only cross-country was by Roy, who was the first of the group to complete his Silver C by going to Bromsgrove, which he thought was Bridgnorth. This retrieve was epic in that two vehicles were used: Jim's "Sidderney" couldn't pull the trailer up the Clee Hills, so Ted's taxi went along to assist, then carried on for the ride. The Burway hill up the Mynd proved insurmountable, even in tandem, as the taxi, pulling first, had a lower bottom gear and Sidderney was catching up; Frank Irving came to the rescue.

So there we were: we had a nice aeroplane, we had acquired a trailer, a barograph and a parachute, one Silver C and the promise of more to come. We seemed well set for the summer. But, no! In the Midland Club's little hangar languished Mr Hardwick's Petrel. The more the chaps saw of this the more they liked it. One specification was first satisfied by Jim climbing into the cockpit to see if his stiff leg fitted. After that, consultations with the Midland Club committee, Sling, Frank Irving, and all available pundits went apace. We left having made an offer, subject to our selling the Kite.

Two weeks later Dr Kiloh came from Newcastle and bought Druid for an immense amount of money, which same measly sum the MGC were prepared to accept for their Petrel.

The next step was to collect the goods. This was undertaken by Jim, Ted and Roy in Sidderney, with the Surrey Club's Daisy trailer, and turned out to be "one of those retrieves". The expedition set off with tins of food and sleeping bags at 8pm on Friday, and arrived half way up the Asterton hill at, as usual, 0?00hrs on Saturday. They crawled up to the top on foot and slept till Colonel Benson's voice on the phone woke them to the fact that their equipage blocked the hill. The day was spent making adaptations to fit Petrel on to Daisy's trailer and the homeward journey began at 4pm with some help from a friendly Land Rover until Sidderney warmed up. His final protesting squeak of brakes fell upon a sleeping Lasham.

On Sunday the idea was to rig the beast. But she wouldn't. Dozens of helpful bodies heaved and strained and shouted, but to no avail. Interval for lunch, after which we returned to find that three stalwarts had popped her together - no trouble at all! Then Frank Irving "snagged" her, with the vultures hanging around. When Frank's chisel revealed a smell no cheese has ever equalled in one wingtip, we began to wonder why we had let our nice little Druid go.

Jim hired a barn near Farnborough, and instigated the rebuilding of 8ft of wingtip. Cables hung from rafters, a primus heated a five-gallon drum of water for bending the plywood, and one tended to step on chickens. There was alarm and despondency when a bug was found lurking in a corner. Jim popped it in a matchbox, and through the help of Malcolm Laurie it was found to be one of the sort which eat woodworm. In case some of its staple diet should also be lurking about, the almost-completed wing was hastily removed.

Soon all the group had their first flights, probably Petrel's first aerotows. All came down grinning from ear to ear. Jim described her as an aerial goldfish bowl. Ann fulfilled an ambition at least six years old, and said she felt like the little man in the Mickimoa in Lawrence Wright's "Cloud Cuckoo" film. The most gratifying thing about Petrel seemed to be her slow flying speed. Thermal circling could be that much tighter - Skylarks, Olympias and even T-21s were left far below, shaking their firsts as we shot up in the most powerful core. The ASI sat nearly on the stop and was useless, so we all flew, most successfully, on the fore-and-aft-level indicator. And all this with better penetration than Druid's. It wasn't at all bad, and we left regrets behind.

The "crash" was reported and Petrel was carried in pieces on a haycart to the farm

The following weekend we flew over 10hrs in her, and Jim did his Silver C height. And then came the cross-countries: Ted began by falling less than a kilometre short of the fifty. Jim did a leisurely 44 miles to Godstone, where the crew spent nearly two hours trying to find him in the last half mile. Alan has been evolving a radio homing device ever since. Then Ted made quite sure of his badge by going 64 miles to a marsh near Eastbourne. The "crash" was reported to the local fire brigade, who tried to cross the surrounding streams, and the local constabulary was in attendance. Petrel was carried in pieces on a haycart to the farm.

She spent the Comps as a demonstration piece for the crowd, at one point doing a flat bungy launch for their amusement. Nearby an EoN Primary was worked on a stand for Hulton

Press by the group, for which we earned a handsome sum for the C of A and trailer fund. A familiar sight at dusk was the Procter Bradford chugging hangarwards with the "broomstick" in tow. Meanwhile we were working on the Comps at a great rate, and trips in the Petrel saved our sanity and amused various pundits who were allowed to fly her. Among them was John Simpson, who had originally bought her from Slingsby and had kept her all the war in the grounds of a Reading school. Paul Minton, who was seen getting glummer and gruffer all week "on the gate", descended from a 3000ft aerotow one evening with a grin that threatened to split his face.

Soon after the Comps Ted's ideas on gliding were straying from those of the rest of us, and John Bunting joined the group in his place. Meanwhile we were engaged on repairs to the starboard wing. A four-year-old repair had not been done properly and a piece had to be spliced into the rear spar near the root. We recovered the wing while we were at it, and Roy test flew Petrel one Sunday in the very dusk. Only just in time, as an expedition was planned for the following weekend. The RAE celebrate the Queen's birthday in October with a Monday off, and this weekend we decided to take Petrel to a hill. The wind caused the choice to fall for one near Blandford, and those who had to stay at Lasham were surprised to be awakened on Saturday night by Sidderney's usual squeak. A sodden and sniffling group reported that Petrel had had an argument with a molehill on landing, which had upset the skid and surrounding structure.

It was agreed to begin the monster C of A forthwith. We had made her just serviceable in the spring, and now intend to re-cover, paint her pretty colours (the colour card is worn out by much fingering and discussion), and generally make a beautiful job of her. Jim took the fuselage to Farnborough; the wings are being done at Lasham.

Our progress report, as of the beginning of November, shows a total of some 60hrs by the group, plus about five given to "odds and sods", Jim, Roy and Alan (also Ted) have their Silver Cs (Alan completed his in a Skylark), and we had a wonderful summer's flying. We have still only invested the price of a depressed motor car, and pay into the kitty 5/- a week running costs, **no** flying fees. We can't understand why there isn't a healthy crop of such groups by now. What has happened to private enterprise?

Postscript - The colour decided upon was a good neutral white! Frances Torode: "Now I shall have to wash her *every* week instead of every other." It is now February and the workshops are cold. However, vast quantities of ripper and dope have been used to good purpose, and our target for test flying is Easter. With the help of sums by Peter Bisgood we are fitting an anti-balance tab on the pendulum elevator to give some "feel", and there are plans to start building an open trailer before too much of the soaring season has passed. We *should* be well placed for summer 1956.

FAMILY TEAM

The Italian World Championships team now has a father-son duo - Leonardo (senior) and Riccardo Brigliadori.

LOOKING BACK



"Ground currents - a perpetual source of trouble". Artist's impression by Pierre Clement.

Francis Herbert Wenham (1824-1908)

We are nearing the end of this series of articles on the great pioneers of gliding, spanning the whole of the 19th century. In the next and final article we will see why these men were chosen for this series, what they had in common and why they succeeded where many others failed. Wenham is an excellent example because he built on what had already been achieved; he studied aerodynamics in an ordered and scientific manner; he arrived at original and important conclusions which profoundly influenced those who followed.



Our photograph of Francis Wenham is printed by courtesy of the Royal Aeronautical Society.

Wenham was, for most of his life, a marine engineer and did original work on tubular boilers and screw propellers. His interests were varied and included photography and optics, but the most productive period of his life was 1858-1872 when he turned his attention to aeronautics. During 1858 a trip in a steam vessel up the Nile gave him the opportunity to observe a variety of large soaring birds, and being an engineer, he tried to analyse their flight. Mouillard, as we have seen, was later to be inspired by the same spectacle and curiously both men, despite close and minute observation, were unwilling to accept the possibility of frequent thermals permitting the long slow circling flight characteristic of vultures and eagles.

High aspect ratio

On his return from Egypt he studied the meager literature (essentially the works of George Cayley; there was very little else) and he wrote a paper entitled "Aerial locomotion and the laws by which heavy bodies impelled through the air are sustained".

Seven years later he was invited to become a founder member of the Aeronautical Society of Great Britain and in June 1866 presented his paper at the first meeting of the Society in the Adelphi lecture room of the Royal Society of Arts. The paper, which was published by the Aeronautical Society in its *Transactions,* is of major importance for two reasons. First, it takes pride of place as the first paper published in a journal which still exists today (now the *Journal of the Royal Aeronautical Society*). But much more significant is the influence this paper had on those who followed.

For the first time he clearly explained that the basis of flight is the resistance of the air to bodies moving in it. He understood that the surface of a lifting body must bear a certain proportion to its weight, but it was not necessary to copy nature slavishly in designing lifting surfaces. He advocated the air-screw as a suitable propeller for aerial machines.

Like Cayley he proposed that wings should be cambered, but he introduced a vital new factor into aerodynamics with the advocacy of long thin wings (high aspect ratio), on the grounds that when a cambered wing is moved through the air, it derives most of its lifting force from the front part (the leading edge). This led him to propose multiplanes as a practical solution to the problem of building long thin wings.

BRIAN WEARE
GLIDER WORKS
DUNKESWELL AIRPORT
HONITON, DEVON
Tel: Luppitt 891338 (9-6 pm)
Honiton 41041 (after 6 pm)

MAJOR OR MINOR REPAIRS ON WOOD, GLASS-FIBRE, OR METAL. ALSO RESPRAYS GLIDERS AND LIGHT AIRCRAFT

C of A OVERHAULS

B.G.A., C.A.A., P.F.A. APPROVALS

CANOPIES

★

LARGE RANGE OF SHAPES AND SIZES FOR GLIDERS AND LIGHT AIRCRAFT

★

GOOD OPTICS

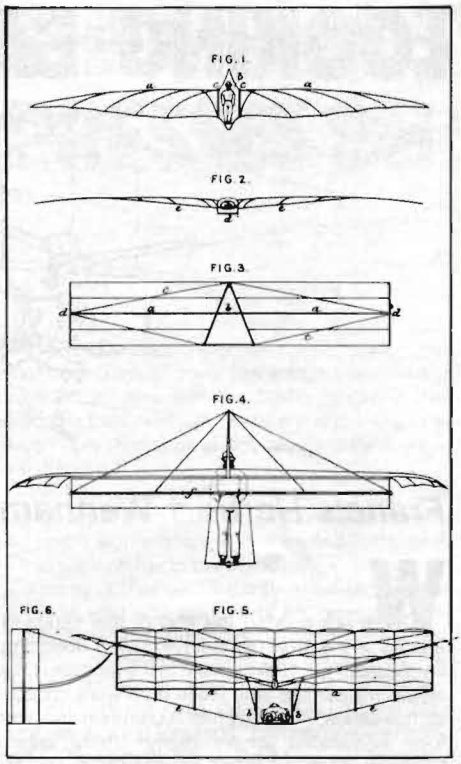
★

FROM MAKER

★

BOB REECE, Rematic
School House
Norton
Nr Worcester WR5 2PT

Tel Worcester
(0905) 821334



The paper also revealed that Wenham had already built and tested full-size five-wing gliders. The first is shown in Figs 1, 2 and 3: the second in Figs 4 and 5. Here is his own account of his clandestine testing of Wenham Mark 1:

"This was taken out after dark into a wet piece of meadow land, one November evening, during a strong breeze, wherein it became quite unmanageable. The wind acting upon the already tightly-stretched webs, their united pull caused the central boards to bend considerably, with a twisting, vibratory motion. During a lull, the head and shoulders were inserted in the triangle, with the chest resting on the baseboard. A sudden gust caught up the experimenter, who was carried some distance from the ground, and the affair falling over sideways, broke up the right-hand set of webs.

"In all new machines we gain experience by repeated failures, which frequently form the stepping-stones to ultimate success. The rude contrivance just described (which was but the work of a few hours) had taught, first, that the webs, or aeroplanes, must not be distended in a frame, as this must of necessity be strong and heavy, to withstand their combined tension; second, that the planes must be made so as either to furl or fold up, for the sake of portability."

With Wenham Mark II he also had problems:

"It may be remarked that although a principle is here defined, yet considerable difficulty is experienced in carrying the theory into practice. When the wind approaches to 15 or 20mph, the lifting power of these arrangements is all that is requisite, and, by additional planes, can be increased to any extent; but the capricious nature of the ground-currents is a perpetual source of trouble.

"Great weight does not appear to be of much consequence, *if carried in the body*: but the aeroplanes and their attachments seem as if they were required to be very light, otherwise, they are awkward to carry, and impede the movements in running and making a start. In a dead calm, it is almost impracticable to get sufficient horizontal speed, by *mere running* alone, to raise the weight of the body."

After the publication of this classic paper Wenham went on to make an exhaustive study of the aspect ratio of cambered wings and during this work further distinguished himself in 1871 by building the world's first wind tunnel. He retained an interest in aeronautics and from time to time made contributions to the discussions at the Aeronautical Society, but his main work in the field was done. From 1871 onwards his influence on progress was through others.

Successful gliding experiments

Both Otto Lilienthal and Percy Pilcher were members of the Aeronautical Society and were certainly influenced by Wenham's classic paper. In 1875 Octave Chanute was inspired by a meeting with Wenham in London to embark, late in life, on his own aeronautical career, and subsequently adopted the multiplane principle for his successful series of gliding experiments. The published accounts of successful glides by Lilienthal, Pilcher, and Chanute's young friends were the inspiration and the staring point for the design of the Wright Biplane gliders on which the brothers learned to fly in 1903.

Happily, Wenham lived long enough to see the first successful gliders and aeroplanes which at last vindicated the conviction, which he had held since 1858, that heavier-than-air flight was possible for man.

INTER-UNIVERSITY TASK WEEK

This year the Inter-University task week was hosted by Bristol University GC at Nympsfield from July 15-21 with nine universities and polytechnics represented with 13 aircraft. Excellent weather gave five contest days, a crop of badge flights and some very creditable speeds by mainly inexperienced pilots.

The Wooden Class was won by Bristol University's K-13 (flown by Gordon Bishop with Alain Escher and Glen Thomas sharing as P2s). Mike Miller-Smith (PIK 20) from South Wales Polytechnic won the Glass Class with 3897pts with Nick Lay (ASW-19), Imperial College, 2nd with 2510pts.

Tasks ranging from 98km to 309km were set, with Mike Miller-Smith and James á Court, flying a Discus *hors concours*, completing the latter.

We would like to thank everyone for making the week so successful, in particular Sid Smith for all his hard work and Tom Bradbury for some superb forecasting. We are hosting the task week again next year so if at a UK university or polytechnic come along – it's great fun and an opportunity to meet other impoverished student pilots in a friendly, low-keyed competition. Two-seater entries are encouraged with non-student P1s to give pre-Bronze students cross-country experience and tuition.

Chris White, *captain of Bristol University GC*

YOUR EYES



YOUR MOST IMPORTANT INSTRUMENT



Without your eyesight, flying would be impossible, so making sure you have the right eye protection is as important as any pre-flight check.

Flight Vision glasses are designed to give your eyes protection from the potentially harmful rays of the sun. The 2.2mm CR39 lenses are capable of cutting out 99% of near and far ultra-violet radiation, exceeding recommended U.K. and E.E.C. standards.

The design of the lens also stops form distortion, improves image contrast and resolution by cutting through glare and haze without affecting the colour contrast so important for field selection when landing out. The glasses also give your eyes the chance to adjust to the difference between the light levels inside and outside the cockpit when checking instruments or maps.

Because we fly in different weather conditions with different light levels, Flight Vision glasses are available with a choice of lens colours to prevent the excessive pupil dilation from using too dark a lens which can lead to damage of the retina.

Both frame and lenses are extremely lightweight making them very comfortable on long flights and all glasses are fitted with curved, sprung side-arms to prevent them sliding down your nose into the inspection hatch when doing the D.I!

Once you have used Flight Vision glasses for flying you will discover that you will wear them for driving, walking or ..... whatever, but be warned — don't lend them to a friend — you might need to buy another set!!

Please send me the following items:

Sets Clip-on lenses for spectacle wearers	Brown ☐	@	£12.00
Sets fixed-lens glasses Brown ☐ Bronze ☐	Orange ☐	@	£36.00
Sets Flight Vision Interchangeables with three sets of lenses Brown, Bronze and Orange	☐	@	£47.00
	Total (including VAT)		£
	Plus postage & packaging		£ 2.00
I enclose a cheque , payable to Flight Vision for:	TOTAL		£

Please debit my Access/Visa card No. _____

Name: Mr/Mrs/Ms/Miss _____

Address: _____

_____ Post code _____

Also available with prescription lenses at extra cost — please send your optician's prescription and requirements to enable us to provide a free quotation.

FLIGHT VISION

FLIGHT VISION 11 BRUNEL WAY FAREHAM HAMPSHIRE PO15 5TX

PHONE: (0489) 579999 Fax: (0489) 579937

OPEN CLASS NATIONALS

Lasham from July 28-August 5

The last person the editor should ask to do a Nationals report is a competing pilot. Pilots have neither the time nor, more importantly, the mental state, to take in the whole scene. They can't stroll around the grid shortly before zero hour taking photographs, while carefully noting all the names of the people in the pictures and getting little anecdotes from them that will enliven the relentless statistics; moreover, any fact finding incursion into the foetid den where scorers, task setters *et al* hang out is met not with the reception due to an honoured representative of the press, but with the stream of abuse customarily reserved for pilots who stick their heads in at the wrong time of day (*ie* any time); it being recognised that pilots are a time wasting, griping and manipulative crowd without whose presence a Comp would run a great deal more smoothly, in the same way that the only thing that really screws up a hospital is the patients. For all these reasons any pilot who has a journalistic job foisted on him is going to do only a moderate job of reporting and a lousy job at aviating, as the results show.

The ideal person for this task is, as last year, one who occupies the back seat of a *doppelsitzer* and has a grandstand view of it all. I am glad that there are more and more of these around. There, Madam Editor, are next year's reporters.

Day 1, Saturday, July 28: 366km, Cirencester, Husbands Bosworth - 18 finishers (44%), winning speed 92km/h, median speed 65km/h, rate of climb (ROC) 1.5kt[1].

A cold front had moved eastwards overnight but did not get far before halted by minor waves leaving a mass of upper cloud behind. Luckily breaks in this top cover allowed good cumulus to develop producing a false sense of confidence. Then the upper winds backed more southerly and brought the top cover back. The cloud edge lay NS just west of Lasham for several hours and all the thermals died out under it. However, when it began to move back eastwards cu shot up rapidly and offered a way back to Lasham for pilots who diverted round to the west. Max temp 24°. Dew point 13° falling to 9° in places. Mean Wind 200/14.

> ***"The airy science is still clearly an art and no doubt will remain so into the next century"***

Tom is the greatest gliding forecaster in the business, but I hope he will forgive me for saying that pilots should never put too much faith in even the best practitioners; the airy science is still clearly an art, and no doubt will remain so into the next century. On this first day, expectations of decreasing cloud and stronger lift turned to worms and most of us ordinary pilots fell to earth under soggy overcast somewhere along the last stretch from Hus Bos, muttering imprecations against weather prophets, especially if we had hung back at the start in hopes of a fast time. These tactical games are for top pilots only: Robin May was the last of the finishers to start (at 1346) and managed to struggle through into 2nd place, but Chris Rollings, who started 36min earlier than Robin, finished 86min earlier and 17km/h faster. Chris was not actually flying for speed but for survival: he tiptoed the last leg and conserved height wherever possible. The early start can be seen as either amazing intuition or a brilliant gamble: had the weather turned out as predicted the distribution of speeds would not have been favourable to that tactic.



Alister Kay who came 2nd.

Even some top pilots came severely unstuck: Brian Spreckley (World 15 Metre Champion in 1987), whom every one expected to be a major threat to the established order of things this year, fell to earth at Silverstone and lost 600pts: Pam Hawkins (4th in the 1989 UK Open Class and winner of three days) played the late start game to excess and came last for the day, though not far behind *S&G's* reporter. It's bad enough when there are another eight days yet to play for, but when the next two days prove unsoarable, as was to happen, a poor first day's result begins to fester in the mind.

1st Chris Rollings, 2nd Robin May, 3rd Alister Kay (all flying ASH-25s)

Sunday, July 29. A south-westerly airflow brought moist air across nearly all of England but the SE kept drier air which came across the Channel from France. With 220/25kt winds the only good looking cu were in and south of the London Control Zone and (for a time) in East Anglia. Surprisingly good thermals developed near Lasham but the Didcot area had very poor weather with bits of drizzly rain at times. East Anglia was highly thermic till late in the day. Max 23° in south, 26° in East Anglia. Dew point rose to 16° in S but was only 9° in E.

Monday, July 30. A south-westerly day with a cold front approaching ever more slowly keeping Lasham cloudy with spells of (mainly) light rain till late afternoon.

Day 2, Tuesday, July 31: 422km, Aston Down, Melton Mowbray - 22 finishers (54%), winning speed 92km/h, median speed 81km/h, ROC 2.5kt.

Yesterday's front came to a halt near Lasham and produced a band of cloud from Devon to East Anglia. Although the cloud was thin enough for weak thermals to develop the only good weather lay NW of a line from Cirencester to Northampton. The north had good thermals and cu based at 5000ft. In the south the grot lasted till evening with cloudbase only 3500ft. Max 26°. Dew point 15° in S, 10° in N, mean wind 240/03.

After two frustrating non-flying days, Brian Spreckley came charging out of his cage and won the day, at the same speed as Rollings on Day 1, but the day was more predictable and the spread of times was not so dramatic as to alter the leading positions materially. Eleven pilots, including all the serious contenders, got more than 900pts.

Nothing if not consistent, Robin May came 2nd again. (He managed to become Champion in 1988 without winning a day.) His logbook reads "Gradual improvement Aston Down to Melton Mowbray, cloudbase 5000-plus. Notable stubble fire near Market Harborough with 171 & 29" (John Jeffries, ASH-25; John Glossop, Nimbus 3DT.) Straw fires aren't what they used to be, however, and the days when a Nationals could be won or lost on fires are probably gone.

The younger Jones Boys, with the occasional intervention from the old Jones Boy, begin to feature increasingly in the prizes from here on. Your reporter got a special award of Smarties for creative low-level aerobatics in trying to find the finish line: how was I to know that the damn thing has been moved sometime since 1963 (in an attempt to prevent creative low-level line-finishes, ironically enough)?

1st Brian Spreckley (ASH-25), 2nd Robin May, 3rd Steve Jones (Nimbus 3DT)

Day 3, Wednesday, August 1: 333km, Cirencester, Pitsford reservoir - 41 finishers (100%), winning speed 108km/h, median speed 85km/h, ROC 3.3kt.

Wednesday, August 1. Clearly the Met man's heating tables need revision in these drought conditions. A max of 28° was forecast but the temperature went 4° higher. Thermals, predicted to be blue to 5000 turned out to have some cloud caps at 7000ft. However, in the NW the tempera-

[1]*All rates of climb are taken from the Peschges total flight averager in Robin May's ASH-25.*

tures were nearer the predicted max and thermals were less good. Max 32°, dew point 11°. Mean wind 200/09.

You can see the speeds and the number of finishers improving as the week builds up. There's one thing worse than gaggling in little gliders, and that is gaggling in super-large gliders; the only compensating factor is that most these days have four eyes in them. I was not too surprised by how much a fully-ballasted ASW-22 outclimbed the Nimbus 3DTs, but impressed by the way in which the latter vanished into the distance, so that I would arrive at the next thermal and find all the height difference had been eliminated. On final glides, or after a few strong thermals, one never saw them again.

This was Robin May's best day, since he was never in the main gaggle, but steadily overhauled it.

1st Robin May, 2nd Alister Kay, 3rd Steve Jones

Day 4, Thursday, August 2: 375km, Thame, Caxton Gibbet, Market Harborough - 41 finishers (100%), winning speed 128km/h, median speed 103km/h, ROC 4kt.

This was an even hotter day. A local sounding made by Derek Piggott in the Chevron showed that thermals would rapidly shoot up once the temp had passed 30°C. There was indeed a sudden change from dead air to strong thermals soon after the critical temp had been reached and heights of 7500ft were possible. Some thermals were marked by puffs of cu. Max temp 33°, dew point 11°. Mean wind 160/13.

"Hullo Mum: the good news is I've done 100km/h for the first time!" "Splendid! What's the bad news?" "I came bottom . . ."

A slight exaggeration: 28 out of 41 did over 100km/h. The median speed of the "true" Open Class, if the pilots of the smaller gliders don't mind my using that expression to describe the 24 metre-plus ships, was 118km/h. This probably makes it the fastest National contest day on record.

John Glossop found the clash of high cloudbase and low airspace, which for many of us created an agonising conflict, an actual advantage: it compelled him to fly his heavy Nimbus 3DT through great areas of strong lift at max rough air speed to stay legal. There is no doubt that this two-seater is at its best going in straight lines in strong conditions. John stressed the value of having a nagivator who could anticipate the "steps" in the airspace, especially when travelling at such high speeds in conditions of very poor visibility.

When you have murky visibility and very high cloudbases, TPs like railway stations in the middle of towns, churches etc can be difficult for the pilot to see and photograph in the correct sector, and difficult for the photo assessors to decipher too. I threw an extra circle and a few extra shots at each of those TPs just to make sure, and suspect I was not the only one. More gripes about that topic elsewhere in this report. A somewhat special day in that a single-seater (Ralph Jones, Nimbus 3) featured in the daily prizes for the first time in this contest.

1st John Glossop (Nimbus 3DT), 2nd Ralph Jones (Nimbus 3), 3rd Brian Spreckley

Day 5, Friday, August 3: 477km, Colerne, Stratford, Long Mynd, Cirencester - 40 finishers (98%), winning speed 122km/h, median speed 95km/h, ROC 3.6kt.

Record temperatures boosted thermals even higher. A temperature of 31.5 was needed to start them off and once again everything popped at once. Before launch a cloudbase of 8000ft was reported near Hungerford with 6kt thermal. Later some cu puffs were found at 9000ft. Only the haze took the edge off a remarkable day. Max 35°, dew point 9°, mean wind 190/07.

A really scenic task in good visibility. The Long Mynd looked beautiful under almost totally blue skies. I often wonder what club pilots pottering around their home circuit make of it when great schools of contest sailplanes suddenly swim into the neighbourhood. It's OK provided it's not one of those cases where you're doing your C badge flight and your thermal is the only one for miles around, as I witnessed years ago. It must be like finding a solitary water-hole in the desert by yourself, only to discover you have attracted the attention of two dozen thirsty camels. Except camels ➡

Food for thought

Two phenomena that are going to become increasingly controversial in contests at Nationals level are airspace infringements and tactical competitive flying.

The former is bound to get worse as more and more air is expropriated by commercial users (and worse still if global warming turns out to be real and there is a long-term trend towards higher cloudbases) and might only be soluble with the help of technology, such as very accurate barographs allied to some correspondingly precise proof of position over the ground at given times. The simplest idea could be to require the pilots to photograph, in addition to the TPs proper, one or more out of a number of specified landmarks in the areas under the airspace that is most likely to be breached on a given day. More work for the contest director/task setter and the photo assessors; and irritating problems for the pilots if the choice of "verification points" is too limited. As it is, the pilot's ability to select a distinctive route that others have not exploited, which reached its apogee 30 years ago with Free Distance as flown by Philip Wills, is becoming less and less important. Gliders could soon get to be like trams running along rails: may the fastest tram win.

Tactical flying gave the French victory in the 15 Metre Class at Wiener Neustadt in 1989 at the expense of Andy Davis. Andy, though doubtless still seething inwardly, was frank enough to say at this year's BGA Conference that he would have done the same if the opportunity had arisen. I hope that the opportunity will arise at Minden, Nevada, USA in 1991. Some people think it is immoral: I think it is no more immoral than cyclists slip-streaming (imagine the Tour de France without tactics; just a series of time trials every day: nobody would watch it) or high jumpers going over the bar backwards. All the same, tactical pair flying carried out properly (ie ruthlessly) does not make for brotherly love, and could raise the tension and lower the fun. As the dour old Yorkshire batsman said through gritted teeth to his partner who was cheerfully bashing the bowling out of the ground "Tha 'asn't coom 'ere to enjoy thesel', lad!"

By gum, 'e's right. What's fun got to do wi' t' Nationals?

Turning points for tourists

Many of the long-serving TPs in the Lasham task book, as inflicted on the contestants in the past three Championships, are distinctly scenic, not to say quaint and peculiarly suited to leisured gentlemen travellers with an antiquitarian leaning. My friend Platypus, who will have more to say on the subject, thinks that this tradition should not be allowed to die quietly. I agree with him. It should be put abruptly to death.

These TPs, old churches, rude carvings on hillsides and the rest, predated the obligation to take photographs with very precise sectors. They were fine when a couple who wanted to get away from the crowd motored out to a beauty spot with a picnic and binoculars; when a glider appeared overhead, whoever happened to be on his or her back at the time would say "Ooh, there's Brennig James" (I am talking about ages ago) and note it in a book. Doing a loop was one way of attracting their attention from whatever else they might be doing, I seem to remember. Yes, I know that would not do nowadays for a troupe of mega-wings. But in those days there was none of this modern nonsense about sectors, so it was fine to use TPs chosen by the British Tourist Authority (Motto: "We tell foreigners where to go".) No longer, I fear. With the New Brutalism of modern contest rules we need brutal new TPs: intersections of motorways, concrete viaducts, runways of defunct airfields (probably Heathrow, if S Hussein Esq has his way) which facilitate both the taking and subsequent assessing of photographs.

I don't see why each club needs to go to the expense and trouble of making up its own TP book; people fly so far these days that a common set of TPs would meet the needs of most of the cross-country tasks done in England and Wales.



The grid.

have better manners than Nationals pilots.

The first half of the day was sensational, with gains of height of over a mile to 7500ft tops at 5 or 6kt averages. A big glider, big climbs and long fast runs: that's the way to cover the ground . . .

Then after Stratford it gradually weakened and the chances of surpassing yesterday's speeds faded. All the same, 17 pilots exceeded 100km/h. "No breaks, just hard work", says Robin May's logbook. Yes, but a great day and a fitting task. Another all-ASH day for the first three places.
1st Chris Rollings, 2nd Alister Kay, 3rd Brian Spreckley

Day 6, Saturday, August 4: 363km, Sherborne, Stockbridge, Sturminster Newton - no finishers, winning distance 268km, ROC 0.9kt.
An invisible cold front was moving SE across the Midlands and yesterday's hot air was confined to the SE. Lasham remained in the hot and highly soarable air and it had been hoped that keeping the routes south of Salisbury Plain would prevent competitors meeting the cold stable air beyond the front. In fact a tongue of cold air from the NW pushed across from South Wales and penetrated nearly as far as Salisbury during the afternoon, undercutting the hot air. To the west the inversion plunged to 2000ft or even lower. Non-competing pilots found waves soarable to 9000ft over several widely scattered parts of England. Max 34°, dew point 14°. Mean wind 280/12.

One of the weirdest days I have flown in over 30 years of Comps. About the time of day when the larks are gargling but not even considering launching into song, I encountered Tom the Met swinging his instrument and looking thoughtful. He said it would be difficult to the west, but better to the east. Promptly - well, an hour or so later, to be fair - a task was set, clearly based on the opposite premise. Until I read Tom's notes above, I never got the chance to find out the cause of this task setting *volte-face*, not having got back from my retrieve till midnight. Tom's crack of dawn prognosis had been immaculate, to my uneducated ear.

"We dashed enthusiastically from splendid conditions at Lasham into misery and grovel after Salisbury"

The task, a sort of double O/R, took us west, then east, then west again. (And then back east to Lasham, of course, but that was academic.) We dashed enthusiastically from splendid conditions at Lasham into misery and grovel after Salisbury; at the TP 1000ft was acceptable and 2000ft was bliss (well, I rather enjoy a good grovel, so long as everybody else is suffering and I can't hear people babbling away about their 8ft climbs through 6000ft). Then eastwards to the second TP at Stockbridge, where we all ran into one magnificent area of lift to over 5000ft, only to have to fly westwards again into the same horrors as before, but worsened by suddenly appalling visibility and by doubts, in the solo gliders any-



Above and below: Final glides.

Below: Alister Kay (ASH-25) flying with his father, Andrew.







Photographs by Terry Joint



John Bally (Nimbus 3) who came 4th.

way, as to where precisely one was. I am glad in one sense that I lost sight of the main gaggle in the murk, for the temptation to play Four-Points-a-Kilometre at low level around the last turn might have been irresistible. Not an ideal game for two-seaters; for the first time a single-seater won the day, and another Jones took 2nd place in a Ventus. In the event the day did nothing much to alter the overall placings, the leading points being closely bunched together.

I would like to have been a fly on the wall in the contest director's bunker that evening. I hope he awarded extra packets of Smarties to all concerned.

1st John Bally (Nimbus 3), 2nd Phil Jones (Ventus), 3rd Brian Spreckley

Day 7, Sunday, August 5: 354km, Chieveley, Kettering, Chieveley - 40 finishers (98%), winning speed 122km/h, median speed 95km/h, ROC 3.5.

A much cooler day followed the passage of the invisible cold front. Traditional cu popped up very early and there was soon an almost total cover of spread out, associated with another barely detectable cold front which moved SE through Lasham during the early afternoon. Although there were good thermals in the cold air, some were distorted by wind shear and possibly by waves much higher up. Cumulus burnt off in the north as the cloudbase rose during the afternoon. A persistent sheet of thick cirrus with an EW edge covered the southern half of England most of the day. Max 23°, dew point 11° falling to 7°, (and even lower in the north). Mean wind 310/20.

The last day brought something really precious - visibility of utter and un-British brilliance, such that from Lasham one could see far across the Isle of Wight where the Cowes Week sailors had begun to play.

So far could the eyes see that Mike Jordy got lost. That is not so silly as it sounds - it often happened in 1976, when the gin-clarity of some days, coupled with a high cloudbase, easily persuaded us that a town that was really twelve miles away was only six miles off. We simply aren't used to Australian vistas.

I thought there was wave about but I always say that when I can't centre properly. (There's wave about most days I fly.) By this stage I was not feeling analytical but just enjoyed the view and the exhilaration of a lively sky with scores of gliders dancing in it. A beautiful last day, a splendid end to a Comp that was a worthy successor to 1989. Can 1991 be anything like as good?

Ralph Jones took all week to show us he still had teeth, but nothing happened to disturb Robin May's lead. Fourth on the day, Robin took the Champion's cup for the third year in a row. Since he is my partner, I am showing pure bias when I suggest that there is a precedent for giving a trophy in perpetuo to the three-in-a-row winner, namely the Schneider Trophy, but doubtless the BGA will plead poverty. Besides the spouses of prizewinners are never asked whether they want these baubles cluttering up the sideboard, demanding to be dusted and polished. Forget the idea.

1st Ralph Jones, 2nd John Bally, 3rd Chris Rollings. ➡



Jerry Odell (Vega 17L) in 16th place.



FINAL RESULTS

Open Class Nationals

			Day 1.28.7 366km ▲ Cirencester, Husbands Bosworth			Day 2.31.7 422km ▲ Aston Down, Melton Mowbray			Day 3.1.8 333km ▲ Cirencester, Pitsford reservoir			Day 4.2.8 375km polygon Thame, Caxton Gibbet, Market Harborough			Day 5.3.8 477km polygon Colerne, Stratford, Long Mynd, Cirencester			Day 6.4.8 363km polygon Sherborne, Stockbridge, Sturminster, Newton			Day 7.5.8 354km polygon Chieveley, Kettering, Chieveley			
Pos	Pilot	Glider	Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts	Speed	Pos	Pts	Speed	Pos	Pts	Speed (Dist)	Pos	Pts	Dist	Pos	Pts	Speed	Pos	Pts	Total Points
1	May, R. C.	ASH-25	74.8	2	877	91.5	2	995	107.6	1	1000	120.5	5	909	111.6	7	882	241.1	=8	866	101.3	4	970	6499
2	Kay, A. E.	ASH-25	70.7	3	848	83.4	7	925	106.6	2	986	122.0	4	925	117.1	2	946	241.1	=8	866	98.0	5	922	6418
3	Jones, S. G.	Nimbus 3DT	61.0	11	778	88.3	3	967	105.0	3	963	118.8	6	888	112.0	5	886	241.7	=6	869	91.5	12	828	6179
4	Bally, J. D.	Nimbus 3	69.4	6	838	79.2	12	887	95.4	9	830	110.6	11	793	112.2	4	889	267.9	1	943	103.2	2	997	6177
5	Webb, M. J.	Nimbus 3DT	69.8	4	841	86.9	6	955	101.9	4	921	116.8	7	865	112.9	15	796	231.7	=12	826	97.2	7	910	6114
6	Jones, R.	Nimbus 3	66.1	13	765	83.7	11	906	82.1	27	644	127.0	2	984	116.1	6	884	243.5	5	877	103.4	1	1000	6060
7	Rollings, C. C. Owen, B.	ASH-25	92.0	1	1000	87.0	5	956	101.5	39	416	117.5	8	824	121.7	1	1000	245.7	4	883	101.8	3	977	6056
8	Jeffries, J. R.	ASH-25	69.6	5	840	82.0	10	912	99.5	6	887	109.7	12	782	100.9	18	707	231.7	=12	826	91.9	10	834	5788
9	Spreckley, B. T.	ASH-25	(235.5)	=29	397	92.1	1	1000	100.9	5	907	123.3	3	941	114.8	3	919	255.3	3	909	84.5	=29	676	5749
10	Glossop, J. D. J.	Nimbus 3DT	68.3	7	831	82.5	9	916	94.5	11	817	128.3	1	1000	104.5	14	799	116.1	31	434	96.8	8	904	5701
11	Jones, P. R.	Ventus	(301.2)	22	580	75.0	15	851	94.0	12	811	113.0	9	821	110.6	8	870	256.1	2	911	90.7	15	816	5660
12	Innes, D. S.	Nimbus 3T	55.3	18	738	87.1	4	957	88.6	13	735	113.0	14	771	108.4	11	844	231.7	=12	826	70.1	40	467	5338
13	Spencer, J. D.	DG-600	58.9	14	763	76.8	=17	817	85.8	23	676	102.8	=21	701	93.9	24	675	231.7	=12	826	91.0	13	820	5278
14	Docherty, T. P.	Nimbus 3	66.2	10	791	66.9	=20	780	94.7	10	820	96.7	28	630	95.3	21	690	201.8	=27	695	91.7	11	831	5237
15	Bird, M.	ASW-22	(204.7)	37	311	81.5	14	857	96.8	7	849	104.7	18	724	104.8	13	802	231.3	=16	824	89.1	17	793	5160
16	Odell, J. H.	Vega 17L	55.9	17	742	71.7	16	822	78.8	32	598	92.5	32	581	92.4	26	657	225.4	22	798	87.1	19	763	4961
17	Cook, I. R.	Ventus	(235.5)	=29	397	(396.7)	27	563	84.5	22	677	111.3	10	801	106.7	12	824	236.1	11	845	90.8	14	817	4924
18	Hawkins, Pam	Nimbus 3	(187.6)	41	223	82.7	8	918	95.9	8	836	109.3	13	777	108.9	9	850	129.4	30	470	92.3	9	839	4913
19	Richards, E. W.	Janus C	57.8	16	756	(405.7)	=25	577	86.9	=15	712	100.3	26	673	94.2	23	678	230.7	18	821	81.7	26	686	4903
20	Hill, D.	ASH-25	(332.5)	24	567	78.8	19	814	85.1	20	686	107.3	20	704	108.6	10	847	97.2	38	363	97.7	6	917	4898
21	Davies, F. J.	Kestrel	63.3	9	795	(346.0)	37	484	85.4	19	691	101.2	25	682	92.6	25	659	229.5	19	816	82.4	23	696	4823
22	Jefferyes, M.	DG-600	(253.3)	27	447	(412.1)	23	587	83.0	24	657	105.6	17	734	103.4	16	786	218.9	23	770	89.0	18	791	4772
23	Jordy, M. J.	ASW-20L	(291.2)	25	502	76.9	13	867	86.3	25	654	102.0	=23	692	86.1	33	563	228.7	20	813	78.8	33	644	4735
24	Giddins, J. B.	DG-202-17C	(300.7)	23	579	64.6	22	760	81.1	29	630	87.8	36	526	92.3	27	655	241.1	=8	866	85.1	27	684	4700
25	Davis, C. M.	Nimbus 2	60.5	12	774	(357.3)	=34	502	85.6	18	693	102.7	=21	701	88.5	31	611	201.8	=27	695	83.2	32	657	4633
28	Steiner, P.	Ventus CT	58.6	15	761	(390.2)	29	553	87.0	=15	712	104.3	19	719	98.7	17	730	102.0	=36	384	82.1	25	691	4550
27	Smith, R. J..	Ventus B	(329.5)	19	659	66.9	=20	780	86.1	17	700	86.4	38	510	99.5	28	640	95.2	39	354	89.5	16	799	4442
28	Fox, R.	Ventus B	(231.5)	35	386	(358.1)	33	503	71.0	38	490	106.8	16	748	99.6	19	706	241.7	=6	869	81.0	=29	676	4378
29	Gardiner, T. R.	DG-202	(322.6)	20	640	(360.9)	32	507	79.1	31	602	93.9	35	548	96.0	22	688	228.1	21	810	68.7	38	497	4292
30	Stewart, D. R.	Ventus B	(232.3)	34	388	(405.8)	=25	577	88.1	14	728	108.6	15	769	95.4	20	692	182.7	29	612	67.2	39	475	4241
31	Pozerskis, P.	ASW-22	63.5	8	796	(371.5)	31	524	74.3	33	536	91.7	37	522	(446.0)	40	269	231.3	=16	824	84.5	20	726	4197
32	Mitchell, K.	Ventus B	(318.2)	21	628	(392.7)	28	557	84.6	21	679	102.0	=23	692	98.4	35	527	102.0	=36	384	82.1	24	692	4159
33	Bridges, R. C.	ASW-17B	(235.5)	=29	397	(411.8)	30	536	74.3	36	516	105.4	31	582	87.;2	32	596	215.7	=24	756	81.3	28	680	4063
34	Lee, M. E.	Ventus CT	(252.7)	28	445	(341.4)	38	477	83.9	26	649	96.2	33	574	78.4	36	492	215.7	=24	756	69.8	36	512	3905
35	Camp, G. W. G.	Jantar	(268.2)	26	488	(353.8)	36	496	82.0	28	643	100.3	27	672	82.3	34	538	112.5	32	425	78.3	34	636	3898
36	Harkins, A. E..	Nimbus 2	(235.5)	=29	397	(407.6)	24	580	66.7	41	230	93.1	30	588	74.0	38	441	215.7	=24	756	79.9	31	659	3651
37	Welsh, A.	DG-400	(194.8)	40	234	(357.6)	=34	502	80.1	30	617	94.8	29	608	90.5	29	634	82.2	40	297	83.4	21	710	3602
38	Russell, F. K.	Glasflügel 604	(182.5)	39	265	(319.5)	40	443	71.3	37	493	91.4	34	568	91.4	30	625	105.5	33	400	69.9	35	514	3308
39	Gardiner, D.	Kestrel 19	(235.0)	33	396	(334.2)	39	466	73.0	35	517	81.4	40	401	70.5	39	400	103.6	35	391	58.0	41	342	2913
40	Millar, J. A. K.	ASW-22	(223.1)	36	362	71.1	=17	817	73.1	34	519	74.5	41	221	(295.8)	41	164	0	41	0	86.8	22	709	2792
41	Tull, V.	Kestrel 19	(194.8)	38	284	(125.5)	41	160	64.2	40	374	79.0	39	423	77.5	37	482	104.2	34	394	68.9	37	500	2617

BGA Competition Scoring Program by Specialist Systems Ltd

ROGER TARGETT

Sailplane Services

Bristol & Gloucestershire Gliding Club
Nympsfield, Nr. Stonehouse
Gloucestershire GL10 3TX

Tel: Office (0453) 860861
Home (0453) 860447 (0453) 545316

FOR SPECIALIST REPAIRS AND MAINTENANCE

Offering outstanding workmanship, efficiency and service in:

- ★ All glass, carbon and kevlar repairs
- ★ Wood and Metal repairs
- ★ All modifications
- ★ Motor Glider engine approval
- ★ C of A Renewals
- ★ General Maintenance

(including re-finishing and wax polishing)



ZULU GLASSTEK LTD

Repair agents for Centrair Sailplanes

Specialising in the repair and maintenance of composite construction sailplanes

ASW20C available for long term job replacement

All jobs completed on time

Office: 08444 3036
Workshop and Fax: 08444 4345

THE 1991 COACHING PROGRAMME

What's in it for you? The national coach explains what is on offer next year.

By the start of the 1991 season, as many readers will already be aware, the BGA will have appointed a second national coach. This is in response to a clear demand from the member clubs for more coaching services than one person can possibly supply. The 1991 programme is only somewhat larger than previous years, as I have assumed that the new coach and I will spend some considerable time running courses together to ensure we are both working to the same standard.

The main purpose of the coaching organisation is to maintain and where possible raise the standard of gliding and soaring enjoyed by BGA members. We seek to do this primarily, but not exclusively, by raising the standard of instructors as much as possible. There are two aspects to this; the instructors' courses, completion courses, CFI's seminars etc are aimed at improving the instructors' ability to teach gliding; the instructors' cross-country courses, wave courses and such are aimed at improving the instructor's ability to fly so that he has more he can teach. The final element, the soaring and cross-country courses, have two purposes. To give a boost to soaring and cross-country flying at a particular club and demonstrate what can be achieved and second to give non-instructors some access to the coaching operation's equipment and expertise.

Having said all that, here's what's in it for you!

1) BGA instructors' courses at many venues around the country from March to October. The BGA office will provide details of dates, places and costs.

2) Instructors' two day completion course at a variety of locations and dates. These are mandatory for all instructors who have done a BGA instructors' course and wish to continue instructing. Again the office will provide details of dates and venues (no course fee for these, it is included in the instructors' course fee).

3) The instructors' cross-country courses:-

Instructors' cross-country course 1 at Booker from April 20-26 is aimed at instructors with a modest amount of cross-country experience, including perhaps one or two 300km flights. Its purposes are to increase speeds to the point where 500km begins to seem possible or where flying in a Regional competition seems worthwhile. Some time will also be spent on the rudiments of teaching cross-country flying.

Instructors' cross-country course 2 is a five day Monday to Friday only course at Bicester. It is particularly for those instructors who have little or no cross-country experience beyond Silver distance and who do not own their own glider. Bring your club K-6 or Astir along from Monday to Friday - instead of having it in the hangar! The aim of the week will be completed closed circuit flights; 100km almost for sure, 300km if we are lucky.

Instructors' cross-country course 3 is a nine day course from June 1-9 for experienced cross-country pilots. It will be aimed at those making the jump from Regionals to Nationals and will have instruction on record attempts. More important still it will be aimed at teaching how to teach cross-country flying.

One of the courses should be in the north of England

Instructors' cross-country course 4 and 5 are July 13-19 and July 22-28. Course 4 is again primarily for the moderately experienced and course 5 for those with little or no experience beyond Silver distance. The venue for these are not fixed at the time of writing but one should be in the north of England. The office will be able to inform you if you 'phone now.

In addition to the above there are two soaring and cross-country courses open to all Bronze badge and above pilots, where we will teach as much as we can about cross-country flying in seven days; one is at Dunstable from May 18-24 and the other at - wait for it - Aboyne, to prove that Scotland is worth a visit in summer as well as autumn; 21hr soaring days, wave and superb thermals off the mountains. This week is for anyone wanting anything from 5hrs to 750km!

Speaking of Scotland, the autumn sees us back there. At Portmoak from September 28 to October 4 for a hill and wave week designed for those sampling the Scottish Highlands for the first time. The week of October 7-12 finds us at Aboyne, hopefully with course members who have already done their height gains and need a bit of help and encouragement to start cross-country flying in wave. The final two weeks at Aboyne (October 13-19 and October 20-26) are for those in search of their Gold or Diamond height - though we will fly cross-country if it seems appropriate.

A note for CFIs' diaries; CFI's weekends similar to the Duxford one this year are planned at Dunstable, April 13-14; Bicester, September 14-15 and Portmoak, October 5-6.

Finally, if you are under 25 and love gliding, don't miss the Junior Nationals at Nympsfield from August 24 to September 1. More on this later.

Also available - some midweek completion courses and one two day course for the issue or renewal of restricted motor glider instructor ratings; dates and venues from the office on request.

In addition to all of the above I expect to be spending a fair number of weekends in the summer visiting some of the smaller clubs - just to fly and where I can help and advise. If you have a particular reason to want a visit, then get in touch. But please don't be offended if you don't get a visit next year, there are after all over eighty clubs - it will take years to get round them all.

That's it folks - prices, booking forms and more details available from the BGA office (0533 531051) - I look forward to seeing as many of you as possible.

COME MOTOR-GLIDING AT ENSTONE

OXFORDSHIRE SPORTFLYING CLUB ENSTONE AERODROME

TO CONVERT YOUR BRONZE/SILVER TO SLMGPPL*

DO FIELD LANDINGS/NAVEX EXERCISES FOR YOUR BRONZE

AB-INITIO TRAINING (NO LAUNCH QUEUES)



Ring Oxfordshire Sportflying Club on 0608-677208 for more information 7 days a week operation

*Self launching motor glider private pilot's licence

OXFORDSHIRE SPORTFLYING CLUB, ENSTONE AERODROME, CHURCH ENSTONE, OXFORDSHIRE OX7 4NP Tel: 0608 677208

RECORD INTER-SERVICES REGIONALS



Our top photograph is of Barrie Elliott, Bicester GC's CFI, celebrating after his 753km polygon with a pupil in the Nimbus 3DT on that famous day of the year, August 7. This was during the Inter-Services Regionals, hosted by Bicester GC from July 31 to August 9, which had an astounding ten contest days. Wendy Durham reports that only one task was less than 150 with 300kms set on four days for Class A and three for Class B. On August 7, 509.4km was set for both Classes resulting in 30 Diamond distances, seven of these by non-competitors who flew the same task. In all nearly 105 000km were flown during the Regionals, 98 781 by competitors and an additional 6000 by non-competitors. "Surely," Wendy writes, "a record for any UK contest, Regionals or Nationals. What's more, at Bicester several pilots progressed from a Silver badge to Gold badge and all three Diamonds within a week."

Our second photograph (both taken by Cary Davey) is of Ken Barker, winner of Class A, flying a Discus in his first rated competition. Ken, an entertainer, has grown up on gliding sites, starting at Keevil where he went solo at 16. Now a member at Nympsfield, he and his syndicate took delivery of the Discus last autumn. "I waited until I could afford to join a syndicate which owned a competitive glider," he explained, "before entering a contest. It was Andy Davis who recommended the Inter-Services: he said I'd enjoy it – and I have!" He also won the cup for the best performance by a civilian pilot in his first competition, donated and presented by Roger Ellwood-Wade, managing director of Floppycopy Ltd. (See full results in this issue.)



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

NATIONAL LADDER

Keith Nurcombe tops the Weekend Ladder in a Tutor to win the L. du Garde Peach trophy, continuing Coventry GC's success with an aircraft Ed Johnson, National Ladder steward, says many wouldn't take outside the airfield boundary. Andy Davis (Bristol & Gloucestershire GC) heads the Open Ladder to claim the Enigma trophy for the fourth year running.

Open Ladder

Leading pilot	*Club*	*Flts*	*Pts*
1. A. J. Davis	Bristol & Glos	4	16971
2. P. Jeffery	Cambridge Univ	4	10955
3. N. G. Hackett	Coventry	4	10527
4. P. Crabb	Coventry	4	9759
5. T. E. Macfadyen	Cotswold	4	9000
6. P. E. Baker	Cambridge Univ	4	8600

Weekend Ladder

Leading pilot	*Club*	*Flts*	*Pts*
1. K. Nurcombe	Coventry	4	8832
2. E. Johnston	Cotswold	4	7731
3. R. Palmer	Avon	4	7172
4. A. J. Davis	Bristol & Glos	3	6622
5. P. Crabb	Coventry	4	6130
6. M. Guard	Coventry	4	5945

NEW HEIGHT RECORD

Booker pilots, Alister Kay and Kevin Wilson reached 36 500ft in an ASH-25 at Aboyne on Friday, October 12, after an 1800ft launch. On a second flight Alister climbed to 30 000ft. They are claiming the UK multi-seater height gain and absolute altitude records.

THE BRITISH TEAM

The team squad (the top 16 pilots chosen in 1989 by the top 30 pilots) has now voted itself into a perceived order of merit for the 1991 World Championships at Minden, Nevada, USA, as follows:
Andy Davis (Standard Class); Justin Wills (15 Metre Class); Chris Garton (15 Metre Class); Martyn Wells (15 Metre or Standard Class); Robin May (Open Class) and Dave Watt (Standard Class) with Jed Edyvean as 1st reserve and Brian Spreckley as 2nd reserve.

This looks very much like the old (successful) gang and shows how hard it is for aspiring National Champions to break into the team. Since Benalla 1987 and even Rieti 1985 the names have been virtually the same. Only Robin May is a relative newcomer after winning the Open Class three years running. Consistently good results is probably what pilots vote for. Jed Edyvean, winner of 1990 15 Metre Nationals, only just missed a place; as did Sally Wells in 1989 when she won the 1988 Nationals but was placed 1st reserve.

So what of our chances. They must be good. Five out of the six flew in Ameriglide 1990 so are familiar with the terrain. Justin won the 15 Metre and Andy only just lost the Standard Class. However, the competition in 1991 will of course be tougher. The French were effectively absent from Ameriglide concentrating on the Europeans in Poland. Once again they, the Germans and the Americans will be the teams to beat.

Money: The costs will be horrendous – principally due to shipping the trailers Ro-Ro

across the Atlantic and hiring vehicles on arrival. No empty RAF Transport aircraft available this time! The costs per pilot are likely to be about £2000 each *after* taking account of the generous contribution of £2 per head from all BGA members.

Watch the sports columns of *The Times* and *The Telegraph* from June 30 until July 14 to see how they all fare!

Ben Watson, *British team manager*

THE BGA EXECUTIVE COMMITTEE

The other day someone asked "How many women are there on the Executive Committee?" "Just me" I said. "Why aren't there any more?" "I suppose because no one else has been nominated." "Well that's crazy," she said, "how does it work?" So I told her:

The Executive Committee has 12 elected members. Club secretaries receive requests for nominations in about December, the clubs nominate candidates and elections are held in February. Moral – if *you* know anyone (male or female!) with something to offer, collar your club secretary and suggest that they do something about it.

It's your BGA after all.

Diana King

FLUFF SLINGSBY

It was with sadness that we heard of the death of Fluff Slingsby, wife of Fred who founded the glider works at Kirkbymoorside, on October 11 at the age of 95.

COMPETITION ENTERPRISE

Deeside GC are the hosts next year from June 29 to July 6. The entry fee is expected to be £75 and entry forms are from Lemmy Tanner, St Katherine's, Aboyne, Aberdeenshire AB34 5BR. Tel 03398 86551 or c/o Deeside Gliding Club.

RECOMMENDED PRACTICES

Two new recommended practices have just been introduced by the BGA and will be put into **Laws & Rules,** the next time the document is re-printed.

RP33. It is recommended that all gliders, whether club or privately owned, should be equipped by the owners/operators with cushions containing energy absorbent materials. (Conventional soft foam actually stores energy and can be dangerous in an accident.) The cushions should have attachments compatible with the glider for which they are provided and be secured so that they cannot move or foul any controls, even under extreme attitudes or accelerations.

RP34. The current airworthiness code sets a design minimum cockpit load for gliders of 70kg (153lb). Some older types have minima significantly higher than this figure. Lighter pilots should be aware that the use of ballast may be necessary in accordance with the aircraft placard to ensure safe flight. It is recommended for an additional margin of safety during type conversions and for inexperienced pilots that further ballast should be carried to

BGA ACCIDENT SUMMARY –

Edited by JOHN SHIPLEY,
Chairman, BGA Safety Panel
Compiled by DAVID WRIGHT

SAFETY CHAIRMAN'S COMMENTS

The reports in this issue show that in most accidents poor pilot skills or judgment and decision making skills are the root of these situations. In general these shortfalls in human performance may reflect upon our training system and pilot supervision practices. Groups of accidents which indicate the potential problem areas for all glider pilots are:

1. Serious injuries occurred to pilots stalling (1) and spinning in (3). With two very lucky pilots escaping serious injury after spinning accidents.

Ground crews were injured in two instances – a forward signaller was hit by a wing, and a wingtip holder lost a finger when a ring caught on a wingtip skid plate.

2. Instructors flying marginally out of gliding range and on cross-country flights have spun in from low level on two occasions, whilst landing in fields. "Boxing the wake" low down or at about the time the tug pilot is about to turn causes problems, particularly for the tug pilot. He may be **upset!**

AEI flights were involved in two field landing accidents out of gliding range of the home field and a third over-ran the runway.

Taking over control (late) requires superior skills otherwise stalling in after a cable break or an undershoot approach leads to damage and minor injury accidents.

Instructors should note the accidents involving **type conversions** (3) and **first solos** (3).

3. The divergent nature of **aerotows** when the tug moves from its normal reference position, whether it is on the ground or in the air. Releasing the tow early in divergent situations will ensure **"no accident".**

4. Failed **winch launches** (11) between 50ft and 300ft have produced serious injuries for the pilots and substantial damage to the gliders. A cable was dropped over 11Kv power lines. Hot stuff!

5. Field landings (22) continue to produce a high percentage of major damage accidents. Undershooting into the downwind boundary and overshooting into the upwind boundary have occurred. Obstructions hit in the chosen field include sheep, a barbed wire fence, ridge and furrow (2) and standing crops. Landing downwind occurred in three instances, the presence of a sea breeze in one of these.

6. Home site accidents include hitting a parked tractor on approach, hitting stakes on the landing run, a number of undershoots (6) and stalling in/heavy (5) (2) landing accidents, also undercarriages collapsing (4).

7. Only a few clubs operate a **bungy launch;** inexperienced bungy crews have lead to the last two bungy accidents. The energy stored in the bungy and acceleration achieved seem to make corrective supervision of an untrained crew impossible during the launch.

8. Maintenance issues include:

- incorrect control deflections causing spin recovery problems.
- a rudder cable pulled out of its ferrule.
- a drag spar bush fell out.
- progressive wear/maladjustment of Bowden cable operated airbrakes such that they would not close during flight.

Ref No.	Glider Type	BGA No.	Damage	Date Time	Place	Pilot/Crew Age	Injury	Hrs
40	Std Cirrus	2673	S	5.5.90 1530	Kingsclece	34	N	90
The pilot had to make a field landing and chose a good size field and, assuming the wind was the same as during his take-off, some time earlier, aimed to land across the diagonal. The downwind leg was too close to the field and he found that even with sideslip and full brake he landed well into the field and groundlooped. He had landed downwind.								
41	SF-27A	3531	N	4.3.90 –	Kitson Field	34	N	43
After a short soaring flight the pilot reversed his direction of turn back to the circuit. At this point the airbrakes opened and he could not shut them. A high circuit and uneventful landing was made. Subsequently it was found that the brakes could only be closed by pushing in the blades. The bowden cable required adjustment.								
42	K-8	2332	N	4.4.90 1030	Kitson Field	0	N	–
Normal club procedure is to change the winch weak link every 20 launches or every flying day. Upon checking it was found that the wrong weak link had been fitted and used. Weak links now systematically checked prior to flying.								
43	K-7	3421	M	31.3.90 1115	Kitson Field P2	53 0	N N	542 0
After a normal flight and landing by P2 the glider hit two ruts and veered towards the hedge. As P2 did not seem to be reacting P1 took over and used right rudder to avoid the hedge. **It was found that P2's right rudder pedal cable had pulled through its ferrule.** Ferrules of this type on club gliders have been replaced and the maker informed.								
44	K-13	3566	M	29.4.90 1730	Lleweni Parc	40	N	7
On his first solo flight in a K-13 the pilot misjudged his height and, only using half airbrake, landed too far down the airfield. He had not expected the K-13 to penetrate so well. He goundlooped the glider to avoid the hedge but punctured the left wing on a stone and broke the trailing edge of the right wing after hitting some bushes.								
45	Puchacz	3576	M	1.5.90 1525	Aboyne P2	46 0	N N	800 –
During landing the nose wheel hit a pot hole which caused the glider to rock back on to the tail skid. This struck the ground heavily and split. The area had been considered OK for landing; however, this was the first nose wheel equipped glider to land here. **The area is being smoothed and pilots are briefed to hold the nose off.**								

In recent years, we've become better known for our experience in glass fibre composite materials than for our long held skills in more traditional wood, steel tube and fabric construction repair work. Yet our repair support is behind a large number of gliders, motor gliders and light aircraft constructed in these materials, whose owner/operators bring them to Chiltern for service and repair.

After all, our policy of consistently high quality work, backed by our comprehensive stock of parts and materials and a customer protection policy with full product liability cover, is a comfort whatever your aircraft is made of.

To enable us to maintain these high standards, we do not accept work on sheet alloy or aluminium stressed skin aircraft, where repairs call for riviting skills that are not in our line of work. Give us a repair job of tubular steel construction or involving wood, plywood, fabric, glue or modern GRP materials, and we are really in our element. We handle everything from minor repairs to major rebuilds.

It is traditional as well as modern GRP skills that have helped to win Chiltern CAA, PFA, BGA and recently our AQAP 4 approval. Equipping us to accept work at most levels and to maintain affordable prices.

So don't fly away with the idea that Chiltern are only at home with composites. We like to exercise our other skills, and its worth talking to us when you have a service need or a repair problem.

CHILTERN SAILPLANES LIMITED

The best.
And it shows.

Booker Airfield, Nr. Marlow, Bucks, SL7 3DR. 0494 445854 (works) or 0865 890517 (outside office hours). Access and Barclaycard accepted with pleasure

Not surprisingly, there are limits to Chiltern repair support service.



CAA Approval No AMR/286.
MOD AQAP 4 Approval No. 3LHCO1

Repair service spares support for Grob, Limbach, Tost, Scheibe and Hoffmann range of gliders, motor gliders and light aircraft

establish a cockpit load of at least 15kg (33lb) in excess of the placarded minimum. In all cases the ballast should be secured in the aircraft so that it cannot move even under extreme attitudes or accelerations.
Barry Rolfe, *BGA administrator*

SKYVIEW SYSTEMS

Hart Technology have introduced a range of personal computer based satellite receiving systems for pilots at £799 plus VAT for the complete system. PC owners can receive live weather pictures directly from the Meteosat 4 satellite giving detailed infra-red and visible pictures of Europe, Africa and the Atlantic showing cloud cover and cloud movement. This allows estimations of wind speed and direction and, by monitoring frontal and cloud movement, predictions affecting flight plans.

For more details contact Hart Technology, Anglesea Road, Wivenhoe, Colchester, Essex CO7 9JR, tel 0206 22 3185, fax 0206 22 5328.

1991 COMPETITION DIARY

May 18-26: Norfolk GC Regionals, Tibenham Airfield.
June 1-9: Western Regionals, Bristol & Gloucester GC.
June 15-23: Standard Class Nationals, London GC.
June 23-July 6: European Junior Championships, Alleberg, Sweden.
June 29-July 6: Competition Enterprise, Deeside GC.
June 30-July 13: World Championships, Minden, Nevada, USA.
July 13-21: 15 Metre Class Nationals, Lasham GS.
July 27-August 4: Booker Regionals, Booker GC.
July 27-August 4: Northern Regionals, Yorkshire GC.
July 30-August 8: Inter-Services Regionals, RAFGSA Centre, Bicester.
August 4-17: Women's European Contest, Coventry GC.
August 10-18: Open Class Nationals, Enstone GC.
August 18-24: Two-Seater Competition, Wolds GC.
August24-September 1: Junior Nationals, Bristol & Gloucestershire GC.
Ken Sparkes, *BGA Competitions and Awards Committee.*

A CLASSIC!

Free Flight, the Canadian gliding magazine, have the horrendous tale of a glider delivery trip that went wrong. It was arranged to take a DG-200 from its Alberta storage to the DG dealer at Hawkesbury, returning with a repaired DG-202 to Edmonton.

But at Hawkesbury, it was noticed the driver had hitched up the wrong trailer and hauled a DG-400 4000km across the country. He was then faced with three more 4000km trips to get all the gliders reunited with their owners.

Ref No.	Glider Type	BGA No.	Damage	Date Time	Place	Pilot/Crew	Age	Injury	Hrs
46	Falke	M/G	S?	10.5.90	Husbands Bosworth		57	N	3500
		G-BHAG		1845		P2	53	N	200

The motor glider was landing engine off with P2, an instructor under training flying. The aircraft touched down at about 40mph and ballooned into the air before a further heavy landing. The aircraft pitched nose down as the undercarriage sub-frame collapsed.

47	IS-29D	2068	S?	7.3.90	Lewknor, Oxon		51	M	374
				1330					

After attempting to ridge soar the pilot decided to land in a field on top of the ridge. On base leg he noticed that the field had a steep uphill slope. This and a strengthening wind probably caused the pilot to misjudge his approach path and reduced speed to clear the hedge. After this he stalled at about 20ft and landed very hard, collapsing the u/c.

48	K-21	2588	M	7.3.90	Dunstable		35	N	290
				-		P2	12	N	-

The flight was to be a trial lesson from a winch launch. As P1 rotated the glider into the climb there was a loud bang, which he thought was a cable break, so he levelled and opened the airbrakes. However, P2 said that the canopy was open and after a normal landing it transpired that P2 had inadvertantly grabbed hold of the canopy locks and unlocked it.

49	K-23	-	M	8.5.90	Tetsworth		41	N	109
				1630					

After choosing a field "to give good access" but with no surrounding "alternatives" the pilot found that his field had ridges across his intended landing path. With no alternative, he landed at 90° to this path although the available landing run was soon seen to be marginal. He landed then had to groundloop the glider to avoid the far hedge.

50	PIK 20D	2536	S	8.5.90	Leighton Buzzard		51	N	55
				1310					

The pilot chose a large, flat, deserted school playing field but **made too cramped a circuit** in the no wind conditions. He passed over the boundary hedge too high and landed well into the field. As a result the glider overran into the metal railing fence bounding the field.

51	Skylark 3F	954	M	5.6.90	Nr Long Horsley		29	N	20
				1730					

On a 50km attempt the pilot had to make a field landing. His choice of field was limited by crops and cattle so he chose a field containing sheep. After **a pass across the field at speed to scare the sheep away,** he turned and made his approach. As he did so he had to pull up over one sheep then put the glider down heavily to miss the rest.

52	K-7/13	-	N	21.5.90	Pocklington		38	S	1000
				1630		P2	0	N	15min

As the launch was commenced P1 felt a pull on the wing of the glider and so released as it started to swing. **The wingtip holder had caught her wedding ring on the metal tip rubbing plate,** and the finger had been severed as the glider started moving off.

53	K-8	3582	M	20.5.90	Gamston		43	N	2
				1720					

After touching down with little or no airbrake the pilot allowed the glider to bounce to about 4ft. The right wing dropped as the glider landed causing a groundloop.

54	ASW-15B	-	M?	28.5.90	Dunstable		36	N	19
				1150					

The approach was flown at 50-52kt into a very light wind and with full airbrake. As the glider entered the wind gradient and flared the pilot found he had **insufficient speed to round out.** He did not reduce airbrake and was unable to stop the glider stalling/dropping heavily on to the ground, damaging the undercarriage.

55	Club Astir	2504	S	27.5.90	Winkleigh		31	N	80
				1540					

The pilot became tired during his first cross-country attempt so decided to land in the nearest suitable field. He chose a field (from 3000ft) with a pronounced upslope even though it was downwind. Approaching over high ground he misjudged his height and landed too far into the field. He then had to groundloop the glider to avoid hitting the far hedge.

56	Bergfalke 4	-	M	13.5.90	Winthorpe		21	M	205
				1600		P2	21	N	0

After a good take-off and circuit P2 failed to respond to P1's prompts to increase speed on the final approach and also allowed the aircraft to drift off the centreline. When P1 asked him to get back on course he did so with a large amount of rudder and also pulled the nose up. P1 took control but was too late to prevent a heavy landing.

57	SHK	1426	M?	28.5.90	Galewood		34	N	29

After joining the circuit near the base leg the pilot found that another glider was ahead of him so made a 360° turn to keep clear. In doing so he lost sight of the airfield and this, combined with an into wind base leg, made him low on final approach. He just cleared the fence **but was slow and a wing dropped,** causing a groundloop.

58	Club Libelle	2415	S?	10.6.90	Whatfield		27	N	53
				1500					

After turning finals the pilot applied full airbrake to land on the short runway. The brakes were eased in as the sink rate seemed excessive but the glider continued to sink and clipped one of the 8ft concrete posts at the end of the runway. The glider cartwheeled into the ground and was substantially damaged.

59	K-8	-	S?	15.5.90	Camphill		31	N	13mins
				-					

On her third solo and first flight in the K-8 the pilot was briefed that the glider might pitch up quickly if the winch launch was snatched. As a result she held the stick forward too long and the glider built up too much speed on the ground. Realising this she released but then ran off line towards trailers and had to groundloop to stop.

60	K-6CR	2301	M	18.5.90	Bradwell		29	N	27
				1630					

The pilot was attempting a second Bronze badge field landing into a field selected by the instructor. **The field had trees across the downwind edge and the latter part sloped downhill.** The pilot flew a high circuit and final approach over the trees and landed well into the field, then attempted to groundloop the glider to stop it, but hit a tree.

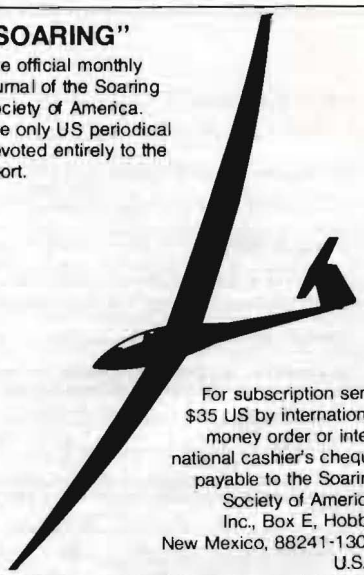
61	K-13	-	M	29.4.90	Lee-on-Solent		0	N	1200
				1800		P2	0	N	0

Following a simulated cable break at 50ft, P2 lowered the nose and commenced a normal roundout at about 45kt. **He suddenly opened an excessive amount of airbrake at about 10ft** and P1 could not prevent a heavy landing on the mainwheel.

62	SB-5E3	2719	M	6.5.90	Harrington		40	N	87
				1600					

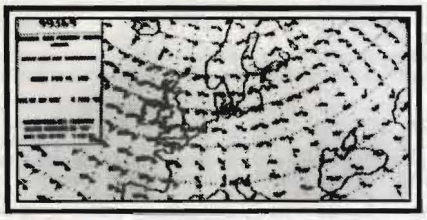
During a cross-country flight the pilot had to make a field landing. Selecting a corn field he made a normal approach and landing in the zero wind conditions. The glider's wingtip dropped soon after landing and **caught in the knee-high crop,** causing a groundloop.

"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.

Weather To Fly?



SKYVIEW SYSTEMS PROVIDE YOUR METEOROLOGICAL ANSWERS

FAX S/W - SYNOPTIC WEATHER DECODER		£ 79.95
SATELLITE - METEOSAT PICTURES		£ 799.95
COMMUNICATIONS - TAFS/MET FORECASTS		£ 250.00
LOCAL WEATHER STATIONS	From	£ 139.95
HAND HELD WIND SPEED UNITS	From	£ 29.95
WIND SOCKS		P.O.A.

All Prices Exclude VAT and Delivery
Call For Full Product Catalogues

Hart Technology.Anglesea Rd.Wivenhoe.Essex
Telephone: (0206-22)3185 Fax: (0206-22)5328

PORTMOAK

IS **THE** PLACE

FOR WAVE – UK altitude record – 36,500' in 1980.

FOR RIDGE – The two hills adjacent to our large airfield give more soaring time.

Inclusive – *Aerotow courses April to September for all levels of competence.*

SCOTTISH GLIDING UNION
PORTMOAK, SCOTLANDWELL
Nr. KINROSS Tel: 059 284 543

Ref No.	Glider Type	BGA No.	Damage	Date Time	Place	Pilot/Crew Age	Injury	Hrs
63	Capstan T-49	-	M	21.4.90 1840	Lee-on-Solent	36	N	10mins

After his first solo flight the pilot made a normal approach and landing. After touching down he **closed the airbrakes and the glider ballooned** back into the air then landed heavily on the nose skid. A panel below the pilot's seat broke loose in an area of previous repairs.

64	DG-300	-	M	5.5.90 1600	Parham	0	N	-

The glider was being towed behind the fire trailer during a change of ends. With one person on the nose and a wing man keeping a lookout for landing aircraft, the combination started off downhill. The nose man shouted as the glider started to run away and the car driver and wingman stopped. The glider swung around and hit the trailer.

65	KA-6CR	1970	W/O	28.5.90 1630	Long Riston	40	M	87

While flying over a heavily cropped area the pilot had to make a field landing so chose the one pasture field in range. Approaching for a crosswind landing diagonally across the field **he noticed the surface had ridges** and farrows so turned to land along these. The result was a downwind landing and a severe groundloop as the wingtip hit a ridge.

66	Speed Astir 2B	2519	W/O	28.5.90 1900	Challes-les-Eaux	39	M	1830

The pilot was being **winch launched from a French site.** He had noted a tractor parked 1/3 of the way down the field and also the **18in high grass just forward of the glider** but agreed to launch. The glider's wing caught in the grass which spun it around while in a nose up attitude prior to release. **It then crashed vertically into the ground** then fell backwards on to its back.

67	K-6E	2411	M	7.5.90 -	Perranporth	49	N	102

Returning after a winter layoff the pilot had six normal check flights prior to this solo flight. While attempting to thermal he allowed the glider to drift too far downwind and, after turning his back on his selected field, **misjudged his height and turned finals too low. He landed in the undershoot field** and hit the far hedge.

68	K-7	1031	S	16.5.90 1700	Kitson Field	66	M	30

The pilot lifted off on the winch launch but then decided to release as the speed fell back to 40kt. It appears that the cable had not been released at this time and the airbrakes were seen to be open prior to the glider hitting the ground and bouncing back into the air. **The pilot may have opened the airbrakes rather than the cable release.**

69	K-7	3421	M	16.5.90 1630	Kitson Field	45	N	500
					P2	25	N	0

The K-7 was launched on the first cable of a twin cable winch. The second cable was taken by a single-seater which abandoned the launch and landed ahead. After landing to the right of this glider the K-7 crew were just getting out when a **hissing sound was heard** as the cable was pulled in and caught the aileron. **The winch driver thought it was clear.**

70	K-6	1216	N	17.3.90 1700	Kitson Field	48	N	66

In light crosswind conditions the winch launch was normal with the **pilot compensating for drift. At the top of the launch the winch stalled and the cable chute drifted the cable** across the nearby main road and on to some 11Kv power supply lines. The electricity board were contacted and the cable **cleared AFTER confirming the power was off.**

71	Cirrus	1734	M	8.6.90 1740	Buckminster	64	N	472

While local flying the pilot encountered a heavy rain storm so had to make a precautionary field landing. During the landing run the glider **hit a barbed wire fence that the pilot had not seen in the heavy rain.**

72	K-7	1349	S	16.6.90 0641	Currock Hill	50	M	377
					P2	14	M	0

The winch launch started slowly but then gathered enough speed for P2 to lift off to about 20-30ft. At this stage he asked if there had been a cable break as the glider did not climb normally. P1 took control and released but was unable to prevent the glider stalling and landing very heavily. **The cable had twisted with another during the launch.**

73	K-6CR	2395	S	17.6.90 1335	Nr Rattlesden	75	N	88

After soaring at 3000ft in poor visibility, the pilot realised he was lost. He saw an airfield which he thought he knew so decided to land. It was not until he was preparing to land that he saw that it was an industrial estate. He then chose to land in a cut hay field **with stacks of bales in it,** one of which broke off a wingtip.

74	K-23	AGA 9	S	2.6.90 1220	Upavon	39	N	75

In conditions which give to turbulence in the approach area downwind of hangars the pilot adjusted his circuit to land in the approved undershoot landing area. After a normal approach, at about 25ft, he felt the glider being "pushed downwards". He closed the brakes and "increased speed" but the glider landed heavily nose first and hit a fence.

75	DG-100	2342	W/O	9.6.90 1330	Westbury Ridge	33	M	78

On a cross country flight the pilot decided to return to a ridge that she knew was working. She then encountered a rain storm and it appears that the glider spun into the ground from about 200ft. **Probable cause was slow speed and the effect of rain on the wings.** The pilot cannot remember anything between entering the storm and hitting the ground.

76	ASW-22	2824	W/O	31.5.90 1900	France	36	S	706

On a final glide, after a 300km cross-country flight in France, the pilot calculated he was above glide until he hit sink about three miles from his destination. By this time he was too low to easily select a field and while turning right the glider entered an incipient spin and crashed into the ground, seriously injuring the pilot. **No margin! No options!**

77	SB-5E	3447	M	24.5.90 1915	Germany	38	N	82

While flying in Germany the pilot decided to make a field landing. Selecting a good uphill field the pilot set up a normal circuit but then encountered sink during the final turn and could not make the field. He landed in the undershoot field, passing under some high tension wires, but bounced on rough ground and groundlooped.

78	Capstan	1106	S	24.6.90 1201	Aboyne	34	N	286
					P2	0	N	0

During an air experience flight P1 was to land long on the main runway as was the normal practice. Approaching at 60kt, due to wet wings, he touched down about halfway down the runway **then allowed the airbrakes to shut, ballooning the glider back into the air.** He was then **unable to stop before the end of the runway** and ran off into rough ground.



PHOTOGRAPHY BY TIM CISLO

THE 1991 SOARING CALENDAR

Delivery of the 1991 Soaring Calendar from the SSA is expected this month. This year features a new design layout with a functional 11″×14″ horizontal format. Great photography makes a calendar and you won't be disappointed at the latest effort. Ring the BGA Shop and take this opportunity to place your order now.

£6.50 plus 45p postage

(Held down to this remarkable price for the fourth year running!)

BRITISH GLIDING ASSOCIATION
SALES DEPT.
FREEPOST
LEICESTER LE1 7ZB
Telephone 0533 531051

ACCESS/VISA ACCEPTED

Ref No.	Glider Type	BGA No.	Damage	Date Time	Place	Pilot/Crew Age	Injury	Hrs
79	Pegasus	3560	S	3.7.90 1430	Sutton Veny	39	N	97

The pilot found he had to land in a relatively difficult area and picked two fields which had power lines. He overshot the first so decided to fly over the fence, under the wires, and land in the next field. During this the right wing hit the standing hay crop and the resulting groundloop broke the rear fuselage.

80	K-7	936	S?	27.6.90 -	Glyndwr	63	N	1900
					P2	17	N	0

During winch operations the second cable is staked down while the first was used. The cables had, however, been drawn out well away from the normal area and as the glider landed P2 did not see the stake and P1 only saw it as it passed by the cockpit. It missed the wing but severed the tailplane about 1ft out from the fuselage.

81	K-7	3344	S	- 1250	Gamston	51	N	125
					P2	46	N	4

During the approach P1 had to prompt P2 to close the airbrakes to avoid an undershoot. The glider just cleared standing corn at the threshold but, after landing into wind across the strip, **P2 turned the glider along the strip and the wingtip caught in standing crop alongside and a groundloop resulted** before P1 could take control.

82	K-21	2871	M?	22.5.90 1130	Dunstable	0	N	-

The glider was being towed to the launch point around the back of the winch **down a steep gradient. The single person on the nose was unable to restrain the heavy two-seater glider and it started to run away. The car driver accelerated** to prevent the glider hitting the car but this snatched the glider which then hit the car.

F=Fatal; S=Serious; W/O=Write Off; M=Minor; N=Nil.

GLIDING CERTIFICATES

ALL THREE DIAMONDS

No.	Name	Club	1990
311	Parsons, R.	Lasham	27.5
312	Starer, D.	London	26.5
313	Wilby, C.	Derby & Lancs	27.5
314	Cheetham, R. A.	Buckminster	29.5
315	Barrett, R. V.	Bristol & Glos	27.5
316	Dalling, R.	Midland	3.7
317	Davis, A. J.	Bristol & Glos	7.8
318	Guard, M. J.	Coventry	24.7

DIAMOND DISTANCE

No.	Name	Club	1990
1/459	Parsons, R.	Lasham	27.5
1/460	Bradney, F. G.	Surrey & Hants	26.5
1/461	Roberts, M.	Southdown	26.5
1/462	Starer, D.	London	26.5
1/463	Wilby, C.	Derby & Lancs	27.5
1/464	Cheetham, R. A.	Buckminster	29.5
1/465	Hibberd, G. P.	Portsmouth Naval	31.5
1/466	Redshaw, P.	Lakes	31.5
1/467	Barrett, R. V.	Bristol & Glos	27.5
1/468	Perry, R. E.	Mendip	3.7
1/469	Dalling, R.	Midland	3.7
1/470	Thompson, M. H.	Lasham	3.7
1/471	Sharp, D. J.	Four Counties	31.7
1/472	Davis, A. J.	Bristol & Glos	7.8
1/473	Bailey, G. F.	South Wales	24.5
1/474	Smith, R. J.	Bristol & Glos	27.5
1/475	Lynn, S. R.	London	18.7
1/476	Aveling, A.	Kestrel	20.7
1/477	Guard, M. J.	Coventry	24.7

DIAMOND GOAL

No.	Name	Club	1990
2/1844	Judd, D. M.	Wrekin	27.5
2/1845	Doyle, T. C.	Two Rivers	27.5
2/1846	Adams, R. C.	Essex & Suffolk	27.5
2/1847	McCullagh, J. S.	Surrey & Hants	26.5
2/1848	Paciepnik, C.	Lasham (in Australia)	2.3
2/1849	North, J. W.	Lasham	26.5
2/1850	Brady, J. P.	Chilterns	31.5
2/1851	Veysey, Elizabeth	London	26.5
2/1852	Thomas, G. E.	Coventry	31.5
2/1853	Sinclair, D. A.	Lasham	24.5
2/1854	Nicholson, J. B.	Lasham	3.7
2/1855	Massey, J.	Essex & Suffolk	28.5
2/1856	Bradley, B. P.	Cambridge Univ	3.7
2/1857	White, H.	Avon	3.7
2/1858	Moore, M. L.	Portsmouth Naval (in France)	10.7
2/1859	Snape, K. R.	P'boro & Spalding	3.7
2/1860	Puritz, R.	London	24.5
2/1861	Angell, Julie	Booker	18.7
2/1862	McGregor, A.	Dorset	18.7
2/1863	Allan, J. C.	Bicester	18.7
2/1864	Preston, E.	Derby & Lancs	18.7
2/1865	Simpson, R. J.	Bristol & Glos	19.7
2/1866	Bushell, B. T.	Upward Bound	20.7
2/1867	Law, C. S. D.	Avon	12.7
2/1868	Maison Pierre, R. J. L.	Anglia	27.5
2/1869	Stretch, M.	615 VGS (Kenley) (in USA)	24.7
2/1870	Forrester, J.	Essex (in France)	22.7
2/1871	Steynor, Linden	Booker (in France)	22.7
2/1872	Pemberton, D.	Bicester	25.7
2/1873	Hengeman, M. J.	Bicester	25.7
2/1874	Allsop, E. S.	Midland	26.5

DIAMOND HEIGHT

No.	Name	Club	1990
3/959	Wilson, T. G.	Cotswold	28.4
3/960	Davis, A. J.	Bristol & Glos (in USA)	5.7
3/961	Townend, C. J.	Burn	11.4

GOLD BADGE

No.	Name	Club	1990
1457	McCullagh, J. S.	Surrey & Hants	26.5
1458	North, J. W.	Esso (Lasham)	26.5
1459	Veysey, Elizabeth	London	26.5
1460	Thomas, G. E.	Coventry	31.5
1461	Bradley, B. P.	Cambridge Univ	3.7
1462	Wilson, R. C.	Deeside	20.6
1463	Sullivan, C. I.	Cambridge Univ	10.7
1464	Snape, K. R.	P'boro & Spalding	3.7
1465	Preston, E.	Derby & Lancs	18.7
1466	Stretch, M.	615 VGS (Kenley)	29.7
1467	Forrester, J.	Essex	22.7
1468	Steynor, Linden	Booker	22.7
1469	Lacey, T. A.	Chilterns	8.7
1470	Townend, C. J.	Burn	11.4

GOLD DISTANCE

Name	Club	1990
Slipper, T. W.	Cambridge Univ	26.5
Judd, D. M.	Wrekin	27.5
Doyle, T. C.	Two Rivers	27.5
Adams, R. C.	Essex & Suffolk	27.5
McCullagh, J. S.	Surrey & Hants	26.5
Paciepnik, C.	Lasham	2.3
North, J. W.	Esso (Lasham)	26.5
Brady, J. P.	Chilterns	31.5
Veysey, Elizabeth	London	26.5
Thomas, G. E.	Coventry	31.5
Sinclair, D. A.	Lasham	24.7
Nicholson, J. B.	Lasham	3.7
Massey, J.	Essex & Suffolk	28.5
Bradley, B. P.	Cambridge Univ	3.7
White, H.	Avon	3.7
Wilson, R. C.	Deeside	20.6
Moore, M. L.	Portsmouth Naval	10.7
Snape, K. R.	P'boro & Spalding	3.7
Puritz, R.	London	24.5
Angell, Julie	Booker	18.7
McGregor, A.	Dorset	18.7
Allan, J. C.	Bicester	18.7
Preston, E.	Derby & Lancs	18.7
Simpson, R. J.	Bristol & Glos	19.7
Bushell, B. T.	Upward Bound	20.7
Law, C. S. D.	Avon	12.7
Maison Pierre, R. J. G.	Anglia	27.5
Stretch, M.	615 VGS (Kenley)	29.7
Forrester, J.	Essex	22.7
Steynor, Linden	Booker	22.7
Pemberton, D.	Bicester	25.7
Heneghan, M. J.	Bicester	25.7
Allsop, E. S.	Midland	26.5

GOLD HEIGHT

Harper, S. J.	Clevelands	8.7
Sullivan, C. I.	Cambridge Univ	10.7
Smith, F. S.	SGU	11.7
Lacey, T. A.	Chilterns	8.7
Gauntlett, D. W.	Clevelands	8.7
Townend, C. J.	Burn	11.4

SILVER BADGE

No.	Name	Club	1990
8408	Hill, J. F.	Midland	17.7
8409	Levitt, M.	Cotswold	24.7
8410	McKernan, T. H.	Derby & Lancs	18.7
8411	Hill, G. F.	London	20.7
8412	Wilson, D.	Burn	22.7
8413	Price, A. C.	Bristol & Glos	22.5
8414	Stumm, N.	Trent Valley	28.7
8415	Hall, T. R.	Bicester	26.7
8416	Snelling, I.	Devon & Somerset	28.7
8417	Hawes, K.	Booker	18.7
8418	Shephard, R. J.	Buckminster	12.7
8419	Langberg, J.	Essex & Suffolk	31.7
8420	Banting, C. I.	Devon & Somerset	28.7
8421	Praill, Monique	Essex	20.7
8422	Crisp, D.	Bicester	2.8
8423	Paciepnik, C.	Lasham	2.3
8424	Startup, P. A.	Bicester	3.8
8425	Baker, R.	East Sussex	5.8
8426	Tisley, B. P. F.	Avon	2.8
8427	Bunniss, P. C.	Bristol	5.8
8428	Houseman, J.	Wolds	6.8
8429	Porat, S. J.	Oxford	5.8
8430	Tillott, N. D.	London	18.7
8431	Brown, V. L.	Stratford	6.8
8432	Burke, J. F.	Staffordshire	31.7
8433	Ralph, P. J. D.	Bicester	7.8
8434	Rainey, M. G.	Coventry	4.8
8435	Entwistle, M.	Buckminster	7.8
8436	Emck, A. J.	Lasham	5.8
8437	Simpson, D. J.	Mendip	6.8
8438	Chamberlain, M.	Coventry	12.8
8439	Rodrick, S. C.	Nortolk	12.8
8440	Newman, N.	Bristol & Glos	27.3
8441	Butler, A. C.	Wolds	28.7
8442	Tierney, M.	Trent Valley	5.8
8443	Murdoch, J. W.	Strathclyde	22.7
8444	Heath, B.	Avon	20.7
8445	Barnes, Robin Caroline	Bicester	6.8
8446	Brown, S. M.	Chilterns	11.8
8447	Perry, R. K.	Oxford	5.8
8448	Hall, R. J.	P'boro & Spalding	11.8
8449	Ballard, C. E. W.	Pegasus	12.8
8450	Brown, T.	Wolds	1.8
8451	Payne, K. W.	Welland	4.8
8452	Woods, M.	Anglia	29.7
8453	Shearwood, Julie	Cranwell	18.8
8454	Green, W. F.	Blackpool & Fylde	18.8
8455	Davies, P. M.	Coventry	16.8
8456	Richardson, J. H.	Lasham	12.8
8457	Brown, M. K.	P'boro & Spalding	17.8
8458	Lay, N. P.	Imperial College	2.9
8459	Dearman, R.	London	26.5
8460	Robinson, Anne	Derby & Lancs	28.7
8461	Hinder, M. J.	Buckminster	12.8
8462	Tillett, Robin	London	7.8
8463	Cotter, S. D.	Essex	12.8
8464	Bugbee, J. L.	Devon & Somerset	11.8
8465	Manning, M.	Essex & Suffolk	5.8
8466	Miller-Smith, M. J.	Lasham	17.7
8467	Hugill, P.	Lasham	5.8
8468	Askins, S. E.	Heron	26.8
8469	Hornsey, R. W.	York	18.8
8470	Gutsell, I. C.	Burn	18.8
8471	Fietze, H. J.	Devon & Somerset	16.6
8472	Sinton, R.	Clevelands	6.8
8473	Przeleski, L.	Cotswold	6.8
8474	Coates, Caroline	Stratford	30.8
8475	Smith, Joanne	Fenland	2.9
8476	Gilbert, J. P.	Essex & Suffolk	2.9
8477	Padgett, I. A.	Fenland	12.8
8478	Denyer, N. H.	in France	17.8
8479	Watson, D.	Yorkshire	18.8
8480	Pentecost, Alexandra	Lasham	27.8
8481	Attaway, L. C.	Anglia	1.9
8482	MacLean, A.	Vectis	31.8

1991 NATIONALS QUALIFYING LISTS

The provisional Promotion and Priority Lists for the 1991 Nationals were compiled by GUY CORBETT, BGA Competitions and Awards Committee, from the results of rated competitions as described in the current Competition Handbook. Entry forms are now available from the BGA and should be returned to the office by January 31. Any entries received after this date will be placed on the reserve lists.

PRIORITY LIST 1991

1	Watt, D. S.	(E)
2	Bally, J. D.	(E)
3	Hood, L. S.	(E)
4	Lysakowski, E. R.	(E)
5	Jones, R.	(E)
6	Sheard, P. G.	(E)
7	Edyvean, J.	(S)
8	Davis, A. J.	(15)
9	May, R. C.	(O)
10	Delafield, J.	(H)
11	Rollings, C. C.	(S)
12	Wills, T. J.	(15)
13	Kay, A. E.	(O)
14	White, S. A.	(S)
15	Wells, M. D.	(15)
16	Jones, S. G.	(O)
17	Clarke, A. J.	(H)
18	Campbell, D. R.	(S)
19	Garton, C.	(15)
20	Cooper, B. L.	(15)
21	Kay, W. M.	(H)
22	Webb, M. J.	(O)
23	Metcalfe, G.	(15)
24	Hackett, N. G.	(S)
25	Smith, D. A.	(15)
26	Spencer, J. D.	(H)
27	Gaisford, P. A.	(S)
28	Stewart, D. R.	(15)
29	Jeffries, J. R.	(O)
30	Gorringe, J. P	(S)
31	Roberts, D. G.	(15)
32	Baker, P. E.	(H)
33	Spreckley, B. T.	(O)
34	Scott, T. J.	(15)
35	Harding, R. W.	(S)
36	Hawkins, P. S.	(QL)
37	Farmer, A. T.	(H)
38	Glossop, J. D. J.	(O)
39	Starkey, C. G.	(QL)
40	Parker, S. J. C.	(15)
41	Jones, P. R.	(O)
42	Mitchell, T. M.	(H)
43	Wells, S. M.	(QL)
44	Elliot, B.	(S)
45	McAndrew, G.	(15)
46	Durham, M. W.	(QL)
47	Innes, D. S.	(O)
48	Smith, E. R.	(S)
49	Odell, J. H.	(H)
50	Kingerlee, J. C.	(QL)
51	Olender, S.	(S)
52	Docherty, T. P.	(O)
53	Cook, I. R.	(QL)
54	Throssell, M. G.	(15)
55	MacFadyen, I. D.	(H)
56	Bird, M.	(O)
57	Richards, E. W.	(QL)
58	Jeffery, P.	(15)
59	King, P. A.	(QL)
60	Redman, S. J.	(15)
61	Boydon, M. V.	(QL)
62	Payne, R. D.	(S)
63	Murdoch, M. L.	(QL)
64	Cunningham, G. W.	(15)
65	Dall, R. N.	(QL)
66	Jefferyes, M. B.	(QL)
67	Hartley, K. J.	(QL)
68	Ashcroft, J. P.	(S)
69	Findon, D. E.	(QL)
70	Cuming, M. F.	(15)
71	Hill, D.	(O)
72	Morris, G.	(15)
73	Fox, R. L.	(QL)
74	Cox, A.	(S)
75	Smart, A.	(QL)
76	Davies, F. J.	(O)
77	Arnall, R.	(H)
78	Hodge, B.	(S)
79	Alldis, C. J.	(QL)
80	Metcalfe, I. J.	(15)
81	Batty, C. J.	(H)
82	Jordy, M. J.	(QL)
83	Downham, E. H. C.	(QL)
84	Giddins, J. B.	(O)
85	Strathern, M.	(QL)
86	Murphy, T. J.	(15)
87	Davis, C. M.	(QL)
88	Tribe, A.	(H)
89	Armstrong, J.	(S)
90	Davey, G.	(QL)
91	Smith, M. J.	(QL)
92	Knight, R. J. S.	(S)
93	Steiner, P. H.	(O)
94	Thompson, M. H.	(QL)
95	Walsh, A.	(H)
96	Williams, P. R.	(15)
97	Langrick, D. J.	(S)
98	Pozerskis, P.	(QL)
99	Smith, R. J.	(O)
100	Forrest, B. R.	(S)
101	Galloway, J. P.	(QL)
102	Miller, A.	(QL)
103	Moulang, A.	(15)
104	Gardner, T. R.	(O)
105	Hutchinson, S.	(15)
106	Taylor, J. R.	(QL)
107	Atkinson, K.	(S)
108	Corbett, C. G.	(QL)
109	Marren, C. A.	(H)
110	Dobson, J. B.	(QL)

(E=Europeans; H=Handicapped; O=Open Class; S=Standard Class; 15=15 Metre Class; QL=Qualifying List)

REGIONALS PROMOTION LIST

1	Young, M.	(JN)
2	Parker, S. J. C.	(LB)
3	Johnston, E.	(EO)
4	Smith, M. J.	(NO)
5	Gildea, C.	(IB)
6	Barker, K.	(IA)
7	Brice, P. F.	(LA)
8	Alldis, C. J.	(ES)
9	Jones, P. R.	(JN)
10	Judkins, M.	(LB)
11	Bird, M.	(EO)
12	Coward, P. J.	(NS)
13	Payne, R. D.	(NO)
14	Woodman, P.	(IB)
15	Spreckley, G.	(EC)
16	Toon, R. J.	(JN)
17	Lemin, R.	(LB)
18	Reed, J.	(EO)
19	Miller, A.	(IA)
20	Morris, B. C.	(LA)
21	Dobson, J. B.	(ES)
22	Miller-Smith, M. J.	(JN)
23	Ellis, J.	(NO)
24	Hodgson, K.	(LB)
25	Pozerskis, A.	(EO)
26	Atkinson, K.	(QL)
27	Torode, H. A.	(IB)
28	Jeffery, P.	(QL)
29	Booth, D. A.	(NS)
30	Stingemore, G.	(IA)
31	Moulang, A.	(LA)
32	Langrick, D. J.	(ES)
33	Boydon, M. V.	(QL)
34	Garrity, A. J.	(JN)
35	Evans, A. D.	(LB)
36	Olender, S.	(QL)
37	Cheetham, R. A.	(EO)
38	Baker, R. J.	(QL)
39	Blackmore, R.	(NO)
40	Corbett, C. G.	(QL)
41	Somerville, A.	(IB)
42	Thomas, G.	(EC)
43	Armstrong, J.	(QL)
44	MacDonald, G. E.	(JN)
45	Davis, P.	(LB)
46	Giddins, J. B.	(QL)
47	Gaunt, T. R.	(EO)
48	Brook, M.	(QL)
49	Bland, M.	(IA)
50	Armstrong, P.	(QL)
51	Crabb, S. J.	(NS)
52	Farrelly, P.	(QL)
53	Dale, G.	(LA)
54	Throssell, M. G.	(QL)
55	Baldwin, A. J.	(ES)
56	Batty, C. J.	(QL)
57	Robson, T. J.	(NO)
58	Adlard, S. A.	(JN)
59	Bishop, G.	(QL)
60	Goulding, N.	(IB)
61	Hyett, C.	(LB)
62	Saundby, R. P.	(IA)
63	Craig, G. W.	(QL)
64	Ashcroft, J. P.	(NO)
65	Sampson, S.	(QL)
66	Hutley, C. K.	(LA)
67	Starling, R. T.	(LB)
68	Arnold, J.	(QL)
69	Williamson, M.	(ES)
70	Stratten, P.	(QL)
71	Sharman, R. C.	(EO)
72	Eagles, T.	(IB)
73	Farmer, A.	(QL)
74	Hunt, S. G.	(NS)
75	Fox, R. L.	(QL)
76	Crabb, P. G.	(EC)
77	Nicholson, J. B.	(JN)
78	Metcalfe, I. J.	(QL)
79	Burry, J.	(LB)
80	Norrie, A. J.	(QL)
81	Gardner, D. H.	(EO)
82	Armstrong, M. S.	(NO)
83	Warren, J.	(QL)
84	Evans, R.	(IA)
85	Stott, B.	(QL)
86	Merritt, K. R.	(LA)
87	Hodge, B.	(QL)
88	Westgate, G. C.	(JN)
89	Hawkins, G. P.	(QL)
90	Cleaver, A.	(IB)
91	Wright, J.	(QL)
92	Darby, M.	(LB)
93	Palmer, R.	(EO)
94	Odell, J. H.	(QL)
95	Taylor, D. P.	(NS)
96	Eade, D. J.	(QL)
97	Hurd, P. L.	(NO)
98	Fritche, P. C.	(JN)
99	Murphy, T. J.	(QL)
100	Payne, G.	(LB)
101	Ellwood-Wade, R. D.	(QL)
102	Cockburn, D.	(IA)
103	Croot, P. F. J.	(QL)
104	Galotti, D. R.	(LA)
105	Bradney, F. G.	(QL)
106	Roberts, S.	(ES)
107	Manwaring, A.	(EO)
108	Steiner, P. H.	(QL)
109	Gorringe, J. P.	(EC)
110	Walker, P. B.	(QL)

(EC=ESC (Le Blanc), EO=Enstone Open, ES=Enstone Sports, IA=Inter-Services A, IB=Inter-Services B, IO=Inter-Services Open, JN=Junior Nationals, LA=Lasham A, LB=Lasham B, NO=Northern Open, NS=Northern Sports, QL=Qualifying List)

8483	Edwards, T. R.	Portsmouth Naval	1.9
8484	Bowen, N.	Booker	27.5
8485	Wells, S.	Dorset	8.9
8486	Barney, M. R.	Cotswold	9.9
8487	Middleton, A.	Buckminster	8.9
8488	Canning, J.	Enstone	8.9
8489	Heath, J. T.	London	7.9
8490	Amand, R. E.	Cambridge Univ	26.5
8491	Kilham, R. W.	Buckminster	31.7
8492	Holroyd, R. A.	Wolds	18.8
8493	Smith, R.	Lasham	12.8
8494	Haseler, Christine	Avon	18.7
8495	Henderson, R. K.	Wrekin	8.9
8496	Brown, A. P.	London	6.9
8497	Andrews, R. V.	North Devon	9.9
8498	Gertz, H.	Booker	8.9
8499	Manning, B. E.	Cambridge Univ	9.9
8500	Knott, G. C.	Buckminster	30.8
8501	Franks, G. S.	Avon	6.8
8502	Hunt, F.	Newark & Notts	9.9
8503	Dales, S. G.	Yorkshire	9.9
8504	Ward, L.	Lasham	19.7
8505	McWilliam, R. D. J.	Surrey & Hants	11.9
8506	Lyster, M.	Bicester	16.9
8507	Darby, R. W.	Surrey & Hants	13.9
8508	Bassett, J. M. C.	Buckminster	17.9
8509	Wright, D. A.	Southdown	14.9
8510	Hill, Katharine	Lasham	11.9
8511	Freeman, D. t.	Vale of WH	16.9
8512	Campbell, P. D.	Pegasus	16.9
8513	Goldsmith, J. J.	Rattlesden	30.8
8514	Godfrey, C. P.	Enstone	24.9

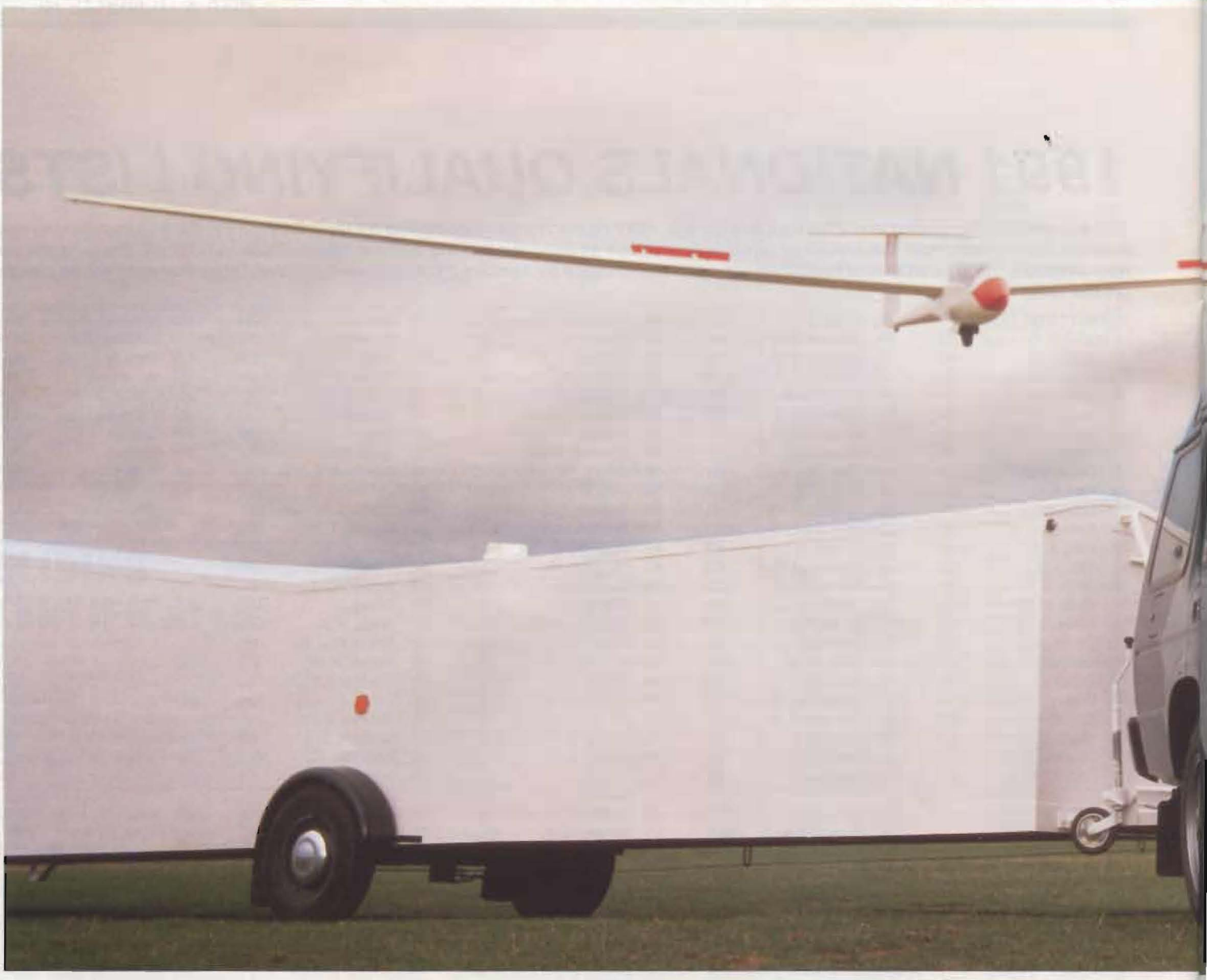
UK CROSS-COUNTRY DIPLOMA

Complete

Name	*Club*	*1990*
Pengilley, D. J.	Bath & Wilts	28.8
Webb, C.	Anglia	28.5

Part 1

Roberts, M.	Glyndwr	28.5
Courchee, J. W.	Anglia	28.4
Cooper, M. C.	Kent	18.7
Hanks, R.	Bristol & Glos	23.7
Taylor, D. J.	Bannerdown	27.5



PUT YOUR GLIDER I

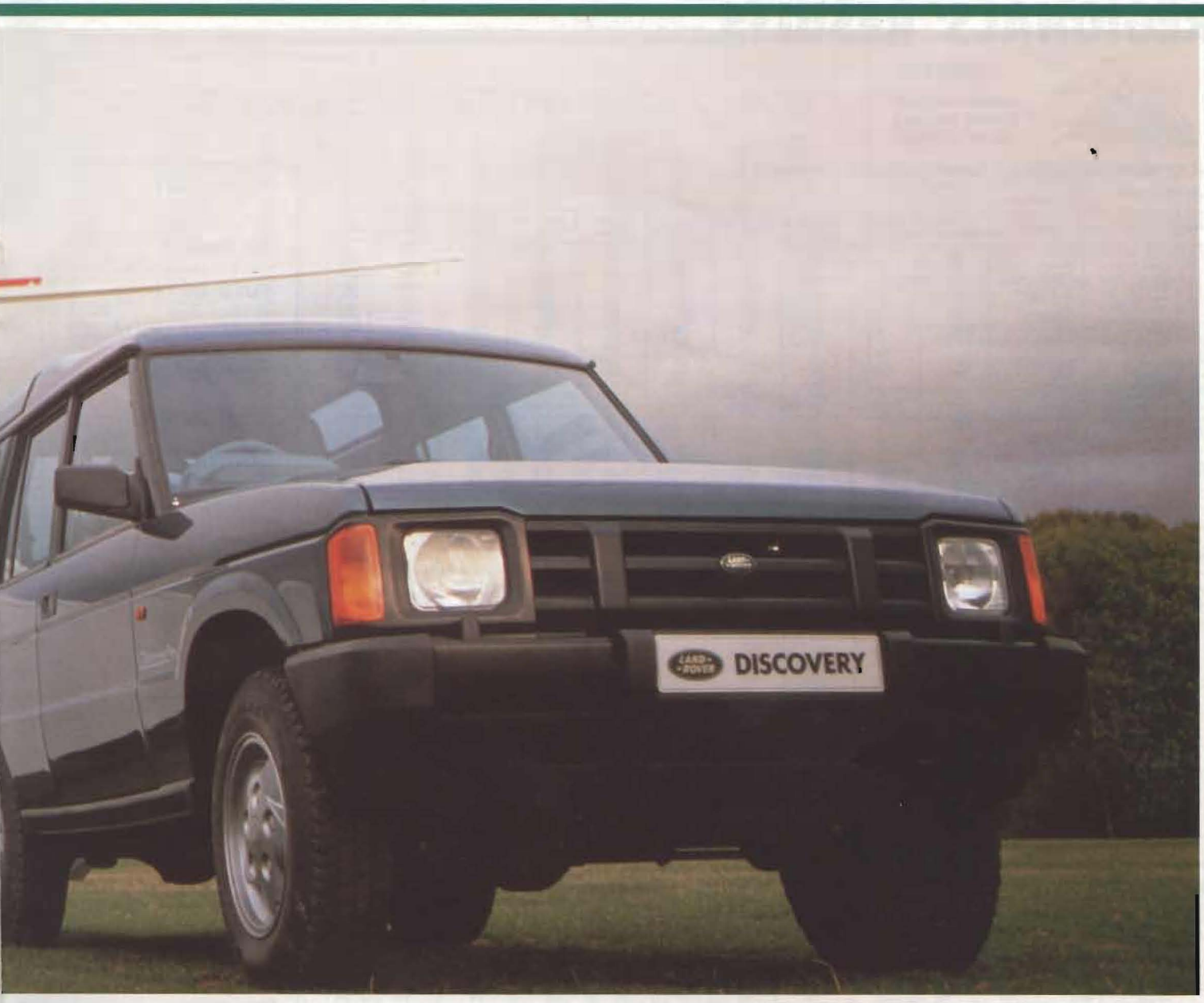
At Land Rover, we've produced the perfect machine for cruising at low altitudes.

The new Discovery puts you behind the controls of a permanent 4-wheel drive vehicle, with a towing capability that leaves others standing. That's a heavyweight 3,500 kilos on trailers with overrun brakes.*

Discovery's all-terrain design passed our gruelling tests of strength and durability with flying colours – from the sandy deserts of Australia to the frozen wastes of Canada.

LAND ROVER

THE BEST 4x4xFAR.



NTO 4-WHEEL DRIVE.

Need added traction to reach that tricky out-landing? You'll find the five-speed gearbox can be shifted to a low gear ratio to provide you with maximum manoeuvrability on and off the road.

So when faced with ground turbulence, Discovery won't leave you flying solo.

We've combined style with power for smooth gliding around town and beyond.

Judge for yourself. Call 081 894 4444 during office hours to arrange a test drive** and see why Discovery soars above the rest.

LAND-ROVER **DISCOVERY.**

*VEHICLES MODIFIED TO ACCEPT COUPLED BRAKES CAN CARRY A FULLY BRAKED TRAILER WEIGHT OF 4,000 KILOS. **APPLICANTS MUST BE AGED 25 OR OVER AND SATISFY OUR INSURANCE REQUIREMENTS.

REGIONALS' RESULTS

NORTHERN REGIONALS – Sutton Bank, July 28-August 4

Open Class

Pos	Pilot	Sailplane	Day 1.28.7 410km ▲	Day 2.29.7 211km ▲	Day 3.30.7 169km ▲	Day 4.31.7 512km ▲	Day 5.1.8 304km O/R	Day 6.2.8 132km ▲	Day 7.3.8 346km ▲	Day 8.4.8 282km ▲	Day 9.5.8 116km O/R	Total Points
1	Smith, M. J.	LS-7	949	111	793	887	975	506	871	771	757	6620
2	Payne, R.	Discus	1000	14	687	919	943	753	955	247	751	6269
3	Ellis, J.	DG-400	615	37	800	931	889	639	893	884	529	6217
4	Blackmore, R.	LS-7	786	0	16	922	936	720	1000	1000	608	5988
5	Robson, T. J.	ASW-20FL	494	0	738	804	922	571	846	857	708	5940
6	Ashcroft, J.	LS-7	870	0	175	1000	1000	699	798	638	722	5902
7	Armstrong, M. S.	ASW-20	981	0	226	974	913	473	761	942	546	5816
8	Hurd, P. L.	Vega	930	0	529	780	788	547	860	645	682	5761
9	Sanderson, P. L.	Kestrel 19	778	-	302	-	910	-	750	-	573	
	Sharp, D. J.		-	40	-	854	-	627	-	534	-	5332
10	Murphy, T.	ASW-20	518	91	135	957	940	644	901	976	8	5170
11	Scougall, B.	Vega	513	0	833	509	683	460	820	608	526	4972
12	Ramsden, P.	Kestrel 19	715	0	320	458	771	514	761	780	568	4887
13	Roberts, P.	DG-202-17	534	0	203	821	947	395	742	737	0	4379
14	Collingham, C.	ASW-20	658	0	129	794	744	403	798	550	0	4076
15	Nash, S.	Ventus 15	833	42	81	807	565	28	457	600	546	3959
16	Gatfield, J.	Vega	421	0	119	500	695	649	77	145	404	3010
17	Turner, P. H.	Kestrel 19	416	4	302	DNF	36	421	622	907	246	2954
18	McAlpine, C.	LS-7	396	2	277	432	859	0	828	142	0	2936
19	Rice, J. W.	Kestrel 19	442	16	126	387	752	0	423	0	661	2807
20	Wright, A. C.	DG-200	297	48	28	413	285	383	453	407	268	2582
21	Green, G. R.	ASW-20L	459	0	227	797	0	DNF	440	625	DNF	2548
22	Eddie, A. J.	Vega	437	0	114	510	0	346	464	406	DNF	2277
23	Mortimer, R.	Jantar 1	421	0	199	387	735	443	0	0	0	2185
24	Hey, R. I.	Mini Nimbus	19	0	18	0	323	521	458	0	DNF	1339

Sport Class

Pos	Pilot	Sailplane	Day 1.28.7 304km O/R	Day 2.29.7 153km ▲	Day 3.30.7 169km ▲	Day 4.31.7 304km ▲	Day 5.1.8 258km O/R	Day 6.2.8 115km ▲	Day 7.3.8 282km ▲	Day 8.4.8 231km ▲	Day 9.5.8 116km O/R	Total Points
1	Coward, P. J.	Std Cirrus	1000	0	622	1000	1000	737	989	815	797	6960
2	Booth, D. A.	Carman JP1536A	566	0	342	812	988	712	938	857	628	5843
3	Crabb, S. J.	Std Cirrus	534	87	123	758	733	458	1000	868	559	5140
4	Hunt, S. G.	SZD Junior	492	0	122	828	763	532	953	556	541	4787
5	Taylor, D. P.	DG-300	512	0	197	737	697	539	886	789	175	4532
6	Aitken, P.	ASW-19B	413	0	111	691	675	489	441	728	542	4099
7	Stott, B.	K-6E	484	88	256	542	597	514	578	213	450	3722
8	Griffiths, P.,	LS-4	-	0	291	-	765	DNF	922	-	DNF	
	Jones, B.		297	-	-	578	-	-	-	109	-	2962
9	Beardsley, G.,	LS-4A	405	-	-	457	-	257	-	0	-	
	Davis, K.		-	0	112	-	696	-	781	-	231	2939
10	Griffin, B.,	DG-100	435	-	-	476	-	0	789	-	332	
	Dell, R.		-	0	240	-	517	-	-	92	-	2881
11	Sword, C. D.	Pegasus	428	28	178	527	676	95	467	409	DNF	2808
12	Fairman, M. C.,	ASW-19B	-	0	74	-	366	-	783	-	DNF	
	Marlow, T.		422	-	-	665	-	404	-	0	-	2714
13	Slater, S. W.	Dart 17	461	65	103	576	255	335	458	441	DNF	2694
14	Young, M.,	K-23	461	-	-	533	DNF	-	-	655	DNF	
	Sear, D.		-	0	88	-	-	0	516	-	-	2253
15	Blake, M. P.	Std Cirrus	146	0	DNF	474	DNF	DNF	DNF	DNF	DNF	620

INTER-SERVICES REGIONALS – RAF Bicester, July 31-August 9

Sport Class

Pos	Pilot	Glider	Day 1.31.7 304.3km ▲	Day 2.1.8 307.8km ▲	Day 3.2.8 184.3km ▲	Day 4.3.8 247.7km polygon	Day 5.4.8 177.2km ▲	Day 6.5.8 324km ▲	Day 7.6.8 307km ▲	Day 8.7.8 509.4km polygon	Day 9.8.8 197.5km polygon	Day 10.9.8 154.7km polygon	Total Points
1	Barker, K.	Discus	*900	1000	492	*851	*950	962	1000	885	1000	*570	8610
2	Miller, A.	LS-4	*920	842	779	897	929	872	767	1000	980	342	8328
3	Stingemore, A.	Discus	888	785	712	1000	849	966	929	936	848	326	8239
4	Pobjoy, M.	Discus	*897		615		914		*684		874		7717
	Bland, M.			*725		907		1000		859		242	
5	Saundby, R. P.	Janus	*831	743	628	889	899	944	728	802	936	200	7600
6	Evans, R.	Discus	649	865	569	992	840	949	795	837	*676	326	7498
7	Cockburn, D.	DG-300	488	898	735	739	602	953	869	982	974	154	7294
8	Matyear,	DG-300	661	772	558	711	917	889	*857	832	786	224	7187
9	Arnold, J.	Discus	885	*837	689	633	751	476	845	786	822	378	7102
10	Mills, A.	LS-4	807	814	671	747	695	*908	820	*771	812	246	7091
11	Boik, M.	LS-4	46	833	715	*828	695	926	771	837	788	387	6806
12	Atkinson, P.	LS-4	621	829	645	777	931	485	*550	853	951	148	6790
13	Gordon, D.	Discus	879	742	870	1	877	460	886	773	776	162	6425
14	Gibson, W.	ASW-20	494	928	549	767	676	464	842	749	868	200	6417
15	Claughton, N.	Discus	804	580	775	845	799	514	689	782	223	234	6046
16	Kirschner, M.	Vega	882	779	664	546	491	730	812	*247	893	90	5934
17	Brown, R.	Mini-Nimbus	589	*656	652	708	651	430	805	309	710	220	5730
18	Sherlock, C.	Mini-Nimbus	580	666	*0	754	716	444	827	766	*787	135	5675
19	Duncan, J.	ASW-20BL	583	511	679	673	136		34	830	906	62	4414
20	Dambrook, E.	Discus	33	208	516	704	10	222	32	*158	575	157	2615
Hors Concours													
21	Ellwood-Wade, R.	LS-7	640	DNF	DNF	DNF	DNF	DNF	850	912	DNF	DNF	2402

Club Class

Pos	Pilot	Glider	Day 1.31.7 304.3km ▲	Day 2.1.8 307.8km ▲	Day 3.2.8 184.3km ▲	Day 4.3.8 173.9km polygon	Day 5.4.8 141.4km ▲	Day 6.5.8 254.2km ▲	Day 7.6.8 307km ▲	Day 8.7.8 509.4km polygon	Day 9.8.8 159.6km polygon	Day 10.9.8 154.7km polygon	Total Points
1	Gildea, C.	Cirrus	870	867	961	931	1000	994	933	993	*750	259	8558
2	Woodman, P.	Astir CS	842	864	920	903	814	984	*883	980	885	179	8254
3	Torode, H.	Sport Vega	635	840	938	787	785	948	781	954	816	268	7952
4	Somerville, A.	K-21	713	854	*792	*686	767	953	1000	643	740	378	7526
5	Goulding, N.	Astir CS	55	883	929	994	985	886	775	1000	929	45	7481
6	Eagles, T.	K-21	690	666	896	894	841	1000	858	435	721	326	7327
7	Cleaver, A.	Astir CS	702	832	807	*862	832	803	*822	938	252	240	7090
8	Gaunt, T.	K-21	739	1000	1000	698	666	383	801	747	792	173	6999
9	Dean, M.	DG-100	670	821	730	812	642	825	768	675	*624	259	6826
10	Wright, E.	Astir CS	41	923	854	*900	598	836	784	857	905	*293	6791
11	Wright, J.	Libelle	678	729	654	877	DNF	826	*865	705	670	411	6415
12	Matthews, G.	Astir CS	678	505	449	765	648	702	632	681	624	377	6061
13	Beveridge, R.	ASW-19	643	-	*950	223	-	355	DNF	-	-	434	-
	Harris, A.		-	903	-	-	972	-	-	*676	851	-	6007
14	Milton, C.	Astir CS	0	750	886	934	859	867	*682	76	*737	110	5901
15	Joly, C.	Astir CS	635	364	695	278	543	764	827	666	538	173	5483
16	Hogg, A.	G 103	654	872	717	806	57	798	*0	705	718	154	5481
17	Davey, C.	Astir CS	205	557	724	722	656	*824	836	919	*0	*29	5472
18	Malam, R.	Astir CS	80	689	264	*783	777	739	*695	174	887	240	5328
19	Barnfather, C.	Astir CS	610	541	751	355	324	687	726	425	557	263	5239
20	Pitchfork, G.	Astir CS	678	562	744	815	22	*381	*619	681	576	110	5188
21	Pratt, D.	Astir CS	73	142	*353	650	630	392	735	425	675	240	4385
22	Dawe, R.	Astir CS	0	670	710	744	81	187	751	189	802	166	4300
23	Ellis, P.	K-23	77	130	*420	*498	136	359	*520	201	102	0	2443

To make sure of getting your copy of S&G take out an annual subscription. Details on p337

We are grateful to the scorers who sent us results, particularly to Tim Newport-Peace of Specialist Systems for all his excellent tables covering Nationals and many of the Regionals

* * *

DNF = did not fly; * = penalty

LASHAM REGIONALS - July 28-August 5

Class A

Pos	Pilot	Glider	Day 1.28.7 246.2km▲	Day 2.29.7 245km Two legs	Day 3.31.7 308.2km▲	Day 4.1.8 222km O/R	Day 5.2.8 217km▲	Day 6.3.8 366.7km■	Day 7.4.8 190.1km O/R	Day 8.5.8 243.4km■	Total Points
1	Brice, P. F.	ASW-20	753	35	924	884	923	1000	1000	943	6462
2	Morris, B. C.	ASW-20L	674	0	1000	1000	937	826	964	899	6300
3	Moulang, A. P.	ASW-20	998	18	767	771	815	937	998	843	6147
4	Dale, G. G.	Jantar 1	466	200	969	856	634	901	844	952	5822
5	Hutley, C. K.	ASW-24	*980	0	*697	945	1000	904	349	848	5723
6	Merritt, K. R.	Kestrel 19	780	0	684	747	820	800	959	797	5587
7	Galotti, D. R.	Discus B	281	*180	*720	931	*629	828	961	925	5455
8	Wright, D. T.	Kestrel 19	800	15	727	615	*752	739	933	601	5182
9	Bastin, J. C.	Ventus B	294	*5	726	*679	853	848	350	1000	4755
10	Brisbourne, R. P.	DG-200	726	*0	721	658	727	815	319	719	4685
11	Reading, P. T.	Ventus B	500	24	767	816	763	*805	0	661	4336
12	Bleasdale, J. G.	Vega	710	27	0	841	*623	873	326	873	4273
13	Nicholson, B.	Discus	*297	195	767	756	512	745	405	515	4192
14	Hurn, T.	Ventus	688	0	242	291	834	823	407	718	4003
15	Murray, W. J.	Mosquito B	723	0	27	742	679	804	0	770	3745
16	Watson, Trish	Nimbus 2B	720	0	698	635	522	183	276	604	3638
17	Cousins, R.	ASW-20	964	0	666	784	0	750	474	0	3638
18	Watson, A. J.	Mosquito	800	0	12	698	950	301	0	781	3542
19	Hoolahan, J. B.	ASW-20	483	27	791	517	895	558	0	0	3271
20	Skelly, G. P.	Mosquito	51	0	260	678	26	458	364	0	1839

Class B

Pos	Pilot	Glider	Day 1.28.7 207.9km▲	Day 2.31.7 308.2km▲	Day 3.1.8 163.3km▲	Day 4.2.8 222km O/R	Day 5.3.8 270.1km O/R	Day 6.4.8 145.3km O/R	Day 7.5.8 144km▲	Total Points
1	Parker, S. J. C.	LS-4	977	*871	767	990	1000	976	624	6205
2	Judkins, M.	ASW-19	992	826	807	773	912	870	778	5958
3	Lernin, R.	Discus	978	727	604	976	800	960	642	5687
4	Hodgson, Karina	Discus	996	748	626	1000	761	986	559	5676
5	Evans, A. D.	Pegasus	981	0	750	950	997	998	875	5551
6	Davis, P.	Discus B	582	809	820	834	897	985	575	5502
7	Hyett, C.	DG-300	*700	667	*626	850	715	998	821	5377
8	Starling, R. T.	ASW-19	374	723	766	841	786	942	688	5120
9	Burry, Jill	DG-300 Club	975	392	620	840	783	816	652	5078
10	Darby, R. M.	Grob Acro	770	*644	*741	942	878	186	739	4900
11	Payne, G.	Pegasus	710	646	*641	823	721	734	591	4866
12	Smithers, J.	Discus	582	661	717	785	635	940	*452	4772
13	Meagher, Mary	Pegasus	602	697	580	781	712	738	612	4722
14	Hindmarsh, G. J.	DG-300	626	*599	620	*701	714	*834	615	4709
15	Piggott, A. D.	Astir CS	396	0	*753	923	822	1000	599	4493
16	Matthews, R. E.	Std Cirrus	672	752	*471	*709	796	171	767	4338
17	Harwood, H. K.	Pegasus	111	801	480	927	874	699	*444	4336
18	Lipscombe, T. M.	DG-101G	544	667	*709	705	163	682	816	4286
19	Veysey, Liz	ASW-15	*681	720	501	*786	449	321	712	4170
20	Day, M. T.	LS-4	989	254	*841	833	792	221	*435	4165
21	Thomas, C.	Astir CS	*235	756	*572	901	675	318	540	3997
22	Williamson, M.	Pegasus 101	692	254	588	688	756	618	*289	3885
23	Nunn, A.	Sport Vega	980	0	543	565	*798	309	663	3858
24	Disdale, P. J.	Grob 103 Acro	86	501	585	806	766	308	489	3541
25	Ellner, J.	Grob 102	144	754	567	832	446	186	580	3509
26	Partridge, R. W.	DG-101G Club	147	20	*335	738	742	962	504	3448
27	Healy, P. T.	Grob 102	*588	7	446	292	817	665	583	3396
28	Moulang, M. Connolly, L.	SZD Junior	615	32	*356	363	671	*577	577	3191
29	Quigley, T.	LS-7	571	0	*613	0	789	936	*217	3126
30	Vaughan, R.	Sport Vega	145	*639	69	406	696	*534	539	3028
31	Ross, G.	Discus B	643	34	*528	806	530	0	478	3019
32	Strange, R. W.	DG-300	*16	*160	*261	*228	0	0	0	665

ENSTONE REGIONALS - August 11-19

Open Class

Pos	Pilot	Glider	Day 1.11.8 164.8km▲	Day 2.12.8 279.2km■	Day 3.13.8 116.5km▲	Day 4.16.8 135km▲	Day 5.17.8 342.9km■	Day 6.18.8 105.5km▲	Total Points
1	Johnston, E. W.	Kestrel 19	919	1000	847	552	911	433	4662
2	Bird, M.	ASH-25	862	927	790	491	1000	230	4300
3	Reed, J. R.	ASW-20	954	972	678	440	890	309	4243
4	Pozerskis, A.	LAK 12	951	779	716	504	977	291	4218
5	Cheetham, R. A.	DG-600	937	898	516	675	*733	432	4191
6	Gaunt, T. R. F.	Kestrel 19	948	932	430	457	912	330	4009
7	Dale, G.	Janus C	771	992	523	579	834	252	3951
8	Sharman, R. C.	ASW-20BL	979	884	221	537	993	305	3919
9	Gardner, D. H.	LS-3A	908	953	683	528	689	148	3909
10	Palmer, R.	Kestrel 19	695	783	763	425	825	244	3735
11	Manwaring, A. J.	ASW-20CL	928	734	485	484	790	267	3688
12	Camp, G. W. G.	Jantar 2B	892	829	692	382	715	112	3622
13	Corbett, C. G.	ASW-20L	764	706	625	416	799	271	3581
14	Nash, Jane	Ventus B	936	882	117	439	978	225	3577
15	Costin, M. C.	DG-400	589	807	676	533	873	98	3576
16	Gardner, T. R.	DG-202/17	841	852	449	475	908	0	3525
17	Olender, S. G.	Ventus B	831	323	724	467	831	309	3485
18	Stringer, M. G.	Kestrel 19	639	783	700	425	591	77	3215
19	Roberts J. H. West, S.	Mosquito B	944	684	320	290	*760	192	3190
20	Watson, A. J.	Mosquito B	705	954	397	389	0	429	2874
21	Tapson, B. Becker, P.	Janus C	946	635	403	354	374*	81	2793
22	Maynard, V. H.	ASW-20	496	662	102	398	587	188	2433
23	Wright, R. H.	Mini Nimbus	580	839	355	401	0	188	2363
24	Thompson, R. J.	Vega	547	37	626	379	769	0	2358
25	Wilson, T. G.	Mosquito B	651	572	119	348	506	109	2305
26	Cumner, G. M.	ASW-20	837	863	575	0	0	0	2275
27	Hutchings, A. R.	ASW-20CL	*17	291	321	387	846	267	2129
28	Bramwell, D. S.	Open Cirrus	561	694	433	0	211	128	2027
29	Smith, S. M.	Vega 17L	651	0	521	324	236	270	2002
30	Miller, J. A. K.	ASW-22	686	0	161	354	738	0	1939
31	Clarke, C. J.	Vega 17L	328	200	199	218	0	0	945

Sport Class

Pos	Pilot	Glider	Day 1.11.8 124.9km▲	Day 2.12.8 253km▲	Day 3.13.8 116.5km▲	Day 4.14.8 122km▲	Day 5.18.8 135km▲	Day 6.17.8 306.6km■	Day 7.18.8 105.5km▲	Total Points
1	Alldis, C. J.	LS-4	748	976	733	305	676	966	258	4662
2	Dobson, J. B.	LS-4	789	1000	*675	453	625	771	210	4523
3	Langrick, D. J.	LS-4	716	919	439	212	570	1000	143	3999
4	Baldwin, A. J.	Libelle 201B	610	696	573	456	560	653	128	3678
5	Williamson, M.	Pegasus	*612	723	657	471	437	644	82	3626
6	Crabb, P. G.	Std Cirrus	833	*769	0	173	758	914	165	3612
7	Roberts, S.	Discus	542	815	*396	418	676	609	128	3584
8	Craig, G. W.	Std Cirrus	794	927	106	237	623	661	115	3463
9	Spiller, R. W.	LS-4	629	843	471	98	546	704	143	3434
10	Brown, G. R. P.	LS-7	647	894	176	477	494	602	128	3418
11	Westwood, D. J.	LS-4	710	737	506	*0	550	662	210	3375
12	Wall, N. H.	Discus	687	*676	679	134	484	525	117	3302
13	Hawkins, G. P.	ASW-19B	*0	788	351	270	827	959	0	3195
14	May, J. I.	LS-4	725	797	61	205	461	765	119	3133
15	Welsh, S. J.	LS-4	515	817	0	182	536	630	286	2966
16	McKirdy, G. V. Wright, J. S.	Pegasus	*574	*121	*41	*423	*485	*906	*92	2642
17	Lynch-Jennings, N.	Std Cirrus	656	587	69	0	585	567	150	2614
18	Parry, N. V.	LS-4	286	912	*0	0	*408	584	268	2458
19	Robson, D.	Std Jantar	420	553	101	0	0	592	135	1801
20	Burry, Jill	DG-300	724	846	44	115	43	0	0	1772

IMAGINE



Mountain soaring, wave and thermal flying in glorious Spain

★ ★ ★

★ Join us for tailor-made holidays
★ Families or individuals welcome
★ Beginners and pundits alike will enjoy breath-taking scenery in our Grob 109B
★ Instrument flying, cross-country, field landing instruction
★ Relax in our luxury private villa, with pool, and experience the holiday of a lifetime

Contact
The Bartons 081-449-9346/081-953-9689
or Spain 010.34.6.5795355

GLIDING IN SPAIN

Neogene Paints

Your specialist paint manufacturer

C664 High Tautening Dope To C/E DTD 753

C665 Aluminium Surfacer 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.

Colour Matching Service

Large or small quantities supplied

Consult our Technical Advisory Service:

Printa Inks and Paints Limited,
Neogene Works, 65 Alfred Road,
London W2 5HQ.
Telephone 071 289 2271

Industrial Paint & Powder Ltd.,
45 Lanark Road, Edinburgh EH14 1TL
Telephone 031 443 8793

CLUB NEWS

Copy and photographs for the February-March 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 December 4 and for the April-May issue to arrive not later than February 12. The fax number is also 0223 247725.

GILLIAN BRYCE-SMITH
October 10

AQUILA (Hinton in the Hedges)
Congratulations to John Cooper on going solo and to Bernard Bateman on his very rapid Silver height.

Our Long Mynd expedition was a great success with 5hrs for John Rayment (completing his Silver badge 31 years after going solo!), Richard Collings and Steve Blackmore. The wave flying fully justified us taking the Pawnee.
J.R.

BANNERDOWN (RAF Hullavington)
In the best ever Inter-Services Regionals four of our pilots - Andy Smart (Ventus), Jon Arnold (Discus), Pete Woodman (Astir CS) and Alan Cleaver (Astir 77) - flew Diamond distances. Peter won the prize for 2nd place and Alan the best novice competition pilot prize.

Our long run of successes in the Inter-Club League ended with us coming 3rd in the final, despite Alan Cleaver's amazingly consistent Novice Class wins.

Congratulations to Kerry Narain on completing his Silver badge with a distance leg and Derek Taylor on his assistant instructor rating. The Kirby Cadet (not Kite as in the last issue) has now gone cross-country.
D.C.F.

BATH & WILTS (Keevil Airfield)
There were many memorable flights during our first task week for several years. Pilot of the week was Graham Galloway with his 300km O/R in 6½hrs, landing at 1945 - his umpteenth attempt at Gold.

Our two-seater training week culminated in Dave Smith, Fred Arkle, Edward Elliott, Gordon Gaughan and Pearce Cadwalleder going solo and Graham Mann resoloing.

Steve (Ski) Gizeskowiak completed his Bronze badge and there have been innumerable Silver heights. The last Inter-Club League meeting produced many outlandings but two scoring days. Our runways have been resurfaced.
B.H.

BLACK MOUNTAINS (Talgarth)
We have had some excellent thermal and ridge soaring with wave still going strong into October. We welcomed expeditions from other clubs and congratulate Larry Matthews (East Sussex) on his Gold height. Also to Jill Grundy and Will Wallis on going solo.

The K-13 is proving to be invaluable. The August Bank Holiday dinner was a well attended, successful evening.
J.G.





Our latest batch of 16 year-old pilots. First two sets of twins. Top left: Chris and Peter Newell, London GC, photographed by S. Cross. Top right: Anne and David Allison, Chilterns GC. Then below left: Antonia Johnson, Borders GC, and below right: Nick Longfield, Yorkshire GC.







Above: New solo pilots from Dartmoor GC - l to r: John Hunt, Steve Lowe and Frank Hopkins with their instructor, Alan Holland. Below; RAE GC's K-13 photographed during an expedition to La Motte, France.



BORDERS (Galewood)
Interest in our full time wave weeks, which are just starting, has been good with visitors coming from many parts of the country. Congratulations to Steve Walsh from Upavon on Gold height and 5hrs on his first flight at Galewood.

Richard Horan, who is going into the RAF, gained his Silver height but sadly missed his distance on the same flight.

We are hoping to buy a glass two-seater and are using the Puchacz demonstrator during the wave weeks.
A.J.B.

BUCKMINSTER (Saltby Airfield)
We have had another good season with a crop of badge claims. Congratulations to Jan Bassett, Mike Entwhistle, John Harwood, Roy Henderson, Mike Hinder, Richard Kilham, Kathy Lawrence and Alan Middleton (Silver badges) and Dave Anderson, Gary Bustin, Mike Calvert, John Granger, Jim Holton, Trevor Hughes, Paul Walker and Jill Woodman (going solo). Our treasurer, Bill Munns, fell out of the sky after 1hr in good thermals to find he had reached the sea, which probably meant he had finally got his Silver distance!

A BGA safety officer came to a flying evening but didn't give away his identity until we were in the pub.

Having a concrete strip means we operate, weather permitting, throughout the year - visitors welcome.
D.H.

CAIRNGORM (Feshiebridge)
The wave season is underway and we welcome Blackpool & Fylde GC, our longest standing visitors, and Avon GC in their sixth wave season at Feshie.

In September the club two-seater was substantially damaged landing on a hill and we are looking for a replacement.
S.M.

CONNEL (Connel Airfield)
Malcolm Shaw has joined us as CFI and Iain MacArthur and Frank Walton have AEI ratings, giving us six instructors. Congratulations to Norman May and Gerry Bryer (going solo) and Bill Miller (Bronze badge).

Angus GC came in May and we went to Portmoak. Both visits were most enjoyable. Our thanks to Angus Fleming and David Whitelaw for an on the spot decision on our behalf to buy the Puchacz and to Coventry GC for the loan of their trailer. It is giving us longer, higher flights and the ability to use hills which were out of our range. We have logged nearly 40hrs in it despite the recent storms.
R.W.

CORNISH (Perranporth)
The Motor Falke has a damaged wheel housing and smashed propeller. We flew the Puchacz two-seater demonstrator for two days.

Congratulations to John Shaw and Phil Hawkey (AEI ratings); Shaunne Shaw and Terry Edwards (5hrs) and Bernie Hatton on going solo.
G.A.H.

COTSWOLD (Aston Down)
Tim Macfadyen (ASW-20) flew the first 750km from Aston Down on August 7, taking 10½hrs, but unfortunately the camera had failed, so no diploma! On the same day Mike Hajdukiewicz (SHK) and Geralyn Macfadyen (Sport Vega) flew 500kms (Geralyn also gaining Gold and Diamond heights at Aboyne in September to complete her Gold). Both pilots now have all three Diamonds. Jane Randle (Nimbus 2) broke the UK women's 200km triangle record (subject to homologation) with 77km/h.

Congratulations to Simon Housden on a 330km O/R in September and Ron Turrell on Gold height at Aboyne, while at Le Blanc, France, Richard Burgoyne, Dave Williams and Fraser Wilson flew 300kms, all completing Gold badges. Mike Barney, Mike Levitt and Les Przeleski completed their Silver badges and new solo pilots are Tim Barnes, Alan Burton, Peter Maller, John Frost and Bill Dallimer.
G.M.

CLEVELANDS (RAF Dishforth)
This fine summer's achievements continue - congratulations to Andrew Ashley (going solo); Jackie Clegg (Silver height); Robin Sinton (completing his Silver badge with a 5hrs); Mark Minary (all Silver legs and Gold height); Bob Little and Vince Suttle (Gold heights); Dick Dawe and Tor Taverner (300kms to complete their Gold badges) and Neil Claughton, Martin Durham and Chris Sherlock (500kms for all three Diamonds).

Various Nationals and Regionals have been flown with the Acro (assorted pilots) coming 3rd in the Wolds Two-Seater Comp.

The old hangar relived its days of glory when we held our Battle of Britain party, complete with authentic food. We understand that Stan Cynalski and Roy Olender are the last Polish wartime pilots still flying; Roy still instructs with us while Stan regularly airs their Pirat.
J.P.

CRANWELL (RAFGSA)
We have had a busy season. Congratulations to Hugh Moonie, Paul Sweeney, Jennie Beattie and Lorna Hutchings (going solo); Julia Shearwood (completing her Silver badge with 5hrs); Simon Pascoe (Gold distance/Diamond goal) and John Lawson and Angie Tapson (motor glider solos). Angus Watson completed part 1 of the UK Cross-country diploma and fell 30km short of a 300km attempt.

The Skylark rebuilt by Steve Benn took to the air after 8 years in the workshop. Mick Lee completed 2000hrs with a cross-country in the Ventus.

Mick Wood and Simon Pascoe are now tug pilots. Neighbouring clubs will be welcome at our AGM on December 1.
B.S.

DARTMOOR (Brentor)
A publicity campaign has doubled our membership and by recruiting groups from the police, senior scouts and local firms we have people who might not have joined as individuals.

Congratulations on going solo to Karon Corley, Gary Davidson, Paul Rowell, Steve Lowe, Frank Hopkins, John Hunt and Ray Bundy.

In spite of great efforts by Alan Holland, Don Puttock, Trevor Taylor, Peter Williams and occasionally our founder instructor Ivor Phillips, we desperately need more instructors to cope with the large membership and plans for cross-country flying outlined by our chairman, Phil Jarman, who has been a wonderful leader during 1990.
F.G.M.

DEESIDE (Aboyne Airfield)
On September 23 there were 23 Diamond heights with a crop of Diamonds the week before. Contact Fiona Bick on 050554382 to book for 1991, leaving your name/number/requirements on her ansaphone.

Mike Law has done sterling work as our first residential instructor and we are pleased he is returning for 1991. We are flying seven days a week from March onwards and visiting gliders are welcome throughout the summer. The area is ideal for a family holiday.

Congratulations to Bruce Wyer, Simon Cossie and Graham Mann (AEI ratings); Paul Booth and Ed Heron (going solo) and Graham Keates (300km Diamond goal).

We have nearly finished building the Vega trailer, have laid 20 tons of concrete in front of the fuel pump and nine tons of granite chips in front of the clubhouse.
G.D.

DEVON & SOMERSET (North Hill)
The dry spell broke for our task week but undaunted we paddled around small tasks to give four days, all won by the Oly 463 flown by Rod Ward and Peter Craggs.

Ron Jones completed his Gold badge and went to 20000ft at Aboyne. Les Hill has his 5hrs and Andy Davidson a Bronze badge. Peter Huggins, Bob Varty, Tim Bardon, Dav Cottingham, Martin Woolner, Damien LeRoux, Ray Duckett, Martin Bennett and Doug Ray have been sent solo, mostly by Tim Gardner.
G.P.

DUKERIES (Gamston Airfield)



John after his solo flight.

John Walker has gone solo at 72, which was a proud and enjoyable moment for us all; Bob Cartledge has his Bronze and flown cross-country; Keith Gregory his 5hrs and Keith Hebden an AEI rating.

Gary Foster is maintaining our winch and car and Peter Turner's lecture evenings on the first Thursday of each month are popular and useful. ➡

Our hangar is nearly complete after much hard work.
N.W.W.

EAST SUSSEX (Ringmer)
Cable retrieve is now more civilised with the new Big Bear ATV.

Fred Bishop organised another enjoyable expedition to Talgarth which resulted in lots of fun, 5hrs for Barry Laker and Gold height for Laurence Matthews.

Other congratulations to Bob Fielder (Bronze badge) and Alex Borak, Mike Burgess, Peter Drew-Bear, Geoff Reeves and Phil Staplehurst (going solo).
L.R.M.

ENSTONE (Enstone Airfield)
This has been a splendid year with three Silver and five Bronze badges completed. Special congratulations to Tony Cox (Diamond distance), John Canning (Bronze and Silver badges in one season) and Larry Griffiths, Roger Pullen and Simon Woodley on going solo.

Our Regionals was the best ever with 51 gliders and our committee is now working on next year's competitions, particularly the Open Class Nationals. Our facilities are to be improved and expanded to meet the demand and already much work has been done on the clubhouse -our thanks to those who have helped, especially Larry and Ken.

Nick Murphy is taking over from Geoff Dixon as CFI and we thank Geoff for all he has done.

A Twin Astir joins the club fleet to improve facilities for advanced training.
M.F.S.

GLYNDWR (Denbigh)
We are pleased with our first six months - 2993 flights and 608hrs. Doug Johnson (after 20 years), John Bradley (after 11 years) and Peter Wills (after 8 years) have resoloed. Congratulations and also to Geoff Glazebrook who claims the first 10000ft climb in an Olympia 463.

Fourteen have completed the 38 miles ridge run and an IS-30 has joined the two K-7s.
T.K.

HIGHLAND (Dallachy)
Well done to Neil Anderson (assistant instructor rating); Tony Kane and Glenda Anderson (AEI ratings); Mark Bissett (Bronze badge); Alistair McIntosh (going solo) and Rod McLeod (resoloing after many years). At one of two very successful expeditions to Avon GC, John Thomson flew Silver distance.

Our K-8 has come out of its chrysalis and must be the best example in Britain - well done Steve Young and helpers - and Bill's new winch is now complete.
A.G.V.

KENT (Challock)
Derek Waldron won League 1 of our very well organised August task week with a club K-8, led by Jerry Bass, winning League 2 just ahead of the K-13 flown by Mike Kemp and his crew.

Christine Bell, Steve Riley, Alan Clarke and Bob Burden have AEI ratings; several members completed in Regionals resulting in 3rd and 5th places; we have had successful expeditions to five clubs and hosted a meeting with BGA Executive members in July.
A.R.V.

LAKES (Walney Airfield)
Alan Meadows, John Burdett and Paul Rose, a tug pilot, have soloed. Our summer courses have been a great success with long, fine flying days and many visitors have had trial lessons.

Peter Lewis, Peter Redshaw and Dave Hannah flew a total of 110hrs at Le Blanc including a Diamond distance for Peter Redshaw. Peter Craven flew 500km at Minden, Nevada.

Dave North and Paul Johnson had interesting wave flights over Whicham valley to 10000ft in the Capstan. We have a DG-300 on site.
G.J.

LONDON (Dunstable)
The annual expedition to Aboyne brought six Diamonds and five Gold badges.

Club soaring weeks (a sort of combined task week and soaring course) were a great success with four more planned for 1991 when we should have added a high performance single-seater to our fleet.

Congratulations to Robin May on winning the Open Class Nationals for the third year running. Also to Chris and Peter Newel and Nick Woodman-Smith on going solo on their 16th birthdays.

A vintage weekend in September was so suc-

Cair Aviation Ltd.

"You can bank on us"

RADIOS
ICOM A2 Tx/Rx. **£295,** ICOM A20 Tx/Rx, VOR **£345,** Inc. accessories.

INSTRUMENTS
Latest zero resettable PZL Sensitive Variometers in standard or miniature sizes. Expanded scale PZL ASI's. PZL T.E. Capsules. Reconditioned Altimeters. Reconditioned Panel Mount Airpath Compasses. Reconditioned 12V T/S. Accelerometers.

PARACHUTES
SP6, Steerable, 18 year life, Bag & Manual. **£320**

AIRFRAME SPARES
Cadet, Tutor, Sedberg, Prefect, T.31, Grasshopper, Swallow, including some large components.

OTTFUR RELEASES
We own the design and manufacturing rights of the "Ottfur" release. New releases available. Exchange recondition service **£39.50**

TRAILERS
Superior well engineered metal trailers for the discerning glider owner. Complete or in kit form.

GLIDERS
Swallow, T21c, Foka 5, Choice of K6s.
*SZD-51-1 Junior **£14,500**, with Trailer **£17,000**
*SZD-50-3 Puchacz **£20,500**, with Trailer **£23,600**

*New gliders in conjunction with Anglo Polish Sailplanes Ltd.

Prices shown exclude VAT and carriage, for full details or our competitive prices and brochure please send SAE

COLIN D. STREET
"Yewdown House", 7 Sharpthorne Close, Ifield, Crawley, Sussex, RH11 0LU.
Tel: 0293 543832, FAX 0293 513819

EB80: THE GLIDER PILOT PARACHUTE OF THE NINETIES

- Competitive price includes travelling bag
- Designed and built for long-duration comfort
- Clean, contour-styled pack and harness giving snag-free cockpit entry-egress
- State-of-the-art, fast opening canopy with optional steering
- Chosen by the RAF for ATC cadet glider training

For details contact:

Sales Department, IRVIN GREAT BRITAIN LIMITED
Letchworth, Herts SG6 1EU
Tel: (0462) 482000 Fax (0462) 482007 Telex: 82198 (IRVLET G)

A MEMBER OF HUNTING PLC



cessful it is hoped to hold a more substantial vintage week during 1991.
J.B.

MENDIP (Halesland)
Congratulations to Ron Perry and Paul Croote on a fine performance in Competition Enterprise, with Ron gaining Diamond distance, and to Bob Merritt on 6th place in the Lasham Regionals. Steve Collins has resoloed and Bob England and Lawrence Anderson have their Bronze badges.

After four years Ron Perry has resigned as CFI due to personal and business reasons - our thanks to him for all his efforts. Peter Turner has become our sixth CFI.

Thanks to Law Anderson and his construction team the clubhouse is nearing completion.

The end of season barn dance was a great success.
T.A.D.H.

NENE Valley (RAF Upwood)
Our Bassingbourn week went well in August with plenty of soaring for members and the Queen's Regiment *ab-initios*.

John Young and Dave Bourne have completed 100km triangles. Horace Bryant, CFI, conducted a "lead and follow" in September which turned into a "lead and scatter".

Congratulations to John Taylor, Jim Rignall, Julian Poole and Eric Yeardley (Silver heights) and Brian Palmer and David Hartley (going solo).
R.E.

NEWARK & NOTTS (Winthorpe)
We had an excellent season with an increase in membership, thanks partly to trial instruction lessons. Also two club expeditions visited us.

We congratulate Martin Clark and Paul Russell (going solo); Dave Alvey and Bill Griffiths (resoloing); Lesley Noon (Bronze badge); Mike Heppenstall and Mike Abrahams (5hrs) and Frank Hunt (Silver badge). Commiserations to John Collier who finally remembered to take a barograph for his umpteenth 5hrs only for it to stop in flight.

Visitors are always welcome.
M.A.

NORFOLK (Tibenham)
In late July 100 veterans of the USAF 2nd Air Division (445th Bomb Group) visited their old base. They visited the village and villagers, attended the church for a service during which a plaque was dedicated, flew in a variety of light aircraft and gliders (to see the airfield for the last time) and were wined, dined and entertained in our hangar.

-We had an expedition to Koblenz GC, Germany in June with wonderful hospitality.

Congratulations to Roger Abrahams on flying our K-18 on a 308km O/R to Silverstone in 6¾hrs and to Steve Roderick on completing his Silver badge.
R.J.H.

NORTHUMBRIA (Currock Hill)
The expedition to Brunton airfield near Seahouses in Northumberland was a great success and we returned the K-7 and Pirat by dual aerotow, a new experience.

The September Portmoak expedition yielded Diamond (1), Gold (4) and Silver (1) heights and two durations despite very windy conditions and only three flyable days. Ron Davis landed in a field holding an irate bull but the glider was retrieved without mishap.
R.D.

OXFORD (Weston on the Green)
Congratulations to Richard Hackett and Peter Shears (going solo); Malcolm Moxon and Steve Porat (5hrs) and to Mark Pollard, Bob Perry, Donal Meehan and Ian Young (Silver distances).

Richard Hall and Brian Payne had rare wave climbs to over 8000ft from Weston on the Green, one setting a new site record.
F.B.

PETERBOROUGH & SPALDING (Crowland Airfield)
The annual soaring week was followed by a very successful barbecue, thanks mainly to the efforts of Viv Brown and Kevin Fear. Money raised went towards a new trailer for the Sport Vega.

Congratulations to Ken Snape (Diamond height) and Bob Darby and Steve Turner (Gold height) at Aboyne.
M.J.

PORTSMOUTH NAVAL (Lee-on-Solent)
The good season has given an unprecedented number of cross-countries from our site. Congratulations to Tom Edwards (Silver badge); Kiera Hibberd (Diamond goal) and Tony Wahlberg (assistant instructor's rating).

Chris Joly represented us in the Inter-Services Regionals at Bicester, achieving his longest cross-country of 460km and winning the Navy's Goodhart trophy.

The summer *ab-initio* course was again successful with 18 solos, while the more experienced enjoyed flying the SZD Junior, our latest acquisition.
Y.C.

RAE (Farnborough)
It's been a highly productive and enterprising summer. Howard Torode finished 3rd in the Inter-Services Club Class, flying one 500km and three 300km. We had several in the Junior Nationals with Guy Westgate and Chris White winning a raffle prize of a day out for two in an ASH-25.

Four gliders and ten pilots went to La Motte in the French Alps and enjoyed over 200hrs flying.

There is a potential crisis looming over the future usage of Farnborough airfield. However, we will survive and thrive somewhere, somehow - watch this space!
M.T.D.

SCOTTISH GLIDING UNION (Portmoak)
Our Pawnee, 75% funded by a Scottish Sports Council grant, is arriving soon. 1991 statistics are around the same level as 1990 due to reduced winter flying - wet and windy - and reduced course and Air Cadet activity. However, membership continues to climb.

We have a spate of achievements - congratulations to Colin Hamilton and Anna Domonkos (full Cat); David Oswald, Allan Davie, Kevin Dillon, Mike Carruthers and John Whitfield (AEI ratings); Alan Russell (Silver badge) and Alec Cruickshank (going solo).

We flew three members from the Guide Dogs for the Blind Adventure Group and it was rewarding to see their confidence in the air.

Autumn hasn't been too kind to our visitors, but a few have had badge claims.
M.J.R.

SHALBOURNE (Rivar Hill)
After ten years with temporary planning permission we have permanent approval and thoughts of longer term planning.

Our two barbecues organised by Steve Glassett were very enjoyable. We had good coverage in the local newspaper's leisure magazine.

Congratulations to Brian Vowell, Mike Kingston and Doug Adams (going solo); Neil LLoyd and Tom Glen (Bronze legs) and Jonathan Mills on his third Diamond with a 500km.
S.C.O.

SOUTHDOWN (Parham Airfield)
Our Diamond Jubilee celebrations were a great success and our thanks to all who helped make it such an enjoyable week.

Robert Adam, Les Beale, Carole Groom, Colin Macdonald, Martin North, Geoff Weston and Helen Buchanan have gone solo, Helen on her 16th birthday making it a family affair with her father, Angus, sending her solo and her mother, Maggie, flying the tug.

Tim Brewer has his Bronze badge; Dave Wright a Silver badge and Graham Noble a UK Cross-Country diploma. Richard Cooper, Richard Hawkins and Rod Walker have flown Diamond distances and two expeditions to Portmoak and Aboyne resulted in them gaining Diamond heights as well as Jane Turner. Congratulations to them all.
C.M.R.

SOUTH WALES (Usk)



Obituary - Angelos Yorkas
It is with deep regret we record the tragic death of our CFI, Angelos Yorkas, aged 34, in a gliding accident on August 4 (see the last issue).

Angelos had been an outstanding pilot since he joined us in 1980 from Weston-super-Mare. ➡

PROTECH
LEADING FINISHES

Protect and appreciate your soaring investment

NOW TAKING BOOKINGS FOR REFINISHING & RECOVERING DURING COMING WINTER SEASON.

Early deposit secures fixed price & position in workshop.
Remember accurate reprofiling restores appearance, performance and value.
Waxing, numbers, letters and personalised colour schemes.
Our scope includes skin punctures, belly landings, trailer damage and tow out gear. C of A's can be arranged.

PROTECH LEADING FINISHES

FLY in or DRIVE via M40 to:
Sailplane Studio, Booker Airfield, Near Marlow, Bucks.
Telephone 0494 438581 or 0753 887829

Hydro-Tech Engineering

5 YEAR STATUTORY PERIOD FOR RE-TESTING OF OXYGEN CYLINDERS

Hydro-Tech specialise in the testing of cylinders to BS 5430.

Glider oxygen cylinders re-tested and pillar valves serviced. Test Certificates supplied.

contact us at:
Tarn House
Gt Urswick, Nr Ulverston
Cumbria LA12 0ST
Tel: 0229 56782

24 hour answering service

When Winter comes can Spring be far behind?

REPLACE your worn-out, old Trailer with a spanking new AMF DROOPSNOOT
MODERNISE your Trailer Fittings - see AMF's Full Range
SMARTEN UP your Trailer with an AMF Re-Paint
BRING your Trailer in for an AMF Overhaul
ORDER your AMF 3-Piece Kit for Solo Towing-out
GUARD against gale-force winds - let AMF fit Tie-Down Ring Bolts

Full Maintenance and Spares Service. No Repair Too Small - Quotations Free

AMF ENTERPRISES, THE TRAILER PROFESSIONALS, MEMBURY AIRFIELD, LAMBOURN, BERKS. RG16 7TJ
Tel/Fax: (0488) 72224 for Price Lists and Quotations



CHART UPDATE

NEW!

The following revised charts have been published by the Civil Aviation Authority:-

1 : 500 000 - NORTHERN ENGLAND & NORTHERN IRELAND - Edition 13
Showing the latest air information and incorporating *the new style topographical base.*
Also :
1 : 250 000 - SOUTHERN ENGLAND - SHEET 16 - Edition 13
1 : 250 000 - NORTH MIDLANDS & YORKSHIRE - SHEET 11 - Edition 12

Previous editions of these charts are now obsolete.
You can purchase the latest editions of all quarter and half million aeronautical charts of the United Kingdom, as well as a comprehensive chart catalogue - either in person or by post from :-

CAA CHART ROOM,
T1120, CAA HOUSE,
45 - 59 KINGSWAY,
LONDON, WC2B 6TE.
Tel : 071 832 5569/8

and from the following accredited chart agents :-

AIRPLAN FLIGHT EQUIPMENT - Open Saturdays-
Building 523A, Southside, Manchester Airport,
Cheshire SK9 4LL. Tel: 061 499 0023/4.

AOPA
50a Cambridge St,
London SW1V 4QQ Tel: 071 834 5631.

BGA
Kimberley House, Vaughan Way,
Leicester LE1 4SE Tel: 0533 531051.

AIRTOUR INTERNATIONAL - Open Saturdays-
Elstree Aerodrome,
Herts WD6 3AW Tel: 081 953 4870.

BRITISH AIRWAYS - AERAD
AERAD House, Heathrow Airport,
Middlesex TW6 2JA Tel: 081 562 0795.

EDWARD STANFORD LTD - Open Saturdays-
12-14 Long Acre,
London WC2E 9LP Tel: 071 836 1321.

They are also stocked by most flying clubs and schools.

Civil Aviation Authority CAA

DON'T FLY WITH AN OUT OF DATE CHART

He was a full Cat instructor, a tug pilot and had many flights in excess of 500km, the most recent being one of 680km. He also had all three Diamonds and led the way in developing members' cross-country skills by training, instruction and personal example.

His many friends will miss his cheerful and enthusiastic personality. Our loss is great but that of his wife, Sue, and the rest of his family is greater. We extend our deepest sympathy to them all.

Liz Phillips

STAFFORDSHIRE (Morridge)

Congratulations to Chris Harris on completing the assistant instructors' course; Dennis Elliott, Mike Laver, Simon Watson and John Williams on their Bronze badges and Geoff Oultram, chairman, on his 5hrs.

After the dry summer our field, thanks to the grass mowing crews, is in excellent condition and further drainage work is planned. We are still considering the possibility of a new site.

A new Tost winch is coming in March and we have a new mains generator.

The one-day and Wednesday evening courses were again successful and we are well ahead with 1991 bookings.

K.L.A.

STRATFORD ON AVON (Snitterfield Airfield)

We had a most successful season due to the dedication of instructors, winch drivers and support crew. New solo pilots are Ian Edkins, June Harris, Phil Pickett and Nigel Spedding with numerous Bronze legs recorded.

Congratulations to Bob Berry, Maurice Noxon and Geof Butler on their Bronze badges and Derek Bennett, Jonty Boddington, Vernon Brown and Caroline Coates on Silver badges.

Mid-week flying continues on Thurdays with David Benton, Steve Brown and John Dutton instructing and we welcome Peter Kenealy, a new assistant Cat.

H.G.W.

THRUXTON (Thruxton Airfield)

Steve Black, a tug pilot, went solo and gained a Bronze leg. Congratulations also to Alistair Caie on his Bronze leg - a nice end to an excellent season.

J.B.L.

TRENT VALLEY (Kirton in Lindsey)

Congratulations to our CFI, Brian Griffin, on his 300km during the Northern Regionals; Matthew Tierney for completing his Silver badge and achieving an AEI rating and Diamond height in one month; Steve Slater and John Rice who joined Matthew at Aboyne and also gained Diamond heights and to Patrick Holland for his good effort in his first attempt in our K-6 at the Junior Nationals.

Our two-seaters were less distinguished at the Wolds Two-Seater Comp, the K-7 coming 5th and the K-13 13th. Robin Parker, Garry Rivers and Peter Moggeridge, who flies oil rig helicopters, join our tug pilots.

Our Christmas party is on December 15 and annual dinner on March 1.

M.P.G.

TWO RIVERS (RAF Laarbruch)

We are celebrating Vince Mallon's 21 years at Two Rivers. He has done a tremendous amount to keep the club mobile and many other background jobs which tend to go unnoticed and all members, past and present, appreciate his hard work, thank him for his support and hope he will be with us for many years to come.

We have two expeditions in October - to Innsbruck and Bisperode.

We welcome our new officer I/C, John Hill, and his wife Yvonne. They are new to gliding but he has already got a Bronze badge and Silver height and Yvonne should solo soon. Congratulations also to Kev Berry and Roddy McRae (Bronze badges); Chris Breeds, Paul Grainger, Chris Price and Alastair West (going solo, Alastair achieving two Bronze legs) and Chris Gilbert (AEI rating).

The new glass-fibre K-13 is being delivered in November, with our Twin Astir going to Israel, and we have a new winch.

L.F.

ULSTER (Bellarena)

This season we had spells of poor soaring weather but well attended courses. A highlight was the large club presence at the Ulster Air Show at Newtownards. The Dart 17, ASW-20 and Monerai were on static display while the Capstan was remarkably sprightly in the hands of DCFI, Mervyn Farrell. It will be no surprise if the Kitfox he is building turns out more like a Pitts Special.

The autumn visit to Kerry to join Eire pilots was again well attended with a contingent from Talgarth. We enjoyed cartowing from the vast beaches and the social sene was better than ever. Perhaps more from the mainland should consider coming.

Harry Hanna has an assistant instructor rating.

B.T.

BLACK MOUNTAINS GLIDING CLUB (TALGARTH)



COME AND TRY OUR VERY SPECIAL MOUNTAIN RIDGE FLYING AND WAVE SOARING

We fly 7 days a week, all year round. Weekend and mid-week courses available for beginners or experienced pilots. Because of our good ridge soaring, instructional flights average 45+ minutes.

For details contact
Derrick Eckley on 0874 711254
or the
Airfield on 0874 711463

Gliding in the Black Mountains?
THE TOWER HOTEL

Family run hotel - rooms with en suite, showers or basic facilities available
Bar, Restaurant and Residents Lounge
Situated one mile from Black Mountains Gliding Club
Tel 0874 711253

AWH

GLIDING HOLIDAYS IN THE SCOTTISH HIGHLANDS

ARGYLL & WEST HIGHLAND GLIDING CENTRE
Connel Airfield, North Connel, By Oban, Argyll, Scotland. Tel: Connel (063171) 243

We operate from Connel A/F north of Oban, (see Pooleys) launching gliders from 1400m runways into breathtaking mountain soaring conditions.

1 or 5 day courses April to October. Visiting gliders and tugs welcome.

ONE DAY COURSE £65
FIVE DAY COURSE FROM £260
ACCOMMODATION P.O.A.

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

The Scottish Highlands and Islands

BUCKMINSTER

We open every weekend and Wednesday throughout the year.

One to five day courses available from May to September, tailored to meet your needs.

Mini Courses available at weekends until 1pm where you will share a glider with the same instructor and a maximum of five other students.

Aerotow and Winch launches available and the Club fleet consists of a Puchacz, K13, K8 and K6.

Everybody 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 (0602) 307737

Holiday Gliding Courses for Beginners



Stay in lovely 16th Century farmhouse or our new Clubhouse

Ring Ron or John on
DOVER (0304) 824888

CHANNEL GLIDING CLUB
Waldershare Park, Dover, Kent CT15 5NH



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 from: The Manager, Bristol & Gloucestershire Gliding Club, Nympsfield, Nr. Stonehouse, Glos. GL10 3TX.

☎ 0453 86342/860060

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)

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

Cambridge University Gliding Club

The club is open to everyone.

We winch and aerotow from Duxford throughout the year, mostly at weekends. We run 3 day "Introduction to Gliding Courses" in April and May, 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
6 Camside, Chesterton, Cambridge
Tel. (0223) 67589

LASHAM

Does your home club operate only at weekends?

At Lasham we operate all week, every week which means we could provide a useful supplement to your training. Whether you are not yet solo and would benefit from a week's consolidated instruction, or a budding cross-country pilot needing soaring or field-landing training, we have the expertise and facilities to help.

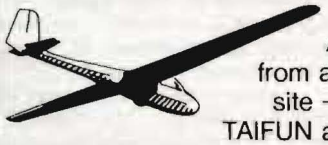
Apart from our large two-seater fleet and excellent aerotow and winch launch facilities, we have a comprehensive briefing room for lectures or instructional videotapes if bad weather prevents flying.

On-site accommodation for club expeditions is always available by arrangement.

Absolute beginners are of course always welcome – we have a large choice of courses and types of membership to suit your needs.

Lasham Gliding Society
Nr. Alton, Hants
Tel Herriard (025 683) 322 or 270

Shobdon



Aerotow from a big flat site – Blanik, TAIFUN and K-8.

HEREFORDSHIRE GLIDING CLUB
Shobdon Airfield Nr. Leominster HR6 9NR
Telephone weekends 056881-8908
or evenings 0905-21740

COVENTRY GLIDING CLUB

- Residential courses held weekly
- 5 day and 2 day
- Good field
- Beginners welcome
- Advanced courses for Bronze & Silver badges. Cross Country Flights during 1989
- AEI courses held on demand

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

LONDON GLIDING CLUB

7 days a week, year round operation

Thermal, Hill and Wave soaring

Modern all glass solo and 2 seater fleet

- 2 & 5 Day courses
- AEI ratings
- Soaring courses

Full catering, licenced bar and accommodation

Details from:
LONDON GLIDING CLUB
Tring Road, Dunstable, Beds LU6 2JP
0582 663419

THE LONDON GLIDING CLUB

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 1991 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

STAFF REQUIRED

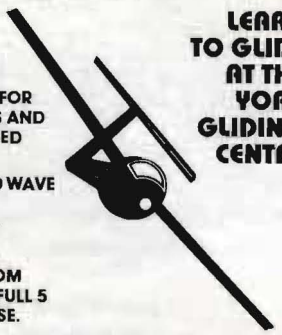
Wolds Gliding Club

A Course Instructor
1991 Season - April-October

Can be Assistant Rated, preferably, but not necessarily Tug Pilot/MGPPL

For further details apply:
Manager
Wolds Gliding Club
Pocklington, E Yorks YO4 2NR
Tel 0759-303579

LEARN TO GLIDE AT THE YORK GLIDING CENTRE



RANGE OF COURSES DESIGNED FOR BEGINNERS AND EXPERIENCED PILOTS
ADVANCED WAVE SOARING
SEVEN-DAY FACILITIES.
PRICES FROM £190 FOR FULL 5 DAY COURSE.

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

VALE OF WHITE HORSE (Swindon)
We have had quite a good season with two very successful courses which we are planning to repeat next year.

There were some good flights from Paul Mansfield, Graham Huggins and Dave Foster with an excellent Silver distance from Gilbert Burge. Congratulations also to Diane Steele on going solo.
E.J.W.

WELLAND (Lyveden)
We have completed the hangar foundations and floor and the steel work is being erected while the clubhouse roof has been removed.

Congratulations to Richard Large (Std Jantar) on his 300km Gold distance and Diamond goal and to Stuart Orwin, Steve Lenton, Nigel Betteridge and Paul Frear on going solo.
R.H.S.

WREKIN (RAF Cosford)
Rowley Fielder, Bob Henderson and Brian Wilkinson have their Silver badges and Rowly joined Noel Hawley and Mike Gagg on our second AEI course run by Mick Davis.

Richie Toon was 4th in the Junior Nationals and flying *hors concours* in the Inter-Services Regionals at Bicester gained Diamond distance, as did Dave Gordon who came 11th.

Kaldown Nsour, our resident Jordanian, has gone solo.

We have our 25th birthday reunion in 1991 when we hope to meet up with past members - see our advertisement in the classified section.
R.J.

YORK GLIDING CENTRE (Rufforth Airfield)
This has been our most successful season with almost every course fully booked and flying virtually every day. A new fuel installation will make refuelling easier and should attract still more visiting aircraft.

Our new colour brochure gives the extra facilities we offer for group and company visits, including land yachting, skid car driving, clay pigeon shooting, rally driving and archery.

Those going solo include Barbara Aspey, Chris Brayne, Judith Crierie, Wendy Farnell, Rhett Harrison, Gilly Rakusen, Paul Scorer, Robert Smith and Andy Stocks with Bronze legs by Glenn Leadsford, Bob Taylor, Terry Taylor (both) and Chris Wrench. Dawn Hammond and Alan Wrigley have Bronze badges; Geoff Barnham and Eddy Metcalfe Silver heights; Rick Hornsey 5hrs and Tom Stocker, who is making a good recovery from his recent illness, earlier completed 394km.
A.W.

YORKSHIRE (Sutton Bank)
John Ellis (DG-400) set a new club distance record of 631km. Congratulations also to Andy Wright (Gold badge and Diamond goal); Bob Boyd (Diamond goal in his M100); Sam St Pierre (Diamond distance); John Goodall, Andy Wright and Mike Brook (AEI ratings); D. Adamczyk, D. Watson and S. Dale (Silver distances) and J. Tomlin and N. Longfield (going solo).

The club has a new K-21 and there is a new T-21 syndicate. We have welcomed a party from Nympsfield and we have an expedition to Feshiebridge this month.
C.L.

SWISS CHOOSE OLD WAY

The Swiss have decided to abandon all experiments with new start procedures and pilot selected tasks, and to go back to the old startline method.

MIDLAND GLIDING CLUB
THE LONG MYND



ADVANCED TRAINING COURSES

Courses from mid March to Bronze standard or Cross Country.
Ab initio courses also always available.
AEI by arrangement.

Detail from:
ROY DALLING
Midland Gliding Club
Long Mynd, Church Stretton
Shropshire SY6 6TA
Tel: Linley (058861) 206

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.

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.

Why not join us at *the* Yorkshire Gliding Club - There is no other club quite like it!

Full residential and catering facilities all year round.

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

LIFTIN' the Blues



An impressive celebration of soaring flight, shot during the British Standard Class National Championships at Nympsfield, England in 1988. With its breathtaking aerial photography and sharp insights into the people and attitudes that circulate within the sport, this 52 minute film will appeal to the pundit and novice alike.

Special Christmas Offer
Only £20 inc. p&p
Available in VHS and Betamax.

Please make cheques payable to:-
Aardman Animations Ltd.,
14 Wetherell Place, Clifton, Bristol.
BS8 1AR. Tel: (0272) 744802.



VISA

Please allow 28 days for delivery.



A CHRISTMAS PRESENT YOU WON'T FORGET

GIFT VOUCHERS FOR TRIAL LESSONS AND ONE DAY COURSES

Also Christmas cards with this photo 50p

CALL ***BOOKER GLIDING CLUB***
0494 29263/442501

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

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

FABRIC

Ceconite Fabric any Quantity supplied

Cotswold Gliders
(Prop. T. Cox)

NOW APPROVED BY
UK Importers
Peter Clifford & Company
as sole UK Repair Agent
for all Blanik Sailplanes

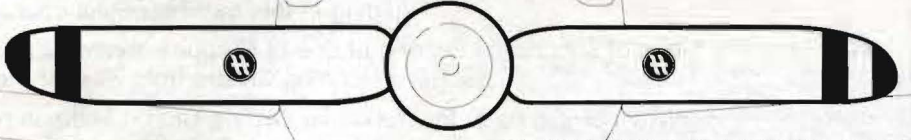
HIGH QUALITY SPECIALIST WORK IN
Glassfibre, carbon, kevlar, wood and metal inc. alloy
All types of repair undertaken - Motor glider engine approval
Kestrel/Libelle aileron drive rebuilds, also rudder drive NDT testing
Full machining facilities for oversize wing pins, axles, control rods etc.

Phone or write
Tony Cox (Senior Inspector)
18 Stanton Harcourt Road
Witney, Oxon OX8 6LD 0993 774892 anytime

LLOYDS APPROVED
CAA APPROVED COMPANY
AI/9182/89

Hoffmann Propeller Servicing

Local Servicing brings you quicker, lower cost repair and overhaul.



★ Grob, Scheibe, Fournier etc.,
★ factory approved workshop
★ large stock of parts available

SKYCRAFT SERVICES LTD.
Facsimile: 0763-852593
Telephone: 0763-852150
Albany House, Litlington, Cambridgeshire, SG80QE

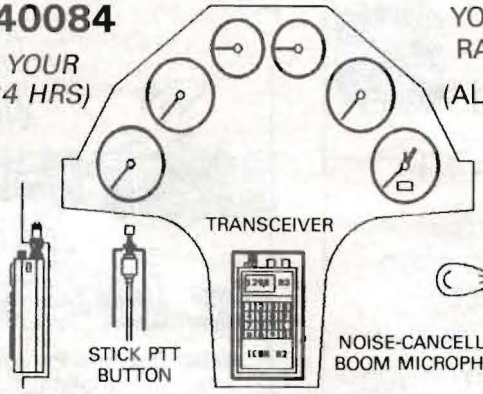
CONTEST

Tel (0962) 840084

CALL US FOR YOUR CATALOGUE (24 HRS)



ALSO THE BEST OF:
ALTIMETERS, VARIOS, ASI'S
COMPASSES, DECCA NAV
ILEC ADC'S & VARIOS
MOTOR GLIDER I/COM RADIO
THERMAL CLOTHING ETC. . . .



YOUR BEST COMPLETE RADIO/NAV SYSTEMS:
(ALL 760 CHAN 5WPEP)

ICOM BASED:

A2: £269
(10 MEM)

A20: £299
(16 MEM & VOR NAV)

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'Orignal, 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 (or $35.00 by Air Mail) but International Money Orders preferred, direct to the British Gliding Association.

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

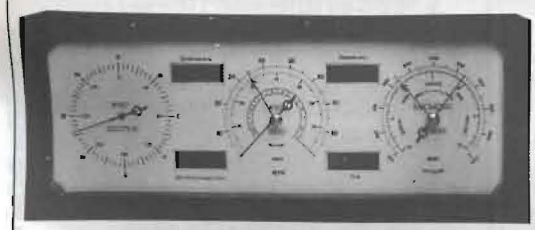
BAROGRAPH AND STATISTICS PRINT–OUT



LET US SEND YOU DETAILS OF: * SYSTEM OPERATION * BAROGRAPH * PRICE AND DELIVERY

CONNEVANS LTD., REIGATE, SURREY RH2 9YR TEL: 0737 247571 FAX: 0737 223475

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, 12 V or 24 V.

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




David Goodison

INSTRUMENTS

CALIBRATED, SERVICED AND REPAIRED

PZL WINTER AND SMITHS

CALIBRATIONS RETURNED WITHIN THE WEEK

4 BROADACRES AVENUE
CARLTON, Nr. GOOLE
NORTH HUMBERSIDE DN14 9NE
Tel. GOOLE (0405) 860856



At last . . . affordable aviation

Why not?
Learn to Paraglide

VISA Access

Open 6 days a week for tuition and sales

Welsh Borders Paragliding Centre
Telephone: 054421 375 or 341

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)

NOW IN OUR 30TH YEAR

SPEEDWELL SAILPLANES

THE REPAIR SPECIALISTS

WE REPAIR: GLASS - STEEL - ALLOY - WOOD

TUG AIRCRAFT REPAIRS AND RE-COVERS

VINTAGE AIRCRAFT REBUILDS

FULLY QUALIFIED STAFF

LLOYD'S APPROVED

RAPID SERVICE

SHEPLEY LANE, HAWK GREEN, MARPLE, STOCKPORT, CHESHIRE SK6 7JW
Tel: 061-427 2488

Anglia Sailplanes

C of A Inspections and repairs to all sailplanes and motor gliders.

Phone or write to:
Stu Hoy (BGA Senior Inspector)
Crown Cottage, Lower Street
Gissing, Diss, Norfolk IP22 3UJ
Tel: Tivetshall (037977) 4114

THE AVIATION BOOKSHOP
HAS
THOUSANDS OF BOOKS
THOUSANDS OF MAGAZINES
in many languages - as well as
THOUSANDS OF PHOTOGRAPHS
All on Aviation: WW1, WW2, Civil, Military, Engineering, Aero Modelling, Navigation, Pilotage, Helicopters, Meteorology etc.

Call in -
or send **£1** for large catalogue

THE AVIATION BOOKSHOP
656 Holloway Road
London N19 3PD
***Tel:* 071-272 3630**
Access and Visa welcomed

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

STORCOMM
TWO-WAY RADIO
TR7603 Air Set

Each set fitted with all four gliding channels 130.4, 130.125, 130.1 and 129.9.

'Volmet' 128.6 optional on channel 4.

- ★ Full power transmitter with excellent speech quality.
- ★ Highly sensitive and selective receiver works both distant and close range.
- ★ Extremely rugged and reliable.
- ★ Full back-up service and spares available.
- ★ CAA and NATS approved.

All radios supplied absolutely complete with easy fit connectors and all fittings.

Details information, prices and full Technical Specifications FREE from

GEORGE STOREY *Tel. 09327 84422*
H.T. Communications, P.O. Box 4
SUNBURY ON THAMES, Middlesex, TW16 7TA

JOIN THE QUEUE -

More and more 'Pilgrims' each year follow the sun to fly at Australia's largest and most progressive soaring site

- BENALLA!

Courses for all standards of pilot; sailplane charter, single or shared, Junior to Nimbus; Badge flights to 1000km; possible National and International records.

High performance training in Janus.

Write or phone John Williamson for details - but ***soon.***

We are booking now for 90/91 season.

GLIDING CLUB OF VICTORIA
Box 46, BENALLA, VIC. 3672, Australia
Phone 057-621058; Fax 057-625599

Special-rate travel and details of alternative Aussie holidays from:
TRAVELBAG, 12 High Street, ALTON, Hants. GU34 1BN. 0420-88724

LAKE KEEPIT



Australia's Holiday Soaring Centre

***LOCATION:** inland scenery at its best. Kangaroos and birdlife abound. One of Justin Wills' favourite sites. Superb cross country soaring.
***ACCOMMODATION:** economic on-site accommodation.
***FLEET:** includes LS7, LS4, Astir, Libelle, Hornet & Twin Astir.
Via **TAMWORTH, NEW SOUTH WALES, AUSTRALIA 2340**

Phone: Int 61 67 697640
Fax 61 67 697547

TO NURTURE A DREAM

Rodney Witter has spent many years searching the Vale of Clwyd, North Wales, for a suitable new gliding site. In 1988 Lleweni Parc, Denbigh, was acquired and this spring became the home of the Glyndwr Soaring Club

Any observer of clouds in the county of Clwyd with an interest in soaring will tell you of the regular lenticular formations just waiting to be enjoyed by glider pilots.

The accepted wisdom of sages such as Vic Carr, who regularly makes the transition from the flatlands at Sleap into the North Wales system, is that the wave lift generally lies along the line of the river Clwyd. This is about the line Ruthin-Denbigh-St Asaph in the Vale of Clwyd some two miles to the west of the Clwydian hills (have a look at your ½ million map to appreciate the potential of the area).

The Clwydians, which run for about 15 miles approximately north to south, are known to produce good ridge lift but this can be killed when the wave arrives.

In 1978 we came with a group from Cosford to try the local wave and to make money for the BGA Philip Wills' Fund (see "Cold Climb over Clwyd", *S&G* June 1979, p107). We had a sponsored gain of height flight and autotowed a Blanik off the side of the hill near the Moel-y-Parc television mast. The Blanik achieved 13000ft over St Asaph and broke off its climb at 2kt when darkness came - so we had some good direct knowledge of the area's possibilities.

For the last three years the North Wales GC has operated from a hill site at Bryn Gwyn Bach Farm, three-quarters of a mile back from the ridge crest (about 800ft at this point) to the north of Holywell. While they have enjoyed good ridge flying with some wave soaring, it was felt that another site on the valley floor to the west of the Clwydian range might offer even greater potential for contacting wave.

It should be viable as a winch only operation if necessary

A basic principle of the site selection was that it should be viable as a winch only operation if necessary as cost and environmental considerations into the 21st century might prohibit the use of tugs. Thus is had to be within winching distance of, and safe return from, the hills and a reasonable distance in front of the hill to be underneath the known wave gap. The line of the river Glwyd along the ten mile valley base (in front of the highest section of the hills) seemed the appropriate hunting ground.

Our new site at Lleweni Parc, two miles NE of Denbigh, has some 80 acres next to the river with 1200 yards of westerly run clear of controlled airspace. Gliding started on an experimental basis from September to Christmas 1989. Much help was given by the North Wales GC and a number of members (and gliders) from the Avro GC joined in the trial flights.

That Christmas we decided to form the Glyndwr Soaring Club (or Clwb Esgyn Glyndwr to show its Welsh connections). The name was chosen to emphasise upward soaring rather than downward gliding and to acknowledge our presence in the area administered by the Glyndwr Council. A number of NWGC members transferred to the new site with the majority from Avro (whose club at Woodford had closed down).

At this point help was sought over our planning application. The NWGC were most helpful in providing their own successful planning documents as a model for our application. Bill Scull, BGA director of operations, came to a meeting with the local council to set their minds at rest over such issues as safety, proper control of the flying operations and air traffic matters. Everything went smoothly and the new club started at Easter.

We soon discovered what a superb site we had - Lleweni is alongside a higher section of the Clwydians where the ridge rises to 1200ft at Moel-y-Parc. The club K-7 has no difficulty in entering ridge lift from a 1300ft winch launch in, say, a 15kt westerly, and can return without drama from a break-off height of 1000ft. We have a ridge "milk run" of some 45km which is easily achieved by Bronze badge pilots.

Thermal sources in the valley bottom are proving particularly good, especially Denbigh and its limestone quarry. Wave is often in evidence (usually mid-week when we are not presently flying!) but confirmation of our positioning of the site came on Saturday, July 7.

SAILPLANE & ENG. SERVICES LTD.

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

FOR SALE
DART 17R £7550
K-4 TWO-SEATER £2300

WRITE OR PHONE:

KEN BLAKE
BUXTON 24365

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

A very moist south-westerly airflow covered the British Isles and many clubs couldn't operate because of the conditions. We had arranged the 7th as a family day to introduce people to gliding, have a party and barbecue at the camping ground by the river and to raise a little money for the Riding For the Disabled charity.

The rain held off and we were presented with a duty gap steady above the site. We kept the two-seaters busy all day with 1300ft winch launches contacting 3kt wave which enabled a flight to 3000ft and back on the ground ready for the next passenger within 15min.

Rotar was evident below 800ft in the circuit and particularly on the approach where, as the lift became stronger during the afternoon, approaches were made higher and further into the field. It is clear there will be severe turbulence low down in strong wave conditions.

We now have some 150 members, many ex Avro and without their equipment and gliders it would have been almost impossible to begin operations. Our board of governors oversee the strategic direction of the club and appoint the committee who provide tactical month by month management. This constitution was evolved with the hope of avoiding internal political wrangles which have been so damaging to some clubs.

As we feel that many sites could be more successful if they had additional interests, we hope to make the venue ideal for family holidays where pony trekking, beaches at the nearby coasts and other attractions are available. We already have a delightful picnic/barbecue site by the river, there is fishing on the Clwyd and walks through the woods have been established. There is a Caravan Club certified location on the airfield (for CC members) and a list of bed and breakfast accommodation is available.

Visitors are most welcome and our secretary, Mark Roberts, may be contacted on 05 334 7932 for further details.

While much has been achieved, there is still a lot to be done to develop the site into what can become one of the finest wave expeditionary and gliding holiday centres in the country. We are deeply indebted to many who have helped us this far. We must mention Bill Scull, Vic Carr and Barry Rolfe, BGA administrator, for their assistance in establishing this exciting new operation. Also Tony Knight who, in agreeing to be CFI for the first two years, has taken on a tremendous burden of work.

THE BGA POLITICAL COMMITTEE

John Holland, chairman, explains the workings of this committee

The Political Committee, formed several years ago, was an expression of the frustration created by the proposed airway over the Scottish Gliding Union at Portmoak. It appeared that no satisfactory appeal procedure was available and that a decision had already been made to lay down this airway, seriously impeding the development of a long standing gliding club and without any meaningful consultation by the CAA.

Fortunately at this time Bill Walker, MP for Tayside North, made it known that he would be happy to represent the BGA in Parliament on any appropriate matters. This was particularly convenient since Bill's long association with gliding *via* the ATC meant he was able to apply his knowledge of the sport to any problems arising.

With Bill Walker's help, the BGA were able to meet the Minister responsible for the CAA at this time, discuss the problems created by the proposed legislation and obtain modifications to minimise the effects at Portmoak.

Since then many problems have arisen affecting gliding in one way or another and been tackled by the Political Committee with varying degrees of success. Whatever the outcome we at least were allowed to present our views and be listened to. We have had meetings with four Ministers with different problems, gliding has been debated in the House of Commons and The House of Lords and a representative of the BGA has given evidence to a Parliamentary Select Committee.

Our success has encouraged the Royal Aero Club to form a similar committee, again using the good offices of Bill Walker from time to time. At the moment it is carrying the workload for all sporting flying in connection with proposed legislation within the EEC to produce some form of mutual acceptance of flying licences.

The debt owed by the gliding community to Bill Walker cannot be overstated. His willingness to dive headlong into any problem is incredible and largely through his influence and help our sport has received hearings at a government level rarely achieved by any other sporting body.

Such pressure from above on the various ministries and other legislative bodies does carry a danger of provoking a hostile reaction that could negate the changes desired. Fortunately contacts within the various departments of the CAA suggest that in fact the BGA has rather confirmed an image of responsibility and an ability to present its case intelligently and cogently. Undoubtably the work of one W. G. Scull has gone a long way to substantiate this view.

A BELGIUM FIRST

The first Belgium 1000km triangle was flown at the end of May. Yves Jeanmotte and Beaudoin Litt flew an ASH-25 round two TPs in Germany and back to Saint-Hubert.

HOME GLIDING

Microsoft's "Flight Simulator" (version 4.0) can be used to simulate thermal and slope soaring in a Schweizer 2-32. Why bother to go to the airfield when you can do it at home?

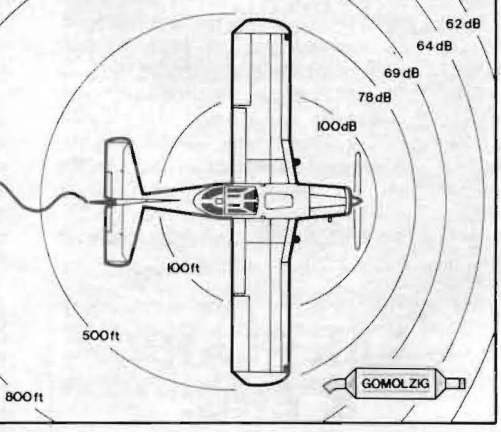
UK pilots are welcome to enter the Centre Velivole du Cal de L'Eure's international competition at Bailleau, France from July 30 to August 9. Further details from the Competition, Secretary, Centre Velivole du Val de L'Eure, Bailleau Aerodrome, Armenonville, F-28320 Gallardon, France.

Aircraft Silencers

LOW NOISE SILENCERS fitted to standard exhaust systems:

★ *dramatic noise reduction*
★ *simple installation*
★ *light weight*

SKYCRAFT SERVICES LIMITED
Albany House, Litlington, Cambridgeshire
Tel. 0763 852150 Fax. 0763 852593



JSW SOARING

'Aquarius' (Dual Weight) Calculators	£12.00
Wind Component Resolvers	£6.50
'Gemini' Calculators (Resolver on Reverse Side)	£12.00
Flight Planning Rulers	£4.00
Protective Wallets for Calculators – or Rulers	50p
'Dolphin' vario Conversions from	£35.00

SAE for Product Details to:
51 PARK ROAD
FARNBOROUGH, HANTS GU14 6LQ

EW Barograph: A superb newly developed fully electronic barograph

With the launch in early 89 in the UK, of our new digital barograph, EW Avionics have been surprised by the response to this exciting new product. Already units are being used by pilots at national competition level as well as regional level. Many badge claims have already been made with many pilots commenting that they probably wouldn't have carried a barograph except for the convenience and user friendliness of the EW Barograph.

No sealing
Light weight 225 gms
Calculator sized 150×80×30mm

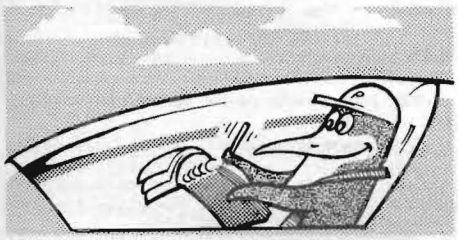
Auto height scale selection to 12km
Full camera and motor detection
Computer analysis available

1-255hrs recording time
Multiple traces

At last a barograph small and light enough to fit into your pocket

EW AVIONICS
45 Wyresdale Crescent, Middx UB6 8TH. Tel: 081-998 1510

WAY OFF TRACK



Never mind the weather, just play the Marseillaise

Stuck recently for 12 successive nights in a Parisian hotel room with nothing more responsive than a TV set, I watched with mounting incredulity the late-night weather forecasts on the French channel Antenne 5. I found that ITN is not alone in treating its weather slot as a occasion for gimmicky graphics and slap-stick comedy rather than for viewers' enlightenment.

Traditional French self-centredness is paramount. Antenne 5's weather chart shows all of metropolitan France - and nothing else. The world simply stops at its frontiers and coasts. No *Manche*, no Atlantic, no Benelux. Not even Switzerland.

Where the weather is coming from and what it's doing there before it's here are of monumental unconcern to Antenne 5. Its rationale, clearly, is that no one of sound mind would be anywhere but *inside* France, so what the weather is doing beyond the country's immediate confines - what the Hell!

The forecasters, like almost everybody else on gallic TV from continuity announcers and newsreaders to pundit talking heads, are absurdly mannered and over-act dreadfully, which completely demolishes any remaining shred of meterological authority the production might otherwise have had.

The comedy comes when the useless, though commendably unobstructed, map is brought on screen - simply by dropping the presenter/forecaster out of the bottom of the picture and then having her pop up again a few seconds later, like a manically grinning Jacques-in-the-box.

As the poor woman, still rabbitting *dix-neuf à la douzaine*, sank out of sight, with the bottom of the screen progressively cutting off her chest, neck, chin, nose, eyes and coiffure, I was irresistably reminded of the old sea shanty:

The bravest man was Captain Brown,
Who played his ukelele as the ship went down.

Each evening it was such a hoot that, for several minutes, I couldn't give due attention to the skin-flick which inevitably followed once the midnight chimes had struck.

Red skies at night gives you a pulmonary fright

I now know why, when I was cross-country flying in Hungary last summer, I was often blundering around, unable to see more than two or three miles in any direction and deprived of the clear visual clues that are needed for navigation Penguin-style - which is to travel very hopefully but rarely to arrive.

It was all those evil smokestacks pouring untold thousands of tonnes of pollutants into the atmosphere far upwind in East Germany, Poland and Czechoslovakia.

As we learn more about the ecological disaster which is the GDR, in particular, it answers a question I have pondered in the past.

Why, with the seminal German role in soaring development, did we rarely hear of soaring in East Germany during its 45 years of Communism, whereas in neighbouring communist states it was a high-profile government-sponsored sport and even, through glider export sales, a source of hard currency?

I had simply assumed that gliding was discouraged by the former GDR régime because of the opportunities it presented for venturesome spirits to throw off their shackles and sail quietly - if not quite serenely - across the Iron Curtain into the west.

Rika Harwood tells me that one brave soul did in June 1973, when electronic engineer Udo Elke scarpered to Soest, in West Germany, in a Foka 5. He crossed the Iron Curtain at about 800m while ostensibly taking part in a 160km triangle task during the East's Nationals Championship.

But it now seems that Udo deserved commendation not only for his initiative and nerve but also for his navigational skills. They must have been of a high order for him even to make his way through the toxic miasma to find the Ulbricht/Honecker fence.

A glance across the Danube into Czechoslovakia from the lovely northern Hungarian city of Esztergom was like gazing, if not into a vision of Hell, at least into the standard London thickie's stereotype of Britain north of Watford - all tripe-and-onions, clogs, knockers-up and mill chimneys belching thick black smoke.

That said, a few lungfuls of crystal-clear champagne air at less than 3000ft amsl but above the freezing fog which clad Hungary's Matra highlands for most of the time I was wave hunting there a few months earlier would have been saleable at £5 a bottle to any driver stuck for five minutes in rush-hour traffic on the M25.

A LOVELY IMAGE!

Ever conscious of the PR impact made by pilots during outlandings, my thoughts frequently wander to the sleepy Dorset town of Blandford Forum on a hot sunny afternoon during the Open Class Nationals.

Two pilots in a field (both shall remain nameless) parked their ASW-22s neatly and trotted hotfoot to the local hostelry, maps in hand. Both built for comfort not speed, neither likely to feature prominently in the best-dressed man of the year award, one speaking with a broad local (Lithuanian) accent, the other probably muttering Platypatian sentences into a hand-held dictaphone - ordered three beers - two for drinking, one presumably for sacrificial purposes to add drama to the tale of the lost thermal. Carpets benefit from a good beer soaking, I understand.

Some time later they were happily dazed to find one crew member, who had already delivered the trailer to the glider and been directed by a combination of insight and a farmer's wife to the aforesaid hostelry, breaking up the party to escort two hostages back to their gliders to perform a ritual derig.

I often wonder what impression the folk from the peaceful haven of Blandford Forum have now of those magnificent men in their flying machines - young, glamorous, flamboyant, wealthy - members of the beautiful people sect?

Probably, but I'm not commenting: and I'm certainly not identifying myself!





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 60p per word with a minimum of £12.00. Black & White photographs accepted £5.00 extra. Box No. £2.50 extra. Prices include VAT.

FOR SALE

GRUNAU BABY 3. Super condition. Reeks Trophy 1988. C of A to June 1991. Open trailer. £2150ono. Tel John (0935 89) 445 (Dorset).

DG101-G ELAN. First class condition. 406 hrs only. No accidents. Water ballast. New Instruments 1990. 2 radios. Strong parachute. Barograph. Oxygen. Low-line metal trailer. Two-man rig. Tow-out gear etc. £16750. Frank Crisp, Derby. (0332) 840482 anytime.

ASW-22. Full competition panel, trailer, rigging aids, one-man tow equipment, etc, very good condition. For price and details telephone F Pozerskis 0858 467723 (home), 0536 85552 (office).

VEGA flapped 15m, low hrs. Good panel, excellent wooden trailer. £13500. Also K-13 available 1991. For details Tel 0494 35005.

K-6CR. Excellent condition. 10 months C of A. Audio and mechanised varios with TE accelerometer, T&S, radio, parachute. Good trailer. £6800. Tel 0472 697484 or 0909 730591.

YS-55 (BE135). Delightful 13.5m, metal. Easy 2 lady rig, 1:32, radio, T&S, 2 varios, audio. Light low line metal trailer. £4500 or form a 2 glider syndicate. Tel 0409 241285.

PHOEBUS 17C Affordable 1:42 glass-fibre, very good condition, new C of A, full panel, Speedwell metal trailer. £10000. Tel Mick Wells 0252 512656.

PIRAT Excellent condition. PZL and electric variometers. Aluminium trailer. £6900. Tel 0302 786360.

SCHEMPP-HIRTH DISCUS A. Excellent condition, Cambridge M Nav, instruments Dittel radio, oxygen, ground handling equipment, enclosed trailer. NZ$65000 - shipping costs your care. Tel New Zealand 09 771 809 (work) or Fax New Zealand 09 399 562.

PIRAT in very good condition complete with trailer; no parachute or barograph. Offers over £6000. Tel: 0241/73566.

VEGA 15m flapped. Basic instruments plus Cambridge MK2 vario/flight director/averager, T&S, oxygen, radio and metal trailer. £14750ono. Tel Gary Bleasdale 0273 723252.

CLUB LIBELLE 1975, 1200 hrs, immaculate condition, full instrumentation, closed trailer. Tel Belgium 010 32 14 81 25 67 (Rudy Jennen) or 010 32 11 43 10 87 (Jan Hannes) after 6pm.

DG-300, superb competition preparation - immaculate finish. Many options and extras available. Must be seen. Tel 0734 753333 (day) 0734 687146 (eves).

Order your new **PEGASUS**
directly from the factory
Interesting price: FFrs180 000 ex-works
Quick delivery: Spring 1991
SN Centrair (Export Dept)
Tel: France 33 54 37 07 96
Fax: 33 54 37 48 64

Let's face it, does he really want another pair of Father Christmas Y-fronts!!

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
4 Dugdale Court, Brunswick Street, Leamington Spa, Warwickshire

Please allow 28 days for delivery. urgent requests can be completed if you telephone ***0926 332877*** *(answer machine). Please leave a message and we will get back to you.*

3 EX-MINISTRY glider launchers, twin-winch, in working order. Tel 0488 71785 or 0488 72485 (eves).

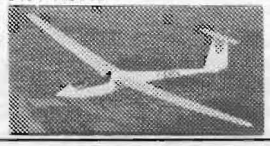
PEGASUS 101A 1986 400 hrs. Two owners only. No syndicate. As new. T/S, Borgelt B21 and B24 system, oxygen, Dittel 720, glass-fibre trailer, tow out rigging aids. £19000. Tel 0244 819935 (work) or 0244 326555 (eves).

WASSMER 39 "Bijave" two-seater with trailer. Tel Paris, France 64 35 53 76 or 45 66 04 69.

ASW-15b. Re-profiled wings, 720 radio, electric vario, barograph. Good trailer with rigging and tow-out gear. Wing/tail covers too. Tel 071 706 1382.

A NUMBER of T-21s and K-4s available. For further details telephone 0787 61919.

PEGASUS 90. Now better than ever. All controls self connect. New super finish. New cockpit layout. Quick delivery. £19500. Contact Nine Four Aviation Ltd (Steve White), 2 Hazelwood Cottage, Old Horns Lane, Booker, Marlow, Bucks SL7 3DU. Tel 0494 436888, Fax 0494 449549.



FOR SALE

DG-400 15/17M like new. All mods. Zander comp., radio, Cobra trailer, engine 60 hrs TT 460 hrs £37000ono.
2×K-21. Both 86 model. Excellent condition, both 1400 ST, 900 hrs, instruments, radio, comp. £32000 each ono.
PILATUS B-4 PC 11. 1976 1200, ST 900 hrs, very good condition, instruments, radio, trailer £9000.
PHOEBUS C-17. 900 ST, 1400 hrs, instruments, radio, trailer £5000.
Tel Norway 47 3 596086

K-8. Must be one of the best about. Hull, basic instruments, parachute £4700. Open trailer negotiable if required. Tel 0908 542629.

CLUB LIBELLE 1975. Well maintained and a delight to fly. Full panel includes netto, A/H, T&S, TM6 radio. Oxygen. Wooden trailer. 1 year C of A. Never pranged. £12000. Tel Frank Irving 081 940 4837 or Martin Judkins 0256 83620.

JAVELOT 2. Excellent condition, basic instruments plus Cambridge CAV2 vario, barograph, metal trailer, C of A May 91, offers around £4500. Tel 0302 368782 (eves).

PAWNEE PA25-235. Equipped for towing gliders. Engine has 520 hrs left. Prop, 1200 hrs remaining and next "major" under Australian CAA regulations due August 1991. Price Aus. dollars 45000 ex airfield. Crating and transport cost will be obtained for genuine enquirers. Tel Concordia Gliding Club 61 2 337 4903, Fax 61 2 564 1136, or write PO Box 138, Petersham, New South Wales 2049, Australia.

PIK 20-D BGA 2537 excellent performer with low hours in very good condition. Comprehensive panel including horizon, Cambridge director, dual electrics and radio. Complete outfit includes new canopy, good wooden trailer with excellent fittings, parachute and tow-out gear. £14600ono. Tel 0256 478244.

OLY 463, good condition with parachute, barograph, radio, audio electric and PZL varios, A/H, T&S and accelerometer. Metal trailer. £5800ono. Tel 0522 752233.

K-6CR. Excellent condition. New C of A, very low hours, A/T hook, Crossfell vario, Dittel radio, parachute and open trailer. £6500 ono. Tel 0952 460420 (eves).

K-6CR. Immaculate, recent C of A, full instruments, covered trailer, based at Saltby. £6250. Tel 0602 301531.

BG-135. Covered trailer, tow out, full instruments, based at Saltby. Tel 0602 301531.

STD CIRRUS 909. Full panel including horizon, Cambridge electric audio, 360 channel radio. Modified air brakes. Metal trailer with new running gear fitted in 1990. Solo tow out gear. Good condition with new C of A £13500. Tel Grant 09323 54786 or Pentecost (Germany) 010 49 89 957 9528.

FOR SALE

K-10 in good condition with current C of A. At present in use - available mid December. £8000.
K-7, new canopy - very good example - current C of A. £6500.
SWALLOW - Large canopy - current C of A. £1800.
All three aircraft can be seen at Burn Airfield.
Tel 0924 251770 (eves) or 0924 862141.

K-7. Very good condition. Two sets of standard instruments, current C of A, £7500 plus VAT. Tel Harry Williams 0926 53985.

K-6CR with 12 months C of A. Usually hangared. Lots of tlc. Open trailer 1200 hrs TT LAC. 12 syndicate forces sale. Viewing Leavesden or Halton. £7250. Tel Wilshere 0923 671240.

SHK. C of A til Feb 91. Glass performance for wood money, needs some work to be fit for new season, therefore low price. Write Box No. 009.

K-6E. Immaculate condition. Fully instrumented. Radio. New trailer. Waterproof covers. Tel Belgium (32) 14 81 32 63.

SWALLOW C of A April 91. Recent respray. Usual panel plus accelmtr, T&S, Battery, OK Barograph, wooden covered trailer. All in good condition £2400. Tel 091 483 4570.

KESTREL 19M. Oxygen, good instruments, radio, aluminium trailer £13800. Tel 0937 62696 (eves).

AMF CHEVVRON 2-32 ultimate personal aircraft, 3-axis microlight (motor glider). Dual control, flaps, radio, factory mods to latest specification, plus many other extras. Custom factory trailer. £12500+VAT. Half factory new price. 50 hrs TT, based Cumbernauld. Tel 031 669 5112.

COBRA 15. 38:1. Good instruments, radio, oxygen, parachute, excellent trailer, one man rig towing out gear. £9000. Tel 0482 861509.

PIK-20E, self launching motor glider, low hrs, good condition, complete with instruments including radio, parachute, aluminium trailer etc. £19000. Tel Norway 010 473 5371 76 or 010 473 5960 86.





LAK-12

From Lithuania - a new sailplane for the Western market:

20.5m span - 2 piece wing - flaps.
Fibreglass & carbon fibre construction.

Max L/D 48:1	Tail dolly etc.	Rigging aids
Fully instrumented	42 gallons water ballast	Full C of A.
Superb fibreglass trailer	Empty weight: 820lb	

Ideal for cross-country minded individuals and clubs

Price: **£18,400** plus freight & VAT. Delivery: 2-4 weeks

Demonstrator available, contact agents:

BALTIC SAILPLANES Ltd.
Baltic Sailplanes Ltd., 46 The Woodlands, Market Harborough, Leicestershire LE16 7BW
Tel: 0858 467723; 0536 85552 (office hours); 0536 81777 (evenings)

(P.S. Watch out for LAK 17 (15-17m flapped) available mid 1991. Send now for Technical Data Sheet. GET YOUR NAME ON THE LIST SOON!)

IRIS D77. 33:1 glass-fibre. Good instruments, oxygen, radio, parachute, metal and aluminium trailer, rigging aids and full waterproof covers. £6500. Tel 0482 861509.

SHK. Full set of instruments, incl A/H, parachute, radio, tail dolly, trailer, rigging aids. £7950ono. Tel 0469 573967.

T-21B excellent condition, new C of A, still in RAF colours, £3500. Tel 0787 61919.

ROLLASON CONDOR D-62C 130hp, aerotow hook, superb two-seater tail-dragger and glider tug. £15000ono. Tel 0694 723601 or 0694 723269.

GRUNAU BABY, in pristine condition. C of A March 91, low hrs, fully instrumented. Rigging aids. New custom built closed trailer which will accommodate most gliders, single or two seater. £2,950 with closed trailer, offer with open trailer also available. Tel 0872 501722 or 0326 74762 (days).

FOR SALE

T-21B yellow, fully recovered 1984. New C of A, one owning club since new. £2500ono.

SKYLARK 4 red, only needs wing centre section recovering. £3500 ono.

Both aircraft are kept hangared and are in good condition, with basic instruments. Genuine reason for sale.

Tel: Derek Ballard 0329 663234

BLANIK, factory refurbished to highest standard. Superb club/syndicate glider, Price (to include trailer and instrumentation) on application and . . .

LAK-12, 20.5m, glass-fibre/carbon-fibre glider. Factory refurbished to highest standard. 48:1 L/D. Trailer, metric instruments etc. Several available. 300-500hrs flown. Approx £14000 (incl VAT). Tel Baltic Sailplanes Limited 0858 467723 (anytime); 0536 85552 (office hrs); 0536 81777 (eves).

FOKA 5, (SZD-32A) built 1969, approx 990 hrs, std instruments. DITTEL ATR 720 radio. Glider is offered at £5500 ex West Germany, and is without trailer. Condition is very good, with no major damage history. Colour: white and red. Apply Bob Neill Tel 021 449 1121.

STD CIRRUS very good condition. Airbrake mod, basic instruments, electric vario and Director. Radio and parachute. 12 months C of A. Aluminium trailer. £13500. Tel 0453 872740.

Ka-7 Good condition throughout. Basic instruments, TE system, bubble canopy. £6000+VAT. View Aston Down. Tel 0453 872740.

SCHEIBE SF-27 3B. 17m ship, 38:1 metal trailer, good instruments, radio £5950. Tel Christine Bell 0483 760537 (home) or 071 600 0423 (office).

STD CIRRUS. Aluminium trailer, full panel including Cambridge CAV2, 720 radio, 2×500's, numerous 300's this year. Must sell hence £11000. Tel Stephen Crabb 0455 220899.

IS-28,B2 600 hrs, excellent condition, privately owned. Complete outfit includes excellent aluminium trailer, full panel front and rear (including A/H), genuine two man rigging aids. No prangs hence £14000. Tel Stephen Crabb 0455 220899.

M-100S. 15m Sailplane. Recovered in Ceconite 1988. C of A till Jan 91. As new wooden trailer. Offers in the region of £6000. Tel 0745 591255.

SLINGSBY T-31B red/white, just resprayed, new C of A, ready to fly. £1800. Tel 0323 898319 (after 9pm).

WANTED

SWALLOW SPARES in good condition, especially canopy, wheel, wing fairing. Tel 0642 824280 anytime.

RETURN of ICOM IC-A2 720 Channel radio, Serial No 2332 removed from Deeside Gliding Club on Sunday 14 October. Tel 0339 885236.

SELF LAUNCHING MOTOR GLIDER wanted for next season. PIK 20E, PIK 30, DG-400 etc. Tel 0420 64195 (anytime).

K-18 or K-8 & K-8 Starboard wing. Tel Dublin (0001) 983994 or Fax Dublin (0001) 342487.

SINGLE-SEATER glass-fibre glider (no flaps) with trailer required urgently to up-date existing fleet. Tel: 0241/73566.

K-6E, Pilatus or similar. Aircraft outside UK considered. Tel 0752 772598 or 0803 312612 or 0626 853082.

DAMAGED GLASS-FIBRE glider by private buyer. Top price paid - would consider complete outfit. Will travel in Europe to view. Tel 081 998 1510.

SITUATIONS VACANT

COURSE INSTRUCTOR required for 1991 season. Apply in writing to CFI, London Gliding Club, Tring Road, Dunstable, Beds LU6 2JP.

COME TO SOUTHERN IRELAND! Tug Pilots with tailwheel and glider experience required five weeks July/August 1991. Full category instructor also required for 2-4 weeks. Apply to CFI, Dublin Gliding Club, 1 Oakdown Road, Churchtown, Dublin 14.

INSTRUCTOR AVAILABLE

With or without own K-21. Also ASH-25E, and Christian Husky tow plane. Available from April onwards - all on ad hoc basis.

Tel 036281 8924

BOOKER GLIDING CLUB

We are seeking applications for the full-time post of Chief Flying Instructor. (Full time deputy Chief Flying Instructor post may also become available). Considerable previous experience in instruction and supervision absolutely essential. Must have PPL and motor-glider ratings.

Written applications and CVs to:
David Watt, Booker Gliding Club
Wycombe Air Park, Marlow, Bucks SL7 3DR

ATLANTA SOARING CLUB, GEORGIA, USA

Gliding instructor wanted. Initial employment period March to September 1991. Must have pass in US Commercial and CFIG written test before arrival. Flight Check could be carried out here.

Send resume to: **Atlanta Soaring Club,**
PO Box 337, Kingston, GA 30145, USA.

FULL TIME MANAGER

London Gliding Club require a full time Manager to assume responsibility for running both the Club's and London Sailplanes Limited's on site activities.

Applications to be made in writing to:
The Chairman
LONDON GLIDING CLUB
Tring Road, Dunstable, Beds LU6 2JP

SERVICES

PENNINGTONS CHARTERED ACCOUNTANTS

For accountancy and taxation services.

Harvard House, Harmondsworth, Middlesex UB7 0AW.
Telephone John Gorringe,
Day 01 759 1967, Evening 01 948 3799.

TUG SERVICES

HOWARD AVIS AVIATION LTD
Old Buckingham Airfield, Norfolk
offer

• A variety of tug aircraft for short or long term hire including Pawnees. • A large stock of airframe and engine parts for all model Pawnees. • M3 approved premises for competitive Pawnee annuals and C of A renewals.

Call JIM AVIS on (Hangar) 0953 860751 (Office) 0953 453946

GLIDER REFINISHING

Repainting/"gelcoating"/finishing of glass and carbon-fibre gliders carried out to best factory-new standards. References available from previous work (20+ examples). Competitive fixed prices for all work. Realistic schedules - no advance deposits required.

Please telephone for advice:
Andy Lincoln, 0962 712662 (evenings)

Norfolk Gliding Club

EASTERN REGIONALS

May 18th to 26th

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

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

FULL REPAIR AND MAINTENANCE FACILITIES FOR ALL GLIDERS IN OUR PURPOSE BUILT WORKSHOP

LS 7 STANDARD CLASS
(WINNER OF '89 STD CLASS NATIONALS)

LS 6 15M CLASS
(WINNER OF '85, '86, '87, '88 15M NATIONALS)

LS 6 TIPPED TO 17.5M 15M/OPEN CLASS

LS 4 STANDARD CLASS

Chief Flying Instructor
Asst & Full Rated Instructors

Welland Gliding Club £0 + Nil Benefits

The Welland GC, newly based at our first class and high potential airfield at Lyveden, near the village of Brigstock, Northants, is inviting applications for the post of Chief Flying Instructor for appointment in March 1991.

Assistant and Full Rated Instructors seeking a friendly club - where your instructional commitment is tailored to your preference rather than the club's - are also welcomed.

The club has 70 full members and expects to grow by a net 15 new members per year. Two K-7 trainers are operated, plus K-8 and L-Spatz solo club gliders. The instructors team presently comprises 3 full cat, 2 half cat and 3 AEI rated instructors; 2 further pilots will be attending AEI courses this winter.

Whilst we are presently a small club, we have received much praise for our achievements to-date and for the commitment of our members to the current development of clubhouse facilities and (winch-based) flying operations of well above average standards.

Suitably qualified folk who are not seeking an ego trip but who would find rewarding the opportunity to contribute to our future should contact Keith Scott, Company Secretary, on 081-566 2142 (work), 0923 34472 (home) or 0836 280401 (airfield) or visit us at the weekend (take the Lyveden New Bield turning off the Brigstock by-pass on the Corby/Thrapston road).

1990 *LS-4A*

Unmarked, 35hrs only!

ALL NEW EQUIPMENT
includes
COBRA TRAILER
GQ PARACHUTE
VARCOM on full Panel
BECKER Radio
Ground handling gear
All standard options

Replacement cost in excess of £29,000.

Available NOW with C of A to June 1991

Please reply with Phone numbers to BOX No. 010

Humberts Leisure

Kent

Established gliding club for sale

- Licensed clubhouse and accommodation
- 1,000m landing strip, workshops and storage space
- Good membership and training courses offered
- In all about 20 acres - leasehold

Offers invited in the region of £65,000 to include a full trading inventory and gliders. SAV

01/05/4875/JCM

Humberts Chartered Surveyors
Tel: 071-629 6700

25 Grosvenor Street
London W1X 9FE
Fax: 071-493 4346

MISCELLANEOUS

WREKIN GLIDING CLUB will be 25 years old in 1991. Ex-members are invited to our re-union. For details contact Rick Jones, 32 Coulson Road, Lincoln LN6 7AT or Mick Boydon, 53 Lancaster Close, Albrighton, Wolverhampton WV7 3NH.

LLEWENI PARC (Denbigh). October 30; 1st 3 **Diamond** Heights and 6 **Gold** Heights - all off the Supercat winch! Magic site!

Late news: On going to press we were sad to learn of the death of Ken Wilkinson, a BGA vice-president, who was chairman during the early 1970s. An obituary will be in the next issue.

ADVERTISERS' INDEX

Aardman Animations	336
Airborne Composities	304
AMF Enterprises	332
Anglia Sailplanes	338
Anglo-Polish Sailplanes Ltd	284
Argyll & West Highland Gliding Centre	333
Baltic Sailplanes	342
The Bartons	327
Beaumont Aviation Literature	338
Benalla GC	338
Black Mountains GC	333
Bon Accord Jewellers	342
Booker GC	336
Bristol & Gloucestershire GC	334
British Gliding Association	321
Buckminster GC	333
CAA	332
Cair Aviation Ltd	330
Cambridge Aero Instruments	283
Cambridge University GC	334
Centreline Services	IFC
Channel GC	333
Chiltern Project	341
Chiltern Sailplanes Ltd	318
Classifieds	342-344
Peter Clifford & Co	299
Connevans Ltd	337
Contest	337
Cornish Gliding & Flying Club	334
Cotswold Gliders	336
Coventry GC	334
Desk Top	288
John Edwards	305
Enstone Eagles	334
EW Avionics	340
Flite Lines Marketing Ltd	282
Flight Vision	309
D. Garrard	338
Glider Instruments	338
Goodison Glider Instruments	338
Hart Technology	320
HT Communications	338
Humberts Chartered Surveyors	344
Hydro-Tech Eng	332
Irvin (GB) Ltd	330
JSW Soaring	340
Kent GC	334
Lake Keepit	338
Land Rover	324-325
Lasham Gliding Society	334
London GC	334
London Sailplanes Ltd	283
Lowndes Lambert Ltd	288
Marchington GC	334
McLean Aviation Ltd	297
Midland GC	335
Mowbray Vale Insurance	286
Neogene Paints	327
Norfolk GC	334, 343
Northumbria GC	335
Oxfordshire Sport Flying Club	315
Piggott Brothers & Co Ltd	287
Protech Sailplane Services	332
RD Aviation Ltd	IBC
Rematic	308
Sailplane & Engineering Services Ltd	339
S&G	337
Scottish Gliding Union	320
Skycraft	336, 340
J. L. Smoker	336
Soaring Equipment Ltd	316, 336
Soaring Magazine	320
Soaring (Oxford) Ltd	282
Southdown Aero Services Ltd	288
Southern Sailplanes	BC
Speedwell Sailplanes Ltd	338
Roger Targett Sailplane Services	314
Ultra-Pro Ltd	337
B. Weare	308
Welland GC	344
Wells Design Ltd	343
Welsh Borders Para Centre	338
C. P. Witter	341
Wolds GC	335
York Gliding Centre	335
Yorkshire GC	335
Zulu Glasstek	314

ANNUAL DINNER-DANCE

As announced previously the BGA Dinner Dance for 1991 will be held jointly with the Norfolk GC dinner-dance at the Airport Ambassador Hotel at Norwich Airport on Saturday, March 23. Tickets will be available shortly and priced at approximately £18.00 each to include the dinner-dance with a six piece band and an afternoon session from 2.00pm to 5.00pm with a guest aviation speaker. Bed and breakfast will be available at a special rate at the hotel for the Saturday night of £50.00 per room and it is hoped that members will visit Tibenham Airfield on the Sunday morning for some flying. Further details and a booking form will be circulated in the next issue of the magazine.
Barry Rolfe, *BGA administrator*

RD AVIATION LIMITED

SERVICE AND CHOICE with a wide range **IN STOCK**

PRICE BREAKTHROUGH
AIR 960 - 108-137 MHz Transceiver - CAA approved £173.04+VAT
ONLY £199 inc. VAT (£203 by post in UK)



DISCOUNT HANDHELD TRANSCEIVERS

ICOM
ICA2 720 channel - ***£299+VAT***
ICA20 760 channel plus VOR - ***£350+VAT***

NARCO
HT 870 720 channel plus VOR
PRICE REDUCTION - ***£289+VAT***

Add ***£3.45*** *for UK post/insurance for Icom & Narco sets*

VYNAFOAM **Energy Absorbent**

- ★ ½"×16"×18" ..... **£16.96 inc. VAT**
- ★ 1"×16"×18" ..... **£19.95 inc. VAT**
- ★ 2"×16"×18" ..... **£24.09 inc. VAT**
- ★ ½" body hugging comfort pad **£22.14 inc. VAT**

VYNAFOAM *can be cut easily and can be joined with impact adhesive. Cushion covers available.*

Cushions VYNAFOAM

STOP PRESS

CAMERAS

The ever popular
KONICA POP
with DATA BACK.

Now available again in limited quantities. Colours Red or Black.

£60+VAT (£69) *by post in UK -* ***£72.45***

The Directors and Staff of RD Aviation Ltd. wish you a Happy Christmas and good soaring in 1991

CASIO Watches



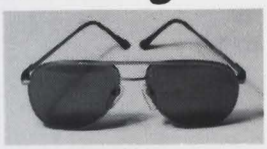
AR-W320AT BM100W

Altimeter Watches Analogue or Digital **£47.00** *inc. VAT & UK postage*

World Time Watches *only* **£29.95** *inc. VAT & UK postage*

CLOUDMASTER sunglasses

in widespread use



- ★ New - Quality frames (black or gold)
- ★ UV reduction
- ★ Improved cloud contrast
- ★ Virtually no colour distortion
- ★ Relaxing
- ★ Clip-ons available
- ★ Prescription models available, including Bi-focal. **£POA**

Our top of the range model is ***£27.99*** *inc. VAT (UK post, add* ***£2****)* ***Free Case***

Special offer *- buy 2 pairs for* ***£50*** *inc. VAT & UK postage*

PARACHUTES - GQ Parachutes Ltd

Do not take chances buy Quality from GQ

Shadow



£640+VAT (£736)

- ★ Quick opening
- ★ Low Descent Rate
- ★ Steerable
- ★ Comfortable
- ★ Inflatable Lumbar pad
- ★ Carrying bag
- ★ Delivery normally from stock - GQ supplies its parachutes unpacked - add **£16.50** if you require yours packed ready for use.

Add carriage ***£6.90*** *inc. VAT*

Silhouette



£666+VAT (£765.90)

PRICES LISTED DO NOT INCLUDE CARRIAGE UNLESS SHOWN - RING FOR QUOTATION PLEASE E & OE

Cheerful, Friendly Service
☎ **0865 841441 (24hr)**
Fax: 0865 842495 (24 hr)
Open to callers: **0930-1830 Mon-Fri 1030-1230 Sats,** *or by appointment*

Spares for Schleicher gliders supplied

Free Catalogue & Christmas Gift Ideas List
R.D. AVIATION LTD,
Unit 25, Bankside, Kidlington, Oxon OX5 1JE
(Just outside the airport)

VISA

MERRY CHRISTMAS

TO EVERYONE FROM ALL AT
SOUTHERN SAILPLANES
AND WE WISH YOU A HAPPY GLIDING YEAR AS GOOD AS LAST YEAR!

IF YOU NEED ANY GLIDING SERVICE, CALL US, ESPECIALLY FOR:

NEW SCHEMPP-HIRTH SAILPLANES

★ ★ ★

USED REFURBISHED SAILPLANES – Current stock:

JANUS CM with NEW ENGINE

ASK 23 – ideal first glass ship

NIMBUS 3 TURBO – as NEW

NIMBUS 3 – WINNER OF SEVERAL NATIONAL CHAMPIONSHIPS
Superb paintwork and profile + many extras

★ ★ ★

DH82a TIGER MOTH

★ ★ ★

REPAIRS AND MAINTENANCE

SOUTHERN SAILPLANES

(Ralph and Stephen Jones)
Membury Airfield, Lambourn, Berks. RG16 7TH
Tel: 0488 71774 Fax: 0488 72482