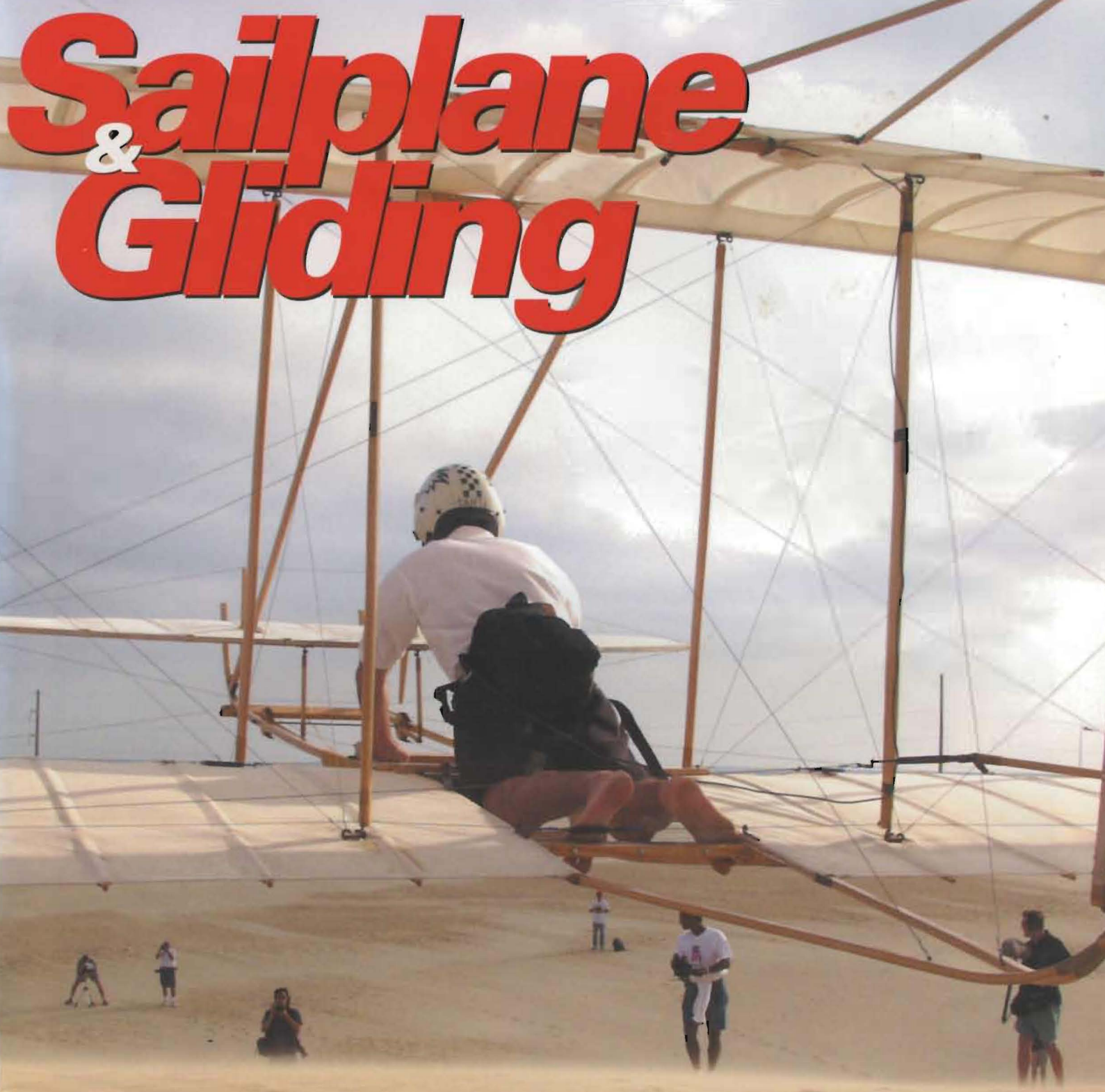
Sailplane & Gliding



Wright stuff

2002 – the real centenary?

From solo to Gold in three weeks

plus Jet Ventus The racing year Derek at 80

Dec 2002 – Jan 2003
£3.75 Vol. 53 No. 6
ISSN 0036-7230













BGA Gliding Conference 2003

Saturday 22 February

Eastwood Hall Conference Centre, Nottingham

WEATHER

The theme of this year's Conference is Weather. Alan Rodger (Antarctic Survey) will talk about "Space Weather" giving an insight into the climate 100-500km above our heads.

The Met office will talk to us on Weather Forecasting a little closer to home, and the facilities available to glider pilots.

Together with presentations from Lembit Opik and Keith Auchterlonie (BGA Marketing), it is an event not to be missed. What is more - it is FREE.

Free conference bag with gifts for every visitor - sponsored by Joint Aviation Services

Book early to avoid disappointment

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"I've done some pretty dangerous things in my life - jumping off tall buildings, being fired out of a cannon, and of course ski jumping."

Excellent accommodation at £63 per room (based on two sharing)
Dinner Dance tickets only £23 per person
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To book tickets, call Claire Emson on (01280) 705741 or (07887) 548913 or email Claire@eventia.co.uk

Accommodation bookings, please contact the venue directly (01773) 532532

For details of the full programme please visit the BGA website www.gliding.co.uk

The magazine of the
British Gliding Association

December 2002 ~ January 2003
Volume 53 No 6

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Season's Greetings – and thank you – to all S&G's supporters: advertisers, readers and contributors

Deadlines

February ~ March 2003

Articles	December 10
Letters	December 10
Club News	December 10
Advertisements	December 16
Classifieds	January 3

April ~ May 2003

Articles	February 11
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As the world prepares to celebrate 100 years of powered flight in December 2003, an arguably even greater achievement risks being overlooked. See pages 7 and 34 to 37 for more. (Photo copyright 2002 Wright Brothers Aeroplane Company)

Sailplane & Gliding

18 Push to use jet power



Jochen Ewald reports on the summer 2002 meeting of the German university flying groups, where a Ventus ctt, the first self-sustainer powered by a model jet engine, was unveiled

22 Here was a challenge



Andy Bardgett describes one of those magnificent flights that you don't have to thumb through your logbook to recall – over the North Sea in wave

24 Who could ask for more?



On December 27 the best-known instructor in the English-speaking world will celebrate his 80th birthday. *S&G* marks the occasion by asking **Derek Piggott** to reflect upon his life in gliding

30 Gold in three weeks



Peter Jones explains how, after a three-year lay-off and with just 30 hours' solo beforehand, he got his Gold in one holiday

50 Seriously fast



Andy Holmes was one of five Midland GC pilots who went to the Junior Championships at Hus Bos this year. He gives an overview of the comp ... and describes his best flight

4-5 **News**

6-9 **Your letters**
Terry Banks; JC Riddell; Bill Mitchell; Paul Sweet; Derek Copeland; Greville Earle; AE (Tony) Gee; Dean Carswell *(reply by Platypus)*; Phil Jeffery *(reply by Mike Fitzgerald)*; Jules Sutton; Rod Salmon; David Brain; Andrew Bardgett; David Smith; Nick Gaunt; Jon Wand; David Salmon *(reply by Peter Saundby)*

12 **BGA Development News**

13 **BGA Communications News**

16 ***Tailfeathers* by Platypus**

28 **Sitting comfortably?**

32 **The record-breakers**

34 **The Wright stuff**

36 **'This was great sport'**

38 ***Gliding Gallery***

40 **Dreams can come true**

42 ***Competitions*: Two-seater**

43 ***Nationals*: Open Class**

44 ***Regionals*: Dunstable**

45 **BGA Provisional Ratings List**

46-9 **Competition results, 2002**

53 **Club News**

54 **Club Focus: Dublin**

60 **Obituaries and BGA Badges**

61 **Salutary Soaring**

62 **Accident/Incident summaries**

64-6 **Classifieds and advertisers' index**

Member of the
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and the
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UK gliding needs you

AT the British Gliding Association we are approaching the time of year when people need to think about elections to the BGA Executive Committee at the AGM in February. Nominations need to be submitted to the BGA office by the end of December; nomination forms have been sent to each full member club of the association.

The BGA constitution allows elected members to serve for up to two years before standing for re-election, with a maximum term of up to six years. This time around Dave Salmon and Richard Yerburgh will be standing down. Mike Jordy will be standing for re-election as Vice Chairman, and Paul Hepworth and Doug Lingafelter will be standing for re-election to the committee. In addition, there are three other vacancies to be filled, as John Hoskins, Val Roberts and Gordon Pledger have had to stand down recently as a consequence of other pressures, mostly in connection with time-consuming commitments to other aspects of gliding.

So my purpose in bringing this to readers' attention is the fact that the BGA needs candidates to stand for election. Being on the Executive Committee is no sinecure. It requires the ability to take a strategic view of developments in our sport, and to be proactive as far as possible and not just reactive to events and external factors. I believe it can be a rewarding role as committee members are elected to shape the destiny of gliding and to ensure continued viability and growth.

Executive members are encouraged to take the lead on particular issues and topics, provide links to the sub-committees and to take part in visits to clubs as well as attending as many as possible of 11 meetings a year (at present meeting near the M42 on the south-east side of Birmingham), including the annual strategy workshop in the spring.

So if you have experience of being on the committee of a progressive club, or have relevant experience in successful management of a small to medium-sized business, or both, you could be well suited to contributing to the future of gliding at a national level. Other relevant experience can of course be advantageous. Personally I would like to encourage some candidates in the younger age range, so as to bring an added perspective to our deliberations.

So if you think you can make a contribution to the national governance of gliding, why not consider standing for election to the Executive?

David Roberts
Chairman, BGA
November 4, 2002
d.g.roberts@lineone.net

VGC has 1,000 members

AS the Vintage Glider Club approaches its 30th anniversary, its membership has passed the 1,000 mark, *writes club president Chris Wills.* We beg some of them to prise loose 14 of our gliders (not including my own three) lying idle in Britain. More than 20 gliders from the UK did, though, attend our 30th international rally in Germany. At the same time, we are looking for new blood on the club committee, since some of our best committee members, who have served us with unparalleled integrity for many years, have asked to stand down. An unexpected but very welcome surprise during 2002 was the arrival of a squadron of restored wooden gliders from Kent GC (T-21b, Swallow, Prefect, Skylark 3 and two Olympias). Another Olympia has been restored by Keith Nurcombe, and a Jaskolka by our group at Wycombe Air Park. International activity includes restoring another Jaskolka in Poland, and the sale of Hans Disma's Minimoa to the Holighaus family at Kircheim Teck ... so it has returned to the place where it was built in 1938. (This aircraft was originally restored at Southdown Aero Services for John Coxon.) Our next international rally is at Jami Javi in Finland and we hope to stage 2004's at Gliwice in Poland. The Finnish site is where the 1940 Olympics were meant to have been staged – and the Olympia flown – but were prevented by war. Perhaps we can get some of them there next year. Better late than never!



THIS year's Inter-club League final, held at Yorkshire GC's site at Sutton Bank, was won by Oxford GC. It's the second year in a row that they've taken the trophy. They earned 15 points in the final. Second were London GC and Midland GC, each with 14 points; Yorkshire GC was fourth (8 points); joint fifth with 6 points were Bath, Wilts and North Dorset GC and Norfolk GC. Above is pictured the winning team, from left: Martin Hastings; Howard Stone; Simon Walker; Mazam Makari; George Crawford and Phil Hawkins. *(Carole Shepherd)*

WIN an Ozee flying suit

"I CAN recommend this multi-purpose flying suit for practicality and comfort in cold conditions," wrote our reviewer of the Ozee Exeat flying suit in 2000. Last year we ran a competition to win one. It was so popular that *S&G* has teamed up with Ozee again to offer a lucky reader another chance to win an Exeat suit (pictured right), in your choice of available sizes and colours.

The first correct answer to be drawn out of the hat on January 6 will win the suit; two runners-up, the next to be drawn out, will each get a fleece balaclava.

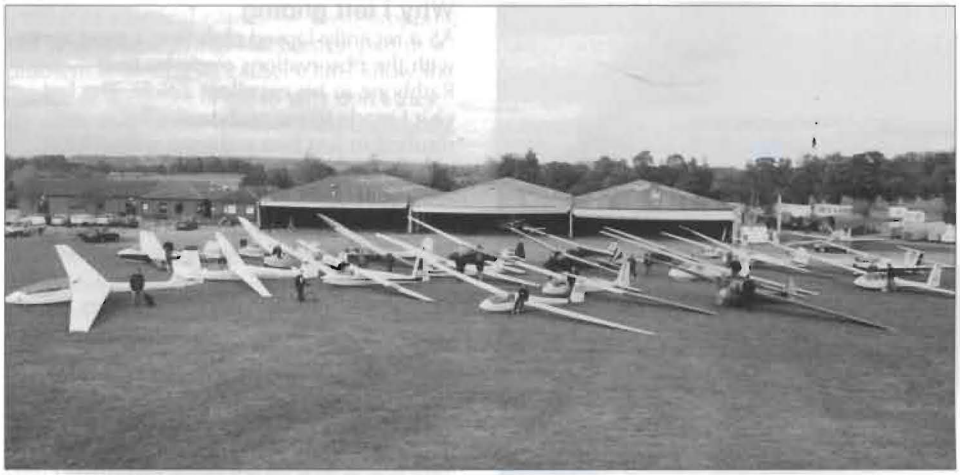
To enter, just answer these questions (answers in this issue)

1. What were the Wright brothers' first names?
2. How far did Plat fly without turning at Minden this year?
3. What type of glider won this year's two-seater competition?

Send your answers on a postcard to: Ozee Competition 2002, c/o BGA, Kimberley House, Vaughan Way, Leicester LE1 4SE and include your name, address and telephone number. Your entry should reach us by **January 3.**

Rules: One entry per person; BGA/Ozee employees are ineligible to enter.





TWENTY of the 27 types of glider operated by the Coventry Gliding Club over the last five decades are lined up in front of the hangars and clubhouse at Husbands Bosworth airfield for the club's 50th anniversary celebrations in October. The first aircraft owned by the club, now The Soaring Centre, was the Cadet (1938 vintage, cost £50 in 1952) and the latest addition to the fleet is the Duo Discus (1999 vintage, cost £60,000). (Keith Nurcombe)

Diary dates

IN 2003, the **PFA Rally** will be held at Kemble airfield, Gloucestershire, close to Aston Down and Nympsfield, from July 11-13. Building works at Cranwell have led to the move. **CAA Safety Evenings** this winter include (date in brackets): Shoreham (26 Nov); Southend, (27 Nov); Peterborough Conington (28 Nov); Halton (4 Dec); East Midlands Airport (5 Dec); Hawarden (9 Dec); Caernarvon (10 Dec); Wolverhampton (11 Dec); Barton (14 Jan); North Weald (15 Jan); Teesside (20 Jan); Dundee (22 Jan); Henstridge (28 Jan); Bodmin (29 Jan); Dunkeswell (30 Jan); Fairoaks (5 Feb); Gloucestershire (11 Feb); Cardiff (12 Feb); Middle Wallop (13 Feb); Gamston (3 Mar); White Waltham (5 Mar); Shipdam (6 Mar); Andrewsfield (13 Mar); Welshpool (18 Mar); Elstree (19 Mar). Full details at *www.caa.co.uk*, click on safety. Next year's aerobatic contests include: **Dan Smith Memorial Trophy**, Dunstable, March 30-31; **British National Glider Aerobatic Championships**, Saltby, May 30-June 2. A full comps calendar is on p45 of this *S&G*.

Team coaching – is it for you?

THE British Team coaches have recognised a need to support up-and-coming talent for future teams. To address this, we will run a week of development training at Ontur, Spain in one of the last two weeks of April 2003. The course will be run by members of the Senior Coaching Squad, and is an enormous opportunity to train with Britain's most experienced world championship pilots. Whilst we aim to support pilots who are young enough to compete in future Junior World Championships, the training week is open to pilots of any age, and we hope to see applications from ANY competition pilots with potential to fly for Great Britain in the future. Closing date is Friday December 27. For an application, contact *jayrebbeck@hotmail.com* or call 01442 842468



Liz Segal

Award for Tony

A PRESTIGIOUS international award from the Prince Alvaro de Orleans-Borbon Fund has been given to Dr Tony Segal *(seen above left)* in recognition of how his work has inspired airworthiness standards in sailplanes that reduce post-accident pilot injury. These include work on energy-absorbing seating foam; evaluating crash-worthiness on impact; emergency escape systems; avoidance of deep vein thrombosis and development of harnesses and headrests. Tony, a long-standing *S&G* contributor, was presented with the award by FAI president Wolfgang Weinrich and the Prince *(above right)* at the FAI conference at Dubrovnik in October. "It is clear," the citation said, "that the research work undertaken by Dr Segal has led to standards which will make for safer flying in the future, not only in gliders". The only previous recipient is Dr Paul MacCready. Also honoured was Cedric Vernon, for many years a BGA Technical Committee member, who earned the Pirat Gehriger Diploma for services to international gliding. He made outstanding contributions to airworthiness standards on structure fatigue, landing loads, and cockpit crashworthiness.

In brief

YOUR application for The Royal Aero Club Trust's new Flying for Youth Bursary Scheme must be submitted before December 31, 2002. This offers bursaries of up to £500 for 16 to 21-year-olds who want to upgrade an existing qualification in a wide range of airsports activities. including gliding. For full details see *www.royalaeroclubtrust.org*

A MEETING with NATS about recent changes to the NOTAM website (*www.ais.co.uk*) was due to be held in mid-November. Andy Roch of London GC agreed to represent the BGA there. See the BGA website (*www.gliding.co.uk)* for any updates.

EASA, the new European Aviation Safety Agency, went live on September 27, 2002.

THE Soaring Society of America has supported a recent FAA ruling that pilots should carry their pilot certificates and an approved form of photo ID with them when exercising pilot privileges. The rule was introduced as a response to September 11. "We believe," says the SSA, "these measures provide far more effective, practical and cost-efficient security benefits than the onerous fingerprinting and background check procedures a number of State legislatures have proposed" (*www.ssa.org*).

THE organisers of the World Class Worlds have cancelled the event, due to be held in February 2003 in New Zealand, because it had only 12 entries at the closing date. In a letter to the IGC, they expressed bitter disappointment at the stance of the British and German National Aero Clubs. The BGA did not fund an entry, as Competitions Committee chairman Ron Bridges later told *S&G*, because the growing number of international competitions and a limited budget forces it to prioritise according to the event's status and the British Team's best chance of success.

THE 95th FAI General Conference approved a new concept for the third World Air Games in 2005: a reduction in the number of participants and more centralisation of the competition venues to increase the event's popularity and attractiveness. A two-phase bid process will start in 2003.

THANKS to James Collum for pointing out that Mr (*not* "Captain") Bill's operation at Dillingham Field, Oahu, offers instruction as well as glider rides (see *Hard work in Hawaii*, October-November 2002, p33). And S&G's apologies to the Brigdens, whose BN postcode was described as Bournemouth in the last issue. It is, of course, Brighton.

WINNER of the BGA 1000 Club Lottery's September draw was R Yarney (£44.25). Runners up in September were JC Tait, RH Dixon, A Thomas, J Green and L Woodage (all £8.85) and runners up in October were DC Perkins, S Hill, DA Jennard, NA Dean and M Davis (all £8.80).

Your letters

Spiralling downwards...

OH, no! It's another hands-wringing, look-to-the-Heavens exhortation about gliding's death by a thousand cuts. "Been there, done that, got the t-shirt," springs to mind after reading Neil Rathbone's article on club survival in the October-November *S&G* (*Is your club in a spiral dive?* p39). Wish I could have a free launch for every article, letter and discussion on this subject over the last 10 years. Plus another for every time there's been no realistic solution put forward at the same time.

Yes, we know what's lacking; yes, we know what the public wants, yet amazingly, Neil even admits under the "chicken and egg" sub-heading, that much of the solution is "shot down as wishlist creation" (a reference to decent clubhouse/toilet facilities). Neil further admits that, two years on from the original awayday soul-searching, most of the ideas "might as well have been pinned up on the mantelpiece".

So what's the point of the article, other than to promote land-yachting as a by-product of gliding, while carefully omitting to mention the cost of laying down a suitable surface at those clubs not basking in the luxury of hard runways/peritracks?

Far better would have been an article that explained how the club approached its bank manager with a well-thought out, five-year business plan and came away with a low-interest loan of £100,000 for the purpose of transforming the club and its approach to gliding. Ah! but we've already shot that one down in flames on page 39: "As flying is weather-dependent, all ideas of business planning and cash flow go out of the window."

So any meeting with their bank manager would have gone something like this... "Good morning, sir. First the good news. We'd like a substantial, unsecured loan for our gliding operation, based on an exhaustive and varied business plan which we thrashed out a couple of years ago one afternoon at an informal, off-site get-together, but haven't had the courage to test out. Now the bad news. It's totally dependent on the weather and if you (er, we) are lucky and Mother Nature doesn't screw us up between now and fulfilment, you won't have to write off a single penny."

Reading between the lines, I think what Neil is really getting at, without actually saying it, is that gliding clubs need to operate on a fully professional basis, like light aircraft flying and golf clubs. The site is operated by paid staff, you book a lesson, or glider if solo, you turn up at a given time, fly and then go... to do the shopping with your wife, take the kids out, clean the car, etc. The BGA has been hinting at this approach for years. Who dares, wins.

Terry Banks, EASTBOURNE, East Sussex

PS: Anyway, anyone who uses words like "nascent" and "minutiae" shouldn't be given a position of responsibility in the first place. I'm such a bitch at times.



Neil Rathbone's article in the last issue has prompted a lively correspondence. See the letters on this page

...Or soaring upwards?

NEIL Rathbone's excellent article on the development of his club reminded me of my own experience some years ago. We were aware of the need to cover our fixed costs with reliable income that was not weather dependent. We found that ground rents for caravans were a helpful source of extra funds.

Planning permission limited caravan numbers on the site, and there was always a demand for sites as suburban families sought to spend their weekends in the country. We restricted occupiers to active flying members. This stimulated flying, a community developed and many lasting friendships were made.

Neil seems to me to be a little shy of saying that he sees the market for gliding in the 50-plus age group who have the time, the money and the determination to develop their involvement in the sport. Youth has many distracting interests these days, and the wastage rate is higher.

To my mind British gliding is drawn two ways. There are still those who look back with nostalgia to a youth when we made most of our equipment. There are others who, rightly in my view, want to give newcomers the experience of soaring flight early in their association with the sport. They argue that the excitement and emotional experience will mean that newcomers are more likely to take up soaring up as a serious reaction.

But the physical demands of soaring remain. I was most impressed with the hangars at Omarama that Roger Coote described in the previous *S&G* (*Action-packed hangars*, August-September 2002, p9). In Britain we are behind in the design of hangars where sailplanes can be kept fully rigged yet able to be taken out without disturbing others. Omarama has solved the access problem. I hope this example is followed over here, for their availability will do much more to increase the appeal of the sport to those over 50.

J C Riddell, HARROGATE, North Yorkshire

Why I left gliding

AS a recently-lapsed club flyer I must agree with the observations made by Neil Rathbone in his excellent article. The last visit I made to my club took all day and resulted in just two aerotows with a total gliding time of 20 minutes. The previous visit, again an all-day affair, netted three winch launches and just 10 minutes aloft. The value-for-time factor is the main reason why I have opted for powered flight.

Bill Mitchell, CUDWORTH, Barnsley

Why I left gliding, too

I READ the excellent article *Is your club in a spiral dive?* by Neil Rathbone. I am a 29-year-old paraglider pilot and at one time not so long back a student glider pilot. I regularly see articles in *S&G* (yes, I still read it regularly) analysing student drop-out rates. All these articles highlight the same problems: time, money and inflexibility of clubs/instructors. So why don't these clubs take note of these findings?

When I was trying to learn to fly sailplanes I encountered many of the problems highlighted by Neil Rathbone and others. Because of my work commitments I cannot go to clubs most weekends. Trying to get a lesson in the three clubs near to me on weekdays was like getting blood out of the proverbial stone. Responses like: "if there's a small turnout during the week you probably won't be able to fly". Fair comment, but that's no good to the aspiring student. When I decided to switch to paragliding I could fly any day I liked (weather permitting). No hassle. No problems.

Next is cost. I was quoted in the region of £1,500 to get to solo standard. But once qualified the cost went on. At up to £90 per flying day it is a costly business. I'm lucky: I have a reasonably well-paid job. But what about the younger generation, who rely on help or total financial support from families? Some clubs have bursaries and these are a good step forward. To go solo and to buy a good-quality secondhand paraglider would cost £1,300-1,700 for the lot. You only have to pay your petrol money and a quid to the farmer to use their land. For a youngster, which would they find financially more viable?

With regard to time and commitment, some people (and I have done it) have spent all day at the airfield only to get a half-hour's airtime. Not a good return when you are learning. When learning to paraglide or hang-glide you spend the majority of your time in the air, weather permitting, so you are constantly getting experience.

To be a good, competent and safe pilot you need experience. A half-hour a week is not good experience. Given the time and cost needed for gliding, it is no wonder that the majority of pilots are nearing their retirement age.

I have spoken to many an ex-gliding student, who fly both hang-gliders and paragliders, and they have all mentioned

similar or identical causes for them dropping out of sailplane flying. The hardest part of a problem is finding its cause. Clubs know the causes of drop-out rates, so why don't they do something about it rather than constantly analysing the problem?
Paul Sweet, ABERDARE, Wales

Yes, launch rates again

SORRY to disagree with your correspondent Alan Childs (*Not launch rates again*, October-November, p7), but launch rate often does matter. It matters if you are sitting in your single-seat glider in a long launch queue, watching the cumulus pop overhead, with the chance of completing your 300km receding by the minute. It matters if you are well down the casual list for instruction and hoping to fly before it gets dark.

If he doesn't believe me, I would suggest that he visits one of the busier clubs (other than the Mynd, which generally achieves an excellent launch rate) on a nice summer's weekend day and puts his name on the end of the casual list for a check flight. Then he will find out just how frustrating and time consuming slow launch rates can be.

May I link this issue to Neil Rathbone's excellent article on club survival and finances? As an instructor I have found the vast majority of people I have taught have sooner or later given up gliding. I have remained friendly with several of them and they usually quote cost, time and relationship problems as the main reasons for this. To a non-gliding partner spending all your money on gliding and whole days at a windy, dilapidated airfield may seem a bit unreasonable.

Neil's wishlist includes younger instructors and more modern gliders. Although I am in my mid-50s I don't disagree with this. However, my club (Lasham) has actually trained up a number of younger instructors, only to find that they often give up within a year or two. Often they find it too much of a commitment, especially if they have a young family, or have difficulty in instructing and meeting the minimum solo flying hours requirements. Incidentally, why are these more onerous for basic instructors?

If we could speed up the launch rate and get all our pupils flown by say 2.00pm, they would be happy and the instructors could then go off soaring to build up their solo hours. Two problems solved in one go!
Derek Copeland, MAPLE CROSS, Herts

The last word on launch rates?

ALAN Childs' letter in the last issue, *Not launch rates again*, was a breath of fresh air in an increasingly politically-incorrect world. Unfortunately, however, the "fun" that he mentions at the end is so often negated by the surgical inefficiency of launching at some clubs, along with the dictatorial attitude of some senior members. A bit like the gruesome state of the NHS, though no statistics tell one the average waiting time, which is actually what matters, particularly at winch sites. However, like Alan, I am not particularly interested in the numbers, just the subject of getting people flying, and those most affected by launch trauma are generally club students.

I suspect that there are many pre- or early solo pilots out there who have all three Diamonds on winches (ie, driving) but all of three minutes of soaring – either because most of the time is spent driving the winch, or because of a lack of cash. With respect to the former, there is a definite view at some gliding clubs that hours of winch driving are good for one, just as increased amounts of cod-liver oil are! Well, I say to such proponents how would they feel if they went on a skiing holiday – perhaps even to learn to ski, Heaven forbid – and were told by the ski company that they were "driving" the ski lift each morning? I can guess that the response would not be in French, but a rather more universal one!

This is not a purely facetious analogy – gliding is competing against a far greater range of recreational sports for the young (and young at heart) than ever before, so we should take note of other sports' successes in generating and retaining enthusiasm. To continue the analogy, most ski lift drivers are not professionals – they are paid a small amount that they can then use to fund their love of ski-ing. So here is my suggestion: why do winch sites not add a £1 levy to each private owner launch, with the £1 going into the pocket of the winch driver (in account terms). After a morning's work, the (invariably) cash-strapped driver can then take a proper aerotow, or four or five winch launches, for free (launch-wise). How many private owners – most of whom take just one launch a day – would begrudge a £1 (or even £1.50) subsidy of a student driver? You never know, the club might actually get volunteers to drive! Is it worth a test? It would also help encourage winch launch efficiency, though we won't go into that, for Alan's sake!

Whilst I am droning on in my first letter to *S&G*, I would also like to make a suggestion in response to the "Say goodbye to another member" letter, as this is hardly the first on the given theme, but they all make one's teeth gnash. This one was particularly worrying, as the author clearly flies at a club with ridge, wave, and thermal soaring, so how can this state possibly have arisen?

If we are serious about training then we need to take a leaf out of the training world in general, and a good example is schools. At the end of term, teachers huddle around in the common room (well, pub, probably) and come up with reports on each student's progress. This is not just an exercise in filling pieces of paper with nuggets of wisdom, but a chance to objectively assess student progress. How many clubs do the equivalent for their student pilots – and I don't mean the sending out of reports along the lines of: "a satisfactory term's work"?

It's clear from recent discussion that CFIs already have to gather statistics on instructor hours each year. Would it be so hard for a club to e-mail out a form to all members to gather similar information – total hours, hours soaring, etc? Once a year, or maybe more often, the club's instructor committee can then review each student and work out who might need extra help. If Snoggins minor has had only two hours' flying this year, and two hours' last year, it's not rocket science to assume that he or she will fall by the wayside soon. There is a chance of catching them before they do.

I can already hear the howls from clubs and instructors that they already know as much, and don't need a survey of their members. Really? If so, why was the last letter written in *S&G*, and many similar ones before? Many clubs clearly do *not* know what state their members really are in. With respect to extra help for borderline pilots, ensure they fly in the soarable part of the day, give them a mentor, get them to go on a week's course – even at another club. If there's a will, there's probably a way. If you lose them, though, it's probably for good.

It takes me over three hours to get to my new club, but it's almost always soarable, has no launch queues (no winches), and I can normally fly for as long as I want. Relatively expensive launches – maybe, but cost per minute is much cheaper than when I started out. Looking back, I'm amazed I even bothered getting solo first time round.
Greville Earle, LONDON, England

Right time to celebrate Wright stuff?

IN October 1902, man (two of them) first demonstrated and proved an invention: the three-axis-controlled aeroplane. The men were Wilbur and Orville Wright and the aeroplane was their No. 3 glider in its fully-modified form. The brothers were on their third autumnal expedition to Kill Devil Hills, a group of several large sand dunes a few miles south of Kitty Hawk, a tiny fishing hamlet on remote Hatteras, the largest of the long string of Outer Banks Islands of North Carolina, USA. It was on this glider that they knew they had achieved controlled aeroplane flight.

Adding a fixed fin to two-axis control had made their problem of adverse yaw worse (due to weathercocking) until, after much thought, they hit upon the idea of making the fin hinged (as a rudder) to control yaw. Fearing pilot overload (pioneering Human Factors studies?), they incorporated it with their wing-warp roll-control action. From their diaries and letters home, it is very clear that they considered this to be the major breakthrough they had needed. This was borne out by their application for a patent in early 1903 (granted 1906). They correctly foresaw that internal combustion engine technology could provide sufficient power, for a given weight, to enable sustained flight (although their assumptions about propeller efficiencies were premature).

Isn't the 100th anniversary of the invention and demonstration of the world's first ➢

Your letters

controllable aeroplane an event we should be celebrating? Next year we shall celebrate the centennial of the Wrights' first powered flights (in December 1903), the longest of which lasted 59 seconds. However, will it be mentioned (I wonder) that their longest flight in 1903 was of 70 seconds' duration but was done on the 1902 glider?

AE (Tony) Gee, Marlow, Bucks

For more on the Wrights, see pages 34-37 – Ed

Discipline required

PLEASE rap Platypus on the knuckles with your ruler! He was so ga-ga over Hans-Werner Gross's Eta (October-November 2002, p17) that he converted the 850kg motorglider weight limit to 1,770lb. My conversion program tells me that it is 1,873.929lb. I too need scales like that!

Dean Carswell, via email

Platypus replies: Yep, mea maxima culpa. I nodded off, as do the greatest. However, at the risk of seeming mean-spirited (what, moi?) I can't help mentioning that your correspondent can't spell Hans-Werner Grosse's name properly, in spite of having it right in front of him as he writes. Does it not show we are all human, even the brightest of us?"

Yes, that was indeed mean-spirited. We have come to expect nothing less. Watch out, pedants all! – Ed

Behind you!

WHILST sitting in the toilet today, I was idly scanning the *Gliding Safety* leaflet dispatched with the latest *S&G*. This contained details of a thankfully minor but bizarre airborne coming together between a K-13 and K-21. The narrative claims "the trailing edge of the K-13 struck the K-21's port wing leading edge". I have seen several interesting gliding mishaps, but have yet to witness one glider reversing into another whilst both were airborne. I will obviously now feel even more threatened when in the vicinity of two-seaters.

Phil Jeffery, *via email*

Mike Fitzgerald, editor of Gliding Safety, *replies: During the preparation of* Gliding Safety, *as with any other published newsletter or magazine, much care is taken to try to ensure that grammar and context are understandable and that ambiguity is avoided. Just occasionally an error slips through and if this is such a case then I apologise – got it wrong – must do better next time! The narrative in question could have read: "the K-21's port wing leading edge struck the right wingtip trailing edge of the K-13". I would like to reassure Mr Jeffery that he does not need to feel threatened any more: principles of flight have not been compromised and he can continue musing whilst sitting in or on his toilet with the absolute certainty that another glider will not reverse into him whilst in flight!*

Circuit accidents and incidents

ONCE again we read in the accident reports of two gliders in circuit, on opposite direction base legs, not seeing each other and very nearly having a major collision – they did actually touch!

Most of this could be avoided by the sensible use of radio.

Surely in the 21st century it would not be unreasonable to insist that all gliders be equipped with a serviceable radio?

All pilots should on joining the circuit make appropriate downwind calls – left- or right-hand – and a call on finals if making an approach from an unusual direction.

It is not a bad idea, if only for one's own benefit, to call "gear down and locked" when making the finals call. It might just prevent a "wheels up". Of course the use of radio does not obviate the necessity for a good lookout. Pilots could forget to use their radio, and batteries do fail.

Jules Sutton, MORPETH, Northumberland



Burn GC's school prizewinner, Louise Proctor, ready to fly with John Stirk. See School-gliding links, *below*

School-gliding links

MORE than a year ago Burn GC put forward a graphics competition for year 11 pupils in high schools in our area. As the final topic for a GCSE graphics course we asked them to design a corporate image for the club. The work would be part of their normal course-work and double up as a competition entry. No extra work for them but a chance to win glider lessons as an extra benefit.

Although we were disappointed by the number of entries we were very happy with the quality. Three entries from Kings High School (Pontefract) were chosen along with one from Kettlethorpe High School (Wakefield) as prizewinners. There were problems getting some of the work, as the schools retain coursework until released by the examining boards in October.

Eventually we managed to arrange a date for them all to come to the club to take their flights. On September 2, the weather was wonderful and every flight a soaring flight. Friends and relatives were very envious as were the club members who were ground crew. The pupils were as good as their work. They showed interest and a considerable aptitude. The instructors were John Stirk and Bill Thorpe (chairman). I have never seen them smile so much.

We are going to assemble a travelling display with some of the work and photos taken on the day. This will be exhibited in local libraries, supermarkets, etc. Was it worth all the effort? Well, if lots of happy smiling mums, dads and kids are anything to go by then the answer is a big yes. I enclose a photograph taken on the day. Don't you just love that sunshine?

Rod Salmon, EGGBOROUGH, Goole

Breakaway cables

REGARDING trailer law and "breakaway cables" (*Trailer law*, October-November 2002, p7), Construction and Use regulation 15 requires trailers manufactured from October 1, 1982, to be only used if they have a device which stops them automatically if the main coupling between the towing vehicle and trailer breaks unless a secondary coupling is fitted which, if the main coupling breaks, prevents the drawbar from touching the ground and some steering remains on the trailer. This requirement also applies to trailers manufactured from January 1, 1997, having a maximum total design weight not exceeding 750kg. (Reference: Croners Transport Operations © Croner.CCH Group Ltd.) So although a breakaway cable is not specifically required, the only way to stop a trailer that has broken away is to have some form of secondary connection to the towing vehicle – ie, a breakaway cable. Simple!

David Brain, ENFIELD, Middlesex

Not the end of the season!

WHY, oh why does the BGA do it? The promotion of the idea that gliding only takes place during part of the year: "the season"

In the last issue (p39) there was an article on club survival, in which value for time and availability (launch types/all weather/ seven-day ops) featured at the top of people's want list. There was a very sad letter from a pre-solo teenage pilot (p6) who is not getting enough flying and bemoaned the fact that their club hadn't flown for months. There was also an interesting article from the BGA's new Communications Officer (p9) about raising the profile of gliding. Surely promoting gliding in a positive manner is what is needed and yet the banner headline for the BGA news talks of "a late season flourish" and the BGA website tells us that "as we are fast approaching the end of the season" plans are afoot for the BGA conference.

No doubt someone will say: "well, we all know what is meant by the season" but, if you repeat it often enough, or if you are new to the sport and know no better, then the mentality that gliding (or even worse, "proper" gliding) only takes place during the summer months becomes a prejudice that taints the whole movement. If gliding is promoted as being seasonal then that is negative promotion not positive.

If we are at the end of "the season" then that poor pre-solo pilot who was bemoaning several months' lack of flying is about to be joined by hundreds of others. Some of them will not return next "season" – some because they believe that gliding is only a part-time sport. Please, BGA, encourage pilots to keep flying over the winter, to gain new skills and broaden their experience, to

experience exciting soaring and visit clubs for whom the "season" lasts 365 days a year. Don't tell them to pack up until spring!
Andrew Bardgett, NEWCASTLE UPON TYNE

Get on your bike lad (or lass)

WITH reference to the anonymous letter in the last issue (*Say goodbye to another member?* p6): if progress at your local club is that bad and you really want to fly, move. Plenty of clubs offer week-long courses in summer and if you have had some experience you should solo during that week. If flying solo is your aim, with membership etc it will cost £500-plus so start saving now, visit a few clubs that advertise courses and talk to the members – you will soon get the feel of how well organised they are. The best clubs will have two pupils per instructor and expect you to do eight winch launches or four aerotows each day. You will learn quickly. Then stay current – if you really want to fly there is no reason why you should not have your Bronze Badge by the end of the summer.
David Smith, *via email*

No more heroes any more

GLIDING is not generating "heroes" these days. We need a Pinsent or a Beckham! Possibly we need to think of gliding in the Olympics. That apart, we have a vast number of national competitions but we do not arrive at an overall champion. Perhaps every two years (between Worlds?) we should have a handicapped contest between the top pilots from each nationals? Winner becomes overall National Champion and perhaps we can build a higher profile for the sport around that. The aim is to help us fight our corner more effectively against constraints of legislation and airspace. A National Champion should be good for us all.
Nick Gaunt, LEEDS, Yorkshire

Thanks, Weatherjack

I NOTE the cover of the October-November 2002 *S&G*: "Good finish, 2002". There were twelve 750s in 2002. Only one of the 750s was done at the weekend (John Giddins, Saturday, July 13, 2002). All the others were weekdays! I suggest that the rash of 750s relates to the excellent Weatherjack forecasts. June 19 and April 16 were forecast to be good a number of days before the event. As a result I suspect people were able to re-schedule their work around the prospect of a 5 rating for the day's weather! Had this service not been available, I wonder if 2002 would have had such a "good finish". Overall, I thought it a rather poor summer though a good September and early October (too late for a 750 though).

Jack Harrison has provided a superb service to the gliding community and I suspect to the paraglider and hang-glider pilots as well. Next year he will not be able to provide the same level of service. Surely our BGA subscriptions could be used to subsidise this important service and enable us to make better use of what spare time we have? It would make good use of the money, benefit the majority of the gliding community and, in my view, would be preferable to sponsoring international competitions.
Jon Wand, COOMBE HILL, Glos

Medicals for over-70s

I READ with interest the letter on page 8 of the last issue from Peter Saundby, complaining about unnecessary rules. It has a certain irony. Like Peter, I too have many years' experience and qualifications in gliding, have recently been a CFI, and am currently involved in gliding administration.

Some time ago I presented statistics and reasons for reconsidering the rather onerous and unnecessary medical requirements for instructors who reach 70. These were introduced in 1995/6 on Peter's recommendation. The need then was arguable, and they were not welcomed by some senior BGA figures, as there really wasn't a problem, and there hasn't been one since, but in any case things have changed.

From British Heart Foundation statistics, available on their website, the age-related incidence of incapacitation/death has reduced, and is continuing to reduce significantly, as Peter agrees. The rate is now well below that of 1995/6, or put another way; the age at which the requirements apply could be increased to 75 or probably higher for the same risk level.

We now have the NPPL with reduced medical requirements compared with a JAA-type medical. Peter was one of the BGA's representatives on the steering group that produced them. They allow, with Peter's agreement, an aeroplane pilot to be responsible for up to three others in the air, if they meet the standard of the DVLA Group 2, there is no age limit. Why will Peter not allow BGA instructors of any age to be responsible for one other in the air, with the same medical requirement?
I quote from Peter's minutes of one of their meetings: "Age limits were discussed. The problem is the wide variation in the ageing process. It was agreed that the annual review served as a check on the older pilots. If an age limit was imposed by associations, it should be an operational and not a medical requirement." I have no quarrel with that statement, why apparently does Peter?

It is argued that instruction is not the same as carrying passengers, and that the medical requirements for NPPL instructors are not finalised (at the time of writing). So what? The aeroplane pilot is still responsible for others in the air, and the BGA has never in the past aligned its instructor medical requirements with that for PPL instructors, other than for professionals and over 70s.

Another argument is that of public perception in the event that something does occur. There is a far greater aggregate statistical risk of an occurrence amongst the far greater number of under-70 instructors than there will ever be with the over-70s. We happily accept this risk.

After the introduction of the requirements in 1996, Dr Antony Segal produced a paper for Lasham, in which he concluded that the risk of sudden coronary death in flight, or shortly after flight, was very low for the 65-69 and over-70 age groups. It must be even lower now.

I would ask the BGA Medical Adviser to follow his own plea, and look again at this matter in the light of developments. Politically-based requirements are not good enough or relevant, they should be based on good, sound, statistical evidence.
David Salmon, HATHERSAGE, Derbyshire

Peter Saundby writes: As Medical Adviser it is my role to advise both individuals and the Executive Committee on medical risk. This hazard cannot be ignored because some 4% of fatal accidents throughout aviation arise from pilot unfitness. A third of the population can expect to die from cardiovascular disease with a quarter (or 8%) dying suddenly. Like airworthiness, aeromedical risk is measured in statistical terms and employs the same numbers. The risk may be small, but so is the possibility of the wing falling off.

It is true that a reduction in cigarette smoking and treatment of hypertension has reduced cardiovascular risk in the general population, although the prevalence of obesity will induce a reverse. However I had always assumed that glider pilots were healthier than the population, and granted an arbitrary margin.

It is wrong to think that the NPPL will lower standards. Variations exist, but the level of acceptable risk differs little between private pilots, professional drivers or even airline pilots. Only private drivers and solo glider pilots utilise a lower standard. What differs is the method by which fitness is assessed. There is no evidence that the established BGA, and now NPPL, method of declaration endorsed by a General Practitioner is less effective than periodic medical examinations in identifying past disease.

The chief predictors of cardiovascular incapacity are age and previous disease. Neither declarations nor examinations can predict the future. The risk starts at about age 45 and doubles every 6-7 years. The Dept of Transport has stated that there are very few professional drivers over the age of 65, and almost none over 70. Therefore they see no need to impose an age limit. The JAA age limit for professional pilots is 65. The FAA enforces 60 in the USA although this has been challenged. No limit is set for private pilots, but expensive escalating hurdles have been imposed. During the NPPL deliberations I was in favour of an age limit for an unrestricted licence, but this was not accepted.

Member clubs of the BGA conduct a large number of trial lessons. To use instructors whose risk of incapacity is greater than other airworthiness factors could be unwise. Dave knows that his proposals have been considered and rejected by the BGA Executive. My advice remains to retain the retiring age of 70 for unrestricted instructors. Those who think they are super fit can obtain a JAA Class 2 medical certificate and gain exemption from the BGA requirement.

Please send letters (marked "for publication") to the editor at helen@sandg.dircon.co.uk *or the address on p3, including your full contact details. The deadline for the next issue is* ***December 10***

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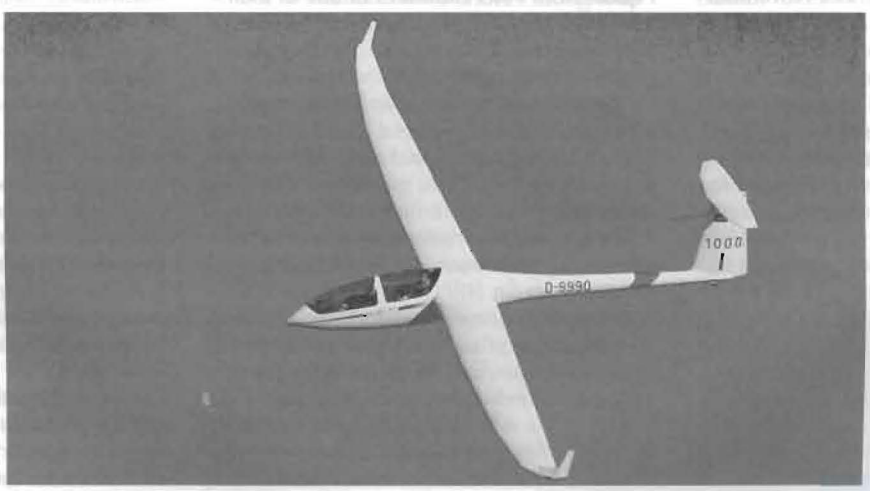
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Funding success at Milfield

THE BORDERS GC has at last received Lottery grant support for its innovative hangar project. Sport England has just announced its decision to provide shortfall funding of £95,653 (65 per cent) towards the project cost of £147,000. Supporting grants have also been awarded from the Berwick Borough Community Development Fund (£5,000), the Northumberland County Small Grants Scheme (£1,250), and in a parallel project for a Youth Section Glider, £2,500 from Awards for All.

The project is for a hangar in which a total of 22 gliders (some club-owned but mostly in member syndicates) can be stored in a ready-rigged and individually accessible state. (See *Action-packed hangars*, August-September 2002, p9).

The idea was first proposed in August 2000 when the BGA supported the scheme, in principle. The case for the development was well argued by project manager Brian Brown and based upon the need to make full use of the site's soaring potential and also to maximise the flying opportunities for all its members. The case stressed the amount of time currently being wasted in routine rigging and de-rigging of gliders and emphasised the need for "more flying for more people" including the elderly, the less strong and those with disabilities. The social and community benefits of making the sport of gliding more available were presented convincingly. Contrary to the elitist image of the sport it was shown that the club serves a broad cross-section of the local community. Gliding deserves investment more than many sports since it is a healthy and challenging sport that can be actively enjoyed well into retirement age.

In spite of meeting all the standard Sport England requirements, the initial application was turned down. The club then exercised its right to go to appeal against that decision. Although the appeal was eventually upheld and a new team appointed to evaluate the project, it was finally rejected on the following grounds:

(i) insufficient sporting gain because the existing membership would be the main beneficiaries (What's wrong with that?)
(ii) insufficient partnership was demonstrated with other existing funding groups
(iii) the project did not reflect an identified sporting need.

On the basis of advice received, the club re-applied in January 2002, taking care to address the points that had been cited in Sport England's rejection letter. The BGA's work on membership retention was quoted and local consultations took place with potential funding partners.

The second application had a much more sympathetic reception and within four months, early "Stage Two Development " status was approved, culminating in the final Award, which has recently been announced.

A detailed building specification has been written, competitive tenders have been obtained and contractors are being chosen for the work which is expected to commence in Spring 2003 with the hangar ready for use later in the summer.

There are lessons to be learned from the Milfield Saga:

(i) Present a good case in accordance with Sport England's strategy
(ii) Be persistent and don't take NO for an answer. After two years, Brian Brown's dogged tenacity of purpose and attention to detail paid off in the end.
(iii) There is still some money in Sport England's Community Projects Capital Fund for a well argued case that meets the criteria for community benefit and sporting gain.

Now is the time to consider grant applications for capital improvements for next year. Contact your development officer if you require assistance.





The hangar site is marked with an "x" (above left) and as a rectangle near to the semi-circular pond (above right)

Chairmen's conference concentrates on priority actions

THE Soaring Centre's new meeting room was the venue for the biggest and, in the opinion of many, the best conference yet, *writes Roger Coote*. The 60 delegates included 53 club chairmen from Scotland to Kent.

The day was based upon the Priority Action Areas taken from the BGA Strategic Plan. Each was the subject of a presentation, followed by syndicate discussions and feedback on the actions to be taken at club level:

Membership: Statistics have been analysed to death. We know the problems but it is time to get out and do something positive. The Southdown and Camphill pilot schemes will report back next year with Best Practice Guidelines. The role of central advertising was limited. Clubs do a better job in the local market with BGA support (eg, the Media Pack). Raising the profile of gliding for political reasons should not be confused with recruitment drives for club members.

Instructor Corps: Bob Pettifer's explanation of the need for better instructor motivation and for higher standards was well accepted. Clubs need to regard their instructors as a precious resource. "Cuddle them," urged David Roberts, or at least humour them and keep them informed. They are the club's interface with the market.

Club Protection: Both the Development and Airspace Committees work hard to protect clubs' interests. Clubs need to ask in good time for advice on issues of security of tenure, planning and funding. Airfield Safeguarding should be a priority at many club sites.

Miscellaneous: The BGA Coaching Operation will be at Bicester in 2003; Clubs' administrative responsibilities on medicals should not detract from a pilot's individual responsibility; BGA is to consider the phasing of club capitation payments; BGA is planning a "National Gliding Day" in 2004; BGA Trial Lesson Voucher scheme is under way and popular; adverts in "Yellow Pages" are more effective than in glossy magazines.

The flak began to fly over the new BGA medical requirements. Some clubs complained bitterly at having to be responsible for maintaining a record of members' medical status. This paled into insignificance, however, when compared with the possible alternative under EASA with heavier regulation of gliding and perhaps, a JAR Class 2 standard of medical for **all** glider pilots. If EASA is allowed to go in the wrong direction, it could have serious consequences for UK gliding. The BGA is supporting Europe Airsports' action to resist the threat of bureaucratic regulation, for which the BGA has strong support from the CAA. In conclusion, BGA Chairman David Roberts reminded delegates that a club chairman's job is focused upon leadership. Effective chairmen set aside time for thinking, planning and above all, for motivating people and keeping them "on side". Altogether a thought-provoking and challenging day – and enjoyed by all.

Readers' offer for tickets to the Outdoors Show

THE hugely successful Ordnance Survey Outdoors Show – the major UK event for all outdoor activities – is back bigger and better in 2003.

The British Gliding Association will be there with clubs from around the country giving practical advice as well as running the new virtual glider! Airsports will form a large section of the Adventure Sports Zone at the show with hang-gliding and paragliding also strongly represented.

Other great stuff at the show includes the International Canoe Exhibition, an international climbing competition, a Super Theatre with the likes of Sir Chris Bonington to inspire your adventures!

There is also a great ticket offer for readers – until the end of January 2003. Simply call the hotline number on 0870 0109 086 quoting "BGA offer" and get two tickets for the special price of £5 (normal price eight pounds in advance, this offer saves you £11!).

Andrew Strachan

Promoting gliding

IT HAS been a busy first couple of months in the job. I am getting to grips with the way that the BGA works and remain overwhelmed at the amount of behind-the-scenes activity that goes on.

On the promotional front, the BGA will be exhibiting at a number of shows over the winter months. These are all targeted at those with an existing interest in aviation and/or adventure sports and are as follows:

BHPA Conference and Exhibition
Telford – Saturday, November 30 to Sunday December 1

***Daily Telegraph* Adventure Sports Exhibition**
London Olympia
– Friday January 10 to Sunday January 12

The Outdoors Show
National Exhibition Centre, Birmingham
– Friday March 14 to Sunday March 16

We will be selling the new BGA Trial Lesson Voucher at these shows. This is an attempt to strike while the iron is hot by getting interested individuals to sign up for trial lessons there and then. I have been gratified by the positive response to the voucher scheme from clubs – we feel that by marketing only to people with a predisposition to air or adventure sports, the conversion rate from trial flight to member should be better than that often achieved from club voucher schemes.

You may have seen the Sports Nation programme on Sky Sports recently. This featured gliding, including footage filmed at this year's Junior Championships. There has been some debate in the gliding newsgroups about this focus on competitive gliding. I believe strongly that we must promote gliding both as a competitive sport (particularly important for bringing younger members into the movement) as well as an accessible sport for life.

Ultimately, we are working to bring new members into gliding. A lot has been written in these pages about the need and the best way to achieve this, including Neil Rathbone's excellent article last month. One simple way in which every member (yes – I mean you) can help, is to go out of your way to make newcomers feel welcome and wanted when they turn up at your site.

Keith Auchterlonie
BGA Communications Officer



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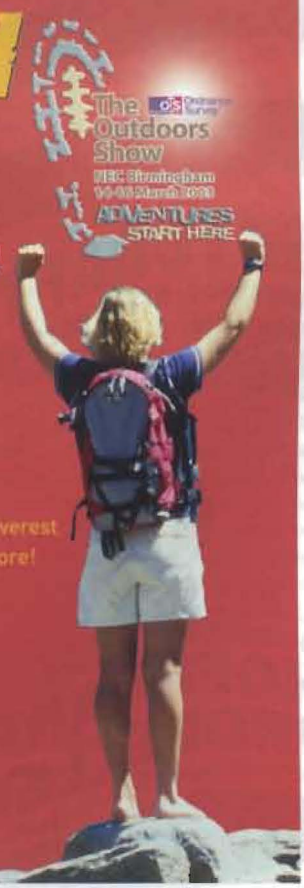
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Stretching the season

IN North America the late summer public holiday, called Labor Day, falls on the first Monday of September whereas the UK Summer Bank Holiday falls on the last Monday of August. In both cases there is a general feeling of: "Ah well, that's it, the season is past its peak and we're sliding down towards autumn". Certainly I have got into the lazy habit of doing very little cross-country soaring in the UK after the end of August each year. I decided this year to see whether I could extend the cross-country season at both ends by flying the syndicate Janus C in Phoenix, Arizona in the first half of March and again in Minden, Nevada in September.

I don't hugely recommend Arizona in the first two weeks of March, however, though it very rapidly improves after that. Renting good gliders is not easy there, either. Electric

'You also have to like flying in blue thermals over endless vistas of rocks and giant cactus'

socks and a well-sealed glider are needed on the good days: Edward Downham and I suffered agonies of incipient frostbite at 15,000ft. You also have to like flying in blue thermals over endless vistas of rocks and giant cactus, with landable fields scarce. But the lively local crowd go cross-country with abandon, which shows you can get used to anything.

At the late end of the season in Minden – where rental gliders are plentiful – one can do serious cross-country soaring in thermals right through September and into October, though the wave takes over increasingly from convection as the days shorten.

I want to describe just one day: Labor Day, September 2, 2002.

This was my 12th season of soaring at Minden. I already had done a 600km flight the day before and indeed my logbook was bulging with hours. The curse of Plat, which usually darkeneth the sky and maketh the desert bloom, was firmly exorcised, possibly because he has been leading a blameless life recently, if only on account of old age. *(Hah! Ed.)* More pragmatically it is because the fourth season of drought is upon the land. So instead of rushing into the air at 10.30 I was still pottering about, I admit with shame, at noon.

A young stranger visiting the airport, name of Allan Adams, chanced to speak admiringly of the Janus. "Nice ship," he said. It goes to show, flattery will get you anywhere. "Want a flight?" I responded. "Sure!"

We declared 600km out and return, down south to the fabled White Mountains, which brood over the sacred ground of the Owens Valley, home of the Bishop Wave, about which grey-bearded glider pilots, gathered around the camp fire strumming their guitars, sing, tears welling in their eyes...

(Cut the poetry, get to the action! Ed.)

Sorry. After the usual struggle in the Carson Valley – it can sometimes take an hour to get going, and I have noticed that the idle rich often take a high, expensive tow all the way to the Pine Nuts to the east of Minden, which I somehow regard as cheating – we departed on track. We ran along the spine of Mount Patterson and over the melancholy remains of the once rip-roaring gold-mining community of Bodie, now a ghost town. Past Mono Lake – steadily shrinking as Californians water their farms and gardens – and over Platypus Flats, a 500-yard dry lake from which I was successfully aerotowed in 1994 and which, being in the middle of several thousand square miles of otherwise unlandable terrain, still resides comfortingly in my GPS. The White Mountains awaited.

About 15 miles north of the Boundary Peak, which marks the northern end of the White Mountains, we circled up to 17,000ft. And then? Well, we just flew – and flew and



two boats is a race . . .

flew, straight as an arrow but with height varying between 14,000ft and 18,000ft, past White Mountain Peak down to a point between Independence and Lone Pine that was exactly 300km from Minden. As we turned to head back north, we were joined by a glistening new Duo Discus. It was very slowly getting away from us. Same span (20 metres), same manufacturer (Schempp-Hirth) but the 20-year old Janus C has flaps and the new Duo is unflapped. The Duo's improved aerodynamics clearly cancelled out the absence of flaps.

At Boundary Peak our paths slightly diverged, and I expected not to see the Duo again. We were being outflown, it seemed. I tried not to feel competitive. But as they say, one boat is just a sailing trip; two boats is a race.

The GPS log of the homeward track just showed a straight dotted line past Bishop

'We had done some 460km without making a single thermalling turn...'

to Bridgwater – of which two airports I had fond memories. They had been the two mandatory landing-places on the day I did my first solo cross-country flight in a Cessna 152, when qualifying for my US single-engine pilot's licence four years ago. The immense irony was that in 1998 the rented Cessna (at only $53 an hour, by the way, including all taxes, fuel, and no landing fees to pay anywhere) was so underpowered that I had to circle in thermals to get enough height to stagger across the mountain passes into the next valley. But today I was flying over the same course with no engine at a steady 100kt true airspeed (but only 75kt indicated because of the altitude effect) and this time the chief concern was not to be sucked by remorseless lift into the forbidden airspace above 18,000ft.

Continuing north from Bridgwater, we passed over Topaz Lake and its "airport". More fond memories. Topaz International is the jokey name for a dirt strip so beset by sheds, trees, berms, bushes and crops that one is no longer allowed to aerotow out of there – though I did so a few years ago. And very exciting it was, too – the tug and all the

obstacles being blotted out by red dust as we blasted off.

Instead of final-gliding into Minden, however, I became curious to know how far this street would go. It stretched behind us to the southern horizon, we knew, and it seemed to stretch to the northern horizon. And at 18,000ft the horizon is an awful long way off. We started a run along the Pine Nuts, parallel to the Sierra Nevada.

There, turning ahead of us with an ASW 20, was the Duo Discus! So by pure luck, taking a slightly different line, we had caught up. Arrogantly we pulled up in the well-marked centre of the thermal at about 8kt and, disdaining to circle, carried on northwards past Reno. Close to Silver Springs we could see we were coming to the end of the street, and decided reluctantly to pause and top up altitude in readiness for a glide back to Minden.

From joining the street north of Boundary Peak, down to the turn on the Whites and back north to Silver Springs, we had done some 460km without making a single thermalling turn. The modest (by comparison with other flights that day) total distance of 680km had taken 4 hours and 40 minutes.

So who was flying the Duo Discus? The next day the mystery glider flew into Minden – the pilot was Gavin Wills, with whom I had flown in the New Zealand Nationals in 1999 in another Duo Discus. (Those days in the wild and beautiful South Island beggar description – maybe some other time.) The previous day, when we raced each other along the Whites, he had taken off earlier and landed later, and completed a total of 900km. At dinner Gavin explained how we had all been the beneficiaries of a convergence covering the entire area.

That's the difference between me and the great pilots – they understand the weather. I hope the Editor and I can persuade Gavin to tell us in a later *S&G* what happened to the sky that day. The air must have been coming down somewhere, but where?

Soaring in the shade of Fujiama

Now we can have some poetry, (since Madam Editor cruelly said "cut the poetry" in the previous section). The Japanese *Haiku* poem has only 17 syllables; five syllables in the first line, seven in the second and five in the third. They are used to convey timeless wisdom, often rather sad, in what you might call a Truth Capsule. I can see myself in advanced years sitting on a mat cross-legged (except that I shall never be able to get up unassisted) writing Haiku with elegant, leisurely brush-strokes in Chinese characters. The Japanese language is quite different from Chinese, but the ideograms are Chinese.

(Thank you so much: absolutely essential knowledge for a gliding magazine. Ed.)

Here is one – an error message– that I received by email from a friend:

Yesterday it worked.
Today it is not working.
Windows is like that.

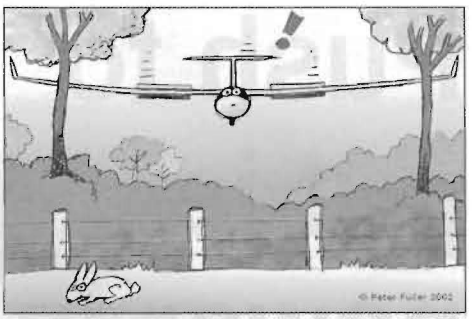
Inspired by this, I knocked off a few, called *High Cu*. (Geddit? Oh well, please yourself.)

White streak on runway
Black streak on glider's bottom
Colourful language.

Old battery dies
Lost without GPS now
Must learn to read maps.

Finished first – loud cheers!
But wait: cup fills with sorrow
Logger not switched on.

"Silent flight" misnamed.
It is only truly quiet
Before the last stall.



The tips were fitted

Bloodsucking gaggles!
Lazy leeches are hateful
(Except you and me)

Green meadow, brown cow
Carbon helps the digestion
Ruminate on that.

First warm, then so cold
One more peebag disaster
Will make life perfect.

Madam Editor, not to be outdone, added one of her own:

Two trees in the hedge,
fifty feet apart. Oh, no!
The tips were fitted.

Please submit your own, to be published in 2003. The editor and I offer a free copy of *The Platypus Papers* to the writer of the best *High Cu* submitted and printed – which means of course that the poem must be printable. Unprintable ones will be circulated privately but will get no prizes.

mdbird@dircon.co.uk

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Push to put jet power in gliders



Above: the jet-powered Ventus ctt. Right: the model jet engine used. Right, inset: jet control panel in the cockpit

Jochen Ewald reports on a new arrival at this year's meeting – the jet-powered Ventus ctt

MEMBERS of the German Academic flying groups (Akafliegs), all students at university, play an important role in the German gliding scene. In these groups, they combine the theory they learn during lectures with the practical work of developing, building and flying new gliders. All the active Akaflieg groups are united in the IDAFlieg organisation, to co-ordinate their projects and exchange experience. Every August, they meet for their summer meeting with engineers of the DLR, the German Centre of Aviation and Spaceflight Research, to test fly their new projects and evaluate their own machines and serial-built gliders and motorgliders. The first summer meeting was held in 1937 at Prien, east of Munich; these days they take place at Aalen-Elchingen airfield, south-east of Stuttgart.

In 2002, the most interesting new arrival was the first sustainer motorglider powered by a modeller jet engine. Martin Kappeler from Hamburg brought his Ventus ctt, powered by a small "JetCat" turbine with nominally 12kg, but realistically 10kg, thrust mounted on a 9-litre fuel tank pylon. This turbine is able to keep the glider flying at 100km/h (54kt) at about 5cm/s (0.01kt) climb rate for about 15-20 minutes. It was demonstrated to the LBA, who wanted to find out whether to change the certification rules to include such drives, and to get an impression of the noise produced and the glider's flying characteristics. They issued two permits-to-fly for gliders with model jet engines; the other, a Ventus CM, is intended to be flown with two engines of 18kg thrust.

Employees of the LBA, the German aviation authority, are welcome at IDAflieg meetings. They clear up certification questions and test-fly gliders being certified. Nearly all LBA people working on gliders and motorgliders are active, experienced pilots and were themselves members of the Akafliegs. This enables the LBA to work effectively and to remain open to new developments. Finally, this meeting gives always an excellent overview about what's new in the gliding scene, and what might appear in future.

Performance evaluation flights always attract a lot of interest. They are carried out in comparison flights with the DLR'S calibrated 17-metre DG-300. Early in the morning, when the air is still absolutely stable and calm, both gliders are aerotowed to flight level 95 or, if the airspace controllers give their permission, to flight level 135. Then they fly "evaluation steps" at different speeds in parallel formation, about a wingspan apart to avoid interference. If the glider to be evaluated has flaps, different flap settings for each speed are also tested. This eventually leads to the speed polars for different flap settings, and data about in which speed range which flap setting is best and where the glider might be improved, for example to avoid drag-inducing laminar bubbles.

In earlier times, these evaluation steps were documented by measuring the time of each step and photographing the two gliders from the side to find out the height difference between them before and after the step. This year, for the first time, a fully-electronic documentation system, which had been parallel-tested during recent years, was in sole use. Now the positions of the gliders are registered permanently by a differential GPS system, while the height differences and the speed indications of both gliders are also digitally registered using high-precision calibrated pressure sensors.

It is thus possible to eliminate the effects of imprecise flying by the pilots as well as of air turbulence.

Unfortunately, the weather during the first week was too bad to evaluate the LAK-17A and the LAK-19, both of which then had to leave. The speed polars of a Ventus 2 CT and of Hans-Werner Grosse's Eta were evaluated. Other projects included assessing a Discus 2's performance with different c of g positions to get some data about this much-discussed subject, and the influence of position and distance on performance when two gliders are flown in formations.

The students also researched new winglets on the Akaflieg Karlsruhe AK-5 and the Akaflieg Darmstadt D-40; the turbulence behind the wing of the Akaflieg Stuttgart's Astir CS; spin testing of the Ahrens Ly-542K Stosser, a restored wooden, fully-aerobatic two-seater from 1954, which had been given new, more effective ailerons by Joachim



A video camera and pieces of wool were used to investigate the turbulence behind an Astir's wing root



Measuring pitot pressures in a vertical cross-section behind the trailing edge to research flap settings



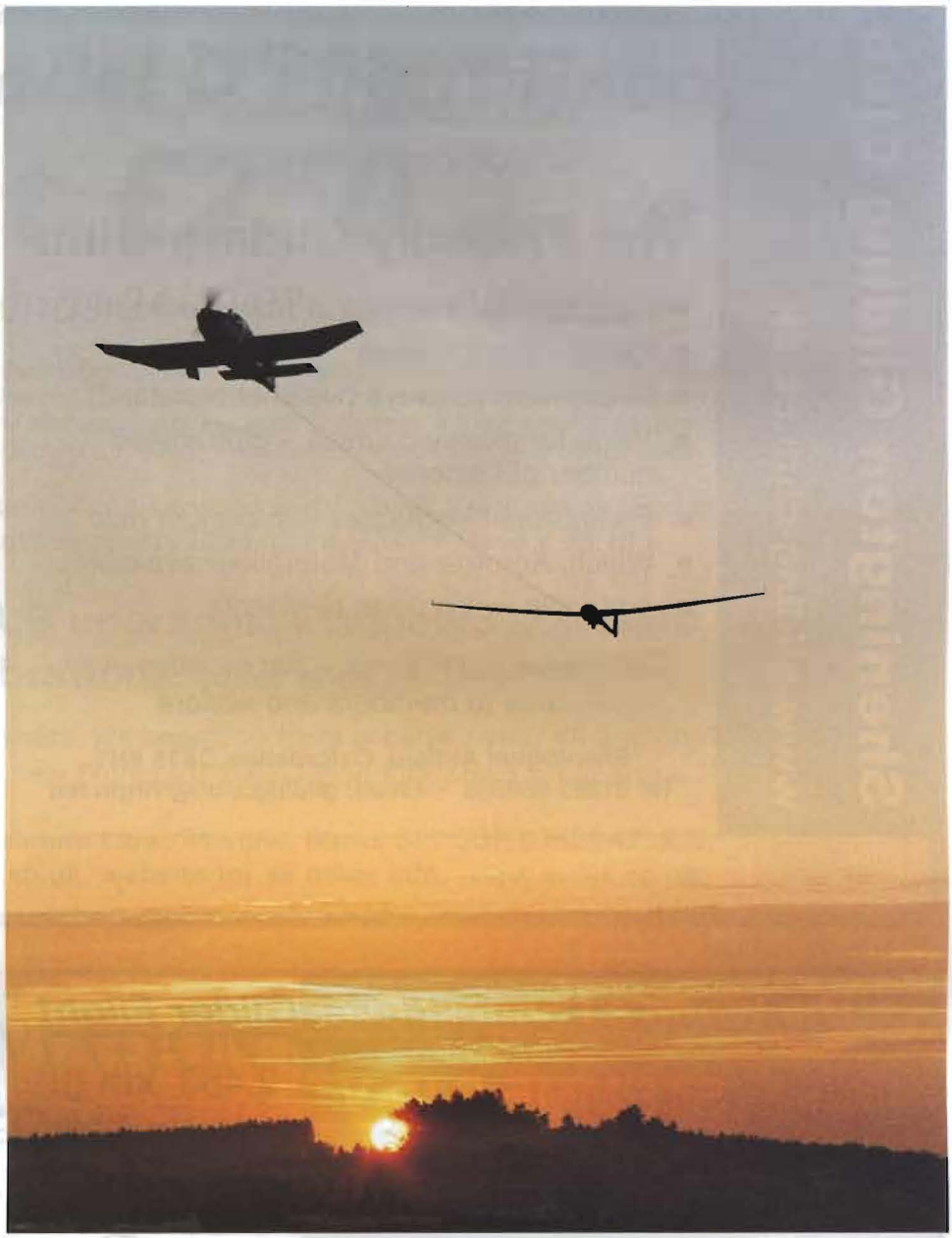
Pictures: Jochen Ewald

Beh; and testing the "wing glove" surface and airflow pressure measurement equipment on the ASH-26E of Prof Mertens from the Fachhochsule Aachen. He is going to use this motorglider to evaluate the effects of so-called "Guerney-flaps" – surfaces at a 90° angle to the trailing edge, developed by racing car driver Dan Guerney. Their effect on the angle of the airflow off the wing is said to increase the lift and lower the pressure on the upper surface, meaning that the airflow separates at higher lift coefficient values. The effectiveness of a Guerney flap of one per cent of the depth of the wing is claimed to be about that of a 20 per cent deep conventional flap.

Another special project from the Braunschweig Akaflieg was measuring the temperature curve of warm water in a Discus waterballast tank as it cooled in flight, to get data about how long a ballasted glider may be flown in low temperatures without the risk of icing.

Special guests, which visited the meeting for part of the time, were the Akaflieg Stuttgart's flapped two-seater FS-33, which underwent some flight tests for certification, and the solar motorglider Icare 2, which was flown by Prof Rudolf Voith-Nitschmann to test its new electronic control system. This has been equipped with new electronics to optimise the conversion from solar energy to drive power, and now seems to deliver significantly more power than before.

Nearly all these gliders, plus a Janus, the DG-100S prototype and the most recently-built 15-metre Salto were also tested using the Zacher programme, introduced by Hans Zacher 65 years ago. Its development and use is a fundamental reason for German gliders' success.



Above: early morning launch for calm-air performance comparison flights against a "stretched" DG-300
Below: the Discus 2 prototype was fitted with a calibrated speed indicator and a special probe to discover its true airspeed as part of an investigation into the glider's performance and handling at different c of g positions



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Here was a challenge

Last July Andy Bardgett had one of those magnificent days that you don't need to thumb through your logbook to recall



Holy Island – Andy's memorable flight crossed the coastline just north of here *(Andy Bardgett)*

MORE than 25 years at the same club: pretty boring, you might think, but no two days are ever the same – and on July 28, 2002, I had a flight to remember.

Our club, Borders, is the most northerly in England and only 12 miles from the North Sea. As a result, good thermal days are often spoilt by sea air. Moving inland to escape takes you over some quite inhospitable, unlandable terrain. On the plus side we are probably the best wave site in England, as an increasing number of visitors testifies. Flatland pilots visiting us often quote the old myths – decent wave only occurs in spring or autumn – it shows itself as long, smooth clouds – the primary is the place to go, etc, etc. Well, this flight disproved all the myths and at the height of the thermal season!

Saturday, July 27 had been a good day. I had started in hill lift, then used thermals then, by pushing forward of the clouds and flying tight figures of eight, got into wave. I was at 8,500ft, still climbing many miles from the club, when I heard the tug pilot announce that he had completed the last launch and that hangar packing could commence. A very fast return along a zig-zagging wave bar brought me home, having flown 125km.

Sunday morning looked as though it was going to produce better thermal conditions but quite soon it became apparent that there was wave activity above the thermals. The first launch confirmed what was happening: Bob, one of our tug pilots, dropped the glider straight into wave. I took the fourth launch, dropped the tow at 2000ft, in 2kt, turned towards the cloud to get 4kts, which by 3,500ft had reached more than 8kts on the averager! Eventually the climb tailed off and by just over 12,000ft I was barely climbing. Although the sky and clouds below looked thermic there were gaps with no cloud and lines of "thermals" across the wind as well as higher "smoothies". Unlike the classic theory the lines were not straight but formed sections of herringbone patterns all over the sky. Which way to go?

Decisions, decisions! Derek Robson decided to head for the Northumbria GC at Currock Hill to claim the Hotspur Trophy, a cup which is held by either Borders or Northumbria and which can only be retrieved by landing at the holding club to collect it. Derek and I used to share a Std Jantar but we now each have our own gliders (mine LS4b HVV). We often pair-fly and act as each other's crew so I decided to keep Derek company. About half-way to Currock I realised that if we both landed out the retrieve was going to pose problems, so I did an about turn to head back home.

Looking northwards provided quite a vista with herringbone patterns all over the sky and, interestingly, well out over the North Sea. Here was a challenge!

I headed for a fairly smooth cloud just to the north of Lindisfarne, or Holy Island as it is also known. When the tide is out Lindisfarne is connected to the mainland by a causeway, but a large expanse of water returns with the tide. It was to this watery expanse that I set course, although at 8,000ft, I had plenty of height to return to *terra firma*. As I approached the cloud, about 5km offshore, I was pleased to find reliable lift, around 1.5kt, and this appeared to extend some way north. Tracking along the cloud took me to 8,600ft, and by now I was north of Berwick.

At this point the cloud made a sharp right turn away from land until it was about double its present distance from the shore. It then turned left to continue roughly parallel to the coast. At this turn the cloud had piled up to form a lovely smooth mound. Taking a deep breath I turned away from land and headed for Norway! Flying over the sea can be rather disorienting: in some instances the horizon disappears as the sea and sky merge into one hazy grey blur and, with nothing to be seen on the sea below, it really felt like a journey into the unknown! My heart rate settled slightly as, tracking directly away from the shore, I wasn't losing any appreciable height. Reaching the corner where the cloud turned again the lift strengthened and I was able to continue northwards around 10km offshore.

As I approached St Abb's Head I was just wondering how far north I could get. The Firth of Forth was now clearly visible and, with a little imagination, I thought I could recognise the hills around Portmoak – that would be some flight! But, just like the on previous day, my thoughts were brought rudely back to earth by a radio call to "all Milfield gliders". The wave appeared to be

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Andy at Keevil preparing for another Diamond goal bid

collapsing back at site allowing almost total cloud cover – time for home! I retraced my course, cutting the corner slightly to save time, and put on speed to make progress into quite a strong headwind. Over land there was total cover although my barograph trace shows quite clearly that there was wave lift above the cloud. Approaching the site on GPS there appeared to be a deep "valley" in the cloud so I prepared to descend through this thinner cloud. As I circled down with my brakes out the cloud thinned further revealing a long avenue of trees, which I recognised as the driveway to Pallinsburn House, only a few miles from home. Cloudbase was around 2,500ft, so I had time to potter around some of the local hills before returning to site. Derek had reached Currock Hill to retrieve the Hotspur Trophy and had been joined by George Hall in the club's Astir – quite a good day!

What, then, was triggering the wave that I used? The answer to that could form the basis of a thesis! There were bits of wave all over the place: many geographical features would have contributed. The wind direction was around 210-220° at all heights, 10-15kt on the ground rising to around 20-25kt at 8-8,500ft. I think it then decreased to about 15kt at 12,000ft. We are in the lee of Cheviot, which at 2,674ft is really a massive block of granite with several flat peaks, split by quite deep valleys. Hedgehope Hill, next to Cheviot, is separated from it by the Langleford Valley. I reached my maximum height directly over Langleford; it is a rather unusual '"hotspot" but I once averaged over 13kts there. I think, on this flight, that wave was being generated by both Cheviot and Hedgehope and the two patterns were producing interference. There is, though, also a low line of hills parallel to the coast, the Kyloe Hills, which may have contributed.

The total distance covered on the 3hrs 20 min flight was around 125km, of which about 35km was over the sea. While I had flown over the sea before, it had always been close to shore, simply gliding down from a wave climb. I had never flown in lift, so far from shore and for such a distance. Definitely a flight to remember.

Andy soloed in 1974 with Bath & Wilts GC, joining Borders in 1975. He has over 1,100hrs, Silver, Diamond height and some failed Diamond goal bids. He hopes to do the first-ever Diamond goal from Milfield





Above: Andy's flight. The trace and weather conditions are simplified *(Steve Longland)*

Who could ask for more?

To celebrate Derek Piggott's 80th birthday on December 27, *S&G* asked him to share with us his thoughts about his life and his future plans

What first attracted you to aviation in general and gliding in particular?
My father was always interested in flying and its future; he had seen many of the very early aircraft and was in London during the Zeppelin raids in World War One. As a young man he knew HG Wells and Bernard Shaw and read Jules Verne. He was inspired by them. He apparently tried parachuting by jumping off a shed roof with a large umbrella but this was not a great success.

Our holidays usually included a visit to the nearest RAF station so I became familiar with the Bristol Bulldog, Hawker Fury and Hart and later on the Gladiators and Gauntlets with their wonderful smell of castor oil. I wanted to fly or to be in the Air Force but it never seemed possible. My father always wanted me to fly.

I was always a keen aircraft spotter and could recognise most of the types by sound before they came in sight. Of course I started building flying models and taking part in free flight duration competitions and this more or less took over from school. As a result, I left school early and became a scientific instrument maker. When the war started, I was making optical instruments of all kinds. I tried to join up as air crew but was held back because I was in a reserved occupation (vital war work). Eventually in 1942 I was able to leave and started flying training. I soloed after about five hours dual on Tiger Moths in Scotland before going to Canada for further pilot training.

Because of my experiences flying models, I knew quite a bit about thermals and in Canada I showed my instructor how to climb faster using the lift below the cloud streets in order to have more time for aerobatics. After completing pilot training I was sent on an instructors course, or rather on two. The first was on twin-engined Cessna Cranes and the second for elementary instructing on Tiger Moths and Fairchild Cornells, which I enjoyed much more because it meant teaching beginners and being able to do aerobatics.

When I returned to the UK there were too many pilots and instructors at that time and eventually in order to do some flying I moved on to heavy gliders, training on Hotspurs, Horsas and Waco Hadrians and then going out to India. Of course I tried to soar them in India, but without much success.

After my first opportunity to fly light gliders and to go soaring, I was hooked.



Derek Piggott *(the **White Planes** picture co.)*

Which phase of your career in gliding have you most enjoyed?
I probably enjoyed the beginning of my gliding instructing most because I already had a wide experience of power instructing and could see the interesting problems of teaching on 3-5 minute winch-launched flights. I had a completely free hand and could make real advances by showing the instructors how to teach and train beginners more effectively. I taught situations and judgment rather than routine circuits, much as I do today. Every flight towards the end of the training involved decision making on the part of my cadets. I did not let them make circuits without them having to think and deal with a situation. This proved just as quick as teaching them to fly "square" circuits by numbers.

I still thoroughly enjoy instructing, but in 1962 after 10 years as a professional gliding instructor, I realised that we needed a motorglider if progress was to be made with speeding up gliding instruction. I became very aware of the time wasted using gliders when compared with using a motorglider. By 1969 we had the Falke and the only efficient way to train larger numbers of students economically.

Of all the solo flying I have done I enjoy gliding competitions most of all, but film flying runs it a close second. Competitions give me a reason to fly cross-country and to try to out-climb and out-perform the other competitors. Aerobatics offer another opportunity to exploit an aircraft to the limits and, with a glider, to show off its beauty. Film flying, too, is a reason to fly interesting aircraft to their limits. In many ways this offered a complete contrast to instructing, where it is vital to set a good example at all times. In film flying I could use my skills to produce the best possible effects, often flying close to the safety limits.

Given the chance to relive your career, would you do anything differently?
I wish that I had made more effort to fly in more competitions in the early 1950s and 60s. Over the years I flew many nationals but almost always in aircraft lent to me on the day before the competition. I had seldom flown cross-country since the previous nationals and usually spent most of the week sorting out the instruments and getting back in practice. T-21s are not good training for cross-country flying in a single-seater like an Olympia or Skylark 2! However, I chose to instruct and put my whole effort into instructing and Lasham. I can only blame myself for that decision.

If you had to identify just one flight that you will always remember with great pleasure, which would it be, and why?
This is a difficult question to answer as I enjoy everything I fly. However, my first flight in anything better than a T-21b was in a Slingsby Sky. This belonged to John Furlong and I was surprised and honoured when John offered me a flight in his beautiful machine. It gave me an insight into things to come, although I never dreamed that 50 years later I would be flying gliders capable of nearly 60:1.

I was amazed by the quietness and the incredible performance the Sky seemed to have. In reality, it was probably little better in performance than a K-6CR, but at the time it seemed magic. It rather reminded me of my first flight in a Meteor jet, just effortless flying and so easy to handle. At the time the Sky was the best glider in the country and competitive with the Weihe which I was to fly some years later. Comparing it now with any of the modern gliders it seems very old-fashioned and not even as good as most glass two-seaters.

Have you ever been frightened while flying a glider?
Of course, many times for a few seconds in the T-21 when the student allowed himself to get a little too far back on a windy day.

However, the worst time was in an extremely active thunderstorm, when I was receiving very severe shocks through the controls in a Skylark 2. I was really scared more of hyperventilating, which together with a lack of oxygen would have put me out cold in a few minutes at the heights I was at. What was it like? Well, imagine putting your fingers into the mains power socket with someone switching the power on for a moment every now and then. Then after several times you know that he will almost certainly do it again and there is

nothing you can do but wait for the next shock. This really was scary and a most unpleasant experience. I enjoyed the rest of the flight and, in my anoxic state, very stupidly did a few loops to celebrate before landing back on the airfield. Looking back on it I was thrilled by the experience and pleased that it got me a Diamond height as well as a British height record.

But I have kept out of active thunderstorms ever since.

What's the worst glider you've ever flown, or refused to fly, and the best?
I have never refused to fly a glider but would not hesitate to do so if I felt it was not airworthy. The only gliders I have disliked flying are ones that have worried me, usually because of poor handling characteristics.

Probably the little American Eaglet was the one I disliked most. It felt all wrong and had a number of potential hazards. For example, it had an inverted vee tail and rested on the tips of the tailplane during take-off and landing. Any severe bump on the ground could cause serious structural damage to the tail and its attachments. However, it was more the lack of any progressive feel on the spoilers used for roll control together with the rather flimsy structure and very light control system that worried me. I towed up to 3,000ft on the first flight because, frankly, I was too scared to pull off before! Of course, it was not as bad as I had expected and once off tow I had a reasonably pleasant flight.

I had some exciting test flights in the Kestrel 22. At first it seemed a superb glider but the more I flew it the more careful I became. It had an unusual and scary spin and on the first full spin, I could hardly believe my eyes when the nose came up to the level flight position after the first turn before spinning more normally for several turns and then recovering itself, as I later found out, regardless of pro-spin controls. After several spins, I just sat and watched and laughed about it, but the first was worrying because I thought it was going into a very flat spin, which might have been unrecoverable.

The best glider I have flown is always the one I flew last. I enjoy every flight and always have done so.

What do you think is most difficult to master when learning to glide?
Without any question flying straight is the hardest thing for a student to learn to do. This is because it requires forming a habit of using the stick and rudder together. To fly straight there must be an immediate response to a wing dropping and an almost instinctive reaction with the stick and rudder used correctly in co-ordination.

Students usually think that landings are going to be the most difficult. They aren't, but the trouble with landings is that you only get one landing per flight, so progress is rather slow if you only make one or two flights each day you go gliding.

What is the most important thing to remember when instructing?
Be patient and try to explain things in an accurate but simple way. Never bluff.

Explain how the student will progress from stage to stage and break down the instruction into easy steps. Beginners need encouragement and to be told and shown how they are progressing.

Often in the later stages of training you are simply doing two or three flights for them to practise making all the decisions and are not teaching anything new. If so, after landing it is important to look for something going on and explain it in detail so that the student feels you are taking trouble for him. If you make a point of doing this with every student they will always try to fly with you again. Often this will be watching a glider on the circuit or landing and explaining how it could have been improved and how the pilot got into the situation and should have avoided it. Usually there are many alternatives rather than only a right and wrong way to do things. There should be very few rules: good airmanship is a matter of eliminating risks by being aware of critical situations and how to recognise them and avoid them.



Derek's "blue card" (BGA record card), stamped "Silver"

What advice would you give to student pilots depressed about their progress?
Tell them to try to fly only with the instructor they like flying with. Students are very often depressed because no one explains what they can expect to be able to do and what will take more experience and practice.

On a very early flight I tell the student that flying straight is almost the last thing they will be able to do because it takes a lot of practice to establish the correct habit of using the stick and rudder correctly. At first the rudder is always difficult to use at all and it will often be forgotten. A beginner will expect flying straight to be easy and when they find it difficult it is demoralising unless you have explained why beforehand. I avoid flying straight as far as possible on the early flights and concentrate on turns rather than flying straight.

After their first attempts at turns I always explain that they will soon improve their co-ordination at height and learn to make good turns, but that when they start doing landings, they will find their turns deteriorating as they forget to use the rudder again. They will find the aircraft weaving from side to side whenever they have to concentrate on other things, like looking ahead at the landing area during the approach and landing. When this actually starts to occur a few flights later, I then remind them that I warned them and reassure them that after a few more flights the problem will disappear.

What advice would you give to anyone trying to decide what glider to buy?
Your first glider should be simple to fly and have good stall/spin characteristics and good effective airbrakes. I would not recommend buying a new machine, especially if you are very competitive. It is better to buy one fully equipped and ready to go and have two years' flying straight away instead of having to wait that time for delivery and perhaps find that what you ordered is no longer competitive or not what you really want.

When, in your opinion, was the golden age of gliding?
I don't think there has ever been a golden age. Every period has brought new advances and each had its problems to overcome. Efficient soaring was more a matter of skill in the early days when variometers were poor and total energy unheard of. Better instruments have made it possible for everybody to learn to centre in thermals, whereas before it was all a matter of reacting to feel.

I am lucky to have experienced developments in instructing from the solo method of training with slides and hops in Primaries and Cadets, Tutors and Grunaus on to two-seaters such as the T-21, T-31, Eagle, Capstan, K7 and K-13, then on to glass. Apart from better performance, instruments and launching equipment, there have been few improvements in 50 years. However, in the UK, the average gliding instructor is more knowledgeable and better trained than in the past, thanks to the BGA National Coaches. The major advance has been the advent of suitable motorgliders but so far the advantages have seldom been exploited.

In 50 years' time, how would you most like to be remembered?
As a friendly gliding enthusiast who foresaw the need for motorgliders to teach glider pilots and who played a part in improving standards of gliding instruction in many countries all over the world.

What are your plans for the future?
I would like to be able to buy into a really light glider such as the Russian Me7 (AC-4) and continue to fly in regionals for as long as I am able. Flying the turbo Duo Discus at Bidford this year made me realise how much easier it can all be without the need for any heavy rigging and retrieves.

I plan to keep flying and instructing until my health prevents me from flying safely. I have had a happy life with 50 years of gliding so far – who could ask for anything more?

■ *Derek's autobiography,* Delta Papa, *is in print again – see* www.dpflying.com



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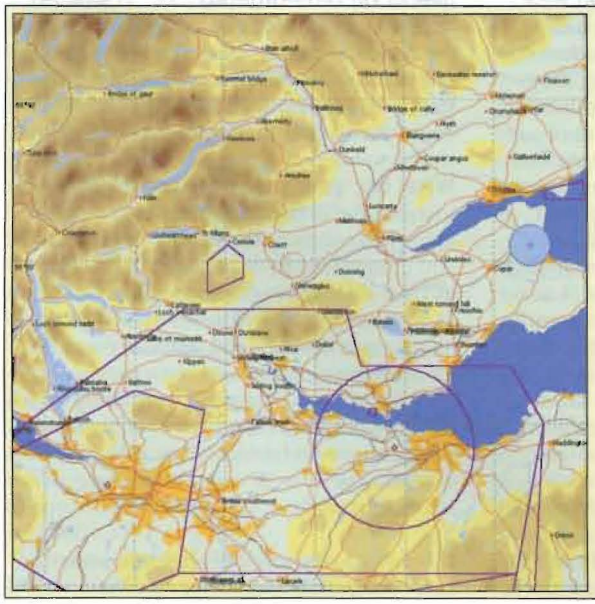
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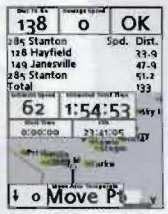
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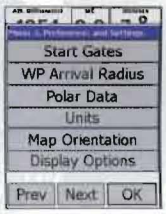
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Sitting comfortably?

Product designer and pilot Adrian Emck (right) spent two seasons thinking about glider seat design, comfort and safety. As a result he built a shell to wear between spine and parachute. He spent three more seasons testing it. Here are the results of his 800 hours' flying research



Bernard Smyth

IT TOOK me two years to link my glider seat discomfort to a medical condition and the resulting operational flying difficulties. Having an uncomfortable seat is one thing; proving conclusively that it leads to other problems is quite another.

This article may encourage you to re-evaluate your seating for, if my assumptions are correct, discomfort greatly increases risk of an accident – and pilots with uncomfortable glider seats are at much greater risk of back injury than was previously appreciated

How does existing seat configuration impact on gliding performance and safety? I was surprised to find that seat comfort influences areas of gliding far beyond spine protection, so read on if you are interested in safe flying, longer stress-free flights, and perhaps greater membership retention.

K-8s can be excruciatingly uncomfortable for five hours, but flying a K-8 or a K-6 you are expected to suffer. Does it matter? After all, you don't have the expectations, refinement and comfort level of a modern expensive glass ship.

If the load on the spine is spread correctly, your comfort is ensured; the comfortable geometry will be a back-saver rather than a breaker. Comfortable, you are less likely to damage your back in an accident – and, I believe, significantly reduce the chance of having the accident in the first place.

Changing to a new glider with 30 years' design advantage on the K-6, I was so uncomfortable after two seasons that I was at the point of giving up gliding. Despite attempts to prevent discomfort, such as back stretching exercises and ensuring the cockpit seat was organised with standard cushion methods, low-level discomfort grew.

Two hours in my LS8 were as uncomfortable as six in a K-6 and my flying became extremely erratic, with repeated visits to doctor and physiotherapist. On most comp nights, I awoke at 3am with a splitting headache. Dehydration, obviously, so more water was drunk. Headaches persisted, so alcohol was banned – and the headaches increased. Ah! poor stress management. The answer? Plan more carefully, arrive at comp a day early – but headaches became worse. Grounded myself, losing a day – obviously poor pilot material.

Listed are my own observations resulting from my anatomically-incorrect seat posture: loss of concentration; loss of spatial judgment; poor lookout; inaccurate flying in close proximity to others – interpreted as aggressive flying; hurried, poor decisions; greater likelihood of accidental airspace infringement; increased chance of accident and potentially worse back injury; failure to notice subtle thermal variation through "numb" seat; over-exaggerate control movements (negative gravity is such back relief!); over pressure on rudder pedals; flying too fast; lost or poor competition days; increased landouts; and retarding of flying skill and loss of flying confidence and motivation.

Visiting physiotherapist Gunnel Berry, I discovered headaches and neck mobility were related to the lower lumbar region. At first I could not believe that low-intensity backache could be the cause of such high-intensity headaches. It seemed out of proportion that the headache was the result of the strain of the muscles holding the spine in a correct anatomical position to avoid spinal damage. Muscles employed incorrectly can apparently lead to aches and pains being referred to other anatomical sites. I had not made this connection before, but now, after 300 uncomfortable flying hours, I had at last understood the problem.

What happens if landing heavily, you further shock-load your back? Due to poor support you are vulnerable so that back injury can occur even in a minor accident. Circuit bashers watch out. Landings you may not perceive as heavy can result in repetitive landing microtrauma accumulation, with pain materialising hours or days afterwards away from the airfield, maybe in a part of your anatomy apparently unrelated to the point of actual injury. No wonder I was slow to understand the dangers of seat discomfort.

My back doctor explained the concept of posture memorisation. Pain activates as your back "remembers" the previous poor lumbar posture and muscles are mobilised to protect the spine from harm. Muscles become tired holding this posture, strain symptoms appearing after time. Even after introducing correct posture, your back may need time to unlearn bad habits.

According to a USA orthopaedic study in 1988: "fatigued muscle increases the spine susceptibility to recreational injuries". This may prove that an uncomfortable posture is an unsafe posture as fatigued muscles are less able to compensate on heavy landing and have wide implications for the gliding movement. "Fatigued muscles are less able to compensate any perturbation in the load or position of the trunk... loss of the ability to protect these weakened passive elements makes the spine susceptible to industrial and recreational injuries" (Orthopaedic Centre New York 1988, Volvo Award in Biomechanics, Spine 13(9) 982-92 1988 Sept Abstract).

Tony Segal has carried out pioneering work on glider impact analysis, seat safety and energy-absorbing foam; as a result, this foam has now been widely adopted to reduce injury of supported and unsupported backs alike. This knowledge encourages a simple and affordable design for private owners. As apparently 94 per cent of heavy landing injuries affect the spine and we are not about to increase fuselage crush length and depth, it becomes essential to maximise the posture design for existing cockpits.

Shell design analysis

I learned from Max Bacon and Peter Saundby how RAF fast-jet pilots had their seats individually moulded. I know an ex fast-jet pilot now flying civil, who changed his new glider last season because, he said: "The pain brought tears to my eyes!" So glider cockpit ergonomics have not kept pace, but how was better technology to be translated cheaply and quickly into a glider? The problem appeared complex, as seat, pilot and the parachute are all variable. Changing the seat pan specification was ruled out for reasons of certification and cost. The parachute, and pilot, could not be altered. I then considered a shell support between parachute and the pilot but was unwilling to go further until David Innes showed me his short shell that fitted between his back and parachute. It was not even moulded to his back but happened to fit. It was the success of this simple method that spurred my efforts and became the preferred solution. Later, I was encouraged to discover that the Institute for Aviation Medicine had developed a shell concept for individual pilots in 1986.

As an improvement to David's, the new shell was extended beyond the coccyx, yet enabling the creation of a seamless connection with the seat pan foam. The lower lumber area had previously "hung in

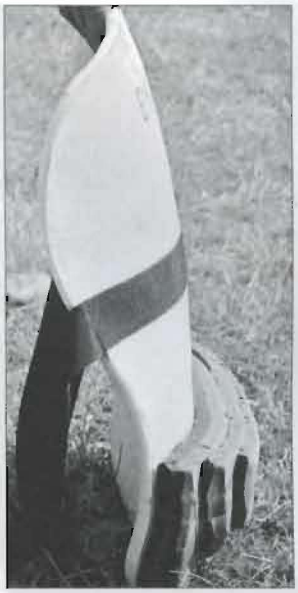
the breeze" thanks to the failed efforts of stuffing newspaper, bits of foam, old carpet in the gap between the parachute and glider seat pan. With little applied force, a pilot so festooned is more at risk of injury. The shell holds the energy-absorbing foam accurately in the cavity, giving protection in the lumber region and, by spreading forces more evenly throughout the shell and the foam, helps to reduce point impact on the spine in an accident. The shell seems to solve an OSTIV requirement: "Pilot protection. 4.23 longitudinal compression of the spine". For protection against this injury, seat backs should be shaped so as to maintain the normal curvature of the lumbar region of the spine rectangular parachutes cavities should be avoided." Unfortunately, this is easier said than done, for parachutes are not primarily designed for spine impact or for comfort.

Short-length parachutes create significant cavities in the lumbar area. Full-length ones may create mini cavities to give a sensation of "lumpiness" before or after re-packing. Glider manufacturers can point to myriad pilot sizes and parachute designs. In turn, the pilot can blame parachute and glider for discomfort. A recipe for doing nothing. An understandable reason, then, why posture is not considered important enough to include in the C of A. Pilot, parachute and seating are inspected only in the integrated round for safe fitting, weighing and c of g. But with the glider, seat, pilot and parachute so mismatched, gliders are likely to be comfortable by chance, not by design. Neutralising uneven parachute packing, the shell should give the pilot comfort and reduce point loading and promote an even pressure over the spine length, and attempt to prevent shock loading in most minor incidents.

The construction of three layers of glass weave and polyester resin allows the shell to flex. Under extreme circumstances, there might be a chance of the shell magnifying the spine impact loading, but this should be no worse than the existing standard seat-pan at transmitting damaging loads in a high-impact accident. However, since the shell provides a more even spread of the load over a wider area, an overall improvement is likely. In fact, frequency dampening should improve due to better physical deployment of safety foam, the shell now accurately holding the safety foam where needed. This is crucial in solving a chronic problem of foam riding up into an uncomfortable position that may maximise back injury in accidents. Expensive foam can at last be applied with precision – a great improvement on floating foam wedges or rolled-up newspaper inaccurately stuffed into the cavity. Long parachutes will require less of lumbar cavity filling foam. (Photographs show a short length parachute).

The top edge of the shell reaches the bottom edge of shoulder blades. Injury from the shell should be remote if the pilot's upper body is thrown forward and downwards, in an accident. Parachuting, the shell goes with you. In the event of an emergency egress from the cockpit, there is an increased risk of injury on parachute landing as shown in paragliding but the lightweight shell and foam suggests a negligible risk. The shell may help protect you in preventing injury falling backwards on to rocky ground, though the light fastening may displace despite over securing by the parachute harness. A fast, forward landing might produce a fulcrum on the spine on the bottom edge of the protector as your legs are forced backwards on hitting the ground.





Above: spine shell, no parachute
Right: the spine shell Adrian made



Above: the spine shell, worn with a short parachute

The shell function is to ensure complete support of the spine, and if found helpful, an anchorage point for the lumbar support pad. It must be emphasised that the shell is made to fit one specific glider cockpit, one specific pilot and one specific parachute pack. (However, using the LS8 shell in a Discus for a week in 2002 proved as comfortable). Tall pilots may not be able to use dynafoam. Only 3mm thick, the shell without foam should still provide better spine protection and comfort than just sitting on the seat pan. Since maximising the use and precision of foam is an important benefit of the shell, decent headroom can be organised.

To build an individual shell from scratch will take a day, excluding time and foam. for the cost of two aerotows The cost in the scheme of things is negligible.

You must judge for yourself whether it is reasonable to assume that uncomfortable pilots will be unsafe, fly less, attend the club less and a significant factor in mature membership loss. You may also conclude that borderline members are lost (or not even gained in the first place), with all of that future income. Perhaps the high attrition rate of new pilots is partly due to perceived discomfort on early flights. But how widespread is discomfort among experienced pilots? Gliding also attracts experienced adventurous spirits – who have all manner of old injuries from other sports – and they may have an increased chance of postural problems in gliders. How can we quantify comfort impact on safety, flying performance and club revenue? What is certain is that my failure to deal with discomfort would result in my leaving gliding. You can easily find technical gizmos, software, parachute packing, any number of glider goodies, but where can you find a complete cockpit ergonomic fitting service?

Does it work?

Now, using the new comfortable shell, no head or backaches are discernible. More importantly after long flights of over 8 hours 30 minutes, no back discomfort emerged. Doubling the undercarriage energy absorbing capacity under new changes to JAR 22 suggests the shell would be a welcome insurance. It would be rash to say that much is proven without independent scientific verification and this research applies to one person only. But while the jury is out, I believe anecdotal evidence is sufficiently compelling for anyone with unresolved, low-intensity back pain, to try a shell.
I believe its benefits include: low-cost back comfort; maximising energy-absorbing foam management; help reduce repetitive landing microtrauma injury; contribution to flying safety; may help reduce severity of spine injury in an accident; ease of use; improved flying satisfaction, motivation, and helping to retain experienced members.

These suggestions are meant raise questions rather than be the answer to all problems of back pain or other physical ailments. If in doubt, see a qualified physiotherapist. Contributions from physiotherapist Gunnel Berry MSc, MCSP, SP, Leg. sjukgymn. Sweden. Photos by Tony Segal. This is based upon a paper/technical report submitted to the BGA's Safety and Technical committees. Thanks to Gunnel for sourcing research papers on back injury microtrauma and editing this article, and to Alan Baker, Max Bacon, G Dale, Trish Emck, Mike Fripp, David Innes and Dr Peter Saundby, and Dr Tony Segal who provided inspiration, comment, editing, and research papers. More information, including references and guidance on building a shell, is available on request



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SO I'M sitting here thinking: if the duty instructor advised me to do this, then it must be right. And I'm looking above me and saying to myself: "aren't all those cu fantastic; aren't the bases just perfect!". Now I'm looking down: that's the ground down there, 500ft below, and the airfield is out of glide distance... and this thought eats itself painfully into the cortex of my brain.

To arrive in this unenviable predicament I started by strapping myself into the cockpit of the Mosquito; the duty instructor came up and leaned against the wing as I waited to be hooked on.

"So, you're going for your Gold Height?

"That's right. I have been waiting for this day for a couple of weeks."

"Let me give you a piece of advice." I focus my attention on him. "Go up to at least 1,500-2,000ft and mark a thermal before you get off tow. Go back and mark it once you're off tow and then pull the brakes out and come down to make a good notch in your barograph." The crew is hooking me up and he smiles confidently and walks away. My mind races through the checks again, everything is OK, and I give him the thumbs up.

So here I find myself, 500ft AGL. "How did it all go so horribly wrong?" I ask myself. I have marked my thermal several times and descended using brake but now there is nothing, just the sink on the vario and the startling, undeniable truth of the unwinding altimeter.

Deniz Ture of the Gliding Club of Victoria at Benalla, Australia, is about to save me. I spent two days being expertly instructed by him after my arrival here at Benalla on the practised art of paddock-landing. Two days discussing and then landing in real paddocks (fields) in the IS-28 only to be towed out to do it somewhere else until I am certain I can manage. Here I sit alone in the cockpit of the Mosquito but hear his gentle, reassuring voice: "Pick a paddock, look around you and pick a paddock, look at your paddock all over and make a decision".

I am feverishly looking around: while instinct says turn towards the airfield, self-preservation says just do it properly. Between the airfield and my inglorious position is a compromise strip of farmland that doesn't look too bad, so I make that decision and head towards it, lowering the undercarriage and starting to set up for a brief circuit. But no – the vario starts clicking at me. Searching to the right there's enough lift to justify a cautious circle that tightens as the instrument's clicks accelerate. A full turn in weak lift! Hope springs eternal. Another turn over the same area and I can find only sink but the 100ft or so gained enables me to edge nearer to the airfield and I can make a glide for an emergency approach on to the end of runway 26. Half-way there it becomes clear that a tug is on base leg for a landing on the reciprocal runway, 08, and my cunning plan is skillfully foiled. Should I make a call and ask him to go round?



Peter Jones



Peter Jones explains how, after a three-year lay-off, he went from solo to Gold in just three weeks

Gold in three weeks

The vario suddenly comes alive: 3kts and I pull tightly to the left and the clicks merge into a steady scream, three more turns and I have 1,000ft AGL but the vario is now hysterical and shows 9kts with the averager hurrying to catch up. At 5,000ft a few minutes later I let out of the thermal and there's sweat running down my face, neck and little bubbles of the stuff all over my chest. The parachute sticks uncomfortably to my back as I wriggle about trying to open all the possible ventilation ports and take a long draught of tepid water. The shaking has subsided – at least, the airframe's has – and the sense of relief is overwhelming.

As I continue the climb at 7,000ft it is clear that the cloudbase is a long way above. At 9,000ft I am still nowhere near it; perhaps today really is the day. Finally at 11,000ft ASL I have good separation and am accelerating under the most perfect cu and the evaporating sweat has cooled me so that I am a little cold. The brilliant Australian sun is all around my cloud but cannot touch me here. The height gain is 9,930ft from the low point, which could not have been more thoroughly marked on the barograph.

But, what if...? What if I am not reading the instruments correctly, what if the barograph has stopped ticking or the ink has dried or is out of contact with the paper, what if the standard atmosphere is different from that which I have just thermalled though? What if the gain is not secure? Treble checking and a good look around and below before gently approaching a stall with my head twisted back in the cockpit. All is well, or at least the instruments look OK and the ticking of the barograph in the back of the cockpit still is audible.

Starting a series of runs under the cloud after some very careful examination of the airspace I pull the stick back into climbing turns around the cloud: 11,300ft ASL, a gain of 10,230ft. There are more clouds not far away, which are higher, so I break out and zip off in their direction. Another series of runs and climbing turns, the Mossie's controls stiffen up beautifully in proportion and my jaw droops with the accumulating g. And then at the end of one of the climbing turns I see what I had been hoping for: some tendrils that are rolling around in a big funnel between two clouds.

The Mossie is above cloudbase and, just hanging on the stall, I fly through the smoky wisps. The vario crackles all along and my left hand is repeatedly tapping the glass of the altimeter to reduce the lag. The visibility all around is excellent, the view priceless.

'On the third day I finished all three legs of my Silver'

At last the nose pitches down in strong sink and she drops like a falling star. I thank Eugene Hanle for designing so much washout in the Mossie's wing that allows me to make a clearing turn to the right and wait until the wing is fully flying before easing slowly out. 10,750ft gained and the memory of every foot of it will never fade away.

Arriving alone at Benalla a few weeks before had been a nervous experience. Having only 30 solo hours in my logbook, mainly in the IS-29, and not having flown for almost three years, I had not felt like this since pre-solo days. Now I would mix and fly with some of the best pilots in the world. But knowing Bob Gray, the operations manager, and knowing the kindness of Australians, I should not have worried.

The Gliding Club of Victoria is two hours north of Melbourne in southern Australia. The club has about 12 single-seaters during the summer months: five twins and three tugs. I was booked for a two day paddock-landing course followed by a five-day cross-country course. There were two students on this: Nick, who already had 200hrs and Silver, and myself. My previous gliding achievements had been limited to never having outlanded and never having landed with the wheel up.

The cross-country instructor was Max Kirschner, who led us through theory in detail before climbing into the Duo Discus *(above left)* for lead-and-follow exercises in the open sky. Max's teaching was so good that on the third day I finished all three legs of Silver on my first attempt. The next day both Nick and I did Gold distance/Diamond goal, again on our first attempt. My time for the 320km was three-and-a-half hours, which reflects the excellent coaching.

Conditions at Benalla are ideal. The hot sun shines almost every day and the ceiling for long-distance flying is up to 12,500ft ASL – plenty of room for thermals triggered from the flat agricultural plain. A temperature trace analysis forms part of the thorough daily met briefing. Outlanding is infrequent. I averaged three hours flying a day on a cycle of five days flying in seven. The pilots, principally from Britain but also from Finland, Holland, Germany and even Japan, get on extremely well. The food is excellent; the bar opens at five-thirty. Accommodation is plentiful and reasonably priced, exchange rates being so favourable for the British.

Six excellent weeks turned me from a novice to someone with a little experience and Silver and Gold. But my most striking final impressions of Benalla are the friendly atmosphere, excellent facilities and exhilarating flying.

The record-breakers

Listed below are UK and National gliding records as at October 14, 2002. There have been 46 new records, which are highlighted in bold text, since *S&G* last published the list. Some of the recent record-breakers are pictured (opposite, from left): Phil Jones, Jay Rebbeck, Brian Spreckley and Mike Jordy. Congratulations also to Ron Davidson, Pam Kurstjens, Gillian Spreckley, Sarah Steinberg, Mike Young and Justin Wills. The longest new distance record is 955km by Justin Wills; the fastest is 176.64km/h around a 300km triangle, by Brian Spreckley. The longest-standing record is a 500km goal flight made by Nick Goodhart on May 10, 1955

National, Open

Gain of Height	10,545m	C Rollings/Bryony Hicks	UK	DG-500 22	08/10/1995
Absolute Altitude	11,500m	Nick Goodhart	USA	SGS 1-23	12/05/1955
Straight Distance	949.7km	Karla Karel	Australia	LS3	20/01/1980
Goal Distance	892.1km	Robin May/P Rackham	USA	ASH 25	06/07/1995
O/R Distance	1127.68km	M T A Sands	USA	Nimbus 3	07/05/1985
Triangle Distance	1362.68km	R L Robertson	USA	Ventus A	02/05/1986
Free Distance	1362.68km	R L Robertson	USA	Ventus A	02/05/1986
Free O/R Distance	1127.68km	M T A Sands	USA	Nimbus 3	07/05/1985
100km Triangle	166.38km/h	Bruce Cooper	Australia	LS6B	04/01/1991
300km Triangle	157.96km/h	Brian Spreckley	S Africa	Nimbus 3	10/12/1997
500km Triangle	151.37km/h	Pam Hawkins*	Australia	Nimbus 4T	04/01/1999
750km Triangle	**150.75km/h**	**Pam Kurstjens***	**USA**	**Nimbus 4T**	**26/7/2001**
1000km Triangle	122.42km/h	Pam Hawkins	Australia	Nimbus 4T	25/12/1998
1250km Triangle	109.01km/h	R L Robertson	USA	Ventus A	02/05/1986
300km O/R	**176.64km/h**	**Brian Spreckley**	**S Africa**	**Ventus 2a**	**7/1/2001**
500km O/R	167.59km/h	Brian Spreckley	S Africa	ASW 22ble	21/11/1999
750km O/R	130.16km/h	Pam Hawkins	Australia	Nimbus 4T	06/01/1999
1000km O/R	116.27km/h	Pam Hawkins	Australia	Nimbus 4T	11/12/1998
1250km O/R					*No current record*

National, 15-metre

Straight Distance	949.7km	Karla Karel	Australia	LS3	20/01/1980
Goal Distance	402km min				*No current record*
O/R Distance	**754.73km**	**Ron Davidson**	**Australia**	**LS8**	**17/12/2000**
Triangle Distance	1362.68km	R L Robertson	USA	Ventus A	02/05/1986
Free Distance	**955km**	**Justin Wills**	**Canada**	**Discus B WI**	**30/5/2002**
Free O/R Distance	676.68km	Brian Spreckley	S Africa	Ventus 2	28/11/1998
100km Triangle	166.38km/h	Bruce Cooper	Australia	LS6B	04/01/1991
300km Triangle	152.71km/h	David Allison	S Africa	Ventus 2B	16/11/1998
500km Triangle	149.85km/h	Mike Young	S Africa	LS6A	15/11/1999
750km Triangle	119.42km/h	Jill Burry	Australia	Discus B	04/01/1999
1000km Triangle	112.15km/h	G E Lee	Australia	ASW 20B	25/01/1989
1250km Triangle	109.01km/h	R L Robertson	USA	Ventus A	02/05/1986
300km O/R	**176.64km/h**	**Brian Spreckley**	**S Africa**	**Ventus 2a**	**7/1/2001**
500km O/R	148.38km/h	Gill Spreckley	S Africa	LS6C	23/11/1999
750km O/R	**109.1km/h**	**Ron Davidson**	**Australia**	**LS8**	**17/12/00**
1000km O/R					*No current record*
1250km Triangle					*No current record*

National, Feminine, Open

Gain of Height	9119m	Anne Burns	S Africa	Skylark 3B	13/01/1961
Absolute Altitude	10,550m	Anne Burns	S Africa	Skylark 3B	13/01/1961
Straight Distance	949.7km	Karla Karel	Australia	LS3	20/01/1980
Goal Distance	687.58km	Pam Kurstjens	Australia	Nimbus 4T	10/01/2000
O/R Distance	1002.83km	Pam Hawkins	Australia	Nimbus 4T	11/12/1998
Triangle Distance	1036.56km	Pam Hawkins	Australia	Nimbus 4T	25/12/1998
Free Distance	1037.29	Pam Hawkins	Australia	Nimbus 4T	25/12/1998
Free O/R Distance	1002.83km	Pam Hawkins	Australia	Nimbus 4T	11/12/1998
100km Triangle	136.25km/h	Gillian Spreckley	S Africa	Nimbus 3	20/12/1997
300km Triangle	153.67km/h	Pam Kurstjens	Australia	Nimbus 4T	03/01/2000
500km Triangle	151.37km/h	Pam Hawkins	Australia	Nimbus 4T	04/01/1999
750km Triangle	**150.75km/h**	**Pam Kurstjens**	**USA**	**Nimbus 4T**	**26/7/2001**
1000km Triangle	122.42km/h	Pam Hawkins	Australia	Nimbus 4T	25/12/1998
1250km Triangle					*No current record*
300km O/R	**145.52km/h**	**Pam Kurstjens**	**Australia**	**Nimbus 4T**	**4/1/2001**
500km O/R	**156.91km/h**	**Pam Kurstjens**	**USA**	**Nimbus 4T**	**20/7/2001**
750km O/R	130.16km/h	Pam Hawkins	Australia	Nimbus 4T	06/01/1999
1000km O/R	116.27km/h	Pam Hawkins	Australia	Nimbus 4T	11/12/1998
1250km O/R					*No current record*

National, Feminine, 15m

Straight Distance	949.7km	Karla Karel	Australia	LS3	20/01/1980
Goal Distance	402km min				*No current record*
O/R Distance	620.31km	Jill Burry	Australia	Mosquito B	04/01/1994
Triangle Distance	814.01km	Karla Karel	Australia	LS3	09/01/1980
Free Distance	814.01km	Karla Kare	Australia	LS3	09/01/1980
Free O/R Distance	620.31km	Jill Burry	Australia	Mosquito B	04/01/1994
100km Triangle	134.93km/h	Gillian Spreckley	S Africa	LS8	16/12/1997
300km Triangle	**143.17km/h**	**Gillian Spreckley**	**S Africa**	**Ventus 2a**	**21/11/2000**
500km Triangle	134.07km/h	Gillian Spreckley	S Africa	Ventus 2	22/12/1997
750km Triangle	119.42km/h	Jill Burry	Australia	Discus B	04/01/1999
1000km Triangle					*No current record*
1250km Triangle					*No current record*
300km O/R	134.33km/h	Gillian Spreckley	S Africa	Ventus 2	12/12/1997
500km O/R	148.38km/h	Gillian Spreckley	S Africa	LS6C	23/11/1999
750km O/R					*No current record*
1000km O/R					*No current record*
1250km O/R					*No current record*

UK, Open

Gain of Height	10,545m	Chris Rollings/Bryony Hicks	DG-500 22	08/10/1995
Absolute Altitude	11,570m	Chris Rollings/Bryony Hicks	DG-500 22	08/10/1995
Straight Distance	827.9km	Justin Wills	LS6	29/05/1986
Goal Distance	579.36km	Nick Goodhart	Skylark 3	10/05/1959
O/R Distance	801.3km	Chris Garton	Kestrel 19	22/07/1976
Triangle Distance	770.5km	Chris Rollings	Jantar 2A	28/05/1985
Free Distance	1008.54km	Chris Pullen/Chris Rollings	ASH 25	22/07/1995
Free O/R Distance	801.3km	Chris Garton	Kestrel 19	22/07/1976
100km Triangle	133.97km/h	Phil Jeffery	LS7 WL	01/08/1995
200km Triangle	119.07km/h	Robin May/ P Townsend	ASH 25	18/07/1990
300km Triangle	117.14km/h	Ralph Jones	Nimbus 3	28/05/1985
400km Triangle	114.3km/h	Ralph Jones	Nimbus 3	1/08/1984
500km Triangle	106.9km/h	Ralph Jones	Nimbus 2	31/05/1975
600km Triangle	94.94km/h	Robin May/S Lynn	ASH 25	19/07/1990
750km Triangle	98.46km/h	Al Kay	LS6C 18W	21/04/1995
1000km Triangle				*No current record*
1250km Triangle				*No current record*
300km O/R	**121.13km/h**	**Jay Rebbeck**	**LS8**	**22/8/2002**
500km O/R	111.83km/h	Ralph Jones/Simon Marriot	Nimbus 3DM	13/08/1994
750km O/R				*No current record*
1000km O/R				*No current record*
100km Goal	173.32km/h	D Hill/John Gorringe	ASH 25	08/04/1990
200km Goal	127.1km/h	Alf Warminger	Vega	12/05/1984
300km Goal	132.8km/h	Alf Warminger	Kestrel 19	24/04/1976
400km Goal	198.36km/h	Alf Warminger	Ventus 16.6m	07/04/1990
500km Goal	90.7km/h	Nick Goodhart	Skylark 3	10/05/1959

UK, 20-metre

Straight Distance	827.9km	Justin Wills	LS6	29/05/1986
Goal Distance	579.36km	Nick Goodhart	Skylark 3	10/05/1959
O/R Distance	801.3km	Chris Garton	Kestrel 19	22/07/1976
Triangle Distance	801.3km	Chris Garton	Kestrel 19	22/07/1976
Free Distance	827.9km	Justin Wills	LS6	29/05/1986
Free O/R Distance	801.3km	Chris Garton	Kestrel 19	22/07/1976
100km Triangle	133.97km/h	Phil Jeffery	LS7-WL	01/08/1995
200km Triangle	96km/h min			*No current record*
300km Triangle	95km/h min			*No current record*
400km Triangle	**107.44km/h**	**Phil Jones**	**Ventus 2b**	**13/7/2002**
500km Triangle	**108.84km/h**	**Phil Jones**	**Ventus 2b**	**16/4/2002**
600km Triangle	88.8km/h	Chris Garton	Kestrel 19	10/06/1976
750km Triangle	98.46km/h	Al Kay	LS6C 18W	21/04/1995
1000km Triangle				*No current record*
1250km Triangle				*No current record*
300km O/R	**121.13km/h**	**Jay Rebbeck**	**LS8**	**22/8/2002**
500km O/R	101.46km/h	Mike Jefferyes	DG-600	17/08/1983
750km O/R				*No current record*
1000km O/R				*No current record*
100km Goal	150km/h	Justin Wills	LS4	12/05/1984
200km Goal	127.1km/h	Alf Warminger	Vega	12/05/1984
300km Goal	132.8km/h	Alf Warminger	Kestrel 19	24/04/1976
400km Goal	98.36km/h	Alf Warminger	Ventus 16.6m	07/04/1990
500km Goal	90.7km/h	Nick Goodhart	Skylark 3	10/05/1955

A. Record Categories: (1) National or UK. The latter are flown in the UK, so no location is given; (2) Open to both sexes, except where identified as Feminine; (3) Classes – Open or 15-Metre for National records; Open, 20-Metre, 15-Metre and Standard for UK records.
B. Changes since this list was published, in the April-May 2000 issue, are in **bold** in the text. This list is also updated regularly at *www.gliding.co.uk*
C. World records can be found at *www.fai.org/records* The FAI asks would-be world record-breakers to contact *record@fai.org* or fax + 41 21 345 1077 for the latest information on recent attempts or pending claims – before they attempt a record flight

* Pam Kurstjens was previously known as Pam Hawkins; Sarah Steinberg was previously known as Sarah Harland


the *White Planes* picture co.


the *White Planes* picture co.


the *White Planes* picture co.


the *White Planes* picture co.

UK, 15-metre

Straight Distance	827.9km	Justin Wills	LS6	29/05/1986	
Goal Distance			*No current record*		
O/R Distance	617km	Chris Garton	LS6	28/08/1989	
Triangle Distance	**760.88km**	**Mike Young**	**LS8**	**19/6/2002**	
Free Distance	827.9km	Justin Wills	LS6	29/05/1986	
Free O/R Distance	617km	Chris Garton	LS6	28/08/1989	
100km Triangle	133.97km/h	Phil Jeffery	LS7-WL	01/08/1995	
200km Triangle	114.95km/h	Dave Watt	ASW 24	03/08/1990	
300km Triangle	115.85km/h	John Gorringe	LS7	03/08/1990	
400km Triangle	**107.44km/h**	**Phil Jones**	**Ventus 2b**	**13/7/2002**	
500km Triangle	**108.84km/h**	**Phil Jones**	**Ventus 2b**	**16/4/2002**	
600km Triangle	88.1km/h	Al Kay	ASW 24	09/05/1991	
750km Triangle	**83.71km/h**	**Mike Young**	**LS8**	**19/6/2002**	
1000km Triangle			*No current record*		
1250km Triangle			*No current record*		
300km O/R	**121.13km/h**	**Jay Rebbeck**	**LS8**	**22/8/2002**	
500km O/R	96.09km/h	Chris Rollings	Discus BW	13/05/1996	
750km O/R			*No current record*		
1000km O/R			*No current record*		
100km Goal	150km/h	Justin Wills	LS4	12/05/1984	
200km Goal	127.1km/h	Alf Warminger	Vega	12/05/1984	
300km Goal	131.1km/h	Justin Wills	Std Libelle	24/04/1976	
400km Goa			*No current record*		
500km Goal			*No current record*		

UK, Standard

Straight Distance	718km	Justin Wills	Std Libelle	01/08/1976	
Goal Distance			*No current record*		
O/R Distance	**417.82km**	**Sarah Steinberg***	**ASW 28**	**1/6/2002**	
Triangle Distance	**760.88km**	**Mike Young**	**LS8**	**19/6/2002**	
Free Distance	**763.32km**	**Mike Young**	**LS8**	**19/6/2002**	
Free O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
100km Triangle	133.97km/h	Phil Jeffery	LS7 WL	01/08/1995	
200km Triangle	114.95km/h	Dave Watt	ASW 24	03/08/1990	
300km Triangle	115.85km/h	John Gorringe	LS7	03/08/1990	
400km Triangle	**105.08km/h**	**Mike Jordy**	**LS8**	**19/6/2002**	
500km Triangle	106.06km/h	Dave Watt	ASW 24	21/04/1995	
600km Triangle	88.1km/h	Al Kay	ASW 24	09/05/1991	
750km Triangle	**83.71km/h**	**Mike Young**	**LS8**	**19/6/2002**	
1000km Triangle			*No current record*		
1250km Triangle			*No current record*		
300km O/R	**121.13km/h**	**Jay Rebbeck**	**LS8**	**22/8/2002**	
500km O/R	96.09km/h	Chris Rollings	Discus BW	13/05/1996	
750km O/R			*No current record*		
1000km O/R			*No current record*		
100km Goal150km/h		Justin Wills	LS4	12/05/1984	
200km Goal			*No current record*		
300km Goal	131.1km/h	Justin Wills	Std Libelle	24/04/1976	
400km Goal	73.8km/h	Justin Wills	Std Libelle	07/06/1976	
500km Goal			*No current record*		

UK, Feminine, Open

Gain of Height	7,833m	Alison Jordan	Astir CS	08/10/1978	
Absolute Altitude	8,701m	Alison Jordan	Astir CS	08/10/1978	
Straight Distance	454km	Anne Burns	Skylark 3A	10/05/1959	
Goal Distance	324.4km	Jane Nash	Ventus B	15/04/1989	
O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
Triangle Distance	524.5km	Geralyn Macfadyen	Sport Vega	22/07/1995	
Free Distance	**757.46km**	**Sarah Steinberg**	**ASW 28**	**19/6/2002**	
Free O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
100km Triangle	114.67km/h	Jill Burry	LS8	31/07/1999	
200km Triangle	93.38km/h	Geralyn Macfadyen	ASW 20F	19/08/1996	
300km Triangle	**96.01kph**	**Sarah Steinberg**	**ASW 28**	**14/7/2002**	
400km Triangle	**97.57km/h**	**Sarah Steinberg**	**ASW 28**	**13/7/2002**	
500km Triangle	86.21km/h	Sarah Harland	ASW 24	15/08/1997	
600km Triangle				*No current record*	
750km Triangle				*No current record*	
1000km Triangle				*No current record*	
1250km Triangle				*No current record*	
300km O/R	84.80km/h	Geralyn Macfadyen	ASW 20F	15/08/1997	
500km O/R				*No current record*	
750km O/R				*No current record*	
1000km O/R				*No current record*	
100km Goal	135.39km/h	Jane Nash	Ventus B	11/06/1989	
200km Goal	85.5km/h	Anne Burns	Ventus B	11/06/1989	
300km Goal	93.16km/h	Jane Nash	Olympia 419	02/06/1963	
400km Goal			Mini-Nimbus	07/04/1990	
500km Goal				*No current record*	

UK, Feminine, 20-metre

Straight Distance	454km	Anne Burns	Skylark 3A	10/05/1959	
Goal Distance	324.4km	Jane Nash	Ventus B	15/04/1989	
O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
Triangle Distance	524.5km	Geralyn Macfadyen	Sport Vega	22/07/1995	
Free Distance	**757.46km**	**Sarah Steinberg**	**ASW 28**	**19/6/2002**	
Free O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
100km Triangle	114.67km/h	Jill Burry	LS8	31/07/1999	
200km Triangle	93.38km/h	Geralyn Macfadyen	ASW 20F	19/08/1996	
300km Triangle	**96.01kph**	**Sarah Steinberg**	**ASW 28**	**14/7/2002**	
400km Triangle	**97.57km/h**	**Sarah Steinberg**	**ASW 28**	**13/7/2002**	
500km Triangle	86.21km/h	Sarah Harland	ASW 24	15/08/1997	
600km Triangle				*No current record*	
750km Triangle				*No current record*	
1000km Triangle				*No current record*	
1250km Triangle				*No current record*	
300km O/R	84.80km/h	Geralyn Macfadyen	ASW 20F	15/08/1997	
500km O/R				*No current record*	
750km O/R				*No current record*	
1000km O/R				*No current record*	
1250km O/R				*No current record*	
100km Goal	135.39km/h	Jane Nash	Ventus B	11/06/1989	
200km Goal				*No current record*	
300km Goal	93.16km/h	Jane Nash	Mini-Nimbus	07/04/1990	
400km Goal				*No current record*	
500km Goal				*No current record*	

UK, Feminine, 15-metre

Straight Distance	324.4km	Jane Nash	Ventus B	15/04/1989	
Goal Distance	324.4km	Jane Nash	Ventus B	15/04/1989	
O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
Triangle Distance	524.5km	Geralyn Macfadyen	Sport Vega	22/07/1995	
Free Distance	**757.46km**	**Sarah Steinberg**	**ASW 28**	**19/6/2002**	
Free O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
100km Triangle	114.67km/h	Jill Burry	LS8	31/07/1999	
200km Triangle	93.38km/h	Geralyn Macfadyen	ASW 20F	19/08/1996	
300km Triangle	**96.01kph**	**Sarah Steinberg**	**ASW 28**	**14/7/2002**	
400km Triangle	**97.57km/h**	**Sarah Steinberg**	**ASW 28**	**13/7/2002**	
500km Triangle	86.21km/h	Sarah Harland	ASW 24	15/08/1997	
600km Triangle				*No current record*	
750km Triangle				*No current record*	
1000km Triangle				*No current record*	
1250km Triangle				*No current record*	
300km O/R	84.80km/h	Geralyn Macfadyen	ASW 20F	15/08/1997	
500km O/R				*No current record*	
750km O/R				*No current record*	
1000km O/R				*No current record*	
1250km O/R				*No current record*	
100km Goal	135.39km/h	Jane Nash	Ventus B	11/06/1989	
200km Goal				*No current record*	
300km Goal	93.16km/h	Jane Nash	Mini-Nimbus	07/04/1990	
400km Goal				*No current record*	
500km Goal				*No current record*	

UK, Feminine, Standard

Straight Distance					*No current record*
Goal Distance					*No current record*
O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
Triangle Distance	524.5km	Geralyn Macfadyen	Sport Vega	22/07/1995	
Free Distance	**757.46km**	**Sarah Steinberg**	**ASW 28**	**19/6/2002**	
Free O/R Distance	**417.82km**	**Sarah Steinberg**	**ASW 28**	**1/6/2002**	
100km Triangle	114.67km/h	Jill Burry	LS8	30/07/1999	
200km Triangle	76.68km/h	Sarah Harland	ASW 24	27/07/1998	
300km Triangle	**96.01kph**	**Sarah Steinberg**	**ASW 28**	**14/7/2002**	
400km Triangle	**97.57km/h**	**Sarah Steinberg**	**ASW 28**	**13/7/02**	
500km Triangle	86.21km/h	Sarah Harland	ASW 24	15/08/1997	
600km Triangle				*No current record*	
750km Triangle				*No current record*	
1000km Triangle				*No current record*	
1250km Triangle				*No current record*	
300km O/R				*No current record*	
500km O/R				*No current record*	
750km O/R				*No current record*	
1000km O/R				*No current record*	
1250km O/R				*No current record*	
100km Goal				*No current record*	
200km Goal				*No current record*	
300km Goal				*No current record*	
400km Goal				*No current record*	
500km Goal				*No current record*	



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The Wri

In October 1902 the Wright brothers lau three-axis control system – in yaw, pitch key milestone in aviation history. But wh

IT'S called the "new archaeology" and it's not about digging up artefacts to display in glass cases: it's about understanding the technology of a previous age by making and using it. So, as a "new archaeologist" of the Stone Age, you knap flints to make tools. For private pilot and master craftsman Nick Engler, investigating the origins of the American aerospace industry, the equivalent was to build and fly replicas of the Wright brothers' aircraft. Since 1999, he has been working to build and test-fly all six of the gliders and powered Flyers that Wilbur and Orville built between 1899 and 1905. So far he and his team at the Wright Brothers Aeroplane Company (WBAC, based in the Wrights' home town of Dayton, Ohio) have made and flown four. The latest to be tested was the 1902 Wright Glider.

A lack of plans was no deterrent. To build the 1902 glider, he first studied the 50-plus photographs of the original. After several hundred hours of measuring and calculating, he had made 20 sheets of engineering drawings. A few hundred hours more, and his team had built a precise replica of spruce, ash, and muslin, historically accurate down to the boxwood roller-skate wheels used for pulleys. The glider took to the air in early October 2002, precisely 100 years after the Wrights' first flights with three-axis control. It was



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Unstable in all three axes

NICK Engler, *writes Klas Ohman*, built an extremely well crafted, precise and accurate replica of the 1902 glider. This was a single-place, man-launched, canard elevator biplane of wood, muslin, string bindings, metal fittings, and wires. The pilot, in the centre of the glider, supported his weight in a push-up type position with his hands on the pitch control bar and feet on the aft lower wing spar. It was an incredibly rugged aircraft that could withstand a fantastic amount of punishment. It weighed about 120lbs (54.5kg), and was flown by pilots from 105-210lbs (47.7-95.3kg); I weigh 145lbs/65.8kg. Its span is 32ft, 1in (9.8m), its length 17ft (5.2m) and its height just over 6ft 3in (1.9m). Max airspeed was 28mph (24.3kt/45km/h); min airspeed was 10mph (8.7kt/16.1km/h). Max height was 30ft (9.1m). Most testing was conducted from the East Dune – an 80ft/24.4m-high mound with a slope of between 10° and 15° – at Jockeys Ridge State Park, Kill Devil Hills, North Carolina. Windspeeds ranged from 8mph to 25mph (5.2kt/9.6km/h to 21.7kt/40.2km/h). As advertised, it was unstable in all three axes.

Pitch control was by a combination of a rotary bar linked to the all-flying canard elevator and forward/aft weight shift. Connection from bar to canard was cable and chain to bellcranks which drove the trailing edge of the canard. Optional centring/camber-changing springs were attached to the canard leading edge. Sense was twist forward for down canard, twist back for up.

Roll control was mechanised to warp top and bottom wings together. A movable "hip" cradle was actuated by the outer thighs and connected to cables and chains to pull on opposite corners of each wing, warping them. Sense was slide right for right roll and left for left roll.

Yaw control was directly linked to roll and was not adjustable by the pilot. Hip cradle slide right resulted in right rudder and slide left gave left rudder.

Control harmony was atrocious, minor changes in the pitch controller would result in pitch rates of approx 10°/sec, whereas full deflection of roll controller gave only a max of approx 2°/sec. Once sideslip was allowed to build, there was no way to recover at the altitudes flown. There was no lateral resistance in the aircraft, save drag from the pilot. With no sideslip, however, the balance of the co-ordinated rolling surface to rudder interconnect was very nice, and the glider stayed in trim. The tasks that I tried included maintaining:

- altitude to within 2ft (workload, very high: inattention for more than 2 secs resulted in ground impact or stall. Altitude maintenance was important to the launch crew. Too high would lift them off the ground; too low would result in a short flight and sore backs for the launchers);
- airspeed to within 5kt (workload, high: required continuous pitch inputs on the pitch controller and/or weight shifts at a rate of one per second);
- the angle of bank to within 5° (workload, extremely high: it needed hard-to-time, near-continuous inputs on the hip cradle from a half to full deflection opposite perceived minute angle of bank changes at a rate of one every 3 secs to maintain level flight, while gusts or inattention to bank angle for more than 2 secs would result in uncontrollable sideslip and ground impact from angle of bank greater than 15°);
- heading to within 10° (workload, extremely high: required co-ordinated hip cradle and pitch controller movement combined with weight shift as airspeed decreased at a rate of one input every second for the duration of the heading maintenance task; most of the test team's flights did not attempt heading control).

This was by far the most rewarding and stimulating qualitative test I have ever done. Thanks go to The Wright Aeroplane company, Kitty Hawk Kites, the National Park Service, Jockey's Ridge State Park and all the countless volunteers who made the flights possible.



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ght stuff

nched an aircraft with a revolutionary h and roll. Their discovery was a hat was the primitive glider like to fly?

Above, from left: Launching Klas in the 1902 glider replica; gliding; concentration during the launch
Below, from left: the launch, seen from down-slope, pilot's eye view; banking; landing in the sand

extensively tested by four pilots from all three branches of the US armed services, who flew about three-quarters of a total of 124 launches.

In addition to the knowledge gleaned for the WBAC's archaeological expedition, the glides marked an important if little-known milestone in aviation history – the first fully-controllable aircraft. "If you go to the Wright brothers' patent," says Nick, "which was acknowledged by the US courts in 1913 as the grandfather patent of the airplane, you won't find a drawing of a powered flying machine but one of their 1902 glider. The Wright brothers' greatest achievement wasn't putting a motor on an aircraft but controlling it in the air."

It's easy to forget, a century later, what a risky venture flight must have been. Nick and his crew realised that when they began flying replicas of Wright gliders in 2000. "We see the Wrights' elegant pictures," he says, "and we think that they are soaring. The reality is very different – the momentum that goes on before and after the pictures are taken is not what we would now call flight. You move the controls and hope the glider responds before you hit the ground. The controls aren't co-ordinated – either they are slow to respond or they're overly responsive. It's a primitive aircraft, nothing that you would want to fly for sport. The Wright brothers, of course, having nothing to compare it to, thought it was the Ferrari of the air." So far, the worst injury inflicted during flight has needed eight stitches. "I flew into a lee rotor behind a dune," says Nick, "and went down head first".

During the 2002 flights, for the first time, US military pilots trained to observe and report upon engineering detail tested the 1902 glider. US Navy F-18 pilot Klas "Santa" Ohman, made 25 of their 95 flights, staying aloft for 8 min 18 secs out of a total of 23 min 45 secs. "The Wrights were a determined bunch," Klas says. "Their journals report some days with upwards of 50-100 flights a day with a team of only three. For our test team, 30 flights a day with a day off in between and a team of four to rotate launch duty was extremely fatiguing." All four pilots came away from the experience sore and bruised, especially on the thighs. Orville and Wilbur must have taken a beating. "They were iron men," observed James Alexander, another of the military test pilots.

In addition to physical hardships, the Wrights must have struggled with uncertainty. "Our present-day test team is graced with the knowledge that the 1902 glider was capable of controlled flight," says Klas. "The Wrights had no way of knowing whether their failures were a result of their design, their flying abilities, the conditions, or all the above."

Among the people satisfied by the "new archaeological" discoveries made during the test flights were Klas and Jim's superiors at the Pentagon, who have offered the services of the military pilots for future test flights.

"We're hoping we can arrange for them to fly all six of the Wright's experimental aircraft," says Nick. "The observations they have offered and the reports they have written comprise the most informative study ever made of the 1902 glider. If they were to do the same for all the Wright aircraft, it would create a valuable body of knowledge for aviation students, scientists, and historians for hundreds of years to come."

The WBAC display features all six aircraft together for the first time in a walk-through timeline. This display will premier at the Dayton Air Show on July 17-20, 2003. You can read more about this display, the WBAC's archaeological expedition, and the flights of the 1902 glider at their website, *www.wright-brothers.org*

Photos by J. Todd Anderson and used with the permission of the Wright Brothers Aeroplane Company of Dayton, Ohio, USA, www.wright-brothers.org

See Unstable in all three axes, *opposite, for more from Klas. For pictures, video and data, see* www.first-to-fly.com *– and see overleaf for Alan Self's article on the Wrights*



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'This was great sport'

Alan Self explores a centenary often overlooked in anticipation of 100 years of powered flight

THE world's first controlled, powered aeroplane flight was made at Kill Devil Hills, near Kitty Hawk in North Carolina on December 17, 1903. But in September and October 1902, Wilbur and Orville Wright made the world's first fully-controlled flights there on a "gliding machine" that embodied all the results of their research and flight trials since 1899. The exact number of flights over the dunes in 1902 was not recorded but was between 700 and 1,000, the longest being 622.5ft (190m) in 26 seconds. In just three years of intensely-focused part-time work, they had developed and learned to fly the largest gliders yet built, discovered the need for three-axis control, and invented a system to achieve it. They were ready for the stage which they had always expected to be the easiest but most expensive, and had therefore left till last – fitting an engine.

An unlikely beginning?

How could these two brothers, with a good education but no formal qualifications in science or engineering, no experience of aviation and no help with finance, succeed where so many had failed?

It was probably the publicity given to Lilienthal's flights that encouraged Wilbur to start collecting all available information on flying machines, which by 1899 included aerodynamic theory and data such as Lilienthal's tables of lift and drag coefficients for the wings of his gliders. Like Lilienthal, the Wrights had their own manufacturing business and could use the workshops in their spare time, and they were able and determined to fly their own craft instead of getting someone else to do it.

"They were such smart boys – natural-born mechanics – and could do anything they put their hands to." (Capt. Daniels, helper and witness at Kitty Hawk)

"...if you are looking for perfect safety, you would do well to sit on a fence and watch the birds, but if you really wish to learn, you must mount a machine and become acquainted with its tricks by actual trial." (Wilbur, 1902)



Kiting the 1901 glider. The high angle of attack reflects its disappointing glide performance
(all photos from the US Library of Congress)

Balance without intrinsic stability

For the structure of their machines the Wrights looked to Octave Chanute's wire-braced biplane hang-glider. But unlike Chanute and Lilienthal, whose craft were balanced by moving the centre of gravity in flight, they decided from the outset to fix the centre of gravity and use movable control surfaces in the airflow. *"We would arrange the machine so that it would not tend to right itself... Then by some suitable contrivance, actuated by the operator, forces should be brought into play to regulate the balance."* (Wilbur and Orville, 1908)

When everyone else aimed for stability, they decided to make a craft whose balance would depend on control inputs by the pilot for every moment of its flight. They were determined to learn the secrets of control by hands-on experience, not just to ride on a craft that could fly itself. After all, they were makers of bicycles, not carriages.

In 1899 the Wrights made a steerable biplane kite of 5ft (1.5m) span to test wing-warping control. The idea of warping the biplane wings is said to have come to Wilbur as he twisted the cardboard box of an inner tube. By omitting the fore-and-aft bracing wires in the Chanute structure, the wing could be warped to change the incidence while still resisting vertical loads.

The warping was controlled by left and right handgrips, each with two cords leading to the upper and lower wingtips on its own side of the kite. When both handgrips were tilted the same way, the kite climbed or dived. When they were tilted opposite ways, it rolled to one side or the other. With this kite the Wrights were launched on a line of continuous development of biplane gliders that led to the powered Flyer in 1903.

The brothers proposed to start their manned experiments by riding a glider flown near the ground as a kite in a strong wind, to prove both lift and control before attempting free flight. Kitty Hawk was a long way from their home in Dayton but it had a record of high wind speeds, while the lonely dunes offered wide open spaces for learning to glide with privacy – flying machines could still attract ridicule.

How the designs evolved

In each of the years 1900-1902 the Wrights took a new glider to Kitty Hawk, where they camped on the dunes for several strenuous but enjoyable weeks of testing.

"Once a year we managed to get away from the usual run of things and we spent that vacation on glider experiments. This was great sport..." (Orville, 1924)

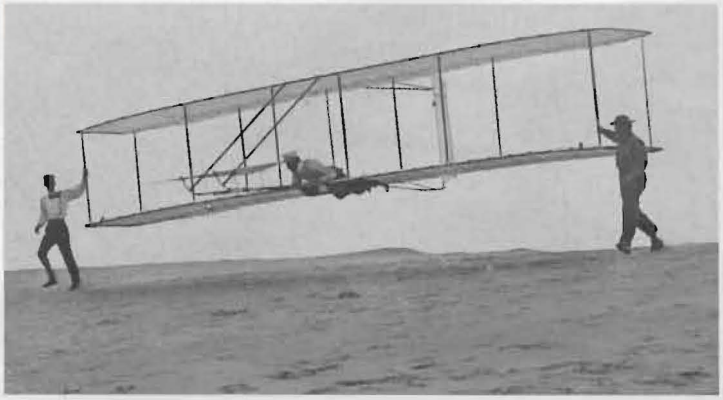
The 1900 glider, their first manned craft, was a biplane of 17.5ft (5.3m) span. It first had a tailplane, but was soon changed to a canard with an all-moving forward elevator. There was no fin or rudder. Against all advice about the risk of injury, the pilot lay prone on the centre section to reduce drag.



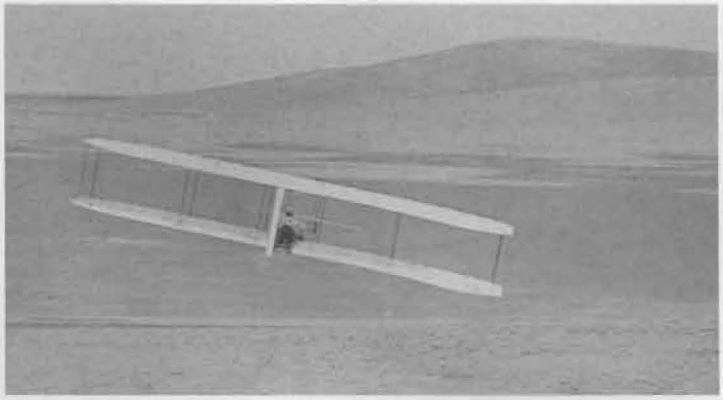
The 25 forerunners of the Wrights' gliders

The Wrights (Orville, left, and Wilbur, right, in 1905) worked alone on the design and construction of their gliders but they were well informed about the work of others, by reading and correspondence. Through the 19th century the conviction had grown that mechanical flight was a real possibility, and the technical press kept their readers aware of ideas and developments. Many thought they could progress directly from a stable powered model to a scaled-up stable man-carrier, some saw gliding as a better introduction, and a few even looked forward to soaring without power. Gibbs-Smith (see references, opposite) mentions 25 experimenters with gliders as projects, models or manned craft before 1900. Although the Wrights modified or abandoned many of their forerunners' ideas, they gave due credit to the work and influence of Cayley, Mouillard, Pénaud, Langley, Chanute and most of all Lilienthal.





Hand-launching the 1902 glider, with Wilbur piloting. Imagine the effort of carrying it back up the dunes. Their best launch rate was 250 in two days



Wilbur flying the 1902 glider with coupled rudder and wing-warping. Left rudder and warping are applied against the turn, to raise the right wing

The elevator was worked by hand levers, and the wing-warping by a foot bar.

As a kite, the 1900 glider would not sustain a man's weight as hoped, but by kiting it with ballast the brothers could try the controls and estimate the lift and drag – the lift was well below expectations. Most of the flights were kited but Wilbur made 12 free glides, with the warping locked, finding that the forward elevator gave good control as he skimmed close to the undulating surface of the dunes.

The 1901 glider was similar but larger, with 22ft (6.7m) span and greater camber of the wing section. The lift was even further below the calculated value and only partly improved by reverting to a lower camber. When the wing warping was tried in flight, after turning towards the lower wing for a few seconds the turn was reversed. With no vertical tail, there was nothing to counteract the increased drag of the lifted wing. The brothers did not yet understand this, and returned home depressed. As well as the lack of lift, they now had a new control problem to solve.

Back home, they made a wind tunnel and a very ingenious system of balances to measure the lift and drag of 38 different wing sections, each at several angles of attack. The results pointed to an error in the value of a constant in the lift equation, used in compiling Lilienthal's tables.

"Having set out with absolute faith in the existing scientific data, we were driven to doubt one thing after another, till finally, after two years of experiment, we cast it all aside, and decided to rely entirely upon our own investigations." (Wilbur & Orville, 1908).

Using their corrected value, the Wrights designed an even larger glider for 1902 with 32ft (9.75m) span and 5ft (1.5m) chord. Their method of estimating lift and "drift" was to kite the glider over dunes with various upward slopes, assuming that the wind was parallel to the slope. When the glider flew with the kite lines vertical, the slope equalled the glide angle. The result was 7°, corresponding to an L/D of 8. "Drift" was analogous to drag but the Wrights visualised it as a force deflecting the glide path downward from level flight, not as the force opposing forward movement, which they called "head resistance".

"...the ratio of lift to drift... alone decides the angle of gliding descent." (Wilbur, 1902)

Two modifications were made during the 1902 tests. To reduce the tendency to upset in lateral gusts, the wings were re-rigged with 4in (100mm) of anhedral. As built with twin fixed tail fins, the 1902 glider would turn in the proper direction when the wings were warped, but was prone to "well-digging" – uncontrollable slipping into a tailspin, planting a wingtip in the sand. This was cured by replacing the fins with a single rudder with half the area, connected to move with the wing-warping. Now they could make balanced turns, and the rudder helped to prevent or recover from the wing-drop. By practising with a machine that had to be flown all the way, they were discovering the essence of flight control.

A canard can be stable but the Wrights' gliders were rigged to be unstable, balanced with a rearward C of G and the elevator at negative or zero incidence. They were flown in strong gusty winds a few feet above the sand where there was little chance of recovery from a stall, and the parachute-like descent of the lightly-loaded canard was safer than the dive of a stalled glider with a conventional tail.

"One day [in 1902] my brother noticed in several glides a peculiar tapping as if some part of the machine were loose and flapping ... while I was making a glide, the same peculiar tapping began in the middle of a wind gust ... the machine suddenly, but without any noticeable change in its inclination to the horizon, dropped a distance of nearly ten feet, and in the twinkling of an eye was flat on the ground." (Wilbur, 1903)

Soaring at Kitty Hawk

Their goal was powered flight, but the two brothers had always considered soaring as a serious possibility, though they dismissed the idea of using gust energy.

"Since soaring is merely gliding in a rising current it would be easy to soar in front of any hill of suitable slope, whenever the wind blew with sufficient force to furnish support, provided the wind were steady."

"When the weather was cold and damp, buzzards would be seen soaring back and forth along the hills... But on warm clear days when the wind was light they would be seen high in the air soaring in great circles... it seemed to be necessary to reach a height of several hundred feet by flapping before this style of soaring became possible... other buzzards only a short distance away found it necessary to flap frequently... This seemed to indicate that rising columns of air do not exist everywhere, but the birds must find them. The soaring problem is apparently not so much one of better wings as of better operators." (Wilbur, 1903).

The Wrights were the best operators around in 1903, when they soared the 1902 glider for more than a minute over the dunes. When Orville returned to Kitty Hawk in 1911 with similar wings, he set a record of 9 min 45 sec which stood until 1921.

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Orville soars the 1911 glider (with rear elevator)



Left: Steam gives way to sail with Heron GC's display at Yeovilton Air Day (Rodney Helmes)

How we









pass the time



Top left: On a Vectis GC expedition to the Mynd, Terry McKinley, Phil Kirby and John Leonard (left, from left) find first the rainbow... and then the rain *(Malcolm Huddart)*

Above: a little bit of snow doesn't stop members of The Soaring Centre winching at Husbands Bosworth *(Sid Gilmore)*

Right: Jeanette Kitchen flying last winter from Trent Valley GC in the East Midlands. According to her husband, John, she is "sporting one of her famous hats, and wondering where the airfield is" *(Dave Bieniasz)*

Below right: Alan Meredith sets off for another aerotow retrieve at the Lasham nationals, in the aptly-registered Pawnee G-TOWS *(Steve Kirkby)*

Below: view from a syndicated Duo Discus, usually based at Aston Down, during a recent expedition to Portmoak *(Mike Weston)*







Dreams can come true

Wally Kahn, the leading light behind Lasham's eventual purchase of its airfield, has come up with another scheme. Here he explains why he believes it's important to preserve Britain's gliding history ... and suggests a possible way forward

HENRY Ford said that all history is bunk! He was wrong! We learn from history – history enhances our lives, history is fun but history needs preserving.

British gliding has a tremendous history, starting with Sir George Cayley, the true "Father of Flight". In every field of our sport we have been in the forefront of development and success except in the vital task of the preservation of our heritage. Other countries have well-equipped and well-funded gliding museums. Notable among these are the American National Soaring Museum at Harris Hill and the German Deutsches Segelflugmuseum at the Wasserkuppe. We, I regret to say, currently do not have such a facility. But we will!

For many years I have collected books, booklets, magazines and other published material on the subject of gliding. My library will be bequeathed to the gliding movement so that more than one hundred titles, plus all issues of *The Sailplane and Glider, Gliding* and *Sailplane & Gliding* from the very first issue in 1930 through to the present day and lots of other fascinating reading matter will be available to UK glider pilots and all other interested people.

'We must make sure that nothing is thrown away that can add to our historical records'

Collections in other hands may well contain books and other matter not on my list, and it would be wonderful if we could in time create the "definitive" gliding library.

There must be a number of glider pilots who have collected or just acquired various bits of gliding ephemera and who, on giving up the sport, are tempted to dump formerly highly-prized but now unwanted gliding "rubbish" into the nearest skip. We must make sure that nothing is thrown away which can be added to our historical records. As an example, only the other day Ruth Brigden was given a copy of a priceless programme (see *Early soaring demonstration*, October-November 2002, p7) of the Demonstration of Soaring Flight held at Itford in Sussex in June 1930 organised by the BGA and the *Daily Express*, signed by several of the pilots and participants. What a find!

In order to fund this scheme we will need partners and friends. The solution hit me like a solid 10-knot thermal. Next year is the first centenary of the Wright Brothers' first man-carrying powered flight. It seems obvious to me that what we urgently need in the country is "The National Aeronautical Library". The sailors have the excellent publicly-funded National Maritime Library. Therefore let's invite all the aeronauticals – sporting, industry, academics, transport *et al* to help us get the show on the road.

Even in these harsh economic times there must be enough goodwill and therefore brass, quite apart from government (taxpayers') money, to be successful. The Library will be a mixture of "actual" books, combined lists such as the splendid web-based universities' and British Library COPAC scheme which at the touch of a button allows you to see which books are held by whom and where. Additionally all other modern methods will be employed to make the library easily available to all and sundry. There are very many collections of aviation literature and photos in the UK.

It would make the scheme even more attractive if space could be provided so that the Vintage Glider Club could house their cherished goodies – and indeed any other collections which should be retained. Additionally, if space can be found for the offices of the British Gliding Association and the other Royal Aero Club affiliates at virtually zero rent with long security of tenure it would strengthen the future of sporting aviation in this country.

The location of this multi-purpose building is open to debate. For openers I know where (say) two acres would be made available on a very long lease at a nominal rent on a freehold active sporting airfield. However, all offers would be carefully considered.

What we need now is a national aviation figure whom we can persuade to 'front' our scheme. Has anyone any ideas?

See opposite for Wally Kahn's bibliography

A bibliography of UK-published gliding books

The following list of books is just part of the collection that Wally intends to bequeath to the British gliding movement. Books on gliding published in the UK form the core of this collection, although he also has material not listed below. He is sure there that there must be more UK-published material out there ... and would welcome help with making the collection as comprehensive as possible. He is also still looking for five issues of *The Sailplane and Glider,* as indicated below. If you know of (or even better, can make available) these or any other relevant books, booklet,s leaflets or pamphlets published in the UK, please contact Wally via the editor

Ashwell-Cooke J	Motorless Flight	1932 J Hamilton
Bird M	Platypus Papers	2000 Platypus
Blanchard P	Elementary Gliding	1955 Thermal Equipment
Bradbury T	Meteorology and Flight	1991 A&C Black
Brunt D	Meteorology	1928 Oxford Uni Press
Champion P	Glider Pilot	1974 Model
Coates A	Jane's World Sailplanes	1978 Jane
Collins G	Sails In The Sky	1988 G Collins
Corbusier L	Aircraft (reprint)	1987 Trefoil Publications
Cumming, M	The Powerless Ones	1966 Fred Muller
Deane-Drummond AJ	Arrows of Fortune	1992 Leo Cooper
Delafield J	Gliding Competitively	1982 A&C Black
Douglas A (Welch)	Cloud Reading for Pilots	1943 John Murray
Douglas A (Welch)	Gliding and Advanced Soaring	1947 John Murray
Edmonds A (Welch)	Silent Flight	1939 Country Life
Ellison N	British Gliders & Sailplanes 1922-70	1971 A&C Black
Fairlie G & Cayley E	The Life of a Genius	1965 Hodder & Stoughton
Fox Geen	The ABC of Gliding	1952 Geo Allen & Unwin
Gotch W	Playground in the Sky	1955 Hutchinson
Hardy	Gliders and Sailplanes of the World	1982 Ian Allen
Hirth W	The Art of Soaring Flight	1938
Horsley T	Soaring Flight	1944 Eyre & Spottiswoode
Horsley T	The Long Flight	1947 Country Life Ltd
Horsley T (String-Bag)	Gliding & Power Flying	1947 Cumberlege
Howard-Flanders & Carr	Gliding and Motorless Flight	1930 Isaac Pitman
Hull E	Take up Slack	2000 Woodfield
Ince D	Combat and Competition	1992 Newton
Irving F	The Paths of Soaring Flight	1998 Imperial Coll Press
Jackson & Ghose T	Tiger in the Sky	1997 Pat Jackson
Jarrett P	Another Icarus	1987 Smithsonian Press
Kahn W	A Glider Pilot Bold	1998 Jardine Publishing
Kronfeld R	Gliding and Soaring	1932 John Hamilton
Kukuski J	Theory & Technique of Soaring	1952 Pitman, London
Latimer Needham C	Gliding and Soaring	1935 Philip Allen
Latimer Needham C	Sailplanes	1937 Chapman & Hall
Leeming J	Airdays	1937 Harrap
Lomax J	Hanna Reitsch	1988 John Murray
Longland	Gliding, from Passenger to Pilot	2001 Crowood
Longland	Gliding	2002 A&C Black
Ludlam & Scorer	Cloud Study – a Pictorial Guide	1960 Murray
Ludlam & Scorer	Further Outlook	1954 Wingate
Mallinson & Woollard	Handbook of Glider Aerobatics	1999 Airlife
Meagher M	Chicken-Livered Granny Glider Pilot	1985 Ava Books
Millett D	Whispering Wings	1994 Newton
Millett D	Teaching Harry to Fly	1994 Hartley Publishers
Merseyside Aviation Soc	Brit. Gliders 1970 1st Edition	1970 Merseyside Av Soc
Merseyside Aviation Soc	Brit. Gliders 1975 2nd Edition	1975 Merseyside Av Soc
Merseyside Aviation Soc	Brit. Gliders 1980 3rd Edition	1980 Merseyside Av Soc
Mole E	Happy Landings	1984 Airlife
Morgan A	Gliding In Eight Days	1990 Osprey
Morgan A	Airborne for Pleasure	1975 David & Charles
Peltzer F	Maloja Wind	1953 Hammond
Penrose H	An Ancient Air – John Stringfellow	1988 Airlife
Pilcher P & Stringfellow	Gliding	1910 R oyal Aeronautical Society
Piggott D	Gliding, Handbook on Soaring Flight	1958 A&C Black
Piggott D	Beginning Gliding	1975 A&C Black
Piggott D	Delta Papa	1977 A&C Black
Piggott D	Understanding Gliding	1977 A&C Black
Piggott D	Going Solo	1978 A&C Black
Piggott D	Understanding Flying Weather	1988 A&C Black
Piggott D	Derek Piggott on Gliding	1990 A&C Black
Piggott D	Gliding Safety	1991 A&C Black
Reitsch H	The Sky My Kingdom	1955 Bodley Head
Robinson C	Q&A for Glider Pilots	1990 Desktop Studio
Scott P	The Eye of the Wind	1961 Hodder & Stoughton
Scull W	Gliding and Soaring	1977 Pelham
Scull W	Soaring Cross-Country	1987 Pelham
Serjeant & Watson	The Gliding Book	1965 Nicholas Kaye
Simons M	Slingsby Sailplanes	1996 Airlife
Simons M	Sailplanes 1920-1945	2001 Eqip
Simons M	Sailplanes 1945-1965	2002 Eqip
Simpson J	Tackle Gliding This Way	1961 Stanley Paul
Sitek & Blunt	Gliding and Soaring	1940 Alliance Press
Stafford-Allen R	Theory of Flight for Glider Pilots	1962 Oliver & Boyd
Stamer & Lippisch	Gliding and Sail-Planing	1930 Bodley Head
Stewart K	The Glider Pilot's Manual	1994 Airlife
Stewart K	Soaring Pilot's Manual	2000 Airlife
Wallington W	Meteorology for Glider Pilots	1961 John Murray
Weiss J	Gliding and Soaring Flight	1923 Sampson Low
Welch A & L	Flying Training In Gliders	1961 BGA
Welch A & L, Irving F	The Soaring Pilot	1955 John Murray
Welch A	Come Gliding With Me	1955 Frederick Muller
Welch A & Gabor	Go Gliding	1960 Faber
Welch A	Glider Flying	1963 Constable
Welch A	John Goes Gliding	1964 Jonathan Cape
Welch A	The Woolacombe Bird	1964 World Publishing
Welch A & L, Irving F	New Soaring Pilot	1970 John Murray
Welch A	Pilot's Weather	1973 John Murray
Welch A	Gliding	1976 EP Publishing
Welch A	The Complete Soaring Guide	1986 A&C Black
Welch A	Know the Game	1994 BGA
Welch A	The Story of Gliding	1980 John Murray
Welch A	Happy to Fly	1983 John Murray
Wilkinson K, Brooks P & Shenstone B	The World's Sailplanes	1958 OSTIV
Wilkinson K, Brooks P & Shenstone B	The World's Sailplanes Vol II	1963 OSTIV
Wills P	On Being a Bird	1953 Max Parrish
Wills P	Where No Birds Fly	1961 Newnes
Wills P	Free as a Bird	1973 William Clowes
Wills P and others	The Beauty of Gliding	1960 Max Parrish
Wright L	The Wooden Sword	1967 Elek Books

Issues of *The Sailplane and Glider* still required to complete Wally Kahn's set:

❑ 1932	Vol. 3, No. 14	August
❑ 1940	Vol.11, No. 3	May/June
❑ 1944	Vol.12, No. 7	August
❑ 1944	Vol.12, No. 8	September
❑ 1944	Vol.12, No.11	December

Please note that the editor is still looking for

❑ many issues of *The Sailplane and Glider,* especially but not only pre-1936

❑ Gliding, Vol 6, No. 1

If you have copies you are happy to donate, sell or swap, please do get in touch on 01453 889580 or at *helen@sandg.dircon.co.uk*

The winner is a T-49



Mike Fox

	Glider type	Glider ID	Points
1	T-49	A23	3429
2	Duo Discus	377	3277
3	DG-500	HNA	3262
4	ASH 25	907	3145
5	Janus A	DR7	2760
6	K-7	CWJ	2521
7	ASH 25E 26.5	IM	2268
8	K-21	GBV	2193
9	ASH 25	M25	2000
10	Grob Twin 2	EGN	1842
11	K-13	HVQ	1752
12	K-7	DWN	1750
13	K-21	JAV	1402
14	T-49	BJQ	1226
15	K-21	JAX	1206
16	K-21	JKA	1152
17	Janus A	HTB	1145
18	K-21	ERH	1006
19	K-21	JAD	987
20	Janus B	DTC	969
21	K-21	D70	957
22	Janus C	EQV	898
23	Twin Astir	FEA	815
24	Eagle	BBQ	792
25	IS-28B	HMG	744
26	Puchacz	HHA	712
27	K-13	JGW	684
28	K-21	EPD	588
29	Marianne	Z35	586
30	K-21	S21	499
31	K-7	ETU	156
32	K13	HDC	137

Mat Woodiwiss, aged 15, reports on this year's two-seater comp. It was won by Peter Redshaw's immaculate T-49 Capstan (above)

I DON'T know who it was, but someone thought it would be a good idea to enter this well-known comp. Our CFI was very enthusiastic because it would mean S21 – a very tidy K-21, and the pride of Staffordshire GC – fulfilling its cross-country role. And it would give young members flying time with our youngest instructor – still fresh from recent experience of the Junior Nationals.

Sally and I were the two Staffs juniors chosen to compete, with Al Gillson as P1. Brave guy, this Gillson chap, allowing us to complete first field selections and landings at the comp! This led to much banter, since Sally picked the best field around, Elvington, the longest runway in Britain, only to lose out on points to another team who landed out three miles away at the other end of it. I was able to push my experience here. Being only 15, I have not yet been allowed to shed excess baggage from the rear of a two-seater ... not bad doing your first field landing prior to solo! Al arranged a crew consisting of his better half Sally (a different one) along with Ian and Lara, who brought a single-seater to local soar while waiting.

Right from the start the comp had a great atmosphere, with a warm welcome. We were directed to the trailer park and campsite, conveniently situated next to the bar. Each day began with a tannoy giving the time of the briefing and whether to rig and grid. This let us rest when the day was late starting. We were grateful for this as the nightlife was active – we even had our own Karaoke to assault the ears of fellow pilots.

Mike Fox (the director) did a brilliant job and was the general butt of everyone's humour at briefing, along with the light-hearted weather reports from Ivor Orrey. Each briefing was followed by friendly banter between ourselves and the other K-21 teams. Somehow the organisers enabled Capstans and K-7s to compete with ASH 25s: the grid was most unusual – glass and wood all mixed up.

After the first day we all relaxed and fell into an easy routine. Ian and Lara, carried along by the atmosphere, asked to fly on at least one day. It is absolutely marvellous to fly at a club where you are only responsible for your own glider. You have your own retrieve crew at hand to fetch you back if you fail to complete the task, and no one to moan because you want to take a glider cross-country and deprive others of its use. We were amazed how many people we already knew; gliding is a small world.

Each day the retrieve crew listened for the callsign on the tannoy as S21 was added to the list of outlandings. This happened every day we flew. We had all agreed that we would try our best and build on our field landing experience if we failed to get round. Ian and Lara hold the Pocklington record this year after landing 1.3 miles away from site as they refused to turn back. Lara just wanted another field landing. We met many friendly farmers during the week. It's nice to know that our glider will feature in several photo albums with children in the cockpit.

We were all apprehensive at the thought of entering for the first time. Next year we plan to bring another two-seater. I hope I get the chance to join the team. This for me has been the experience of a lifetime, one I shall never forget. Thanks to all who made this possible – especially my home club, who do so much for younger members and trusted us with the glider. I had a great time.

Mike Fox adds: I found the comp amazingly hard work, but extremely rewarding. Most of all it was fun. Thanks must go to the excellent 30-strong team that made things run smoothly. Cheers, guys!



The two-seater grid at Pocklington this year (Mike Fox)



Alistair Gillson

Mat's first field landing, at Luddington in Lincolnshire

A gentlemen's contest



Peter Harvey shares extracts from his Open Class diary...



the ***White Planes*** picture co.

DEAR Diary – Never mind the glitterati of the Worlds or the Europeans, the glamour of the crew's tents on far-flung flying sites, or the excitement of 50km final glides over lion-infested wild lands, this is the *main* event – the primo competition on the World Wide Gliding Calendar – and this time the host of the Open Class Nationals is Tibenham – the final event on the 2002 UK rated calendar (OK, along with the Hus Bos based Juniors). It's a little late in the year for a UK comp, with the final day due on September 1, and murmurs about vindictive members of the comps committee banishing the Opens to the North Sea in winter circulate around the club's Martini brollies, but the weather is pleasantly settled in the late summer sun and Weatherjack's forecast seems unexpectedly fine. Maybe all will be well as per usual for the Open Class Nationals. To spice up things on the airfield a little more, the Eastern Regionals are flying alongside the Opens and the whole lot is sponsored by Adnams the brewers.

Day 1 and already the weather's playing its tricks. Off northwards to Swanton in fairly murky conditions, then south – close to the first of the military areas that dot the Anglian region. I can't believe we're doing this: with most of the region covered in MATZs, fast jets, heavy jets, fighter jets, Jumbo jets, Hercs and Regionals pilots it's lucky the gentlemen of the Open class are such a professional, considerate lot. Ha!

Approaching Mildenhall I called ATC to give position, height, etc, but they weren't too interested in me since the myriad of meandering targets just east of them seemed far more absorbing. They were on the case, however, and informed all traffic to watch out for the 15-plus gliders circling between 1,000ft and 3,000ft 5km east of Mildenhall. How convenient. Dare I ask them the climb rate, as well? Perhaps pushing luck a little too much. Around the southerly Sudbury turn, then off to Cambridge – a turn too far as it happened – the lift ended some 30km short. Most folks dived into the nearest cloud and I joined in, hoping the myriad of jets stayed clear while we jockeyed for position. Jets became less of an issue as the AH packed up and I pushed on towards Cambridge at low level in the clear, almost enjoying the silky smooth glide, until Robin May's calm airline pilot's tone informed all that he was passing 8,000ft. Aaarghhh!

Twenty minutes later the engine worked perfectly and I climbed away in rain to get home. There's been much debate behind the bike sheds recently about engines. Purists remain, but I've yet to find one ecstatic about me motoring away from their remote out-landing position (a suitably malicious "gotcha" feeling), while waiting four hours for their crew. Ha. No angry farmers, no outlanding damage, easy retrieves and that gorgeous smell of two-stroke...

Meanwhile, back in the real world, Mr May had completed his sub-orbital cloud climb and whizzed around the course to win the day and the case of Adnams extra-strong bitter. My old syndicate partner Richard Blackmore was 2nd in the ASH with Ralph Jones 3rd.

The next few days we hid in the caravans waiting for the rain to abate and Robin to recover from the Adnams-induced hangover.

Day 2, August 28, and 200km is set: to Norwich, then off to Six-Mile Bottom. I programme the toys and wait with the other gentlemen and Lucy Withall, the sole lady competitor, for cloudbase to become sensible. Excitement rose as Dave Gardiner completely groundlooped his Nimbus 3 off the runway and into the next field. It rates as the most spectacular – tail-in-the-air, but damage-free – manoeuvre I've ever seen. So spectacular that Ralph Jones appeared frozen in his cockpit. More likely, his experienced glance could tell there was no damage. David gamely later took off from another runway to complete the task.

Conditions almost blued out before the task opened, but I did manage to contact a small wave in front of a small cu, climb over the building cloud, then running out of ideas, flew down the back and under to where I'd started! Apparently I won the day, but the Adnams-induced haze from the winnings strangely obliterated the details. It must have been a racing day since Ralph was 2nd and Russell 3rd. I do remember its being a few comps since I've actively competed against Russ, rather than team flying with him. Why the next Worlds, in Poland, has only one Open Class spot per country instead of the usual two is very perplexing and disappointing.

Day 3, August 29: 197km set, the forecast improving. An ugly scene on the grid as scales turned up alongside my glider. Of course, I would have co-operated fully, but remembered the exhaust pipe needed attention so disappeared under the car. Ever helpful, my trusty crew Anthony Claiden soon helped the scrutineers drag me out. The glider was positioned on the scales, especially imported for the occasion (no expense spared, you know). With a 750kg limit, I was dismayed to see the indicator pushing towards the 900kg... as the bolts sheared and the whole lot collapsed. The dismayed stewards took the scrap metal away as several other pilots arrived at the scene to thank me. After the horrible fiasco during the Europeans in Hungary, with three



Above: Pete's shot of the grid team. Top: his Nimbus



Open Class winners, from left, were Pete Harvey, 3rd, Robin May, 1st and Russell Cheetham, 2nd

sets of scales calling 750kg anything from 500kg to 850kg, I felt that somehow my lovely Nimbus had got its own back.

Given such a small task, start time was crucial, even more so with high cloud moving in from the west. Having waited too long, I joined a small group including Ralph and Al Nunn, as we diverted east, supposedly heading south to Ipswich. Dumping water early proved a good move and I slowly made the turn and headed north towards improving conditions. I spent most of the long northerly leg attempting to catch Tim Parker in his ASW22BLKnobs-On. Couldn't do that, but did catch quite a few others and the stonking thermal just after the Norwich turn was made doubly enjoyable by watching Russell just miss the core. Quickly remembering I'm a gentleman again, I set off for home and another crate of Adnams' best. Chris Lyttelton was third and Robin second to consolidate his overall lead.

Day 4, August 31: Last day of summer, so 405km was set towards Newport Pagnall, Leicester, Bedford and home. All went well until Leicester and a large area of spreadout. Pete Sheard won the day after pushing on just enough and consistently making the best of the cloud climbs. Robin retained his overall lead, Pete Sheard was 2nd and Russell 3rd. There aren't many points in the spread, but can I catch up from 4th on the last day?

Day 5, September 1. The day looks superb and there's mutterings about a 500km task, just to say "yah boo" to those folks who said autumn was no good for a UK comp. In the end 412km was set via Leicester to pay homage to BGA HQ. First climb at 11.00hrs was 6.5kts average, storming! By the time the window opened, North Sea clag had obliterated the observable task area and we gradually minced away under 8/8ths.

Advice from John Giddins was to go north. Bob Bromwich, Bernie Morris, Tim Parker and I had retrieved him from a field the previous day, presumably earning shed-loads of Karma points in the process. He was right and after a relatively slow start we had an absolutely storming run towards Silverstone. I chased Russell, with Robin close on my heels. His climb rate seemed incredible, but later he explained he'd been unable to carry water. I've not known such superb soaring conditions in the UK over such a large area. Mega! Honours and beer went to Russell at 123km/h, who instead of the conventional flashy high-speed finish has been perfecting his 50/50 line crossing technique. That's 50ft and 50kts. With elephantine gonads that's no problem, but mine disappear to squirrel-size with 50ft on the calculator. Room for improvement, Peter. Mike Thick was 4th for the day, with Robin and I equal 2nd.

Overall, it was a superbly-run comp, the smooth team led by director Woody. He called it the gentlemen's competition (outstandingly brave given that Lucy was in the front row at briefing). Accurate met was delivered by (Weatherjack) Harrison. The task-setters were got it about right, making for happy bunnies all round. Thanks to Adnams for supporting the competition with their superb beverages. Robin May was the deserving winner, with Russell Cheetham second and myself 3rd. My best memories included: encountering an interesting mix of thermal, sea breeze, wave and Adnams; flying along cloudstreets that ended in the nearby North Sea; daughter Charley pointing out the North Star one evening; Richard Blackmore cooking pancakes on the grid using the tail dolly as wind protector. I'll look forward to flying Tibenham again.

Open Class Nationals, Tibenham

1	R May	ASH 25	4040	86.7 1 832	91.4 6 563	81.9 2 701	93.0 4 960	122.3 3 984
2	R Cheetham	ASW 22 BL	3941	68.2 4 750	96.0 3 618	75.3 9 605	93.5 3 968	123.3 11000
3	P Harvey	Nimbus 4	3888	(181.9) 10 579	96.6 1 625	83.2 1 720	94.2 2 979	122.3 2 985
4	P Sheard	Nimbus 4T	3841	67.6 5 748	90.2 8 549	80.4 4 679	95.5 11000	114.6 8 865
5	R Jones	Nimbus 4	3648	80.5 3 805	96.4 2 623	63.719 435	89.3 5 899	116.0 6 886
6	M Thick	ASH 25	3514	(180.8) 11 576	85.715 496	75.5 8 608	88.5 6 887	119.9 4 947
7	A Nunn	Nimbus 3	3476	(210.6)8 665	89.7 9 543	71.815 553	87.3 7 868	113.411 847
8	J Gorringe	ASH 25	3332	(215.8)7 681	87.512 517	75.6 7 609	80.713 761	108.215 764
9	T Parker	ASW 22 BL	3314	(152.2) 16 490	89.110 535	74.910 599	86.7 8 858	112.512 832
10	L& CWithall	ASH 25L	3307	(155.8) 13 501	82.017 451	79.1 5 660	82.212 785	117.5 5 910
11	B Morris	Nimbus 4DT	3268	(192.2)9 610	87.413 516	73.912 584	83.311 803	107.616 755
12	D Findon	Nimbus 4DT	3233	(138.6) 21 444	86.914 510	72.713 567	84.810 827	115.9 7 885
13	K Hartley	Nimbus 3	3231	(155.5) 13 501	83.716 471	74.311 590	86.5 9 855	111.413 814
14	J Edyvean	Nimbus 3	3167	(137.3) 22 437	93.9 4 593	78.4 6 650	76.817 698	109.714 789
15	R Kalin	Nimbus 3	2936	(150.7) 19 484	90.7 7 555	58.422 358	75.818 683	114.010 856
16	C Lyttelton	ASH 25	2920	(155.2) 15 500	87.711 520	81.3 3 692	(252.6) 23 351	114.1 9 857
17	R Blackmore	ASH 25	2914	82.1 2 812	71.522 326	67.717 494	69.120 574	104.617 708
18	D Innes	Nimbus 4T	2818	65.0 6 736	75.720 375	65.618 462	79.215 738	91.723 507
19	R Cole	Ventus 2CT	2683	(143.9) 20 462	81.218 441	68.116 500	74.819 667	98.520 613
20	C Smithers	ASH 25 E	2631	(151.6) 18 487	78.219 405	61.620 404	80.214 753	96.522 582
21	J Giddins	ASW 22	2512	(107.7) 26 335	91.5 5 565	71.814 554	(316.7) 22 423	99.919 635
22	J Glossop	Nimbus 3DT	2329	(160.0) 12 514	(32.1) 2639	60.021 381	78.616 727	102.018 668
23	P McLean	Ventus 2CT	1850	(132.3) 23 422	61.025 240	49.823 314	58.021 465	85.424 409
24	F Pozerskis	ASH 25	1755	(152.3) 16 490	72.721 340	(27.3) 2652	(174.1) 26 260	98.520 613
25	D Gardiner	Nimbus 3	1597	(128.2) 24 405	65.024 248	52.123 314	(180.3) 25 271	81.526 359
26	B Bromwich	DG-505 MB	1562	(127.0) 25 401	69.023 296	(101.5) 25 163	(211.8) 24 315	84.025 387

How to win: move house

THE WEATHER leading up to the 2002 Dunstable Regionals was quite poor but as the days drifted by improving forecasts brought drier days and the farmers were out cutting crops late into the night.

Contests at Dunstable are passionate and intensive but held in the fairest and friendliest of spirits with everybody helping each other to get into the air and home again in time for a beer. This good-natured ethos can absolutely ruin a decent comp so it was just as well that the director (Andy French), the club newsletter editor (Veronique Russell) and a couple of notorious club members (anonymous) conspired to issue a contentious nine-page news article at the first briefing. This article appeared to be a series of interviews with the contest management glitterati and pilots discussing strengths and weaknesses of their friends and their gliders. It was, of course, a spoof, based on highly-exaggerated interviews conducted after a few beers in the bar.

At briefing, as top pilots winced at the threat of dire retribution for airspace infringements, their eyes spotted their names in the article and what was being said about them or what they had allegedly said. This immediately sparked a series of arguments between erstwhile old friends. Threats were issued, gauntlets were thrown down and the stage was set for a good day's racing followed by further crack in the bar.

The racing was held in indifferent weather and no large tasks were set (see p49 for the full results.) The contest squeezed six racing days from the nine possible. In the Red class, Warren Kay (LS8) came 1st followed by Steve Lynn and Trevor Stuart, flying beautifully in ASW 27s. Special mention to Rob Brimfield, who picked up two 1st and a 6th place in the first three days to give him pole position only to suffer in the last three following a very heavy birthday celebrations assisted by explosives placed under his caravan and ignited at 1am. Special mention also to Reb Rebbeck, who picked up his first day win for many years following intensive coaching from sons Henry, Jay, Luke and Matt.

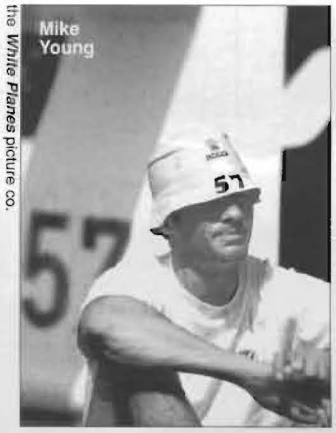
In the Blue class, Malcolm Birch in a Libelle thrashed the pants off the opposition in a demonstration of audacious flying. To rub salt in the wounds he even moved house during the comp, arriving late one day long after the grid had said goodbye to the start gate. Malcolm used to be a handful in his K-6 and Heaven help us if he ever gets his hands on a real glider. Nick Wall (Discus) came a strong second. CFI Andrew Roch sharing with Mark Davis in an ASW 24 came third.

During the contest, Edward Downham and Jay Rebbeck lost their heads during an assigned area task and went way off track to break a UK speed record. Some people just can't take a task seriously!

We all had a great time and would like to thank many guests who travelled so far to be with us. In particular, Tom Snoddy and Alan McKillen (Ulster), John Ferguson and Robbie Knight (Portmoak) and Peter Wimmer (Germany). Thanks also to Mike Woollard and Dill Faulkes of the Faulkes Flying Foundation for the loan of two DG-505s used to great effect by our Dunstable Cadets to gain 4th place in the Blue Class.

Congratulations to the "firm but fair" director, Andy, and his staff for allowing us to have so much legal fun. It is rumoured that Stephen Lynn may be the contest director in 2003.

Alan Harrison



the *White Planes* picture co.


the *White Planes* picture co.

Rich Hood



the *White Planes* picture co.

The top 250 UK pilots

1	RS Hood	43	BA Birlison	85	BR Forrest	127	JT Hitchcock	169	SE Morecraft	211	S Jobar
2	MJ Young	44	KB Tipple	86	B Inglis	128	K Nicolson	170	JA Stephen	212	GW Craig
3	PJ Masson	45	HA Rebbeck	87	GR Green	129	BC Morris	171	AD Irving	213	JA Crowhurst
4	DS Watt	46	TR Mountain	88	GM Spreckley	130	MJ Cook	172	LE Tanner	214	R Maskell
5	AJ Davis	47	GE McAndrew	89	W Aspland	131	R Kalin	173	TM Mitchell	215	JKG Pack
6	SG Jones	48	R Jones	90	SS Shah	132	DR Campbell	174	N Hackett	216	CC Lyttelton
7	PG Crabb	49	PE Baker	91	RD Grieve	133	P McLean	175	MC Costin	217	ND Smith
8	AA Darlington	50	DA Booth	92	RJ Nunn	134	NV Parry	175	H Stone	218	MP Benson
9	PR Jones	51	H Jones	93	CC Rollings	135	OJ Walters	177	RW Croker	219	RE Robertson
10	JN Rebbeck	52	G Macdonald	94	TJ Parker	136	TC Wright	178	P Davis	220	RJ Welford
11	PJ Harvey	53	MG Thick	95	NH Wall	137	D Hilton	179	A Eckton	221	GK Payne
12	MD Wells	54	MI Pike	96	T Pozerskis	138	IR Cook	180	DF Bromley	222	PW Armstrong
13	EW Johnston	54	FJ Davies	97	SR Lynn	139	S St Pierre	181	MB Jefferyes	223	JD Ewence
14	DC Chappell	56	E Sparrow	98	KM Draper	140	DR Wardrop	182	M Morley	224	RC Bridges
15	SJ Crabb	57	RF Thirkell	99	EJ Smallbone	141	BL Cooper	183	P O'Donald	225	JR Taylor
16	AE Kay	58	JD Glossop	100	ER Smith	142	JA McCoshim	184	SG Olender	226	MA Pettican
17	LM Wells	59	CC Watt	101	B Fox	143	AP Brown	185	CV Heames	227	ME Lee
18	RA Browne	60	P Jeffery	102	JC Meyer	144	JG Arnold	186	SM Bateman	228	JD Spencer
19	SJ Steinberg	61	AV Nunn	103	A Clark	145	MP Mee	187	RP Garner	229	DR Smith
20	PC Fritche	62	AJ Clarke	104	AJ McNamara	146	SJ Redman	188	GN Thomas	230	JG Allen
21	CG Starkey	63	PF Brice	105	JR Luxton	147	D Heslop	189	AR Hill	231	RA Johnson
22	GN Smith	64	GC Metcalfe	106	DE Findon	148	JP Simmonds	190	PH Rackham	232	DH Gardner
23	RC May	65	DW Allison	107	L Hornsey	149	DM Byass	191	CR Thomas	233	GD Morris
24	TJ Milner	66	JA Tanner	108	AJ Garrity	150	A Wells	192	J Langrick	234	MG Throssell
25	EH Downham	67	GK Drury	109	L Withall	151	PL Hurd	193	GP Hibberd	235	PA Stanley
26	TJ Wills	68	PJ Coward	110	CR Emson	152	MT Davis	194	JR Jeffries	236	DM Ruttle
27	A Jelden	69	AF Perkins	111	AF Watson	153	JB Giddins	195	RH Blackmore	237	WA Harris
28	RA Johnson	70	MR Fox	112	AK Laylee	154	J Coutts	196	AR Parker	238	PO Paterson
29	RA Cheetham	71	KD Barker	113	IM Evans	155	JF Fitzgerald	197	CJ Peters	239	DJ Scholey
30	TJ Scott	72	JN Wilton	114	T Stuart	156	DD Copeland	198	JA Hallam	240	AM Dalton
31	BT Spreckley	73	PM Shelton	115	A Hall	157	AR MacGregor	199	AJ Birkbeck	241	TJ Brenton
32	BC Marsh	74	D Payne	116	D LeRoux	158	M Strathern	200	B Flewet	242	AJ Stone
33	SR Ell	75	DS Pitman	117	KJ Hartley	159	MF Cuming	201	DP Francis	243	IP Freestone
34	J Williams	76	MJ Birch	117	JR Edyvean	160	WJ Murray	202	TR Gaunt	244	MB Judkins
35	R Pentecost	77	JP Gorringe	119	MR Parker	161	MW Durham	203	BA Fairston	245	GF Wearing
36	D Draper	78	W Kay	120	PR Stafford-Allen	162	JA White	204	K Davis	246	R Maisonpierre
37	ND Tillett	79	SC Barker	121	LS Hood	163	R Tietema	205	C Curtis	247	D Piggott
38	GG Dale	80	DP Masson	122	PF Whitehead	164	RJ Hart	206	ER Smith	248	M Critchlow
39	O Ward	81	MJ Jordy	123	GH Davidson	165	RA King	207	JH Pennant	249	M Newland-Smith
40	JM Hood	82	DW Smith	124	PC Naegeli	166	T Moulang	208	A Sanderson	250	R Andrewartha
41	LM Rebbeck	83	SA Adlard	125	RB Witter	167	GS Goudie	209	ML Brown		*Provisional ratings list*
42	PG Sheard	84	GP Stingemore	126	K Houlihan	168	DR Ley	210	B Stott		*compiled by Jerry Pack*

... and the calendar of contests where you could join them in 2003

Overseas Championships	Spain	5 May–16 May	Competition Enterprise	Sutton Bank	12 Jul–20 Jul	Regionals	Dunstable	16 Aug–24 Aug
Women's Worlds	Czech Republic	18 May–1 Jun	28th Worlds	Leszno, Poland	19 Jul–10 Aug	15 Metre Nationals	Booker	23 Aug–31 Aug
"Turbo" Regionals	Bidford	14 Jun–22 Jun	Regionals	Lasham	19 Jul–27 Jul	Regionals	Gransden Lodge	23 Aug–31 Aug
Regionals	Booker	14 Jun–22 Jun	Standard Class Nationals	Hus Bos	26 Jul–3 Aug	Junior Championships	Nympsfield	30 Aug–7 Sep
Regionals	Hus Bos	28 Jun–6 Jul	Regionals	Sutton Bank	26 Jul–3 Aug	Two-Seater Comp	Pocklington	*to be advised*
Junior Worlds	Slovak Republic	5 Jul–19 Jul	Club Class Nationals	Lasham	9 Aug–17 Aug	Mountain Soaring Comp	Deeside	*to be advised*
Regionals	Tibenham	12 Jul–20 Jul	Open Class Nationals	Lasham	9 Aug–17 Aug	**Important**: The ratings list is provisional: protests by **Jan 1**		
18 Metre Nationals	Tibenham	12 Jul–20 Jul	Inter-Services Regionals	RAF Bicester	9 Aug–17 Aug	Deadline for returning UK nationals entry forms: **Jan 31, 2003**		

15-Metre Class, Gransden Lodge (July 27 – Aug 4)

	Pilot	Glider	Total	Day 1 27/7/02	Day 2 28/7/02	Day 3 29/7/02	Day 4 2/8/02	Day 5 4/8/02
1	C Starkey	ASW 27b	3039	78.1 1 815	(104.2) 18 82	67.8 2 690	114.9 1 939	58.7 3 513
2	E Downham	ASW 27	2852	71.6 15 693	(201.6) 4 177	(172.4) 8 588	112.1 2 896	55.7 4 498
3	T Scott	ASW 27b	2786	74.7 3 752	(87.7) 24 70	(169.4) 9 576	110.2 3 865	60.1 2 523
4	N Tillett	ASW 27b	2667	70.2 20 666	57.7 1 234	(161.7) 13 548	101.2 10 723	55.4 5 496
5	O Ward	Discus	2662	71.7 14 696	(54.8) 29 44	59.7 4 670	104.0 6 768	53.3 7 484
6	P Jones	Ventus	2548	73.3 7 726	(106.4) 14 83	(180.4) 5 617	106.7 5 804	(195.8) 12 318
7	S Steinberg	ASW 28	2477	75.8 2 772	(159.1) 5 134	(147.6) 17 496	100.6 12 713	(222.5) 11 362
8	RF Thirkell	LS8	2450	72.7 10 714	(36.9) 31 30	(161.5) 14 547	97.6 20 665	55.0 6 494
9	G Metcalfe	ASW 28	2443	73.9 5 737	(151.4) 6 126	(131.6) 22 436	99.4 17 694	47.1 9 450
10	P Jeffery	LS8	2308	71.1 17 683	(118.2) 7 93	(82.3) 31 269	102.2 8 739	60.4 1 524
11	JN Wilton	ASW 20c	2253	72.1 12 702	(114.2) 10 89	(97.1) 30 319	97.9 19 671	51.1 8 472
12	E Johnston	ASW 28	2232	70.9 18 680	(88.4) 24 70	(168.9) 10 574	101.4 9 726	(115.3) 14 182
13	A Hall	LS6c	2175	66.8 26 603	(106.4) 14 83	69.4 1 694	100.2 13 707	(60.0) 30 88
14	K Tipple	ASW 20	2172	74.1 4 740	(105.9) 14 83	(163.8) 12 556	100.0 14 704	(60.9) 28 89
15	B Cooper	LS6	2141	69.5 21 654	(101.4) 19 80	(178.4) 6 610	95.8 21 637	(102.9) 15 160
16	D Draper	LS8	2125	73.8 6 735	(117.7) 8 92	(119.0) 27 390	100.0 15 703	(132.1) 13 205
17	P Naegeli	Ventus 2c	2035	72.5 11 709	(113.9) 10 89	(130.1) 29 331	106.7 4 810	(65.8) 23 96
18	D Byass	LS8	2026	69.2 22 648	(217.7) 3 194	(164.1) 11 557	87.3 27 502	(84.1) 19 125
19	F Davies	LS6	2008	72.0 13 700	(117.4) 8 92	(177.9) 7 608	85.8 28 478	(86.8) 17 130
20	R Welford	LS8	1993	71.6 16 692	(105.8) 14 83	(131.5) 22 436	99.3 18 692	(61.6) 26 90
21	W Aspland	LS8	1935	73.1 8 722	(113.6) 12 88	(77.8) 32 253	102.8 7 748	(83.7) 20 124
22	A Sanderson	Vega	1932	68.0 24 625	(52.3) 30 42	(154.2) 16 520	78.3 30 361	53.2 10 384
23	S Redman	LS8	1915	65.9 27 585	(232.6) 2 207	(129.9) 24 430	93.3 22 597	(107.2) 23 96
24	RJ Smith	ASW 27	1885	(203.5) 30 320	(100.1) 20 79	61.9 3 675	101.2 11 722	(60.9) 28 89
25	G Payne	ASW 27b	1877	65.4 28 576	(89.0) 23 71	(132.0) 21 438	99.9 16 702	(85.4) 26 90
26	M Pike	Ventus 2CT	1873	70.7 19 676	(90.2) 22 72	(129.9) 24 430	92.5 23 585	(79.6) 22 110
27	DS Innes	LS6	1805	73.1 9 721	(101.5) 32 -7	(135.4) 18 450	87.9 26 512	(86.5) 18 129
28	P Rice	ASW 20	1804	67.5 25 616	(58.5) 27 47	(133.4) 20 443	90.0 24 546	(114.4) 16 152
29	C Alldis	LS8	1743	68.6 23 636	(95.8) 21 76	(119.8) 26 393	88.1 25 516	(82.8) 21 122
30	D Heslop	Discus	1363	49.6 31 309	(59.9) 26 48	(135.3) 18 450	85.3 29 471	(58.1) 31 85
31	H Jones	Discus	991	(0.0) 32 0	(107.9) 13 84	(154.5) 15 521	(333.9) 31 294	(63.2) 25 92
32	I Molesworth	Ventus BT	726	54.0 29 339	(55.7) 28 45	(105.4) 28 342	(0.0) 32 0	(0.0) 32 0



Right: an LS8 dumps waterballast on approaching the line at Husbands Bosworth in this year's Juniors
Opposite top: ASW 28 finishing in the same competition
Opposite bottom: Rescuing a broken-down Wells – or playing car tug o'war? (the ***White Planes*** picture co.)

18-Metre, Lasham (Aug 10 – Aug 18)

	Pilot	Glider	Total	Day 1 10/8/02	Day 2 12/8/02	Day 3 13/8/02	Day 4 14/8/02	Day 5 15/8/02	Day 6 16/8/02	Day 7 17/8/02	Day 8 18/8/02
1	P Jones	Ventus 2CT	4127	(45.5) 22 4	89.6 1 1000	(156.6) 7 662	62.7 16 436	(281.1) 35 805	112.9 1 791	(96.3) 29 85	49.3 11 344
2	J Rebbeck	LS8	4086	(0.0) 47 0	87.3 7 956	(146.6) 15 616	65.1 11 460	(295.6) 15 847	109.5 3 746	(110.7) 14 108	50.6 6 353
3	M Wells	LS8-18	4073	(54.8) 2 5	87.6 6 961	(138.0) 20 576	66.2 5 471	(304.2) 13 873	105.4 4 690	(134.5) 1 148	50.1 8 349
4	D Chappell	LS8-18	3983	(58.8) 2 5	79.6 17 801	(142.4) 17 597	65.5 9 464	71.0 2 991	99.7 10 614	(130.7) 6 141	53.4 2 370
5	R Browne	LS8-18	3915	(55.7) 2 5	79.9 15 807	(197.0) 3 847	61.6 19 426	(294.6) 18 845	96.7 18 561	(106.9) 21 101	46.0 20 323
6	G Smith	LS8-18	3825	(41.7) 42 3	84.7 9 882	(154.0) 9 650	65.8 6 468	(293.7) 21 842	92.3 25 515	(108.8) 18 105	51.8 4 360
7	A Kay	Ventus 2CT	3815	(59.2) 2 5	88.0 3 969	(130.1) 32 544	66.5 4 474	(286.2) 29 821	92.9 23 522	(126.3) 7 137	49.2 12 343
8	S Jones	Ventus 2CM	3775	(53.8) 22 4	87.9 4 968	(130.9) 31 548	68.4 3 492	(272.1) 39 779	99.6 11 613	(23.7) 45 21	50.3 7 350
9	B Marsh	LS8-18	3774	(63.0) 2 5	75.5 28 717	(137.6) 21 575	64.3 12 452	74.5 1 1000	94.9 22 549	(124.9) 9 131	49.5 10 345
10	R Pentecost	LS8-18	3726	(56.6) 2 5	75.2 31 697	(193.2) 4 829	(141.4) 38 271	(309.1) 9 888	98.2 14 593	(108.8) 19 104	48.5 14 339
11	C Starkey	ASW27b	3711	(55.1) 2 5	81.9 12 847	(180.0) 5 769	61.6 21 425	(286.4) 30 820	104.0 6 671	(128.1) 7 137	(20.8) 42 37
12	L Wells	LS8-18	3696	(60.5) 2 5	82.6 10 860	(137.6) 21 575	65.5 9 464	(304.5) 12 874	110.8 2 764	(110.8) 14 108	(25.7) 39 46
12	J Hood	LS8	3696	(0.0) 47 0	86.1 8 930	(123.9) 40 512	57.4 27 384	(299.8) 23 840	94.9 20 550	(121.0) 11 125	51.1 5 355
14	G MacAndrew	Ventus 2T	3685	(45.7) 22 4	72.1 35 650	(204.3) 1 867	(143.0) 37 276	69.9 5 987	86.3 44 434	(131.1) 5 142	46.4 19 325
15	H Jones	Ventus 2C	3676	(64.5) 2 5	82.5 11 859	(125.8) 36 520	59.5 32 355	(300.0) 14 861	98.5 13 598	(109.6) 16 106	53.6 1 372
16	M Pike	Ventus 2CT	3586	(48.1) 22 4	76.3 25 735	(136.9) 23 572	65.7 8 466	(294.8) 18 845	96.6 16 573	(83.8) 34 74	45.1 22 317
16	F Davies	LS6c	3586	(45.4) 22 4	73.8 32 684	(153.7) 10 649	62.9 15 438	(308.2) 10 885	87.6 42 451	(122.2) 10 127	50.0 9 348
18	A Clarke	Ventus 2CT	3583	(56.2) 2 5	79.7 16 803	(150.6) 12 638	72.1 1 530	(282.4) 34 809	103.0 7 658	(77.2) 38 67	(40.9) 33 73
19	P Jeffery	LS8-18	3556	(64.2) 2 5	77.1 22 749	(163.8) 6 695	63.7 13 446	(318.2) 6 914	91.1 29 498	(90.6) 31 80	(99.1) 25 169
20	D Masson	LS6-18w	3508	(59.8) 2 5	88.0 2 970	(125.7) 36 520	48.9 33 300	(290.3) 27 832	105.0 5 685	(133.9) 2 147	(27.7) 38 49
21	W Aspland	LS8-18	3488	(54.7) 2 5	78.3 19 774	(142.3) 18 596	56.8 29 378	(295.0) 17 846	88.5 41 464	(102.8) 25 94	47.3 17 331
22	G Stingemore	LS8-18	3421	(42.5) 22 4	87.7 5 963	(130.8) 32 544	65.9 6 468	(278.3) 38 796	95.9 17 562	(135.3) 41 49	(19.8) 44 35
23	J Luxton	LS8	3353	(54.1) 22 4	77.6 20 760	(197.4) 2 848	58.3 25 393	(290.8) 26 833	88.4 47 378	(103.3) 24 95	(23.4) 40 42
24	M Young	LS8	3349	(48.3) 22 4	(280.3) 47 347	(139.5) 19 584	46.0 34 292	71.3 2 991	100.2 9 620	(131.8) 4 143	52.9 3 368
25	P Naegeli	Ventus 2CT	3334	(60.3) 2 5	80.2 14 812	(123.6) 39 514	55.8 31 369	(280.2) 36 802	91.1 29 498	(25.2) 44 22	44.4 23 312
26	D Campbell	ASW 27b	3328	(53.9) 22 4	77.4 21 755	(148.8) 14 626	56.8 29 378	(285.0) 31 816	102.3 8 648	(106.5) 21 101	(154.0) 47 0
27	A Hall	LS6c	3287	(72.6) 1 6	81.3 13 835	(126.4) 35 524	(145.4) 35 280	(317.3) 7 912	92.0 27 510	(133.2) 3 146	(41.8) 32 74
28	D Watt	Ventus 2A	3276	DNF 47 0	76.4 24 736	(143.6) 16 602	68.5 2 494	(280.4) 36 802	94.9 20 550	(29.6) 43 26	(37.3) 34 66
29	J McCoshim	LS8-18	3274	(44.3) 22 4	69.4 41 595	(133.9) 27 558	63.0 14 439	(267.5) 42 764	89.1 38 472	(108.1) 20 103	48.6 14 339
30	WJ Murray	Ventus 2CT	3262	(54.8) 2 5	78.8 18 784	(112.5) 43 463	(123.9) 46 235	70.4 4 989	99.6 11 613	(90.7) 32 79	(52.9) 30 94
31	L Tanner	LS8	3209	(53.6) 22 4	74.6 30 701	(129.1) 34 536	61.6 19 426	(292.2) 25 838	92.3 26 514	(72.6) 40 64	(75.8) 27 126
32	M Jefferyes	DG-600	3208	(49.2) 22 4	71.2 37 631	(136.4) 24 569	(140.5) 39 269	(293.0) 23 840	89.6 36 479	(85.0) 33 75	48.9 13 341
33	SR Ell	LS8-18	3160	(45.7) 22 4	(333.0) 45 396	(132.4) 28 551	62.3 17 433	(295.3) 15 847	91.8 28 508	(99.2) 26 88	47.6 16 333
34	J Langrick	LS8	3136	(55.4) 2 5	74.8 29 705	(132.5) 28 551	(130.0) 44 247	(259.4) 43 741	90.2 33 486	(79.2) 36 70	47.2 17 331
35	I Cook	Ventus 2CT	3114	(43.5) 22 4	76.2 26 733	(94.7) 46 397	57.6 26 386	(288.0) 28 826	90.5 32 490	(113.7) 13 115	(95.2) 26 163
36	JR Taylor	LS6-c	3064	(56.5) 2 5	66.2 43 527	(134.8) 26 562	58.8 24 398	(316.4) 8 909	92.5 24 517	(93.9) 30 83	(35.6) 37 63
37	K Draper	LS8-18	3055	(62.4) 2 5	60.6 44 418	(153.1) 11 646	(126.0) 45 238	(293.5) 22 841	89.8 35 481	(109.5) 16 106	45.6 21 320
38	G Corbett	Ventus 2CT	2978	(30.7) 42 3	76.7 23 742	(116.6) 42 478	(138.3) 41 265	(284.3) 33 814	87.3 43 447	(116.0) 12 117	(65.5) 28 112
39	S Redman	LS8	2965	(60.5) 2 5	69.2 42 591	(51.5) 47 238	60.1 22 411	(304.7) 11 875	97.3 15 582	(46.8) 42 41	(131.5) 24 222
40	R Bromwich	LS6c	2934	(40.0) 42 3	75.8 27 724	(123.7) 41 511	(135.9) 42 259	(267.9) 41 765	89.4 37 476	(107.1) 21 101	(53.6) 29 95
41	B Morris	LS8	2852	(19.8) 46 2	73.0 33 668	(132.4) 28 551	(140.4) 39 269	(294.6) 18 845	91.0 31 497	(0.0) 46 0	(11.3) 46 20
42	R Jones	Ventus 2CT	2566	(53.9) 22 4	71.5 36 637	(155.6) 8 661	(122.7) 47 233	(268.5) 40 768	(139.1) 48 130	(77.0) 38 67	(37.0) 34 66
43	A Emck	LS8	2553	(44.3) 22 4	72.5 34 658	(124.7) 38 516	61.9 18 428	(153.9) 45 423	84.9 45 415	(85.2) 37 69	(22.8) 41 40
44	C Alldis	LS8-18	2536	(49.0) 22 4	71.0 38 628	(103.6) 45 430	(111.7) 48 208	(247.1) 44 704	90.2 33 486	(0.0) 46 0	(42.6) 31 76
45	J Gorringe	LS6	2517	(53.2) 22 4	70.5 39 618	(137.6) 24 569	(145.3) 36 279	(284.7) 32 815	(85.9) 49 82	(96.4) 27 86	(35.9) 36 64
46	T Moulang	Ventus 2CT	2402	(56.8) 2 5	70.5 40 617	(108.6) 44 445	57.1 28 381	(132.0) 46 368	89.1 39 471	(96.1) 27 86	(16.3) 45 29
47	J Giddins	LS8	2297	(54.0) 22 4	(247.2) 48 316	(149.1) 13 628	59.4 23 404	(93.5) 48 277	95.8 18 561	(87.1) 35 71	(20.1) 43 36
48	C Lyttelton	ASW 27	1308	(43.1) 22 4	(319.6) 46 383	(20.5) 49 95	(132.3) 43 252	(47.5) 49 159	90.3 45 415	(0.0) 46 0	(0.0) 47 0
49	P Davis	Discus 2b	1124	(33.1) 42 3	(187.7) 49 248	(22.1) 48 102	(0.0) 49 0	(104.1) 47 303	88.8 40 468	(0.0) 46 0	(0.0) 47 0
50	M Dawson	Ventus 2A	0	DNF 47 0	DNF 50 0	DNF 50 0	DNF 49 0	DNF 50 0	DNF 50 0	DNF 46 0	DNF 47 0





Standards, Pocklington (June 22 – 30)

	Pilot	Glider	Total	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	P Harvey	LS8	4944	1 791	8 823	9 612	13 281	2 990	12 535	8 912
2	E Johnston	ASW 28	4795	6 724	13 764	8a 613	2 348	12 855	15 503	2 988
3	L Wells	LS8	4764	2 774	6 848	10a 611	16 249	8 881	8= 538	16 863
4	M Wells	LS8	4530	13 608	20= 711	4a 624	12 286	6 895	6 542	15 864
5	S Steinberg	ASW 28	4241	33 298	28 611	7 614	1 370	9 865	10= 536	3 947
6	R Johnson	ASW 28	4140	19 548	4 980	25= 426	30= 122	20 756	18 491	19 817
7	S Ell	LS8	4128	44 70	14 753	6 615	5 331	7 892	4 548	7 919
8	D Draper	LS8	4111	15 597	30 535	13 593	22 161	11 859	21 469	9 897
9	B Marsh	LS8	4102	21 541	18 729	21a 473	20 175	5 902	3 552	24 730
10	B Birlison	Discus CS	4060	8= 642	16 737	20 507	32 120	22 703	19 474	12 877
11	T Mountain	LS8	4022	16 582	7 847	24a 446	6 330	33 488	33 389	4 940
12	D Booth	LS8	4003	10 635	9 817	14 592	33 119	32 545	16 495	21 800
13	J Rebbeck	LS8	3997	3 755	11 778	19 570	14 264	17 786	43 23	18 821
14	J Glossop	Discus	3995	22 539	19 724	32a 377	9 304	14 826	38 370	17 855
15	P Brice	ASW 28	3909	36 234	12 766	23 454	19 203	15 824	10= 536	10 892
16	M Fox	Discus B	3805	5 732	2 991	25= 426	7a 323	21 749	27= 425	38 159
17	M Jordy	LS8	3775	26 401	36 415	18a 574	8a 317	19 760	2 561	22 747
18	N Clarke	LS8	3755	11 629	1 1000	32a 377	15 258	13 841	8= 538	39 112
19	H Jones	Discus 2a	3695	27 398	33a 504	3 632	41 72	24 695	14 507	11 887
20	O Ward	Discus 2b	3676	7 659	44 130	15a 590	26= 134	10 862	27= 425	13 876
21	L Hood	LS8	3631	4 737	23 687	44 0	10a 298	23 700	32 395	20 814
22	G Metcalfe	ASW 28	3608	43 83	29 563	1 670	11 291	27 665	30 406	5 930
23	P Shelton	LS8	3484	38 183	17 732	35a 371	43 58	18 780	17 494	14 866
24	B Thirkell	LS8	3452	29 383	3 984	11 596	3 336	35 456	20 473	36 224
25	J Tanner	LS8	3406	42 103	26= 621	22 467	17 248	31 616	26 429	6 922
26	L Rebbeck	LS8	3404	31 354	43 143	2 636	39 93	16 790	34 388	1 1000
27	J Arnold	Discus B	3328	12a 611	10 816	5 619	42 70	40 193	40a 340	26 679
28	P Baker	LS8	3324	14 602	20= 711	31 380	4 332	37 437	42 123	23 739
29	OJ Garrity	LS7	3290	23 514	25 631	36a 360	25 142	26 670	25 437	28 536
30	P Crabb	LS8	3254	30 367	5 916	25= 426	34 117	4 906	13a 522	DNF 0
31	J Luxton	LS8	3191	25 406	15 746	34 376	38 99	28 635	23 449	32 480
32	B Morris	LS8	3152	35 274	31 532	25= 426	30= 122	3 919	39 365	29 514
33	J McCoshim	LS8	2996	32 307	26= 621	16a 585	23= 146	36 447	29 424	33 466
34	R Cheetham	ASW 28	2944	8= 642	39 220	41 120	23= 146	1 1000	7 540	34 276
35	A Watson	LS7	2908	17 577	40= 219	25= 426	37 111	29 629	31 402	27 544
36	B Fox	ASW 24	2797	18 569	40= 219	30a 386	21 164	30 622	41 326	30 511
37	D Westwood	LS8	2774	34 281	22 710	12 594	40 86	39 213	37 380	31 510
38	M Mee	ASW 28	2601	24 408	24 647	38 336	28= 123	38 286	1 575	35 226
39	J Langrick	LS8	2375	28a 387	34 501	42 119	18 206	25 674	35 386	40 102
40	P Sheard	Discus 2a	2050	37 204	42 145	39 298	44 20	42 149	5 546	25 688
41	C Peters	Discus	1965	39 150	35 460	17a 582	28= 123	DNF 0	24 442	37 208
42	J Jeffries	Asw 24	1772	20 545	38a 258	37a 357	26= 134	34 478	DNF 0	DNF 0
43	J Hitchcock	LS4	1409	40 146	32 528	43 64	35 115	41 171	36 385	DNF 0
44	I Evans	Discus BT	1204	41 112	37 401	40 123	36 114	43= 0	22 454	DNF 0

For results of other BGA-rated nationals see: page 51 (Juniors); p44 (Open Class); and p49 (Overseas)

Club Class, Lasham (Aug 10 – Aug 18)

Pilot	Glider	Total	Day 1 11/8/2002	Day 2 12/8/2002	Day 3 13/8/2002	Day 4 15/8/2002	Day 5 16/8/2002	Day 6 17/8/2002	Day 7 18/8/2002
1 T Milner	Std Cirrus	4190	(132.8) 6 530	76.9 8 918	(119.0) 12 365	61.4 1 1000	88.2 4 620	(152.8) 1 741	(65.2) 3 16
2 A Jelden	Std Libelle	4041	(134.1) 2 543	76.0 7 920	(148.5) 7 470	59.5 2 994	79.6 19 519	(129.8) 22 587	(31.9) 6 8
3 B Spreckley	Std Cirrus	4011	(132.9) 5 531	80.5 1 1000	(107.0) 20 324	58.1 3 984	85.3 8 582	(130.2) 24 582	(30.3) 6 8
4 J Williams	Std Libelle	3953	(114.7) 26 450	72.8 17 846	46.2 2 628	(265.8) 8 847	84.7 7 587	(129.9) 21 588	(26.2) 9 7
5 D Draper	Std Cirrus	3902	(138.1) 9 523	77.4 6 930	44.3 3 624	(186.3) 37 578	85.3 9 581	(140.9) 11 658	(32.3) 6 8
6 L Rebbeck	LS4	3863	(122.4) 27 449	83.9 3 945	(64.9) 32 199	59.5 4 971	96.7 1 646	(143.4) 18 618	38.7 1 35
7 K Tipple	Astir III	3834	(135.2) 1 548	76.8 5 939	(108.0) 17 332	(223.2) 25 706	84.3 9 581	(149.3) 3 728	(0.0) 39 0
8 G Dale	ASW 19	3760	(124.0) 18 472	74.4 20 801	(185.0) 4 538	(241.4) 18 731	81.8 26 499	(149.7) 7 688	(132.8) 2 31
9 G MacDonald	Std Cirrus	3746	(109.9) 33 420	79.2 2 971	(162.4) 5 506	(248.8) 10 781	77.5 31 479	(130.2) 24 582	(27.8) 9 7
10 E Sparrow	Pegasus	3680	(133.1) 25 451	77.0 18 818	50.1 1 629	(216.4) 33 638	82.4 29 484	(147.3) 14 654	(26.9) 17 6
11 C Watt	Std Cirrus	3667	(133.4) 4 533	74.0 16 853	(56.6) 34 191	55.0 6 969	73.1 39 422	(146.0) 6 693	(24.9) 17 6
12 J Tanner	ASW 19	3631	(138.0) 3 535	78.2 11 884	(65.4) 31 208	(228.6) 28 691	87.7 11 574	(156.2) 2 732	(30.2) 9 7
13 K Barker	ASW 19	3630	(134.5) 14 499	72.9 23 768	(122.7) 13 363	(243.9) 15 739	90.6 5 610	(144.0) 16 645	(23.6) 17 6
14 A Nunn	ASW 19a	3599	(126.7) 16 484	77.4 15 867	(56.7) 38 184	57.3 5 970	89.8 6 599	(120.2) 37 492	(10.5) 37 3
15 S Shah	Astir CS/DG-100	3556	(124.1) 28 441	76.3 10 906	(101.6) 22 306	(235.6) 16 738	81.1 17 526	(137.2) 17 632	(25.7) 9 7
16 E Smith	LS4	3545	(125.0) 23 460	76.1 22 779	(119.8) 16 341	56.6 7 958	84.8 24 502	(123.8) 36 496	(36.1) 5 9
17 R Fox	LS4	3497	(134.5) 13 502	77.8 19 815	(102.9) 23 288	(263.6) 11 775	87.4 14 533	(136.6) 26 577	(31.4) 9 7
18 D Le Roux	Std Cirrus	3428	(131.5) 8 524	78.0 3 945	(102.1) 24 278	(103.5) 42 332	89.0 2 629	(148.8) 4 713	(26.3) 9 7
19 C Emson	Std Cirrus	3369	(118.0) 22 461	75.3 12 883	(70.5) 27 228	(208.0) 31 648	84.1 12 566	(130.4) 23 583	(0.0) 39 0
20 N Parry	LS4	3353	(98.5) 44 337	67.5 36 598	(179.4) 6 504	(256.1) 14 752	84.8 25 501	(148.8) 13 655	(26.1) 17 6
21 G Spreckley	ASW19	3351	(125.5) 17 479	78.2 12 883	(55.0) 41 178	(236.4) 23 716	84.5 14 533	(130.0) 29 557	(20.9) 32 5
22 DM Byass	Pegase 101A	3347	(134.5) 11 507	81.2 9 907	(48.6) 44 153	(238.0) 26 705	85.2 20 518	(131.3) 31 551	(25.7) 17 6
23 A Garrity	LS4	3331	(119.4) 29 436	74.9 24 754	(144.8) 9 419	(259.5) 12 762	85.9 22 515	(115.7) 42 445	DNF 39 0
24 G Goudie	LS4a	3327	(127.2) 19 470	80.4 14 870	(58.7) 39 183	(229.0) 29 669	80.7 36 451	(152.5) 9 678	(23.8) 17 6
25 A Eckton	ASW 19	3315	(123.4) 19 470	72.3 24 754	(61.6) 32 199	(233.8) 24 707	83.8 18 525	(144.6) 14 654	(25.8) 17 6
26 GN Thomas	SHK-1	3234	(132.8) 7 525	58.6 42 519	(124.5) 11 388	(265.4) 9 846	74.9 35 457	(115.9) 38 488	(40.6) 4 11
27 M Cook	ASW 19	3213	(124.9) 35 412	70.9 29 723	(70.8) 29 220	(237.7) 19 720	77.9 38 450	(148.9) 8 683	(19.4) 32 5
28 M Jordy	Pegasus	3208	(103.9) 42 367	67.5 34 615	(172.6) 8 440	(236.9) 27 701	93.7 3 623	(117.5) 40 462	DNF 39 0
29 M Pettican	ASW 19a	3197	(111.7) 34 415	68.5 31 672	(107.0) 21 312	(242.5) 17 735	80.3 30 480	(133.0) 26 577	(25.3) 17 6
30 J Crowhurst	ASW 19	3179	(133.1) 10 513	65.6 35 608	(74.3) 27 228	(237.9) 19 720	85.7 13 548	(129.8) 30 555	(27.8) 9 7
31 I Evans	LS4aWL	3079	(126.8) 23 460	73.6 30 710	(57.2) 42 176	(229.1) 30 662	82.1 34 458	(143.6) 19 613	(0.0) 39 0
32 R Hart	Std Cirrus	3020	(133.1) 15 486	69.1 40 572	(114.1) 15 348	(228.9) 22 717	(180.0) 45 213	(143.8) 9 678	(25.4) 17 6
33 R Johnson	DG-101	2962	(101.4) 40 375	69.3 26 746	(114.4) 14 349	(240.8) 13 755	(134.9) 46 28	(147.4) 5 704	(20.0) 32 5
34 M Tomlinson	LS4	2914	(118.7) 31 433	67.1 38 590	(94.1) 25 263	(207.7) 35 605	82.5 32 473	(131.2) 32 543	(31.3) 9 7
35 D Wardrop	DG-300	2674	(0.0) 47 0	70.4 32 660	(61.5) 34 191	(220.9) 32 645	86.0 21 516	(149.0) 12 656	(27.3) 17 6
36 J Pack	Astir CS	2633	(102.4) 38 385	(230.5) 45 365	(108.0) 17 332	(166.8) 40 516	78.5 23 504	(121.1) 33 525	(23.0) 17 6
37 P Healy	ASW 19	2627	(127.9) 32 426	65.0 37 594	(57.6) 36 187	(237.8) 19 720	(198.4) 44 233	(115.7) 41 461	(22.9) 17 6
38 M Sheahan	Std Cirrus	2594	(102.1) 39 379	69.0 27 739	(62.3) 30 209	(94.0) 44 308	70.3 41 385	(129.1) 28 574	DNF 39 0
39 NP Wedi	LS4	2562	(123.5) 30 434	69.2 33 635	(114.7) 19 325	(218.5) 33 638	87.1 16 530	DNF 45 0	DNF 39 0
40 M Wilson	Std Libelle	2554	(106.7) 36 408	54.3 43 420	(30.0) 47 103	(178.5) 39 559	75.2 33 460	(131.8) 20 602	(9.4) 38 2
41 M Lee	LS4	2490	(125.8) 21 464	76.3 21 783	(42.6) 46 133	(207.9) 35 605	83.6 28 486	(4.7) 44 13	(25.1) 17 6
42 J Hitchcock	LS4	2327	(0.0) 47 0	73.6 28 726	(140.2) 10 404	(89.7) 45 276	78.3 39 422	(124.3) 35 499	(0.0) 39 0
43 D Copeland	Std Cirrus	2217	(104.8) 37 393	53.6 44 390	(54.8) 37 185	(103.4) 43 331	75.8 36 451	(120.3) 39 463	(17.1) 36 4
44 A Walford	PIK 20D	1923	(51.0) 45 164	69.4 41 525	(55.8) 43 174	(194.1) 38 563	83.9 27 491	(0.0) 45 0	(23.3) 17 6
45 J Ballard	LS4	1587	(6.8) 46 22	(225.8) 47 249	(57.3) 40 179	(86.0) 46 267	72.4 42 350	(126.7) 34 515	(19.7) 32 5
46 M Edmonds	DG-300	1471	(102.1) 43 355	(173.7) 46 267	(44.9) 45 140	(151.0) 41 423	57.6 43 253	(9.7) 43 27	(24.8) 17 6
47 DR Payne	Pegasus	1341	(134.0) 12 506	66.0 39 581	(88.9) 26 254	DNF 47 0	DNF 47 0	DNF 45 0	DNF 39 0
48 D Piggott	Grob 102	372	(108.2) 41 372	DNF 48 0	DNF 48 0	DNF 47 0	DNF 47 0	DNF 45 0	DNF 39 0

Turbo Competition, Bidford (Jun 15–23)

Position	Pilot	Glider	Points
1	D Findon	Nimbus 4DT	4130
2	R Witter	Ventus 2CT	3974
3	I Cook	Ventus 2CT	3782
4	A MacGregor	Discus BT	3757
5	W Murray	Ventus 2CT	3608
6	R Jones S Marriott	Nimbus 4DM	3571
7	M Costin	Ventus 2CT	3512
8	W Inglis	Ventus CT	3500
9	S Twiss	DG-400	3490
10	J Wand	Ash 26E	3429
11	J Young P Purdie	Nimbus 3DT	3001
12	F Jeynes	Ventus 2CT	2904
13	D Innes	Nimbus 4T	2742
14	M Moulang	Ventus 2CT	2543
15	T Caswell	Nimbus 3DT	2392
16	M Pope	Ventus 2CT	2223
17	D Piggott & R Starmer	Duo Discus T	2149
18	JF Goudie	Discus BT	1963
19	R Bromwich	DG-505MB	1773
20	J Denne	Discus BT	1697
21	K Hook	DG-400	1584
22	M Day	Ventus CT	862
23	E Coles	DG-800B	15

Aerobatic Nationals, Saltby (May 30–Jun 2)

Beginners	Pilot	Glider	Overall %
1	Carl Sorace	K-21	91.409
2	Mark Erlund	K-21	90.851
3	Adrian Hobbs	K-21	89.317
4	Mike Collett	K-13	87.213
5	Caroline Bois	K-21	83.069
6	Roger Grimes	K-21	79.357
Sports			
1	Simon Walker	Pilatus B4	72.161
2	Mazen Makari	Pilatus B4	65.832
3	Donald Gosden	Fox	56.737
4	Nikki Mills		53.496
5	S Otterburn	Pilatus B	53.24
6	Peter Miles	K-21	52.745
7	Richard Chapman	K-21	47.025
Intermediate			
1	Graham Saw	Lunak	79.765
2	Alex Yeates	Fox	75.406
3	John Gilbert	Pilatus B4	74.425
4	Andy Cunningham	Fox	67.221
5	Brendan O'Brien	Fox	62.325
Unlimited			
1	Guy Westgate	Fox	81.289
2	Jamie Allen	Swift S-1	80.78
3	Paul Conran	Swift	73.462
4	Chris Cain		54.97
5	Andy Cunningham	Fox	37.601

Regionals, Sutton Bank (Jul 27–Aug 4)

A Class	Pilot	Glider	Points
1	M Fox	Discus	2133
2	B Fox	LS4	1996
3	R Kalin	Discus	1846
4	P Hurd	LS6	1843
5	Davidson/Mckay	Duo Discus	1815
6	R Maskell	Discus	1758
7	M Carruthers	LS7 wl	1664
8	M Judkins	ASW 20	1572
9	R Bromwich	DG-505MB	1465
10	J Carter	Discus	1419
11	R Brisbourne	Kestrel 19	1412
12	N Heriz-Smith	Ventus	1344
13	J May	Discus	1285
14	J Fack	Discus	1181
15	J Russell	LS8	1091
16	B Payton	LS8	921
B Class	**Pilot**	**Glider**	**Points**
1	S Barker	Std Libelle	2134
2	K Draper	Std Cirrus	1996
3	P Whitehead	ASW 19	1975
4	S St Pierre	DG-200	1880
5	E Sparrow	Pegasus	1868
6	P O'Donald	LS7	1751
7	B Stott	SHK-1	1614
8	J Ewence	LS7	1523
9	Beardsley/Smith	LS4	1517
10	C Teagle	DG-500	1370
11	A Sheldon	K-21	1156
12	M Sheahan	Std Cirrus	1155
13	G Wearing	Cirrus 17.7	1130
14	J Taylor	K-6E	1045
15	B Griffin	DG-100	957
16	M Fairman	ASW 19	730
17	L Rayment	DG-200	697
18	C Harder	Pegasus	680
19	A Jenkins	Cirrus 17.7	551
20	M Whyment	ASW 19	171

Inter-Services, RAF Cosford (Aug 3–Aug 11)

Open Class	Pilot	Glider	Points
1	T Mitchell	Nimbus 3	1645
2	S Adlard	Duo Discus	1630
3	P Sturley A Hyslop	LS6	1501
4	L Hornsey	ASW 20	1500
5	P Stafford Allen	Ventus b	1498
6	P Mclean	Ventus 2CT	1461
7	J Arnold	Discus	1415
8	JF Fitzgerald	Ventus CT	1406
9	D Ley	Discus	1402
10	M Morley	ASW 27	1375
11	C Peters	Discus B	1358
12	ND Smith	Discus CS	1306
13	C Heames	Duo Discus	1284
14	AR Mountain	Duo Discus	1221
15	C Gilbert	Discus	1167
16	K Walton	Nimbus 2C	1115
17	S Churchill	Discus	1095
18	TM World	ASW 27	1064
19	J Lee	Discus	1020
20	I Smith	ASW 27	915
21	A Clarke	DG500	900
22	T Moyes	LS7wl	872
23	PR Barley	ASW 27b	853
24	J Duncan	Discus	844
25	T Cook	Janus Ce	762
26	B Mackenzie MV Boyden	Janus Ce	750
27	MP Osborn	Ventus CT	748
28	R Witter	Duo Discus	699
29	N Aram	Discus CS	667
30	T Rogers	Discus	665
31	PM Gallagher	Discus	661
32	R Roberts	Discus	656
33	P Kingwill	Discus	430
34	SW Naylor	LS7wl	397
Sport Class			
1	D Smith	LS7	1559
2	A Clark	LS4A	1557
3	G Davidson	Astir CS	1428
4	A Farr	Pegasus	1339
5	D Bullock	DG-505	1105
6	RW Croker	Pegasus	1104
7	TRF Gaunt et al	K- 21	1102
8	D Smith	Astir CS77	1070
9	JWL Clarke	Astir CS	1043
10	J Wright	Pegasus	1010
11	JI May (OUGC)	K- 21	993
12	M Gazzard	Astir CS	945
13	T Head	Pegase	802
14	BH Penfold	Junior	771
15	D Maddocks	Astir CS	683
16	T Davies	ASW 15b	666
17	WK Stroud	LS4	652
18	JM Staley	LS4	614
19	JD Peck	DG-100	514
20	M Pickersgill	Astir CS	498
21	T Marwarha	LS 4	356
22	SJ Mynott	Grob Acro	150

Midland Regionals, Hus Bos (Jul 27–Aug 4)

Position	Pilot	Glider	Points
1	Graham Drury	LS8	1978
2	Brian Marsh	LS8	1941
3	David Booth	LS8	1869
4	Paul Shelton	LS8	1803
5	Tony Pozerskis	Lak 17 (18)	1713
6	Al Mcnamara	ASW 24 (w)	1655
7	Chris Emson	DG-505	1642
8	Bill Inglis	Ventus C 17	1631
9	Mike Armstrong et al	DG-500 (20)	1616
10	John & Tess Whiting	Discus (w)	1615
11	Toby Wright	Discus	1613
12	Mike Jordy Roy Spreckley	Duo Discus	1513
13	Mark Davis	Discus (w)	1511
14	Richard Johnson	ASW 28	1507
15	Rolf Tietema	Std Libelle	1490
16=	Howard Stone	LS6 18m	1437
16=	Mike Costin	Ventus 2c (18)	1437
18	Graham Hibberd	LS7	1417
19	Chris Curtis	ASW 17	1416
20	Gordon Craig	LS4	1408
21	Ron Bridges	LS8-18	1390
22	Dave Ruttle	Janus A	1346
23	P & R Pozerskis	ASH 25	1342
24	Gerald Bass	Pegasus	1330
25	John Popika Malcolm Guard	LS7 WI	1316
26	Graham Thomas	LS7	1300
27	Mike Tomlinson	LS4	1268
28	Stephen Goss	LS3	1258
29	Mark Jerman	ASW 27	1232
30	Andy Holmes	Discus	1225
31	Richard Large	LS8	1221
32	Bob Nicholls	Ventus 2c (18)	1215
33	Stephen Bradford	Pegasus	1187
34	Nigel Maxey	DG-300	1186
35	Tony Limb	LS8-18	1162
36	Malcolm Allan	LS8-18	1144
37	Chris Davison	LS3	1140
38	Basil Fairston	ASW 27	1082
39	Gavin Summerell Adam Clarke	Discus (w)	1065
40	Derek Westwood	LS8	1063
41	Peter Whitehouse	Pik20	1038
42=	Phil Tiller	Discus	982
42=	Nan Worrell	Discus (w)	982
44	Ron Davidson	SB-5	942
45	Ken Payne	LS7	903
46	Mik Garwood	Discus	853
47	Jim Hathaway	Glasflugel 3	841
48	Keith Sleigh	Pegasus	828
49	David Crowson	LS7 WI	802
50	Glynn Macarthur	Vega	714
51	Mazen Makari	ASW 24 (w)	712
52	Paul Stanley	Duo Discus	706
53	Eddie Wright	ASW 20	639
54	Stefan Bort	LS8-18	585
55	Andrew Preston	ASW 19	567
56	Peter Andrews	Std Libelle	441
57	Brian Mcdonnell	Discus	392

For the results of BGA-rated nationals see the previous pages (46-7), p51 (Juniors); p44 (Open Class) and opposite (Overseas Nationals)

Mountain Soaring, Aboyne (Sep 2–8)

	Pilot	Glider	Points
1	Pete Gray	DG-202	2557
2	Roy Wilson	DG-600	2362
3	John Williams	LS7	1424
4	Mark Jerman	ASW 27	1386
5	Steve Thompson	DG-200	1210
6	James Davidson	LS7	1081
7	Dickie Feakes	ASH 25E	1029
8	Sam St. Pierre	DG-200	847
9	Al Eddie	LS8	831
10	Duncan Mackay	Duo Discus	722
11	Sue Heard	Discus	658
12	Andrew Eddie	ASW 19b	480
13	Alex Maitland	SF-34	59

Regionals, Lasham (Aug 10–18)

A Class	Pilot	Glider	Points
1	R Pentecost H Kindell	Duo Discus	2983
2	E Smallbone	LS6a	2836
3	W Inglis	Ventus CT	2671
4	P Kite A Eckton	Nimbus 3	2667
5	J Simmonds	Ventus	2541
6	T Moulang	Ventus 2CT	2446
7	S Bateman	ASW 20c	2302
8	S Jobar	Nimbus 2b	2284
9	P Paterson	LS8	2162
10	A Emck	Discus	2119
11	P Pengilly J Warren	Nimbus 3DT	2118
12	D Innes	Nimbus 4T	2058
13	T Parker	ASW 22 BL	2045
14	A Hall	ASW 20	2025
15	J&S Nash	Mosquito B	2004
16	K Draper	LS8	1930
17	D Edwards	ASW 17	1742
18	G Read	ASW 27	1604
19	J Bailey	ASW 20	1597
20	J Russell	LS8	1457
21	J Lyell	Stemme S10	1318
22	C Hunt C Gibson	ASW 20c	1054
23	M Brooks	LS6c	903
24	P Hamblin	Discus	518

Regionals, Nympsfield (Jul 27–Aug 4)

Position	Pilot	Glider	Points
1	L Wells	LS8	1354
2	L Rebbeck	LS8	1343
3	A Davis/C Rollings	Duo Discus	1219
4	A Jeldon	Std Libelle	1217
5	R Nunn	Std Cirrus	1192
6	J Meyer	ASW 20F	1117
7	N Wall	Discus b	1106
8	M Mee	ASW 28	1091
9	M Parker	ASW 20	1053
10	S Morecraft	ASW 19B	1005
11	T Stuart	ASW 27B	989
12	A Parker	Ventus 2C-18	981
13	J Crowhurst	ASW 19B	972
14	G Morris	ASW 20	969
15	R Andrewartha	Std Cirrus	953
16	S&J Nash	Mosquito B	932
17	G Macfadyen	ASW 20F	892
18	A Perkins	Open Cirrus	825
19	G Macdonald	Discus	803
20	F Jeynes	Ventus 2CT	782
21	W Harris	ASW 20F	773
22	S Crozier	Std Cirrus	769
23	L Hood	LS 8-15	734
24	J Wand	ASH 26E(W)	715
25	R Francis	LS4	703
26	A Gillson	ASW 20L	699
27	J Moore	Pegasus	666
28	I Craigie/A Langton	Astir CS	617
29	S Armitage	Discus CS W	607
30	A Moss	LS6 B	464
31	A Wells	LS8	448
32	SJ Ferguson	Std Jantar	366
33	R Rebbeck	LS4	363
34	N Irving	Discus w	276
35	G Nicholls	LS3 17	0

Regionals, Tibenham (Aug 24–Sep 1)

	Pilot	Glider	Points
1	J Wilton	ASW 20C	3407
2	B Grieve	LS 8	3325
3	A Watson	LS 7	2993
4	P Stafford Allen	Ventus B	2979
5	D Heslop	Ventus 2CM	2886
6	R Hart	Discus B	2689
7	A Hill	LS6CW	2682
8	M Benson	Discus B	2576
9	G Thomas	SHK 1	2547
10	N Gough/I Mountain	LS7WL	2508
11	J Gilbert	LS3A	2411
12	J&S Nash	Mosquito B	2220
13	P Ryland	Kestrel	2070
14	J Crowhurst	ASW 19B	2000
15	M White	Nimbus 2	1950
16	M Roberts	ASW 19B	1887
17	N Clowes	ASW 20C	1843
18	J & T Whiting	Discus BWL	1739
19	A Smith	Std Cirrus	1734
20	S Bradford	Pegase	1707
21	P Foster	ASW 19B	1562
22	D Dyer/R Griffin	ASW 15	1525

B Class	Pilot	Glider	Points
1	D Pitman	ASW24 WL	2645
2	D Draper	Std Cirrus	2525
3	A Garrity	LS7 WL	2425
4	J Hitchcock	LS4	2282
5	D Wardrop	Discus	2136
6	D Copeland	Std Cirrus	2065
7	N Riggott, M Evans & D Powell	DG-101G	2023
8	C Thomas	Pegasus	1936
9	J Pack	Astir CS	1921
10	D Scholey	Discus	1910
11	E Healy	ASW 19	1882
12	M Sheahan	Std Cirrus	1852
13	P Keutgens	ASW 19 Club	1810
14	J Wright	Discus	1802
15	A Laylee	ASW 24w	1761
16	N Worrell G Bird	Discus a	1746
17	C Luton	LS3	1706
18	R Jarvis	ASW 20f	1546
19	J Ferguson	LS7 WL	1535
20	M Davenport G Coppin	Discus Turbo	1392
21	M Stevens W Palmer	DG-300	1146
22	D Williams	ASW 19	1130
23	R Vaughan	Astir CS	1093
24	M Edmonds	DG-300	948
25	D Bowtell	Std Libelle	928
26	C Lewis	Astir CS77	904

Regionals, Dunstable (Aug 17–25)

Red	Pilot	Glider	Points
1	W Kay	LS8-18	3001
2	S Lynn	ASW 27	2990
3	T Stuart	ASW 27	2954
4	N Tillett	ASW 27	2940
5	J Gatfield/Scott	ASW 27	2841
6	R King	ASW 27	2667
7	M Newland Smith	Discus	2648
8	P Rackham	LS7	2626
9	R Brimfield	ASW 24	2564
10	J Reed	Discus	2479
11	D Lingafelter/Wimmer	Discus	2353
12	G Payne	ASW 27	2221
13	I Reekie	LS8-18	2139
14	F Russell	LS6-18	2133
15	M Jerman	ASW 27	2046
16	M Stringer	ASW 20cl	1962
17	J Knight/Ferguson	Duo Discus	1947
18	R Davidson	LS8	1861
19	W Head	ASW 27	1756
20	W Craig	Ventus 15	1722
21	R Robertson	LS6	1712
22	S Edwards	Ventus 17.6	1682
23	R Rebbeck	LS8	1669

Blue	Pilot	Glider	Points
1	M Birch	Libelle 201	1925
2	N Wall	Discus	1740
3	A Davis/Roch	ASW 24	1710
4	A Harrison/Hodge	DG-505	1607
5	A Brown	Vega	1539
6	G Beardsley/Smith	LS4	1493
7	A Cornelius/Garfield	K-21	1308
8	A Hodge/Harrison	ASW 19	1199
9	J Foster/Bayford	ASW 20	1135
10	EA Coles	K-23	1123
11	M Dalton	Libelle 201	1087
12	M Hurd/Woollard	DG-505	1058
13	D Miller	LS7wl	1012
14	M Makin	ASW 20	990
15	A Mckillen	ASW 20	932
16	P Whipp	Discus	895
17	M Fairman	ASW 19	843
18	R Winter/Lodge	Std Cirrus	730
19	J Slater	Discus	704
20	JJ Jeffries	K-21	619
21	T Snoddy	Std Cirrus	489
22	R Brecknock	Mosquito	169
23	V Grayson	Libelle 201	23
24	J Melvin	Discus	13
25	R Puritz/Hicks	LS4	0

Booker Regionals, Booker (Aug 24–Sep 1)

A Class

	Pilot	Glider	Points
1	B Inglis	Ventus C	1914
2	P Brice	ASW22 24	1869
3	J McCoshim	LS8	1828
4	B Cooper	LS6	1735
5	John White	Ventus 15	1729
6	A Perley	LS8	1718
7	W Parker	ASW 20c	1379
8	R Starey	LS8	1061
9	M Hardwick	LS6c	1010
10	T Hughes	LS6	745
11	A Green	LS8	541
12	G Lyons	LS6-18	533
13	B Flewett	Discus 2a	251
14	P Patterson	LS8	169

B Class

	Pilot	Glider	Points
1	B Forrest	LS7	1883
2	A Laylee	ASW 24	1833
3	D Hilton	LS7-wl	1719
4	J White	Discus B	1558
5	A Birkbeck	Discus B	1536
6	S Jenkins	LS4	1504
7	B Sinden	Pegasus	1478
8	N Goudie	LS4	1365
9	J Waterfall	ASW 20a	1344
10	P Copeland	Pegasus	1034
11	G Laurence	LS1c	863
12	G Birkett	DG-100	431
13	D Staff	LS4	397
14	H Nithiandarajah	Discus	125
15	J Watson	ASW 15	57

Senasa Gliding Challenge/Overseas Nationals, Ocaña (May 13–24)

Pilot	Glider	Total	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9
1 Stephen Crabb	LS8	7598	866 5	979 4	312 20	1000 1	842 7	946 6	989 2	911 3	753 9
2 Martyn Wells	LS8	7541	984 1	1000 1	326 12=	873 11	954 2=	977 2	811 12	800 6	816
3 Leigh Wells	LS8	7479	857 6	983 2	32811	872 12	954 2=	974 3=	80014=	901 4	810 4
4 G Dale	ASW 24	7476	875 4a	816 14a	385 2	945 7	1000 1	1000 1	806 13	805 5	844 1
5 Paul Crabb	LS8	7457	853 7	852 11	317 18	993 2	843 6	907 11	1000 1	922 2	770 8
6 Henry Rebbeck	LS8	7113	755 14	949 6	297 22	954 5	950 5	968 5	694 20	796 7	750 11
7 Peter Baker	LS8	7080	975 2	811 15	440 1	826 18	820 8	937 7	949 4	716 22	606 24
8 Jay Rebbeck	ASW 28	6879	713 15=	981 3	366 4	912 8	951 4	974 3=	296 34	938 1	748 12=
9 Richard Hood	LS8	6389	132 43	751 19	372 3	894 9	808 12	917 10	908 6	792 9=	815 3
10 Phil Jeffery	LS8	6348	828 10	898 9	278 26	771 28	726 25	871 13	667 22	718 21	591 26
11 Graham Smith	LS8	6286	775 13	877 10	279 25	946 6	762 19	691 26	721 18	760 15	475 36
12 Ray Payne	LS8	6247	841 8	749 20	341 8	657 33	684 29	818 18a	672 21	737 18	748 12=
13 Dolf Pretorius	LS8	6140	784 11	667 23	339 9	300 46	738 23	936 8	964 3	635 30	777 6
14 Roel Kuil	DG-800	6135	713 15=	771 16	313 19	766 29	642 34	671 29	856 10	767 14	636 20
15 Ronald Rooij	Duo Discus	6132	780 12	617 28	261 29	819 19	751 21	632 33=	770 16	727 20	775 7
16 Iain Evans	LS4 WI	6128	633 22	606 29	364 5	777 27	783 14	674 27	886 7	654 27	751 10
17 Peter Coward	LS8	5953	124 45	935 7=	356 6	972 4	703 28	850 14	720 19	679 25	614 22
18 Mark Wering	Nimbus 3	5813	611 24	764 17	355 7	780 26	736 24	637 32	800 14=	623 32	507 31
19 Gill Spreckley	LS8	5801	167 38	725 21	219 34	880 10	769 16	809 19	739 17a	789 12	704 15
20 Rose Johnson	LS4	5744	485 31	657 25a	287 24	783 25	652 31	751 22	882 8	692 24	555 29
21 Joost Clemens	Discus	5642	550 30a	840 12	226 32=	866 13	350 41	805 20	620 25	774 13	611 23
22 Paul Shelton	Duo Discus	5641	155 40	757 18	324 15	807 20=	811 10	845 15	532 27	699 23	711 14
23 Gary Stingemore	LS8	5573	149 41	935 7=	323 16=	299 47	596 36	904 12	938 5	790 11	639 18
24 Stephen Olender	Ventus 2c	5261	605 25	716 22	326 12=	383 44	610 35	639 31	844 11	647 28=	491 34
25 Paulo Rosado	Lak17-18	5248	705 17	522 35	257 30	526 35	781 15	632 33=	664 23	513 37	648 17
26 Mike Mee	ASW 28	5063	589 27=	549 34	323 16=	460 38	490 39	768 21	600 26	647 28=	637 19
27 Gavin Goudie	LS4	4908	671 18	662 24	62 40=	864 14=	753 20	672 28	139 40	455 38	630 21
28 Peter Batenburg	Discus WI	4858	635 21	45 47	226 32=	804 22	720 26	737 24	300 33	795 8	596 25
29 McCoshim/Luxton	LS8	4808	667 19	564 32	62 40=	428 42	789 13	625 35a	331 32	756 16	586 28
30 Richard Johnson	ASW 28	4805	837 9	488 39	0 DNF	864 14=	763 18	742 23	0 DNF	625 31	486 35
31 Bart Renckens	Ventus 15	4804	117 47	285 44	186 36	845 17	816 9	830 17	210 39	730 19	785 5
32 Max Dolfin	DG-800	4722	589 27=	645 27	109 37	419 43	743 22	710 25	467 28	453 39	587 27
33 Watson/mountain	LS7 WI	4661	639 20	493 37	211 35	465 37	590 37	493 40	860 9	219 43	691 16
34 Alan Binks	Pegasus	4591	382 32	486 40	325 14	480 36	809 11	662 30	375 30a	566 34	506 32
35 Blackmore/Kangurs	ASH 25	4290	616 23	380 42a	94 39	807 20=	572 38	536 38	224 36=	519 36	542 30
36 Chris Lyttleton	ASW 27	4202	130 44	497 36	43 45	785 24	646 33a	834 16	46 41	792 9=	429 39
37 Harry Wondergem	Ventus 2c	4060	328 34	579 31	267 28	846 16	681 30	487 41	0 DNF	674 26	198 43
38 Ryan Priest	Discus WI	3887	165 39	825 13	336 10	990 3	647 32	924 9	0 DNF	0 DNF	0 DNF
39 Johns/Chant	ASH 25b	3779	919 3a	592 30	289 23	673 32	302 42	253 45a	0 42=	258 42a	493 33
40 Tony Pozerskis	Lak17-15	3699	593 26	489 38a	268 27	791 23	765 17	569 37	224 36=	0 DNF	0 DNF
41 Morris/Warren	Nimbus 3D	3669	559 29	341 43	233 31	725 30=	260 43	469 42	356 31	292 41a	434 38
42 Adrian Emck	LS8	3430	190 37	656 26	48 44	431 41	719 27	0 DNF	452 29	590 33	344 41
43 John Glossop	Discus	3390	196 36	562 33a	100 38	439 40	176 45	578 36	224 36=	743 17	372 40
44 Reb Rebbeck	LS4	3311	145 42	99 46	62 40=	551 34	462 40	378 43	653 24	525 35	436 37
45 Patrick Onn	LS8	2388	122 46	250 45	49 43	441 39	243 44	356 44	263 35	342 40	322 42
46 Tim Scott	ASW 27	1651	378 33	973 5	300 21	0 DNF	0 DNF	0 DNF	0 DNF	0 DNF	0 DNF
47 Dave Ruttle	Janus B	1617	322 35	452 41	0 46=	347 45	0 DNF	496 39	0 DNF	0 DNF	0 DNF



Seriously fast

above and opposite: the ***White Planes*** picture co.

Andy Holmes was one of five Mynd pilots who went to the Juniors at Hus Bos...

AS THE fastest competition I've ever been involved in, the 2002 Junior Championships at The Soaring Centre was definitely another good advert for the UK's growing junior gliding scene. Despite a considerable amount of banter beforehand, mostly on the subject of Christmas shopping (the Juniors was in September this year) we had an excellent week. The weather gods were certainly game for a laugh. Every day was flyable, we had six comp days and 100km/h was possible on four of them.

At my home club, Midland GC at the Long Mynd, the juniors scene has also been developing rapidly. Between Aston Down 2001 and Hus Bos 2002 we have progressed from one competitor to five and there are more to come in the future. Our small but growing group of young pilots seems to be re-energising the enthusiasm of club members whatever their age. The Juniors trademarks of improving our flying whilst also concentrating on enjoying ourselves seem to be rubbing off on everyone else.

After competing in the 2001 Juniors, one of my aims was to help as many of my Mynd mates as possible to fly the 2002 comp. Discussions of which gliders we could blag, who could crew and how we could get the right kind of practice kept our enthusiasm up over the winter, in between some ridge and wave flying and the odd beer. Over the spring and summer we became involved in Rockpolishers – our local Inter-club League. The Mynd team included at least one junior pilot on all the flyable days. All the junior pilots won the days on which they flew. This helped the Mynd reach the inter-club league final.

Our flying didn't interrupt our glider blagging. After a bit of juggling we were all sorted. The only club gliders available went to Ian Mac (Discus 493) and Sarah Platt (K-23 EVV). I was awarded the BGA Discus, 19. (Sorry for the days I planked, guys! I guess there is still much to learn.) John Roberts scored an insurance share in BGA coach/Mynd mate Simon Adlard's LS4, IV. Joining the Mynd in winter, Michael Pettican shared a Faulkes Flying Foundation DG-505 with Colin Childs from the BGA office.

We had no idea of the quality of weather to come. The first day overcame fears that September might not bring good racing conditions. With a task of just over 300km, the top 20 averaged more than 100km/h. This started a theme which continued all week – speed. To put these numbers into perspective, one of my targets for the week was to crack the 100km/h barrier. I came close: on day 5, I did 99.4km/h. In isolation, I would like to think that's quite fast, but in this company it put me equal 24th! Winner Ed Garner did 114km/h; the top 21 averaged over 100. This was a seriously fast comp!



Mike Fox

Two-seater P1s (front) and P2s (rear) at the Juniors

As well as being the fastest comp I've ever been to, it was also the best organised. There are many people behind the scenes at comps, so thanks to all involved. The key players were director Derek Westwood, probably the best met man in the world ever Hugh Brookes and task-setter Ron Bridges. These guys kept the comp moving with a relaxed style and put the weather we had to good use. The UK is bidding to host the 2005 Junior Worlds, and I would like to think that combining this team with a few recent ex-juniors would be a great starting point to run the first international comp in the UK for many years.

Of course, the Juniors isn't just about the flying. On one evening in the middle of the week we had an *It's a Knockout*-style contest between four teams of pilots and crews. It included racing to feed a rope through the team members' clothes while they were still wearing them, and all sorts of new ways to inflate balloons and eat peanuts with help from the opposite sex. I'll leave the rest to your imagination. Spectators can be forgiven for thinking the aim was to cheat as much as possible, because they are probably right! It was an amusing way to spend an evening.

Over the course of the week, three pilots – Luke Rebbeck, Leigh Wells and Andy Perkins – flew consistently well. With 49 competitors and six comp days, these guys managed never to drop below the top eight on the day. Luke, who won, had just one day when he didn't finish in the top three – nice one! Also flying well was George Green, who proved that his 2001 result was no fluke by cruising into fifth place, close behind Junior World champ Jay Rebbeck.



Above: Luke Rebbeck came first overall. There was just one day when he wasn't in the top three

Below: Andy Perkins of Booker came third in an ASW 28



Junior Championships, Husbands Bosworth

	Pilot	Glider	Total	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
1	Luke Rebbeck	LS8	3308	3 827	7 575	3 576	2 450	2 497	1 383
2	Leigh Wells	LS8	3236	2 828	8= 564	2 579	4 396	3= 487	2 382
3	Andy Perkins	ASW 28	3194	1 846	5 595	1 580	3 404	8 476	4 293
4	Jay Rebbeck	LS8	3056	8 785	25 494	5 568	1 455	3= 487	14 267
5	George Green	Discus	2963	12 750	3 599	11 504	9 370	13 465	9 275
6	R Nunn	LS8	2935	11 759	6 587	10 523	17a 344	15 453	12= 269
7	Jon Meyer	ASW 20f	2925	5 804	14 549	12 501	23 316	7 478	7= 277
8	Jez Hood	LS8	2920	6 799	1= 606	26= 351	6 386	6 483	3 295
9	Mark Parker	ASW 20	2883	14 721	4 596	17 478	22 323	3= 487	6 278
10	Matthew Cook	LS8	2844	9 779	17 524	6 564	5 394	11 471	25 112
11	Owain Walters	Discus 2a	2775	4 805	20 511	4 574	24 305	12 469	26 111
12	John Tanner	LS8	2773	7 788	12= 556	28 342	8 377	18= 438	11 272
13	Brian Birlison	Discus B WI	2770	16 694	10 561	16 480	13 353	16 449	16 233
14	Anna Wells	LS8	2741	15 705	1= 606	30 332	12 357	10 472	12= 269
15	Mark Brown	Discus	2614	33a 578	21 508	8 529	26 299	22= 426	10 274
16	Alan Irving	Discus B WI	2464	19 677	15 540	18 471	15 347	26 400	42 29
17	David Bromley	Discus B WI	2437	13 734	35= 267	7 548	14 348	21 430	27= 110
18	Richard Garner	Discus	2366	21 660	24 500	35 113	7 378	18= 438	7= 277
19	David Wardrop	Ventus C 15	2306	23 650	30 433	14 489	30a 271	14 463	DNF 0
20	James Ewence	LS7	2293	25 644	27 469	24 356	21 328	27 386	27= 110
21	Will Harris	ASW 20f	2282	22 657	8= 564	23 358	10= 364	37 223	19= 116
22	Edward Foxon	Mosquito	2274	10 772	18 521	9 528	26a 298	45 49	31 106
23	Ian Craigie	SHK-1	2265	18 682	26 486	15 482	37a 213	31= 288	23= 114
24	John Roberts	LS4	2236	27 622	37a 265	13 492	17= 344	22= 426	40 87
25	Pettican & Childs	DG-505	2203	39 483	23 502	25 353	20 333	24= 424	30 108
26	Edward Garner	ASW 28	2174	29 599	12= 556	38 110	28 294	1 510	32= 105
27	John Hingley	Discus B WI	2135	31 593	32 382	20 437	33 256	29 364	35= 103
28	Hemraj Nithiendarajah	Discus B WI	2106	28 601	34 298	19 469	38a 197	18= 438	35= 103
29	Ian Macarthur	Discus	2019	46 263	22 507	29 334	19 337	9 473	32= 105
30	Oliver Peters	Discus B WI	2009	32 592	31 414	37 111	16 346	17 443	35= 103
31	Simon Barker	Std Libelle	1987	17 692	19 519	33 153	35 236	33 271	19= 116
32	Albert Freeborn	Discus	1874	24 649	48 60	32 307	10= 364	28 384	27= 110
33	Andy Holmes	Discus B WI	1838	26 629	41 236	42 96	36a 216	24= 424	15 237
34	James Wilson	ASW 19b	1801	34 559	40 237	21 373	25 304	35 231	39 97
35	Andrew Langton	Astir CS	1784	36 512	29 446	26= 351	39= 187	31= 288	DNF 0
36	Arthur Docherty	ASW 20	1738	37 509	16 537	31 322	43 141	36 229	DNF 0
37	Alastair Harrison	Std Cirrus	1645	38 506	28 467	DNF 0	31 264	30 292	19= 116
38	Luke Roberts	Pegase 101	1630	20a 668	42 228	39= 108	39= 187	40 158	5 281
39	Andrew Betteley	Pegase 101	1507	35 537	35a 267	36 112	29 272	34 233	41 86
40	Duncan Ashley	ASW 24	1281	48 35	33 339	22 363	34 238	38 202	34 104
41	Adam Laws	ASW 19b	1227	30 594	45 193	39= 108	32 258	44 74	DNF 0
42	Ian Plant	Astir Cs	1076	43 368	43 218	43 77	39= 187	42a 110	19= 116
43	Andrew Bates	Pirat	834	40 423	DNF 0	34 123	42 163	41 125	DNF 0
44	Sarah Platt	K-23	787	44 346	46 158	44 49	DNF 0	43 108	17 126
45	James Ward	Pegase 101	769	41= 388	47 78	DNF 0	DNF 0	39 189	23= 114
46	Mark Holden	Mistral-c	649	41= 388	39 258	45 3	DNF 0	DNF 0	DNF 0
47	Peter Hibbard	Mistral-c	580	47 96	38 259	41 105	DNF 0	DNF 0	18 120
48	Chris Beaumont	K-6e	504	45 279	44 203	DNF 0	DNF 0	46 22	DNF 0
49	Nicola Claiden	Std Libelle	0	DNF 0	DNF 0	DNF 0	DNF 0	DNF 0	DNF 0



Above: Leigh Wells, who was 2nd

Below: Crew Sarah Curtis flew in a two-seater in 2001. Faulkes Flying Foundation and BGA two-seaters were used in 2002 for newer pilots



Going my own way made this the most memorable flight

AFTER any competition, certain images stay in your mind, *writes Andy Holmes (pictured below right)*. For me, the last day was the most memorable, mainly because of contrasting weather during the flight. There were reasonable climbs before the start, but showers on track to our first TP – Edgehill.

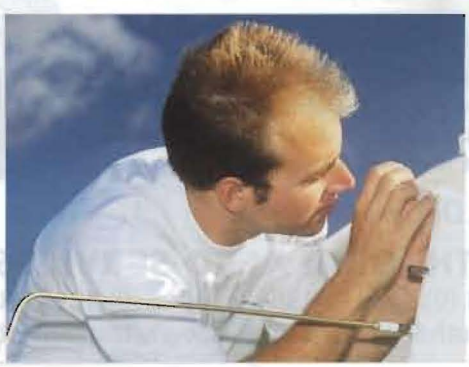
A strong climb just after the start opens convinces me to keep climbing through max start height, to start vertically. This is going to be a difficult day. Gaining extra height in what is almost certainly the strongest climb I will see for a while seems like a good idea.

We run into weak conditions almost immediately and start to bunch up. As an early starter I'm leading a small group, tiptoeing towards Edgehill. These small groups gradually merge into a few large gaggles. The climbs are weak, and during the glides a lot of us are spreading out to dump water without affecting each other. It's an eerie feeling, gliding into the gloom with all your mates, dumping ballast as you go. It's still a comp of course, but the overriding feeling is that we're all in this together.

Feeling a bit uncomfortable in the large gaggles I press on alone, but as soon as I find a climb I get plenty of company. Some distance from Edgehill, a line of showers becomes apparent, running south-west/north-east. The nearest shower is either over or very close to the airfield. There is a gap of a few miles to the next shower upwind. We're all comfortably on glide for the TP and most people seem to be planning on gliding through the shower, hoping to get away on the other side with Edgehill as a safety net. Before committing I scan around to consider other options. I turn hard left to a weak-looking cu over Banbury to give myself some thinking time.

I keep climbing until the showers have drifted such that I can cross the gap in the shower line at right angles and turn Edgehill at the same time. In light rain, I nearly resign myself to joining the other 20 or so gliders at Edgehill, but I have plenty of height so continue gliding under the dead-looking sky. I see a dark line of cloud ahead with some gliders circling.

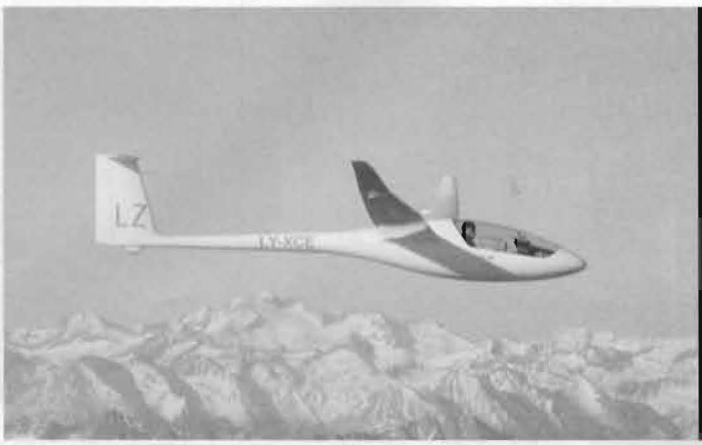
I commit to a low arrival under the line of cloud and have a look at fields on my way there. Climbing away surprisingly well from about 800ft agl gets me in range of Bidford, where patience is required before making the good weather to turn Worcester and head to the third TP – Moreton in the Marsh. I soon reach the edge of the good weather around Worcester and the next move isn't straightforward. On track the sky is looking unsoarable after the showers have passed through. I wait for a while but the sky isn't improving. There is a shower to the left of track over Bidford. There are good cu both 90° left of track (Birmingham airspace) and 90° right of track (South Wales). I see no way to join the dots between the good weather and the TP – there are none to join, it seems.



Jon Lewis

My best option, I decide, is to search around the Bidford shower for lift. There is a very weak climb but I can't make anything of it and glide for the airfield, scratch for a while then land for an aerotow retrieve. Around 10 gliders landed out near the third TP and a couple landed halfway home from Moreton. Luke and Leigh cloud-climbed high enough to glide to small patches of sunshine where they patiently worked weak climbs and made it home.

Why was this the week's most memorable flight? That's hard to explain, but it was very different from your average comp day. The large gaggles before the first shower were quite a contrast to flying alone for the rest of the flight. I was pleased that, after being disappointed by the earlier plankage, I had the confidence to make decisions that put me on my own – and then benefit from it!



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Club news

Angus (Drumshade)

IN October, Alex Maitland and John Cobb took our SF-34 to Deeside for the mountain soaring contest. They enjoyed the week very much and learned a lot about competition flying. With the university term starting, there has been quite an influx of pilots from Abertay University GC, with students from Germany, Holland and France learning to glide here.
Wolf Rossmann

Aquila (Hinton-in-the-Hedges)

IT is with great fondness that Aquila remembers Keith Chichester (see obituaries, p60). Congratulations to Matt Glencross and Barry Woodman for soloing. Matt went on to complete a one-hour soaring flight (or Bronze leg) the following day on only his second solo and during October, too! With the onset of winter several members are organising wave expeditions; glider fettling gathers pace in our new workshop. A very tidy K-6CR has joined the fleet. Training continues in the winter and we welcome visitors (*www.aquilagliding.com*)
Hugh Gascoyne

Black Mountains (Talgarth)

THE annual Task Week was fully subscribed and a lot of fun was had by all. This included barbecues and the demolition of the old clubhouse. Mike Tomlinson won, but only after lots of midnight oil was burnt computerising the scoring system. Greville Earle deserves mention for being positive when the undercarriage on his brand-new DG-300 collapsed... yet again! Launches are well up on last year and we have already passed the target set by treasurer Charles Baker. Late summer and autumn have been magnificent with cross-countries being flown right into October. We are about to install an uprated electrical supply to the new clubhouse to keep us warm. Dunstable began their annual pilgrimage on October 12 with a fabulous day of ridge flying and soaring the Brecon Beacons plus some excellent thermal cross-countries as far as the west coast of Wales. Visitors are always welcome.
Robbie Robertson

Booker (Wycombe Air Park)

BOOKER plans to host a (free) Regionals in June/July and the 15-metre Nationals in August next year. The Regionals will have both Sport and C Classes flown to C Class rules, I understand. We will repeat our successful spring expeditions to Jaca and Shobdon. Congratulations to Alun Jenkins (Gold) and Alan Stagg (Diamond) in an excellent first week of the Aboyne expedition. Booker has a new chairman, Bruce Cooper, and several new committee members. Vice chairman and Company Secretary is now Alan Green, Jack Luxton takes over as treasurer, and Richard Garner joins the committee. Welcome and best wishes to them all. Jed Edyvean has left us for pastures new, and his many friends at Booker wish him well in the future.
Roger Neal

Borders (Milfield)

THANKS to a lot of hard work by Brian Brown, we have managed to secure a substantial Sport England Lottery Fund, Community Capital grant to help fund the building of a 22-place hangar for members' gliders. The award of £95,634 will go towards a total project cost of over £147,000. This will allow us to keep our gliders rigged, which will, we hope, increase utilisation. On those duff days when conditions change, members will be able to pull their sailplanes out of the hangar, and be ready to fly within 10 minutes. With our "ageing" population of pilots (a problem at most clubs), this should encourage more flying. Brian has been steadfast with his attention to detail and enthusiasm for this project. The club is to undertake research to find out why so few young women take up gliding.
Bob Cassidy

Bowland Forest (Chipping)

AFTER a dismal start to the season we have made up for it during the past couple of months, and well into October the field is still dry! We have had a good number of wave days. Expeditions have included trips to Aboyne, Husbands Bosworth and Shenington – many thanks for your hospitality. We were pleased to receive a return visit from Shenington. One of our K-13s went to the two-seater competition at Pocklington. Our new Junior seems to have been flown non-stop.
Eileen Littler

Bristol & Gloucestershire (Nympsfield)

NEW arrangements are being made to escort members of the public on the field. Our BAE Systems parachute repackers are being made redundant so we're seeking new arrangements. Jim Wilson and John French are to go on assistant instructor courses. Ian Marshall, Mark Thompson and Jon Baldock are to start instructor training and several members are having refreshers. Mark and Jon, plus Andy Charters, bought the former club ASW 19 and promptly completed Silvers. Bob Williamson flew his entire Silver and did his first out-landing on the same flight. Congratulations to Howard Bliss, Ben Eyles, Tom Mayne, Bill Eveleigh and Rowan Carter on solos. 500s were flown in September and 300s in October as the season lengthened. Welcome to new members Lemmy and John Tanner.
Bernard Smyth

Cairngorm (Feshiebridge)

ONE week into Octoberfest and we have been blessed with fantastic soaring conditions (five Diamond heights and several Gold in one day!) and still two weeks to go! We have had visitors from Aboyne, Portmoak, Shenington, Weston-on-the-Green, Southdown, Bidford, Sleap, North Wales, and Needwood Forest. Badge claims include Hugh Stevenson (Diamond height), and Andy Farr (Gold height). We will be flying right through the winter on weekends and midweek by arrangement so any applicants wishing to join the "Vertical Barograph trace club" will be made most welcome. Please phone our secretary Ruth on 01667 493459 or the club on 01540 651317 or see *www.gliding.org*
Chris Fiorentini

Cambridge (Gransden Lodge)

WELL done to the recent clutch of first solos and type conversions and to Julian Bane, Clare Hooper and Paul Flower (50km) and Jane Whitehead (300km). Phil Jones rounded off his record-breaking summer by winning the 18-Metre Nationals. August had everyone believing the season was over prematurely but the sun rose on September and it all got good again. Pete Belcher flew 500km, finishing just short of home (the days aren't long enough in autumn) but making it far enough for Diamond distance. Mike Young went to Hus Bos in Bluebell, our T-21, to reclaim the fire bell they stole. Unfortunately, three days later the Hus Bos lot flew their T-21 to Gransden. Next year? Andrew Watson and Ian Noble are Assistant Instructors and Steve Woolcock has qualified as a Basic Instructor. Keitha Bryce-Smith and Chris Sullivan, our two new BI coaches, will be training more BIs. Thanks to John Bridge for running the club



*Demolishing **Black Mountains GC**'s old clubhouse*

ladders for many years. John Birch takes over from him. We are flying six days a week over winter, with ab initio lectures and basic aerobatic training, too.
Gavin Deane

Clevelands (Dishforth)

ROLL on the Christmas/New Year wave camp! We will be a full-time operation from December 21 through to January. As usual visitors will be most welcome. See our website for details. James Hoyes is solo, courtesy of Shenington, Andy Pete has Bronze, Alan Jenkins achieved 300km and Dick Cole was a creditable 19th in the Open Nationals. We have no fewer than 25 freshers from Leeds University Union Gliding Society. We thank Kevin Kiely for 18 months of hard work; he has handed over the reins as CFI to Mark Desmond.
Polly Whitehead

Cotswold (Aston Down)

OUR holiday courses have proved very successful this year thanks to the course instructor, Bo, and winch driver. Congratulations on first soloing to David Wade, Bhavna Patel, Bert Perkins, Alan Hester, Sam Hunt, Lyndon and Joe Gabris and Don Paffrath. Tony Parker has Diamond distance and Alistair Harrison and Simon Buckley 300k. Brian Birlison was 10th in the Standard Nationals and three of our younger pilots, Mark Parker, Alistair Harrison and Brian Birlison, flew well in the Juniors. About 70 members of the public were flown at our successful September open day. A big get well to Mike Smith following his recent illness. Unfortunately, it means that he will miss the club expedition to Portmoak. It is with regret that we announce the death of Gerry Fellender (see obituary, p60)
Frank Birlison

Cranwell (RAF Cranwell)

APOLOGIES to anyone anticipating a rousing Cranwell knees-up to celebrate the club's 30 years. All was cancelled when we realised that key players would be out of the country, at Her Majesty's pleasure ... sort of. Those who remained enjoyed an unusually good early autumn. Pete Cornthwaite gained Silver while Kevin Knipps completed Bronze and Silver duration.
Paul Skiera

Dartmoor Gliding Society (Brentor)

THERMAL and wave have often spoiled each other recently but gave interesting local soaring until well into October with occasional excellent days. Well done to: Trevor Taylor for his 300km (290km more than his previous attempt); Martin Cropper, 47km (alas); John Clark, Gerald Badcock and Stan Fouracre on resoloing (Stan was an instructor in the infancy of the club); to Ian Brett and Steve Clarke on converting from power to the subtler skills. Mick Burrows from Gamston found wave when most of us couldn't. Impressive graphs

Please send entries to *helen@sandg.dircon.co.uk* or Helen Evans, 7 Ollney Road, Minchinhampton, Stroud GL6 9BX to arrive by **December 10** for the next issue (February 11 and April 15 for the following two)

Dublin

DUBLIN GC (writes chairman John Houlihan) is based at Gowran Grange airfield near Naas, within a one-hour drive of Ireland's capital. Surrounded by the rich pastures of County Kildare, with the Blessington lakes and magnificent Wicklow mountains as an impressive backdrop, it is a "must visit" site for visitors to Ireland of a gliding disposition!

Established in 1952, the club had among its founding members a former RAF pilot and a former Luftwaffe pilot, who had been interned during World War Two as a guest of the nation! Little did these gentlemen realise that they were laying the foundation stones for Ireland's premier gliding club, which now boasts nearly 100 members, ranging from 18 years to almost 80.

It is an all-aerotow operation using a 180hp Super Cub. The leased site of 48 acres offers good operational scope, with a 500-metre grass strip (03/21), which limits activity only in stiff easterlies or westerlies. Averaging 2000 launches per annum, 2,500 in a good year, the club operates two K-13s, two K-8s, a K-7 and a K-18. Some 20 private gliders keep tuggies busy on good soaring days.

It is predominantly a thermal site, but the nearby Wicklow mountains offer hours of fun in moderate westerlies, while easterlies and south-easterlies generate good wave within easy reach. Despite lying within the Dublin CTA and a military restricted area, airspace is seldom a problem, standard clearance being allowed to 4,500ft amsl, even higher if you ask nicely! Compared to many UK or European sites, airspace in Ireland is a fairly relaxed and uncomplicated affair permitting most Badge and cross-country flights. Irish weather, on the other hand, is as unreliable and unpredictable as ever.

While Ireland is renowned for its beauty, simplicity and welcome, not to mention its Guinness, the country is not well endowed with thermal activity, making Irish glider pilots rather good scratchers! That being said, competitive pilots representing Ireland in the UK and overseas have always finished with very respectable scores and are a spirited force to be reckoned with. During the summer, 100km and 200km flights are not uncommon, one persistent member having flown a 300km on a well-chosen day.

The club is famed worldwide for its annual safari to the beaches of County Kerry (above), where for two intensive weeks every September gliders are car launched off the beach into the beautiful Kerry mountains, giving those lucky enough to experience it some of the most spectacular flying the world has to offer where the mountains meet the sea. This is challenging flying, not for the inexperienced or faint-hearted, and is often a test of endurance for pilots who take on the forces of wind and tide to test and hone their flying and survival skills. Ireland's altitude record was gained on safari in 1991, 24,000ft from a simple car launch to 700ft.

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At a glance

Launch type and cost: aerotow £14.00 to 2,000ft

Club fleet: K-13 (2), K-7, K-8 (2), K-18

Private gliders: 22

Types of lift: Thermal, wave, some ridge

Operates: Winter, weekends; summer, seven days

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*James Vorley, a 16-year-old, went solo at **Deeside**, Aboyne, this summer (Colin Wight)*

assure us we are beating financial break-even point. The hiccup caused by the loss of one of our two-seaters may make that harder to maintain but we hope that new more efficient links between launch-point, winch and vehicles will help. Alan Holland is recovering from a hip replacement: thanks to other instructors for covering his usual days.
Phil Brett

Deeside (Aboyne)

SATURDAY, August 31: what a day to remember with a north-westerly wind at 20-30kt! The first launch was a declared 500km and the second a 1,000km. Claims included Steve Thompson's Diamond goal and distance (he completed a 300km two days previously); Dave Smith's Gold distance, Diamond goal and Gold height; and Andrew Eddie's 100km, completing Silver. Lyn Ferguson-Dalling achieved Gold and Diamond height. Other notable achievements since then, apart from visitors' and Andrew Eddie's Diamond heights, include first solos for James Vorley (aged 16) and Ed King. Robin Dransfield claimed Silver height and a Bronze leg. The mountain soaring contest produced excellent flying and a good social week, including whisky-tasting from our main sponsor, Royal Lochnagar Distillery. The landouts at Balmoral Castle resulted in a kind letter from the Queen, who declined a flight in a motorglider, but wished us happy landings in future; several trial lessons for members of the Royal Protection Squad and the Gordon Highlanders and some new members. Two members and their gliders feature in the Royal photograph album. Press rumours of crash landings were greatly exaggerated!
Sue Heard

Devon & Somerset (North Hill)

A successful Enterprise was due, as ever, to hard work by Sandy Harrup and her team. There was interesting flying amongst the capricious sea breezes of the West Country, not to mention tales of renowned hospitality,

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*Phil Ford (solo) and Amanda and Mike Millar at **East Sussex**. Amanda has re-soloed while Mike is a tuggie*

as reported by an obviously smitten junior! The season has had its darker moments, however, with a serious accident very nearly resulting in the death of two members. We wish them a speedy, complete recovery. Nevertheless, summer ended with a flourish: Silver distances for Ernie Perrin, Godfrey King and Clare Alston. Clare also managed five hrs and 18 seconds later! John Pursey made a late charge but was unable to topple Simon Minson from the top of the club ladder. Simon Leeson coerced almost the entire club into a successful Open Day: more than 120 trial lessons and several new members. Mark Courtney has his assistant rating. We look forward to a new K-21 in the spring. Early autumn has seen more out-and-return wave flights to the west of Dartmoor, and cliff soaring on the south coast between Beer and Budleigh Salterton. The names just make you want to try it, don't they?
Phil Morrison

East Sussex (Ringmer)

OUR lottery grant-funded Super Cub tug arrived in June and has been put to good use. Phil Ford and Ron Nippard have gone solo, Cathy Scott has re-soloed as has Amanda Miller after a 20-year lay-off. We have welcomed a total of 29 new members this year so far. There have been club trips to Denbigh, Talgarth and the Wolds two-seater comp in which we came 16 out of 34, learning a great deal and having a lot of fun. We send our regards to our new-found friends from Stafford and look forward to see them again next year.
Adrian Lyth

Essex (North Weald/Ridgewell)

CONGRATULATIONS and a warm welcome back to George Booth on re-soloing, and to Vince Earl on re-soloing and gaining his R/T licence; to David Charles and Terry Stone on going solo at and John Whitwell on completing his Silver. Our second club week at Ridgewell produced a number of good soaring flights with a couple of members achieving heights of over 6,000ft. The week ended with members tucking in to a super barbecue – our thanks to Sue Martin and Lin Brennand. Overall we have had a good season not only flying wise, September saw over 500 launches, the best for five years, but also improvements in facilities at Ridgewell. Work has also started on refurbishing our workshop at North Weald. We have returned from Ridgewell to our winter quarters at North Weald where all flying (aerotow only) will be. Why not come and enjoy our mile and a quarter concrete runway? Evening events this winter include talks, film shows and quizzes.
Peter Perry

Essex & Suffolk (Wormingford)

THE weather has finally turned, but we can't complain as it has been quite good with some cross-countries from more accomplished members. Juniors George Green and Robbie Nunn were 5th and 6th respectively in the Juniors (Robbie also came 5th in the Eastern Regionals this year, and managed to get his assistant rating, busy boy). We also won the Anglia TV Cup: Andy Sanderson and Pete Nicholls represented us. John Bone and Paul Johnson have BI ratings, Liz Russell is our latest soloist, so congrats to her.
Steve Jones

Highland (Easterton)

THIS report starts with me in bed with a slipped disc looking at a sky full of wave, knowing I was missing a good day – and was I ever! Five members got to 20,000ft: Rick and Mark (Fulmar) both got Diamond height; Robert Tait got to 24,500ft regretting he had not opened up the upper airspace as the wave bar was "a monster that looked so solid you would have thought it was carved out of stone"; David Chalmers got to 20,000ft with no barograph. We hosted the Norfolk GC. They got eight out of nine flying days with some good thermal days and our ridge working at times for them, but no wave. Our thanks to Gordon Pledger, who serves on the BGA Executive and who paid us a visit to give two very interesting talks (on the BGA and on hypoxia).
Roy Scothern

Imperial College (Lasham)

THANKS to unusually good October weather and the enthusiasm of the committee and instructors Duncan Ashley, Martin Judkins, Hemraj Nithianandarajah and Chris Smart, the club has got off to a flying start with many keen new members signing up. Preparations are under way for an expedition to the Czech Republic in summer 2003. Our members have racked up some impressive achievements, including first solos and Bronze legs for Ken Cox and Sejul Shah, and a Bronze and Cross-country Endorsement for Katie Sykes.
Alan Bamford

Kent (Challock)

THIS year has been very successful with a healthy number of new members, and achievements such as the recent 16th birthday solo of Mirren Turnbull. Mirren joined us at Easter, soloed after about 60 launches, and is planning a career in aeronautical engineering. Much credit goes to CFI John Hoolahan whose measured approach is encouraging. As well as our winter social activities, we are eagerly awaiting the imminent arrival of the first of our K-21s. The latest of our regular Bronze theory courses has been over-subscribed to the extent that we are having to run into a second weekend.
Caroline Whitbread

Kestrel (RAF Odiham)

WE ran a successful five-day course kindly hosted by Bicester, thanks to Ted Norman and Martin Pike. Bernd Verneulen converted his German gliding instructor rating to a BGA rating. Congratulations to Matt Reid and David Marshall on first solos and to Marc Morley and Simon Boyden on clocking up 1,000 hours. An expedition was made to Sutton Bank to attend the vintage glider rally. A recent non-flying day was used to fill a skip with all that "it might be useful one day" clutter from the hangar and workshop. Thanks to Barry Sealey for repairing the clubhouse roof.
Simon Boyden

Lakes (Walney Island)

IT would seem that Peter Redshaw got the Capstan's Cosim working perfectly in time for the two-seater comp (p42), not only did the Capstan win its class but it won outright! I think next year they may ban the use of such instruments as constituting an unfair advantage. Congratulations to Peter and the team. Some members have just returned from the annual jaunt to Portmoak for the wave. The weather played its usual tricks. Flying was scarce and the golf aplenty. Our thanks to Irene and Steve for looking after us with their usual flair: we're all on diets now. See you next year!
Peter Seddon



*Sixteenth-birthday soloist Mirren Turnbull at **Kent**, with instructor Tony Moulang (Teddy Raw)*

Lasham Gliding Society (Lasham)

GRAHAM McAndrew and Peter Masson are claiming a British 200km triangle record in the club Duo Discus. This has to be ratified. Caroline Bois came second in the Sports Class at the Saltby Open Aerobatic competition. Security at the airfield has been improved with new fencing and security gates. New windows have been installed in the clubhouse as part of a general upgrading of our facilities.
Tony Segal

Lincolnshire (Strubby)

CONGRATULATIONS to Derek Woodforth on Silver distance. John Brooks has flown his immaculately-restored Swallow and to celebrate the fact took it to Silver height. (This is John's hot ship. His previous restoration was a Tutor.) We have had numerous Bronze legs of late so well done to all. Margaret and Alan Childs have left us for Northamptonshire. We thank them for their contribution to the club. The Geriatric syndicate have bought a K-6CR. The combined ages of the three easily passes 200: keep it up, lads.
Dick Skerry

London (Dunstable)

WELL done to Simon Cattle, who did Silver distance on October 4. The second of the only two surviving 1936 Scuds renovated at Dunstable took to the air recently, flown by Laurie Woodage. A full winter evening programme on everything from mountain soaring to vintage flying is planned. A new take-off strip has been ploughed and reseeded on the north-east run: visiting cross-country pilots please note this is not an additional Luton runway. Members are building rocket-powered creations in readiness for the annual Buttocks Trophy on firework night.
Geoff Moore

Mendip (Halesland)

WAS this summer's weather really that bad? Well not according to our flying records. Figures for launches, hours and trial lesson evenings are all ahead of last year's. We got free publicity for our open day by simply emailing details to the local TV station, which included them in a "What's on" page on Ceefax. Unfortunately, the weather did not co-operate but we still managed 22 trial lessons. Lynda Thomson chalked up a victory for the ladies by getting in her first solo ahead of her husband, Gwyn Thomas, who was on hand to congratulate her with unquestionable sincerity.
Keith Simmons

Midland (The Long Mynd)

IT was a great shock to learn of the unexpected death of Alison Rowson. Alison, a long-standing club stalwart and the daughter of Robin Bull, had fulfilled many roles over the years. Our deepest sympathies go to husband Jeff and children Michael and Sarah. We've changed ➢

Club news

CFIs, trading a Nick for a Neil. Many thanks to Nick Heriz-Smith, who has obviously been bewitched by Ontur and his instructing role there. Welcome, Neil Clements. We are also very sorry to say farewell to Janet Stuart in her full-time role. As office chief and daughter of Jack Minshell she is an integral part of the modern Mynd's development. At Sutton Bank we came second equal with Dunstable in the Inter-club League Final. The spirit and camaraderie of our own task week was well enjoyed, especially by new recruit Alan Barnes, a hang-glider champion who has to sit down to do it now after a body part replacement. He did it spectacularly in a K-23, describing vividly how to use a convergence after the rest of the field had sunk into rain-filled, mist-capped valleys. Perhaps the recruitment focus might include those who fly the "ragwings" and the "mattresses" with their intimate understanding of the ether.
Roland Bailey

Needwood Forest (Cross Hayes)

THIS year has been our best since our move to Cross Hayes. Launches are up well above target, there have been numerous achievements and we have a record number of new members. Congratulations to Dave Bowden on his Basic Instructor rating, to Peter Kent on Silver height and to new solo pilots Carl Smales, Nick Griffin, Antony Bradford and Adam Murcott. Our four scholarship holders are progressing well and, after many years away from gliding, Britannia captain Dave Murcott is again enjoying the delights of silent flight. In three days, we transformed three small dingy rooms in our Portacabin into one light space, with briefing, lounge and kitchen areas – a much more welcoming, versatile clubroom. With a comprehensive winter programme of talks, workshops and presentations scheduled, we plan to make good use of it! Our programme also includes a number of social events and visits to other clubs. Find out more at *www.GoGliding.co.uk*
Val Roberts

Nene Valley (Upwood)

WE were blessed with many super soaring days right into October resulting in a record number of soaring hours, a couple of 150km flights and a handful of Silver distances. Expeditions have increased members' flying skills and knowledge of other clubs. We competed in the Inter-club League with creditable results and hosted one of the legs at Upwood. CFI, John Young, was pleased by the standard of airmanship and there were many compliments for our honorary social and catering staff. There have been a steady trickle of new members and a good number of trial lessons. The fleet has another two-seater and we look forward to a winter programme of social events and fettling of ground equipment and aeroplanes. Our normally well-drained site and hard strip should permit the membership to remain current.
John Bennett

Newark & Notts (Winthorpe)

THE mediocre weather doesn't seem to have held us back. Dave Prosolek and Rance Noon soared to 11,000ft and 9,000ft respectively in wave over Winthorpe – not bad for a flat site, eh? Our youngest solo Amy Sentance gained her Silver height, Noel Kerr achieved the same and has since tagged on his Bronze and Cross-country Endorsement. Andy Lucas got his Silver height and distance claims, and Marcus Willett clocked up 5hrs plus at Portmoak for his Silver duration and Nick Jeins soloed on October 5.
Chris Dring

Norfolk (Tibenham)

AT the end of August we hosted the Eastern Regionals and the Open Nationals concurrently. Seven NGC pilots flew the Regionals, Bob Grieve was second and the ever-consistent John Wilton won for the second year in a row. Thanks to 'Woody', Bonnie and team, and caterers Rachel and Eddie Applegate. In September we were the venue for a Stearman rally, with over a dozen handsome examples of the chunky biplane visiting. Gliding activity continued as appropriate, and members and visitors alike enjoyed a fine barbecue. Our first Scottish wave expedition to Highland GC was blessed with good weather but sadly little wave. The hospitality and general flying were excellent and there are high hopes, in every sense, for the second week. Plans for Cadet/Youth Days during the winter are advanced: we are recruiting from groups such as youth clubs, Scouts and Guides as well as our own Cadet members. Starting with breakfast in the clubhouse, we hope that these intensive winch sessions will encourage more young people to attend.
Alan Harber

Northumbria (Currock Hill)

UNFORTUNATELY, the name of our only lady BI, Ailsa Cooper, was left out (by me) of last issue's account of her splendid flight to retrieve the Hotspur Trophy (he was Northumberland's most famous son). Roy Mitchison flew a 300km and Dave Mands did over 100km on the same task during Syerston's August task week. Frank McLoughlin soloed at Husbands Bosworth. Ian Plant took part in the Juniors. We mourn the loss of our very popular K-8 on September 15. Flown by an experienced club pilot, it struck a small tree on our western boundary and disintegrated into the gorse. The pilot suffered only one minor bruise. David Rogers is retiring as treasurer and will be replaced by Nicky Brandi.
The proposed airway over the site will have a base of FL125, which should be a less of an obstruction than expected. Alan Scott is leading a team refurbishing the clubhouse ground floor. There will be a new shower, new lavatories and the bunkrooms will be replaced by a workshop area. A very successful end-of-season party was arranged by the Brandi duo.
Leonard Dent

Oxford (RAF Weston on the Green)

IN time to get their names mentioned at the AGM, Nick Bellof, who left a strong thermal just after launch just to get the landing "over and done with", has gone solo, Simon (he knows who he is) has re-soloed, Anthony Buck and Rob Jackson have done their 50km and Nick Brooks has achieved Diamond goal. Oh, and Dave Bray got his Cross-country Endorsement (alright, Dave?) The OGC team of George TMB Crawford, Martin Hastings, Phil Hawkins, Maz Makari, Howard Stone and Simon Walker won the Inter-club League final against stiff competition and some self-induced drag. Well done, the lads. And after nine years of selfless service as CFI, Cris Emson has decided to stand down. Deputy CFIs, Martin Hastings and Howard Stone are already gearing up to take over. All at OGC would like to thank Cris for his years of making sure we flew properly and giving us a hard time if we didn't, and especially helping all those who've been through an instructor course to get through it.
Steve McCurdy

Peterborough & Spalding (Crowland)

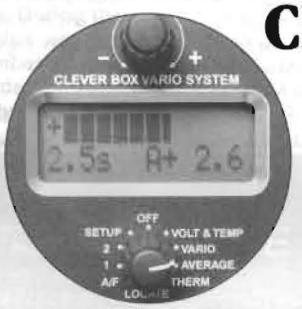
THE September soaring was good in the fenlands, and it's congratulations to Big Al Flintoft who made the most of it by completing his 300km. Well done to Annie Ewer, who now has Bronze. Changes on the ground include: buying a new grass cutter for the runways; a new control vehicle that is almost complete; and the east/west runway is to be widened. Negotiations are in progress to extend the trailer park and rigging facilities. The annual expedition to Aboyne is under way.
Joan Pybus

Portsmouth Naval (Lee on Solent)

STEVE Morgan took his new Sport Vega to Keevil so he could fly to Lasham and get 50km to finish his Silver – except he didn't cos the missus was flying it – so he took the Junior instead!! Congratulations to Paula too. Congratulations to Mark Holden and Henry Freeborn on



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their Juniors performances with Henry getting the "Kwik-Fit" prize for most tyre changes on the grid. Claire Willson finished her Bronze and the Indian summer has seen lots of late season soaring. New K-21 E7 has not been flown since its import, and we are still waiting for our elusive Supermonk to turn up. The new university year started well with a solo for Jon Verrill.
Pete Smith

Rattlesden (Rattlesden)

A very mixed summer has resulted in several personal achievements. Kevin Western has his Bronze, Paul O'Leary has soloed and achieved Silver height, Gemma Page has soloed and Colin Pitt has had an enjoyable first season as a BI. The introduction of a Pegase to the fleet has stretched horizons for many (you can now land out even further away!) and our eagerly-awaited Brand New Winch has arrived.
Pat Gold

Scottish Gliding Centre (Portmoak)

OCTOBER saw the end of a very successful summer course season, and special thanks must go to our course instructor – John Northern. We signed up six new members following courses, and solos were achieved by Gary Scott, Gary Donachie, Steven Waddell, John Lochhead, David Brochie, and Andrew Berry. In addition, Samantha Pink from the Edinburgh University GC, based at Portmoak, went solo. Colin Hussell and Richard Chapman (visiting from Bidford) went away with Diamond heights and our very own Bob Petrie went to Feshie to get his Diamond height. The weather has caused all sorts of problems, not least of which being unable to fly everyone who bought trial lesson vouchers. Our marketing campaign sold (almost) too many and despite operating a strict booking system, we were hard pushed to keep everyone happy.
Ian Easson

Shalbourne Soaring Society (Rivar Hill)

JEROME Daste soloed recently and converted to the K-8; Greg Rybak completed his Bronze; Annette Purcell did her Silver distance; 'Mad Max' the BIG Tost winch is back with a vengeance; half the club went to Aboyne; Geoff is back on the instructor rota and instructing midweek after a few hiccups following the introduction of the new medical standards.
Wendy Coome

Shenington (Shenington)

CONGRATULATIONS to Alison Noel and Glenn Scott on going solo. Kath Barnes completed her Silver, and



*Barry Stubbs went solo at **Southdown GC** recently*

Graham Bambrook has also flown Silver distance. Like most people we have had a fantastic September, and the midweek courses have remained busy. Our course season ends shortly, but will start again in March – many thanks to Lu Kennington, Steve Codd and Kath Barnes for their sterling work. We will continue to fly weekdays as and when the weather allows, but on a more *ad hoc* basis, so if you wish to visit midweek then please call ahead to check. The party season will be on us soon, so keep in touch with our social calendar and news at *www.gliding-club.co.uk*
Tess Whiting

Shropshire Soaring Group (Sleap)

THERE have been some very pleasant thermal and wave flights at Sleap but we have been a bit thin on the ground with many of our members enjoying expeditions to Chauvigny, Sutton Bank, Pocklington, Feshiebridge, etc. Ric Prestwich made several good climbs at Feshie with one gain of height of over 20,000ft. Just to rub it in at Sleap he climbed through the cloud street to contact wave to over 10,000ft. We congratulate Dave Triplett (now of North Hill) on Diamond height at Feshie.
Keith Field

Southdown (Parham)

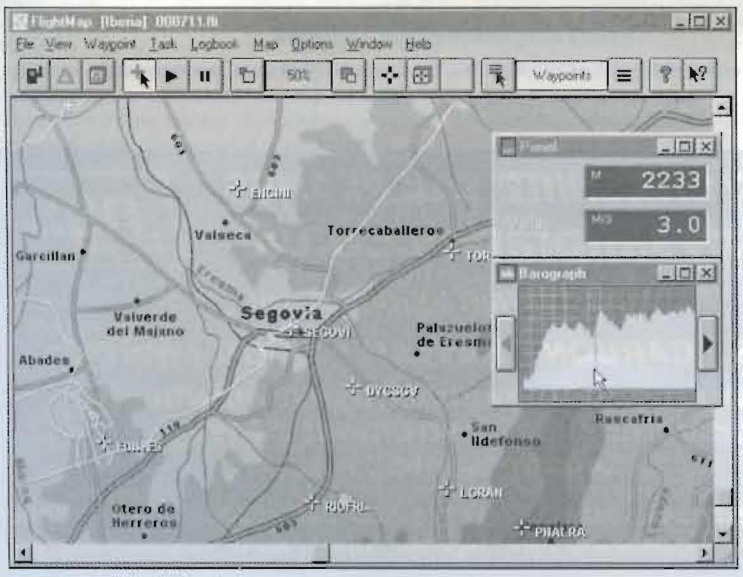
A lone World War Two German bomber flew across our airfield a week before the Shoreham Air Display. It had the effect of sorting out the youngsters from the OAPs, since the latter immediately took cover. At the airshow itself our aerobatics champion Guy Westgate gave his usual faultless display. At Parham, Barry Stubbs, Ola Olsson, Sam Jenkins, Pat Birman, Chris Yardley, Ian Bateman, Marcus Romero and Neil Banks all went solo. We have never had so many first solos in such a short space of time. The key to this seems to be in the promotion of our one-day courses for the public. We are recruiting more members through this scheme than from the sale of trial lessons. We have a new syndicate Grob 109B on the field and have parted with the vintage two-seater Eagle. The Eagle, designed for the 1956 World Championships, was flown by Peter Scott, The Duke of Edinburgh and George Ansell, to name but a few. She has found a good home at Wolds GC. This autumn, we have sent expeditions to Aboyne, Lasham and Aston Down. Pilots from Lasham, Kenley and East Sussex have visited us recently to take advantage of the hill soaring potential, the result of a prolonged period of northerly winds. They pointed out that the windsock was flying upside down and that the advertiser's name could be read only while doing an inverted beat-up!
Peter J Holloway

Staffordshire (Seighford)

THANKS to the hard work of a number of members (Colin Ratcliffe and gang), installation of the Avgas Tank is now nearing completion. Congratulations to Paul Cooper and Lara Davies on Assistant Instructor ratings. Rob Rolfe has completed Silver distance; Alan Jolly has his Cross-country Endorsement; John Bates and James Davies have Bronze Badges. Despite the lack of good wave and a poor wind direction on the expedition to Milfield, an enjoyable week's flying was had by all. Thanks to the Borders members for their hospitality, and to Paul Cooper for organising the trip. Winter *ab initio* courses are as popular as ever – thanks to Ian Davies for his instructing efforts. We are looking forward to our 40th anniversary dinner (Saturday, February 7, 2003). Andrew Oultram has taken over as club CFI; thanks to Simon Watson for all his hard work.
Paul (Barney) Crump

Stratford on Avon (Snitterfield)

MANY congratulations to the record number of 10 students doing first solos during August and September: Graham Thompson, Kate Finlay, Joe Dormer, Steve Handy, Karl Berger, Peter Kirby, Adrian Flower, Paul Thornton, Martin Foran and Emma Sharp; and to Derek Miles (re-solo). Other achievements include: Bronze Badge (Nick Jaffray, Mike Corfield, Ian Kennedy and Robert Austin); Bronze legs (Liz Pickett, Steve Handy, Adrian Flower, Peter Kirby, Graham Thompson and Brian Banks); Cross-country Endorsement (Ian Kennedy, Mike Corfield and Steve Farmer); Silver height (Steve Farmer, Gerry le Seuer and Phil Pain); Silver distance (John Dickinson and Steve Farmer); Silver Badge (David ➢



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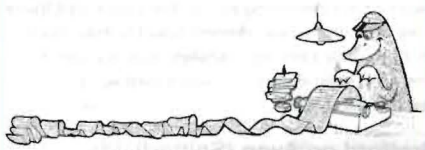
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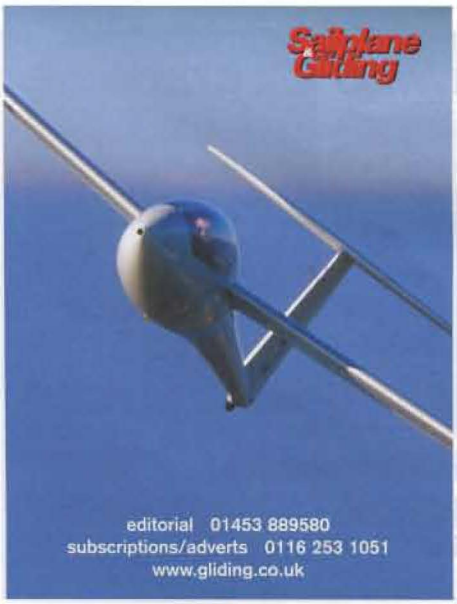
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Club news



*Ten pilots have soloed at **Stratford on Avon GC**'s Snitterfield site this summer. Pictured are (from left) soloist Kate Finlay, course instructor Phillip Pickett, and soloist Graham Thompson*

Ireland, Mark Laver and David Searle); Gold distance/Diamond goal (Andy Balkwill). Four members sampled Aboyne: Diana King now has all three Diamonds, Martyn Davies has Diamond height and Barry Monslow, Gold height. Membership is buoyant, boosted by Les Ingram's two-day static display at the University of Birmingham. Two superb steel containers are now installed on site, creating more secure storage for tractors and vehicles. Finally, the most successful club ladder for years sees Phil Pickett first, Dave Benton eight points behind him and Mike Coffee third.
Harry Williams

Surrey & Hampshire (Lasham)

A good end to the summer, with September producing several Silver distances and other badge flights. Hannah Hay completed Bronze and Silver, joining Chris Sterrit, Laurence Wolf, Jeremy Anscomb and Chris Redrup, who have all completed Silver. Not forgetting Silver distance flights by Sian Lane and Martin Conroy. S&H fielded five gliders in the Club Class Nationals, and David Wardrop took Ventus 391 to the Juniors. Winter works are under way: K-8 474 is being recovered; Discus 399, re-gelled. We are now planning to update our "Group 2" gliders, and an order has been placed for a new Ventus 2c, for delivery in early 2005.
Graham Prophet

The Soaring Centre (Husbands Bosworth)

CONGRATULATIONS to Frank McLoughlin and Mo Burijarji on going solo. Terry McKinley has his 100km diploma. Mike Larkin, Brian Scaysbrook and Bill Childs have Silver distance, and Tony Lintott has Silver height. Paul Gleeson did all three legs of his Silver in one flight! In September, we held a very successful Junior Nationals. We also held another excellent task week in August. Many thanks to everyone involved in organising and running these. We were glad to welcome the Kenley pilots on their annual expedition. On October 19 we celebrated our 50th anniversary, with a formal dinner attended by over 130 members, old and new. We also had a display at the airfield of the 24 types of gliders that the club fleet has ever had, ranging from a Tutor to the Duo Discus. University gliding is still going strong. We have regular members from Warwick and hope that Coventry students will be with us again soon. Our new Rotax Falke has proved very popular, with over 250 hours flown so far. We will be holding our Children's Christmas party on December 21, and our annual dinner and prizegiving on January 18. There will be an expedition to the Mynd in February/March.
Siobban Hindley

Trent Valley (Kirton-in-Lindsey)

John Williams took an excellent fourth place in the Club Class Nationals. Ray Parkin is a full and motorglider instructor once more and Simon Grant has an assistant rating. Richard Trussel is solo, Pat Sellers has Silver height; Paul Daubany has a Cross-country Endorsement. Horst Lange will be flying with us again, complete with new hip, which could be an advantage if we ever land out 10 miles from civilisation as we did recently.
John Kitchen

Ulster (Bellarena)

GETTING prime-time television exposure on a BBC1 programme "Sky High" will, we hope, attract recruits. Peter Richardson was an unassuming ambassador, with an obvious love of gliding. Further publicity followed from a group of Department of Agriculture staff who took sponsored flights as part of a team-building exercise and raised much needed funds (£900) for the Foyle Hospice. The annual safari to the beautiful beaches of Inch and Fermoyle in Kerry at the end of September was not blessed with exceptional soaring. True to form wave set up as we headed home! Our Cub is out of action but it is business as usual thanks to our second one.
Seamus Doran

Vale of White Horse (Sandhill Farm)

THE acquisition of our own tug is a great success, and has encouraged enthusiastic flying on days when, despite being thermic, making contact and getting away would have been much more difficult from a winch launch. Our annual dinner and awards ceremony was in late September and Cliff Beveridge's excellent cooking was once more much appreciated. Notable among the awards was the joint one to Stuart Pepler and Gerry Brown for their cross-country flying when Diamond distance only just eluded them, and that to Mike Skinner for his indefatigable work on behalf of the club. Our congratulations also go to Richard Chapman for a Diamond height gain during a visit to Portmoak.
Graham Turner

Welland (Lyveden)

THE long summer has put 16 pilots from our little club on the National Ladder: Jason Hammett with Silver and 100km Diploma, Peter Pearson's 100km part 1, Peter Heywood's Silver height (at Sutton Bank), Paul Porter's Silver distance, Bill Burgess' and Dick Short's Diamond goals and even CFI Nigel Perry's downwind dash to Aston Down in the K-8. Sadly (for him) Chris Curtis's performance in the Hus Bos Regionals would have earned him over 4,000 points but for National Ladder exclusion rules. Michael Neal continues to K-6E more kilometres than anybody. Mike Taylor has Cross-country Endorsement and Silver height. Toby Walker has soloed. We made our presence known intermittently in the East Anglian Inter-club League and the Anglia Cup Weekend. Thanks to Hus Bos for hosting a task week for us and the BGA for the loan of the plastic Puchacz on the club's Flying Week. A group has just returned from Sutton Bank and another is heading for Aboyne.
Strzeb

Wolds (Pocklington)

THE annual Christmas dinner and prizegiving, judging by the accomplishments this year, will be a lengthy affair. Mike Cline has his 50km at last, Chris Gibbs after 14 glider flights went solo, Mike (17) and Tim Pickles, Ian Caldwell and Hugh Williams also went solo. Tom Ruffell also re-soloed after 21 years' absence. Tim Milner sneaked off and won the Club Class Nationals without telling anyone. Members are thinking about plans for a new clubhouse and improving the general facilities – we don't think it will last another winter season of social activities, such as the 'Free Ale Night' the 'Children's Christmas Party', and the 'Bonfire Bash'. In fact, it will probably collapse during the 'Mike Fox Leaving England Extravaganza', which is bound to be being planned by someone.
Ged McCann



*Anthony Hollings of **York GC** after completing Silver at Portmoak in his Carmam 15/34 – a French kit rather like a Libelle, with a 37:1 L/D and fixed undercarriage – built by his father, Tom, in his garage*

Wyvern (Upavon)

RELATIVELY good weather, a superb 'Longest Day' party and two task weeks run by the CFI, Pat Farrelly, have made this summer one of the best for years. Just under 7,000km were flown between April and October, with nine flights over 300km. Since going solo on July 28, Dane Williams completed two Bronze legs, one-hour, two-hour and five-hour soaring flights and his Silver height, all in a month. Jagjit Marwaha and Lewis Williams both went solo on their 16th birthdays. Nobby Reid has completed Silver and along with Brian Penfold and Peter Jenkins, passed BI training. Werner Stroud completed his Assistant course and Jane Goddard has completed Bronze. Sadly there isn't enough space to list all the other achievements. The Christmas dinner and AGM on December 7 sees Jamie Sage hand over the chairmanship to David Ockleton after some five years at the helm. *www.wyverngliding.org.uk*
Brian Penfold

York (Rufforth)

WE are delighted to have had buoyant applications for membership this summer, and we now have four female members under the age of 22 as well as several young male trainee pilots. Our operations in late summer have continued to break records, keeping our finances in excellent shape, and at long last the loan for the purchase of land has been fully repaid. The SF-25C motorglider has returned after a long refurbishment, resplendent in Faulkes Flying Foundation colours – a striking yellow and black – with a new engine and propeller. The aircraft is now owned by the FFF.
Mike Cohler

Yorkshire (Sutton Bank)

THE felling and clearing of the trees at what is now known as "The Sharp End" has been completed, and it remains only to convert an area looking like a World War One landscape into usable airfield. The club held an open day on September 14, raising some £700 in support of the Yorkshire Air Ambulance. Our task week was well supported, Bill Payton winning the trophy in what were difficult conditions. Two new turning points were established: DRX = Drax power station which resembled a YGC satellite airfield for a few hours and NFG = Not Far from Goole to accommodate Gary Harvey's claim. The event combined with the Universities' week, the students appreciating our winch launches and ridge flying. We hosted the Inter-club Finals, coming 3rd. John Lynas completed what might have been a 500km flight but his flight recorder battery expired at Doncaster. Beryl, our office manager, has decided to retire. Her bright smile and wonderful co-operation with both our members and the public will be sorely missed.
Bryan Boyes

Obituaries

Keith Chichester – Aquila

KEITH'S sudden death, aged only 50, from a brain haemorrhage was a huge shock. For over 30 years our gentle giant was a mainstay of the club, and neither the launch-point nor hangar packing went so smoothly as when he was around. Keith (1952-2002) was an apprentice at Hawker's in Hatfield when he joined and then a draughtsman, commuting to Aquila most weekends. After moving to BAe Woodford, he looked briefly at nearer clubs but soon returned. For many years Keith was everyone's favourite winch driver, training many others. Gaining his Silver, he took part in club expeditions, inter-club competitions and vintage meetings, flying both club machines and his own Skylark. He was also an air experience instructor for some time. But Keith will be remembered most at the launchpoint. He was always willing to help, giving up his own flying slot to ensure things ran smoothly. During rainy days, quiet chats also revealed his encyclopaedic knowledge of gliders and aircraft. Keith was Aquila, a friend and a gentleman we will sorely miss, but not forget. We send our sincerest condolences to his sister.

Ron Sangster

Gerald Fellender – Cotswold

IT IS with great sadness that we report the death of Gerry Fellender (1950-2002), after a long illness. Gerry, a long-standing member of the club, had an enthusiasm for gliding which he readily passed on to others. As a Basic Instructor he delighted in introducing others to the sport. His calm and patient approach put people at their ease and inspired confidence: skills which he also used to great effect as an advanced driving observer, and latterly when he set up his own business, as a driving instructor. He will be sadly missed, and our thoughts are with his wife, Jean.

Don Brookman

Julian Hine – Devon & Somerset

JULIAN Hine (1943-2002) died in July after a long struggle with Multiple Sclerosis. Julian's love of flying started as a child, when he built and flew many model aircraft. In 1971 his interest was re-kindled after a flight in a Cessna from Dunkeswell Airport to a private airfield in Cornwall in connection with his business as a poultry farmer. Julian soon decided that gliding was the best way to achieve his ambition to fly and joined the Devon & Somerset GC, where he quickly progressed to solo. A succession of syndicate gliders finally brought him to his beloved DG-100 in which he achieved many notable cross-countries, the best being North Hill-Ely Cathedral-Cambridge for his Gold distance. Julian became an instructor in 1980 and was CFI at North Hill from 1984 to 1986. In 1992 his flying came to an end as Multiple Sclerosis relentlessly took its toll. His two children, who still retain an interest in gliding, succeed him.

Martin Hine

Peter Ramsden – York

PETER Ramsden (1934-2002) died suddenly at his home in August, after three decades of flying. An accomplished rugby league player, he was included in the "Hall of Fame" at McAlpine Stadium for his legendary success at Wembley in 1953. After his rugby career was over he joined the gliding club at Rufforth. Peter became its first cross-country pilot, and was the first Rufforth-trained pilot to enter a gliding competition. He won – and went on to compete at nationals level. Peter also became a full-rated instructor and PPL and "did his bit" flying the tug. Gliding was a major part of Peter's life. He served as CFI, tugmaster, and on the club committee. His contribution to Rufforth has been immeasurable – the bricks and mortar of the first hangar being a small tangible legacy to his presence. Peter modestly once said: "I'm a self-educated brickie, and I do my best". Many glider pilots will remember him as a man small of stature but great in heart and spirit who prepared many for their enjoyment of gliding. He leaves his partner, Dawn, son Christopher and granddaughter Alexandra, daughter Lynn and grandson Liam and great-grandson Lee.

Lynn Hepworth (nee Ramsden)

BGA Badges

	Pilot	Club (place of flight)	Date
DIAMOND BADGE			
628	Mike Philpott	Booker	13/7/02
629	John Bugbee	DSGC *(Fuentemilanos)*	17/8/02
630	Stephen Thompson	Deeside	31/8/02
Diamond distance			
1-894	Derek Coppin	Lasham	14/7/02
1-895	Mike Philpott	Booker	13/7/02
1-896	David Bromley	Four Counties	13/7/02
1-897	John Bugbee	DSGC *(Fuentemilanos)*	17/8/02
1-989	Nicholas Smith	Cranwell	13/7/02
1-899	Stephen Thompson	Deeside	31/8/02
1-900	Simon Barker	Wolds	13/7/02
Diamond goal			
2-2851	Tanya Starey	Booker	14/7/02
2-2852	James Quartermaine	Yorkshire	13/7/02
2-2853	John Hingley	Cambridge	14/7/02
2-2854	Jane Whitehead	Cambridge	13/7/02
2-2855	Brian Pearson	Staffordshire	14/7/02
2-2856	Mark Davis	London	15/7/02
2-2857	Richard Short	Welland	13/7/02
2-2858	Alan Jenkins	Aquila	13/7/02
2-2859	Darren Lodge	Burn	13/7/02
2-2860	Richard Chapman	Bidford	25/7/02
2-2861	Keith Green	Lasham	14/7/02
2-2862	Laurence Gerrard	Buckminster	31/5/02
2-2863	Manuel Williamson	P'boro & Spalding	13/7/02
2-2864	Stephen Woolcock	Cambridge	16-Apr-02
2-2865	Peter Kingwell	Cranwell	13/7/02
2-2866	Philip Dolling	Aquila	14/7/02
2-2867	Ernest Burgess	Welland	14/7/02
2-2868	Dominic Haughton	Midland	31/5/02
2-2869	Mark Roberts	Anglia	1/9/02
2-2870	Ian Deans	Lasham	1/9/02
2-2871	Nigel Pocock	Surrey & Hants	1/9/02
2-2872	Mark Dexter	BWND *(Chauvigny)*	21/8/02
2-2873	Dennis Stangroom	Wyvern	1/9/02
2-2874	Stephen Thompson	Deeside	31/8/02
2-2875	Julian Bayford	Cambridge	1/9/02
2-2876	Alan Flintoft	P'boro & Spalding	8/9/02
2-2877	David Crowhurst	P'boro & Spalding	1/9/02
2-2878	Nick Brookes	Oxford	13/7/02
Diamond height			
3-1579	Richard Jones	Fulmar	17/8/02
3-1580	Roger Bowker	Heron *(Omarama)*	16-Mar-02
3-1581	Lyn Ferguson-Dalling	Deeside	31/8/02
GOLD BADGE			
2240	Tanya Starey	Booker	14/7/02
2241	James Quartermaine	Yorkshire	13/7/02
2242	Randall Williams	East Sussex *(Gap)*	26/7/02
2243	Richard Short	Welland	13/7/02
2244	Alan Jenkins	Aquila	13/7/02
2245	Laurence Gerrard	Buckminster	31/5/02
2246	Manuel Williamson	P'boro & Spalding	13/7/02
2247	Philip Dolling	Aquila	14/7/02
2248	Stephen Thompson	Deeside	31/8/02
2249	Julian Bayford	Cambridge	1/9/02
Gold distance			
	David Bowtell	Lasham	14/7/02
	Tanya Starey	Booker	14/7/02
	James Quartermaine	Yorkshire	13/7/02
	John Hingley	Cambridge	14/7/02
	Jane Whitehead	Cambridge	13/7/02
	Roderick Salmon	Burn	13/7/02
	Randall Williams	East Sussex *(Gap)*	26/7/02
	Mark Davis	London	15/7/02
	Richard Short	Welland	13/7/02
	Alan Jenkins	Aquila	13/7/02
	Darren Lodge	Burn	13/7/02
	Richard Chapman	Bidford	25/7/02
	Keith Green	Lasham	14/7/02
	Laurence Gerrard	Buckminster	31/5/02
	Manuel Williamson	P'boro & Spalding	13/7/02
	Stephen Woolcock	Cambridge	16-Apr-02
	Simon Twiss	Lasham	23/6/02
	Philip Dolling	Aquila	14/7/02
	Ernest Burgess	Welland	14/7/02
	Victoria Grayson	London	13/7/02
	Mark Roberts	Anglia	1/9/02
	Ian Deans	Lasham	1/9/02

Salutary Soaring: it nearly happened to me!

AFTER many years of accident-free gliding, an incident occurred which seemed to require some thought as to its cause. Almost an accident.

The Scene was a small gliding club's grass field, which has an upward slope on four approaches and a slope down on the last, largely inverted-saucer shape. The runway being used was the "downhill" one.

The Day brought a light northerly wind, which meant that no "runway" was directly into wind. A day when cloudbase was around 6,000ft with about three-eighths cloud cover. Plenty of thermals.

The Pilot was (still is) a fully experienced rated instructor in his seventies, who has thousands of hours.

The incident – an overshoot resulting in no damage. Why the fuss? Well, wouldn't you want to know what could bring an almost-serious overshoot about? I did, and so I analysed why, oh why. As Thora Hird said in one of her scenes when a 90-something friend died: "Why? Oh why?"

Well; the first thing of note was that I hadn't had a particularly good night's sleep and awoke very early for me; probably because my wife was in hospital for a week with an operation behind her. Yes, behind her! Details irrelevant.

After an invigorating flight of four hours in ideal conditions it was time to return to the field. The glider was a Club Libelle with excellent braking abilities in which I have had hundreds of hours and, in the distant past, several field landings without incident. What could go wrong? I was not aware I was tired at the time, but probably was.

After arriving overhead in the vicinity of 1,500ft I announced on the radio I would be landing after a left-hand circuit. This was duly carried out with an arrival downwind of the appropriate runway. Committed to a left-hand finals landing, I heard the radio say that the runway was obstructed. By a car towing a glider along it. Although this had been seen and noted, I gained an impression that a glider was on the approach below me, unnoticed. This was no time to be adding to the constriction, especially as an overshoot would lead to running into falling ground! The obstruction itself didn't present a problem, as I had height enough to let the runway clear.

'With full airbrake and a steep approach I was still airborne when I should have stopped!'

I considered it very dodgy to turn in the opposite (right-hand) direction if another glider was on the approach. At the time it seemed prudent to forget the original runway and continue in a left-hand circuit to choose an equally suitable runway. This entailed a lowish circuit on the upwind scale of the field (How many times have I extolled the virtues of a "downwind circuit"?) With the re-selected circuit completed, bearing in mind I was low, I turned in early. Too early. With full airbrake and a steep approach I was still airborne when I should have stopped! There was no headwind component!

After a full-airbrake groundrun the long grass at the side of the small amount of runway remaining was a welcome sight. The approaching downhill slope to the boundary fence was not.

Fortunately I stopped in time. Another 20 or so feet of height would have had serious consequences. All that was damaged was my ego... and another victory for Mother Nature.

Post-inspection thought. The radio message was from a glider at 4,000ft. Good spotting, but confusing.

My error was simple – getting tired without realising it.

Pilot	Club (place of flight)	Date
Nichol Riggot	Lasham	14/7/02
Christopher Lewis	Lasham	14/7/02
Mark Dexter	BWND *(Chauvigny)*	21/8/02
Dennis Stangroom	Wyvern	1/9/02
James Wilson	BGGC *(Hus Bos)*	1/9/02
Stephen Thompson	Deeside	31/8/02
Arthur Docherty	Cranwell *(Hus Bos)*	1/9/02
Alastair Harrison	Cotswold *(Hus Bos)*	1/9/02
Simon Barker	Wolds	13/7/02
Julian Bayford	Cambridge	1/9/02
Alan Flintoft	P'boro & Spalding	8/9/02
David Crowhurst	P'boro & Spalding	1/9/02
Nick Brookes	Oxford	13/7/02

Gold height

Lyn Ferguson-Dalling	Deeside	31/8/02
Michael Crews	Borders	12/1/02

SILVER BADGE

11076	Chris. Chamberlain	Bicester	13/4/02
11077	Paul Whipp	London	2/8/02
11078	Mark Laver	Stratford	19/7/02
11079	David McLean	Scottish	13/8/02
11080	Richard Butler	Chilterns	14/7/02
11081	Michael Howard	Four Counties	13/7/02
11082	Kathleen Barnes	Shenington	15/8/02
11083	Christopher Millson	Cambridge	18/7/02
11084	Stuart Carmichael	London	24/6/02
11085	Rory O'Conor	Yorkshire	14/7/02
11086	Allan Reynolds	Midland	22/8/02
11087	Graham French	Fenland	21/8/02
11088	Howard Williams	Bidford	21/8/02
11089	Sarah Platt	Midland	22/8/02
11090	Andrew May	London	19/7/02
11091	Tim Sands	Scottish	18/8/02
11092	Cliver Thrower	Derby & Lancs	21/8/02
11093	Anthony Claiden	London	12/8/02
11094	George Hall	Borders	28/7/02
11095	Richard Cust	Burn	13/7/02
11096	Neil Armstrong	Kestrel	19/6/02
11097	David Mands	Northumbria	27/7/02
11098	David Trouse	Yorkshire	16/8/02
11099	Antony Ettridge	Southdown	24/7/02
11100	Paul James	Trent Valley	3/8/02
11101	Carol Marshall	Dorset	24/7/02
11102	Robert Nichols	Burn	13/7/02
11103	David Ireland	Stratford	1/9/02
11104	Robert Williamson	Bristol & Glos	31/8/02
11105	Bill Childs	Soaring Ctr	1/9/02
11106	Paul Holdnall	Wrekin	1/9/02
11107	Anthony Hollings	York	13/7/02
11108	Graham Bowser	Black Mountains	31/8/02
11109	Richard Billany	Midland	22/8/02
11110	Paul Barnett	Lasham	24/8/02
11111	Sheradan Roberts	Booker	14/7/02
11112	Ben Watkins	Surrey Hills	21/8/02
11113	Peter Cornthwaite	Cranwell	1/9/02
11114	Julian Bane	Cambridge	2/9/02
11115	Martin Conboy	Lasham	31/8/02
11116	Andrew Lenthall	Lasham	1/9/02
11117	Paul Gleeson	The Soaring Centre	1/9/02
11118	Duncan Reed	Wyvern	2/9/02
11119	Geoffrey Searle	Stratford	27/8/02
11120	Christopher Huck	Cotswold	13/7/02
11121	John Whitwell	Essex	5/9/02
11122	Christopher Shepperd	Nene Valley	31/8/02
11123	Tom Newham	Four Counties	1/9/02
11124	Darren Arkwright	Lasham	1/9/02
11125	John Donovan	Shenington	22/8/02
11126	Stephen Morgan	Portsmouth Naval	28/8/02
11127	Christopher Jones	Staffordshire	17/7/02
11128	Nigel Greenwood	Cotswold	1/9/02
11129	Brian Scaysbrook	Soaring Ctre	5/9/02
11130	Christopher Sterritt	Lasham	1/9/02
11131	Michael Collett	Booker	4/9/02
11132	Martin Roome	Lasham	1/9/02
11133	David Broxholme	Wolds	13/7/02

UK CROSS-COUNTRY DIPLOMA

Pt 1	Rory O'Conor	Yorkshire	21/8/02
Pt 1	Howard Williams	Bidford	21/8/02
Pt 1	Tom Edwards	PNGC	17/7/02
Pts 1 & 2	Robert Nichols	Burn	13/7/02
Pts 1 & 2	Terry McKinley	Vectis	21/8/02
Pts 1 & 2	Bill Childs	Soaring Ctr	1/9/02
Pt 1	Anthony Hollings	York	13/7/02
Pt 1	Robin Birch	Cotswold	2/8/02
Pt 1	Ian Norman	Scottish	14/8/02
Pt 1	Stafford Linott	Kent	14/7/02
Pts 1 & 2	David Keith	Shenington	4/9/02

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SAFETY THROUGH UNDER-STANDING IS BETTER

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Accident/incident summaries

by Dave Wright

AIRCRAFT Ref	Type	BGA No	Damage	DATE Time	Place	PILOT(S) Age	Injury	P1 Hours
069	Dart 17R	1330	Minor	12-May-02 1645	5nm Easterton	62	None	230

The pilot took an aerotow retrieve back to his launch airfield. The tug pilot was surprised when he pulled off 500ft below the agreed height (He had not reset his altimeter for the aerotow airfield). He tried to gain enough height to get to his site but had to make a field landing. On landing the undercarriage collapsed due to not being locked down.

070	Mistral	4796	Minor	03-Jun-02	Wormingford	47	Minor	57

The pilot was making his first flight on type and received a full briefing before the winch launch. The glider rotated gently into the climb but then the pilot, believing he was too slow, lowered the nose and released. The glider was then seen to oscillate in pitch, bouncing heavily before a controlled landing was made.

071	ASW 19	4550	Substantial	19-May-02 1614	Winthorpe	49	None	164

The pilot, with limited experience on type, flew the glider in the gusty crosswind conditions and attempted to soar. He hit strong sink and so flew a shortened circuit. After lowering the wheel he mistakenly moved the gear lever instead of the brake lever. Oscillating, the glider landed heavily, bounced then groundlooped as a wing touched.

072	DG-800 motorglider	G-MSIX	Substantial	15-Jun-02 1400	Cropthorne Worcs	71	None	1423

During a turbo competition the pilot ran out of lift and attempted to restart the engine at about 1,000ft. It fired briefly then failed and he could not start it. At 6-700ft he lowered the wheel to land in a selected field. Approaching the field, the glider sank into the hedge as negative flap was selected by error or caught on a sleeve.

073	Std Cirrus	4639	None	13-Apr-02 1500	Weston on the Green	32	Minor	137

The pilot made a normal approach and landing on the airfield but during the ground run the glider hit a pot hole that was hidden in the long grass. The tall pilot, raised by a two-inch thick energy-absorbing cushion, hit his head on the rear cockpit arch. He briefly lost consciousness and for some days had problems with memory, headaches and vision.

074	Nimbus 3DT	4458	Substantial	23-Jun-02 1704	The Park	71 54	None None	2300 850

The accident occurred during landing when P1 attempted to land on a part of the airfield that had a cross-field slope. The Open Class glider's wings were not kept parallel to the slope and the right wingtip touched the ground. This caused a ground-loop, which broke the fuselage.

075	LS7 WL	3882	Substantial	19-Jun-02 1445	Dunstable	38	Minor	533

During a cross-country flight the pilot felt unwell so, correctly, returned to his airfield. At 1,000ft he lowered the gear, but then on finals thought he had forgotten, and in error raised it. He then failed to round out fully on an upsloping part of the airfield. He suffered some back pain but x-rays revealed no serious damage.

076	SZD Puchacz	1748	Minor	02-Jun-02 –	Bidford	–	None None	640 54

During basic instructor training P2 failed to make a properly held off landing and P1 was slow to take control. The resulting heavy landing broke an undercarriage tube which appeared to have been suffering from a pre-existing crack. This damage was accentuated by subsequently towing the glider.

077	Astir Club	4891	Minor	01-Jun-02 1430	Tibenham	42	None	7.5

The pilot decided his approach was too close to other gliders parked on the runway so chose to stretch the glide and land further up the field. He closed the brakes but then re-opened them again and lost speed. The glider stalled in from about 15ft, bounced up several feet before landing again when the canopy came off and smashed on the runway.

078	DG-101	3139	Minor	19-Jun-02	West Dean 1530	32	None	40

During a Silver distance attempt the pilot found no lift so picked a grass field. During the second half of the ground run a wingtip caught in the grass, which was longer than expected, and the glider groundlooped. Later inspection revealed damage to the tailplane fittings.

079	PA25 Pawnee Tug	G-ATFR	Minor	16-Jun-02 1313	Milfield	54	None	510

At 450ft on the aerotow the tug lost power so the pilot signalled the glider to pull off. P1 did this and positioned his circuit to keep clear of the tug's probable landing area. Both landed safely. The tug's port, rear engine cylinder was split away from the engine block. Engineers suspect a pre-existing crack, possibly caused by shock cooling.

080	K-7	1664	None	12-Jun-02 1226	Perranporth	70	Minor	0.1

The pilot was to make his first solo glider flight (he held a current PPL(H)). He was prompted and seen to physically check the brakes before launch but at about 10ft off the ground they were seen to open. The tug was called by radio and he signalled with the rudder but the glider released. With brakes still open he undershot, landing heavily.

081	AC-4C	–	Minor	19-Jun-02 1450	Shenington	49	None	34

The pilot landed with the wheel up on the grass landing strip causing minor damage. The undercarriage retraction system on this type consists of two controls which have to be operated in sequence to raise or lower the wheel. A knob to unlock the u/c from either position and a lever to raise/lower the wheel. The pilot pushed this the wrong way.

082	Twin Astir	–	Minor	–Jun-02	Incident Rpt	–	None	–

There had been a very serious accident earlier that day and members were somewhat in shock. A glider had been parked near the hangar and mistakenly left attached to a buggy. A club member later used the buggy to attend to another press reporter and did not notice the rope. The glider lurched forward, narrowly missing members and hitting the hangar.

083	Vega	2710	Minor	29-Jun-02 1600	Chiddingly East Sussex	44	None	466

During a cross-country flight the pilot had to land out. He landed in a sloping, crop field after his original choice was seen to have undulations. The glider ground looped, damaging the wings and main pin.

084	ASW 20CL	–	None	–Jun-02	Incident Rpt	58	None	821

While soaring the pilot selected thermal flap setting and there was a loud noise followed by the lever jamming. Seeing the left flap was in the full negative position, he reduced flap on the right wing to improve roll control. He chose to make a fast (to keep control) flapless landing in a long into-wind field. A hotelier was found disconnected.

➢

Accident/incident summaries (cont)

AIRCRAFT Ref	Type	BGA No	Damage	DATE Time	Place	PILOT(S) Age	Injury	P1 Hours
085	T-21B	3189	Substantial	19-Jun-02	Challock	45 –	None None	700

P1 was making a "type experience" flight in the T21. P2 was briefed on its flying characteristics before the winch launch started. As P1 started to rotate into the full climb attitude the winch power was cut in mistaken response to a launchpoint "stop" shouted to a tractor. The pilot was unable to prevent a very heavy, nose-down landing.

086	ASW 20L	2778	Substantial	04-Jul-02 1515	Nr Aston Down	62	None	419

The pilot was making a marginal (400ft at two miles out) final glide, relying heavily on the glide calculator. He decided that he had better land in a field he had just passed so turned, flew an abbreviated circuit then lowered flaps too early. He undershot the field, clipped a wall and broke the back of the glider in a heavy landing and groundloop.

087	K-13	–	Minor	—Jul-02	Incident Rpt	–	None	–

During pre-flight checks the pilot found he could not move the stick sideways. Inspection showed that an undercarriage rubber had split and jumped out of its housing, jamming the stick. A heavy landing had been made earlier that day and the glider checked and cleared for flight by an inspector, flying twice before the problem was found by removing rear seat.

088	Sport Vega	2758	Write-off	23-Jun-02 1248	Wormingford	22	Serious	415

Returning from a cross-country task, the pilot misjudged a low level "competition finish" and ran out of height after flying a turn back to the field. The glider flew into the tops of trees on the approach and the impact took the wings off. The pilot was thrown out of the cockpit and was seriously injured.

089	Discus Turbo	4687	Substantial	08-Jul-02 1809	Bellarena	72	None	2000

The glider's canopy flew open at about 300ft on the aerotow. The pilot had problems controlling the pitch of the glider and the tug pilot, fearing a tug upset, signalled, then radioed for him to release, which he did. The glider was seen to fly erratically around too a wide circuit before undershooting into the boundary fence.

090	Twin Astir Acro	3574	Minor	18-Jul-02 1500	Nr Popham	71	None	65

The pilot flew out of gliding range of his airfield in strong thermic conditions then hit strong sink. He attempted to reach another airfield but this was not possible so he chose to land in a crop field. The glider groundlooped, damaging the glider's fuselage around the wheelbox.

091	ASW 19	SH5	Minor	10-Jul-02 1355	Near Lasham	33	None	91

While positioning to start a competition flight the pilot had to land out in a field. The combination of an upslope and the wind gradient led to the pilot stalling onto the ground from about 18 inches. The impact damaged the wheel fairing and cracked the canopy.

092	Discus	3874	Minor	14-Jul-02 1620	Lasham	45	None	791

Because of airfield congestion during a competition, the pilot decided to land outside the normal landing run in an area coned-off during repairs. The glider ran across a dispersal pan and dropped into a depression, applying the brake suddenly, causing damage to the mainwheel and wheel brake assembly.

093	PIK-20B	–	Minor	–-Jul-02	Incident Rpt	–	None	4201

While towing the glider to the launchpoint behind a car, the tail dolly broke. As a result the glider collided with the car, damaging the flap and aileron.

094	Ventus C	3781	Minor	05-Aug-02 –	Ellisfield	72	None	699

The pilot was returning to the airfield when the lift failed. Getting low, he chose to land in a grass field rather than risk crossing an area of forest. He saw two fences, several hundred yards apart, and landed between them. During the landing run the glider hit a single-strand fence, which fortunately broke as it slid up the canopy.

095	ASW 15	4129	Minor	07-Jul-02 1540	Upwood	54	None	61

Seeing another glider carry out a landing well up the field the ASW15 pilot decided he would land short, with full airbrake to ensure he had plenty of room. During the roundout, at about 2ft above the ground, the glider stalled and landed heavily. With full airbrake the wheelbrake was also fully applied and the forces caused the gear to collapse.

096	Falke motorglider	G-FHAS	Minor	20-Jul-02 1400	Burn	49 64	None None	28 18

After touchdown the motorglider moved slightly to the left prior to turning right and backtracking on the runway. The left turn continued as the wing caught in the grass, turning the aircraft into the standing crop alongside the runway.

097	Kestrel 20	1760	Write-off	24-Jul-02 1600	Crewkerne	61	None	2500

After a difficult four and a half hour flight the very experienced pilot had to make a field landing. After cramping the circuit the glider stalled during the final turn and the pilot could not recover before hitting the trees. The glider was severely damaged but the pilot escaped with only a slight cut. He believes fatigue affected his judgement.

098	ASW 19B	4532	Substantial	20-Jul-02 1340	Near Hereford	49	None	382

On a cross country conditions deteriorated and the pilot had to make a field landing. His chosen field had an upslope and a crosswind on the longest run. After landing with full brakes the glider suddenly groundlooped to the right as the wing caught the sloping ground. This was aggravated by the crosswind and low number of landings on type.

099	N/A		None	–-Jul-02 1102	Incident Rpt	–	None	–

In the light wind conditions the winch launch was normal until, at the top of the launch, the driver failed to reduce speed sufficiently and the was cable released nearly vertical. Despite a rapid retrieve of the cable it drifted back over the winch and struck two cars parked some 30metres behind it.

100	K-8B	3597	Minor	24-Apr-02 1400	Brentor	56	None	59

The winch launch of the K-8 was taking place with a crosswind and as "all out" was given the glider snatched then slowed due to a bow in the cable. The right wing dropped so the pilot immediately pulled the release just as the tension came back on. The glider's momentum caused a ground loop into the nearby boundary fence.

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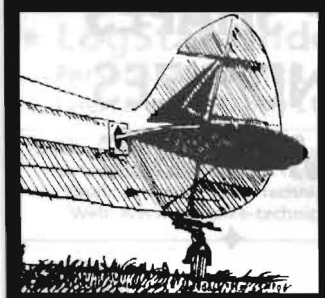
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INDEX TO DISPLAY ADVERTISERS

Airborne Composites	58
Anthony Fidler	66
Baltic Sailplanes	52
Benalla	11
Bicester Aviation Services	17
Bristol & Glos GC	54
BGA AGM	inside front cover
Bruno Brown	62
Cair Aviation	56
Cambridge Instruments	10
Clacton Aero Club	64
Confurn	20
Connection Aviation	66
Cotswold Gliders	64
CP West Ltd	30
Cumulus Soaring Supplies	27
Deeside GC	66
EW Avionics	21
Flightmap Software	57
Glider Instruments	62
Glidingshop.com	63
Hill Aviation	26
Ideal Microsystems	58
Jaxida Covers	58
Joint Air Services	21
Lasham Gliding Society	30, 64
London GC	27
LX Avionics Ltd	13
McLean Aviation	10
Midland GC	14
North Yorkshire Sailplanes	58
Outdoors Show	14
Oxfordshire Sportflying	58
Ozee Leisure	64
Pilot Flight Training	17
RD Aviation/AFE	inside back cover
Rematic	63
Roger Targett	14
Scheibe Falke	17
Scottish Gliding Centre	65, 66
Senasa	20
Severn Valley Sailplanes	65
Shenington GC	20
Sky4 Aviation	64
Skycraft Services	13
Soar Minden	15
Soaring Oxford	22
Southdown Aero Services	52
Southern Sailplanes	outside back cover
Stemme Motorgliders	20
TaskNav	26
The Platypus Papers	58
The Soaring Centre	15
Thomas Sport Equipment	52
TL Clowes/Cumulus	11
Turnpike Technics	62
Waikerie	64
York GC	52
Yorkshire GC	26
Zulu Glasstek	27

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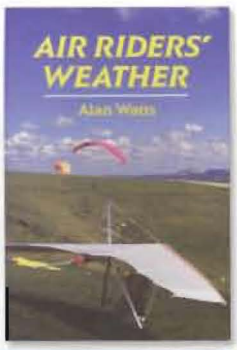
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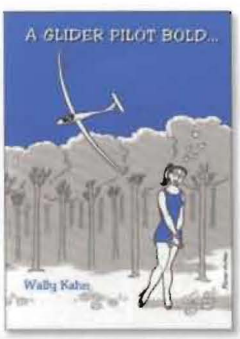
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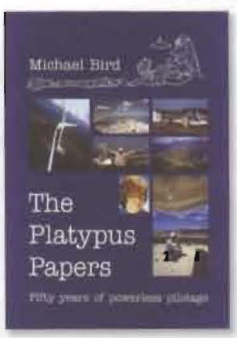
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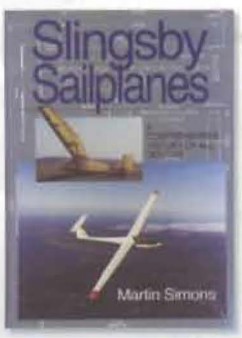
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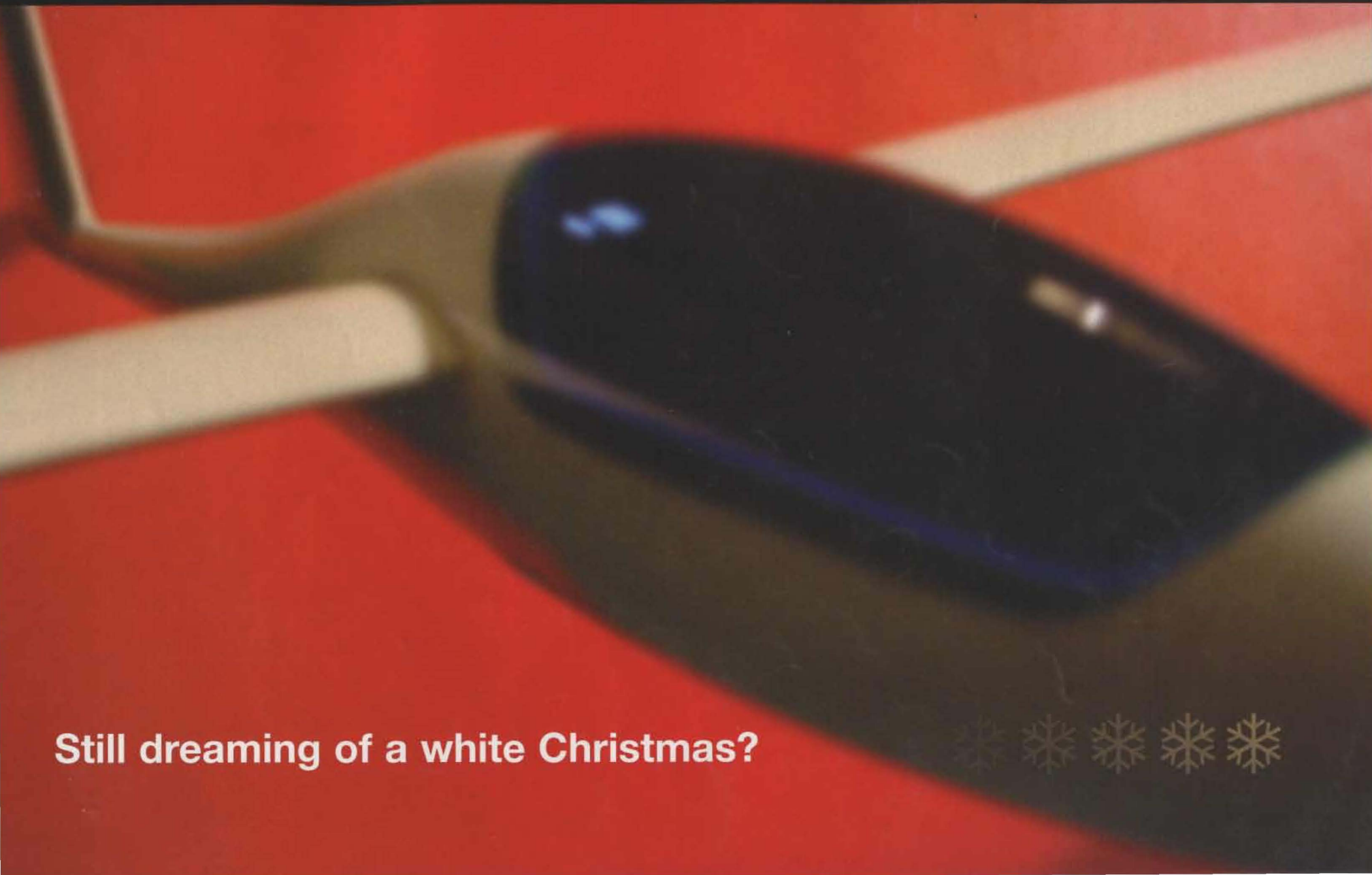
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