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Jun - Jul 2003

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The 18-Metre version of the Standard Class ASW 28 took to the air for the first time in March. Jochen Ewald test-flew it for us from Poppenhausen and took this picture. His flight test is on p18 and to see a picture of an ASW 28-18, see p30

Sailplane & Gliding

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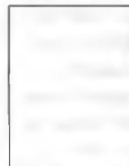
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News in brief

Daventry CTA's base is to be raised by 1,000ft, reports Carr Withall. After years of requests by the BGA airspace committee, to both the CAA and Manchester, that they raise the base of the Daventry CTA between Manchester and Birmingham to FL55, a large area of the CTA will have a base of FL55 with effect from July 10, 2003. Maps with exact co-ordinates will be sent to all clubs. The northern boundary will run from Camphill down towards Stoke on Trent and across to airway B3. The southern boundary will run from B3 at Wheaton Aston towards Blithfield lake and then up to Rocester. This will benefit all pilots who fly cross-country in the area and be particularly beneficial to those from Camphill, Seighford and Cross Hayes.

Congratulations to Royal Aero Club Silver Medal winner Terry Slater and to Cedric Vernon, who was presented with the FAI's Pirat Gehriger Diploma at the RAeC Awards Ceremony as we went to press. A full report will appear in the next issue.

EGU: At the European Gliding Union's annual congress, in Malmö, Sweden, BGA Chairman David Roberts was elected to the EGU Executive Committee as a Vice President. Peter Eriksen of Denmark is President. The EGU, affiliated to the FAI and to Europe Air Sports, comprises 12 national gliding associations and represents gliding interests on all regulatory matters in Europe, including airspace, pilot licensing, airworthiness and maintenance, and operations. Its related organisation in the FAI, the IGC, deals with sporting/competition matters but covers the world. The BGA invited the EGU to hold its 2004 congress in the UK next February, combining it with the BGA Conference.

EAS: The annual conference and general meeting of Europe Air Sports (EAS) was held in The Hague in April; the UK was well represented in several air sports. EAS is the over-arching representative body of the National Aero Clubs of 25 European countries and its focus is on representing the interests of all air sports on all regulatory matters. With the emergence of EASA (European Aviation Safety Agency) as the future regulator above each country's civil aviation authority, EAS has the pivotal role in negotiating future regulatory frameworks. EAS is the only officially-recognised European-level representative body for air sports with the European Commission, and is governed by a five-member board, of which Dr Peter Saundby (BGA Medical Adviser) is a member. David Roberts was elected to the EAS Board as Treasurer in April. A Royal Aero Club offer to host the next EAS Conference in the UK in April 2004, probably in Cambridge, was accepted.

Fees: For every Gliding World Record Claim put forward by the BGA to the FAI there is now a fee of 100 Swiss Francs. This, taking bank charges into account, comes out close to £50. Accordingly, anybody fortunate enough to be in a position to claim a world record will need to pay a fee of £50 to the BGA along with their claim, which will be passed on to the FAI for homologation if successful.

From the BGA chairman

WHILST struggling to meet the editor's deadline, I have reflected on what I have been doing for the last year as Chairman of the BGA.

My time has been dominated by external representational activities in respect of regulatory developments in Europe (see also *It will never be the same*, February-March 2003, p10, and *What's happening in Europe?* April-May 2003, p15). A positive aspect to come out of my plea for volunteers to assist in this area was several calls from glider pilots. So, thank you.

As we look forward to the summer, we shall have plans of what we want to achieve in our flying, whether it is a first solo, or the Bronze Badge, or going cross-country, or beating a record. The various British Teams will be practising with the goal of winning and maintaining our solid reputation for being one of the best competitive gliding nations in the world. As a famous golfer once said: "the more I practise, the luckier I get". And that applies at whatever level of gliding we perform.

With practice comes experience, and with experience, knowledge. That knowledge, backed up by experience, must always be present to maintain our alertness to what

can go wrong if we take our eyes off the ball (or keep them in the cockpit) for even a moment. Gliding, like all forms of fly-

ing, can be very unforgiving in the moments when our concentration lapses. So flying safely with constant awareness of what is going on around us, and always being alert, should be every pilot's goal. Accidents take the gloss off our sport, and most gliding accident reports I read normally reveal a common thread – human lapses in concentration. Don't be the one who falls into this trap, and never think: "it won't or can't happen to me" – because then it more than likely will do.

Safety is the objective of the European regulations being formulated in Brussels. But sometimes I really do wonder about the approach, because the minds of legislators seem to be set on creating rules as the sole means by which safety is achieved. Whilst a basic framework of rules is probably necessary for the technical aspects of aviation, such as airworthiness, and basic operational issues, I hope we can influence the thinking of the rule drafters to focus on how the human factor in aviation can be addressed, without an encyclopaedia of "rules".

How many glider accidents are caused by a technical failure as against those that are caused by human failure? Very few, I can tell you. If as much effort goes into addressing the human factors, without creating a raft of

rules, as will undoubtedly go into technical rules, then we may make progress. But so far I am not optimistic.

On the insurance front, the European Commission's proposals have been going through the committee review process, both in the Council (of Ministers) working group and the European Parliament, in what is known as the "co-decision" process.

The bad news is that, compared with what we knew two months ago when there was an exemption for non-powered aircraft and "ultra light" powered aircraft, the Council working group has now deleted that exemption, but with a "reservation" from the UK.

This means that unless the exemption is re-instated in May or June, gliding will be subject to EU legal requirements for third party insurance and "passenger" insurance.

At the time of writing, an amendment has been inserted to have two weight categories below 2,000kg MTOM with a first break point of 500kg. This doesn't particularly help gliding, and the 500kg figure was not based on our recommendation. However, the change was the result of intense lobbying across several countries against the initial crude first category up to 25,000kg

'I firmly believe that the spirit of gliding will never be quashed by inappropriate legislation or over-zealous rule-making'

with £68m indemnity. The indemnity minima for third parties that go with these amended weight categories are currently about £1.3 million for up to 500kg and £3 million for up to 2,000kg. A Europe Air Sports paper has been submitted to the Commission and the Council, setting out proposed break points at 450kg, 750kg, 1,200kg and 2,000kg, and lower indemnity minima. It remains to be seen whether the EAS paper will become the basis for any further amendment.

All this goes to show that – as a long-standing gliding friend at my own club said – we may have seen the best times in gliding. I am sure he meant only from a regulation point of view, but I firmly believe the spirit of gliding will never be quashed by inappropriate legislation or over-zealous rule making.

I learnt one thing recently. Apparently the use of the French word "directive" in EU speak is interpreted by we Brits as "a regulation or directive", with which we must comply. Apparently the French "translate" it as a recommendation. Now I understand why the waste paper baskets are full in France!

David Roberts
May 8, 2003
d.g.roberts@lineone.net



Dates for your diary

Aerobatic Nationals	Saltby	30 May-2 Jun
"Turbo" Regionals	Bidford	14 Jun-22 Jun
Regionals	Booker	14 Jun-22 Jun
Classic & Vintage Rally	Camp Hill	21 Jun-28 Jun
Regionals	Hus Bos	28 Jun-6 Jul
Junior Worlds	Slovak Republic	5 Jul-19 Jul
World Class Worlds	Slovak Republic	5 Jul-19 Jul
PFA Rally	Kemble	11 Jul-13 Jul
Regionals	Tibbenham	12 Jul-20 Jul
18-Metre Nationals	Tibbenham	12 Jul-20 Jul
Competition Enterprise	Sutton Bank	12 Jul-20 Jul
VGC Rendezvous Rally	Oripää, Finland	18 Jul-21 Jul
VGC International Rally	Jämi, Finland	22 Jul-31 Jul

28th Worlds	Leszno, Poland	19 Jul-10 Aug
Regionals	Lasham	19 Jul-27 Jul
Standard Class Nationals	Hus Bos	26 Jul-3 Aug
Regionals	Sutton Bank	26 Jul-3 Aug
Inter-Services Regionals	RAF Bicester	9 Aug-17 Aug
Club Class Nationals	Lasham	9 Aug-17 Aug
Open Class Nationals	Lasham	9 Aug-17 Aug
Regionals	Dunstable	16 Aug-24 Aug
Two-Seater Comp	Pocklington	17 Aug-24 Aug
K-21 Competition	The Long Mynd	16 Aug-24 Aug
15-Metre Nationals	Booker	23 Aug-31 Aug
VGC Slingsby Rally	Sutton Bank	23 Aug-31 Aug
Regionals	Gransden Lodge	23 Aug-31 Aug
Junior Championships	Nympsfield	30 Aug-7 Sep
Mountain Soaring Comp	Deeside	7 Sep-13 Sep

WORK will start on the Deutsches Segelflugmuseum's new extension to its building at the historic site at the Wasserkuppe – the cradle of the sport of soaring – on June 12 this year. A model of the new building, which is necessary because of a lack of space for exhibits, is seen (right) being shown to the Hessian State Minister for Science and Art, Ruth Wagner (centre). The State is subsidising the 2.8 million-euro (£2 million) development to the tune of 843,000 euros (£600,000), and the museum hopes for support from Germany's gliding community. See also www.segelflugmuseum.de



Scottish pilots start climbing the ladder

At the time of writing (early April) the Scottish clubs have taken a clear lead in all the National Ladders. Very few of the Scottish scores are due to height gains – the leading pilots have already achieved some excellent wave cross-country flights, including a couple of declared and completed 500kms at speeds of around 100km/h. The tables below will be (should be?) well out of date by the time this issue of S&G is published. To see the latest standings, please visit the BGA National Ladder website at www.bgaladder.co.uk where you will also find more complete details of how the top scores were achieved. Some of the claims have been submitted along with logger files, which may be downloaded so that we can all see just how the top pilots made best use of the day. Remember that the National Ladder is open to all UK-based glider pilots. Any pilots who would like to take part should visit the website, where the current Ladder Rules may be found.

John Bridge, National Ladder Steward

OPEN LADDER: 1 Kevin Hook, Scottish GC, 8872pts, 4 flights; 2 Jack Stephen, Deeside GC, 5549pts, 4 flights; 3 John Williams, Scottish GC, 3978pts, 4 flights; 4 Les Blows, Southdown GC, 3170pts, 3 flights.

WEEKEND LADDER: 1 Kevin Hook, Scottish GC, 5754pts, 2 flights; 2 Jack Stephen, Deeside GC, 4162pts, 2 flights; 3 John Williams, Scottish GC, 3105pts, 3 flights; 4 Andrew Warbrick, Deeside GC, 2605pts, 3 flights.

JUNIOR LADDER: 1 Andrew Eddie, Deeside GC, 1334pts, 1 flight; 2 Gareth Francis, Scottish GC, 962pts, 1 flight.

Guy Westgate wins Dan Smith Trophy

THE aerobatic gliding community gathered at Dunstable for the season's opener, the Dan Smith Memorial Trophy competition on March 29. After a spell of good weather it was disappointing to be grounded by vis of less than 2km. After a good meal and social evening, March 30 dawned bright and clear with the first competitors ready to launch to 4,000ft by 09.30hrs (only one had forgotten to reset his alarm as the clocks were put forward overnight – he shall be nameless!) Two of London GC's K-21 gliders, FYF and JWD, were put to good use: 14 competitors each safely flew two programmes of sports figures to complete the competition by 17.30hrs. Gold, Silver and Bronze British Aerobatics Association medals were presented to Guy Westgate, Mike Woollard and Jamie Allen by Nick Buckenham. The Dan Smith Trophy for the top "sports pilot" was won by Mike Collett from Booker for a very consistent and tidy performance. Director Ray Stoward and Chief Judge Dick Happs thanked everyone concerned for a safe and fun weekend.

Final results: 1. Guy Westgate 78.810%; 2. Mike Woollard 77.266%; 3. Jamie Allen 76.658%; 4. Andy Cunningham 76.591%; 5. Brendan O'Brien 75.653%; 6. Alex Yeates 75.594%; 7. Paul Conran 74.165%; 8. Chris Pollard 68.940%; 9. Mike Collett 67.628%; 10. Donald Gosden 65.448%; 11. Chris Cain 61.875%; 12. Mark Erlund 59.156%; 13. Peter Miles 57.713%; 14. Mike Newbound 54.508%

Ray Stoward

News in brief

Devon & Somerset: S&G is sorry to report that on 17 April, 2003, a single-seater Pegase glider from the Devon & Somerset GC site at North Hill, near Honiton, Devon, was destroyed in an accident some 2km north-east of the airfield. Damage to other property was minor and no other aircraft or people were involved in the accident. The pilot, Peter Palm, did not survive the impact. The investigation into the causes of the accident is being carried out by BGA investigators delegated by the AAIB.

Hundreds of the great and the good in gliding from the UK and beyond crowded into a marquee to celebrate Ann Welch's life at her memorial service at Lasham in March. The speakers were Max Bishop, Judy Leden, John Williamson and Fabia Welch. Despite the atrocious wind and rain, which put paid to a planned flypast, the day was a fitting tribute to a remarkable person. Will we ever see a gathering like it again?

World Juniors: the Junior Worlds will be held at The Soaring Centre, Husbands Bosworth, in 2005, as a joint venture between the club and the BGA. Well done to Jez Hood, who came 2nd in the pre-world Pribina Cup at Nitra, Slovakia. Luke Rebbeck and Leigh Wells were 6th and 7th respectively; Anna Wells was the leading woman at 13th. Good luck to all British pilots taking part in international competitions this summer (see top left) – you can follow their progress via www.glidingteam.co.uk

Winners of Royal Aero Club Trust bursaries for Bronze or Silver Badges include Amy Barsby, David Clarke, Sally Longstaff, Amelia Nash, Amy Sentence and Ian Thomson. The RAeC plans to award bursaries again in 2003 and is looking for sponsors. Visit www.royalaeroclubtrust.org for a full list of 2002 winners. The Trust is also running its photographic competition for 2003, which is open until October to entrants with conventional or digital cameras. For details, see the Trust's website.

Finningley: Peel Airports' plans to turn the former RAF base at Finningley, near Doncaster, into a commercial airport have won government approval.

C of A: The introduction of the new BGA C of A has been delayed while the BGA waits to see what effect EASA will have on airworthiness rules.

Apologies to Bob Pettifer, chair of the instructors committee, for missing him off the list of BGA sub-committee chairpeople last issue (p5). Please also note that the phone number for Lakes GC is (w/ends & Bank Hols only) 07860 135447 and its URL is www.lakesgc.co.uk – the URL for Denbigh GC is www.DenbighGlidingClub.co.uk. Apologies that these were incorrect in the last S&G (pp33&36).

Lottery: The winner of the BGA 1000 Club Lottery for March 2003 was Dr R Mackie (£42.50), with runners-up JA Johnston and JG Allen (£21.25). The winner for April was AW Doughty (£42.50), with runners-up WM Cooper and M Costin (£21.25).

Your letters

Avoiding a diplomatic incident

IN the April-May issue of *S&G* we had the excellent Club Directory with a very useful map, the key to which was neatly laid out with each country in its own separate box (p34-35). Except one! Andreas GC is on the Isle Of Man. The Isle Of Man is not in England, it is not in the UK and it is not in the EU. The island also boasts the oldest continuous parliament in the world. To avoid *S&G*'s precipitating a constitutional crisis may I suggest that the map-maker be asked to correct this error in future productions? On the other hand, I suppose we could just annex the UK!

Brian Goodspeed, RAMSEY, Isle of Man

Checks, and Basic Instructors

I WOULD like to reply to the letters by Mary Meagher and Roy Ferguson-Dalling in the April-May *S&G* (p7). Whatever an individual's perception of a standard procedure, the teaching of non-standard checks within a training organisation as championed by Mary Meagher is at best confusing and at worse dangerous. The current check can easily be adapted for misting or heat by saying: "Canopy open until ready for cable". I suspect the main problem is the failure of instructors to realise that "Eventualities" is a CHECK, not a briefing. The launch failure procedure should be part of the pre-flight brief. "E" should be eventualities as briefed (engage brain), followed by continuous monitoring of wind, potential ground or air conflicts and availability of emergency landing areas.

I am not sure what to make of Roy Ferguson-Dalling's letter on Basic Instructors. They are by definition competent pilots starting their instructional career and taught to the same syllabus as all instructors. I have found them in general to be conscientious and very aware of their responsibilities, and to suggest they let the aircraft pitch up and down until their student is sick is nonsense. The suggested addition to the lesson is valid, but I always thought it came as a natural progression when teaching attitude control. Apart from a short BGA course and five-year check, basic instructors are trained and supervised by their club. Their instructional standard will reflect the help and supervision given by that club's senior instructors. As Roy has been a professional instructor and Deputy CFI at his club for a number of years he is well placed to ensure that trial lessons are conducted to a high standard.

John Dransfield, ABOYNE, Aberdeenshire

Preparing for Eventualities

MAY I suggest that "Eventualities" should be covered as part of the pre-flight briefing (or self-briefing) rather than the pre take-off check? The pre take-off check should only involve items to ensure that the glider is in the correct configuration for the launch, and if kept to that should not take long enough for the canopy to mist up.

Ken Brown, PORTISHEAD, Bristol



Club map prompts international conflict? See left...

Circuit planning

BOB Pettifer's article in the February-March 2003 issue of *S&G* (*Circuit Planning*, p28) is timely and welcome – I just hope the distilled wisdom doesn't go unheeded. Inaccurate landings, the result of inadequate circuit planning, have been around for as long as I can remember – and that's a scary thought! Two comments, which both address safety. Bob makes reference, as a precursor to joining the circuit, to "losing height around the high key area", creating a picture of spiral descents right in the middle of the highest traffic area in the vicinity – much better to lose surplus height elsewhere. Bob also talks of "downwind checks" – when practical it's much safer to do these before reaching the high key ("pre-landing checks"?) when the workload is less. This removes the distraction on downwind when the pilot should be concentrating on flying the glider and looking out to monitor position, angle and traffic. Both these are, perhaps, small points taken in isolation, but important if we are trying to instill a safer, get-it-right, culture.

Dean Carswell, MIDLOTHIAN, USA

A seasoned campaigner

"I DON'T believe it!" Perhaps I'm paranoid but, having written to *S&G* (*Not the end of the season!* December 2002-January 2003, p8) bemoaning the use of the word "season" by the BGA, I couldn't believe what I found in the latest issue from the BGA's Communications Officer. The very first paragraph of *Communication News* reads: "By the time you read this, spring should be in full flow and, hopefully, the prospects for a great soaring season will be good".

As if that wasn't bad enough even Platypus has a go at me! He thinks the recent flurry of *Haiku* writing has something to do with the period between Christmas and the soaring season being the ideal time for fallow minds to become fertile. Well I'm sorry I didn't

have time to write any *Haiku*, I was too busy keeping my mind alert and stimulated by soaring!

Please, please, please don't insult those pilots who gain duration flights, Gold and Diamond heights and who cover lots of kilometres by telling them they haven't been soaring. Promote gliding for its breadth of experience not its restrictive "season".

Andrew Bardgett, NEWCASTLE UPON TYNE

Keith Auchterlonie, BGA Communications Officer, replies: Sorry, Andrew. You are, of course, 100 per cent correct. Living in Scotland, I should know this and I hope that you southern pilots will visit us up here to make the most of our fantastic wave (and cover lots of kilometres). Andrew makes a good point and I, for one, will be careful in future not to give the impression that this is not a year-round sport.

Varifocal lenses

HAVING recently returned to gliding after a long break I was worried that the varifocal-focal spectacles that I had been using for a considerable time may cause problems, as I was aware that they were not advised. I discussed this with my optician, who said I would probably have more problems adjusting to bifocals than a pair of the more recently-designed varifocals. I now have a pair of Varilux panamic lenses (there are others similar) which are much better at eliminating distortion. The lenses cover an arc of about 120° and the clear vision is reduced to about 100°. What I found more troublesome was the tendency for lines above eye level to bend up and those below to bend down. This could make an object appear higher or lower than it actually was. The new lenses have virtually eliminated this.

One other factor I have used to enlarge the clear view area is to have the lenses centred about 4mm lower and 1mm wider than my eye centres. Another option, which may have been better, was to have contacts for distance correction and half-moon for reading. Unfortunately, the contacts currently available are not suitable for my eyes.

I hope that this may be helpful to other pilots, but it is probably best to make sure that you can change the lenses if they are not suitable: some opticians are reluctant to do this at no cost. I had four pairs made before I was satisfied and felt slightly guilty about it.

I would like to know whether the newer varifocal lenses are still not recommended?

Derek Himsley, ASHFORD, Kent

BGA Medical Adviser Dr Peter Saundby replies: Recent advice is contained in the IAA guidance manual.

I quote: "These progressive glasses enable the selection of proper focussing by tilting of the head. The earlier generation of these glasses created an annoying and possibly dangerous distortion to the right and left of the central zone. These distortions are much reduced in the current lenses. Some people are enthusiastic wearers of these lenses while others claim that they prefer ordinary bifocal or trifocal lenses. Whether they will be accepted by the individual subject cannot be foreseen; today, however there is no reason to condemn their use by air crew."

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



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Your letters

➤ Richard – did you land near Thorne?

THE owner of a riding stable near Thorne recently visited us at Burn GC wanting details of how he could claim the glider flight you offered him when he helped to retrieve your glider from his field last July, presumably during the Northerns.

Unfortunately he cannot remember your name and address, except that it was "down south". We would like to honour your offer, but who are you please and where do we send the bill?

By the way, can anyone help us with the design of a reliable automatic circuit for the UP SLACK and ALL OUT switching of our signal lights? At present no two members have similar control over their flashing fingers and our winch drivers get confused.

Bill Thorp, BRAYTON, Selby

Motorglider instructors

BOB Pettifer's reply to John Northen's letter (*Motorgliders and training*, April-May 2003, p9) is like the curate's egg: good in parts. We would all agree that instructors should demonstrate competency and safety in the exercises that they teach. The key word here is competency. So 50 per cent of full cats don't make the grade. Has he tested the same competencies in assistant cats who hold motorgliding solo qualifications? If not, his methodology is flawed. I know some really cracking Assistant Cats who could go on to be Full Cats but can't afford the extra cost. They already struggle to keep their own private/syndicate glider insured and accept that they will often be unable to fly it because they are instructing for the good of the club.

Ahhh! Now there's the rub, we are a small club, no pool of rich gliding types to pick up the expected cost. Well, we all know that the BGA runs at its best when legislating for the Lashams of the movement. Bob, it's often not that the Ass Cat doesn't have the skill, dedication and commitment to "meet the full cat criteria and take the test" – often he just can't afford it.

Let's look at this logically.

He is competent to fly a motorglider.

He is competent to carry a passenger in the motorglider.

He is competent to instruct in a non-powered glider (come to think of it, he can instruct in a *turbo*).

What is an Ass Cat incompetent at by virtue of him not being a Full Cat in relation to motorgliding instruction?

Now let's consider a small club. We have two Full Cats; we could not operate without the four Ass Cats, who are competent to instruct and to run the operation. We would like a motorglider, but who instructs? The poor Ass Cats need to invest in motorglider conversion, then Full Cat conversion taking time as well as money. We need make it as easy as possible for the clubs and the instructors to embrace the motorglider whilst ensuring safe practice.



The discussion about what rating you should have to instruct in motorgliders continues: see letters from Mike Terry, left, and Peter Turner, below (photo: Mike Fox)

If I may use an example from the medical world, nurses used to be deemed not competent to prescribe drugs or defibrillate patients (cardiac arrest) and so on: this is no longer the case. Medical and paramedical professions have long since realised that the key principle involved is competency. If they can do it to the right standard then they can do it: it matters not what they are called in terms of job or hierarchical title.

I asked: what is an Ass Cat incompetent at by virtue of his not being a Full Cat in relation to motorgliding instruction? The task for Bob surely becomes to identify those criteria, if any, and to design a course to teach and test them thus facilitating the adoption of motorgliders into ALL our clubs. If they don't exist, then...

Mike Terry, NEWARK, Notts (inexperienced Ass Cat who just happens to be expert in Competency-Based Assessment)

More on training in motorgliders

I READ with interest John Northen's letter in response to Derek Piggott's excellent article on training in motorgliders and agree with him wholeheartedly. If we are to make full and proper use of motorgliders in our clubs and so improve the lot of *ab initio* and experienced pilots alike we need more motorglider instructors and we are only going to get them in any numbers from the ranks of the Assistant Instructors. Like John, I know several Assistant Instructors who would be excellent motorglider instructors but have no desire to become a Full Cat.

However, Bob Pettifer's response surprised me. I agree it is essential that an instructor's capability needs to be checked from outside the club and that standardisation must be ensured, but unless things have changed since I was an MGIR Coach these items are covered on the course before the rating is issued – just the same as on the Full Instructor course. So the system is already in place.

So where is the problem? If the weeding out and polishing up is done on the initial

course and on subsequent renewals by regional coaches, standards can be maintained and we will be able to use our kit more effectively. This way we stand a chance of dramatically reducing the loss (mainly through sheer frustration) of budding pilots. It will also speed up the checking of aspiring cross-country pilots.

Provided each club has at least one Full Cat motorglider instructor to oversee the programme, along with the CFI of course, it could easily be made to work.

So how about a serious re-assessment of the subject? We really need to maximise the use of this very useful tool.

Peter Turner, Full Cat, BGA and CAA Motorglider Instructor, Mendip GC

Bob Pettifer, the Chairman of the BGA Instructors Committee, replies: We will re-consider it but I cannot see why it is such a big issue to become a Full Cat. At the last instructors committee meeting it was agreed to leave the requirement the same. I would however welcome some correspondence on why instructors don't want to become full cats?

Virtual glider training

I READ with interest the recent article by Derek Piggott (*Fast Track to Learning*, February-March 2003, p18), regarding the use of motorgliders to expedite the training of the neophyte aviator.

As a quiveringly early post-solo pilot, who still cannot help whooping out loud when I find myself alone in the cockpit a thousand feet above the airfield, I wholeheartedly support the sentiments expressed, the obvious commitment to training, and the vast reservoir of common sense displayed.

Now, not yet being quite the legend that is Piggott, I must hesitate modestly at this point, but I think I can suggest another oft-overlooked training aid which could be of equal relevance to the fast track ... namely the humble gliding simulator.

Doubters will immediately scoff that the experience offered by simulators is not authentic. True. But the same concerns apply to a motorglider but, as discussed, can be resolved by liberal application of common sense and pragmatism.

Having turned to the PC during the last few months of enforced winter layoff I can't help feeling that such 'games' can offer equally huge training potential at many stages of learning.

Imagine, if you will, the blinking *ab initio* being courteously greeted upon entry to the club and led to the briefing room (instead of them turning up every weekend and hovering about bashfully until someone finally condescends to shout at them).

Imagine them being shown what the launch will look like, what the instruments are and how they respond, the basics of the circuit. Imagine showing several together instead of one at a time and then letting them have a go immediately.

Imagine strapping them one at a time into the real thing and illustrating in practice what they have already been shown.

Finally, imagine them reviewing all this in the safety of their own home without any supervision required. Imagine.

For my own part, my gliding training has, like many, been punctuated by an unfortunate series of gaps (the most recent corresponding with my entry into wedded bliss). These have caused endless frustration (the gaps, not the wedded "blisses") and relatively slow progress even taking into account my routine levels of incompetence.

However, a winter spent hunched over my PC resulted in a successful re-solo on my first day back. Coincidence? Maybe, but I doubt it.

I think that my virtual glider training paid off! Instead of trying to remember what to do next in the circuit, under the high perceived workload of the novice, I was 'current' in thinking about aiming points, air speed, the angle to the field, the shape of the circuit, use of air brakes, etc. Flight sims these days are remarkably realistic!

Of course, dual training in a battered K-13 by a battered instructor is the heart of glider training and will remain so. But I believe gliding simulators could have an important and cost-effective role to play in expediting training and that the BGA should formally encourage their use at the club level.

Perhaps that is already the case, but if so I have never noticed it.

One final point. I regularly hear concerns expressed in these pages about how to attract more callow youth to gliding. Well surely the use of simulators in the training curriculum would appeal to the younger PC-enabled proto-aviator. A spin-off benefit?

Anyway, must go now, time to learn about flight planning and to attempt my first cross-country flight. Very handy how these thermals are marked with a column of big blue or red dots...

Eugene Lambert, WENDOVER, Bucks

Airborne in the USA

I'D like to add another perspective to the solo age debate (*It's best to wait until you're 16*, p8, April-May 2003). I recently spent a couple of years instructing in the USA, where the minimum solo age is 14, but licensed (that is, self-briefing) pilots must be at least 16.

Between these two ages glider pilots can fly solo, but under the supervision of an instructor, exactly as Bronze-standard pilots do in the UK.

My US club (the MIT Soaring Association, now merged with the Greater Boston Soaring Club) runs a well-supported cadet programme, where youngsters aged 14 and over organise the grid and push gliders in return for discounted flight training. When they get to solo standard, the instructors treat them just like any other pilot, sending them solo only if they're completely ready on the day, and with daily check flights and close supervision for the recently-solo. Not all cadets go solo by 16, but those that do have a safety record comparable to, or better



Flight sims can be a valuable training aid, argues someone who believes his flying has improved thanks to his PC, Eugene Lambert (see Virtual glider training, left)

than, other newly-solo pilots.

Now here's my point. Just as for older pilots, going solo makes a major, positive impression on most youngsters. Even so, when they reach 16 or 17 we start to lose them as they start taking important school exams, get driving licences and discover the opposite sex. However, we do see some ex-young-solo pilots coming back to gliding in their early 20s when they leave college, get a job, and have enough spare time and spare cash.

If we lower the solo age to 14 in the UK we stand a better chance of "catching 'em young", and sowing the seeds of a lifetime's interest in gliding. By 17 most young people have too many other calls on their time to spend weekends at the airfield. However, if we can capture the imaginations of properly-trained 14 to 16-year-olds by sending them solo, we'll likely get more of them back into gliding in their 20s.

Andrew Watson, CAMBRIDGE, Cambs

A European standard solo age?

GIVEN that you can sail across the Atlantic solo at the age of 15, I must say that I fully agree with the recent letter (*Solo at last*, April-May 2003, p7) by one of the BGA's newest and youngest solo pilots, who asks why he should wait until 16 to fly solo.

With all the EU legislation that we are likely to endure regarding maintenance, medical standards, and so on, are we not also going to come in line with Europe and send our youth solo at 14 like the Germans?

For the first time in some years, we have trained three instructors under the age of 25 over the last winter. Twenty years ago that would have been a common occurrence, but these days when the average instructor age (in our club) is fast approaching 50, we must attract more young people into the sport.

If we do not then I must ask if gliding will still be going strong in another 20 years.
Paul Armstrong, CFI, Four Counties GC

The Brits are back

IN the February-March 2003 issue of *S&G* (*Long-laid plans are realised*, p43) Fred Weinholtz identifies substantial British influence upon the German capital of soaring training – the site at Oerlinghausen

He also promotes the intention of people at Oerlinghausen to bid for the 2005 Vintage Glider Rally.

This is remarkable for two reasons.

Firstly, it shows how important the Vintage Glider Rally has become as a valuable part of the gliding movement. Secondly, to hold the Vintage GC rally at Oerlinghausen would be another British influence on the site, since the rally is a British invention.

Albert Hengelaar, via email

Which Jaskolka?

I WAS intrigued to read in the Vintage Glider Club section of *Club News* about the remaining Jaskolka in the UK (April-May 2003, p58).

Could this possibly be the one that I flew in the Nationals with John Jeffries in 1959? I have a photograph in a gliding diary, which clearly shows the UK competition number 91, and a further reference number of SZD-8TER ZD on the fin.

I find it remarkable that 140 were built and only six survive. It had no unpleasant flight characteristics, a fact, which I am sure John will confirm. It attracted much interest, having a number of design features that at the time were quite new.

Michael Garrod, via email

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A sporting chance

GLIDING really is a sport that can be enjoyed at all levels. Top competition pilots and those who never venture further than gliding range of their home field seem to be united in one thing – their passion for gliding.

People can participate from 16 for as long as they remain physically able.

Enthusiasm doesn't seem to tail off with age – in many people, it increases.

Paradoxically, this is one of our problems.

The world, quite rightly, sees us as a pastime that is enjoyed by many.

They appreciate the skill involved in flying and the beauty of the world that we see from our privileged viewpoint.

They also see gliding as something that is elitist, only for the rich, probably for those not in their first flush of youth.

Gliding is not perceived as "sexy", compared to other forms of flying, such as hang-gliding or parasailing.

Gliding is also not seen as a serious, competitive sport.

The image problem is one my colleagues on the Communications and Marketing Committee and others are working hard to address. We are fortunate in that the sport offers tremendous visual opportunities to the media.

Everybody that takes the trouble to look seriously at gliding is bowled over not only by how good the sport looks, but by how enthusiastic and youthful our figureheads appear (no – I don't mean chairman David Roberts and myself here – I mean our real ambassadors, the UK team members).

If you don't agree with the last statement, just ask yourself – who are the public faces of every sport that receives serious media attention – the players or the administrators?

Others in the gliding community are also doing a fantastic job, helping to portray our sport as something that is cool. Look at the work of Neil Lawson at the *White Planes* picture co. or the Smoking Video team and you will see what I mean.

We cannot overcome the image problem overnight, but I think we are making progress.

The problem of the perception of gliding as "only" a pastime, rather than a serious sport, is more difficult to crack.

We would desperately like to see gliding being given a much higher profile in the sports sections of the national newspapers and on sports TV, particularly in this world championship year. It is not easy to get the press interested, though.

We are in a chicken-and-egg situation, with the media not willing to devote space and time, unless they can see a public interest – which we cannot generate unless we increase the media exposure. Somehow, we need to break into this loop.

There have been some successes – the quarter page featuring Steve Jones in the Sunday Times sports section recently is a case in point. Much more is needed, though.

"Why?" I can hear some people asking. Increasing the sporting profile of gliding has all sorts of benefits.

This is not about self-serving publicity. An increased sporting profile will surely help to bring new, enthusiastic, competitive people into the sport; it will make gliding much more attractive to potential sponsors; and it will improve our claims on funding for our elite competitors.

I firmly believe that an increased sporting profile is of great benefit to all glider pilots, not just to the few top competitors who will, inevitably, be the focus of attention.

We will be trying to place as many column inches before, during, and after the world championships as we can.

A comprehensive press briefing pack is available, interviews have been arranged, daily news stories will be prepared after each day's competition in the women's, the juniors and the multi-class world championships.

If the UK team achieves good results, we will make a song and dance about this and will try to expose our new champions to the full (no – not that way!).

We had hoped to run a day for the media in early April but had to cancel as we could not generate sufficient interest amongst our target media groups. The activity above may go some way to raising this, especially if good results are achieved in Jihlava, Nitra and Leszno.

The UK teams have been most helpful, responding to my unreasonable demands and investing their own time when, I am sure, they had more pressing things to do. Through this column, I would like to ask for your assistance.

When talking about gliding to your friends and your acquaintances, talk about the competitive aspect.

When preparing something for your local newspaper, highlight the fact that the UK leads the world in championship results. When I talk to journalists, they are always surprised at the performance of the modern sailplane – drop figures like 200km/h, 500km tasks, 40,000ft into the conversation or press release.

If you want any background or copies of my press briefing documents, just ask.

It won't change the media's perception of us overnight, but as Confucius is said to have said: "A journey of a thousand miles begins with a single step".

Keith Auchterlonie
BGA Communications Officer

Funding:

THE BGA booklet, *Financial help for Gliding Clubs*, last published in 1996, has been revised. Since the last issue, gliding clubs have been awarded over £1million in capital grants from the Lottery Sports Fund and a further £250,000 from the Foundation for Sport and The Arts. Other sources of funding have not proved quite so fruitful.

In investigating possible sources of financial help, the opportunities created by European funding organisations have been carefully examined. Some business organisations claim to have accessed EU grant funds – and if they can be successful, why not gliding?

To place the opportunities in perspective, it is vital that a gliding club demonstrates that it can generate an operating profit, in other words, that it is sustainable. No funding organisation, whether European or UK based, will grant or lend money to bolster a failing business, nor indeed will they core fund business. The money is usually placed to help develop additional projects that can justify the investment.

Most of the funding organisations from the 1996 edition are still active. The position is now more complicated because there are now more potential sources of funding. The BGA has its specialist Planning and Environment fund and the Philip Wills Memorial Fund, which now offers loans at an incredibly low rate of interest.

The principal change since 1996 has been the prospect of access to European funding. It is not an easy process but for a club wishing to find support for a viable development project, it is nevertheless worth careful consideration. The table opposite provides examples of available funds.

Unlike Sport England's Community Projects Capital Fund, there are no clear-cut programmes designed exclusively for sport. That is not surprising; sport is not identified for specific support under any EU treaty.

Funding for sport is available but generally restricted to partnerships or joint ventures linked to commercial enterprises. Financial help is directed, in particular, towards small and medium sized enterprises ("SMEs" in EU jargon) employing fewer than 250 people. Generally, that means sport might be eligible as part of a larger, more complex programme (for example, a regional re-generation programme) in conjunction with SMEs and community partnership projects.

However, 2004 is European Year of Sport with emphasis upon education through sport, thus creating wider funding opportunities for joint ventures between sporting organisations, although in some cases, participation is required from at least four co-operating member states.

The individual gliding club has very little prospect of accessing European funding on

Roger Coote
BGA Development Officer

13

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TIME to have fun again? "I'll not harp on the past," writes Ian Dunkley, "and tell you how each year the Camphill Vintage and Classic Rally gets bigger and better, that last year we flew more days, more hours, for less capital cost, and arguably more kilometres than the concurrent Standard Class Nationals. I'll also not tell you about our plans to celebrate at next year's rally the 50th anniversary of the first Worlds held at Camphill, and – less significantly – in the UK. Instead, I'll tell you about the "fun" that brings pilots, with their vintage or classic gliders, to a hilltop in the Peak District National Park – or, as seen here, to a field below it. Wave, thermal, ridge, bungee launching, downhill racing, fireworks, parties and prizes, both deserved and undeserved. This year's theme is the 1960s (miniskirts, long hair, flower power, permissive society... the mind boggles). Interested in joining us from June 21-28? Email dlgc@gliding.u-net.com for details."

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"DOES my bum look big in this?" Not a question that you'll catch these four members of Oxford GC asking, says Claudia Bungen, since that might invite the response from boorish men: "Well, it does stretch from Wales to East Anglia". Claudia denies coming up with the idea for these undoubtedly striking dresses – one size fits all and one map per dress suffices – while bored on one wet and windy day at the club's airfield of RAF Weston on the Green. Seen from left are Carole Shepherd; Karen King; Claudia; and Gina Pattison. "Two of us used last year's maps and two some older ones," she explains, "which is why the colours are slightly different. But we wouldn't let anyone draw on them. Some people were suggesting Assigned Area Tasks..." The picture was taken by Nick Hills at this year's British Gliding Association AGM and dinner dance.

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Tug pilot wins praise for coping with emergency

BORDERS GC tugger and glider pilot Bob Cassidy is one of three people whose skillful response to serious in-flight engine problems got them chosen for the final of Civil Aviation Authority (CAA) General Aviation Safety Awards for 2002.

Now in its eighth year, the CAA scheme recognises people within UK GA whose outstanding airmanship, practical skills, quick thinking and common sense averted a serious incident or possibly fatal accident. Anyone involved in GA – pilots, engineers, aircraft operators or air traffic control staff – can be nominated.

At the ceremony in London on May 8, Christopher Linton of Cheltenham won top prize for a forced landing on Worthing beach in a Beech Bonanza – with no power and limited visibility due to a smoke-filled cockpit and oil-covered windscreen – after the engine failed during climb-out from Shoreham.

Along with Bob, the other finalist was John Romain, who managed a successful safe emergency landing at Bourn – with only 30ft of runway remaining – after the engine on a Spitfire MkXXVIII failed during a test flight from Duxford.

Here is Bob's account of the incident that led to his being nominated:

"I was flying our Piper Pawnee on aerotow from Borders GC in June last year, towing the K-21 on a training flight; the instructor was my syndicate partner (and CFI). This was the fifth flight of the day. We would normally use the Supercub 180 for two-seater flights, but it was on C of A. The day was fairly flat with strong westerly winds, giving the Pawnee 160, with its limited performance, a reasonable rate of climb into wind.

I had done, at that time, in the region of 450hrs on aerotow at the club, and about 600hrs on gliders. I did my aerotow training some 10 years ago under the watchful eye of Alan Irwin, then CFI. He always said that a

good tug pilot should be able to judge his circuit and approach without needing to use the engine, and treat each circuit as a glide approach. I have always tried to follow that philosophy, and try to learn something on each flight, using side slips on occasions to burn off height on final approach, as well as varying flap settings (sometimes just to relieve boredom). I also always seem to be tug pilot on the good soaring days!

On the day in question, just as I was starting a gently-banked turn at about 450ft, the engine suddenly began to run very rough and the aircraft started to lose power. I knew exactly where I was in relation to the airfield, and with the brisk headwind decided I could make a downwind landing, after completing a turn back to the field, first waving off the glider, which responded immediately. This is something we practise regularly as Bill, the CFI, is keen to keep everyone current on launch failure/unable to release situations.

I trimmed the Pawnee for best glide, and although the engine was "banging and thumping" decided to keep it on full throttle, as I didn't think I could do much more damage (self preservation had also set in!).

Going into glide mode, I could see from the reference point I had chosen in our field, that I could get back in. If this had not been the case, I could have landed in one of two large fields near the site.

As I monitored my approach (with some small residual power from the engine) it was clear that I could manage a slightly into-wind approach. I managed to land safely without damaging the aircraft, using first stage of flap as I crossed the boundary.

My CFI and best gliding mate (we cut our teeth together on gliders) did his best to keep out of my way, and had plenty of time to land safely with his pupil, who no doubt now realises that E for eventualities means just that!



As an aside, a visiting CFI commented that he was amazed I had managed to retain the tow rope, too. In all honesty, I said to him that I forgot it was there: I was concentrating on keeping the tug flying, and getting it back on the field.

After landing, I took off the cowl covers, and could see that the port rear cylinder head had blown off. The engineer's report stated that this was probably a long-standing shock cooling crack which had developed over a long time, and eventually gave way. It would not have been possible to see this on a DI.

Lessons I have learned:

- Never assume the engine will keep going.
- Always know what your options are before take-off.
- In circuit fly the tow plane like a glider when the circuit traffic allows. (All our tug pilots are glider pilots, so we have a fighting chance).
- Tow planes have a tough life, and take a lot of abuse. Expect the unexpected!
- If you are doing all those circuits, do something useful with them. Most tug pilots are glider pilots, and we should always take the opportunity to do something with each flight, as we do when gliding. Our club has a policy that power pilots wanting to tug must complete Bronze.

At the time the problem arose, I felt amazingly calm, I just went into glide mode (none of that "mayday" stuff – "aviate" took priority). But after I got back on the ground adrenalin kicked in when I reflected on what had happened. That night, I had one or two beers on the way home; thankfully, I wasn't driving!"

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Er, Season's Greetings

I HAVE been taken to task by a reader from Newcastle (see letters page) who rebukes me for suggesting that the sudden explosion of haiku poetry was due to people having nothing much better to do in the winter. My reply is suitably churlish:

What Andrew Bardgett says is absolutely true. He is paranoid. But that does not necessarily invalidate his trenchant observations. When I was young there was no Season; I flew every day that God sent, and quite few days when the Devil seems to have stood in for God. As I am now in my 70th year, however, for me the Season is when flowers bloom, birds sing and make their nests, and fruit swells upon the bough. I am interested in hearing of kilometres being achieved outside the conventional season; I certainly doff my hat to the heroic pilots that cover real distances in winter cross-countries, especially when exclusively using wave and/or ridges. They ought to be celebrated: they should be named and famed in Club News, or even on the front cover of *S&G*. My impression, however, was that most people at wave sites just pole-squat at vast altitude over the field till their goolies (or other extremities in the case of the opposite sex) go numb. That shows fortitude but, once you have sussed out the house rotor, not a lot else.

I look forward to a barrage of statistics, or even logger-traces, demonstrating how deluded and out-of-date I am in that respect.

PS As an alumnus of Royal Grammar School, Newcastle at the end of World War

Two and the witness to some spectacular air-raids on Tyneside earlier in the conflict, I regard myself as an honorary Geordie, and hope that none of the true Geordies are mortified by my deliberately incendiary remarks.

How gentlemen travel

After a mediocre day's scraping around 150-odd kilometres in nearly eight-eighths – I'd say it was fifteen-sixteenths or thirty-one thirty-seconds, in fact, with the dimmest patches of soggy sunshine illuminating the odd field now and then. By the way, when



words acquired in the Royal Navy

I was young I'm sure they had decimal cloud-cover, with everything in tenths. So when did they change to the coarser measure? And why?

– I asked a club member if he'd like to fly in the ASH 25 the following day, which promised to be a lot better. He duly turned up the next morning with a vast bag, the contents of which I did not enquire about. After an initially awkward start, until I discovered simultaneously where the Waterboy drinking vessel had hidden itself and why my parachute was so uncomfortable, we got into our soaring stride and romped around 310kms at 97km/h. It was warm, when only a week earlier it had been several degrees below freezing, reminding us forcibly that April is the cruellest month. Winter's cobwebs were finally blown away. "This is a gentleman's conveyance," I always say of the ASH when it devours the miles with only the very occasional nuisance of

stopping to take on tankful of altitude.

And talking of devouring, the great bag contained, wait for it, homemade rolls with ham, cheese and lettuce; tiny sweet tomatoes; apricots; yoghurt; orange juice; potato crisps, and a few other items I have forgotten about. He even paid for the aerotow. You're invited again, sir.

Another passenger a year or so ago also came aboard very hastily with a vast bag, but this one contained no food, just a full-size laptop computer and a pile of ancillary hi-tech gear. Why? Search me. Now it is not serious, just messy, if a cheese, lettuce and ham roll or a couple of tomatoes get wedged in the space where the rear stick should have full and free movement along with its mate in front. A computer or modem getting wedged in the same space is a different animal altogether. Every now and then a tight turn threatened to become a full-blooded spiral dive, while I bellowed a few words acquired in the Royal Navy 50 years ago to the P2, to the general effect that he should remove the wedged item instantly before we both died a grisly death.

All in all, I am inclined to demand a rigorous airport-style inspection of passenger baggage before boarding. Small, soft, squidgy, edible objects OK, if there's enough for two. Large, rigid, inedible impedimenta not OK. What if the large, rigid, inedible item is a Fortnum's wicker hamper, containing peaches, foie gras, ciabatta bread and Roquefort? Still not OK, for reasons detailed above. Empty the Fortnum's contents very gently into a Tesco plastic bag, please, give the bag to somebody to hand to you once you are comfortably seated, climb aboard and get strapped in, and don't forget to relieve your helper of the Tesco bag. We'd better put that item in the cockpit checklist after Straps and before Peebags. (My cockpit checklist bears just a glancing resemblance



the Devil seems to have stood in for God

Afterthought: I hardly need add that remnants of food and juice attract all sorts of animal life, large and small. I had to set traps to catch a mouse in the Janus one spring in Nevada – which proved a success from my point of view and a disaster from the mouse's. At the microscopic level, I often worry that sugary drink spilt on glass or carbon fibre will soak into it and encourage insects to eat the structure. So a thorough clean-out is advisable after the blow-out.



expensively failed

to the standard version.) By this time the tug has wandered off to launch somebody else. Never mind, we have seven-league boots; let them mark the thermals for us.

What, you forgot to print out a menu? I don't know, the service here is going to the dogs...

Launch or lunch – or a bad case of wind?

Food for thought again, and vice versa. I paid a one-day visit to the field at La Ferté Alais near Paris in 1961, which was at that time an active gliding aerodrome. Since it was a grim day in late autumn and no flying was in prospect, I chose to have the excellent Ragout à la Provençale with wine. From my visits to other French gliding sites since then I have noticed that a gourmet midday meal with wine is customary even when the thermals are popping like champagne corks and plenty of flying is in prospect.

The regulars told me that it was their habit always to take off away from the hangars and always to land back towards the hangars, regardless of the wind direction. This clearly saved time at the beginning and the end of the day. Necessity may indeed be the mother of invention, but sheer indolence is a close contender for the title. Anyway local pilots from their earliest youth became very good at coping with crosswinds, and even tailwinds, on both take-off and landing. This is invaluable experience, especially if you are suddenly compelled to cope with a crosswind during a field landing – something I have myself expensively failed to do, twice.

I did not think of asking my fellow-diners what they did when a stiff gale was blowing from the rear. They either a) relaxed their iron rule and shifted the launchpoint or b) took their chances with the gale and occasionally suffered a vicious *cheval de bois* (wooden horse, that is, groundloop) or c) muttered the French for "To Hell with it!" and extended the lunch hour until the wind changed. I guess I can bet which they did.

I encountered very dissimilar food but a similar take-off/landing rule at Black Forest Gliderport in 1971 and 1980 when it was located near Colorado Springs. (It has since moved north towards Denver.) That was

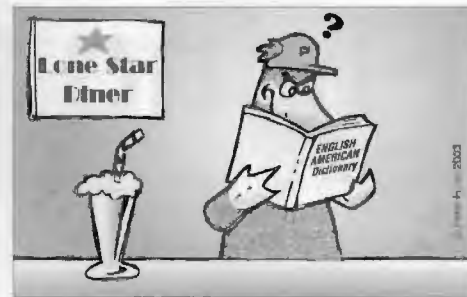
chiefly because there was a very pronounced slope on the single asphalt runway and it always makes sense to take off downhill and land back uphill.

The trouble with people like me, brung up in the Early Cambrian era of gliding on grass fields with no marked-out runways, is that you get corrupted by always expecting to take off and land exactly into wind. The moment the wind shifts, people with my mentality have an overpowering urge to shift the launch point, move the tugs and the winch, as if 15° or so of crosswind would cause disaster.

I used to insist on landing dead into wind and often ended up smack in the middle of the aerotow run or on the winch cables, forcing my partners to make an immense journey to retrieve me, and holding up the launching meanwhile. It was rumoured that I did it deliberately to ensure somebody came and dragged me out of the way, but honest, I didn't. I could have saved everyone a heap of trouble by landing back near the launch-point despite the crosswind. Heck, I'd learnt to kick off drift in 1949 as a Cadet in solo training. It's not rocket science.

At Dunstable 20 years ago, when a south-easterly blew, two-seaters and monster solo ships were towed directly towards a 300ft hill surmounted by power wires. I saw the late Mike Carlton do just that in the ASW 22 at maximum weight. *Très impressionant*, as the French would say, which does not mean very impressive, but very scary. It was strictly a spectator sport so far as I was concerned.

I can't remember any gliders or tugs hitting the hill or burning up on the wires, but I that down to the sagacity (cowardice reinforced by experience and intelligence) of either the tuggie or the glider pilot. I am told it is not as perilous as it looks, but it deterred me. Remember, too, that in a south-east wind one also had the sink and curlover in the lee of the ridge to cope with as well as the obstacles. On one occasion I sneaked a day off from the office and went all the way up to Dunstable and got the two-seater ready, only to be told by the tuggie that he was not going to launch me. He had a wife and kids, etc. I drove back to South London with not a word of criticism of that tug-pilot passing my lips, despite a



"weathervane" in the USA

wasted day; indeed I respected his decision. Of course at the time neither of us thought of doing a crosswind take-off using a greater length of the field with no big obstacles. That just was not done.

Until quite recently if a south-east wind was forecast at Dunstable I would just stroll around to my local restaurant in London SW13 and have Ragout à la Provençale with wine instead. Sitting there I would console myself, in a sour-grapes mood, that I was missing nothing anyway since south-east wind days were useless for soaring – which is absolutely not true. Murky, maybe, but often stiff with thermals.

Nowadays we are much more willing to take off on aero-tow with a 90 crosswind, using the initial downslope and a long, unobstructed run where possible. People seem to cope. The replacement of tailskids with tailwheels on nearly all gliders has helped. The tendency to weathercock ("weathervane" in the USA, a lady there told me firmly with pursed lips) is lessened, especially if you hold the stick firmly back and keep the tailwheel on the deck until rudder and ailerons take effect.

Look, I'm not promising that I'll never do a *cheval de bois*. I have tempted providence in this column enough this season – sorry, this year.

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Flying the ASW 28-18

Jochen Ewald tries out the latest 18-metre offering from the Alexander Schleicher factory

YOU don't get optimal performance and handling in an 18-metre glider just by extending wings designed to perform at 15 metres – which is why only the inner wing section of Schleicher's new 18-metre ASW 28 remains the same as the 15-metre version.

And that means Schleicher's new engineer, Michael Greiner (like Martin Heide, a former member of the Stuttgart Akaflieg) had to do far more than just adding a wing extension to Gerhard Waibel's original ASW 28 design to make the new 18-metre glider handle and perform properly.

The join for the new extensions is 5.25m from the glider's centreline, making the 28-18 a glider with a proper four-part wing. Flown with the 15-metre tips, the outer shape of the four-section trapezoid wing is exactly the same as the pure ASW 28, but the 18-metre extensions have a fifth trapezoid section. This gives the whole wing a really smooth and elegant line. Both spans use the same winglets, and the aerofoil remains the Delft University DU 99-147, developed by Loek Boermans.

Another change comes with the tailplane, taken from the ASH 26, which is larger than on the 15-metre version to help cope with higher loads originating from the larger wing. Two other new options the new glider offers are a turbo engine (see p30-31) or a ballistic glider recovery system.

Just four days after the 28-18's first flight in March this year, I was invited to the factory's airfield at Poppenhausen-Huhnrain, below the Wasserkuppe, to try it.

A glance into the trailer revealed that with the shorter inner sections of the wing, the 6.58-metre fuselage is now the longest



Above, opposite: the ASW-28-18 in flight with Uli Kremer; below, with and without the 18-metre wingtips

part of the derigged glider (perhaps we should now be thinking about shorter and safer-to-drive trailers!).

Rigging the lightweight inner wing sections with their fork-tongue spar connection and two main bolts is easier than the full 15-metre wings. To secure them, the main bolt levers are swung down behind plastic locking hooks, so there are no loose parts except the bolts themselves. These inner sections also contain the integral waterballast tanks, which can carry up to about 90 litres each. This is a little less than the two 105-litre tanks of the 15-metre glider, but because it weighs 17kg (37lb) more when empty the new version can match the max 15-metre wingloading of 50kg/m² if required.

The tanks are filled through screw-lids in the upper surface at the outer end of the inner wings, and the covered outlet valves are close to the fuselage below the wings.

Ailerons and airbrakes connect automatically via Hänle connections behind the main spar, while the automatic waterballast valve connection is in front of it.

The lightweight outer wing sections (for both the 15- and 18-metre versions) have spar ends held and secured by spring-loaded bolts, which are extracted by screwing a tool into the leading edge of the inner wing. When the extension is inserted, the outer aileron connects automatically via a tongue that fits into a slot of the inner aileron. Finally, the winglets are inserted from above and secured automatically by a spring-loaded bolt, which is unlocked for derigging by pressing a small item (key or similar) into the hole at the outer surface.

Before fitting the tailplane the pilot needs to decide whether to carry a battery or a ballast weight in the fin box. Once rigged, small Plexiglas-covered holes allow you to







Left: Gerhard Waibel, seen here with the right 18m wing outer section, will retire on August 31 this year, after a career spent creating a lot of top-class and safe toys for the world of gliding



Right, from left: Uli Kremer with the bigger tailplane (from the ASH 26); pictured with him is Michael Greiner with the winglets (used by both the 15-metre and the 18-metre versions)

Y see whether this is empty or not. The tailplane is fitted from above then pushed backwards into its final position and the elevator connects automatically. Then you turn the fixing screw above the horizontal stabiliser. It is also secured automatically by a spring-loaded ball that snaps into grooves on the outside of the screw's head. This screw is now permanently connected to the tailplane. If it isn't fixed properly, the head stands proud.

In the fin is a 5-litre (1.1 gallon) water-ballast tank, which is filled from below; its valve is connected to the dump lever for the main tanks. The fuselage, borrowed from the ASW 24, is unchanged. The cockpit has the usual Schleicher layout, so conversions are easy for pilots. On the right, there's a new, quieter fresh-air nozzle; another inlet in the front acts as canopy de-mister. Forward of the pedals is a ballast fitting for light pilots.

As you'd expect, the front-hinged canopy is supported by a gas strut and lifts the instrument panel with it. At the rear there's a Röger hook to make emergency exits easier.

Compared to the 15-metre version, the 18 weighs about 17kg (37lb) more with the 15-metre tips, and about 25kg (55lb) more with the 18-metre tips; the prototype is another 4-7kg (9-15lb) heavier. All this meant my take-off weight in the 15-metre version would be about 353kg (778lb) and 365kg (804lb) in the 18-metre version with the c of g central. Max AUW of the 15-metre version is 525kg (1,157lb), limited by the max stall speed requirement from the JAR

certification rules, while the 18-metre's is 575kg (1267lb).

The roomy cockpit is very comfortable, with adjustable backrest and headrests. Although the cockpit frame is relatively high with the canopy closed, visibility remains excellent and is much better than it seems when you look at it from outside.

Trying an emergency exit, though, I found it quite hard to lift my body above the cockpit wall. Although there are small steps behind the pedals, I miss proper grip points to lever myself out. Gerhard Waibel told me he preferred to enhance cockpit crashworthiness instead, because more pilots are severely hurt or killed hitting the ground than when exiting a glider. He is waiting for the maker of the NOAH emergency exit aid (see p28) to adapt it to the ASW. A 28 fuselage has been fitted with Hans-Jörg Streifeneder's ballistic recovery system (see p28).

With the canopy closed and the pedals set fully forward, I found that there wasn't very much space above my toes, so pilots with long legs and large shoes might find it a little narrow.

For the aerotow, I chose to do the initial ground run with the airbrakes open to avoid a wingdrop – windspeed and direction often vary at this "one-way" valley airfield – but I found it wasn't really necessary as the ailerons were effective from the start. Despite some turbulence on take-off I found the 28-18 easy and safe to fly straightaway. It has good control efficiency combined with positive but light control forces, and a stability which

would make it suitable even as a club "first single-seater". Undercarriage retraction was easy, too.

After releasing from tow, I tried the stall. (Data I measured in the 15-metre version is given in *italics*. The prototype 28-18's ASI had not been calibrated, so there might be a slight difference in the actual airspeeds.) The first light buffeting started at 74-76km/h (40-41kt) and became more marked as the speed dropped to about 60km/h (32kt). With the wing partially stalled and the nose high, the 28-18 still felt under control. Pulling the stick back further resulted in an even higher angle of attack and shaking, until a wing finally started to drop. Easing the stick forward produced an immediate recovery. With twin-bladed Schempp-Hirth airbrakes fully open, the corresponding speeds are about 4-5km/h (2-3kt) higher, and the stall becomes stable even with the stick fully back. It's all fine, safe behaviour. When circling, the stall is also obvious and gentle.

The roll rate for the extended wing is good, too. I measured the 45° roll-rate at 4.4 seconds at 100km/h (54kt) for the 18-metre version as opposed to four seconds at 105km/h (57kt) for the 15-metre, average values for gliders of these spans. This small difference also demonstrates the good design of the new outer wing section. In circling flight below 100km/h (54kt) – 90km/h (48kt) with the 15-metre wing – I found that a little more rudder is necessary than aileron to keep the string in the middle, and while the 15-metre wing needs nearly no opposite aileron when circling, the 18-metre does, and produces slightly higher aileron forces.

Climbing in calm thermals is easy and fun with 30° bank and a speed of 85km/h; (46kt) rougher thermals, as you'd expect, need tighter turns and 90-95km/h (48-51kt) to get the best climb at my weight. The 15-metre wing wants about 5km/h (3kt) more. Of course performance has yet to be measured, but I expect that pilots of flapped gliders will be surprised at how well this unflapped one performs. The trim spring in this prototype was the original, and the higher

Type	ASW 28	ASW 28-18/15m	ASW 28-18/18m
Airfoil	DU 99-147	DU 99-147	DU 99-147
span (m)	15	15	18
wing area (m ²)	10.5	10.5	11.88
wing aspect ratio	21.43	21.43	27.27
max AUW (kg)	525	525	575
empty weight (kg)	247	264 (V1=268)	273 (V1=280)
max pilot weight (kg)	115	115	115
min wingloading (kg/m ²)	28.6	30.0	27.4
max wingloading (kg/m ²)	50	50	48.4
max waterballast (kg)	210	c. 190	c. 190

forces from the larger tailplane meant the range at my weight went only from min speed up to 180km/h (97kt). A new, slightly stiffer spring is to be fitted.

At higher speeds (the speed limit was 200km/h – 108kt – during my flight because flutter tests had not been completed) the 28-18 felt stable and comfortable, though the wing is significantly stiffer than older glass-fibre ones.

Trimmed to 80km/h (43kt), the 28-18 accelerated to 92-95km/h (49-51kt) with full airbrake – just right to avoid trim changes on approach. Sideslipping was easy and stable with normal angles of bank. For a full sideslip the 18-metre wing requires full aileron and about 80 per cent of the rudder, while the 15-metre wing does it with 80 per cent aileron and full rudder. In both cases, the stick has to be pulled back a small amount to compensate for the slight nose-down moment. With airbrakes open, the elevator deflection to keep the speed constant increases to about 70 per cent.

For landing, a basic approach speed of 90-95km/h (48-51kt) is about right. The undercarriage lowers as easily as it rises, and the locking position is clearly felt and seen. The approach is easy to control and the touchdown is fully held off. The hydraulic disc wheelbrake uses the last inches of the airbrake lever and is effective – heavy pilots with forward c of g need to go easy on it, or risk scratching the belly.

With the ASW 28-18, Schleicher has created a very promising ship. The sales of

the LS8-18, the first modern Standard Class glider with wing extensions, demonstrated that clubs and private pilots like unflapped 15/18-metre gliders. The performance is not far below that of flapped gliders but their price is significantly lower. Indeed, clubs often prefer unflapped gliders for their fleet so that early solo pilots can fly them (if the pundits don't hog them...). They not only permit championship flying in four classes, but also provide cross-country flights which used to be the preserve of Open Class ships.

The ASW 28-18 benefits from the fine craftsmanship of all Schleicher gliders and fits well into club fleets where the Schleicher name is already established. The original 15-metre ASW 28, of which 50 have been built since production started in 2000, will also remain on offer: with a lower empty weight and more waterballast capacity it will provide competition pilots with a slightly wider range of wingloadings, as well as being a bit cheaper.

Designer Gerhard Waibel, who brought fibre-reinforced plastics technology to Schleicher 40 years ago, is to retire on August 31. He is not only one of the world's best and most successful glider designers, but also the one who managed to introduce new safety features, forcing competitors to think about more than just performance. Looking at Michael Greiner's design of the ASW 28-18 wing extension, I think that in him and Martin Heide, Schleicher has found the right men to continue the company's success in the future.



The outer join of the inner wing section of the ASW 28-18 prototype, with spring-loaded bolt and the connection tongue at the aileron (All photos: Jochen Ewald)

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Spot your crop for the drop

The second of two articles by Mike Cuming and John ("Red") Staley on field selection looks at your options in June, July, August and September...

MIKE and John originally wrote a series of articles that appeared in the spring and summer editions *S&G* in 1992, illustrating the various crops in synchronisation with the countryside itself.

The original articles are still referred to quite often so the lads have been persuaded to revise and update them, resulting in this two-part article. Meanwhile Adrian Hatton has produced an excellent website at www.field-landings.co.uk/ which shows individual fields and their crops at various times of year; it is very well illustrated with photos and text.

June/July/August – overview

Everything is growing rapidly by now and most crops are far too tall to land in. The colour of the landscape has mostly changed from brown to green and towards the end of this period a lot of it will turn golden before becoming brown once again.

Some crop fields – like rape – will already have lost their flowers by June, although rape is a difficult crop to spot accurately because it has quite a long flowering season. Cereals will start to turn golden during July; by August most crop fields will be golden apart from grass and late-planted crops like maize, spuds and sugar beet.

Livestock will be outdoors throughout the period, with the attendant risk of wires and electric fences.

Trees will all be in full leaf, which can have an impact on field selection, especially near roads where overhead cables may be hidden from all but the closest scrutiny. On the other hand, poles and other objects in fields will usually be made obvious by tractor wheelings or clumps of weeds, which tend to surround them. Remember that differing light conditions – and even



Late July in Oxfordshire: barley in the foreground, Bicester airfield (short grass) to the rear and lots of green wheat
NB: the editor mistakenly described the L-shaped field in the last issue (p38) as stubble when it was of course silage

your sunglasses – can make the true colour of fields hard to discern.

June – in detail

There will be lots of green fields about – especially if it has been wet as it so often is in June – and many of these will be cut silage fields which are excellent to land in. Some grass fields will have been cut for hay and the drying hay will lie in swathes in the field for a few days during dry weather. Cereals will show up deep tramlines, quite evident against the darker green of wheat, slightly less so amid the pale green barley. Brown fields, fairly uncommon, will be either set-aside or late-planted crop (maize or sugar beet). At this time they are probably – potatoes excepted – safe to land in.

Some fields will show yellow and these are likely to be oilseed rape, although by the end of the month even spring-planted rape will have ceased flowering and will have

taken on a ragged light green appearance.

June – advice to instructors. Think seriously about airfield-hopping or field-hopping, alpine-style. There will be large areas with few attractive fields and it can often be more comfortable for early cross-country pupils (and experienced pilots!) to stay within range of a suitable field, airfield or farm strip. If cloudbase is low, it may be inadvisable to send early cross-country attempts.

On longer cross-country flights it is likely that you will encounter significant variation in both terrain and crop development: for example, a typical 300km flight from Sherington might have turn points in Somerset (green fields and slopes), Norfolk (flat and largely cereal or late-planted sugar beet) or Leicestershire (similar to base in Oxfordshire, with a mix of cereal and grass and a variety of undulating terrain to match).

July – in detail

Everything is now maturing and the harvest will be beginning in southern areas. Rape is harvested from late July, leaving a distinctive white-coloured stubble which although tall is safe to land on – although it can be tough on the ankles during retrieves! Beware of mistaking swathed rape for cut cereal straw rows. Swathed rape is wider and also taller (see www.field-landings.co.uk/ for details and pictures). Winter-planted barley will also begin to be harvested in late July, this time leaving shorter golden stubble – but not for long. The recent trend is for stubble to be ploughed back in as soon as possible, before it has a chance to dry out. Expect to see a cultivator in the same field as the combine, or nearby. Although the

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traditional stubble field (and stubble fires) are therefore a rare sight, the loose brown surface will still be pretty good to land on if it's been ploughed and harrowed. Unfortunately, it's very hard to tell the difference between this and a ploughed field, which will have large hard lumps of soil, until it's too late. Brown fields found in July will probably be recently cultivated stubble – or maybe set-aside (see p38 of the last issue for a long discussion of the relative merits of set-aside). If there's a stubble field available, use that instead.

Potatoes, peas, beans, sugar beet and maize will all be green and the rows will usually be visible so these can be avoided. The ground will of course be fairly dry (partly because the crops themselves use up a lot of the surface water) so tramlines and other disturbed ground may be very hard indeed. *July – advice to instructors.* Have fun! The range of available fields will improve steadily throughout the month. In early July encourage pilots to choose light green (cut grass) and by the end of the month look out for stubble (white for rape or gold for barley). When landing in stubble fields do check where the tramlines are and land along them even if across wind – they will be more difficult to spot once the crop is harvested.

August – in detail

As this month progresses, virtually all remaining cereal crops will become gold (the exception to this is in the far north, where everything happens just a little later). The fields will of course quickly turn back to brown again ready for planting the next crop. Root crops, such as potatoes, are in their prime and will not be harvested for a little while either. Grass fields will still be green but rather paler and not so lush. *August – advice to instructors.* The days will be shortening noticeably, with thermals cutting off rather earlier and many retrieves being conducted by torchlight. The sun will still be setting slightly to the north of west but will be a lot lower. The glare from a low setting sun can make recognising the colour of fields quite difficult.

The best fields to land in will be green, gold or brown. Green fields should be pale and smooth with no visible rows at all. Golden fields will be ripe crop or stubble but how do you tell whether your golden-coloured field is stubble or ripe crop? Ripe crop will tend to ripple with the wind and will often have disturbed/flattened patches and will have visible tramlines at regular intervals. Stubble, the best choice, will be very even with an apparently smooth surface.

September – sneak preview

The thermal season in England and Wales draws to a close during the first half of September. The Junior Nationals (Aug 30–Sept 7 at Nympsfield this year) tend to use up the last few really good racing days and – although there will still be lots of 50km and 100km cross-country badge flights over the next month or two – flights of 300km or



Late July in Oxfordshire again: rape shows forward of the winglet, barley below it and out silage above it

more become increasingly rare as the ground gets wetter and cooler and the sun does not get so high. Many pilots will of course move northwards to go wave soaring as autumn develops. As well as plenty of grass, they will encounter lots of rolled and freshly planted fields, or maybe stubble depending exactly how far north they go. *Advice to instructors* – encourage badge attempts throughout September and beyond. There are lots of fields to choose from.

The short summary

- In June finding a sensible field becomes challenging.
- The first part of July in pure arable areas is downright difficult.
- In August there is a lot of choice.

Mike and Red's 1992 series, *Get off my land*, ran in the April-May, June-July and August-September issues. www.field-landings.co.uk shows fields and crops during the year; we suggest you look at it regularly.

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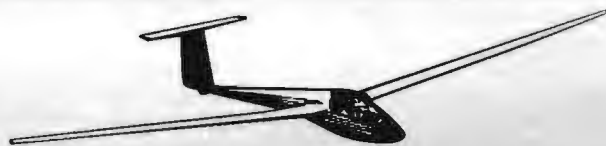
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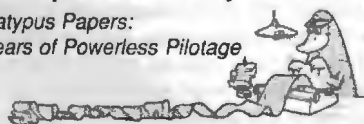
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the White Planes picture co.

Are you playing the game?

Competition tactics can be a maze to navigate. Dan Pitman explains how Game Theory can help you think through the interdependencies

PICTURE the scene. It's the fourth day of the Nationals, and things are not going well. The weather has been "challenging" and today is nothing different (the sort of weather in which you only rig if it's a competition, or if you're practising for one). After a couple of hours' scrabbling around in the sort of conditions that leave sane people running to the nearest retail village the inevitable happens; our pilot has given up hope and is concentrating on making the best of the retrieve. Then, out of nowhere, a saviour. "Bubbling to your right, ones... twos..." – another pilot, who has put himself out of the race with a disaster on Day 2, calls him to a climb. Our pilot is away again, and gets back home to retain contention for the lead...

So, what was happening? Why should a competitor call you to a climb when, whatever his position overall, he seems only to gain from your demise? How do you sort out what's going on? First it was all the false starts and misinformation; now the people you want to beat are helping you out!

Competition tactics are difficult. Pilots who can fly excellently on club days turn up to their first comp and bomb, and those who do well instantly are accused of following. It typically takes many years, even for those who already have many hours in the air, to be consistently successful in competition.

The purpose of this article is not to explain how to fly fast (that has been the subject of numerous articles, by better pilots than I: on

reading the sky, picking your climbs, planning your final glide and the other nuances of racing). What I will try to do is explain something that might just mean the difference between first and second: using your competitors to your advantage. The subject of Game Theory.

Game Theory is simply a structured way of thinking about competitive dynamics. It has been successfully applied to a wide variety of fields, from pure maths, through economics and international relations, to evolutionary biology. As an example, the techniques of Game Theory were recently applied by the UK Government to extract more than £35 billion in fees during the auction of 3G mobile phone licences. Game Theory has also been used in the study of the US/Soviet arms race that brought on the end of the Cold War. It can offer insights wherever the decisions of "players" are interdependent – that is, when each player's decisions affect those of all the others, and no single player can assume the behaviour of the others will be fixed. I believe that it can also be applied to help understand, and in some cases change the dynamics of, competitive soaring.

Splitting the bill

The mathematics of Game Theory can quickly become impenetrable to all except the experts and so, to illustrate some of the key concepts of the theory, many stylised games have been described. One of the most simple

to understand is the "game" of splitting the bill in a restaurant – something all of us have probably done with varying levels of success in the past. (Personally, I have found that curries normally provide the greatest source of argument, perhaps because of the quantities of Cobra that normally accompany them!)

In this very stylised game, imagine that you are having dinner as part of a group of ten strangers. The restaurant serves just two dishes, chicken and steak. While we will assume that steak is the favourite of everyone, in this example it is twice the price of the chicken, and so we will also assume that were each of the diners alone they would choose chicken (being thrifty glider pilots). What we find through Game Theory is that, when each diner knows that the bill is to be split evenly, the outcome turns out to be quite different.

Let's consider the choices faced by a single diner – you! – in isolation (being able to view the "game" in this structured way and from the perspective of each "player" is the essence of Game Theory). Here, choosing steak will no longer double your bill, as the increase will be shared between all ten at the table. Whatever the others do it is in your best interests to have them subsidise your expensive tastes. A perfect scam?

Well, no, because as all the others share the same information and preferences they will make the same choice – steak over chicken. The final outcome is that the bill has doubled! Each diner would have been "better off" choosing chicken but, because they perceive that the additional cost will be borne as a group, they end up making

choices that leave all in the group worse off (but not as bad off as anyone naïve enough to choose chicken, who would end up paying almost the price of the steak for it!).

Game Theorists have conducted real life experiments with games such as this and found out that people often do follow this theoretical trap.

Splitting the gaggles?

An interesting theoretical diversion, but of any relevance to gliding? I think so, and believe a parallel to this simple game is seen in the gaggles that inevitably form on weak, blue competition days. As the group nears the top of the thermal, where the climb begins to weaken, it is obviously in mutual best interest to leave as a group and find a better climb – competition glider pilots being both competitors and co-operators. (We all want to win, but we also know that multiple pilots working together can fly cross-country faster than they could alone). Is such co-operation within the gaggle always what happens?

In my experience often not; sometimes even the “good” pilots are found hanging around at the top of the stack, “failing” to make a decision. Why? Well, viewing the “game” from the point of view of a single “player” it is easy to see the problem within this simple example. On a weak, blue day the thermals can be hard to find without a circling glider to mark them for you. Being the first to leave means that you take the risk of missing a climb and landing out. Following has some obvious advantages; if you don’t find a climb yourself you can simply join one marked so obviously by the competition, thus minimising your risk. Whatever the others do, in this simplified example, you are best to wait another turn or two after they leave, and so minimise your personal risk.

Now let’s look at the “game” as a whole. All the others share the same incentives; the result is that no-one leaves the weakening climb! In many situations this may not really matter; after all, it is relative not absolute cross-country speed that is important in a competition. However, imagine if there were not just one gaggle, but two or more. In this situation surely you would prefer it if you could speed the progress of the whole of your gaggle?

Play it again, Sam

When you play games repeatedly, their outcome can change dramatically. Returning to the restaurant example, let’s make a small change and assume that, in a new game, the diners are now forced to eat together at the restaurant every week for eternity (bad luck for them, given the arguments that happened following their previous visit!).

The difficulty in the previous game was that, having made your own choice, you could do nothing to influence the choices of the others. Without a way to stop them ordering the steak, the only option available was to order the steak yourself (and there-

fore at least be no worse off than the others). In a new game that will be played over you do have a way to deter the others from ordering steak this visit – you can order the steak next time you eat. Choosing chicken may leave you worse off the first week, but will send a signal to the others that you are willing to co-operate (and if the game is to be played indefinitely this potential loss will soon be insignificant). In fact it has been shown mathematically and in “real life” experiments that for a game assumed to be repeated indefinitely “rational” players do tend to co-operate.

Good news for gliding? After all, there will be many thermals in each day and several days of competition (outside the UK, at least!). Unfortunately not – in the terms of pure Game Theory co-operation such as described above will only occur if the game is played indefinitely. If there is an end to the games, however distant, players will tend to make the mutually sub-optimal choice from the start.

The “Me” in “Team”

To understand this, let’s envisage a group of pilots who have agreed to team fly during a comp – sharing tactics and information by radio to allow the group as a whole to increase its cross-country speed. In fact, let’s imagine they have done so well that on the last day they are holding the top three places. Each wants desperately to win and so on that last day there is a real temptation to renege on the deal to co-operate and instead to try for first place (perhaps by failing to call team-mates to a particularly good climb near the end of the task and thus winning back a vital few minutes).

On the last day there is no way to punish a defector with future non co-operation – the competition will be over – and it is this lack of deterrent that, in Game Theory, suggests non co-operation in the single game. Now, if each team member believes that their teammates will renege on the last day, what incentive is there to co-operate on the penultimate day? And if not on the penultimate, why co-operate on the previous day? In fact – given a bit of backwards induction – why co-operate at all?

Pure theory? Surely a combination of altruism and friendship amongst the team would stop such a disaster? Perhaps not! I have heard of at least one competition in which a team member had a change of heart on the final day, and suggested to their teammates that they should all fly to win on that last day.

Could Game Theory have helped? It would certainly have allowed the teammates to think through the risks/temptations that could occur on the final day. However, the techniques of Game Theory might have been used to change the “game” itself, and thus prevent such last-minute problems.

Value-added tactics

So can Game Theory make you a contest winner? Well yes, and no. Game Theory will

not help you climb faster, nor glide further and faster (the things that really win comps). However, I think it can help you achieve that last advantage if you are already flying well.

One of the key things to learn from Game Theory is not to play in a game you cannot win, but a still more powerful technique is to change the game to become one that you can. Team flying, both when pre-arranged and also when spontaneously “agreed” at decision points during a flight, is immensely important in competitive gliding, and if you are going to attempt it you need to understand how to make it successful for you.

While the simple scenarios above could have been understood without the structure of Game Theory, I think the discipline of thinking about the decisions of players in isolation, given the actions of their peers, does provide some useful insights.

It should also help you avoid some of the tactical errors in competition that might leave you on the ground as more skilled players climb away.

In the situations considered each player was optimising his behaviour, given the behaviour of the others. This is typical of Game Theory with multiple players; in fact the equilibrium that occurs when each does his best, given the choices of others, is so important that it has a special name: a Nash Equilibrium (named after the mathematician of Oscar-winning fame). Here, each player realised that his actions, or rather the other player’s perception of his actions, would influence their behaviour, and that winning a single “round” was not necessarily the key to winning the “game”.

A word of warning

Game Theory is simple in principle, but incredibly complex to apply in practice. You are normally left trying to analyse not only your competitors’ objectives and perceptions, but their perceptions of your perceptions, and their perceptions of what your perceptions are about their perceptions of your perceptions... and so on!

It’s all too easy to misdefine a game, its players, or its boundaries. Let’s return to the incident in the Nationals, when one pilot was called by another in the same class, who was already out of the running for the title, and guided to a climb during difficult conditions.

Pure altruism? Possibly not, as when questioned the first pilot felt he definitely would return the favour if he got the chance. So was the other pilot making the best use of Game Theory – linking a game he could no longer win to help a future one that he could? Possibly, but he may have forgotten about the other players! Although his helpful advice was not against the rules – because he was still in the competition and still flying the task – to other pilots unable to use his advice it might have been interpreted as unfair play.

We’ll have to wait and see if any of them try to spoil next year’s game!



On show

Helen Evans went to AERO 2003 to investigate the latest on offer from the sailplane manufacturers

IF THE words "aviation exhibition" bring to mind the trestle tables, sagging canvas and wet grass of the average British airfield, you should have been at AERO 2003 in Germany in April...

Billed as Europe's premier general aviation trade fair, this biennial exhibition brought 504 retailers, manufacturers and agents from 22 countries to Friedrichshafen on the shores of Lake Constance. Dominated by 351 German exhibitors, it had 32 stands from the Czech Republic, 21 from France, 18 from Switzerland, 17 from the USA and 15 from the UK. In 2001, 49,000 people attended; this year, 47,500 did (fewer members of the public but more trade visitors).

As you admire the exhibits in the well-lit halls or watch the air display that uses the adjacent runway (which also takes passenger flights direct from the UK), you quickly realise that Britain has nothing like this. In

Above and left: the Streifeneder glider rescue system fitted to a Ventus 2bxi. Both Schleicher and Schempp have installed a prototype of the system. Below, from left: Schleicher opted for the original two-handed yellow-and-black release over the pilot's head; Schempp decided to change that to a one-handed release, which can be fitted to the left or right cockpit wall; while DG's NOAH system uses an under-seat airbag to help eject the pilot safely. See the bottom of the opposite page for more news about these safety features





at AERO

the gliding hall, all the major European manufacturers were represented, giving you the rare chance to compare their latest ships just by walking a few paces. It also, of course, gives them the same opportunity, as I discovered when I bumped into Schempp-Hirth employees checking out the new LS10a on the Rolladen-Schneider stand.

The LS10a, D-9710, which is a flapped 15/18-metre sailplane in direct competition with Schempp-Hirth's Ventus, was due to have its maiden flight the week after AERO. Heralded as the successor to the LS6-18w, with a carbon-and-glassfibre LS8b fuselage, and wings developed from the LS6 aerofoil, its best glide in 18-metre mode is said to be more than 48:1. Two or three are booked to compete in the worlds on a permit to fly, in 18-metre mode. Production is due to start in September with delivery from next summer. So far there are 120 orders or options. The 18-metre only version has a hull price of 65,000 euros (c £45,450); the 15/18m hull price is provisionally estimated at around 70,000 euros (c £48,950). A turbo version and a wider cockpit are planned.

If that's the LS10, what about the LS11? Also on display was the fuselage for this two-seater, designed in collaboration with the Akaflieg Köln. They plan a maiden flight in September and two versions (a trainer at 18.5m or 19m and a high-performance 20m ship) to go into production next year.

A major theme at AERO 2003 was safety. The Streifeneder ballistic recovery system (called a "rescue" system) was on show but still not certified because of a fatal accident in 2001 during the final pre-certification test, when the pilotless LS3 was being lifted by



Above, clockwise from top left: interior and exterior views of the new 15/18m LS10a; two Schempp employees (on the right of the photo) check out the LS10a; LS10a with the LS11's fuselage behind it on the left and LS8t's on the right

Below: the future of two-seaters? The LS11 fuselage

Below: the LS10a prototype uses the LS8b's fuselage





Above: from left, the now-certified LS8t turbo; (centre) the ASW 28E turbo's engine and (right) the ASW 28E with Australian visitor Bernard Eckey trying out the cockpit



Above and below: the the Carat D-KAMS "BK" from AMS flight of Slovenia, with its unusual two-bladed propeller (seen here at rest) and its 15-metre "Discus" wings. The engine is a Sauer S1800-1-ES and the best glide, engine off, is claimed to be 35:1

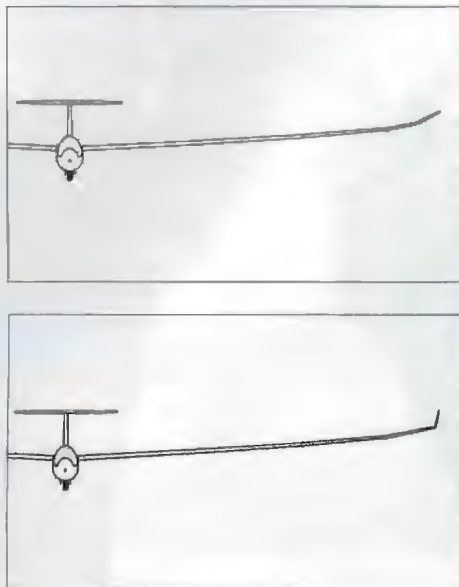


This immaculate Zlin 24, factory No. 260, dates from 1948. It was restored by Czech company Aveko, from Brno, and was on show on HPH's stand in the gliding hall. As well as a full-size 304c, HPH also had several models on show – including a radio-controlled airship that flew around inside the exhibition halls to draw attention to their stand



Left: a German electric winch, one of three winches on show at Aero. Below: the SkyLaunch team and (right) the "stretched" engine bay on the new SkyLaunch 3, 30cm longer than the 2





Top: Ventus 2c-18m wing and above: the new Ventus 2cx

Above: the new DG-808s, a competition version of the DG-808b, which is optimised for strong conditions

➤ a helicopter. Peter Selinger told me one of the ropes appears to have fouled a rotor blade. The helicopter crashed and its pilot died. The LS3, which was saved by its rescue system, is being held pending conclusion of the accident investigation. It is hoped to conduct the final test this year.

This tragedy has not, however, stopped Alexander Schleicher and Schempp-Hirth fitting the system to prototypes. Schleicher's is an ASW 28, D-1119 "OU", with a two-handed black-and-yellow-striped release sited over the pilot's head. Schempp opted for a modified, one-handed release, fitted to the cockpit wall of Ventus 2BXR D-4594 "DE". Their provisional estimate of the price is 12-15,000 euros (c £8,400-£10,500). Because the system uses the space that the engine would occupy in a self-launcher or turbo, it cannot be fitted to motorgliders.

The first of the safety features on to the market is DG-Flugzeugbau's NOAH system. This uses an airbag that inflates underneath the pilot after the canopy is jettisoned and the straps are unlocked, to aid exit in the case of a mid-air emergency. It is certified and offered by Rollanden-Schneider as well as by DG; Alexander Schleicher have fitted it for a customer on request, so DG's Karl-Friedrich Weber tells me. DG has sold about 20, three-quarters of them retro-fitted, at 3,500 euros (£2,500) each.

DG displayed its new DG-808s, D-9808 "VH", for the first time. This competition version of the DG-800s has been optimised for strong conditions. Its new ballasted weight of 600kg (1,322lb) is more than double its empty weight of 267kg (588lb). With a wing area (at 11m²) 1m² greater than most of its competitors it now, says Karl-Friedrich, has one of the highest wing loadings as well as the lowest. German champion Ralf Fischer is to fly one in the Worlds this year. At a hull price of 60,000 euros (c £42,000) for the

808s, DG has five or six orders. DG is also planning the self-sustainer version of the two-seat DG-1000s (of which 26 have been sold at a hull price of 70,000 euros/c £48,950). The DG-1000r's engine, the Hirth F33B, has a large two-bladed prop. DG hopes to start deliveries next spring at a "slightly higher" price than the Duo Discus.

Apart from the Ventus 2BXR, the latest development on show at Schempp was a further refinement of the successful Ventus 2C. The Ventus 2CxM D-KBTL "TL" has a max AUW of 565kg (1246lb) a different-shaped outer wing (see above left) and nose profile, and a thinner, wider tailplane. This optimises performance in strong conditions, giving a higher wingloading and better handling when heavy. It will cost a few per cent more than the Ventus 2C's hull price of 55,700 euros (c £38,950). Certification is hoped for soon and the delivery time is two years. Schempp is also starting to think about an 18-metre version of the Discus 2.

Alexander Schleicher displayed ASH 26e

D-KAPL "VX", ASW 28-18 D-3618 "PV" (the new 15/18-metre ship – the waiting list is up to 2005; see also p18), and ASW 28-18e D-KPAS, the turbo version, expected to take to the air for the first time in May. The fuselage front section is from the ASW 27, and the back end from the ASW 24e. The Solo 2350 engine is the same one that is used by the LS8t and Discus Turbo.

The world's largest sailplane, the two-seat Eta, was also on show. The Iidaflieg has measured a value for its performance: more than 70:1. Its roll rate (45°-45°) is 5.3 secs – "the same as the Kestrel!" remarked John Delafield, who was present. The model shown – D-KKUM "X33" – belongs to Italian Umberto Mantica. It will take another year to build the remaining three of the original production run of six (owned, respectively, by Hans-Werner Grosse, Erwin Muller, Umberto, Bruno Gantenbrink, Hartmut Lodes and Jan Kruger, and the sixth possibly by Erwin Muller again). They are still on a German permit to fly, although certification ➤



Right: the LAK-19t with the LAK-17 behind it



➤ is hoped for this year. The manufacturers have made those amazing 30m (100ft) wings more than 70kg (154lb) lighter, through design and construction changes that took 13 months and new moulds and jigs. They have yet to decide whether to move into further serial production or what the price would be. The current cost to build an Eta is 500-600,000 euros (c. £350,000-£420,000). Hannes Zimmerman of International Sailplane Services is handling interest. He estimates that 20-30 of more than 150 enquiries are serious. Delivery of any new gliders could be as early as winter 2004.

Eta's empty weight is 650kg (1,433lb) and structural max AOW is 950kg (2,094lb) but for international Open Class competition, the limit is 850kg (1,874lb). Eta X33 will fly in the Open Class Worlds this summer, with Italian Stefano Ghiorzo in the front and owner Umberto in the back.

If you're wondering why one of Eta's wings is covered (see above right), wing cover-makers Jaxida, from Denmark, booked a stand nearby and used Eta to display their wares. In a decade, Jaxida has sold around 1,700 sets of covers in 20 countries. This includes four sets for Eta – unsurprisingly, the most expensive ones they make.

British exhibitors included Airplan Flight Equipment (RD), Europa and SkyLaunch. The new SkyLaunch 3 can be supplied as an empty shell at 33,700 euros (£23,600), for continental customers to adapt as they choose. The engine bay is 300mm longer than the SkyLaunch 2, to take bigger German engines. Alternatively, a fully-fitted version

Above, clockwise from left: gliders at AERO 2003; the third of six Etas, this one owned by Italian Umberto Mantica; the prototype of a new canopy mechanism for the Rotax Falke; and the instrument panel in Mantica's Eta

with a new diesel engine costs 74,000 euros (c. £52,000). Most of the 42 skyLaunch 2s sold so far are in the UK, though six have gone to Iran. Europa's MD Keith Wilson is planning a demo tour in Germany/France of the "long-winged" Europa kit motorglider, which he launched in the European market at AERO. He aims to break a world record in one this year. The kit costs about £50,000 finished, and he has sold just under 50.

Another motorglider on show was a Rotax Falke, D-KEOR, of which 160 have been sold, four in the UK (two with the Faulkes Flying Foundation, one at Mendip GC and the BGA Falke). Scheibe has developed a new canopy mechanism for it (see above).

Stemme brought along S10vt D-KUSF and plans for three motorgliders – the S2, S6 and S8 – that they hope to have flying by the end of the year. The Czech firm HPH showed Glasflugel 304c Wasp OK-9999 "HPH" and brought plans for the 305s and the 305se – a new design (without/with engine, respectively, although the engine has yet to be chosen) for the 18-Metre Class. The makers expect maiden flights in 2003 and

2004 respectively and hull price, without engine or instruments, is expected to be 20-25 per cent more than the 304cz.

It was good to see the well-known Polish SZD-51-1 Junior SP-3467 "AP" (sold off the stand) and an SZD-55-1, SP-3659 "JB" at the show. After the closure of their state-owned producers, a company network co-ordinated by Andrej Papiorek has brought these back into production. They have three orders for the 55, and ten for the 51. They also make the SZD-50-3, better known as the Puchacz, for which they have seven orders, and hold the moulds both for the SZD-54 Perkoz, a modified Puchacz, and for the SZD-59 Acro. Meanwhile, LAK brought its latest single-seaters: the 15/18-metre LAK 17a D-7417 "BG" and the Standard/18-metre LAK 19t.

The number and range of products on show at AERO is impressive. As well as the 504 exhibitors, 243 other companies were represented on their stands. If you want to stay up-to-date at first hand with gliding developments, the dates for next time are April 21 to 24, 2005, in Friedrichshafen.

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Opening doors for Juniors

Ian Craigie is one of the lucky British juniors who has flown with George Lee in Australia. On this page he describes the experience; overleaf, George explains the philosophy behind the opportunity

GEORGE Lee, three-times World Open Class Champion (in 1976, 1978 and 1981), offers perhaps the best-ever soaring training available to young people.

Upon his retirement, George decided to set up an airfield specifically to train young people. He purchased a suitable site near Dalby, Australia – with consistently-good, rather than epic, weather – added two 800m-long runways, built a hangar, and bought a Nimbus 4DM to train the pilots in.

He accepts four pairs of juniors every season, one of the pair being British and one Aussie or American (so far). You may ask: why would someone do that? What's the catch? Well, there isn't one; George simply has a desire to put something back into gliding.



Above: George Lee at the entrance to his own hangar

I was lucky enough to be offered the opportunity of flying with George Lee for two-and-a-half weeks last winter down in Oz. The flying was superb, with just three days lost to bad weather. Typical tasks included 500s and 300s, at speeds ranging from 90km/h to 135km/h.

The quality of the instruction is amazing and George encourages complete immersion in gliding, from 08.00hrs at breakfast to 20.30hrs, when the debrief finishes. The jobs for the day include discussion of the weather, tasks and preparation of the glider, then you either fly or, if it's your day off, read a selection of material provided by George. If that isn't enough to do then you can read any of the complete set of *S&Gs*, *Soaring*, or Aussie gliding mags.

Later, you help to clean and put away the glider then after dinner have a debrief of the flight with the logger file on the computer. Every aspect of competitive gliding is covered during the course, with particular time devoted to any individual weaknesses.

Flying with George Lee was a unique experience: I have flown with excellent cross-country pilots, but never someone who seems so faultless – at least to someone of my experience level. It is simply amazing to see perfect route selection, perfect thermal entry, and perfect centring (not easy in a Nimbus 4DM at 800kg-plus flying at 95kt), every single time.

There was so much to learn that it would be impossible to recount it all, and indeed many of the lessons were intangible.

However, there was one strong lesson that seems applicable in almost every flying



The view from inside the hangar (top) at three-times world champion George Lee's Australian ranch, Plain Soaring, where he takes junior pilots from across the world to teach them soaring in his Nimbus 4DM (seen opposite, between thermals) All photos: Ian Craigie

situation. That is the need for thorough preparation: of equipment, psychology, physical fitness and, at comps, crew. Preparation is not exciting but it is essential. I'm not a big fan of lists and procedures but having seen them used to great effect has persuaded me that they can be very useful. They remove stress and free mental capacity for more important things like flying.

There is no space to list all the things that need preparing (I started writing a list, but it doubled the length of this article); needless to say, it is long. If your preparation is done properly you should be at the stage that the only variables for the day are going to be the weather and the task. Nothing else should require any mental energy.

This can be achieved by developing a routine and having checklists, again, this sounds dull but it can be of huge help in helping you to fly cross-country faster.





Above: George and Dillon Krapes about to launch; the visiting juniors spend alternate days flying



Storm cloud near the ranch: the weather is not perfect!

Three-times World Champion George Lee explains how and why he set up *Plain Soaring*...

GLIDING has meant much to me over the last forty years. Experiences have ranged from my first, hook-setting three-minute circuit in a T-21 from Bicester, through winning three consecutive Open Class World titles, to taking Prince Charles on his first flights in a glider, to receiving the MBE for services to gliding and to flying the memorable Trans-American Smirnoff Derby.

Professionally I served in the RAF for nearly 22 years flying Phantoms, and then went on to fly B747s with Cathay Pacific Airways in Hong Kong for 15 years.

My gliding was limited during my last tour of duty in the RAF, when my wife, Maren, and I were stationed in the far north of Germany for three years. It was a similar situation in Hong Kong, where there was no gliding available, although I did manage to keep in touch with the sport during holidays.

The fact that there was no gliding in Hong Kong was tremendously frustrating but it did give me ample time to reflect on my plans for retirement. Maren and I decided that by now we were best suited to a climate that was hot and dry (within reason!).

Since joining Cathay Pacific Airways I had been spending one gliding holiday a year in inland Southern and Eastern Australia and had both made friends and come to know the country and its way of life. Eventually Maren agreed with me that Australia should be our retirement destination.

Having established right of abode, we then set about exploring the various areas to the west of the Great Dividing Range until we came upon Dalby, where we both felt independently that we had found the right area. With the help of my friend Shane McCaffrey, a suitable farm was identified that was just about to come on the market and a deal was made. During the first year of residence a house, a hangar and two runways were constructed, the first flight at *Plain Soaring* in my Nimbus 4DM taking place five months after arriving in the country.

The foregoing constitutes a brief summary of what actually took place!

Before leaving Hong Kong I had given considerable thought as to what form my gliding activity might take. For many years I had been conscious of the fact that the average age of glider pilots globally had been steadily increasing, and I felt that there was a need to assist and encourage highly-motivated young pilots that displayed both talent and potential. I had been an instructor for some 15 years in the UK, during the course of which I had done a certain amount of two-seater cross-country training. I had also been involved in the early stages of junior competition training in the UK, which steadily evolved to become the Junior Nationals of today. The concept of operating a self-launching, high-performance two-seater in coaching courses for reasonably-experienced junior pilots gradually matured in my mind, and so it came to be.

I decided to do my own flying during the first season, as well as setting up the framework for the first course which was in



Left: Ian and George coming in to land at Plain Soaring

Above: getting ready for off with engine extended and George just visible in the mirror looking up at the sky

Right: Plain Soaring from the air. George Lee planned and built it with international juniors training in mind



October 2000. I decided that there would be two pilots on each course, the duration of each course being two-and-a-half weeks, and that there would be four courses per season. I felt that I would like the pilots to come from the UK and Australia (one pilot from each country on each course), and so it was for the first two seasons. The Australian gliding movement is relatively small, and after the first two seasons there were no more sufficiently experienced Australian junior pilots available. I then approached the Soaring Society of America and for the 2002/2003 season I had four American juniors to join the four British pilots. In spite of the overall size of the American gliding movement, the number of experienced junior pilots in the US is small, and for next season I will have three Austrian juniors, as well as a South African junior, to join the British pilots (there is no shortage of British juniors!).

Running the courses to date has been both demanding and satisfying. Given reasonable weather conditions each course has resulted in approximately 50-55 hours flying. A typical flying day starts at 09.00hrs with the weather briefing and finishes around 20.30hrs after the evening debrief. If the weather is poor on any given day we spend the time working our way through a syllabus of discussion topics. At this point I must pay tribute to the wonderful support that Maren gives to the courses. This ranges from getting the guesthouse ready, through doing copious amounts of cooking (junior pilots have very healthy appetites!) to cleaning the guesthouse, all the while remaining cheerful!

Since day one of the first course, it has been pleasing to find that only minor cosmetic changes to the course structure have been required. It has been a pleasure working with keen young pilots and the international aspect has been a bonus. It has been particularly rewarding when I have seen genuine progress being made as a course develops. Although I had little to do with it, it was wonderful to see Pete Masson go on to win the World Club Class Championships at Gawler, having attended the second *Plain Soaring* course.

As to the future, Maren and I have decided that, for a variety of reasons, we will do just two more seasons of courses. That would make a total of 20 courses in all and hopefully 40 young pilots will have been helped on their way.

Incidentally, you may be wondering where the property name *Plain Soaring* came from – well, it came in a flash of inspiration one day in Hong Kong as I was taking a shower. Having said that, there have been numerous occasions when life has been anything but plain soaring!

Juniors who have flown at *Plain Soaring* are (in alphabetical order): Matt Anglim (Aus); Brian Birlison (UK); Mark Brown (UK); Ian Craigie (UK); Gavin Goudie (UK); Hugh Hofmeister (Aus); Alan Irving (UK); Dillon Krapes (US); Heath L'Estrange (Aus); Anthony Leach (UK); Pete Masson (UK); David McManus (Aus); Robert Nunn (UK); Luke Rebbeck (UK); Mike Robison (US); Liz Schwenkler (US); Sunay Shah (UK); David Stewart (Aus); Brett Sutcliffe (Aus); John Tanner (UK); Ben Thompson (Aus); Anna Wells (UK); Caleb White (Aus); and Garret Willat (US).

For accounts from Anthony, Gavin, Luke and Pete, see *Learning with George Lee*, October-November 2001, p48



Above: American junior Dillon Krapes, Ian's fellow course member, in George's hangar



Time to put away the toy after another day in the air..

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HUMAN FACTORS

In the third of his five-part series investigating human performance limitations for glider pilots, Ian Atherton takes a look at the ergonomics of cockpit design

ERGONOMICS is the study of how humans interact with their environment, in this case the cockpit. This area of design study emerged from World War Two following numerous accidents in the RAF, where it was determined that poor cockpit design was a significant factor in many aviation accidents, especially when the crew were fatigued.

The physical dimensions of a person compared to the cockpit will determine how easily that individual finds it to operate the variety of controls and instrumentation required to fly the glider. Cockpits, like other artefacts, are designed to fit the user. Since it is not viable to make a cockpit individually tailored for each pilot, the designers use an ergonomic model derived from data that is collected from the target market. In the case of a glider, this means it is typically aimed at the male adult: the cockpit ergonomics usually reflect the dimensions of an average male. JAR 22 specifies the anthropometrical range used for modern gliders.

For example, the average dimension for height, arm length, and so on, would be in the centre of the "ergonomic curve" (see *diagram, opposite*). At each end of the curve are the extremes of smallest and largest. The two very extremes (top and bottom five per cent) are usually ignored as they distort the data and are difficult to build enough adjustment into the design at an economic price. Obviously, this creates problems for both tall/large pilots (typically over 6ft 1in/1.85m) and short/small pilots (typically less than 5ft 4in/1.62.5m tall).

Small, lightweight pilots have a variety of ergonomic difficulties. Ballast can be added to compensate for an aft C of G, and solid packing added to bring the pilot forward enough to operate the controls. However, this is not the whole story: often levers are not in the ideal position to gain the best mechanical advantage. Thus, some levers may be more difficult for such a person to operate, especially with load on, such as airbrakes. This is not because the smaller person is weak, but that they have a poor mechanical advantage compared to an average person in the same cockpit.

A good example of this is the airbrake lever on K-7s. The travel on these required restricting so that the lever did not move too far back, effectively out of operable range for smaller pilots. Without this restriction, the airbrakes may become impossible to close once past a certain point whilst flying, with potentially disastrous undershoot implications when approaching to land.

Another problem arising out of cockpit ergonomics restricting the positioning of controls that continues to cause accidents is

Inside the cockpit

the incorrect selection of control levers or switches. This is particularly common on gliders that have several levers, say the undercarriage/airbrake/flaps, close to each other (Pegasus, ASW 19, ASW 20). Other items have also been mistakenly selected when in close proximity and have similar design to each other. Examples include the canopy lock instead of water dump valve (Pegasus), airbrake lever instead of cable release (K-13), and canopy release instead of airbrake lever (K-7).

The way to prevent such mistakes is to employ rule-based behaviour (checklists or drills; this is discussed in detail in a later article), and to always take the time to look at and positively identify the selected control before and after using it.

Indeed, accidents frequently occur even when the control has been initially correctly identified and the pilot has selected the new position, but not confirmed visually that this is correct, for example: flap selection made to incorrect position, or undercarriage down but not properly locked, causing it to retract on landing.

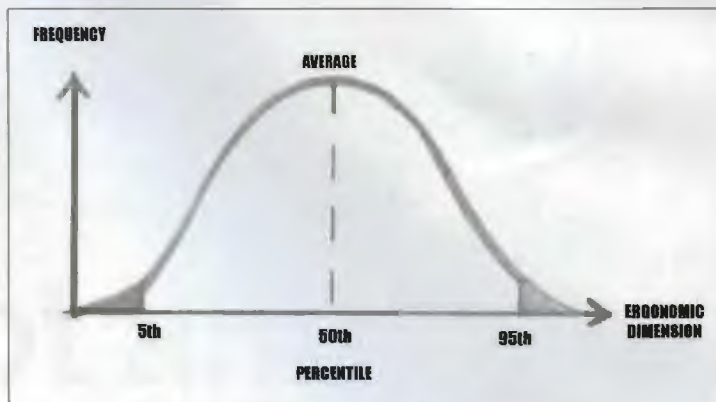
Before flying any new type of glider, a briefing by an instructor qualified on type is essential. Pilots should also make sure they can correctly identify, reach and operate all the controls of the glider through their full range before getting airborne. If the undercarriage is to be tried out on the ground, obviously the glider must be supported by some other means such as a belly dolly.

Displays

Glider cockpits have a wide variety of instrument displays, the requirements for which are listed in JAR 22. Some are very basic and may only include the traditional analogue pressure driven vario/ASI/altimeter combination typical in many club training gliders. At the other end of the spectrum is the privately-owned hot ship that may have a dazzling panel full of high-tech instrumentation. This could include displays for an electronic vario, averager, glide computer, radio, cloud flying equipment, GPS, and even a moving map. There is little standardisation for instrument panel layout in gliders and this high-tech mixture of both analogue and digital, colour and monochrome displays can be extremely distracting and difficult to decipher if the pilot does not have the experience and current practice to use it efficiently.

Often clubs do not have the facilities to properly train their pilots in how to use such equipment and, therefore, it is not factored into the training syllabus. Thus, many pilots either fly with these expensive gadgets turned off or (more likely) risk trying to learn

Right: the ergonomic curve. Exceptionally tall, short, heavy or light pilots should note that the five per cent at each end of the curve, as shaded in the diagram, are usually excluded in when considering effective cockpit design



how to use them while flying solo, possibly in a thermal, which presents obvious collision risks and must be avoided.

A heads-down mentality has increased in gliding as more and more "must have" gadgets have appeared in the cockpit, requiring greater attention from the pilot, and causing lookout to suffer. Pilots need to be thoroughly familiar with instruments, displays and panel layout before they fly, and they must learn to use complex items such as GPS in a dual-control aircraft with an instructor or authorised safety pilot. In general, analogue displays are excellent for conveying trends, for example, lift/sink information (vario), whereas digital displays are better for presenting discrete numeric information, such as radio frequencies. Colour and clarity are also important, and many ASIs now have coloured bands or markers depicting particular speed ranges specific to that aircraft type.

Colour codes

All gliders should have the various levers in the cockpit colour coded. Red-and-white stripes or red denotes emergency canopy release. Yellow denotes the launch cable/tow release. Blue denotes airbrakes. Green denotes the trimmer.

Cockpit logos

These are labels sometimes added in the cockpits of more modern/complex gliders as an additional visual reminder. They have a simple picture depicting the function of the lever they are positioned close to.

Audio

The most obvious and successful instrument for gliding in safety terms is the audio vario, which allows the pilot to have a good idea about the lift or sink he is in whilst keeping his eyes outside the cockpit. This type of instrument can be very useful. Other tones, such as undercarriage unsafe buzzers have had more limited success and the distraction

on finals has led to some serious accidents as the pilot "runs out of hands" too close to the ground. It is now generally thought that it is safer to land wheels up than to get distracted on final approach and crash wheel down. Their use is now generally discouraged by the BGA, and the RAFGSA stopped their use after a serious accident to one of their gliders several years ago. Other bleeps from GPS and even radio chat can cause distraction at the most inopportune times, and possibly help to overload some pilots. Synthetic voice warners are generally now preferred to horns on commercial and military flight decks but, to my knowledge, are not yet employed widely in gliders.

Tactile information

Standard shapes for lever grips are often used in modern powered aircraft, allowing the pilot to confirm a lever by touch once visually identified. This is useful but not yet generally employed in gliders.

Next issue: personality and behaviour

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GLIDING GALLERY

Paul Bramley took this shot of launching from the frozen lake at the Scandinavian wave camp at Ottsjo this year





Blowing hot and cold



Above: this sequence of photos of Ted Neighbour was taken by his wife, Mary, at the Gliding Club of Victoria, Benalla, Australia. The first in time is on the left. Observe Ted's hands on the umbrella, and the flynet over his sunhat. "Each day," he explains, "we would all wait for the prescribed magic °C when the thermals would start. It paid to watch the locals – the moment they moved to the launchpoint or called for the tug, there would be a scramble. Take your eyes off the scene and you could be at the back of a long queue." Another way of telling when that magic trigger point in time has arrived, as these photos show, is when you need both hands to hang on to your umbrella... and when the flynet over your sunhat begins to soar!

Left: Mel Eastburn took this from a campsite near to Justin Wills' home on the morning of the day that the first New Zealand 1500km Diploma was flown. Later on in the day the rising temperatures dried out the air and the clouds disappeared



Australian bushfire smoke crossed more than 2,000km and the Tasman Sea to mark New Zealand wave. The photo was taken on February 17 from Wardell's airstrip at Omarama, looking north in a westerly (Phil Swallow)



Keith Slimmons of Mendip GC was standing on the jetty one evening at Te Anau in New Zealand's South Island looking out over the lake of the same name, and couldn't resist photographing this wave system



Now this is a 25 knot windssock! Ross MacIntyre took the picture at Gransden Lodge; it captures, he says, the spirit of January in the UK in 2003. Don't be fooled by the blue sky; he snapped it between snow showers

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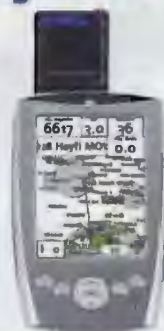
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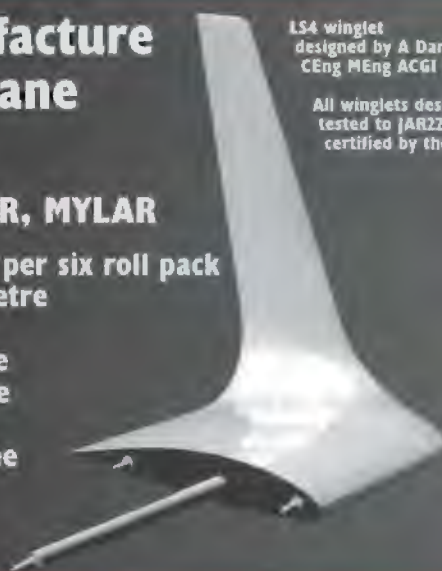
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'Look out over the side!'

Roger Emms, a former CFI at Nene Valley GC, explains why he still remembers his first glider flight... and launch

I CAN STILL remember the first time that I flew in a glider, or, to be more precise, I can still remember the winch launch... very vividly!

It was June 19, 1986, and my curiosity had finally overcome my total fear of ever going up in an aeroplane without an engine. I'd seen an article about a local gliding club in the paper during the week, where they launched gliders "on a winch" and finally decided to give it a go, to see whether it could in any way help with my abject fear of flying.

Having arrived at Nene Valley GC that fateful Saturday, I was quickly signed up (there were only ever half a dozen people there in those days), and very briefly told that we'd go up and with any luck find some lift (whatever that meant) to see if we could "get away" for a while.

I was shown how to get into the glider, and then one of the members strapped me in and asked if I was comfortable. I said: "Yes" – but I wasn't, really, because the damned glider was leaning to one side and I was trying to sit upright.

The pilot in the back seat (I wasn't told about the fact that he was an instructor, but then I didn't know how the system worked anyway, I just prayed that he knew what he was doing) mumbled a few words that I didn't really understand, apart from "how much do you weigh?" and then said: "cable on, please".

Everything went quiet, then just as I was wondering whether I was supposed to do be

doing something, I was jerked into the back of my seat, there was a loud bang from somewhere behind me – which I now know was the tail of the K-7 hitting the ground – and we lurched forward. I tensed in total fear as the aircraft rattled and banged its way along the strip, then suddenly we were apparently almost vertical. I reached out and grabbed the transverse bar just below the edge of the cockpit to stop myself falling backwards (illogical but understandable reaction) and spent what seemed forever holding on like grim death while the glider bumped up the wire.

Just when I thought things couldn't get any worse, there was a loud crack from beneath my seat, and the glider bounced upwards; "Oh no," I thought, "the glider's breaking up!"

'Just four minutes later we were back on the ground, and I was still quaking with fear and wondering what went wrong'

My stomach gradually came back to its normal place in my abdomen, and I realised that we weren't falling out of the sky. The rushing noise of the wind gradually subsided, and only then did I hear a voice from the back, quite calmly telling me: "Only a thousand feet, damn it, let's see if we can find some lift."

Just four minutes later we were back on the ground, and I was still quaking with fear and wondering what went wrong. "We're going again," said the voice behind me, and before I could catch my breath the whole launching performance was repeated!

Suffice to say that the ensuing 23 minutes converted me, and I wanted to learn how to master this thing: I turned up religiously

every Saturday from then on (I was 42 years old when I started) and on my 75th launch a year later I went solo.

Now let's get down to the point of all this: if I hadn't been lucky enough to "get away" on that second flight, the terror of the launch would probably have prevented me from ever going to a gliding club again.

I've been lucky enough to have joined a club which has not only grown in numbers since I joined it, but has also grown in its awareness of the human factors involved in attracting and keeping new members.

In my early years, I vowed that if I ever became an instructor, I'd make sure that nobody I took up ever had a first launch like mine. I did become an instructor; my progress was slow, but I became an AEI, as it was known, under Woody Woodhouse at Tibenham early in 1989, despite the fact that I asked him to write 'blue/yellow' as a reminder in my log book to cover a little incident while we were on aerotow, but we won't go into that now...

In November 1990 I successfully survived an Assistant Rating course under Terry Joint at Lasham; in June 1993 I was promoted to Full Rating by Mike Jefferyes, who ran the course at our airfield, using our K-7s (poor Mike), and later that year I was elected CFI, after our previous CFI resigned for personal reasons.

Back to the point of my story: ever since I started taking people up for their first flights, my pre-flight briefing has, apart from all the usual pre-flight checks, included the following statement:

"While we're launching, the best place for your hands is on your straps up by your shoulders.

"Now I'll tell you the three key things about a winch launch; firstly, the ground run



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Forgotten forerunner

is very short, and you'll be pushed into the back of your seat, hard, and there'll be lots of bumping and noise.

Secondly, the angle we go up at is under my control; it may seem very steep, and you may feel as if you're slipping backwards, but if we don't go up steeply, we won't get very high; don't worry, it's quite normal, and I'll tell you to *look out the side* as soon as we're off the ground. That way, you'll be watching the ground drop away and the view getting better as we go up. Anyway, if you look ahead all you'll see is blue or grey, and that's boring! There'll be lots of noise and bumping and rattling all the way up the cable, because gliders are hollow and everything echoes around in them.

Thirdly, when we reach the top you'll hear a noise like this (pulls cable release and releases it sharply) as the cable comes off. The glider may surge upwards a little, but that's only to be expected, as we've just dropped a few hundred pounds of steel cable; then everything will settle down, the noise will decrease, and we'll look at the world around us and see how a glider flies.

Incidentally, if you feel the back of the glider waving from side to side as we go up the launch, it's just me telling the winch driver to slow down a bit, and lastly, if the cable breaks, it's not a problem, because we're flying! All I'll do is lower the nose, build up speed, then land in the safest place, which is often straight ahead."

Maybe some S&G readers will take issue with this process, but I still often take people up for their first lessons if there's no Basic Instructor available, and in my experience the most common remark after we've landed, is for the person to say: "That was absolutely great, and the launch was nowhere near as dramatic as you said it would be." This puts my mind at rest that I'm achieving the goal I set myself many years ago, and the fact that our membership continues to rise seems to indicate that people want to come back, even when their first flight is only "up, round and down".

Wally Kahn tells us of a pioneer whose remarkable achievement deserves recognition along with other epics of aviation history

LONG before the American Wright brothers made history at Kitty Hawk in 1903, a quite remarkable Swiss shipwright working in the shipyards of Simpson and Strickland in Dartmouth, Devon, not only designed but also built and flew a glider. This he achieved in the spring of 1894, and although Sir George Cayley's reluctant coachman can claim the distinction of being the first glider pilot (though strictly only as a non-participating passenger) in England (1852) and Percy Pilcher followed in 1895, our man was undoubtedly the first genuine, all singing and dancing glider pilot!

His is an incredible story; happily a Swiss aviation historian called Jean-Claude Cailliez, who has made a special study of Liwentaal, hopes to publish a detailed biography later this year.

Alexandre was the son of a Finnish Count, who escaped from a Siberian political prison camp and fled to Lausanne, Switzerland. Alexandre, or Albert as he is also known, was born the middle son on January 3, 1868. Following a Swiss and French education he worked as a shipwright in Dartmouth.

After his epic three flights in his glider, the last of which ended in a mishap, he went on to design a twin-engined aeroplane but due to his move to London, this machine was never built. From 1891 to 1911 he registered nine patents, which are still stored in the London Patent Office.

On his return to Switzerland, he worked with Hiram Maxim the machine-gun man, inventor and early aviation pioneer and then for Count Zeppelin designing and making

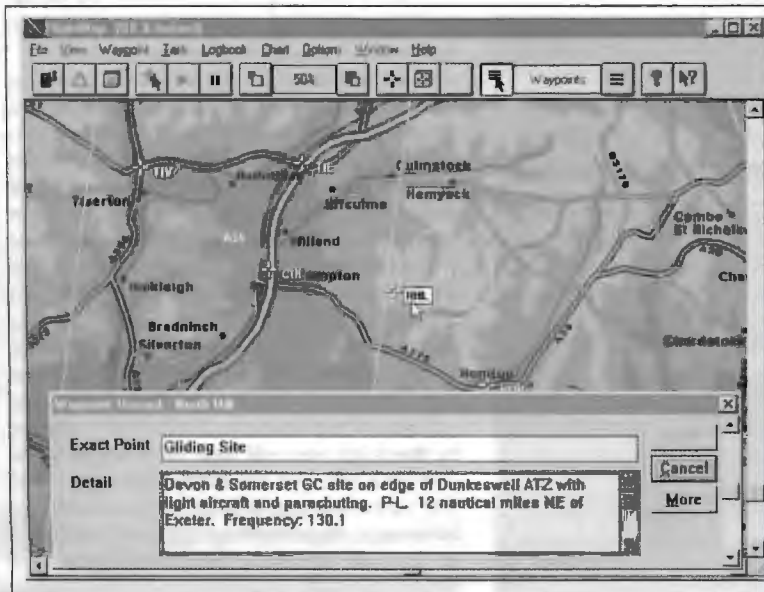


Anthony Bryant

propellers for his airship. During the First World War, he established a factory in Paris building flying machines but – ironically – it was bombed by a Zeppelin! He emigrated to Canada after the war and the trail went cold. We hope our Swiss friend will be able to fill in more gaps in this remarkable story.

The details of the "Dittisham Aerostat" (above) were as follows: wingspan 13.1m (43ft), length 6.4m (21ft) weight 54.5kg (120lb). The fuselage was a single tube of steel. The wing was shaped like a gull's, used Norwegian pine spars and was covered with silk. The large all-moving tailplane was operated by a long lever and there was a rudder for directional control. The undercarriage consisted of a single bicycle wheel and a skid at the tail. The pilot sat on a bicycle saddle in a heavy calico smock and a cap facing backwards to reduce the drag!

I am indebted to the late Bob Marsh, whose booklet *The Liwentaal Enigma* is an invaluable source of information. With the forthcoming Swiss book, I hope this wider exposure will make the name of Liwentaal stand alongside other world-famous flying pioneers.



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Illustration shows the Waypoint Inspect facility. Map data is supplied by Bartholomew Digital Data.

How to survive checks

Ian Dunkley draws upon his 45 years' experience to offer serious and not-so-serious tips for pupils and instructors alike

THE FIRST check flight that most people are involved in is the one that they aren't completely aware of – the one when an instructor runs out of valid reasons to fly at your expense (for a short while, at least). In my case, I circumvented this check many years ago simply by climbing into a Grunau Baby and shouting "all out" when no instructor was present.

Two things happened shortly afterwards. I experienced my first cable break, real or simulated, just as the CFI drove onto the airfield with his nine-months-plus pregnant wife. Unfortunately, their arrival coincided with my mentally reaching the page in the book that said, "lower the nose..." etc, but omitted to say by how much, revealing to them a Grunau Baby in plan view.

The CFI's wife screamed, the CFI thought of paperwork, and the baby reacted to the echo of "all out" and prepared for launch. This, to my subsequent advantage, resulted in the CFI making a U-turn for the hospital, where he presumably expected me to join them.

Remarkably, I was not sent to the back of the two-seater queue or allotted to spending an infinite number of weeks unravelling piano wire or, worse still, sent to a golf or fishing club, but allowed to continue solo, leaving another "solo" check flight to teach me a few exercises best learnt dual.

If you are in the least observant, however, you will realise that two people are involved in any normal check flight, and that whilst both have a vested interest in survival, the P2's main concern is "being checked out", the P1's should be more primeval. This article, then, is all about surviving check flights – from both points of view – drawing upon my experiences of 45 years, and those of others who have lived to tell the tale.

If you are sensible, or are forced to abide by the rules, you will have to satisfy an instructor that you are ready for solo. The way to do that is to be on your best behaviour, do everything right, don't try to show off, and fly a circuit that is pure local copybook. Complying with this latter

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Think about the flight first and keep everything simple, says Ian Dunkley: that way, if the instructor pulls a fast one, you aren't overloaded

(photo: Mike Fox)

suggestion is sure to impress, as such circuits are not often seen.

The other thing is to think about the flight first and keep everything simple; that way, if the instructor pulls a fast one (or the bung), you are not over-loaded and can cope. If you adopt this approach you should get through most of the checks introduced to frustrate you as you advance up the ladder. It's just a pity that the accident statistics, and observation, show how few people adopt this approach in their solo flying.

Pupils may not believe it but an instructor gets, nearly, the same kick out of sending someone solo, as the soon-to-be P1. Having checked the log book to make sure all the required exercises have been completed, and checked the conditions, the instructor is ready and wants to send you off, so it's up to you not to disappoint him. Not only does the instructor feel satisfied that he/she (how I hate political correctness), and their colleagues have done a good job, he is also aware that you are more likely to fly safely on this check than on any other. From his point of view, this is a relief. For from this moment on the instructor knows that the more experienced you become, the more likely you are to try to kill him. (I have watered down this last sentence a bit as I don't want to scare off my replacements in the instructor corps.)

It is part of an instructor's job to get you

into difficult situations to see if you can cope. It is not his job to get into situations that he can't cope with. How often do you read "instructor failed to react in time" to explain of an accident? This is much less likely to occur if instead of just "sitting in the back for a ride", he has made a discussed plan for the check, which she monitors (does that solve the sexism problem?).

A few years ago, I needed my annual instructor check at another hill site (not my UK home club at Camphill in Derbyshire).

'P1 said: "Fine, I'm satisfied, just fly now". I should have known better than to take him at his word. I decided to go for a tour...'

Instead of following my own rules and keeping it simple, I set off on a tour of the local mountains. Deciding that I had enough height to cross a broad shoulder that was out of lift, I went for it: my P1 didn't say anything "so it must be OK" and it was – but only just.

Later in the flight, faced with returning over the same shoulder, I said: "I'm going to go round it this time".

"Thank God for that," was the response, "I thought we were too low last time, but you seemed happy."

Two instructors flying together is a dangerous combination, more so if each respects

the other's ability. In these circumstances it is essential, even if it seems to be clear already, that the pilots agree who is P1, and discuss the implications of this before they take off. (If the other instructor recognises that incident, it was my fault, OK?)

On an approach, the experienced P2 was flying a long final. From the back I saw another glider on a base leg below and in front: "Watch out for the glider below and left!" I said, his head swivelling and "OK" being the only response. The situation developed, so uttering the instructor's prayer: "I have control!" I banked away.

"No, you have *not*," he said, with feeling, and turned back, only to utter his own prayer: "Oh, Christ!". Prior discussion could have avoided the risk of collision.

Check flights fall into many categories – progress, annual, site, remedial – and there is no good reason why a "training element" cannot be introduced into them, or the P2 put under pressure. If this is not done a competent P2, who flies by the book, proves only that someone in the past did the right thing in sending them solo; his current instructor has achieved nothing, other than confirmation. I was having a check for the issue of a New Zealand instructor rating recently, flying in weak ridge conditions, carrying out various demonstrations, and being shown local tricks, until the P1 said, "Fine, I'm satisfied, just fly now". I should



Do unto others ...

➤ have known better than to take him at his word. I decided to go for a little tour off the end of the ridge, during which we chatted.

"When you are training instructors, what do you do if you know they are about to make a mistake?" he asked.

"Let them, of course," I replied, and gave one or two examples.

"Oh, I just wondered, as you're out of gliding distance of the field for a good circuit." I will now let you into a secret, providing you keep it for your own use: I knew where I was, had planned to use the ridge to get me back, or if the ridge failed, had decided on a reciprocal as my bolt-hole. My mistake was not keeping it simple, and giving the instructor something to quite rightly criticise, but – and here is the secret – don't argue. Nothing annoys an instructor more when he has created a useful lesson than to be given excuses that imply he has wasted his time. The ridge worked, I flew the correct circuit, but was it worth the risk of failing?

A site check, which I have found that some pilots resent, is a case in point. The duty instructor has a responsibility and the visiting pilot an opportunity to make sure that any solo flying is conducted safely, and that lessons learned at the site over the years are passed on. This is particularly important at new hill and mountain sites, and the sensible pilot should ask for a site check even if the DI says one is not required, or more dangerously, says: "You don't want a check, do you?"

Some years ago, a top international pilot turned up unannounced at Camphill with a TV crew in tow, hoping to film their man at our photogenic hill-top site. This posed a problem to the duty instructor: should he insist on the check flight that was obviously creating an ego problem for the Top Pilot? He insisted, and the subsequent check flight proved – ego or no ego – that the Top Pilot was not current on winch or able to handle the strong ridge conditions. Exit the Top Pilot and TV crew in a cloud of dust, although I am sure that the Top Pilot realised on reflection that the instructor had made the right decision.

Flat sites may seem to offer less challenge, but even here there can be hidden dangers, like getting lost or losing the airfield. A few weeks ago in New Zealand I had a site check intended to show me just how easy this was to do. Despite being forewarned,

there were occasions on the flight that even though I knew where the field should be and the instructor had been showing me the geographic pointers that would lead me to it, I could not always spot it from height. Low down, this could have been a problem, best experienced with company – a valuable check flight (and he also detected two bits of "loose" flying). This kind of check does of course have its dangers:

"See that road, passing the church?"

"No."

"OK, there is a triangular field with a tree in the middle of it, see it?"

"No."

(Sigh.) "It's coming in front of the nose now."

Four eyes all looking at the ground near an airfield is potentially not a good idea, particularly when nearby another pair of eyes may also be trying to find the road by the church that points to the field. Unless of course you don't mind making a premature trip in the reverse direction.

One tip that may help, if you have or may have any doubt of the airfield's location when you release, is to watch the tug, provided that he/she (damn it, "the pilot") is not going off on a retrieve after dumping you. This tip got me out of trouble once when flying a non float-equipped glider from an island airfield in a lake filled with islands.

Whatever the check flight is for, the instructor needs to have a plan, modified to

'There are times when a pilot should ask for a check flight, even if no-one else knows that they need one'

suit the P2. What does he want to learn about the pilot? What does he want to show him? What type of flying does the P2 want to do if he is "checked out"? And what does the instructor expect of him?

Similarly, the P2 should have a plan, too. Of course he wants to be checked out, but wouldn't he like to know the local hotspots, suitable landing fields, to be shown how to thermal below hill or mountain tops or the best way to transit into wave, to polish up his flying generally? It may take two or three flights, but isn't it worth discussing?

You can also help yourself by watching what others do before you take off, or asking questions. Doing a tight Camphill-type circuit will not impress if the club's practice is to fly highly-formalised circuits or use half the local district. I know that to my cost.

Where a site check can go wrong is when it is given by a new instructor, who has not yet learnt to shut up, nor appreciated the difference between direct or indirect prompts – even if neither are required – or even worse, not learnt the art of having a spring-loaded hand, just OFF the stick. Mind you, some instructors never learn this, and no doubt like me you have experienced them. Often, all the instructor achieves is to



...as you would have them do unto you (Ian Dunkley)

use you as his auto-pilot and show you what he wants, and as a result has no idea of what your own judgment is like. If you have discussed the flight with them beforehand, this is less likely to be a problem.

My usual response if I find the instructor interfering is, being the tactful person that I am, to say: "Tell you what: you fly, I'll learn the local area and you show me the circuit". This is normally leapt at, and, despite having flown only the launch, I still get checked out. On one occasion however, I felt the iron hand on the stick right from the roll of the glider on launching. I overrode it until at the top of the launch I turned left into a thermal, only to find the aircraft rolling to the right. So I relaxed my hold and merely "followed through" for the rest of the flight, with no comment from either of us. Landing, my instructor said: "You fly well, that was OK". I would have preferred it if he had criticised some aspect, revenge would have been sweet, but don't forget – don't argue.

The check flights that I object to are those that go beyond the check requirements for purely financial reasons. These can occur at commercial operations, and I must say that as I am writing this in New Zealand, it does not apply to Omarama, who are very professional. No, it's some of the American sites that I have flown at: "That was a fine flight with a left-hand circuit, now you must do one to the right". I have had that one at least three times over the years. "That was a good aerotow, you must now have a cable break." At 1,500ft? Still, if you want to fly, don't argue, pay up, or ask for their flight requirements before you start spending money.

Annual checks for either solo pilots or instructors should provide an opportunity for both testing and training, a simple jolly round the sky being at best a waste of time, or at worst a dereliction of duty. Let's take the case last year of an old, and sick, pilot: a "best behaviour" circuit could probably have been completed without problem, but proving competence at demonstrating spins off a failed winch launch?

Doing negative-g pushovers, spins or spiral dives when already suffering from disorientation and detachment was an experience that I (for that sick pilot was me) don't want to repeat. I had returned from an abortive gliding trip to India with "something nasty", found on my return that I could not answer the question, "AM I SAFE?"

satisfactorily, even if I could recollect what all the initials I'M SAFE represented, so I stopped flying for the summer. It came to the time that my check became imperative so with full knowledge the CFI and I set off.

It was nearly another month before I felt fit enough on the ground, to ask for a recheck, and pass.

I had stopped flying voluntarily. Had I continued I might not have had an accident, and the club would probably have found out that I was ill only because of the check. The point that I am making is that there are times when a pilot should ask for a check flight, even if no one else knows they need one.

I said earlier that check flights are not welcomed by many pilots. This is a pity, as I hope this article will have shown: we can all fall into bad habits, be off colour, learn something new or, in the final analysis, get past it. Isn't a check flight something that should be welcomed, not feared or resented?

I could have stopped there, it would have been a good note to end on, but I have just remembered that I have not told you of my final "solo" checking exercises, which also emphasise the need for a site check.

After the fire that created the now sadly defunct Phoenix GC in Germany, we needed gliders to rise from the ashes, otherwise the new name would have been inappropriate. Hamlien, of Pied Piper fame, had a Grunau, and the expedition to collect it warrants a story in its own right. The site, a small field with a nearby ridge, was new to us all, as was ridge flying, which we all wanted to try, without check flights, of course.

I, the last to fly, had overheard some Germans saying something along the lines of: "Stupid Englishers, don't they know you have to fly close to the ridge?" It was now up to me to redeem the reputation of the Brits, this being 1957, so taking my launch I headed straight for the hill, waiting for whatever the German equivalent of a green ball was then.

Lessons followed fast. Firstly, the wind needs to remain blowing a bit to make the ridge work. Secondly, there are good geometric reasons why turns are made away from the ridge (I can still see the women running away from the oak I circled; don't ask how I knew it was an oak). Thirdly, suddenly tightening a turn requires a prior excess of speed if funny things, which require mental reading of the chapter on spins, are to be avoided. Lastly, that being back on the airfield would be a good thing.

This was when I learnt my fifth lesson: don't show off. Hoping to redeem myself, for I knew my antics would have been observed, I decided to do a spot landing, just over the fence, by the hangar. The full spoiler and a full-blooded side-slip approach were, I was assured, most impressive, as was my landing – marred only by being the wrong side of the fence. It was 40 years before I returned to Hamlien and on that occasion I couldn't find the airfield in a car.

Before you ask: if I turn up at your club, yes, I would like a check flight.

Choose your instructor carefully and there is a lot of fun to be had with your Annual Checks. Paul Harvey supplies tongue-in-cheek tips

THE FIRST thing to decide is how confident you feel. Flown recently and feel good? Then annual checks can be a source of entertainment. Bit rusty and broke? There's something in it for you too.

For the confident and competent, when arriving for annual checks look out for the newest graduate of your club's instructor training programme. If they have just been given their ticket they will be well groomed and possibly even smartly dressed – although this is unlikely. One thing is certain: they will be apprehensive. New-found responsibility does that to people; avoid it at all costs.

To take the rookie through his (or, even better, her) paces, strike up a casual conversation and ask how their instructor's course is going. When they tell you what you already know, congratulate them heartily and ask them an obscure question on spinning – something like: "Is it possible to stall the rudder independent of the elevator?" should do nicely. If they don't know the answer (and I certainly don't) they will still give an entirely plausible explanation. Smile and suggest: "As it's time for my annual check, perhaps you could demonstrate it?". The trap is set. Only terminally-stupid new boys enjoy spinning from the back seat and clubs tend to weed these out well before solo.

To have fun on annual checks, you had better be good or rich. The new boy or girl won't take risks and if you get it wrong, you'll fail. (Read below for guidance on how to get through annual checks on the cheap.)

If you are lucky your club will have a dedicated machine for spin checks – don't take it. It will have been bought to give instructors an easy time and that's not what you are about. Choose another one.

Now you are strapped in and the new boy will be nonchalantly chatting about anything so long as it's unrelated to the flight – quantum mechanics, the Ming Dynasty or Alan Walter's theories on monetary policy in the 1980s. If you are still awake, you can ask for the cable: if not, you will probably fail there and then.

Now you are off. The aerotow should be flown with total concentration and little if any conversation. If the instructor tries to start a conversation simply reply that M0 is a crude measure of monetary supply and that Nigel Lawson was right all along; make it as convincing as their explanation of the rudder stalling.

Off tow, you can begin to enjoy yourself. Most instructors expect two full turns in the spin. The rookie deserves more: three or four at least, assuming you have the height. I have never yet managed to get an instructor to prompt for a recovery but then I don't like spinning and I'm not rich. After the first spin, both parties will have forgotten about the rudder stall and will be firmly focused on surviving the next 10 minutes.

From about 2,000ft you will be asked to repeat the exercise, except this time from the

opposite direction. This is something you should plan for before you get in. A tip from the top, recover after two spins. If you can hear the instructor breathing, you have done well and even if you fail, the £30 tow will have been worth it.

However, there is more to come. Those who have been through many annual checks will know that recovery from spins should be completed by 1,000ft. There is no guidance on when they should begin! Experience has shown that 1,300ft is a good height to suggest another final spin check. The fact that you have suggested it means that the instructor has little choice other than to go along with the idea.

By the time you have run through another **HASSL** check, you will be down to 1,200ft. Two full spins are the most you should attempt else it's back to the launch queue for another go.

Circuit planning and landing have to be perfect so the rookie feels relaxed when he's marking your homework. If you are rich, pass or fail doesn't matter – just go and bully another rookie. However, if you are poor you need to pass first time. The strategy is simple, and almost the exact reverse of the rookie.

Firstly, try to find the most experienced instructor. If they fly commercially, so much the better. Don't bother with banal gliding questions. A bit of chitchat about the family, other members, or *recent* gossip will do. Then go and do something useful at the launchpoint. Ensure you get the glider brought back to make instructors' lives easy.

Pre-flight checks must be rigorous and fluent; feigning nonchalance at this stage is vital. On tow above 200ft you can strike up a conversation but they will probably do so before, just to check you can walk and chew gum at the same time. Adjusting the DV panel and ventilation is a sure way of impressing the experienced instructor (and disturbing the inexperienced one); spotting scenery, other gliders – and the tug – gets you brownie points as well.

Off tow, locate the airfield and await instruction. Two turns in the spin is all you need: any more and you will be seen as either incompetent or (worse) trying to wind up a rookie. On recovery, comment again on some aspect of the scenery – if you can find it. Get everything right at this stage (above 1,500ft) and he won't suggest spinning from 1,200ft himself.

However, it's not over yet. There is every chance they will pull the "approach from an awkward position" or the "approach with an awkward instructor". If they say, "I have control" when you thought you had – that's what's coming next.

Unlike with the rookie, the circuit and landing doesn't have to be that good. And provided that you don't need a dustpan and brush to put it all back in the hangar – you'll probably get away with it.

Club news

Aquila (Hinton-in-the-Hedges)

WITH this early unseasonably good weather, the first few soarable days of the year behind us and our fleet fully fettled and flying, 2003 promises to be a good year. To encourage more members to venture further afield, we have capped glider charges at two-and-a-half hours maximum. Aquila is now actively pursuing an expansion of our membership this year, through local advertising and our excellent Learn to Fly package (www.aquilaagliding.com). Our congratulations and thanks go to Ken Harris, who celebrated 60 years of flying on the April 12 with a flight on a good soaring day. Ken's extensive repertoire of stories and enthusiasm for flying to match can only be admired.

Barry Woodman

Bath, Wilts & N Dorset (The Park)

THIS spring has seen a lot of flying but very little soaring weather and much workshop activity. The Motor Falke has been reduced to its component parts ready for a fuselage overhaul and re-cover, and our new (second-hand) Astir has emerged looking almost as immaculate as the rest of the fleet. Mike Jenks, who did so well in his SHK last year, has acquired a LAK 12, a novelty on this airfield. Youth is making its presence felt; we have welcomed two groups of scouts so far this spring, part of an ongoing scheme organised very enthusiastically by Chris Chapell and Nick Bowers, and our junior bursary members are all very active. We also have several very keen members from the Bath University contingent.

Joy Lynch

Bidford (Bidford)

IT hasn't been the best start of a season for us. Our tug G-CUBB developed a bad case of hangar rash, which put our full-time opening date back a couple of weeks. Not to be beaten, however, tugmaster Dave Findon and syndicate partner Graham Wright kept the club airborne at weekends by providing tows with their vintage Tiger Moth. This gave the opportunity for Bill Inglis to open his cross-country account and on April 12 rack up the club's first 300km of the season, so well done there, guys! Moving with the times, we have bought a new EW logger to replace our barographs, making it easier for members to record their Bronze and Silver heights in the club aircraft. Aviation at our airfield (Bickmarsh) has been taking place since 1963 and to celebrate its 40th year, we are holding an anniversary do on July 5, with all sorts of activities and we hope a flypast by the Red Arrows. Finally, we wish club caretaker Leon Blick the best of luck with his move back to his home turf in Lincolnshire. Whatever job Leon was doing, whether it was mowing the airfield, fixing the clubhouse roof or running the bar, we simply won't know what to do without him!

James Ward

Black Mountains (Talgarth)

AFTER an excellent 2002, we are already well up on last year for launches and flying after some super late winter and spring weather. The predominant easterlies may not suit everyone, but Talgarth's unique location means we have had wave most weekends and often have to tow to only 1,500ft or so to contact the primary right above the clubhouse, which has taken us to 13,500ft so far this year clear of the airway. We have even had south-easterly wave, which is unusual for us, and Andrew Richards gained his Silver height several times but only once with a barograph! In memory of Tony Burton, who died last year, we have created our first trophy at BMGC: the Tony Burton Trophy, which will be awarded on an annual basis to the club member making the best gain of height. It will be hard to match Tony's amazing 32,500ft a few years ago in his Vega but we will do our best! The accommodation for our full-time manager/course instructor Don Puttock is rapidly nearing completion and we are confident that this investment will mean lots more midweek flying this summer for members and visitors alike.

Robbie Robertson

Borders (Milfield)

ONCE again our AGM comes around and we say our farewells to committee members who are standing down. This year we lost David Scales, our treasurer, and Bob Cassidy who looked after the public relations side of our chosen sport. Both have given their time and effort for many years, well done and many thanks. Roger Cuthbert steps boldly into the treasurer's position, while yours truly takes over as PRO. Congratulations go to Andy Bardgett and Andy Henderson for gaining their Diamond heights, 5,520m (18,111ft) and 5,110m (16,766ft) respectively, and commiserations to the pilots forced to open their brakes at the required height



Former CTO Dick Stratton, whom every glider pilot who has ever wielded a screwdriver will know, celebrated his 80th birthday in May by flying solo (for the first time in "a while") in the T-21 at Bicester; he was also given tickets for the aviation event at Oshkosh, USA, by well-wishers who knew he had long wanted to go there

because they were without oxygen. We are now looking forward to our first ladies' pre-solo course from May 26-30.

Mike Charlton

Bowland Forest (Chipping)

SATURDAY, February 15, 2003 will be remembered as a tragic day, and probably the worst in the history of the club. This was the day that we lost two of our most experienced members due to a motorglider accident. Both were full-rated instructors and very experienced pilots on gliders and power. We were totally devastated by their loss (see obituaries, p59). I do not feel that it is pertinent to write a full report of club news in this issue, except to congratulate Neil Ritchie on achieving his first solo.

Eileen Littler



Ken Harris photographed at Aquila GC to mark the 60th anniversary of his first solo (Ian Hamonds)

Bristol & Gloucestershire (Nympsfield)

TROPHIES were awarded at the annual dinner to: Jon Meyer; Richard Smith (two); Andy Davis and Phillipe Garang jointly; Tim Macfadyen; Peter Bray; Fred Hill; Chris Edwards; James Metcalfe; Bob Williamson and Rob Thompson. A child protection policy is in place. Mike Harris has taken over winch/tractor maintenance and Nigel Smith volunteered to look after other club vehicles. The motorglider fly-in is planned for July 5-6. Sid's task week runs from July 26 to August 3. We're hosting the Juniors in August. Advanced mentors and mentees had a social evening and are now all ready for some weather so that the old ones can teach the younger ones how to win the Nationals. We welcome Mel, Barbie and Shelly Dawson, Andy and Elaine Townsend and Martin and Mary Wells. Congrats to Jonathan Coote and Ian McKaveney on first solos and Tim Allen on re-soloing. And thanks to Lemmy Tanner for taking over running the bar. We were saddened to hear of the death after a short illness of Pete Hitchcock, 28, a former member of our University Group. Our sympathy goes to his wife, Stephanie.

Bernard Smyth

Cairngorm (Feshiebridge)

SUPERB spring weather has given us excellent soaring conditions with members flying the Feshie wave out to Kyle of Lochalsh and Beaulieu accompanied by climbs of up to 15,000ft. Badge claims this month include Chris Fiorentini (Diamond distance). We have a new ASW 19 syndicate comprising of last year's first solos, and an immaculate LS7, courtesy of Jim Riach. Once again we must thank our overworked inspectors, Nick Norman, and Ray Lambert for keeping the gliders and tug in excellent condition. "Mayfest" looks like being the best yet with bookings coming in thick and fast. Now, it's never too early to think about our celebrated "Octoberfest" so please check our website for details, and contact Chris on 01540 673231 to book your slot (no booking fee). Looking forward to seeing you all.

Chris Fiorentini

Cambridge (Gransden Lodge)

WE are on our summer timetable, flying seven days a week, and by the time you see this we will have started evening flying on Tuesdays and Thursdays. The evening groups often produce a high proportion of the club's first solos in the year and we hope that will continue. A short course of lectures got some of last year's solo pilots through the Bronze exams – well done. Badge claims in club aircraft are starting to come in, too. Don Howard and Barry Paley took advantage of the gravity failure in April to get their Silver heights. Peter Warner has qualified as a Basic Instructor. A number of club members went on an expedition to Cerdanya in the Pyrenees in March. Some fabulous flying was had and there are moves afoot to try and make it an annual event. One cautionary tale from Alan Head, though. When crossing the border alone from Andorra to

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France, explaining the suitcase full of your wife's personal belongings requires some quick thinking and talking. The biggest thing going on at the club at the moment is the new building. We are planning a more welcoming, professional office reception. As ever, a lot of work has been done by volunteers in the club and thanks go to all of them. We are looking forward to 2003 being as successful as last year. Already there are over 60 entries for the Gransden Regionals in August and we are hoping for plenty of chance to practice before then.

Gavin Deane

Chilterns (RAF Halton)

NEWS items that slipped through the cracks from last year are Gordon Howarth's Part B 100km Diploma, as well as his sterling work with Peter Mann and a few others in fixing up our new stainless-steel-kitchened bus, and a new control box. However, such is the hardware "churn" in the club that this box has already been supplanted by another that provides uninterrupted 360° visibility. Back to this year, the good weather continued through March and April, with March 9 being particularly notable as we experienced the joys of ridge, thermal and wave – all in the same flight. Pip Barley has completed two 100kms, one a March triangle in his ASW 27, the other an early April out-and-return to Banbury in the club's Discus – while on air test – but then it had snowed that day! Rick Davis has his Bronze, and on a glorious 12 April, Dave Trill and Graham McMellin aspired to Silver heights while there was a 5,000ft plus cloudbase to enjoy. One UCL student benefiting from a BAES bursary is well on the way to solo (and most probably will be before this is printed), and we are pleased to see plenty of UCLGC students at the airfield again. On a more serious note, will all likely visiting pilots please be aware that a



Andy Hyslop of Chilterns shot this from LS6C-18WL R69, in wave just north of RAF Halton on March 9

neighbour has planted tall leafless (in other words, difficult to see) trees next to his artificial pond – on the undershoot/approach to 20 (two-zero) – beware!

Andy Hyslop

Cleveland (Dishforth)

OUR student pilots have been keeping us well supplied with celebratory beers! Emma Salisbury achieved first solo, shortly followed by her first Bronze leg. Andy Rhodes also went solo – well done to both. Cleveland will be represented at all levels in the Inter-club League this year – the first meet being at Rufforth over the Easter weekend. We are also looking forward to a mini expedition to the Soaring Centre at Husbands Bosworth during May. Let's hope that a few people can tick some of the boxes on their dream sheets during these events.

Polly Whitehead

Cornish (Perranporth)

HAVING had little to write about over the winter, and having missed the deadline for the last issue, I am

determined to confirm that the Cornish club still exists, and that we are looking forward to a much better year. January and February saw a marked increase in flying compared to last year, so it seems to be starting off OK. At our AGM our chairman Ivan assured us that really good years come once in seven, and this year is THE ONE! Methinks his head is on the line but I hope he's right. Demand for higher trial flights than the standard 2,000ft tow continues to grow and this generates more income. Roughly 30 per cent are standard flights, with nearly 15 per cent electing for our prestigious Mile High flight this year so far, which is rewarded with a framed certificate, nicely provided by our IT guru Nigel. One new solo this year – congratulations to Nick Thomas (he was already a microlight pilot!). He's now been recruited to the committee (!) and will be organising our social side this year. We wish all our friends well for 2003, and many thanks to all our members who continuously give their valuable time to the club. Keep it up!

Dean Penny

Cotswold (Aston Down)

THE recent dry weather has encouraged flying and we have had first solos from Jamie Gowler and David Groom. Lisa Peacock has completed part of her Bronze. Jane Randle flew to Diamond height at Omarama in March to complete (subject to ratification) her Diamond. She reported that it was a wonderful experience to be at more than 20,000ft in sight of Mount Cook. This last Diamond has been very elusive for Jane and hopefully she will reveal all to S&G (via a how-I-did-it report of course.) No such luck on the recent club expedition to Portmoak, we always seem to pick the week with easterlies in it. However everyone enjoyed themselves and we are now pretty current on local hostilities. Our privately-owned tug is proving very successful with several of our more experienced power pilots checked out to fly it. I must report a lively AGM at the end of February. David Briggs has taken over as treasurer and Peter Ward as safety advisor. At the time of going to press, members are mystified at the disappearance of Gary. He was last seen disappearing towards Aboyne with a jar of marmalade in one hand and a glider attached to the back of his car.

Frank Birlison

Cranwell (RAF Cranwell)

THE early taste of fair weather sent spirits soaring and attracted trial lesson flights that may translate into longer-term memberships. Our March AGM provided lively discussion centred upon objectives, fleet composition and financial strategy while, on the lighter side, the annual awards went to James Walker (two trophies); Ray Walker (his dad); Angus Watson; Mick Lee; Peter Cornthwaite; Sue Wood; Kevin Knipps; Brian Hutchinson; Richard Brown and Peter Kingwill. Pete Kingwill is, sadly, to stand down as OIC but will remain an active member. Our thanks go to him for his years of dedication and firm grip of the helm.

Paul Skiera

Deeside (Aboyne)

THIS year has been notable for cross-country flights. Jack Stephen flew what was probably the first 500km flight of the year achieving 550km of a declared 750km, Aboyne-Skye-Banchory East and Speyside. This was followed by a further 500km to Callander-Rhynie-Comrie. Richard Arkle achieved his 500km Aboyne-Crianlarich-Dufftown-Roybridge and return. Roy Wilson flew an out-and-return to Loch Arkalg of 230km and a flight to Laggan Beach and Lossiemouth of 280km. Congratulations to Mark Boyle on achieving his Silver height and to Roy Garden, who has completed his Bronze and Cross-Country Endorsement. We now have three Puchacz in the club fleet. There are a few places left for the Wave Season and the UK Mountain Soaring Championship; book now to avoid disappointment.

Sue Heard



Arthur Docherty in the BGA Discus, 19, taken by Andrew Bates from the Edinburgh University K-13

Edinburgh University (Portmoak)

THIS Easter, Edinburgh University hosted its fourth flying week at Portmoak, with Nottingham, Cambridge and hangers-on joining in the fun. We had pilots from all experience levels, from pre-solo to pilots with hundreds of hours. The weather was excellent: wave, ridge and thermals going strong for seven days. I flew every single day for at least half an hour and totalled about 15 hours. Neil Hodgins and I (Edinburgh), Robert Richards and Pete Ballard (Nottingham), Claire Hooper and Paul Flower (Cambridge) and Phil Harris (Four Counties) all did Silver durations. Neil got 25km into his Silver distance before making his first-ever field landing. Unfortunately, the wind was slightly over-enthusiastic one night, gusting to 60mph and destroying a few tents, forcing hapless students to retreat to the workshop.

As for wave flying, everyone got a bit of the action; Jamie Cook, one of Edinburgh's pre-solo pilots, went all the way to Crieff and back with Guy Hall in the K-13! Andrew Bates managed 100km in the K-8 before letting the novices have a go. Neil Irving did Diamond goal and Will "Bomber" Harris (Cambridge) and Little Dave (Nottingham) got Diamond height; Paul Browne (Cambridge), Andrew Langton (Nottingham), Arthur Docherty (Derby), Phil Harris and Paul Harris got Gold heights. Matthew Prowse (Edinburgh) re-soloed after six years. Congratulations to Emily Todd (Cambridge) who went solo. Sam Pink, Edinburgh's president, got a Bronze leg and went solo on the winch. Martin Ling (Edinburgh) is well on his way to solo, Fraser Hartland (Nottingham) now has both Cross-Country duration legs. Andrew Mosedale of Cambridge got a Cross-Country leg after re-soloing! The nightlife was also fantastic; and included food cooked over an open fire, with help from our winch driver Ian. Lots of fun was had, especially by those sacrificing themselves to the weather gods in the name of the women's gliding movement. Thanks to Portmoak bar for the liquid entertainment, let's hope you don't spend too much money cleaning the floor. Any universities interested in joining us next year please get in touch at gliding.club@ed.ac.uk

Bruce Duncan



Pilots at the Universities' Easter week at Portmoak

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Club news



Mick Lee photographed when briefing a trial lesson at *Crenwell* recently

Derby & Lincs (Camphill)

SINCE our last appearance there have been some changes. Chairman Chris Haslett retired at our AGM after leading the club for several years. Thanks to Chris, membership and finances are very healthy. Dan Reeves takes over, with Ken Singer as Vice Chairman, and Bob Makin as Treasurer. Miranda is joining us again for the summer to cater for our culinary needs. John Shipley is now a Regional Examiner, and I retired in February after six years on the BGA Exec. During the worst autumn and winter we can remember we have managed some flying, because Camphill rarely gets waterlogged, so you know where to come if your site does. We have had the BGA Duo Discus for a few weeks. CFI Mike Armstrong logged our club record distance last year, 638km, and also flew to the Long Mynd and back, for the Beer Tray in October. Congratulations to Maurice (Mo) Bent for completing Bronze, Jonathan Thorpe on Diamond height, and Richard Dance on Gold height. Our guru on the hills, Peter Gray, won the Mountain Soaring Championship at Aboyne, and called in to see Her Majesty. Congratulations also to Bernard Abbot on going solo. Expeditions are planned to Portmoak, Pocklington and Currock Hill. Our Friday evening talks are under way, starting with a wave talk from me, followed by getting the best out of the local hills from Pete Gray. Our Skylaunch is back after refurbishment, and one of our glider-breaking bumps in the airfield has been graded out and re-seeded. By the time this is in print more volumes of airspace will have been appropriated (see last issue), but with Cam Withall's help, we have alleviated the loss a little.

Dave Salmon

Dartmoor Gliding Society (Brentor)

THE final frustrations of winter were relieved by a couple of good Dartmoor wave days. Now we are back in regular business. Our new K-7/13 from Rufforth has obviously been well trained. On its first flight here it obediently took the CFI to 6,000ft. His P2, gliding for the first time in 25 years, was his brother Stephen Matthews. Gavin Short has completed his Bronze in his first year and new member, Mark Gatehouse, has graduated from helicopters to K-7s. Congratulations to both. After six months Alan Holland is back instructing again with his new hip and his old enthusiasm. The fire brigade, in difficulty while fighting gorse fires on the steep slopes adjoining our site, were glad to recruit our tractors and drivers for the afternoon. We hope for early notice of potentially soarable fires in return. At the AGM the only committee member to escape was our senior citizen, Eric Rodmell, replaced as treasurer by Karon Matten. A small increase in annual subs was agreed but our flying fees remain as low as ever.

Phil Brett

Dukeries (Gamston)

WE have spent some time improving security: Allan Jones has lined our hangar with steel-reinforcing mesh to deter burglars. Ian (Chunky) Thompson and Ron

Vickers have replaced the winch cab with a lovely new top. The Swannack family – John, Lance and James – Nick Ashton, Glen Barrat and John Talbot laboured hard to lay a new concrete apron in front of the hangar. Thank you all for the effort. I managed to break my leg jumping out of the rear of the Janus – embarrassing, as it was on the ground at the time. Congratulations to Tim Cawood, Ian Minogue, and Tony Milkolajczyk, who have all gone solo. Tim is another of our (£300) fixed-price-to-solo students; we have room for more.

Mike Terry

Essex (North Weald/Ridgewell)

WE are now the proud owners of a virtually new Pawnee tug and our tug pilots are getting used to the view over the very long nose compared to the Super Cub. Thanks are due to our President, John Fricker, for keeping his ear to the ground as we looked for this. We waved goodbye to Juliet Bravo with sadness. The Super Cub, one of the last Cubs built by Pipers at Lochaven Pennsylvania in 1980, was bought by us new in that year. After the rear seat was replaced by an extra fuel tank, the aircraft was flown all the way to the UK. She gave us sterling service. The club annual dinner was a great success. Congratulations to bubbly Vee Harrington on gaining her radio licence. Vee has also taken over from Geoff Martin as Course Secretary. We wish her well and thank Geoff for all the tremendous work he has put in. Congratulations also to Tony Hampshire, who was awarded the Chairman's Merit Cup for all the effort and enthusiasm he has shown over the past year. Our Chairman Brian Murphy, much to his surprise, was presented with an electronic weather station by members as a thank you for his tremendous "behind the scenes" work. Peter Gill's postponed talk on wave flying was a great success and well worth the wait. Our Ridgewell site has dried out quicker than expected, enabling us to open it up some weeks early. The additional K-8 in our fleet had a good first outing with Peter Manley on March 23, with a thermic flight of just under the hour. Members are anxious to see if Peter secreted an automatic thermal sniffer when he rebuilt it!

Peter Perry

Fenland (RAF Marham)

WELCOME to the second instalment from the desert. I missed the AGM for the second year in a row due to sandy commitments, so this year I secreted a tape recorder before I left and have managed to compile a report. You, dear reader, will be spared the official stuff due to poor sound quality so here goes with the CFI's report. There was praise for an accident-free year and a moment's thought for our members out in the Gulf. Prizes went to Pete Stafford Allen for the longest and fastest cross-country; Pete Luckhurst for his care and attention (!) and Pete Harris for his sterling work for the club. Member of the year was Timmy and the CFI's Trophy went to Paul McLean. The Al Raffan Trophy went to Sid and Mitch for all their promises! Cheers, Del for all your work as CFI. Goodbye to Dave Postlethwaite, all the best in your London job. Del, keep my seat warm in the Discus; Bob, keep spotting those thermals for me. Your Scud-dodging correspondent,

Graham French

Four Counties (Syerston)

OUR club expedition to Portmoak in March was very successful – flying every day with badge claims from: Rachel Hine (Silver height); Andy Langton (Gold height); Rob Richards and Pete Ballard (five hours); Phil Harris (Gold height and five hours); and Fraser Harland (two Bronze legs). Ray Weston, who went along for the fun of it, managed everything from five hours to Diamond height (again)! Dave Bromley was also rumoured to have gained Diamond height but has not yet successfully priced it from his logger.

Sue Armstrong



The new tug at *Essex GC*, replacing a Super Cub that they had owned since new (James Jolley)

Fulmar (Easterton)

ONCE again the weather is gradually improving, and we are starting to get some sniffs of summer. We have enjoyed a few thermal days among a spate of ridge and wave days. Congratulations go to Mike Black for his Gold height in wave, also to John Leighton, who has taken over as CFI; perhaps he doesn't know what he has let himself in for! Finally, we are just putting our Inter-club League team together for the first round, which takes place at Easterton in early May; we won last year and don't intend to give up that trophy easily!

Mark Lee Brown

Herefordshire (Shodbon)

A GOOD start to the season, with some classic wave and thermal days leading to successful visits from both Booker and London GCs. Trailers will no doubt soon be hitching up, as we now have two new Bronze pilots, with both Brian Laurie and our new chairman, Dewi Edwards, completing in plenty of time for all those early cross-country adventures. Our first task week of the year is planned for May, followed by the "Herefordshire Aviation Days" event on May 31 and Jun 1. This will be a repeat of the last year's, where in conjunction with Herefordshire Aero Club, Sabre Microlights and Tiger Helicopters, our doors are thrown open to the general public for the weekend. Visitors are invited to view the static aircraft display, sit in many of the cockpits or even take a trial lesson in the aerial conveyance of their choice. Who knows? There may even be some new members amongst them!

Mike Hayes

Highland (Easterton)

IN the last S&G I thanked Steve Young for all the C of A work that he does at our club. This time I have to say au revoir and bon chance, as Steve and his wife have decided to move to France and enjoy their retirement. He will be greatly missed – and not just for the work he has done for us. At our recent AGM we presented him with a weather station. On seeing it our CFI threatened to resign so he could get one! Our CFI has offered up a crate of beer again this year to the first declared 300km from our club. Last year he won his own crate of beer when he did a 500km! Our winch of 40-odd years had a gearbox failure and is being repaired. Thanks to Fulmar, who brought over their winch from Kinloss so we are able to continue flying. Congratulations to Mike Black on his Gold height and Jim Main on going solo.

Roy Scothern

Imperial College (Lasham)

OUR week-long Easter course was a great success, with first solos for Luke Cooper-Berry and Jaime Mateus, who also deserves a special mention for giving himself a practice cable break on one of his last instructional flights! Great progress was made by all who attended, and our thanks go to Hemraj Nithianandarajah and all the other instructors for the hard work they put in. Looking ahead, plans for a summer expedition to the



A NEW clubhouse, roll-in/roll-out hangars and seven-day operation form the backbone of an ambitious five-year plan for one of Eastern England's premier gliding sites.

Tibham Airfield, home of Norfolk GC and the Eastern Regionals, is already at the planning stage for a new southern-hemisphere style hangar and additions to the club's accommodation.

The 300-member club sees these improvements as the logical second major step in its 44-year history. The first was the far-sighted move to buy the World War Two airfield, wartime home to the 445th Bomb Group commanded by Hollywood legend James Stewart. We originally rented the former RAF base from the Air Ministry, but a local farmer bought it in 1962. That led to 25 years of tenancy until the club started to buy parts of the airfield in the late 1980s. But then, in 1990, the rest of the site went up for sale. NGC grabbed the opportunity and ended up owning one of the largest private airfields in Britain. The traditional "A" layout of tarmac

runways has a main strip a mile long.

Three long runways in excellent condition were a great legacy so, when NGC was formed with 50 members in 1959 the state and size of the runways meant autotow was an easy option. Courses and a cadet scheme started with a small basic glider fleet, which was uprated with two two-seaters and a motor glider in the late 1960s.

Tugging operations started in 1972 as relations eased with the local landlord, but it wasn't until the club bought the whole airfield 13 years ago that the fleet and launch facilities took a giant leap forward.

In 1991 a new Supercat winch – recently completely overhauled – was added. The gliders have been gradually upgraded to the almost entirely glass fleet we have today and at the end of the 90s the club bought two 180hp Robin DR400s for a massive improvement in the tugging operation. We have just added a Grob 109 to the fleet.

Over the years the club has hosted several national comps and the very successful

international vintage rally as well as staging the popular Eastern Regionals.

We have recently introduced annual subscriptions that include all club glider time and links with Highland GC in Scotland mean frequent wave expeditions to one of Scotland's friendliest clubs. NGC has its feet planted firmly in the future with a thriving cadet scheme and increased emphasis on courses, from intensive one-day to full six-days. They range from *ab initio* to aerobatics – under a former British aerobatics champion – and we have just added NPPL training as well.

We are one of four UK sites applying for recognition as Significant Areas for Sporting Purposes, which should ease future planning and safeguard the airfield from any local development which could hinder gliding. And grant applications are already in the pipeline to cover parts of the five-year plan, so the club is on course to go on improving its Norfolk welcome.

Andy Vidion

At a glance

Full membership cost:
£400 pa (includes free club glider time)

Launch type and cost:
Aerotow £16.50, Winch £5.50

Club fleet:
K-21, Grob 103, Grob 109, K-13,
Club Astir, Astir CS (x2), K8, Venture MG

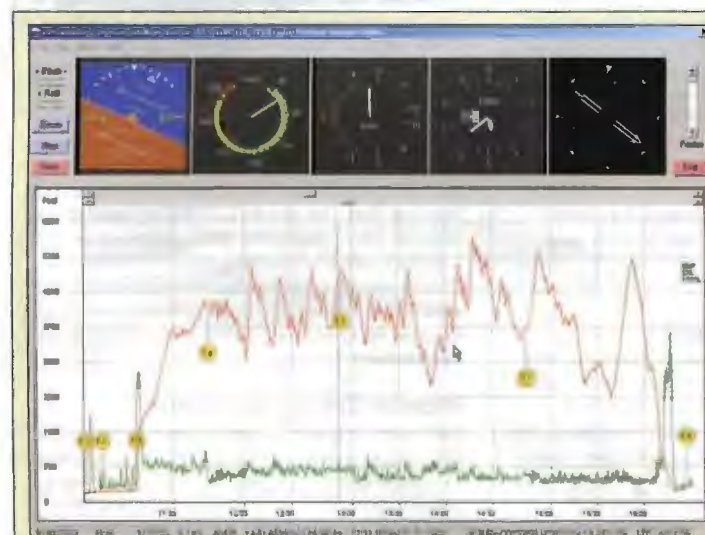
Types of lift: Thermal

Operates:
Weds, Thurs, Sat, Sun (all week by arrangement during season and courses)

Contact:
Clubhouse: 01379-677207
Courses: Phil Burton: Phillipburton231@aol.com
Chairman: Roy Woodhouse

www.ngcglide.freemove.co.uk

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Club news

Czech Republic are coming together, aided by generous grant from the Imperial College Trust. Finally, the club's recent AGM saw the election of a new committee to serve in the next academic year. Succeeding me as Captain is Luke Cooper-Berry, supported by Jaime Mateus (Vice-Captain), Nasreen Al Hakim (Secretary) and Shaun Murdoch (Treasurer). Edward Coles-Gale and Rodolphe DeRosee are responsible for equipment and publicity respectively. We wish them every success.
Alan Bamford

Kent (Challock)

EARLY-SEASON south-westerly winds have enabled numerous 50km ridge runs along the North Downs. We have also had some good thermic days with Official Observers getting into practice again. Paul Bateman has completed his Silver and is joining our group of Basic Instructors under training. David Crimmins is our latest solo pilot. On the day of writing this, however, it's gently snowing! After the success of last year's open weekend, we are running a similar event on June 21-22 to coincide with the longest day. We also have a number of social events throughout the year in addition to club expeditions, special training weekends and, during May, a BGA soaring course.
Caroline Whitbread

Kondor (AGA Brüggén)

AFTER overcoming the final bureaucratic obstacles and renovating and equipping our new clubroom and an "office bus" full flying activities began in March. A new C-Falke 78, D-KAAZ, with folding wingtips, replaces poor D-KOEM, sadly destroyed by an autumn storm and joins our AGA K-21 from Odiham. An open day in March, with the help of Nörvenich's new DG-505, was a great success. Membership is steadily increasing and service people interested in trying the sport are welcome to contact CFI simon.duerden@amsl.com (apologies for my typo in the December-January Issue).
Jochen Ewald

Lakes (Walney Island)

WE now have a new tug, yet another Super Cub, and it's performing well. This year has got off to a good start with some wave and even the odd thermal to keep us occupied. Congratulations to Jan Eldem on going solo and shortly after completing one of his Bronze one-hour flights. Welcome also to our new members; we hope you enjoy learning to fly with us. Peter Redshaw has been honing his skills in the Capstan in readiness for the two-seater comp. The guys at Pocklington have suggested that he leaves the Cosim at home this year, to even things up a little.
Peter Seddon

Lasham Gliding Society (Lasham)

THE memorial service to honour the memory of Ann Welch was conducted by the Revd C Gilbert in the presence of 350 friends from all branches of aviation. Max Bishop, Judy Leden and John Williamson gave addresses. Fabia Welch read an extract from The Woolcombe Bird. The flypast, to include a spiefire flown by a female pilot, had to be cancelled owing to the bad weather. One intrepid microlight pilot had flown his machine from Derbyshire for the occasion. A balloon was released by Ann's grand-daughter, rising to the heavens as a symbol of Ann's spirit. A new development is the trial of a retrieve winch to see if it gives a quicker launch rate. Mark Davenport is running a successful series of R/T courses. The club Duo Discus has been based in Jaca, nicknamed Lasham South, for the benefit of the 20 or so Lasham pilots who fly there. We are grateful to the evening course instructors and their supporters: Nigel Pringle, Charles Baker, Merv Saunders, Ian Smith, Mick Wells and Martin Judkin. We welcome the return to the staff of Phil Phillips as Secretary and DCFI.
Tony Segal

The most recent solo pilot at Mendip GC is Gwyn Thomas (right), seen with instructor Brian Headon. Keith Simmons took this picture soon after Gwyn's first solo – but not before Gwyn had got the wings sewn on to his flying suit...

London (Dunstable)

THE Shobdon expedition in March was well attended. The elusive wave did not appear during the week of high-pressure system, however, a good thermal day gave the opportunity for every glider to be airborne at once flying for many hours. Tom Rose decided to leave after two days and catch his flight to Minden, where he gained Diamond height and pulled out at 28,500ft still going up – congratulations (but not flying his T-21). During one winter evening we were entertained by Robin May's spectacular European Tour 2002, in which moving traces of the two gliders were superimposed on screen in three-D fashion against mountains and valleys in the Swiss Alps. Looking at the best pieces of lift and sink one could believe the views were really taken from a moving helicopter. Congratulations to Peter Donovan who gained a first Silver distance of the year on March 2 (to Husbands Bosworth). Twenty-two people went to Cerdanya over three weeks in which many high climbs were found in wave. The Dan Smith Aerobatic Memorial Trophy event drew 14 competitors during the last weekend in March, flying two K-21s – Mike Collect collected top honours for highest placed sports-level comp. The Dunstable Regionals is now full.
Geoff Moore

Mendip (Halesland)

CONGRATULATIONS to our youngest member, Matt James, who soloed just three weeks after his sixteenth birthday. The long-awaited Rotax Falke has arrived and



Jan Eldem went solo at Lakes GC and shortly after completed one of his Bronze one-hour flights

its syndicate members are giving it plenty of airtime. Although only 80hp it quite happily hauls our two-seaters to 2,000ft in short time, in spite of their less than sylph-like occupants. Peter Turner has been cleared as a motorglider examiner. His voluminous logbook shows that if you need tuition, checking or examining in anything from an Airfix kit to a 747 then he's your man. We have recently welcomed a visitor from the Czech Republic, who is currently working on Airbus in Bristol. Vaclav Stroj ("call me Bob!") has always flown Blaniks but soon converted to the K-13 and our K-8s. Fortunately for Bob, some of our members live in and around Bristol, which has overcome his original problem of getting to the club. This involved two changes of bus and a mile-long walk up the 1 in 5 hill to our site.
Keith Simmons

Midland (The Long Mynd)

ALL our K-21s are now back from refinishing in Poland. Our flamboyant chairman Julian Fack, whose heart is in



gliding but whose jokes come from motorsport, has retired from the committee after ten years of significant progress for the club. The big days started early. On January 16, John Roberts was at 11,500ft in wave and other good days were a build-up to the week of March 16-22. There were 650 launches, due to the efficiency and enthusiasm of our visitors (Hullavington Air Cadets and Oxford University). At our dinner dance the guest speaker was Derek Piggott. The most promising young pilot award went to the all-purpose Lynette Causier, usually to be found in the kitchen, the office and the cockpit. Informal sources say she also got the golden shovel for following the tyre tracks of a 4x4 into a bog. First solo congratulations also go to Dev Galal, who made his flight on March 2 together with the ever-lucky Dutch visitors. The first cross-country of the year was by Simon Adlard to Hereford.
Roland Bailey

Needwood Forest (Cross Hayes)

THE weather is back, the field is dry and our season is off to a fantastic start. A very great deal of thanks must go to Alan, Dave and Pete for spending much time recently hard-waxing and doing the C of As on our beautiful club fleet, not to mention one or two private gliders. Last year the club had the most successful year for some time, and with a larger membership at the start of this year we are looking forward to a better year still. Indeed we have gained five new members in the last couple of weeks alone. The annual club dinner was oversubscribed. We actually managed to drink more beer than normal! The awards given were: Hog Trophy to Val Roberts; Whiteley Plate to Adam Murcott, CFI Trophy (for best progress) to Jim Follon; Cross-country Trophy to Dave Bowden, and Edge Trophy (for club ladder) to me. Finally, and on a personal note, I would very much like to thank Val, Andy, Alan, and the various speakers for organising and giving a series of lectures for me and 10 other club members in an effort to get us through our Bronze papers. All 11 candidates passed. If you would like to see what we are doing, and perhaps to join in, then do visit www.GoGliding.co.uk
Paul Machacek

Nene Valley (Upwood)

WE have made a good start to the flying season with some very fine local soaring days. Our Safety Evening produced a good turnout and some well-prepared and thought-provoking topics by the speakers lead by CFI John Young. John got our attention by re-stating the chilling statistics of fatalities over the past 10 years then addressed how they might be minimised during the

Club news

winch launch phase of flight. Roger Morrisroe took us through the medical aspects and how safety could be compromised if these are ignored. Saturday, April 12 saw the first flight of our newly-acquired toy. Delta Quebec X-ray, a K-7/13 conversion, was liberated from Portmoak last October and with a little TLC by Brian Cracknell and his motley crew has emerged to become a promising addition to our fleet. The first day's flying amounted to some five hours giving many members an introduction to this wonderfully-stable workhorse. The logbook records some 26,000 launches and nearly 5,000hrs. We suspect she knows more about flying than many of us can ever aspire to. Our open day will be on June 15 and task week from August 2-10.

John Bennett

Norfolk (Tibenhams)

AS usual, we celebrated the achievements of the past season early in the new at our own "Oscars" evening, aka the club dinner. Roy "Woody" Woodhouse and Ray Hart took the lion's share of the awards with seven trophies between them, but the Whisky Cup (cross-country ladder) fittingly went to Bob Grieve, our flying Scot. Philip Burton, newly-elected to the BGA Exec, found time between his Basic Instructor training and working with the club cadets to win the club ladder (most points for badges, etc) narrowly ahead of Philip Foster. The President's Trophy, presented to NCC by our first president, the late Alf Warming, is awarded for the longest flight from a Norfolk airfield, went to Peter Stafford Allen (Marham) for a 602km effort. The club winch has been overhauled and came back into service a very different animal indeed. Aficionados report a significant improvement in its performance and heights of 2,500ft have been reached off our main runway, much to the chagrin of the aerotowed pilots who paid nearly four times as much for the privilege. We want to promote more cross-country flying and considerable effort has been made to upgrade club gliders. The Grob 103 and three Astirs we now have are all equipped to the appropriate standard, as is the K-21, which will be used for aerobatic courses. Our fleet has been further improved with the purchase of a Grob 109 motorglider, formerly based at Rattlesden. This will be primarily used for specific motorglider training.

Alan Harber

North Wales (Llantisilio)

IT'S all happening up in the top right-hand corner. Our AGM saw the silverware get its annual polish and be handed out to the guilty. Our CFI Dave Holt got the height trophy for his near-12,000ft effort at Feshie,



Tony Cummings (left) receiving his trophy from Dave Holt, CFI at North Wales (David Trotter)

Harry Mcnee received the best club flight for his Bronze legs last Summer. Tony Cummings very deservedly got the best progress award and yours truly got the Grunau trophy for best progress through perseverance! We also spent a mad weekend at the end of March moving the whole club just 200ft to a much better location on the field. (Don't ask!) However it did give us a chance to empty out the workshop and discover all those lost treasures that our chief engineer has been griping at people for losing for years. We have even had some super flying. The early spring wave came to us in force a couple of weeks ago and three lucky trial lessons got half an hour each at 3,000ft. Members were getting up to an hour and three quarters. One was glad to have the CFI in the back, when he was still going up trying to get into circuit with 70kt, the nose down and the brakes wide open! See, the mountains can be fun!

David Trotter

Northumbria (Currock Hill)

ON March 20, the new P18 airway, and its related controlled airspace, came into effect. There is worse to come in October. Negotiations continue with Newcastle Airport re local arrangements. Our new Pawnee tug, G-BXST, has arrived. It is a lighter aircraft than the late Zulu Victor and seems to get us up there much quicker. John Bell soloed on March 26 and Craig Storey has completed Bronze. Frank McLoughlin has, within the past fortnight, flown two Bronze legs in his syndicate Pirat. April 9 was a red-letter day at Currock. Brian Milburn took his ASW 15 through the Tyne gap, to Kirkbride, west of Carlisle, to complete Silver. At the

same time, Mark Stobo and Ian Plant, one-time cadets, declared a two-seat 100km triangle (Burnhope Reservoir-Bishop Auckland). Their feature recognition was a little deficient and they went round Cow Green Reservoir instead. Nevertheless, they flew 115km in a Puchacz. Our 4x4 has been converted into a substantial crash/fire tender. Two of our senior instructors, John Allan and Alan Scott, have been appointed Deputy CFIs. John will be responsible for ab initio and Alan for post-solo training. With the stalwart support of cadets Craig Storey and Ryan Palmer, I have disinterred the club newsletter. The first edition came out in March. Don Welsh (club chairman) and Ian Plant are about to attend the Basic Instructor course. A mysterious hovercraft has appeared in the trailer park. Could it be that the club council has knowledge of future weather that we poor plebs are not privy to? The Grob 109b, which lives at Currock, is to be used for navigation and field selection training.

Leonard Dent

Oxford (RAF Weston on the Green)

AFTER literally, well ages really, of tireless work by a group of dedicated, skilled and mostly bored members with no social lives, our second K-13 has been restored to the pristine condition it was before people started flying it and getting it dirty. Thanks to everybody who spent many a cold Tuesday night breathing in dope and cigar fumes to make it happen. The only other event of note was both drums on the winch failing on the same day! Spooky! Oh, and while all this was going on, Gina Paterson went solo - well done, Gina.

Steve McCurdy

Portsmouth Naval (Lee-on-Solent)

ELUSIVE tug VH has finally been pressed into service and Chipple ZZ is being tarted up to be sold after many years' service. Southampton University held a successful winning course with three new pilots going solo and a spate of Bronze legs. They plan to enter two of our fleet in the Juniors later this year and have been pressed into service to acquire launchpoint markers. We hope to hold a vintage rally this summer. Daedalus camp, which is separate to the airfield, is being redeveloped to house the Army and 400 young gentlemen seeking asylum - please don't tell our insurance companies. There should be no effect on airfield operations.

Pete Smith

Scottish (Portmoak)

THE early part of the year has seen many visitors to Portmoak with a high number of badge claims. Our

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hangar project is progressing well and we hope to have final planning permission by the time you read this. Welcome to our new full-time instructor, Andy Sanderson, and big thank you to Neil Irving, who has stepped in as our summer course instructor. Our 65th AGM was held in March and the following Board members were re-elected: Brian Cole-Hamilton, Bruce Marshall, Kevin Hook, Chris Robinson, Joe Fisher, Douglas Tait and Ian Easson. Special thanks to retiring Board members Bob Jones, Neil McAulay and Neil Irving. A wee reminder that the Vintage GC holds a rally here on July 5-6, not that you need an excuse to visit! **Ian Easson**

Shalbourne Soaring Society (Rivar Hill)

AT our annual dinner and awards on February 1, Bert Gallagher was awarded honorary Life Membership; Matt Carter was awarded the Dale Maleham Memorial Cup for the most notable progress; the Bernie Tubbs Cup for the Retired Member of the Year was awarded to William Davis; the Norsk Data Challenge went to Alan Brind and Alan Pettit; Club Member of the Year went to Keith Lovesey; and the John Dabil Trophy for Instructor of the Year was jointly awarded to Steve Ottner, Martin Hoskins and Ken Reid for running Earlybirds sessions during 2002. We have had some weather in the first few months of 2003, and the day after our annual dinner saw a great soaring day. The benefits of cross-country evenings are already evident. Over 5/6 April we had our first aerotowing weekend of 2003, and more are lined up for the next few months. Looking ahead, the week commencing July 28 will see a BGA Soaring Course, and the committee are planning other activities on, around and above the airfield. Well done to the first solos of 2003, Chris Keating and Phil Logue. Further congratulations are due to Colin Baines and Dave Morrow for gaining their BI ratings; to Jerry Pack on receiving his Assistant rating; and to Jim Gavin for his Full rating. Liz Sparrow, our CFI, and Kay Draper, are the Club Class entry in the British Women's Team and on April 12 they went to Ontur for team training. **Liz Seaman**

Shenington (Shenington)

CONGRATULATIONS to Annette Shaw, who has her Bronze, and to John Rogers, our new Assistant-rated instructor. At our annual dinner prizes were awarded to Gary Brightman, Tim Donovan, Frank Broom, Paul Gibbs and Steve Codd, Mark Fisher and Colin Hales (recently back from an epic trip to Australia in a KR2). We've just had our AGM, and a Race Night, and have more plans for summer events including the July 4th



Brian Milburn of Northumbria after his Silver distance – even the glider is smiling! (Frank McLaughlin)

barbecue. Check our website at www.glidering-club.co.uk for up to date details. Otherwise our intensive midweek courses are busy, and we look forward to visiting club expeditions in summer. Call the office if you want to come mid-week – visitors welcome as always.

Tess Whiting

Shropshire Soaring Group (Sleep)

THE upturn continues. Membership is up. Finances are sound and we are making a special offer to prospective new members of £5 a month for three months to enjoy our subsidised launch rate and superb facilities. There has been some mid-week flying, which will hopefully increase when my torn shoulder muscle gets back to normal. Thanks to all who have rigged and derigged my glider and swung the prop on my Turbulent. Chris Fox has introduced some of our visitors to the intricacies of flying flapped gliders and the cross-country season has started with a number of successful goal flights. Most of us have taken advantage of the local wave. Our expedition season also starts shortly. It is expected that Peter Gill, our CFI, due to pressure of work with Ofsted, will shortly hand over the job of CFI to Colin Ratcliffe. **Keith Field**

Southdown (Parham)

SPRING came early this year to Parham, and with it the long-awaited northerly winds. The welcome ridge lift, boosted by modest thermals, gave every cross-country pilot worthy of the name the chance to blow away the cobwebs. Tony Hoskins was particularly active, and managed one of our first 300km flights of the year. So

consistent was the lift that even our most experienced pilots began to take it all for granted. The resulting outlandings were a useful reminder that weather forecasting is still an inexact science. At the AGM we elected Dave Cowley, Ian Ashdown and Paul Barker on to the committee and our new chairman will be Dick Dixon. The Chalk Pits museum at Amberley is planning an exhibition celebrating one hundred years of aviation. The Wright brothers' work inspired local enthusiast Jose Weiss to design model gliders. Later he built full-sized machines, which were flown by Eric Gordon England. The first glider flight in Britain was made in 1904 from Amberley Mount and England's unofficial time was just over 60 seconds. A club was founded soon afterwards, using a Wright biplane glider and two of the Weiss designs. This forerunner of our club remained active until the outbreak of the First World War. We have great hopes that this exhibition, and the subsequent publicity, will bring some new young recruits to Southdown. Sadly, we have to report the death of John Lee following a short illness. He helped to build the replica of the famous Colditz glider (see *S&G*, April-May 2000) and flew it in the associated television documentary. John was an expert craftsman and will be remembered for his many qualities, the most outstanding of which was his huge generosity of spirit (see also obituaries, p59).

Peter Holloway

South London (Kenley)

IT seems that quite a lot of interest has been taken in the on-going saga between us and the MoD over our terms of licence to use Kenley airfield. We have received very welcome support from the BGA, our local MP Richard Ottaway and also from the RAFVR, who run the resident Air Cadet squadron. Thanks to the tireless endeavours of Peter Bolton on our behalf, we have succeeded in regaining permission to fly from Kenley, although in a revised operational area. Discussions as to a more permanent arrangement are ongoing, and we are anticipating more good news later in the year. In the meantime, the annual pilgrimage to Jaca, in Spain, is underway as I write (probably a good time to buy shares in San Miguel...) The club's annual social was a great success – well done to Dave Hull for organising it. Our yearly charity day event is looming again: as in the past few years we shall be supporting the Marie Curie Foundation. As we enter the soaring season, a big thank you goes out to all the members whose efforts during the winter months have ensured that we have a serviceable fleet of vehicles and launching equipment, and to the CFI, Peter Poole, for maintaining the club aircraft. **Alan Seear**

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Club news

➤ Staffordshire (Seighford)

CONGRATULATIONS to Simon Watson on winning the Early Bird Trophy for the first 100km of the season. Already, many pilots have done more cross-country flights (and gained more points) than they did in the whole of last season. Paul Cooper is the new club Ladder Steward – many thanks to Derek Heaton for his efforts over the last two years. The recent kind weather has helped us to get ahead of our launch target for the season. We are now operating on more days of the week – regularly three to four days, sometimes more! Thanks to all those who give their time to help run the field/instruct on what otherwise would be non-flying days. The K-21 will again take part in the two-seater competition at Pocklington. The K-7 is looking well after a total refurbishment. Thanks to Chris Jones and helpers for efforts on the publicity front; to Neville Cooper for his bricklaying skills, and Lee Featherstone and Steve Brindley for the club newsletter and to Colin Ratcliffe for designing and building an outside WCI. For news, see also www.staffordshiregliding.co.uk

Paul (Barney) Crump

The Soaring Centre (Husbands Bosworth)

CONGRATULATIONS to Richard Banks, who has his Bronze Badge, and Stephen Lee, who went solo. Well done to Russell Cheetham, who completed the first 100km of the season on March 2, and Steve Turner who did the first 300km on April 8. We are pleased to see staff instructor Mick Hughes back for another season, our new course tug pilot, Andras Pinter, all the way from Hungary, and our new course winch driver, Sean Boustred. We also welcome our new club manager, Keith Chesher, who joined us on April 28. Many thanks to our departing manager, Andy Parish, who has done an excellent job of managing the club for the last four years. The start-of-season party held on March 29 was a big success. Thank you to the party organisers. We have held three successful flying weeks for students from the Universities of Loughborough, Warwick and Coventry. At our AGM we elected a new chairman, Jonathan Walker, new vice chairman, Ron Bridges, and new committee members Paul Howard and John Inglis, and re-elected committee member Roy Spreckley. Thank you to our retiring chairman, Mike Hughes, and committee member Pat Piggott for all their hard work. The Midland Regionals will be held at Husbands Bosworth from June 28 – July 6, and we shall be hosting the Standard Class Nationals from July 26 – August 3.

Siobhan Crabb

Trent Valley (Kirton in Lindsey)

MEMBERS are already taking advantage of the early spring weather with expeditions to Aboyné, Portmoak, Salby, ... and Benalla. Yet another successful dinner dance and prizegiving was held, with the most outstanding flight cup being awarded to Andrew Turk, who has subsequently left the club due to work commitments. The new hangar doors are progressing well – many hands make light work, especially for Bob Kamita, who unfortunately lost part of his finger when the door slid on to it. We are looking forward to our flying week in May and the BGA Duo Discus' visit in June. Preparations are in hand for the fourth Trent Valley Wooden Cup competition, on July 26-7. Any visiting pilot with a wooden glider who would like to join us would be most welcome: just contact director Patrick Holland on 01636 892968.

Janet Nicholson

Ulster (Bellarena)

AS the club prepares for Easter, launch rates are on track to rival some of our best years. The opportunity to increase our fleet with the addition of a single-seater Astir has come about – though unfortunately due to the disbandment of a club syndicate. Speed control is

now the order of the day to those of us used to wooden machines! Wednesday flying has been introduced on a trial basis thanks to the generosity in the giving of their time by several instructors/tug pilots. In preparation for the "Walking on air" week at the beginning of May access to the clubhouse has now been made wheelchair friendly and further renovations are in progress to the toilet block. Later in the month we have been invited to open a two-day airshow in Portrush with a glider in formation flypast, complemented by a static glider display. With free admission to the airshow visitor numbers are expected to be high. Well done to John Kells on going solo.

Seamus Doran

University of the West of England (Aston Down)

COMPETITION is growing with Lisa and Anna both going solo and bets on as to who will get Bronze first, the Easter progression week planned should ensure some new solo pilots. Congratulations to James Mackey, our graduate member, for obtaining Bronze and Silver this year. Special congratulations and farewell to James Benson who is leaving us after obtaining a scholarship to do his ATPL; all the best for the future.

Anna Gunn

Vale of White Horse Gliding Centre (Sandhill Farm)

WE have had an encouraging start to the season, with a number of early cross-country flights. Steve Nash is so far leading the field with both the first cross-country of the year and the first rounding of our local 100km "Bob's Triangle". Mike Skinner has sponsored an out-and-return competition to a variety of motorway and motorway-style service stations and a number of these flights, albeit the shorter ones, have already been achieved. This year we have arranged two weeks when the club will be open continuously and not just at weekends: the first at the end of May will have taken place by the time this is in print but the second, our famous "Ed's week" will still be to come. This is the week beginning June 30, and as always at Sandhill Farm visitors will be most welcome.

Graham Turner

Vintage Glider Club

WE are very sad to report the death of John Lee (see opposite). In the Czech Republic, 85 vintage and classic gliders have been made airworthy in the last decade, including 12 Orliks and 38 Orlik 2s, five of which did 300km-plus flights last summer. In Britain, two Lunaks are flying. We hope the only airworthy Jaskolka, damaged in strong winds during Ann Welch's memorial service, will soon be repaired. The service was well attended by VGC members. Our Achmer members represented us with a magnificent stand at Aero 2003 in Friedrichshafen. Mark Morley has done 300km in his Swallow from Odiham. Danish members have restored and flown a H17a; Swedish members have restored and are using the wartime bungee ramp at the Alleburg Gliding Museum.

Chris Wills

Welland (Lyveden)

OUR diversion from the winter jobs saw another spirited contest with the usual result in the inter-club bowling match against Upwood. With the extraordinary weather over the last month, not only has the field been usable but most members are current. Brian McDonnell has just started as CFI with Chris Hatton remaining as deputy so we shall see what new management brings. A Cirrus is in the process of joining the club single-seater fleet, hopefully opening up new adventures. Already planned is a fully-booked *ab initio* course in May, our open weekend on June 21-2 and our flying week in the first week in August.

Strzeb

Wolds (Pocklington)

THE annual expedition to Portmoak is about to set off and members are busily checking their trailers, and packing up their pee bags and gloves for the many long wave flights to come. Those of us tethered to North Yorkshire are making the most of the spring weather. Graham Walker has gained his Silver height, and the re-soloed Tom Ruffell has just had a 1.5 hour flight in his new Cirrus share. Jon Smith has completed an early 300km whilst Alan McWhirter did a 100km triangle at an average speed of 93kts. Two thirds of the Fox Family are back from Oz with a suntan, and are making plans to go back, while son Mike is flying in New Zealand with the Wills family. Steve Derwin has his Cross-Country Endorsement. Well done to Martin Fryer for his Assistant Instructor Rating, and Graham Wadforth and Dave Mazingham for their BGI ratings.

Ged McCann

Wyvern (Upavon)

SPRING is in the air, and the thermals are starting to develop (well, they were when I wrote this!). Most of the fleet has been C of A'd now and our thanks to Tom Muncaster for co-ordinating most of the effort, and to those that have provided to the muscle and manpower. Our MT rep, Ken Marsden, has managed to find us a new bus – perhaps not so new, and in the wrong colour, but we have high hopes. Ken and our safety rep, Nobby, have been beavering away on the inside of the bus over the past few weeks and we hope it will be ready for our Longest Day celebration in the middle of June. The hangar was also subjected to some serious spring cleaning at the start of April; thanks to those who turned up with brushes and enthusiasm! We have run our first two courses this year with great success, and have even managed a few solos from the courses. Our thanks to all who turn up to help run them, and in particular to John Appleford and Dennis Stangroom, who show up course after course to drive the winch and retrieve vehicles. To find out more about us, visit us at www.wyverngliding.org.uk

Brian Penfold

York (Rufforth)

THE *Ouse News*, the newspaper that carries local items of interest to club members, has been printed in high-quality colour for the first time in April. We have again seen the benefit of our web pages bringing visitors from afar when a Japanese pilot spent a week with us in the spring. The club trainers are changing with a push towards establishing an all-K-13 two-seater fleet, apart from the DG-505 which we operate on behalf of the Faulkes Flying Foundation. We are looking into extending our single-seater fleet over the coming year. So far the new airway and other changes to airspace in the region have not caused us any problems, and we are hopeful that cross-country flying will not be affected.

Mike Cohler

Yorkshire (Sutton Bank)

CONGRATULATIONS go to Mark Harford for his solo, Geoff Palmer for completing his Bronze Papers, Andy Wilson and Chris Day for converting to the Astir, and to all those who got in the wave and soared to great heights this month. The welcome sunshine of March kicked off the cross-country season proper, with the start of the Inter-club League imminent and lots of local (and not-so local) soaring. Pilots have been enjoying the first strong thermals of the year and brushing up on soaring techniques. The annual dinner dance took place on March 22 and it was well attended by almost unrecognisable members who ate, drank, made merry, and applauded the prize giving in an exotic mixture of clothing. Mention should be made of Andy Wright and Rory O'Connor, who between them swept the board, and to Geoff again for getting the trophy for most improved pilot.

Alex May

Obituaries

Peter Davies – Portsmouth Naval

IN 1950, at RNAS Lee on Solent's first post-war "At Home & Flying Display", Peter Davies (1926-2003) first became aware of the Portsmouth Naval GC. He was impressed by the Olympia on tow behind a Tiger Moth, and the winch launching of the T-21, which looped the loop; he joined. After 22 flights in the T-21 his first solo was in the Tutor in 1953. After eight solos, however, he drifted too far downwind on base leg, and had to abandon the approach due to being lower than the trees bordering the airfield! Turning away, he flew between two massive oak trees and pancaked into a reed marsh. Fortunately the ground was soft enough to cushion the impact though not his dismay at his poor judgement. In 1956 the club moved to Lee on Solent. His aerotow check was with Humphrey Dimmock in the T-21 towed by a Sikorsky S55 Helicopter as part of the 1958 Air Day. The towrope was rather long but it was well clear of the downwash, and all went very smoothly. In 1959, CFI Dave Holding decided that he should help with passenger flying in the T-21. After a check flight, he was soon airborne with his very first passenger, an attractive young lady wearing a long skirt. As he eased into the climb on a rather fast launch, this skirt flew up over her head. It was all very confusing for a novice instructor but somehow he managed to land safely. In 1961, he did his full rating: Ann Welch was his final examiner, which he admitted was quite an experience. In 1963 he was appointed CFI. He continued active until the late 1970s, then devoted more time to flying his Tiger Moth. As well as serving as CFI he was also at various times Treasurer and Secretary, and he held several positions on the RNSA Committee as Air Member, Competition Secretary and Treasurer.

Martin Heneghan

Tom Lamb – Oxford

THE Oxford GC wishes to announce the sad death of Tom Lamb (1950-2002) on December 1, 2002, after a three-year battle with multiple myeloma. He joined the club in the early 1970s and was a member, and a good friend of mine, for more than half his life. For the last 12 years we were joint owners of our beautiful Mini-Nimbus. Always relaxed, sociable and cheerful, he was popular both as an instructor and when entertaining the children at the club. Of whatever age, they all adored him. His engineering knowledge was often useful at C of A time, and he was always there when any hands-on work was needed. He enjoyed social events, as well as the ski-ing expeditions, the beer festivals, his golfing holidays and his radio-controlled models. He was also disorganised, spectacularly untidy, and seldom got anything properly finished, but those were his ways and we wouldn't have changed him for the world. A confirmed bachelor, Tom was a Gold Badge pilot who enjoyed friendly competitions such as the Aston Down task week and the Inter-Club League. His rambling anecdotes resulting from these meetings were legendary. Probably the most famous one involved landing out on a hot day, and being offered the use of an open-air pool by two gorgeous farmers' daughters. They didn't seem worried by the fact that he had neglected to pack a swimming costume before take-off. "You don't need one" was the cheeky response. The location of this farm remains a closely guarded secret.

Phil Hawkins

John Lee – Southdown

IT IS sad to record that John Lee (1944-2003) died on Thursday, April 3, after several months' illness. What a character John was! He had no interest in competitive gliding, but loved to stay aloft the longest. He never (officially) flew cross-country, but was a consummate soaring pilot. Always fascinated by flight, he started building his gliders in the late 1960s. He was greatly inspired by Bill Manuel, builder of the Wren classics. John often spoke of Bill, but he also corresponded with

many other pioneers; this deepened his insight into "pure" gliding. John built, or rebuilt, eight or nine gliders, several being his own designs. He never just "bought" a glider. After leaving school, John joined Elliot's of Newbury as an apprentice; he did some adventurous travelling, then became a specialist building carpenter. John built two tiny pre-war Hutter 17s, and they were marvels of craftsmanship. John loved flying the Hutter, but seeking more performance he built his lovely red Oly 2b, which was grafted together from parts of about five. Finally he rebuilt an Oly 463, cunningly lowering its fuselage height. While working on his 463, John was urgently commissioned to produce the wings for the Colditz Cock for the television documentary. This demanded almost superhuman effort: John worked 18-hour days for seven weeks, through Christmas, to meet the deadline. Probably no-one else could have done it, but this was typical of his extreme ability to concentrate. The Colditz glider project – research, building and flying – was one of John's crowning achievements. The glider is now at the IWM, Duxford (see S&G, April-May 2000). He will be greatly missed, and our deepest sympathy goes to his wife Bev, and her boys Sam and Olly.

Andrew Jarvis

Martin Moss – Bowland Forest, Midland

IT IS said few people stay true to themselves under the pressures of modern living. Martin Moss (1948-2003) was one of them. At Midland GC he made a deep impression. For a start he would listen with an interest and intensity that was wholly genuine. As an instructor he was respected for his calm, clear teaching and his optimism; a man who knew how to get the best out of others. In the bar his quiet presence had a curious magnetism. The Howidunnits would be in full flow but you were always aware of those wondering what Martin was thinking and watching for the opportunity to start talking to him about sailing, or animals, or, of course ..., FLYING. Personal memories are the enduring memorials to people like him. Mine are of Martin standing almost apologetically at the far end of the trailer line, by the fuselage of his huge, kink-winged Nimbus. As if he needed to ask. There was surge of volunteers to help. And, later that day, of the image of the great white wraith, speeding underneath in the opposite direction out of a gloomy turnpike at Evesham. It was a reminder of his competence but it was also a kind of metaphor for his life. He was to come second that task week but you felt that next time he would really go for it. Onwards and upwards, quietly and resolutely, as was shown by his acceptance of the post at Portmoak. And, finally, a memory of two stanzas by James Kirkup, which in a befuddled state we'd both agreed said it all about wave flying:

*Above the drifts
Of quilted clouds
Our stillness shifts
Where breath is rare
We beat the shires
Of racing air!*

Roland Bailey, Midland GC

MARTIN had a lifelong passion for anything that flies; starting in the ATC. While DCFI at Bowland Forest he decided to find paid flying work, then spent a number of years at Midland GC as weekday course instructor, coming home at weekends. He once told me he felt privileged to fly The Mynd; it was such a special place. Then just before his death he was offered the position of manager at Portmoak. He was relishing the challenge. At Bowland Forest he was the person cross-country pilots aspired to be: he flew the longest ever cross-country from Chipping, just short of 500km; on a trip to

Husbands Bosworth a few weeks later he completed a 500km, and to prove it was no fluke did one the day after as well. On another occasion he actually flew back to Chipping from Husbands Bosworth, leaving his wife Beryl to tow the trailer home. A quiet reserved man, who had the respect of everyone that met him, Martin will be missed by us all. Our condolences go to Beryl Moss, his family and friends.

Steve Robinson, Bowland Forest

Tom Paxton – Borders

SADLY, we have to report the death of Tom Paxton, a well-liked and popular member of the club, who lost his battle with a brain tumour on March 8 after a short illness. Tom, a farm manager, joined us in 1971 and soon became an exceptionally good soaring pilot, developing into one of our finest instructors. He became the club's first home-grown Silver pilot but an injury to his back during a voluntary parachute jump, forced him to pursue other more relaxing interests. His accident did eventually lead to the end of his flying but he never forgot his gliding club friends. He was a founder member of the Winged Wheels, whose four members were frequently seen on their vintage motor cycles around Northumberland in the 1970/80s. He made headlines some years ago in *Sailplane & Gliding* when on a gliding holiday at Portmoak he 'landed out' on a cross country flight in what he thought was a perfectly good deserted grass field; but, unknown to him a bull was lurking in the shadows. He had just placed the parachute on to the wing tip when he heard the thundering hooves of a bull, which was about to charge the glider. In awe of seeing his treasured possession smashed to a pulp, and with his own life in danger, he quickly grabbed the bull by its wet slippery nose and twisted it hard to prevent a catastrophe. Luckily, being a farmer, he knew exactly what to do until help arrived from the near-by village. Realising that his illness was terminal, Tom asked that all his gliding friends be informed. Over the past six months many of them went to see him to chat and laugh about old times and at the same time offer support to Hilda, who nursed him devotedly over the last few difficult months. Tom, a real gentleman, died peacefully at home, as he had lived his life, quietly and with great dignity. He is survived by his wife Hilda, son Tommy, daughter Pat and three grandchildren.

James D Hogarth

Dave Rukin – Bowland Forest

DAVE Rukin (1958-2003) had been a member since starting gliding in January 1989; he had a passion for anything associated with aviation. If anyone was flying at the club, he was there; he always claimed that he was working in the area. Dave, our DCFI, had the knack of putting people at their ease; he could spot when someone had a flying problem, and motivate them through a difficult patch. He would then get them in the air and talk, demonstrate and practise the problem away. He had the potential to be one of the greats among UK instructors. As a man, he was calm and kind, as a human being, he was gentle and in tune with nature. During his teenage and young adulthood he also had a love of shooting and fishing, but his dilemma as he got older was how to carry on these activities without hurting anything. He came to the conclusion that he would watch rather than harm any living creatures. He could often be seen on the airfield before flying, surveying the numbers of rabbits, lapwings and anything wild that he could count to check that everything was in equilibrium. He was also a local magistrate a fact that very few people knew, but this was the nature of the man, quiet, thoughtful and a strong sense of loyalty to his community. We all mourn the loss of a good friend and fellow enthusiast. Our condolences go to Patsy, family and friends.

Steve Robinson

Flying big wings

A conversation between Phil Phillips (BGA Safety Committee) and Graham McAndrew (then CFI at Lasham Gliding Society) about safe flying in Open Class gliders

THE British Gliding Association's Safety Committee is becoming concerned about the increasing trend of accidents involving big-winged gliders. These seem to have one fairly common denominator – the pilot's lack of experience on Open Class gliders. These gliders are more difficult to fly and less forgiving than a 15-metre glider, and here Phil and Graham discuss some of the factors involved.

Phil: *I think Lasham must have the greatest concentration of big gliders in the country, if not the world. At the BGA we have seen a dramatic increase in accidents involving large-span aircraft; is this the case at Lasham as well?*

Graham: Surprisingly no, although we do normally reflect the national trend. We are 10 per cent of British gliding, we would expect 10 per cent of the accidents as well. I think the main reason for bucking this trend is the amount of space we have; space is a great asset. If you have space you avoid a lot of problems.

Unfortunately, no amount of space will prevent the silly accidents or the ones that occur through the pilot simply being ill equipped to cope with the situation.

Phil: *What do you mean, "ill equipped?"*

Graham: I mean he does not have the flying skill to extract himself from the difficult situation that a more experienced pilot would have seen coming. How does the old saying go – "He uses his vast experience to avoid having to exercise his superior skill".

Phil: *But the same can be said about all flying accidents, not just the large-span gliders. What makes the big glider accident different, and how is the pilot meant to become better equipped to cope with their unique handling qualities?*

Graham: Well, it is a problem, especially when there isn't the experience in the club to lead the fledgling Open Class pilot through. There are more and more big gliders being bought by pilots with less and less experience, and they are having accidents – not really surprising. There is no substitute for a good briefing and two-seater training by knowledgeable pilots but this is not always available.

Phil: *So are you saying that short-hours pilots should not be buying long-span gliders?*

Graham: No. You are confusing experience with hours in the air and this is not the case. I have many thousands of hours in the air

but put me in an aircraft type that I am not familiar with and I am inexperienced: I have to recognise that and fly accordingly.

Phil: *OK, so recognise your shortcomings... but what do you mean by "fly accordingly?"*

Graham: Well, put it in context: if it were the start of the season and you had not flown for four or five months then along comes a nice spring day and you jump into a glider and race off cross-country. Would you attempt to scratch away from a low scrape in a dodgy thermal, or would you let discretion be the better part of valour and either slow down sooner or land? You are not inexperienced but you are out of practice. It is the same in a big glider for the first 100 hours or so – you must recognise you are behind the aircraft and do not take even moderate risks. Another old saying comes to mind: "Don't put the aircraft anywhere where your mind has not already been". In other words, think hard about what you are about to do and if the outcome is not certain, do something less chancy.

Phil: *Coming back to briefings, what do you think are important considerations?*

Graham: There is absolutely no point in seeking a briefing from a pilot who is not himself very experienced on the type. If you do not have a suitable pilot at your club then go to a club that has. I am sure they will oblige. I think the problem is that if you ask an instructor for a briefing for a particular aircraft type he will try to oblige, regardless of his experience on that type. This is more prevalent at the smaller clubs where the pool of expertise is smaller.

Phil: *Presumably it depends on what the pilot is used to as to what the briefing or check flights and so on should consist of?*

Graham: Absolutely. I think the biggest hurdle is going to be for a Standard Class pilot converting to Open Class. He has the added complication of the flaps and this, it would appear, is where most problems have arisen.

Phil: *So what would be your advice be?*

Graham: Apart from two-seater instruction, you mean?

Phil: *That as well, what would you teach on conversion training and briefing?*

Graham: OK, let's deal with the take-off first. Aerotow only, I would not convert using the winch: to my mind big gliders and winch launching do not go together so let's forget that aspect of it.

The take-off run should be clear and

largely into wind. Set flaps to full negative to give maximum aileron control at low speed. Maintain this until you have adequate control, there's no rush, when you have good aileron control gradually change down to 0 or +1. Practise this movement on the ground so you can easily achieve it without having to look down. That's it, once you are in the air, it is just another glider but expect to have to move the controls a long way (use full rudder when turning) and for nothing to happen quickly except things you do not want to happen quickly.

Phil: *What about when you're off tow?*

Graham: You want a good, long flight to get the hang of it, a good soaring flight. Think about what you might do with the flaps. Understand what they are there for. The positive settings will reduce the stall speed by a few knots, that's all. If you need the stall speed to be slightly lower then use some flap.

Phil: *When might a reduced stalling speed be an advantage?*

Graham: In order to be able to turn tighter in the thermal. If you are heavy you will find the glider stalling in a tight thermal turn and the more flap you drop the slower you can fly at the same bank angle. But consider this, the more positive flap you apply, the less aileron authority you will have, so do you want to fly a couple of knots slower, or do you want to be able to manoeuvre quicker? I would say nine times out of 10 you would want to roll quicker, so use flap sparingly: one notch of positive as and when you are centred. If you're not centred, don't use it, it will only make a slow rate of roll even slower. I would advise against using more than one notch of positive in most aircraft, it only makes things worse in my experience. Worse still is using the positive settings to slow down; how much drag does that create? Only drop flap when you are at the slow speed – if you have to use force to move the lever you are changing the setting too soon.

Phil: *What about negative settings, then?*

Graham: The negative settings effectively alter the angle of incidence of the wing, allowing the glider to move through the air at a more efficient angle. The faster you go the more the profile drag; the flap is trying to reduce this drag. It is only efficient at a set range of speeds so don't be tempted to change too soon, follow the handbook recommendations as to speed and flap changes.

Phil: *That sounds a bit too easy: there must be more to it than that.*

Graham: Apart from the approach and landing, yes that's it. The more you fiddle



More and more big gliders are being bought, but how do you convert to them safely?

the *White Planes* picture co.

with the flap lever, the more drag you will create, so don't move it unless you have to. The rest is just practice. You will get the best results by avoiding having to turn. The difficult bit to get used to with a large-span glider is getting into the thermal and staying centred, avoid having to do that often by planning ahead and you will eat up the miles.

Phil: OK, so what about the landing?

Graham: Well, as with any aircraft it's only when you get near the ground that getting it wrong actually starts to mean anything.

Phil: Other than mid-air collisions, you mean?

Graham: Yes, OK then, other than mid-air collisions. Any big glider appears to get bigger the lower you get. You need space, you need to plan ahead and it is important to get the approach set up and stable.

Phil: What about the flaps?

Graham: I would recommend landing flap on every approach, other than in very strong winds. Big gliders are generally under airbraked and require the extra drag that flap gives. But again you must think about what that flap will do. Landing flap will generally reduce the roll rate, again, it will also require larger pitch changes for a given speed change and acceleration will be slower, attitude will be more nose-down and ailerons may well feel lighter.

If you are flying a non-flapped machine, or a glider where the flaps do not create a lot of drag, then by closing the brakes in an undershoot you will regain your full performance. In other words, in a 45:1 glider with no brake, you open full brake and your glide goes down to, say, 15:1. When you recognise that an undershoot is developing you can close the brakes fully,

regain that 45:1 glide ratio and use that performance to rectify the situation. Now look at the flapped glider, in particular an Open Class flapped glider, where the flaps reduce the glide angle considerably. Lowering the landing flap will reduce the performance from, say, 55:1 to 30:1 – the brakes, when extended fully, will reduce the angle still further: down to, say, 20:1. Now when the glider is undershooting and the brakes are closed you will only recover back to 30:1, not your original 55:1.

Phil: And presumably you cannot reduce the flap setting to recover the performance?

Graham: Precisely. If you reduce the flap setting, you will reduce the drag by a small amount, but you will also reduce the lift by quite a large amount, so the glider will descend faster for a period, as a result of the flap reduction.

Phil: I know different pilots use the landing flap at different times in the circuit. What do you do?

Graham: The landing flap will reduce the roll rate and the control effectiveness. Deploying landing flap should be a one-way street: in other words, you shouldn't be in a position where you should be considering retracting them again. If you are very high, you can lower landing flap on base leg, provided that there is no doubt about your making your touchdown point. If not so high, wait until you have turned finals but remember that the flap movement is going to require a corresponding pitch change if the airspeed is to be maintained. This co-ordination should be practised at height. Practise retracting the flap suddenly as well, and note the height loss and the time to recover to normal flying speed and attitude (you definitely do not want the flaps slipping

out of landing position into full negative on approach – a nasty habit of certain older Open Class machines).

Use the brakes normally but remember you have an additional resource at your disposal – speed. If you are overshooting, an increase in speed will increase the drag dramatically and hence increase the rate of descent. In other words, if you find you have full brake and are still overshooting it is possible to increase their effectiveness dramatically by lowering the nose, allowing speed to increase and hence the drag and control a wayward approach in this manner.

Phil: Something to be practised with adequate space and opportunity rather than on your first field landing, though?

Graham: Absolutely. Above all else, and this applies to any glider approach into any field, give yourself an undershoot and an adequate overshoot. A very good maxim is to aim to touch down a third of the way into the available landing field. Plan your approach with the undershoot and overshoot in mind. If you want to place the glider or to taxi, you do so by airbraking into the undershoot area and then easing the brakes in, in order to extend the float/ground-run into the chosen, available space. Once on the ground, and firmly so, remove your hand from the brake lever, transfer it to the flap lever, apply full negative flap, then re-select your airbrake and wheelbrake if required. If you try to aim to land in the overshoot, you will misjudge it and roll through the far hedge. If you approach so as to land just over the boundary, you will inevitably modify that boundary with your undercarriage. Remember, all undershoot accidents happen with the airbrakes open, not closed.

Phil: Thank you, Graham, most enlightening.

Spot-on landings

Our anonymous writer explains how he found out the hard way that the aim of a spot landing is not to deposit a pile of shattered fibreglass as close as you can to the airfield boundary...

FIRST, the background: I had a Bronze plus Cross-Country Endorsement with a total of 56 hours PT, 13 hours on type from 19 launches. I had my Silver height and was working up to the other Silver legs when the day was good enough.

This day wasn't good enough for me to do either leg, so I decided to get some spot landings on type signed off. The wind was almost straight down the run, some 15 to 20kt. Strong enough, but I'd flown in such conditions quite a few times over the last couple of years, so I didn't feel unduly concerned. The approach went over crop which had grown to about 3ft high, and the landing area slopes up noticeably on approach, but not dramatically – usable right from the boundary in the absence of crop.

The first flight of the day was no good – there was a two-seater just ahead of me in circuit and in keeping out of their way I didn't get a spot landing in. The second flight was "spot" on. Just a shame (a very great shame as it turned out) that nobody saw it! Which brings me to the painful bit.

By now I was determined to get at least one spot landing signed off. On my third flight, by the time I was at 300ft on the approach, everything seemed to be going fine – circuit OK, final turn above 400ft, half airbrake, 60kt, edge of the field approaching nicely. By about 100ft I was looking up the run thinking the approach phase was basically over, making sure I held my half airbrake, thinking I was "in" but close. At 50ft the penny finally dropped.

Sadly, so did I. I don't remember much of this bit, but it would seem that the following happened – I got caught by the curlover from the sloping field and crop without enough height or speed to recover. I tried to speed up, but hung grimly onto my half airbrake! When I hit the crop I groundlooped through 270° in a very rapid and spectacular fashion and came to a halt just inside the airfield boundary.

I can remember only four things from this part of the flight:

- "Oh ****."
- "I'm rotating."
- "I've stopped and I'm OK."
- "Let me get out and wave so that people know I'm OK."



Three feet of crop makes quite a difference to the airflow close to the ground

the White Planes picture co.

As we were putting the remains of the glider back in its box, another glider that had been away for a while came in and we all went quiet when the tail dipped into the crop as he hopped over the last 20 yards for a remarkably short landing!

So what lessons are to be learned from this? May I suggest:

- Don't be afraid to seek advice. If it's possible, always brief on the day's specific challenges or risks irrespective of your perceived familiarity with the airfield (this doesn't have to last 20 minutes!).
- Be aware of the subtle seasonal changes around your own home airfield. As I found out to my cost, three feet of crop makes quite a bit of difference to the airflow patterns close to the ground.
- If the flying conditions alone are a challenge, don't put yourself under extra pressure. Remember, whatever you wanted to do, there's always tomorrow.
- Recognise that a strong headwind carries the risk of curlover and wind gradient even at a nominally benign site, so allow REAL tolerances when selecting your reference point – if the headwind is strong the real risk is undershoot, not overshoot.
- DO NOT creep into the habit of setting the airfield boundary as the reference point for those nice short landings. Trust me, the boundary WILL bite you one day!
- Always set spot landing criteria with an imaginary 10-foot obstacle on the field boundary – then if there's an accident it will be at 5kt at the far end of the field rather than at 55kt at the near end.
- Once you set your reference point stick

to it and adjust your descent accordingly: don't be tempted to just "note" that it is moving and simply hope you've got enough tolerance to be OK. Take immediate and decisive corrective action to remedy the situation the instant you detect a deviation from your intended flight path.

■ Even if you think that you, personally, can make it over the boundary remember that there's a lot of fibreglass behind you – it is a lot more elegant (and believe me a lot less traumatic, too) if that can all make it in as well.

■ Don't make a spot landing special. Take every opportunity to practise the technique safely and make every landing a precision landing.

■ Remember, flying isn't all seat of the pants and glory. It demands preparation, practice, analysis and self-criticism. After all, if you can't get things right when it's free and easy, you will not get it right when things start to go wrong.

And finally, without being too sentimental, another lesson I learned from this was what a nice bunch of people glider pilots are. Not one person took me to task for trashing a treasured club glider at the start of the season. Almost everyone's first question was: "Are you OK?" and people typically said things like: "S**t happens," "Don't quit," "Two sorts of pilots – you've had an accident or you haven't yet," and the key question: "What have you learned?"

So, chastened and – I hope – improved, I continued my quest for that elusive Silver Badge, which I achieved a couple of months later.

If this article saves just one of *Sailplane & Gliding's* readers from going through what I did, it will have been worth it.

Accident/incident summaries

by Dave Wright

AIRCRAFT Ref Type	BGA No	Damage	DATE Time	Place	PILOT(S) Age	Injury	P1 Hours
013 K-21	4828	Minor	13-Jan-03 1200	Sutton Bank	70	None	111
After winch launching on to the local ridge the cloudbase lowered from 700ft at the time of launch and the pilot lost sight of the ridge. The glider drifted back as the pilot tried to find the airfield and lost height rapidly. It landed in a small clearing in a wood next to the airfield but sustained only minor damage.							
014 Venture motorglider	G-BUFN	Minor	12-Jan-03 1129	Sandhill Farm	52 24	None None	316
The motorglider pilot's chosen take-off path took him across an uneven area of the airfield where the ground dips away. The aircraft briefly became airborne then sank back to the ground and the pilot aborted the take-off. When the engine was stopped it became apparent that the propeller had hit the ground and had broken tips.							
015 K-7	—	None	—Jan-03 1556	Incident Report	50 53	None None	782 130
Unknown to the pilot, the winch shock rope caught on a flange of the nose wheel and remained attached at the top of the launch. The nose started dropping then apparently returned to normal but P1 decided to land and check it out. During the approach the glider was halted by the cable, stalled and span, but P1 skillfully recovered at 50ft and landed.							
016 K-21	4166	Minor	09-Jan-03 1433	Snitterfield	42 50	None None	742 43
This was a simulated field landing exercise across the airfield. P2 noticed the glider was undershooting so initially closed the airbrakes and P1 considered this and corrected the flight path sufficiently to land on the airfield. P2 opened the brakes again and, although they landed on the airfield, the tail was damaged on a ridge in the rough ground.							
017 Falke motorglider	G-BHSD	Minor	22-Jan-03 1500	Kilcoleman	64	None	4777
The pilot was taxiing the motorglider across wind to the active runway when a gust caused the aircraft to drift sideways on the wet, soft ground. Despite the pilot applying full left rudder the right wingtip hit a fence post and was damaged.							
018 Falke motorglider	G-KDFF	Write-off	15-Feb-03 1340	Bowland Forest	55 44	Fatal Fatal	1500 1500
This FATAL motorglider accident occurred when the experienced pilots tookoff across the line of two winch cables. One cable caught in the tailwheel before the aircraft became airborne. It was seen to fly somewhat nose high before starting a turn. It then span or spiral dived into the ground, killing both pilots.							
019 PA25 Pawnee Tug	G-BUXY	Minor	22-Feb-03 1625	The Park	55	None	243
After landing, the tug pilot slowed to a walking pace before turning away from the winch run. The turn was downwind and the aircraft's tail lifted causing the propeller to strike the ground and break.							
020 SZD Puchacz	—	Write-off	21-Feb-03 1419	Camphill	64 39	Serious Fatal	1513 0
This FATAL ACCIDENT occurred when the dual glider returned to the airfield, where it collided with a winch cable being used for another launch. With the cable embedded in the left wing P1 managed to spiral down until the glider apparently span and impacted the ground at high speed. P2 in the front seat was killed and P1 seriously injured. Subject to BGA investigation.							
021 Janus C	4599	Minor	16-Feb-03 1721	Easterton	36 56	None None	192
P1, on his third flight on type, returned to the circuit to find both landing strips blocked by gliders at about midpoints. He chose to land over them but ran short of space because of excessive speed, a lack of airbrake and failure to use negative flap during the landing run. P1 turned the glider but a wing tip caught and caused a groundloop.							
022 K-21	4024	Substantial	04-Mar-03 1700	Dunstable	47	Minor None	—
The post-solo student was ridge soaring, practising S-turns under instruction from P1, and was asked to turn right away from the hill. At 50kts, full control input failed to prevent the glider entering the curlover and it rapidly sank 150ft and struck the hill. Despite breaking the fuselage, P2 escaped injury and P1 had only a bruised back.							
023 SZD Junior	3847	Minor	17-Feb-03 1456	Aboyne	16	None	4
The early solo pilot returned from a wave flight and was faced with variable crosswind conditions on the narrow strip. After a good circuit, approach and landing all was normal until the crosswind veered the glider off the runway and onto an area of rough grass. In error he used both rudder and aileron and touched a wing causing a groundloop.							
024 Std Cirrus	4992	Substantial	06-Mar-03 1300	Pocklington	60	Serious	56
The pilot winch launched with the elevator incorrectly rigged. He aborted the launch at about 30ft and bounced heavily, injuring his back. He had rigged the glider and had been asked about the "rattly" control during the 'positive' checks and was told there was more movement in one direction than the other before take-off. He wrongly thought this was 'normal'.							
025 Open Cirrus	2426	Minor	14-Mar-03 1720	Talgarth	55	None	520
The pilot was landing in conditions known to give turbulence and sink in the circuit. He flew a circuit that resulted in the final stages of the approach being too high and fast and he touched down halfway up the field. He had, belatedly and unsuccessfully, tried to deploy the tail chute and then had to groundloop to avoid the far hedge.							
026 PIK-20b	2444	Minor	09-Feb-03	Selby	48	None	189
The pilot found he could not lock the undercarriage in the down position and it collapsed during the ground run, causing minor abrasion damage on the runway. The reason for the difficulty is being investigated. It was suggested that a landing on grass alongside the runway may be a better option in such cases.							
027 K-21	3642	Minor	26-Feb-03 1430	Lasham	60	None	4
This failed winch launch apparently took place when the pilot mistakenly thought the 'bang', heard when the Test rings slipped into line, was a cable break. He lowered the nose without releasing and, as the winch driver cut the power, overtook the cable chute, which coiled around and damaged the glider's wing.							
028 Not Known	—	None	—Feb-03 1400	Incident Report	56	Serious None	500
The glider had come to a halt and the instructor, keen to address a potential problem he had spotted elsewhere on the airfield, climbed out. He caught his right leg in the harness and fell forward and outward, landing on his left foot with a circular motion, which fractured his left fibula.							

BGA Badges

Pilot	Club (place of flight if different)	Date
-------	--	------

FAI 1,000km DIPLOMA

13	Richard Kalin	(Tocumwal)	18/12/02
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DIAMOND BADGE

638	Michael Strathern	ex-pat (Omarama)	15/11/02
639	Paul Cox	Norfolk (Omarama)	8/2/03

Diamond distance

1-907	Malgorzata Drecka	Lasham (Benalla)	7/1/03
1-908	Alexander Truman	Lasham (Tocumwal)	16/12/02

Diamond goal

2-2894	Ronald Baker	Lasham	20/6/02
2-2895	Jon Hall	Midland (Tocumwal)	17/12/02

Diamond height

3-1597	Michael Strathern	ex-pat (Omarama)	15/11/02
3-1598	Andrew Henderson	Borders	23/2/03
3-1599	Paul Cox	Norfolk (Omarama)	8/2/03

GOLD BADGE

2267	Jon Hall	Midland (Tocumwal)	17/12/02
2268	Alexander Truman	Lasham (Tocumwal)	16/12/02
2269	William Payton	Yorkshire	6/3/03

Gold distance

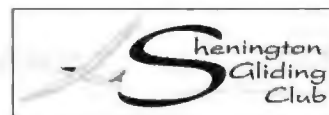
Ronald Baker	Lasham	20/6/02
Jon Hall	Midland (Tocumwal)	17/12/02

Gold height

Alexander Truman	Lasham (Tocumwal)	16/12/02
Jennifer Leacroft	Soaring Ctr (Omarama)	13/12/02
William Payton	Yorkshire	6/3/03
Ken Bell	Lasham (Tocumwal)	7/1/03
Stephen Stokes	South Wales	2/2/03

SILVER BADGE

11164	Simon Withey	Black Mountains	5/1/03
11165	Neil Davies	Cotswold	23/1/03
11166	Ken Bell	Lasham (Tocumwal)	7/1/03
11167	Keith Southerden	The Soaring Centre	21/12/02



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(plus lenses) CM/K/P £45.00

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(standard lenses) CM/GA/S £59.00

(plus lenses) CM/GA/P £68.00

Cloudmaster sunglasses can also be supplied with prescription lenses.

Please call **Rosemarie** on 01865 841441

or email rosemarie@afeonline.com for further information.

Camelbak

The Camelbak insulated drinking system offers the glider pilot an easy to get at ice cold drink, an essential for any serious cross country pilot. Now available with tapped bite valves to stop those unwanted leakages, and available as both the Classic and Standalone types, with water capacities of up to 3.0 litres.

Camelbak Classic

- Available in both 1.5 or 2.0 litre capacity.
- External zip pocket for keys and essentials.
- Breathable mesh harness.
- Screw cap polyurethane reservoir.

1.5 litre Camelbak Classic CB1.5S £27.99

2.0 litre Camelbak Classic CB2.0S £39.95

Camelbak Standalone

- Easy fill, easy clean.
- Fully insulated.
- Durable exterior is abrasion resistant and lightweight.
- D-ring attachments.

2.0 litre Standalone Camelbak CBUNB20 £29.95

3.0 litre Standalone Camelbak CBUNB30 £32.95



All prices include VAT at 17.5%

UK Carriage Rates:

Order value	Charge
Below £25	£2.99
£25-£100	£3.99
Over £100	£4.99

Overseas Air & Road rates:

Order value	Charge
Below £25	£3.00
£25 - £100	£5.00
Over £100	£6.00

PRICE-CHECK

Garmin GPS 12	£145.00
Garmin GPS 12XL	£199.00
Garmin GPS 2 PLUS	£199.00
Garmin GPS 3 PLUS	£355.00
Garmin GPS92	£339.00
Garmin GPS 3 PILOT	£399.00
Garmin GPSMAP 196	£729.00
Icom A3-E	£299.00
Icom A22-E	£319.00

NEW

Filser ATR600 760 Channel Transceiver

The new ATR600 state of the art panel-mounted transceiver is built in the popular 57mm circular chassis for a neat fit into a standard panel cut-out. The ATR600 offers full 118.00-136.975 MHz in 25kHz steps, a full 100 channel memory with the ability to name frequencies, for example, LASHAM 131.025. The ATR600 displays both active and standby frequencies with one touch flip-flop active frequency selection.

The ATR600 fits a 57mm panel cut-out, weighs approximately 700g and is 180mm deep, plus connectors. It is designed to perform reliably from 10.5v DC to 18v DC.

ATR600 £875.00

AVAILABLE SOON- ATR600 two seat control unit

Contact **Michael** on 01865 841441

or michael@afeonline.com for further information

AUNTIE WAINWRIGHT IS BACK

RD Aviation will be attending the following competitions during the 2003 season.

14/6/2003 Booker Regionals

28/6/2003 Midland Regionals—Hus Bos

26/7/2003 Standard Class Nationals—Hus Bos



£13.99
postage £2.99

NEW Charts for 2003

1:500,000

South England & Wales

Ed 29 available now

North England & Ireland

Ed 26 available now

Scotland, Orkney & Shetland

Ed 22 available 12 June



1:250,000

England South

Ed 7 available now

Central England & Wales

Ed 5 available now

Northern Ireland

Ed 3 available 10 July

Southern Sailplanes

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