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Battery voltage indicator

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■ AN OUTBREAK of Avian Influenza in central England has been confirmed. Full details, including those relating to associated control zones, are at: www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/index.htm This is a worrying time for the farming industry so in the event of any field landing please remain sensitive to farmers' concerns and make sure you follow the BGA Code of Practice for field landings as published within BGA Laws and Rules.

■ RASP-UK (Regional Atmospheric Soaring Prediction for Great Britain) has moved to a new site, with an improved upload speed. The new URL is <http://rasp.inn.leedsmet.ac.uk> The site now features forecasts for a week ahead, coverage of the whole of the UK, 4km resolution for today, 5km resolution for tomorrow, 12km for the rest of the week and more than 40 parameters, including soundings.

■ THE Young Navigators Challenge is an annual competition for 11 to 18-year-olds. Enter an essay or project on why navigation is essential and how it is put to use and you could win prizes such as flights in general aviation and military aircraft and gliders, or cross-country expeditions. All entries for the Young Navigators' Challenge 2008 have to be received by 31 December 2008. For more information visit www.rin.org.uk/news-events/competitions/young-navigators-challenge

■ THIS year's Motor Glider Examiners' Seminars take place in two locations: Bicester on Saturday 15 November and Millfield on Sunday 16 November (a fast car will take the SRE(MG) from one to the other). Seminar content will be similar to previous years: an excellent opportunity to get up to date with current developments, reflect on the year's experiences and share knowledge. Contact Andy Miller on 01249 821 031 or andy@asmiller.freeserve.co.uk

■ The Hertfordshire Scouts have a Super Falke motor glider based at Gransden Lodge in Cambridgeshire. Learning to glide in this aircraft is proving so popular among young people that the club at Gransden Lodge would very much welcome visiting BGA MGIR or CAA SLMG flying instructors who could give up an occasional weekend half or full day to help with the flying. Please contact the club directly rather than the Scouts – office@glide.co.uk

■ New Class D Control Zones (CTRs) and Control Areas (CTAs) will be introduced around Robin Hood Airport (Finningley) on 28 August 2008. The 1:500000 Aeronautical Chart 'Northern England and Northern Ireland' (Sheet 2171AB) Edition 31, to be published on 28 August 2008, will incorporate the changes.

■ The UK Qualifying Grand Prix will be held at Lasham from 1-7 September. The winner and runner-up will qualify for the World Sailplane Grand Prix Final to be held in late 2009. More details are at <http://gp.lasham.org.uk> A public day on Saturday 6 September is expected to attract in excess of 5000 spectators to see the Grand Prix, a series of air displays, and ground-based activities and exhibits. During the week of competition, each competitor will be tracked in real time so that the races can be followed by a world audience live over the web. (See p42)

Stealing the show

GLIDING swept the boards at the Royal Aero Club Annual Awards Ceremony held at the RAF Club in London on 2 July.

BGA recipients picked up 10 of the awards presented by Air Chief Marshal Sir John Allison KCB CBE FRAeS, President of Europe Air Sports and a Vice-President of the RAeC.

THE BRITANNIA TROPHY

Awarded to John Williams, who has radically moved the goal-posts of British gliding with his studies of local weather patterns and wave formations around the coasts of Scotland. In 2007 he made the three longest glider flights ever in the UK, increasing the greatest distance flown in a day from 1020km to 1540km. He was top of the BGA 2007 National Ladder.

THE PRINCE OF WALES CUP

Awarded to the British Women's Gliding Team, which won a clutch of Gold medals and the overall Team Cup at the 2007 Women's World Gliding Championships in France.

GOLD MEDAL OF THE ROYAL AERO CLUB

Awarded to Derek Piggott for a long and outstanding career, including many gliding achievements and flying WW-1 replicas in nine major cinema films. Though now over 80 years old, he is still flying competitively, writing articles and giving lectures.

SILVER MEDAL OF THE ROYAL AERO CLUB

Awarded to Peter Harvey, winner of the British Standard Class, Open Class and UK Overseas Gliding Championships. Internationally he won Gold medals at the 2005 and 2007 Europeans and Bronze at the 2006 World Championships, and has been selected for the UK team for the 2008 Worlds. He is a coach for the BGA Junior International teams and young competitors.

BRONZE MEDAL OF THE ROYAL AERO CLUB

Awarded to John Glossop, who has held the UK Open Class 400km triangle record and holds all three Diamonds. His involvement in managing Cambridge University GC, included a major role in moving from Duxford to Gransden Lodge. He has been competition director at many national and regional gliding competitions there.

ROYAL AERO CLUB DIPLOMA

Awarded to Jack Harrison (Weatherjack). For seven years, he has provided tailored daily weather forecasts for glider and hang-glider pilots on his Weatherjack website, and also provided localised forecasts for competition organisers. As new technology is overtaking the need for such a service, he is now retiring.

CERTIFICATE OF MERIT OF THE ROYAL AERO CLUB

■ Awarded to John Blackmore, who has had a long involvement with gliding, gliding instructing, and light aircraft flying including as a tug pilot. He has flown 38 different types of glider, 8000 launches and over 3000 hours.

■ Awarded to Derek Platt, who has sustained enthusiasm for flying and commitment to the Midland Gliding Club over 24 years. As an Instructor he provided an introduction for hundreds of people on trial lessons. He acts as launch director and his practical skills are regularly called on at the clubhouse. He has around 900 hours gliding and 300 motor-gliding and, though he was 80 last December, he plans a lot more flying yet.

OLD & BOLD TROPHY

Awarded to Jim O'Donnell. He became involved with aircraft preservation at East Fortune Aircraft Museum in 1973, and since 1986 he has organised the Tuesday Group of

Nationals, regionals and other dates

Booker Regionals	Booker	19/7-27/7/08	2-Seater Comp (not rated) Pocklington	17/8-24/8/08
Northern Regionals	Sutton Bank	19/7-27/7/08	UKMSC (not rated) Aboyne	31/8-6/9/08
Bicester Regionals	Bicester	19/7-27/7/08	UK Sailplane Grand Prix Lasham	1-7/9/08
Standard Class Nationals	Lasham	2/8-10/8/08	Saltby Open (Aerobatics) Saltby	5/9-7/9/08
20-Metre 2-Seater Champ	Lasham	2/8-10/8/08	Gliders v PowerAerobatics Lasham	10-12/10/08
Junior Championships	Nympsfield	2/8-10/8/08		
Gransden Regionals	Gransden Lodge	2/8-10/8/08		
Inter-Services Regionals	Honington	2/8-10/8/08		
Worlds (flapped classes)	Lusse, Germany	3/8-15/8/08		
Club Class Nationals	Aston Down	16/8-24/8/08		
Midland Regionals	Hus Bos	16/8-24/8/08		
Dunstable Regionals	Dunstable	16/8-24/8/08		
Lasham Regionals	Lasham	16/8-24/8/08		
18-Metre Nationals	Bicester	17/8-25/8/08		

Congratulations to the following competition winners:

Bidford Regionals	Dave Findon
Eastern Regionals	Angus Watson

Please make a note that **Saturday 7 March 2009** is the date for the BGA AGM and Sporting Conference and BGA Governance and Chairman's Conference. Look forward to seeing you there.



Award-winners pictured left to right are: Derek Platt, Keith Nicolson, John Blackmore, Lucy Withall – British Women's Gliding Team, Michael Bird, Peter Harvey, Derek Piggott, John Williams, Jack Harrison – Weatherjack, Jim O'Donnell, Liz Sparrow – British Women's Gliding Team, John Glossop, Kay Draper – British Women's Gliding Team. Not present: Brian Spreckley and other members of the 2007 British Women's Gliding Team – Rose Johnson, Sarah Kelman and Gill Spreckley

elderly glider pilots who work there. Since its inception, he has supported the Walking On Air charity for disabled glider pilots, both as an instructor and tug pilot. Now 84, he continues to fly the tug and gliders at Portmoak and to tour the country in a motor glider.

THE NEXUS TROPHY

Awarded to Michael Bird, S&C's very own Platypus. This column emerged in 1969, eight years after Michael first began writing for the magazine and, nearly 40 years later, still appears in every issue. The column is both funny and insightful, ranging from witty one-liners about the baser aspects of gliding life to the complexities of the theory of flight. A

collection of his Platypus writings was published as a book in 2000.

FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE – UK AWARDS FOR 2006

These awards were presented to the UK delegation at the FAI General Conference in Autumn 2007, and are re-presented here.

FAI – PIRAT GEHRIGER DIPLOMA

Awarded to Brian Spreckley and Keith Nicolson who have contributed significantly to international gliding by their joint work to develop the IGC Ranking List. It has now been embodied in a new Annex in the FAI Sporting Code for Gliding.

Taking to the airwaves

TWO women glider pilots appeared on BBC4's *Woman's Hour* within a week in July.

First Moyra Johnson, 93, president of Yorkshire Gliding Club, told reporter Jill Hopkins how she got into gliding.

Her father was in the Royal Flying Corps and made her a model glider she could pull across her bedroom ceiling when she was ill during the First World War.

Her interest in aircraft was sparked and she became the only woman in the club in the Thirties but the men reacted well to her, she said "I was one of them". She described being bungeed and the feeling of being like a bird.

Five days later the programme visited women's world champion Sarah Kelman at

Cambridge and she did a running commentary on her flight on a "fantastic" day when she got to 5,000ft and a nine knot thermal.

Sarah said all kids dreamed of flying like birds but she was told she could not fly as she wore glasses.

Then during her studies for an aeronautical engineering degree she found out she could fly and took up gliding.

She now flies airliners for easyJet for a living "to pay for my gliding".

Presenter Jenni Murray went on to wish Sarah well competing with the men in the World Championships at Rieti.

Unfortunately Sarah had to withdraw and returned home after damaging her glider on day one.

■ IT'S OFFICIAL – gliding is a sexy sport! *The Daily Telegraph* recently published a top 10 of summer courses, advocating people try a new sport for the summer. Gliding came in at number four, beaten only by Junior Baywatch (life-saving for eight to 14-year-olds, Paddlesurfing (for those who can't surf standing up) and Frisbee frolics (seven-a-side game with no referee). The article said: "Summer gliding is an elevating joy that is comparable with sex or eating a really good cake. Whether rocketing from zero to 60mph in three seconds on a winch, or easing heavenwards behind a tow-plane, it's an absorbing pleasure for those aged 14 and upwards."

■ THE CAA has clarified its position regarding the registration of gliders (and other aircraft) owned by clubs which have Community Amateur Sports Club (CASC) status. Aircraft owned by a CASC are eligible for registration directly to the CASC, rather than having to be registered via trustees. However, the title to the aircraft must actually rest with the CASC and not with an associated entity, which is the case at some gliding clubs registered as a CASC but having their aircraft owned by a similarly named limited company.

■ CLUBS are invited to include their own logo on the cover of Pooleys' new range of Trial Flight Guides. Aimed at people who have bought, or been given, a trial lesson in a glider, aeroplane or helicopter, the guides cover basic theory, terminology and jargon. Written in easy to understand English, the books are aimed at the absolute beginner. The glider and helicopter versions retail at £6 with the aeroplane version at £4.99. A minimum order of 50 copies is required by clubs wishing to include a personalised guide in their trial flight package.

■ FAI President Pierre Portmann recently travelled to Chicago (USA) to represent the FAI community at a Memorial Service for Steve Fossett. Mr Fossett set over 80 FAI world records, including the shortest time around the world in a balloon (320 hrs 33 min), and the aeroplane world distance record (41,467.53 km).

■ FLARM is now approved as an IGC flight recorder – provided it is upgraded with IGC-approved firmware, some minor physical modifications are made and the unit is sealed with tamper proof holographic labels. An engine noise recorder (ENL) can be fitted at the same time.

■ AN additional seminar for BGA inspectors to introduce the new and revised procedures for the continuing airworthiness of gliders, motor gliders and tugs under the BGA umbrella has been arranged for Saturday 30 August 2008 at Husbands Bosworth. This will be the last such seminar to be held. Any BGA inspector who has not attended one of these seminars will not be able to renew their inspector authorisation in September 2008. Book using the form available at <http://www.gliding.co.uk/bgainfo/technical/documents/seminarbooking2008-3.doc>

■ The winner of the BGA 1000 Club Lottery for April was A E Mayhew (£31.50), with runners-up S Hill and D I Johnstone (£15.75). The winner for May was P Arthur (£31.50), with runners-up Mrs A Pentecost and R S Maxwell-Fendt (15.75).

Your letters

Not one of ours

AIRPROX, *Learning From Experience* (June-July *S&G*, p28), mentions a Tornado meeting gliders "near" Carlton Moor and has a map showing the location of the Airprox.

I would like to point out that the gliders concerned were most definitely NOT flying from Carlton Moor. Indeed, our glider (yes there is only one) at Carlton Moor never seems to get to venture that far from our airfield! Please publish this letter as I am concerned if Carlton Moor GC is criticised by implication.

Ged Terry, CFI, Carlton Moor GC
By email



The BGA hosted five Mode S public meetings, which were attended by around 1,000 people (Alto)

Regulation or hard work

I AM very grateful to the members of our executive committee for all the hard work they put in on our behalf in addressing the various regulatory issues that seem to hit us in a never-ending stream.

The nature, content and style of the regulation must make it even harder to carry out this work. Take the most recent and current issues as examples of what I mean. We have had the CAA registration and the EASA CofA. Now I don't know how the rest of my fellow glider pilots feel about this but I am feeling quite negative about both issues since they caused a lot of work and expense for what I think is no benefit whatsoever to us or anybody else.

The Mode S issue is even worse since the CAA put out proposals that were not supported by facts and were, from our point of view, quite unworkable not least because the technology is not yet available to install such devices in gliders.

To my mind the proposals as they stand are unprofessional and bureaucratic since they are not supported by facts and therefore it can be argued are unnecessary. It seems to me that in spite of all the hard work on our behalf and all the meetings and arguments that go on we usually get clobbered with regulations more or less as they are proposed.

I wonder if as a movement we should not be looking around the corner when we look into the future and find ways to regulate the regulators' behaviour so that they behave in a more reasonable, realistic and professional manner when proposing regulation.

After all we have recourse to two

parliaments, two sets of MPs, a House of Lords, and the law. We live under a more or less democratic political system so there must be ways to change the rules.

George Szabo-Toth, BGGC Nympsfield,
By email

Please refer to BGA Chairman Patrick Naegeli's column on page 12 – Editor

More burning issues

RE Mary Meagher's letter (*Burning issue* April-May 2008, p7) and Nick Gaunt's (*Still a burning issue* June-July 2008, p6), I seem to recall hearing/reading a similar tale when I 'did' US Soaring sites as a student (rather a long time ago).

I offer some further clues about how the sun's light/heat might conspire to assist your glider's endeavours to self-destruct.

The human eye is adapted to detect a small band of light wavelengths known as the visible spectrum. Not visible is a much wider band of infra-red (heat) rays of a similar nature but longer wavelengths: heat radiation is transmitted and reflected much like visible light.

The glider designer would not have sold many gliders using materials which melt or burn in (unconcentrated) direct sunlight, even in the world's hotspots. Some form of concentrator was most likely involved, either a concave mirror or a convergent lens (essentially a curved wedge) which brought the sunlight to a 'focus'. (In Greek I understand this means 'hearth' – seems singularly appropriate).

Even then, the mirror or lens would have to be at precisely its focal distance from readily burnable material. Closer or further away, and the light/heat would be spread over a larger area and therefore unlikely to achieve melting or burning temperatures.

We pay eye-watering prices for distortion-free perspex/plexiglass cockpit canopies. Any lens-like action (wedging) would be seen by the pilot as extreme distortion, which seems to rule out the closed canopy.

By contrast, the inner surface of an open canopy ticks the box as a curved mirror which might serve to focus the sun's rays (for the science pedants, paraboloidal form is ideal).

Jim Hammerton's response immediately following Mary's letter recommends the canopy cover (for when the canopy is closed). For our purposes, light (including infra-red rays) travels in straight lines. If the canopy needs to be open in strong sunny conditions, avoid having it and any part of the cockpit internals forming a line pointing to/from the sun. In that way your 'focus' will fall elsewhere; make sure your body is not there either!

Tony Gee, Marlow, Bucks.

Please send letters (marked "for publication") to the editor at editor@sailplaneandgliding.co.uk or the address on p3, including your full contact details. Deadline for the next issue is **6 August**



In the T-21 for my first winch launch (Kerry Mertz)



Getting ready for a flight in the 1961 K-7 with Steve Jarvis, who looks after the club's ground equipment (Kerry Mertz)



Above and below: moving on to the late 70s with Roger Emms in the club's K-13 (Kerry Mertz)



Gliding through the ages



A line-up of Nene Valley's fleet was an impressive sight when I visited during the club's spring task week in early June

(Kerry Mertz)

S&G Editor Susan Newby experiences a history lesson in gliders at Nene Valley, starting with a flight in the T-21, fondly known as the Barge

WHILE waiting to hear if my application for the position of S&G Editor had been successful, the Chief Sub of the newspaper group I was working for mentioned that his daughter-in-law, Kerry Mertz, flew gliders.

Kerry had said that if I got the job, Nene Valley would like to welcome me with an introduction to gliding.

I was delighted to be appointed as Editor and, just before officially taking up my new role, I popped down the road to the Gransden Lodge open day. The day dawned wet and blustery, but conditions improved and BGA Treasurer John Birch took me up in his Duo Discus for my first glider flight in more years than I care to remember (my last experience having been as a Venture Scout). Thanks John!

Helen Evans and I then spent several weeks working towards a smooth handover. I would like to thank Helen for all her hard work over the last eight-plus years in ensuring I had such a well-run magazine to pick up on. We saw the last issue off together at the printers and suddenly it was a case of "I have control".

Now it was time to take Kerry up on her offer and a date was soon fixed for my visit to Nene Valley.

On arrival, I was met with such an enthusiastic reception I could almost imagine the red carpet. After an initial chat with chairman Roger Emms (who has since stood down – hope it wasn't something I said!) and CFI Roger Morrisroe, it was off to the launchpoint.

Here I have to admit to feeling a degree of trepidation, thanks to a conversation I'd had with the BGA safety officer the previous day on the subject of accidents caused by winch launch failure.

Roger Emms soon put me at ease, explaining what I should expect from my first winch launch. I was to experience 'gliding



First flight of the day was in the T-21 with CFI Roger Morrisroe

(Dave Mansfield)

through the ages' and my first flight was in a T-21 (the Barge) dating from 1954. (The pilot, Roger Morrisroe, told me he was of a 1938 vintage!)

Any nerves were soon forgotten as the cable snaked away, tightened and then hurled us skywards. Half a minute later, with a clunk and a lurch as the cable released, the glider launched at 1,500ft.

A fantastic experience and no sooner had I picked the flies from my teeth, than I was ready for my second flight. This time it was with Steve Jarvis in a 1961 K-7.

Finally, Roger Emms took me up in the 1977 K-13 (or K-7 modified to be precise). Before long, Roger suggested that I take the controls. For the next few minutes, all I heard



Ready to join the DG-300 syndicate?

(Kerry Mertz)

from Roger was "keep those shoulders down" and he was right – it is much easier when you are not tensed-up.

Shoulders down and more relaxed, the next sound to come from behind me was Roger clapping.

"Do you want to know why I am clapping?" he asked. "Two reasons – firstly because you are doing well and secondly to prove that it is you doing the flying."

I made a concerted effort to keep my shoulders down.

After turning in to the final approach, Roger took the controls back for the landing.

Three different flights, all enjoyable. My favourite glider? I think it would have to be the T-21.

Thanks to everyone at Nene Valley for a memorable day, especially my pilots, and to Kerry for setting it all up and for grabbing my camera to take pictures.

I would also like to thank everyone at Gransden Lodge for making me so welcome on my last visit.

I hope you enjoy this, my first issue, and I look forward to visiting as many clubs as I can in the future.

Happy flying!

Help make a difference

BGA Development Officer Alison Randle tells how survey response is shaping Sport England strategy

YOU may recall that last autumn, we told you about the Sport England rolling survey programme that randomly selects citizens (by phone) and asks them about the sports and recreational activities they take part in.

As predicted, the results of this survey have been, and will be, used to inform the Sport England strategy. The results for the first quarter to the end of December 2007 have now been published and show that, in comparison to the same quarter in 2005, the fastest growing group of adult (over 16) participants in sport and active recreation is the over-55s; a sector of the population that gliding is well placed to support.

More importantly, glider pilots have been responding in sufficient numbers for the statistics to be regarded as significant; not all sports are in this position. If you responded, thank you. If you get the chance to, you can make a difference so go for it!

Sport England's new strategy

I described the importance of networking for clubs in the last issue of S&G and those principles apply equally well to the BGA – even if it does make for rather turgid work! One area of this work has been in relation to Sport England's latest strategy. Much of it is heartening. There are areas where gliding is already doing much of what Sport England will strive to achieve over the next few years; such as providing quality, well-run clubs with facilities enjoyed by an increasing number of people of all backgrounds and abilities.

In some areas, such as identifying and developing talented individuals, we have plenty of best practice to share with other sports. It is frustrating to discover that, despite gliding's continued achievements and overall development, we aren't on Sport England's list of the chosen sports to fund.

Occasionally, Sport England develops a project that is relevant to the BGA's Development Plan and we have managed to secure funding for two of our projects in the past 18 months. At present it is unclear whether such project funding opportunities will be available to us under this new strategy. On a positive note, the strategy does identify a number of organisations that could support your club in its work with the local community.

The BGA will be looking at this in more detail and looking to develop working relationships with relevant organisations that can give you support locally. For those of you not in England, these organisations (or their equivalent) operate across the UK so this work



Wave over visiting gliders at May Feshie Fest 2008

(Alison Randle)

will be of benefit to you too.

My work hasn't just been about the strategic stuff; there's been club support work too. I have also managed to get out and about a bit – even getting up to the Cairngorms for Feshie Fest where it was great to see visitors from several clubs enjoying the flying (wave and thermal) and the company. At my home club, we have had visiting clubs too. Quite apart from the fun you can have, visiting other clubs supports British gliding. By the way, if you happen to see me at a gliding club, I'm probably not working but it often makes sense for me to use the opportunity to find out what is happening around the country, so come and talk to me. If it isn't convenient or it becomes clear more detailed discussions are required, we can arrange to talk or meet another time.

Slow start for 2008

The first half of 2008 has been challenging for many clubs. The rise in fuel costs together with poor weather is putting our sport under strain. Some clubs have already increased launch fees to reflect the rise in costs, others are absorbing the costs elsewhere. Rises in other living costs seems to be hitting trial lesson business too.

As ever, the BGA Development Team is working to support clubs in general and specific clubs when invited to do so. We wait to be invited for a number of reasons, but primarily because it is your club not ours.

If you think your club needs assistance, please ask. It goes without saying that maintaining confidentiality is important to the way we work.

Are you flying your own gliders enough?

How do you view the club equipment? Who uses it? Who paid for it? Who owns it?

Each year you pay fees of various sorts and contribute to the club by volunteering. From small deeds like keeping the log to being on the committee, all voluntary efforts help to

keep the club running. Your contributions help to purchase and maintain club equipment, so how do you view it? As the fruits of your investment? Should you? Yes! Whatever glider you think you own, you also have shares in the club fleet. Do you ever take time to make the most of them?

Make the most of your assets

In a variation of the old saying 'The superior pilot uses his superior judgement to keep himself out of situations that may require the use of his superior skills' this opens a splendid opportunity for you to help your club to continue to thrive. Listening to the news, it would appear that there could be challenging times ahead, but you can help your club to stay out of truly challenging financial situations by making the most of your assets. You can also help to keep costs down by looking after club kit as if it is your own (it is) and helping to maximise the launch rate.

Club gliders on the ground cost the club money. Or rather because it is your club, any maintained and insured club glider not flying is costing you money because you have paid for the insurance, CoFA and so on. You may even get to pay for it twice if at AGM time the treasurer reports lower than forecast income and has primed the committee to put forward proposals to increase fees. Essentially, you will be paying to watch a club glider sulk in a dark corner of the hangar.

You do have a choice. Instead of paying not to fly (downright daft), you can pay to fly! You may have a lovely shiny sailplane, but are there are days when you are up at the club and not flying because either you haven't rigged or your syndicate partner beat you to it? So why not fly anyway? Preferably go soaring to mitigate those increased fuel costs, but whether it is a lark about and local sightseeing in the club K-8, junior or K-23, or a bit of sociable mutual flying with a mate, it's yours, so go and have some fun!



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The Editor's word is final

BGA Chairman Patrick Naegeli talks deadlines and thanks those that have taken the time to submit their thoughts on Mode S to the CAA

IT WAS Benjamin Franklin that said "Certainty? In this world nothing is certain but death and taxes."

Had he lived contemporaneously with gliding I am sure that he would not have overlooked two additional fundamental facts – that a deadline for S&G is a DEADLINE, and that there is no higher authority, BGA or otherwise, than the S&G Editor.

Helen Evans reminded me – as she frequently had reason to – of both as the due date for my article loomed. Her successor, Susan Newby, has clearly taken to her new role like a duck to water by continuing, very subtly for the moment at least, with Helen's tradition. And so I would like to congratulate Susan on both taking the post and for her fine work in bringing her first edition of S&G together despite my best efforts to keep her guessing as to my piece.

One other person I would also like to congratulate is Chris Heames. Many of you will know Chris and have come across him in one of his many gliding capacities. Aside from being the BGA Senior Regional Examiner for the Services, he is also our Senior Air Accident Investigator; his day job is as the Chief Instructor at the Air Cadet Central Flying School and, in his spare time (!) he is a display pilot flying Hunters. Chris's tremendous contribution to aviation was honoured by the Air League at its recent annual reception at St James's Palace. Chris received his commendation from The Duke of Edinburgh. Richly deserved, Chris, well done.

Regulatory changes

BGA life is not, unfortunately, all about receptions at St James's Palace and S&G deadlines. Our own "day job" comprises a range of important and involving tasks associated with the support of clubs and individual glider pilots. It also involves a lot of staff and volunteer time being focused on dealing with regulatory changes.

By 31 May, approximately 1,500 glider pilots had submitted responses to the CAA's consultation process on the introduction of Mode S. As was the case when the CAA undertook its initial consultation exercise in 2006, we accounted for a large majority of all the responses received by the CAA.

A good many individuals, either through their own initiative or in response to a request by the BGA, copied their local MPs in on their consultation responses. These contacts have helped raise levels of awareness as to our concerns with the current proposals. We



Chris Heames (left) is pictured receiving a commendation for his tremendous contribution to aviation from The Duke of Edinburgh at the Air League annual reception held in June at St James's Palace

have already received a number of requests from MPs for more detailed information and have been happy to oblige.

The BGA is not looking to go "political" on the Mode S matter – in any event the consultation process has not yet concluded – but we do recognise the helpful counsel, and possibly future support, that can come from appropriately informed Members of Parliament.

We cannot be sure as to what form of final recommendations the CAA will submit to Ministers; we can't even be absolutely sure about when, as it looks as if it will take a few months for all the responses to be processed and the further, final analyses completed. In the meantime, we will be keeping a careful track on this particular critical phase of the consultation process. I would like to personally thank all the clubs and individuals that have taken the time to bring themselves up to speed on the Mode S subject and submit their thoughts and input to the CAA.

It would have been nice to think that regulatory matters would have taken the summer off and allowed the myriad of BGA staff and volunteers concerned with such things to do some flying.

Fat chance.

EASA are on a "roll" and issuing thoughts, seeking input, and circulating NPAs (Notices of Proposed Amendment) thick and fast.

The latest tome to hit our in-tray is the NPA

on licensing, all 800-odd pages of it. A BGA Working Group – comprising Chris Gibson, Dick Dixon, Chris Curtis, Don Irving and Andy Miller – is working its way through the material and will be co-ordinating the development of the BGA's response. I fully expect this NPA to give rise to a considerable amount of work – both as it progresses through the consultation process and then in whatever form it makes its way through to implementation in. I am sure that future issues of S&G will be devoting considerable column inches (or should that be Euro-centimetres) to the subject.

During the (odd) quiet moment I sometimes reflect on how all this new regulation is going to make life safer and better.

Then I put things into perspective and remember that Benjamin Franklin was never more correct than when he said that "Beer is living proof that God loves us and wants us to be happy". Though he would probably have substituted (added) the word gliding for (with) beer had he known better.

Have fun, stay safe.

Patrick Naegeli
Chairman, British Gliding Association
June 2008

Airworthiness transition update

The BGA process for transition of EASA gliders to EASA Certificate of Airworthiness (CofA) in time for the 28 September 2008 deadline is working well, **writes BGA Chief Executive Pete Stratten**. Many thanks to the inspectors and owners involved.

The CAA part of the process has been stalled pending receipt of the expected written formal approval from the European Commission. To ensure that owners would be unaffected by the CAA delay, the BGA negotiated a contingency plan with the DfT and the CAA. That contingency plan was set under way during June and, shortly afterwards, all owners who had applied to the BGA for a transition will have received a replacement BGA CofA extended to full validity, ie for a 12-month period. As usual, the BGA was taking a proactive approach on behalf of pilots and owners.

During early July, the BGA received notification that the European Commission had finally published the required document which allows the CAA to begin to process the issue of EASA CofA and the first year Airworthiness Review Certificate (ARC) to transitioned BGA gliders. At the time of writing, the BGA Chief Technical Officer was liaising with CAA airworthiness managers to provide them with whatever support we can. With the vast majority of transition applications having already passed through the key BGA area of responsibility, the CAA has a big administrative task on its hands over the next few months.

Application deadline

It is likely that the CAA will wisely seek an exemption that will allow an overrun of the 28 September 2008 deadline for processing EASA CofAs for gliders. However, if you have yet to complete your transition application, please don't leave your transition to the last moment as the deadline of 28 September 2008 still applies for transition applications.

It is worth noting that some owners have included unnecessary supplementary information with their transition packs. Photos of the glider or instrument panels, copies of registration documents, work sheets, etc, are not required as part of the transition application paperwork so please do not include them. The ideal place for these is in the owner's aircraft maintenance file or documents folder. The BGA and its airworthiness team would be grateful if owners and inspectors would continue to ensure all relevant pages of a transition pack – preferably single-sided to aid scanning – have been fully completed and are included.

Once again, the BGA would like to thank owners and inspectors for their ongoing cooperation during this unavoidable transition to EASA-regulated airworthiness requirements.

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REGIONAL SAFETY OFFICERS



The BGA is seeking an additional 5 volunteer Regional Safety Officers (RSO) to provide enhanced safety management support to clubs. The RSO role is key to ongoing BGA and individual member club safety management and also provides a safety assurance function for the BGA as a whole.

Prospective RSO should ideally have the capability and capacity to visit an allocation of between 5 and 6 clubs on a rotational basis. They will also be invited to sit on the BGA Safety Committee, and help to establish BGA Safety Management System policy and direction

Applicants for this voluntary role should apply in the first instance to the Chairman BGA Safety Committee via the BGA Office. A short gliding CV outlining relevant experience should accompany the application, along with a suitable endorsement from either the applications club CFI or current RSO.

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Battling regulation fatigue

BGA Executive Committee member Chris Gibson discusses the issues and implications of the latest EASA consultation, which covers flight crew licensing and medicals

FOLLOWING the EASA Airworthiness and CAA Transponder episodes you might be forgiven for feeling a little 'regulation-fatigued'. However, the latest EASA Notice of Proposed Amendments (NPA) – dealing with flight crew licensing and medicals – has now been published and we would ask for your support again in responding and securing the most favourable outcome for British glider pilots.

This NPA deals with the licensing and training requirements for all flight crew – including gliding. As expected there are two licences available (which differ primarily in medical requirements and 'commercial' privileges):

- The EASA Leisure Pilot's Licence (Sailplanes) – LPL(S), often referred to as 'recreational licence'
- The ICAO compliant Sailplane Pilot's Licence – SPL

Since last summer the BGA has been working closely with a wide range of European airport bodies with similar interests to secure the best outcome for British gliding. We have reviewed reams of draft documentation which has clearly been derived – in content and format – from other GA documentation (eg JAR FCL).

The BGA has had a significant impact on

the content of both the NPA licensing requirements and the implementing rules. Many of our suggestions have been accepted but there are still a good number of significant issues to which we will need to respond robustly. It is not possible to summarise all these here but significant issues remaining include:

- VFR flight – the documentation makes no provision for anything other than VFR flight for glider pilots. The availability of a cloud flying endorsement has been removed (with no reason provided) and gliding would therefore be restricted to VFR flight. This is inappropriate and clearly has a huge impact for UK gliding. We have already made representations in this respect and this is, at present, our major concern.
- Medical requirements – the current proposals for the LPL(S) will require a GP (or other medical practitioner) to respond personally to a significant checklist during the medical. This is significantly different from the current self-declaration which most glider pilots use as the basis of a medical. It has the potential to increase the cost of the medical and, indeed, to deter many GPs from providing them at all.
- Instructing – the proposal is for a hierarchy of instructing which provides for: FI (restricted), FI, FI (Examiner) where recommendations (to the NAA, ie the CAA – or possibly the BGA on behalf of the CAA) are made by an FIE for the issue of licences and ratings. There is currently no provision for BI instructing – clearly a huge issue for us in providing early training and in the effective provision of trial

flights on which many clubs depend as a source of income and future members.

And there are others...

The NPA consists of three documents, which are available on the EASA website, and which deal with:

- NPA 2008-17a explanatory notes and appendices
- NPA 2008-17b part FCL (implementing rules and AMC)
- NPA 2008-17c part medical

I would recommend that you register on the website (at http://www.easa.eu.int/ws_prod/r/r_npa.php) and view the documents. EASA has also made available a comment and response tool (CRT) (at <http://hub.easa.europa.eu/crt/>) which, once you have familiarised yourself, can be used to register your views and comments on the proposed NPA.

As the BGA develops its response over the coming weeks, information will be provided on the BGA website Pilot Licensing page for your information and to help you formulate your own response to the NPA. There is every chance that a significant volume of independent responses to the obvious issues will have a significant mitigating effect and we encourage all glider pilots to respond in an appropriate fashion.

The date for final submissions is currently 1 September but EASA has received a number of submissions for extension and we are hopeful that the response date will be extended to, at least, 1 October.

This NPA will affect both the structure of glider pilot licensing and the way in which we prepare our pilots for the various qualifications within that structure.

All UK glider pilots will need to transition from their current certifications to an EASA licence (either a LPL(S) or an SPL. The latest date for this is 8 April 2012. We are unusual in the UK in that we have no formally recognised licence – and therefore need to transition from a position of no legally recognised qualifications to an EASA licence. While this is not strictly part of the NPA response, it is an issue we need to address and we are currently evaluating a number of transition options with the CAA (EASA's UK representative).

We believe the standard of UK glider pilots to already be beyond the equivalent EASA requirements and our position is that, in transitioning, our pilots should retain their current privileges, ie equivalent 'grandfather rights'.

Stay in touch with these licensing developments over the coming weeks through the BGA website.

Your continued support is important to help us ensure we secure the best possible outcome for British gliding. Thank you.



EASA proposals could have an impact on the provision of trial flights – essential for many clubs as a source of income and future members. Our picture shows David Chapman, head of the Flight Operations Division of CAA, about to take a trial flight at Aston Down (Alison Randle)

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Silence is golden (1)

MANY years ago I conceived the idea of a cartoon featuring two characters in woolly bobble-hats and shapeless overalls, namely glider pilots, conversing – or trying to converse – at the launch point. The shapelessness of their outfits makes it impossible to tell which of the sexes they belong to; it also makes it easier for me to depict, never in my youth having been to life-classes to draw the female form.

On the left of our two pilots is a winch; its engine is going flat out, which you can tell from both the shallow angle of the wire and the near-vertical attitude of the tiny cross in the far distance – perspective being something I can draw with more skill than female flesh, having seen rather more of it.

A site for sore ears

The winch vibrates like a kettle-drum, puffs of vapour issuing from its vertical exhaust pipe; nearby throbs a Soviet-collective-farm-style tractor, like the monster we had at Dunstable in the 1980s for collecting multiple cables, fondly known as Chernobyl.

Further away a tug with a glider on tow passes over a row of houses, while two more Cubs are taxi-ing up to the aerotow point. On the right a line of big cars and trailers rumble down the perimeter track towards the exit. (A trailer behind a Land Rover bowling down the road can be heard a good quarter-mile away, as I know from sitting in a field for hours – without any mobile phone, of course – desperate to hear the sound that meant crew and pilot were soon to be reunited.)

Over this din, one of the pilots is yelling, “What I said was, isn’t silent flight *wonderful?*” A picture is indeed worth a thousand words. I should have just drawn the cartoon and saved you a heck of a lot of reading.

A 2008 version of the cartoon would fall quite flat: gliding is already a lot quieter overall than it was. The old tractors, which were no fun to start by hand so were left throbbing away all day and also churned up the grass, have been replaced by smaller, quieter vehicles or by golf-carts, some of which use tiny petrol engines and others have batteries. And these days road retrieves, like hurricanes in Hertfordshire and

Herefordshire, hardly ever happen. So that queue of chunky cars and trailers, proudly rumbling towards Cornwall, would today be reduced to one vehicle shame-facedly sneaking out of the gates, drawing as little attention to itself as possible, and attracting minimum shame to the outlanded pilot. To be even more up to date I should have to include a self-launching electric glider whirring heavenwards like a great big model aeroplane, with what little noise it makes coming only from the propellor.

At that time of my imagining that first cartoon and its ironic caption a generation ago, my concern was entirely about noise; what we called Silent Flight made lots of noise, as angry phone-calls from householders upwind of some gliding sites used to remind us.

‘Today’s younger, environmentally-aware pilots would be stunned to hear that in the 1950s and 1960s we actually got a government rebate on every gallon of fuel spent in retrieves’

To a much lesser extent were we then concerned about the cost of fuel – and to no extent at all did we worry about poisoning the environment. If carbon-pricing had been mentioned to a 1960s glider pilot it would have been assumed that one was talking about the cost of a new material that might some time transform sailplane performance.

In fact today’s younger, environmentally-aware pilots would be stunned to hear that in the 1950’s and 1960s we actually got a government rebate on every gallon of fuel spent in retrieves. The reasoning had been that power-pilots got a government subsidy for the fuel their engines consumed, and some persuasive person in the BGA (Philip Wills?) got the UK Treasury to agree to do the equivalent for gliding. That’s right, kids, you won’t believe it but Her Majesty The Queen (or at least the ministry acting in her name) paid us to make our road-retrieves as long as possible. When that particular gravy-train hit the buffers I cannot remember – one of Britain’s periodic financial crises no doubt put an end to the subsidy for good.

Silence is golden (2)

Outside the glider cockpit it has therefore become a lot quieter. What’s happened inside the cockpit is another matter altogether. As usual, what Progress gives with one hand she takes away with the other.

A few gliding pundits of the 1950s had radio – and how the rest of us admired and envied them! They were like the early owners of automobiles, having the place all to themselves and hardly any traffic getting under their feet. It was Toad-of-Toad-Hall time for upper-class accents on the airwaves.

Cacophony in the cockpit

In the next decade every peasant installed a radio, and the ether became clogged with messages. The length of these transmissions was usually in inverse proportion to their urgency, having to do with whether Nigel and Samantha were free to dine tomorrow, or where the pilot had put the baby’s rattle. But at least you did not have to use radio, even to fly in Nationals, so you could if you wished get some peace and quiet.

Later radio became mandatory in competitions – how else could start lines be held or, in the USA, how could tasks be changed in mid-air after everybody has departed on course?

By the 1990s you were obliged by the rules to listen in at all times – but even if it had not become mandatory we would not have dared to switch off: there might be some vital competitive information you would otherwise miss.

Team flying especially meant continuous use of radio. We are also frequently having to talk to the guardians of restricted airspace to get permission to cross. Radio chatter is as inescapable a part of the background as music in restaurants.

Meanwhile audio-varios had come in during the 1970s. What a blessing in crowded thermals, we thought! But it meant even more noise.

At first they only chirped when climbing. However modern computers also beep at you when you start or go round turn-points, as well as telling you that you are five knots too slow or too fast in the cruise. The noise is

therefore more or less uninterrupted.

In spring this year I flew for the first time with Flarm, which tells me with beeps and lights that there is another glider nearby – assuming it also has Flarm.

Unfortunately there seems no way of telling it, “Yes, Flarm, I have seen that glider and know where it is – now please just tell me about other nearby gliders that I have not spotted.”

I await my first competition using Flarm, with dozens of other Flarm-users in the same small thermal, with some dread.

I also now get the GPS’s female voice warning me that I am getting near airspace of one kind or another. Since in Southern England one is always near somebody’s airspace this nagging is never-ending. (I am not talking about intruding on to the main approach to Heathrow: being in the vicinity of small airfields where nothing happens all day counts for the purposes of this busy device.) If you are circling, and therefore popping in and out of the proximity-zone which triggers the gadget, you will get a warning every 30 seconds.

In a word: Aaaargghhhh!

I notice you said, “Aaaargghhhh!” in the last issue. Is this going to become a habit? (New Ed.)

Probably, but only when I am banging on about my pet hate, instruments (Plat.)

The Golden Age of Gliding may be right now or, as our youngest stars insist, may still be to come.

But if silence in the cockpit is golden, the Golden Age is way back in the past.

PS: I have just had a whizz idea: in two-seaters all this noise could be piped to the navigator/bomb-aimer through headphones. The helmsperson could then choose to waft along in tranquillity, interrupted only by rare, life-critical communications from the guy in the headphones.

‘They were real men in them days...’

I HAVE here the August 1959 edition of *Sailplane & Gliding*; records were topping everywhere. At the nationals, Nick Goodhart made his prodigious 360-mile (580km) goal flight to Portmoak on 10 May.

I was there as a spectator from Dunstable (whose star pilot Geoffrey Stephenson won the contest) watching the cream of Britain’s glider pilots failing to stay up not once but twice, finally creeping away on their last launch.

Nick’s third launch was at 13.03 – by no means a promising day. This goal flight, not beaten till this century, resulted in a 36-hour retrieve covering 960 road-miles (a normal ratio of eight road-miles to every three miles flown) using 69 UK gallons of petrol, or 316 litres, which would cost today £376. American readers note that this is 84 US gallons, which would cost \$344 today. Note the UK/US cost discrepancy at today’s exchange rate of around \$2 per £1 sterling.

I do wonder, by the way, how many gallons were consumed by the vast American cars of the 1950s when Dick Johnson set his record of over 500 miles and others rushed to surpass it!

I am proud to say I myself did a retrieve that famous day, but it was all of one mile – rescuing Dan Smith’s Skylark 3 from a dense wood close to Lasham, where he had piled into the trees following aileron-disconnection on tow. I think I have told this story before but never mind: Fred Slingsby’s team got Dan into the air the next morning.

They were real men in them days...

By the way, in the same August 1959 edition of *S&G* Derek Piggott tells readers of his “Cheap Diamond” a 300 km triangle in an Olympia 419 from a winch-launch at Lasham three weeks later.

The carbon-footprint of that flight was probably one-hundredth of that of Nick’s flight, and so would earn high praise from today’s environmentalists – but it is Nick’s Portmoak flight – with its thermals weak and strong, the streeeting and 18,000ft cloud-climbs, and finally the ridge-soaring and the 10,000ft wave which delivered him to his

goal – that is remembered to this day.

It wasn’t fuel costs that made contest-directors in all countries switch increasingly to closed-circuit tasks in the 1960s, but the combined pilot-and-crew fatigue of long retrieves and, even worse, the loss of entire contest days

following a big free-distance task, as happened after the Portmoak triumph.

In Britain the change was also spurred by our running out of country; clearing sand out of the wheel-box sounds like fun but not when 20 other guys have landed with you on the same beach and, worse still, everyone has earned the same points for all that effort...

platsandg@blueyonder.co.uk

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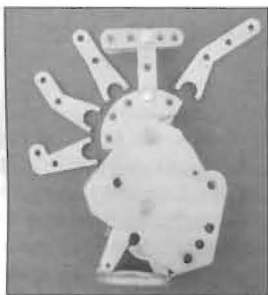
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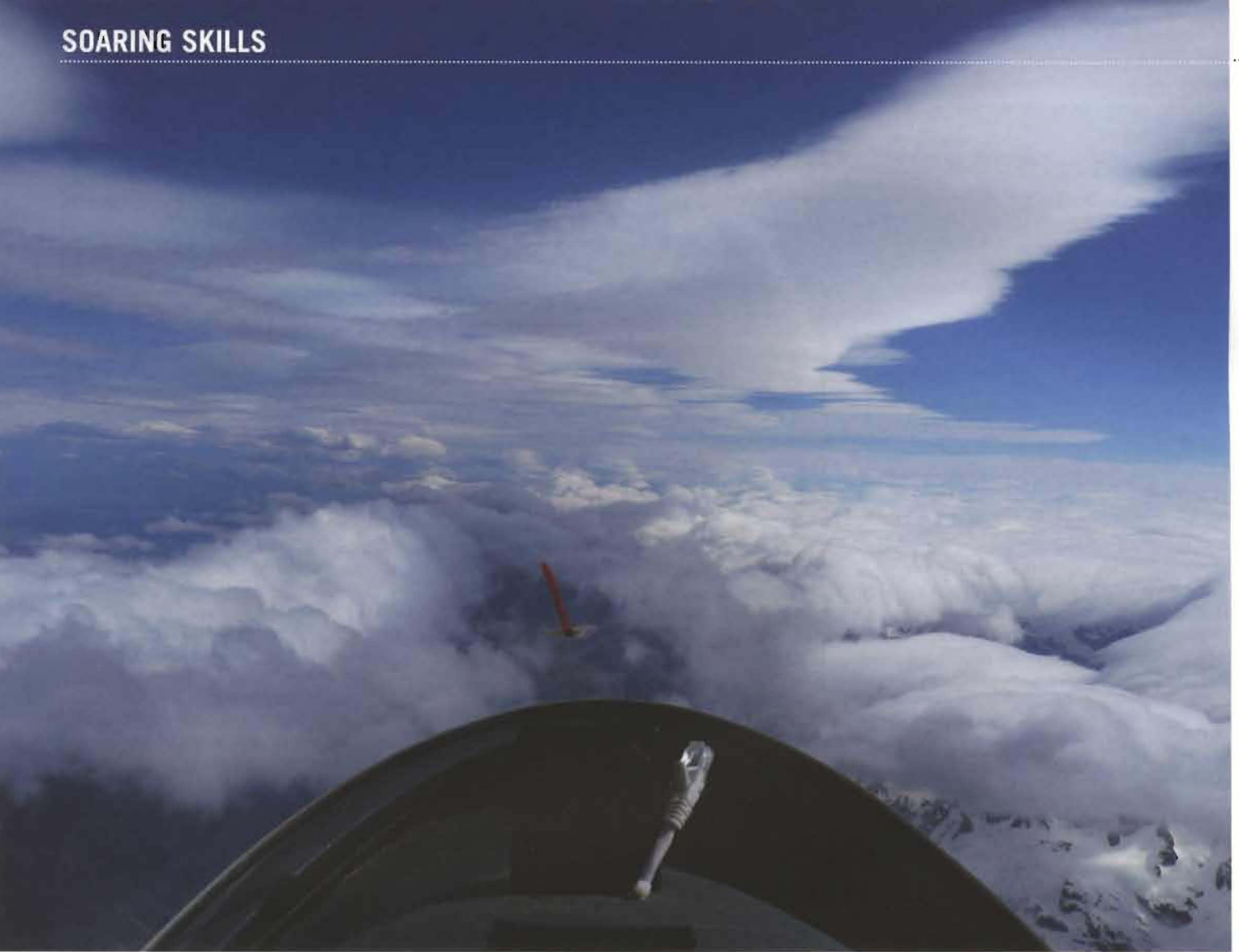
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Looking south near Mount Cook in New Zealand's south island with an upper and lower wave system. The glider is heading for a line of lift marked by cloud to the left of the nose

(Catherine Johnson)

On the crest of a wave

WAVE sets roll in. Distant surfers paddle hard to catch the point break off the rocky headland. Surfers are good at predicting their wave conditions. Oceanic waves are a fairly simple function of weather and the shape of the inshore shallows. Atmospheric waves are much more complex. They vary with wind speed and direction, temperature and dew point profiles and the shape of the terrain itself; all of course, in three dimensions.

The surfer is addicted to the exhilaration of standing on the ocean propelled by its power. He sees his wave stretching away before him and, assessing its size and shape, plans his run in. The glider pilot too is excited by breaking into his own atmospheric wave; the air becomes silky smooth, the variometers beep wildly and the altimeter winds up. But he cannot see his wave, it's invisible.

The pilot's wave is embedded in the air and he rides in it, not on it like the surfers. It can only be felt, recorded by the glider's



Gavin Wills offers advice on how to remain established in wave and how to harness its power to run distance or climb to altitude

instruments or inferred from the interpretation of clouds (which may or may not be present). So the atmospheric wave rider not only needs good flying skills, but also a much greater understanding of the formation and dynamics of his waves than does his surfing buddy. Surfing atmospheric waves is not always easy but it is one of the most extraordinary things that humans do and somehow it has that special taste of forbidden fruits!

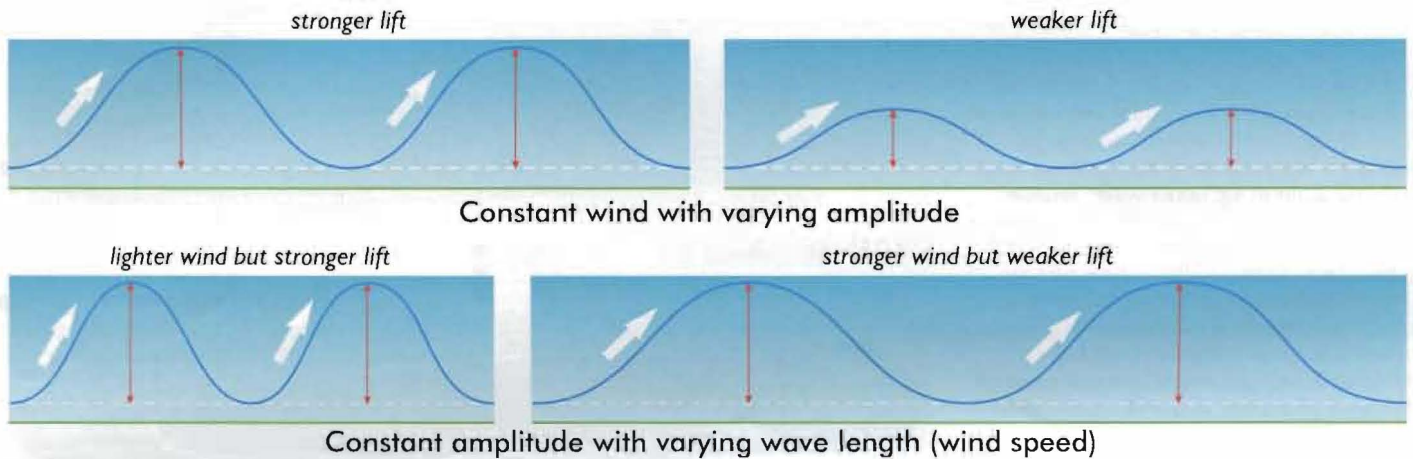
In previous articles we discussed conditions that enhance the formation of atmospheric waves and how to catch them.

Here we offer advice on how to remain established in wave and use its power to run distance or climb to altitude. In a future article we will discuss a multitude of interesting wave shapes, showing how to recognise and utilise them.

The rush experienced by the glider pilot as he breaks out of the turbulent air below and transitions into the smooth laminar flow of the wave keeps us coming back time and time again. The realisation that this atmospheric wave may be 30km wide, over 50,000ft high with 100 knot winds and 3,000 fpm climb rates is tremendous. On the other hand the wave may be small and delicate, simply offering welcome energy to enable an unexpected cross-country flight.

The power of the system largely relates to the wind strength and its direction relative to the trigger. But climb rate is controlled by the strength and angle of the wind's stream lines lifting the glider. The angle of the stream lines is controlled by the wave's amplitude and its

Figure 1: The effect of amplitude and wave length on wind stream line angles and climb rate (lift)



wave length. Wave length, of course, increases with wind speed. Therefore climb rate in wave is related to both amplitude and wave length and not directly to the speed of the wind.

A tall short wave, for example, may often produce better climb rates than a shallow long one. Sometimes waves in very strong winds with long wave lengths produce surprisingly poor climb rates. In general the best and most manageable waves for gliders are generated in winds between about 20 and 60 knots.

Atmospheric wave amplitude, which has such an important effect on climb rate, is complex to predict (see figure 1). It relates to the strength of the inversion in the wave transition zone, the instability of the air below, the inversion compared with the stable laminar air above, the altitude above ground of the transition zone and the wind structure aloft. In general, the greater the instability of the airmass underlying the stable laminar flow, the greater the amplitude. Also increasing winds aloft seem to produce bigger amplitude.

On first entering wave, it's important that the glider pilot determines the nature of the tiger whose tail he rides. To help with this he needs know the accurate wind speed and direction, the position over the ground of the strongest lift and the location of the wave's trigger.

During the transition into wave there will often be a dramatic change in wind velocity. (the point X in figure 2). The new wind strength and direction should be carefully determined and your wind computer's data verified. First note your position over the ground and your climb rate, then slow the glider to a little above stall and ascertain the drift by carefully watching the ground move relative to the canopy side rail.

Manoeuvre the glider into wind until the drift ceases and the headwind-tailwind reading on the computer peaks. Note the wind direction by reading the compass and get a rough idea of wind speed from the glider's movement forward or backwards over the ground.

Look upwind over the nose of the glider to find the trigger for the wave system. This

should be visible from the primary or secondary bounce provided the trigger is not under cloud. Estimate three things about the trigger; your distance from it, its effective length and the wind direction relative to the trigger. Also note its shape.

(See figure 2) Now push upwind until the climb rate begins to drop off then, providing the wind is not too strong, make about three circles taking care not to get blown back into any cloud. If the wind is strong (over about 40 knots) turn crosswind and drift rather than circle.

**'On first entering wave,
it's important that the
glider pilot determines
the nature of the tiger whose
tail he rides'**

Note the drift over the ground to get a sense of wind speed and its direction, and then as the climb rate peaks straighten up. The computer should now have figured out an accurate true wind velocity and you will know where the best lift is relative to the ground and to any lenticular or rotor cumulus cloud that may be present.

To stay in the best lift, point into wind and fly at the true wind speed. (Remember that your ASI records indicated air speed which

will be a lower number depending on your altitude). Note again position over the ground and position back from the trigger.

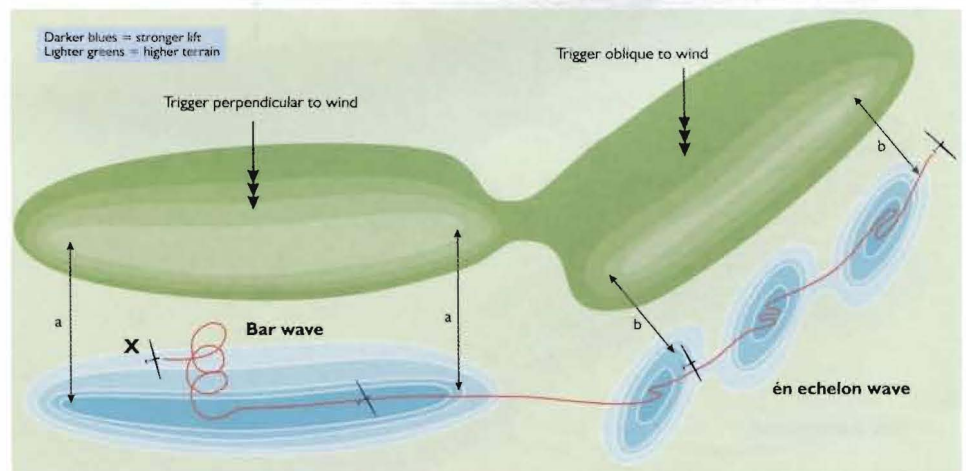
To maximise altitude, get established behind the trigger where it's nearest to being perpendicular to the wind and where the trigger is high with a clean downwind slope to a flat plain with no other interfering ridges. If the wave is marked by cloud, the lenticular or rotor cumuli will be steepest and highest at this point. Fly slowly and pointed into wind. If the winds are below about 30 knots gentle figure of eights may be necessary to remain in the strongest lift and in one place over the ground.

In stronger winds match the wind's true air speed but take care not to track backwards. Always relate your position to a fixed point over the ground.

Keep climbing until the lift runs out, or you are as high as necessary, or running low on oxygen. If the lift stops and you have not drifted down wind into the sink, then you have reached the top of that wave. The wave may have topped out because the winds were light, decreasing or changed direction with altitude.

If you need to climb further you will have to find another more obliging wave. This can be done by moving upwind to the primary, which is usually the strongest wave or by

Figure 2: Becoming established in wave and tracking en echelon wave



➤ finding a way into possible upper wave systems. In the latter case find a climb in the lower wave system that is below a lenticular cloud in the upper system and patiently try to climb higher.

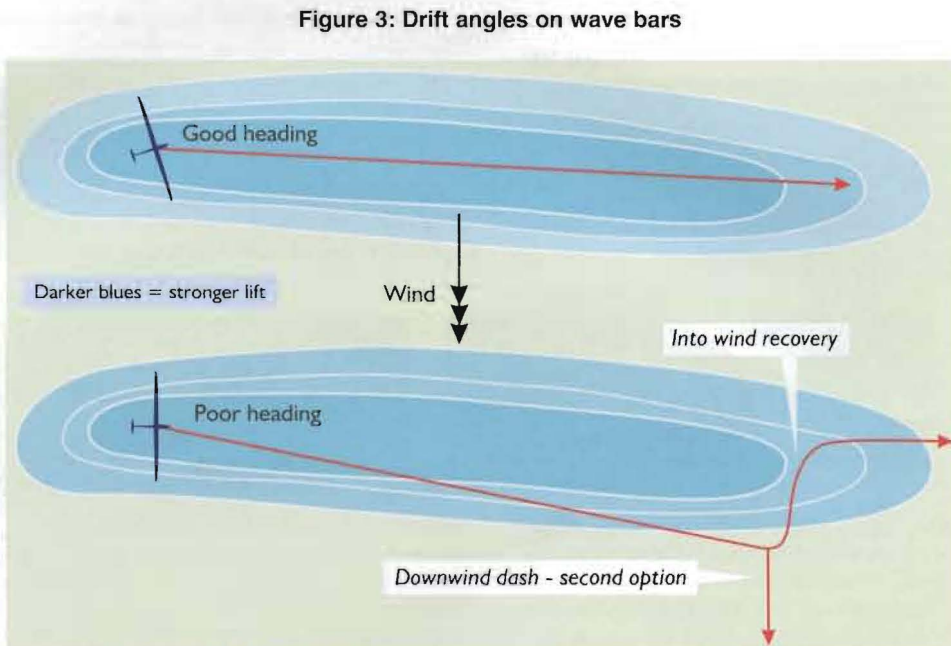
It is not uncommon for climb rates to drop from 10 knots in the lower system to one or two knots in the intermediate layer before building again in the upper wave. Tenacity and good thinking may pay off at this point.

By now our ocean surfer will be nursing aching arms as he paddles out for another ride or maybe even drying off on the beach. While he might be dreaming of riding monstrous waves it is unlikely he will be thinking of surfing a single system for several thousand kilometres as our illustrious glider pilot can do.

'Long-distance wave flights need to be made in close proximity to the main triggers, where the wave pattern will be easier to understand and to predict'

Soaring across country in wave is about understanding the relationship between the wave systems and their triggers. For any given set of triggers that interact with a stable laminar wind flow a predictable wave system will form. If the triggers are long then the wave system will extend crosswind as far as the triggers go and may oscillate downwind for several hundred kms (over 30 oscillations have been observed from satellite photos in New Zealand).

Invariably, however, mountain range triggers are not continuous and the wind is often sub perpendicular to them. This leads to the formation of more complex wave systems with interference patterns being established both by the oblique wind direction and the



competing triggers. For this reason, long-distance wave flights need to be made in close proximity to the main triggers, where the wave pattern will be easier to understand and to predict.

Whether the wind is either perpendicular to the trigger or somewhat oblique to it, the wave energy follows the trigger. If the wind is perpendicular to the trigger the lift is continuous. But if the wind is oblique to the trigger then the energy will still follow the line of the trigger but the lift will be nodal and increases and decreases in strength. This creates an echelon waves (see figure 2 again). In either case the pilot can be confident that the wave will run the length of the trigger and will remain a constant distance downwind of the trigger.

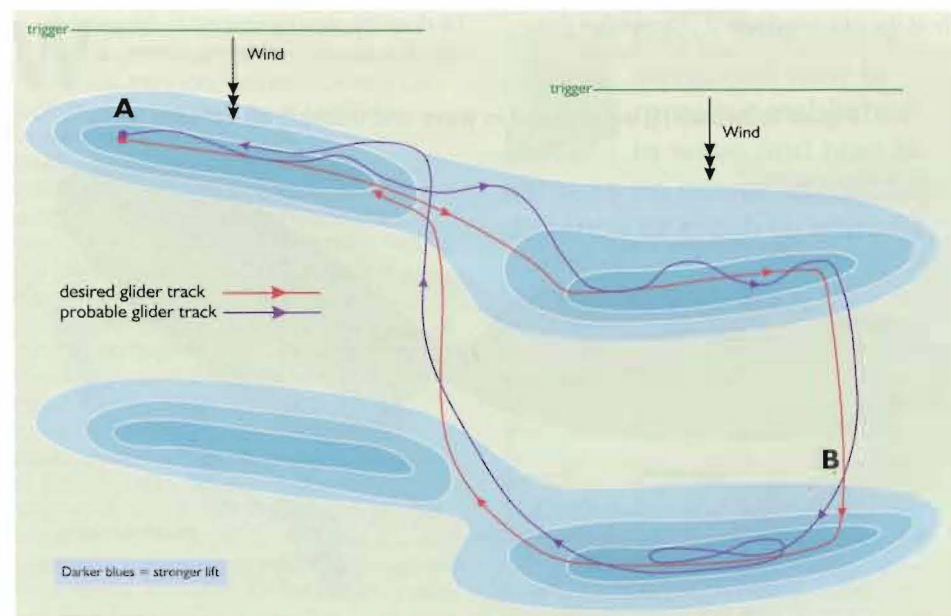
Established in the strongest part of the wave over a recognisable point on the ground, with

the wind speed and direction accurately observed, our glider pilot is ready to go across country. From now to the objective, the wave patterns must be followed, taking great care not to drift downwind and out of the wave.

If the wave bar is not well marked by cloud the pilot will imagine a track parallel to the trigger to a recognisable point five or 10km away that is the same distance downwind of the trigger. To maintain this track the usually strong wind must be offset. Losing this track by drifting down wind over the ground by not off setting enough drift is the most common problem wave flying pilots will encounter. The angle of drift is proportional to the wind velocity and the glider's speed.

'From now to the objective, the wave patterns must be followed, taking great care not to drift downwind and out of the wave'

Figure 4: Tracking from A to B and back along wave bars



In strong winds the glider will typically be flown fast at 90-plus knots (see figure 3). Consider that if the wind speed is 60 knots then to avoid drifting out of the wave the glider must be doing 60 knots and face directly into wind! In all conditions higher than expected cruise speeds are essential. Abandon MacCready ring settings!

If you unexpectedly fall out of the lift into sink the chances are you have drifted downwind. Therefore search upwind first. If that fails and as a last resort make the downwind dash to the next wave bar back.

When the lift is strongest turn into wind and note your position relative to the ground. This the place to climb or to run along the wave front. If you strike wind shear you are too far down wind. Immediately turn into wind.

Some rules of thumb may be useful here:

- If low in the wave system and you encounter turbulence, immediately turn into

wind and accelerate. You have probably encountered rotor turbulence at the wave transition.

- If low in the wave system and the smooth lift decreases and turns to sink, you are too far upwind. Turn crosswind and wait until the lift increases.

- If you are high in the wave system and the lift turns to sink then immediately turn upwind and accelerate to get back to the lift. It can take much longer to get back to the lift than it took drift out of it.

- If you are in sink and apparently plummeting every way you look then turn directly downwind and run. This is a standard escape option in wave, which is not always available due to excessive cloud or unlandable terrain. Therefore always keep an eye on the viability of your downwind escape route.

Generally a dogleg-like track is planned to run along waves bars with short up or down wind jumps between waves. It is important that these jumps are made directly up or down wind to minimise the dramatic effect of the sink between waves.

A downwind jump is best made where the climb is strongest provided you can easily and safely get over any cloud. (See figure 4.) A downwind jump at this point leads you straight into the strongest part of the next wave back.

If cloud is in the way move to where the jump can safely be made. Because the jump involves a strong tailwind, don't fly too fast to offset the strong sink – about 70 knots is fine, slower if the winds are light. Fly directly downwind.

When tracking crosswind along the wave notice that downwind is 90 degrees to your heading plus your drift angle. This means that a point directly downwind of the glider will probably be behind the downwind wing.

An upwind jump is much more difficult and should be carefully planned to avoid falling out of the wave. The route should track across a wave bar's weakest point. This could be, for example, a gap in the trigger marked by a thinner wave cloud. Besides choosing a wave bar's weak point decide whether to:

- either climb high and go over any cloud. This avoids dropping below the transition zone and out of the wave. It presupposes of course that the upwind cloud is not too high to get over nor the winds too strong.
- or climb not so high and duck through the transition zone just below the upwind wave cloud. This method works best when the winds are very strong.

Jumping upwind (see figure 5) is not too much of a problem in lighter winds but as the winds get stronger the height to which the glider must climb gets higher at an exponential rate related to the wind speed. Consider this. As the wind speed increases the wave length gets longer so the glider climbs higher where the winds are stronger still so the glider flies even faster with a greatly increased sink rate, which means more height is needed! The net effect is that once winds get to about 70 knots between

Figure 5: Jumping upwind in wave



8,000 and 10,000 feet can be lost in a single upwind jump. When winds are much over 70 knots it becomes impractical to make upwind jumps as the glider must be flown at speeds approaching its true VNE.

If the wave is marked by a lenticular cloud the job is easy. Just surf the upwind side of the cloud and avoid drifting into it.

'Generally a dogleg-like track is planned to run along waves bars with short up or downwind jumps between waves'

However, if the wave is marked only by scattered whiskers of rotor-cumuli then carefully observe where the whiskers first form and aim to track just upwind of these spots.

While following these rotor cumuli, avoid heading directly to a good-looking rotor cumulus developing some kilometres ahead. (See figure 6.) By the time you arrive at its front edge it will have drifted back into the decaying part of the wave. Remember that these rotor cumuli, unlike lenticular clouds,

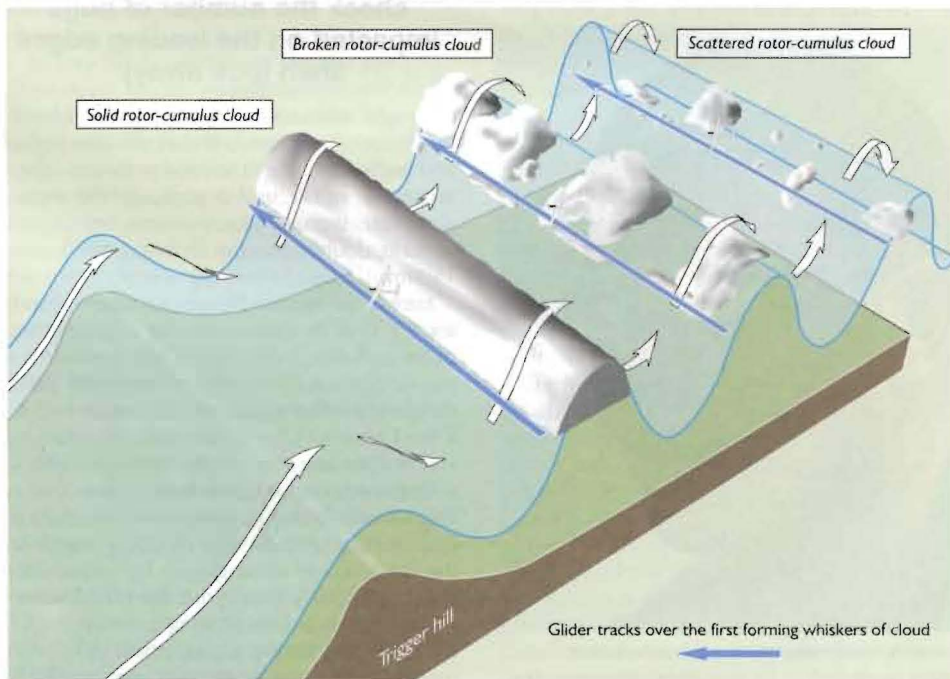
are below the transition zone and drifting with the wind. Therefore always track to where they begin to form. When the wave is marked by only a few whiskers of cloud, following the wave bands successfully can be a delicate but fulfilling operation.

The ocean surfer therefore is lucky that he sees his wave so clearly and when interference wave patterns make his waves lumpy and difficult he simply packs his board on the roof of the car and goes home. However, in the atmosphere, interference wave patterns and strange wave shapes are common so the glider pilot needs to know when and where they form so as to fly them effectively.

In our next article we will discuss various unusual wave shapes and patterns and how to predict and fly them. This is the "nitty-gritty" of advanced wave flying!

■ Gavin Wills is the founder, owner and director of Glide Omarama and Gavin Wills Mountain Soaring School. He has 10,000+ hours – 6,000+ hours gliding since 1957 (then aged nine). Born into a soaring family, Gavin grew up flying in the mountains.

Figure 6: Following rotor cumuli clouds embedded in wave bars



The eyes have it!

MANY years ago, when some of our younger National and World champions were still at primary school, I wrote a scientific report on sunglasses for glider pilots. Our glorious editor has asked me to summarise it for the benefit of the current generation of pilots.

The average person wears sunglasses to reduce the light intensity and to look cool. Glider pilots have the additional needs of haze penetration and improving cloud definition (although some still rate looking cool as the number one priority).

Here we will discuss how sunglasses can help protect your eyes, improve your vision and what a pilot should look for when choosing a new pair.

UV hazard

Fortunately for life on Earth, the upper atmosphere absorbs the very damaging solar radiation in the range 240nm and below at very high altitudes, while most of the radiation in the 240-300nm range is absorbed by ozone at altitudes of 20-60km.

The damage to the ozone layer that was a big talking point in the 70s and 80s is now less of a problem, due to the offending CFCs being phased out. It has been estimated in the last year or so that in about 50 years time ozone levels will have recovered to their former levels.

The problems are UV radiation in the range 290-320 nm (UV-B) and the range 320 upwards (UV-A). The former is the more dangerous of the two; capable of breaking the chemical bonds in the substances you are made of. DNA and RNA can be cut in two,



With sunglasses an essential item for all glider pilots, John Wright explains what to look for in choosing a pair that will protect your eyes while helping you detect thermals

and then recombined in different ways, a mutation of your genes that can lead to malignant melanoma – skin cancer. UV-A causes tanning and sunburn.

The least harmful effect of UV on your eyes is that it causes the material in the eye to fluoresce, emitting, rather weakly, visible light. You can detect this hazy glow of light in a nightclub that has UV lighting for special effects if you look into some darkened area to the side of the UV sources. However the retina can suffer more serious damage from UV – temporary blindness, lesions that can result in permanent blindness and cataracts. (Australians are much more aware of this problem than Europeans.) Snow blindness occurs when the eye is exposed to the continual reflection of UV radiation for prolonged periods. Those nice shiny glider wings reflect light rather well, don't they?

'After images are also a problem in very bright conditions, where you can see a version of a bright object in an unnatural colour for a short time (common if you look at your nice shiny wings to check the number of bugs impacted on the leading edges then look away)'

Greater amounts of UV reach ground level in summer than winter, and as we soar higher and higher we meet a second problem – the proportion of UV, and in particular the more dangerous wavelengths, increases with altitude, doubling by the time you reach 1500m.

Luckily for us, our Perspex canopies absorb some UV, as do spectacles. But a fair amount of the radiation from about 350nm upwards is transmitted with little attenuation. Since dark sunglasses will cause your iris to open wider, if the UV is not attenuated more than the visible light you can receive more UV with such glasses than without them! When the original article was written, not all sunglasses gave good protection against UV. Fortunately the vast majority of sunglasses now state that they are UV400, cutting out this troublesome radiation. When I tested sunglasses in spectrometers for the earlier article, all models except one let through very little UV

compared to the amount of visible light they transmitted. The exception at that time was the RAF's MK14 sunglasses, which actually let through more UV-A than visible light! While it is now unusual to find sunglasses that do not say they are UV400, be cautious about using those that don't actually state this on the packaging.

Haze penetration

Light is scattered when it interacts with electrons in molecules of the transmission medium, and the amount of scattering is dependant on the wavelength (colour) of the light. UV and blue light are scattered quite significantly when they pass through air, while yellow, orange and red are not affected very much.

When we scrutinise the distant landscape or sky, the scattered blue light comes at us from many different angles and leads to the familiar bluish-white haze. (Artists add a bluish tinge to distant objects to make paintings more realistic, and many people don't even notice the colour, they just see those parts as distant.)

The fluorescence in the eye from UV adds to the scattering effect as well. Obviously for good haze penetration, we need to cut out the UV and remove the violet (400-450nm) and blue (450-490nm) light, while simultaneously letting through a larger proportion of the other light. Serious photographers use a yellow filter for black and white work (or perhaps an orange or even the more extreme red filters) to reduce haze.

The colour of the lenses depends on which colours are absorbed and which ones are transmitted. From the spectra I recorded at the time, it was clear that orangey sunglasses such as Suntigers had excellent haze penetration, and brown sunglasses (often referred to as Tan 3 by the big name manufacturers such as Rayban and Randolph Engineering) were almost as good. Both these lens colours removed large amounts of blue and violet light, but the orangey coloured blue-blockers were opaque to all such light. Greenish sunglasses didn't absorb enough blue for good haze penetration, while greyish glasses transmit roughly equal amounts of all colours, and thus are not particularly good at haze penetration. However haze



In tests, orangey sunglasses showed excellent haze penetration (www.whiteplanes.com)



Sunglasses can help detect thermals by making clouds stand out in the sky more clearly

(www.cloudrider.co.uk)

penetration is only one factor in choosing your sunglasses.

The sharpness of a focused image depends on two factors – the wavelengths present and the diameter of the lens. Chromatic aberration is the effect where light of different wavelengths is focused at different distances behind the lens. It produces the coloured fringes at the edges of cheap binoculars for example, blurs the edges of images and thus reduces the eye's ability to resolve fine details. Removing some or all of the blue light will increase the image sharpness, all other things being equal.

For a lens, including the eye, at very wide or very small lens diameters its ability to sharply focus light is reduced. Very dark sunglasses make the iris open very wide, and very bright sunglasses force the iris to close down a great deal. Thus neither is ideal. Mirrored lens and ski glasses tend to be very dark and my tests showed they let through very little light compared to most other sunglasses, so I don't recommend them for glider pilots. However they may help while soaring an alpine ridge covered in snow if you have sensitive eyes.

In very bright conditions, the very bright orangey coloured blue-blocker sunglasses let through a great deal of light at all wavelengths other than the blue end of the spectrum, forcing the iris to narrow down, reducing the visual acuity. These sorts of

glasses do give good visual acuity in dull conditions however.

My conclusion was that the brown (Tan 3) style of lens had the best overall balance for good haze penetration and visual acuity under normal flying conditions. They reduced the amount of blue and violet light, without forcing the iris to open too wide or close down too small.

In very bright conditions, the eye can't close down the iris enough to reduce the amount of light entering the eye to comfortable levels. The melanin behind the retina cannot absorb all the light and the excess then bounces around the eye due to internal reflections, out of focus, and giving a whitish haze. This is more of a problem when the sun is close to the line of sight. This haze reduces the image quality, reduces contrast, and makes us squint our eyes.

After images

"After images" are also a problem in very bright conditions, where you can see a version of a bright object in an unnatural colour for a short time (common if you look at your nice shiny wings to check the number of bugs impacted on the leading edges then look away).

And finally diffraction of the light due to the small iris aperture in very bright conditions further degrades the image quality. Ideally, sunglasses should significantly reduce

the intensity of light of all colours, although not necessarily by equal amounts. Most sunglasses do this but some of the lighter coloured sunglasses made reading a newspaper or looking at glider wings uncomfortable in bright conditions, and these should be avoided, in my opinion. The eye isn't particularly sensitive to blue light, so blue blockers always seem very bright.

Increasing cloud contrast

This is what many pilots seek from their sunglasses – the ability to detect thermals, especially those just beginning to form in the distance, by making clouds stand out against the sky more clearly. This can be achieved by sunglasses that darken the blue of the sky more than the white of clouds, thus increasing the contrast between clouds and the background, making them more sharply defined.

The way the brain handles colour information from the eyes works slightly against this due to a phenomenon called colour constancy, where the brain effectively corrects for any imbalance in the colour balance being viewed.

We don't normally notice the reddish colour cast from incandescent light bulbs or the yellowish green light from fluorescent tubes unless we view a picture taken under these conditions. Few people are aware of the warm reddish light of early

SUNGLASSES REVISITED

➤ morning or late afternoon. But although the brain will try to correct the colour balance we see through sunglasses, there will still be some increase in contrast between clouds and the sky.

Perceived contrast also depends on the fore- and background colours. After black and white, the next strongest contrast occurs between royal or navy blue and yellow. This means that sunglasses that remove blue light and transmit yellow with little attenuation will make clouds, especially those thin wispy ones that mark the birth of a new cloud, easier to see. Cloud shape and structure will be more sharply defined as the shadows on the surface and underside will be darker when the blue of the sky reflected into them is also removed.

'Most sunglasses are not designed with glider pilots in mind; so don't assume that expensive glasses are better than others. Often you pay for the name and the style, rather than quality of the lens'

This implies that sunglasses with brown lens should be more suitable for glider pilots than other colours. The colour constancy phenomenon makes the clouds still appear whitish, but the ratio of transmitted yellow to blue is a very good guide to how effective sunglasses will be. Unfortunately most people don't have access to a UV-VIS spectrometer to measure this ratio. But from my earlier research, I can easily recommend glasses with a strong brown colour, the colour often described as Tan 3.

Blue-blockers tend to filter out all blue light, and would be expected to result in a very dark sky against which clouds would stand out extremely well.

However, after blue, the sky scatters a fair amount of green light, to which the eye is very sensitive. So the sky doesn't go dark, but a peculiar green or golden colour towards the sun. Cloud contrast does increase a fair bit with these orangey or red glasses. But they tend to give a rather bright view of the world and don't reduce glare as much as many people would like. Their haze penetration



Stuart Foynton

properties are very good however.

A neutral grey lens can increase the perceived contrast, because the eye has difficulty in comparing several very bright objects. Decreasing the overall brightness makes differences more noticeable and so clouds can be more sharply defined.

General comments

Most sunglasses are not designed with glider pilots in mind; so don't assume that expensive glasses are necessarily better than other ones. Often you are paying for the name and the style, rather than the quality of the lens. When doing the research for the first article, I asked an optician that repaired sunglasses if they could lend me a lens belonging to a rather expensive (and good) brand to test.

When I asked if they needed a deposit to guarantee I'd return the lens they said "oh forget it, just keep it, it's only 50p" – but the sunglasses cost about £45 a pair.

One fashionable style of glasses is a possible flight safety hazard – those with very wide legs. Some have legs 2-3cm wide and this reduces your peripheral vision significantly, so gliders really can creep up on you unnoticed. I strongly suggest avoiding this style completely.

Gradual tints, which are clearer near the bottom of the lens, tend to let through too much light when you look around, cause glare and are just fashion items in my humble opinion.

Blue lenses let through more of the scattered blue light than the less scattered red, orange and yellow, so haze penetration is poorer. Also cloud contrast is reduced, since a bluish tinged cloud against a blue sky is rather low contrast. Green lenses are letting through light to which the eyes are most sensitive; hence the sky stays relatively bright, giving greenish clouds against a blue-green sky.

■ **John, a computing consultant, former research chemist and spectroscopist, gained all three Diamonds in Club Class gliders, before upgrading to an LS8 in 2006. A member of Windrushers since 1981, he has more than 2,500 hours and an Assistant Instructor rating. He has used UV-Vis spectrometers to examine sunglasses in detail.**

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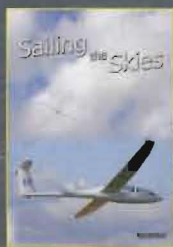
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Stunning settings

THANKS as ever to these photographers, listed clockwise from above:

A view of the Spinnaker Tower, and the Gunwharf area in Portsmouth Harbour.
(Neil Shaw)

Taken from a K-6 "475" just before sunset in March. It shows the NW ridge at Talgarth looking North.
(Robbie Robertson)

K-21 on tow, with P1 concentrating on the aerotow. Pictured just above is a privately-owned T-21 based at Halton, joining a thermal
(Neil Beattie)

One of London GC's tugs returning after a busy day
(Tom Pridgeon)

Ridge running New Zealand style – look very carefully and you just might spot the glider on the far right of the image, flown by Gavin Wills
(Geoff Purcell)

If you would like your photographs to be considered for publication in Gliding Gallery or included elsewhere in S&G, do please send them to editor@sailplaneandgliding.co.uk



Fighting bulls and ASG29s

IT WAS the annual pilgrimage to Ocana, a small town an hour's drive South of Madrid in the heartland of the Spanish fighting bull country. The European Soaring club, notably Brian and Gill Spreckley combined with a small but efficient team of helpers, IT support from Rock IT and the great venue provided by SENASA, merge seamlessly to produce great racing and a really fun event.

The handicap event seeks to level the competition between ASG29s and the Club Class LS1s with just about everything in between – a real challenge for Brian and the organising team.

Run over 12 competition days, with a practice day on the first Sunday, the event partly coincides with the school holidays at the end of May running into the beginning of June. The weather – well, it was not typical Spanish weather but certainly made the nine flying days (of which eight were scoring days) very interesting.

The turnout this year was a little down on previous years at 33 entries, not surprising considering the usual contingent of 10 French pilots had decided to have their early season training camp in France, where it rained nonstop! I am sure they will be back next year providing their usual brand of humour, arm-waving and all things French.

We did however have five pilots from Ireland, five locals and a token Kiwi, Dane Dickinson, over in Europe for the summer on walkabout. The rest were the usual stalwarts who have been coming to Ocana for years.

With everyone safely ensconced in the local hotels and bars, talk of the journey, all the new roads, windmills and solar farms (explaining where all the EU money is going) turned inevitably to the racing as the first briefing began. Brian, famous for his ability to get a race out of a weather map that looked



Shaun Lapworth reports on an Overseas Nationals where untypical Spanish weather made for interesting flying and resulted in a few landouts worthy of myth and legend

more like a sow's ear, was to be challenged once again.

"It's going to be tricky," he said. "If we are lucky we might get something out of it." Funny thing luck, the harder you work the luckier you get and out of nothing the team managed two days of good racing before heavy leaden skies stopped play for three days.

'This is where they breed the fighting bulls – "beware landing in a meadow with shade trees and a stout fence" is part of the annual briefing'

The forecast for the remainder of the competition looked mixed but as each day dawned the weather improved and brought a wide range of conditions from low and moderate cloud bases, to convergence, showers and even a day in the Blue.

Over the years this comp has seen the trend in gliders move from Standard Class with bucket loads of LS8s to Open Class ships and now, this year, a squadron of ASG29s and Ventus 18-metre gliders.

Nearly half the fleet were 18-metre gliders all ballasted to the gunnels. No wonder there is a water shortage in this part of Spain! Seven of the 18-metre gliders were ASG29s and it would have been 10 if the factory could have produced them fast enough (unfortunately

three of the pre-booked pilots did not get their new toys in time to make the event).

Let's hope the Euro takes a turn for the better so the disappointment of not making it to the Overseas is not compounded with an exchange rate rise in price!

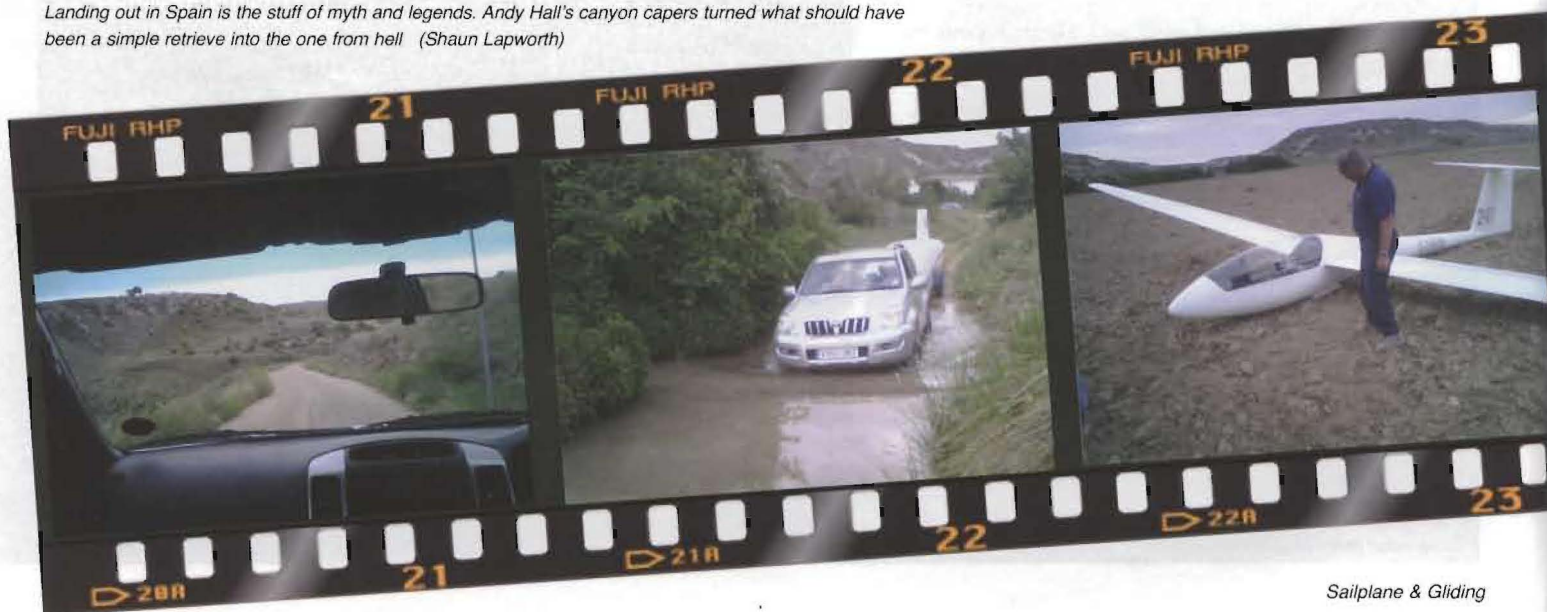
The three days of iffy weather kept us mostly on the airfield just in case there was a window to launch and Brian had us grid two out of the three days we did not fly. The routine of rigging and towing out became natural only to see quite unnatural behaviour as we waited for the weather.

It would seem that if you have 18 metres of wing and lots of damp fields, an expectation of large quantities of bugs is the next problem to tackle. The strange behaviour involves a funny dance in a jerky fashion up and down the wings as the electronic bug wiper systems were "trained" into submission. Gone are the old fishing reel systems of old and a new-fangled gismo that fits in an oxygen bottle holder with a series of switches now controls the bug wipers.

However, it would appear you not only have to spend half the morning loading your glider with enough water to fill a swimming pool but you now have to do this funny dance as well! Come back Club Class, all is forgiven.

As it turned out, the wet fields did produce a huge crop of bugs as the weather improved and the racing began again. It's strange but

Landing out in Spain is the stuff of myth and legends. Andy Hall's canyon capers turned what should have been a simple retrieve into the one from hell (Shaun Lapworth)



true; in the days that followed you could see the “bug wiper envy” grow daily. Gary Stingemore finally succumbed to the envy and took an electric drill to his spanking new 29 towards the end of the comp to fit his newly-acquired wipers only to finish second on a day that was almost bug free.

In the now improving weather, Brian and his deputy Rose Johnson kept their cool and ran a series of both racing and assigned area tasks. This kept us mainly over the Spanish plain but occasionally, when cloudbase would allow, sent us over the hills and into the Toledo Mountains. This is where they breed the fighting bulls; “beware landing in a meadow with shade trees and a stout fence” is part of the annual briefing.

The scenery is truly spectacular, only eclipsed by the many tens of Spanish Raptors who chose to fly with us each day. If you have not been to fly in Spain, put it on your “bucket list”, it is so different from the UK and very memorable.

The hills and mountains generate lines of convergence in the right conditions with great streets of lift running out into the Spanish plain. This suited the ASG29s and, for a moment, the smile on Chris Cobham’s face as he passed me at 110kns and still climbing made it look like the £120,000 was worth it!

The 18-metre gliders did not have it all their own way though, the handicapping and task setting gave the little gliders a fair crack on more than half of the days. The usual waiting game at the start, played mostly by the 18-metre gliders just proving their cahunas (or is it wallets) are bigger than the rest of us, got caught out as the day ended prematurely on more than one occasion.

The unstable damp air mass proved entertaining on the return to the airfield with showers and overcast making the final glide from 50K out a bit on the “buttock-clenching” side for many. Although not all made it back.

Landing out in Spain is full of myth and legend. To be honest, it’s not that bad as long as your field selection skills are used and you don’t let the field pick you. According to



Steve Clender

Untypical Spanish weather made the nine flying days (of which eight were scoring days) very ‘interesting’

Russell Cheatham, there is only one field you can’t land in on the approach to Ocana from the South – only trouble is this was the field, full of young vines, that picked him on the penultimate day.

All we can say is, we hope Russell’s glider can be mended in time for the 15-metre Nationals and that the episode has improved his knowledge of fine wine production.

More topical were the couple of fields Andy “lightning” Hall managed to find during the competition. Early on in the fortnight, Andy had found a well-groomed field into which he promptly executed a textbook field landing only to find it was surrounded by a high fence, padlocked gates and contained a number of angry guard dogs.

‘He promptly executed a textbook field landing only to find it was surrounded by a high fence, padlocked gates and contained angry guard dogs’

This outing was put in the shade by his “canyon capers” on the penultimate day. Caught out by the showers and overcast, his final glide left him 9K short of the airfield. Short on options in the brisk Northerly wind he tried to soar the ridges of the Ocana canyons. To call them canyons is probably a little on the grand side but steep and deep they are. Unfortunately, the ridge did not work and he picked a freshly ploughed field.

Despite the short distance from the airfield, what should have been a simple retrieve turned into the one from hell. The field Andy had landed in at the bottom of one of the canyons had no easy road access. The closest was three miles from his field. With the aid of GPS, sat nav, a good old fashioned map plus an element of luck we managed to find the

track that led down a 1 in 4 incline into the canyon and eventually near to the field.

Having thought the worst was over, we bumped into Andy walking in the right direction along the track. After the usual pleasantries were exchanged Andy informed us that the usable track had a surprise for us, a ford around the next corner! With plenty of help from Chris Lutton, his crew Dave, Bill Inglis and his Toyota 4x4 we gave it a go.

The pictures (see below left) really tell the story. Bill and his truck rose to the occasion, tackling the knee-deep ford and soft field with ease. Bill now carries a set of the pictures in his truck so if anyone gives him stick about owning a 4x4 he can prove what it’s for!

The last day was set to be Blue and we were not disappointed. Having had clouds to help or hinder us all week we now had to prove we could still do it blindfold. A classic area task set over the plains and the mountains with scope for both the big wings and the Club Class made this a true leveller of skill and handicap.

With convection taking us only to 7000ft the spectacular hills and mountains dictated the routes. With Russell out of the picture, Mike Young only needed to get past Y to finish first overall but instead gave us a master class in how to fly his new ASC29, winning yet another day. Russell, who had held the leader’s ‘pants’ for all but the first day, reluctantly handed them over to a worthy winner of yet another great Overseas Nationals.

■ Shaun started gliding in 2002. He got his Siver in May 2003 and his first 500km in August the same year. Shaun has a half-share in a standard Cirrus and owns a Discus-2T. He has attended four Overseas Nationals and has 800 hours to date.



Weather to race or not

For Hugh Brookes sniffing the weather can give a first indication of how a day is likely to shape up. Here he talks about the challenging but rewarding task of competition weather forecasting

I'VE been asked to write a short article about a day in the life of a met man at a gliding competition. Every day is different of course but a typical day may go something like this. Get up at 0515 hours, far too early. I'm the only one about, which is nice as the next few hours will be packed with people, questions and decisions. I savour the summer morning as I sip the first of many cups of tea.

I sniff the weather. It's surprising what an intelligent sniff can tell you, especially as I've been doing this for years. Then a good look at the sky. Check the clouds. Good if there aren't any. Check the wind direction at cloud height so we can have a first guess at where the weather is coming from. It's not so difficult to do. Stand completely still, line up a recognisable piece of cloud against a still object like a roof of a building and then observe the motion of the cloud.

Having finished my tea I then venture indoors to the 'office' where I have set up my computer, linked to the internet. This would have been done the day before the first competition day by one of the IT experts. There seem to be so many at competitions.

It's now time to do some serious work as I've got two hours to produce a forecast, but also to get it into some sort of format that the director can understand. The director is our leader and should be treated with the utmost respect. The next nine days are dedicated to making him happy, or to put it another way, to keeping him off my back.

I always present some synoptic 'overall weather' charts at the briefing so my first task is to save last night's synoptic chart and an outlook chart for the following day. They're popped into a folder which I will call, being an original thinker, 'day one'. I'll have a good look at these charts to see what they can tell before storing them away for the briefing.

The Met Office has a very good website for raw weather data, the data that I want. I'm not interested in sites that will tell me 'There may be a chance of rain this afternoon' or 'Some clouds will bubble up later this morning' or 'A few showers this afternoon, mainly in the west'. This for the Great British Public not for steely-eyed Met Men.

What's the radar rainfall going to tell us? Is



Hugh Brookes uses his Powerpoint cross-section to demonstrate what he thinks the sky will look like over the day during one of his daily briefings at last year's Club Class Nationals at Lasham (Catherine Johnson)

there any rain about, where is it going and how heavy is it? A rainless rainfall map is what I like to see but I've got to consider the chances of rain or showers during the day.

If there is rain showing on the radar picture I will most probably show three or four of these at briefing to give an idea of movement and intensity. I won't put any into the 'day one' folder yet as I will want to show the most recent rainfall.

'I now want to look at actual weather observations around the country, or around the area I think most likely will be the best for today's task. I'm particularly interested in temperature and dew point, two very important elements'

It's somewhere about 6.30am now so I'd better press on. Time for a quick cuppa? Yes why not (can have a look at the sky at the same time). So a five-minute think and then back inside.

I now want to look at actual weather observations around the country, or around the area I think most likely will be the best for today's task. I'm particularly interested in temperature and dew point, two very important elements. I will use this information later to start the detailed forecast. I will also

take a wet and dry bulb temperature reading on site. I look at the 5am set of observations, as these are likely to be close to the overnight minimum. These are readily available on many weather sites.

Having got a good idea of the temperatures and the dew points I will then see what sort of cloud is being reported and also other elements like wind and visibility. I may have a sneaky peep at some TAFs (Terminal Area Forecasts) to see if my ideas are more or less the same as the Met Office forecasters' (who have so much more information than I have). TAFs have to be treated with caution.

One has to know the complicated code and also how the weather elements are changed according to laid down definitions. Also military TAFs have different rules to civil TAFs! It all starts to give a picture of what's happening. I'm beginning to get a feel for the day.

The satellite pictures would be next. We've got a wide choice via the internet. I like to look at any polar orbiters that are available, which have more detail on them as the satellite is much lower than the geostationary ones (36,000km above the earth). The pictures have to be interpreted quite carefully. They hold a wealth of information about cloud type, tops and of course distribution. It's very useful to have some sort of movie loop so that movement and development can be assessed.

The geostationary one (always above the

same part of the earth) is the answer here.

This is all very well but I've only been looking at actual weather so far. It's given me a good insight though on how the day may shape up. I suppose experience does help here. What about the forecast?

Getting on for 7am, must speed up. Time for another quick cuppa? Yes why not (can have a look at the sky at the same time).

It's now time to look at the dreaded tephigrams, the most important asset that the forecaster has.

Finding a 'representative' sounding can be quite challenging as there are so few radio sondes launched nowadays. However one can nearly always find one of use.

We then have to interpret the information sent back from the sonde and plotted on to the tephigram and, you'll be pleased to hear, I am not going into detail about lapse rates, instability, mixing ratios blah blah. It's also very useful to have forecast soundings and the internet has various sites with these, although they will most likely be SkewT-Log P diagrams (slightly different to the tephigram). One can then select where and at what time you want the information.

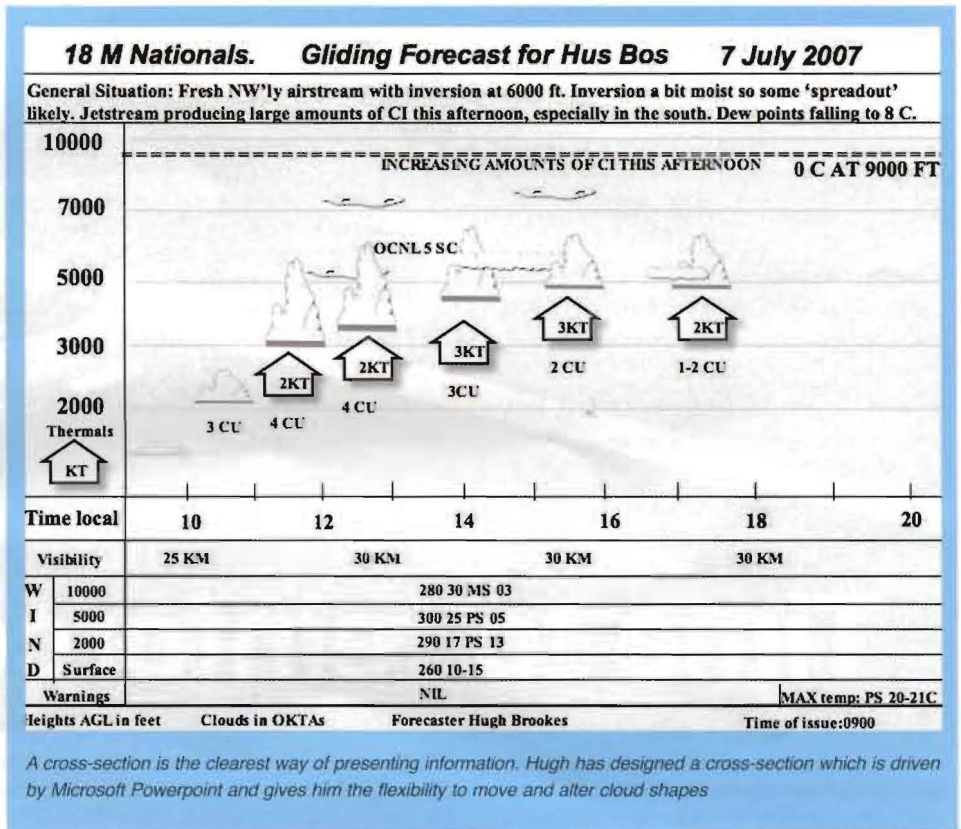
What I will say is that I wouldn't stand a chance of producing a decent forecast without the teph. I suppose I'm lucky that I can analyse a teph pretty quickly having had loads of experience. Mind you, every day is different so it doesn't pay to become complacent.

The tephigram now allows me to work out the theoretical maximum temperature of the day, and then modify it to take into account any cloud effects, any advection (movement) of warmer or colder air and how convection may reduce it. I now have a maximum temperature and also a minimum temperature taken from last night's observations and my own thermometers. From these temperatures I will now plot a heating curve.

A heating curve is a graph of time against temperature, in our case temperature rise during the day. Having found the temperature to start convection, via the tephigram, I can now see when that temperature should occur. The graph can be a bit tricky to get right so careful monitoring of the temperature rise in the morning is important. I can then see if my forecast temperatures are going according to plan.

The heating curve can give me the (cumulus) cloud base at any time (the difference between the temperature and dew point multiplied by 400 gives a very good estimate), and the tephigram cloud tops and any other type of cloud such as stratocumulus and cirrus. I can also make a good guess at thermal strengths by looking at the area bounded by the surface, dry adiabat produced at maximum temperature and the temperature produced by the sounding (environmental curve). The larger the area, the stronger the thermals. This is all a bit subjective and requires some practice.

Now I've got all this information, I need to present it in a recognisable format and the cross-section is the clearest and most



understandable way. I've designed a cross-section which is driven by Microsoft Powerpoint and is fully flexible. In other words I can move cloud shapes around and alter the size and shape of them. They can also be duplicated. I'll now draw out on the cross-section what I think the sky will look like over the day with cloud amounts and thermal strengths included.

'If it's all going pear-shaped then the task setter must know straight away and we would have to re-think the whole thing out again. This monitoring of the weather goes down to the wire, in other words about five minutes before briefing'

There are other weather elements to consider, such as wind velocity and visibility. The winds can come from internet websites whereas the visibility has to be assessed from the overall weather situation and actual weather reports.

It's now nearly 8am and I'm prepared to face the director and task setter and give them a good idea of the day's weather.

I'll brief them and suggest a best area for the task. They can then work out the task length from the time that usable convection is available.

There are many other factors to consider as well such as wind strength, glider performance and airspace restrictions.

The task setter now goes into overdrive and starts to prepare a task whilst the director may

have breakfast. I may join him as I've done enough for a bit. After a hasty breakfast it's time to take temperatures, look at the sky, look at the latest charts and weather actuals to see if any nasty, unforeseen changes are taking place. If it's all going pear-shaped then the task setter must know straight away and we would have to re-think the whole thing out again. This monitoring of the weather goes down to the wire, in other words about five minutes before briefing.

After the briefing it's more looking at the way the day is developing and I'll continue to do this right up to first launch. Once the gliders are on task I begin to unwind and relax and be nice to people.

Competition forecasting is the most challenging work that I do during the year but also the most rewarding. It always gives me a buzz to watch the final glide knowing that I must have done something right. A good end to the day and I've got the evening to look forward to with a couple of beers, good food and good company. I can forget about all the angst and nail-biting of the morning, that is until I start all over again tomorrow...

■ Hugh joined the Met Office in 1958 and spent all his working life there. He began forecasting in 1982 and forecasting for glider competitions soon after. Since then he's forgotten how many competitions where he has been the Met Man - there have been so many! Hugh started gliding in earnest in 1970, while working in Germany, and eventually became an instructor as well as taking part in competitions. Now he describes himself as more of an armchair pilot.



Time to reinforce safety

Statistics have shown that, in the majority of sailplane accidents, the most seriously damaged part of the cockpit was that between the control stick and the pilot's seat – the part most important for protecting the occupant. From August, all new glider designs in Europe will be required to have a crashworthy cockpit

MANY glider pilots will have seen on TV the recent F1 racing car accidents involving the cars impacting a wall of tyres at 150 mph, the driver subsequently being shown to be basically physically unharmed. Meanwhile, sporting gliding is at the same level of risk as motorcycling. I am pleased to report that after August 2008, all new glider designs in Europe will be required to have a crashworthy cockpit. These requirements will not be applied retrospectively to older designs as this is considered to be impractical.

The International Gliding Commission, the worldwide governing body for gliding (part of the FAI – the Federation Aeronautique Internationale), held a meeting in March 2006 at which it was decided that to participate in international gliding competitions, future designs of gliders should have crashworthy (reinforced) cockpits. However, it was reasonably decided that the rebuilding of existing gliders to the new specifications was not possible.

A senior member of the BGA has pointed out that the decision concerning the redesign of glider cockpits could have serious financial implications for a small glider manufacturer, resulting in the company being taken over by a larger company. Also, the new proposals could be easily avoided by a designer claiming a new design was merely a development of an existing glider design. In civil aviation, the numerous development types of the Boeing 737 airliner are a known example of this procedure.

OSTIV (Organisation Scientifique et Technique Internationale du Völ a Voile) held a meeting in Wiener Neustadt in 1989. OSTIV has as members of its organisation the



Tony Segal looks at new legislation regarding crashworthy cockpits that should considerably improve the protection of the pilot from injury in heavy landings and accidents

following – glider pilots from most gliding countries in the world, academics from university departments of aeronautics, and representatives from the glider manufacturers.

At the this meeting, it was decided to form a crashworthiness sub-committee to investigate the energy absorbing properties of the glider fuselage in accident situations. Experiments have been carried out on this subject in the USA by Prof Wölf Roger, Fachhochschule Aachen; and Dipl Ing Martin Sperber, TÜV Rheinland Koln; and in the UK by myself, with the help of the RAF Institute of Aviation Medicine, DERA QuintiQ and the RAFGSA). Incidentally, I have been invited to observe the experiments carried out in Germany, and Wölf and Martin have both stayed as guests in my home in England.

The rulemaking directorate of EASA, the European Aviation Safety Agency, requested that OSTIV put forward proposals for standards for glider crashworthiness to be considered by EASA. A liaison officer from EASA was appointed, Boudewijn Deuss, who has worked closely with OSTIV and has attended many of the recent crashworthiness sub-committee meetings.

The proposals were placed on the EASA website for three months for consideration by an interested individual or organisation.

Following consideration of the points raised, the following standards were accepted, namely the certification specifications for sailplanes and powered sailplanes – CS 22.

The following notes are mostly taken directly from the CS 22 publications. I have merely corrected some of the errors in English grammar, and added my additional comments where necessary.

Summary

The existing figures for emergency landing conditions have been reviewed and revised to reflect the current knowledge for protecting the sailplane occupants against serious injury during emergency (outfield) landings and impacts following recovery from emergency situations close to the ground.

The increased loads also cover the requirements resulting from the introduction of parachute recovery systems which after activation bring the sailplane, or its damaged body, to the ground at a vertical speed of 6-8m/sec and at a 45° negative pitch angle.

Background

At the end of the 1980s increased numbers of fatalities and serious injury with lasting effects occurred during emergency landings of sailplanes. Modern brittle composites, as for

example carbon fibre resins used in sailplane structure, have greatly increased static strength. On the other hand, they showed inadequate performance on dynamic impact. For example nose impact following a low height stall during interrupted winch-launch or a high round-out, resulting in the collapse of the cockpit section.

From the statistics of sailplane accidents in Germany during the period 1987-1992 carried out by Martin Sperber, which for the first time included an analysis of damage intensity in different parts of the cockpit, important information was delivered. In nearly 80 per cent of accidents (including three nose impact configurations), the most seriously damaged part of the cockpit was that between the control stick and the pilot's seat, which is the part most important for protecting the occupant.

During the 1990s, accident statistics showed a significant increase in fatalities caused by difficulties in bale-out after mid-air collisions (especially during international competitions). This led to the development of a Glider Parachute Recovery System, based on the research by Wölf Roger at Fachhochschule Aachen. After activation by the pilot, the glider with the occupant remaining in the cockpit is lowered safely. However, modern crashworthy cockpits are required to prevent injury to the pilot on the subsequent impact of the glider with the ground.

Stall speeds of modern sailplanes have increased to an upper limit of 80-90km/h, and the maximum mass often approaches the upper limit of 750-850 kg. The resulting increase in kinetic energy is caused by an introduction of powered sailplanes and the updating of sporting competition rules.

Impact energy absorption

For maximum protection of the occupants in survival crash landings, firstly the main part of the cockpit should constitute a strong cage (as defined).

Then the forward part of the cockpit should

be sufficiently weaker for it to yield before the main part, but stiff enough for it to absorb considerable energy in so yielding.

Energy absorbing seats, seat cushions or seat mountings constitute another means of improving safety by reducing the load on the occupant's spine in a crash, and when accidentally landing with a retracted wheel.

The wording "give every reasonable chance" (see below) expresses the limited possibility to determine the quantitative probability of injury in the accident process. This is affected by many inputs, such as the physical height, sex, weight of the occupant, and the specific characteristics in the accident.

The required load levels have been chosen partly on medical grounds, and partly in consideration of what is currently practicable.

Protection of the legs

For maximum protection of the legs during the deformation of the front part of the cockpit, the feet should have adequate space to move slightly backwards together, without twisting or rocking.

General design

The conditions specified are considered to be the most representative of the wide envelope of possible crash loads and impact directions. However the design should be such that the strength of the cockpit is not unduly sensitive to load direction in pitch or yaw.

Showing compliance

Dynamic tests are not mandatory. Static tests or calculation methods are acceptable means of compliance. If calculation methods are solely used, they should be verified by re-calculation of static tests data of structures of similar design.

Calculation methods should take into account margins against variation in material properties, such as tensile or compressive strength, and margins against stability limits such as buckling of the canopy sill.

Conventional semi-reclining seating

In this case it is sufficient to demonstrate that the main part of the cockpit, extending at least from the front control pedal (adjusted to the intermediate longitudinal position) to the rearmost headrest mounting or the wing attachment section (whichever is furthest aft), including the harness attachments, meets the requirements.

STRUCTURAL REQUIREMENTS FOR EMERGENCY LANDING CONDITIONS

Cockpit structure

This should withstand the inertial loads due to the following accelerations. These accelerations have been increased as follows:

Upwards	4.5g to 7.5g
Forwards	9g to 15g
Sideways	3g to 6g
Downwards	4.5g to 9g

The cockpit should withstand an ultimate load of nine times the weight of the sailplane (increased from six times the weight) acting rearward and upward at the angle of 45° to the longitudinal axis of the sailplane, and sideways at an angle of 5° acting on the forward position of the fuselage at a suitable point not behind the pedals.

The supporting structure must be designed to restrain, under the above loads, each item of mass that could injure an occupant if it came loose in a crash landing.

Seats and safety harness

Each seat and safety harness installation must be designed to give each occupant every reasonable chance of escaping serious injury under the conditions stated above.

Baggage compartment

Means must be provided to protect occupants from injuries by movement of the content of the baggage compartments under a forward acceleration of 15g (increased from 9g).

CONCLUSION

The new requirements are practical, and inexpensive if implemented in the manufacturing stage. They should considerably improve the protection of the pilot from injury in heavy landings and accidents.

■ Dr Tony Segal qualified in medicine in 1956. He was sent solo the same year at Lasham by Derek Piggott in a T-21 (Daisy). He gained his PPL at Denham flying an Auster, and was a member of a Miles Magister syndicate. He has 600 hours in gliders, and 150 hours in power. He worked as a GP for 30 years and, on retirement, was a student on the six-month Diploma Course at the RAF Institute of Aviation Medicine. This included experience of hypoxia, high-g, and helicopter dunker training. He has carried out studies at Farnborough for 20 years on pilot spinal injury, glider cockpit crashworthiness, and seat harness and undercarriage design. He is the medical adviser to the international OSTIV Sailplane Development Panel.



Modern brittle composites, such as carbon fibre resins used in sailplane structure, have greatly increased static strength. On the other hand, research indicates inadequate performance on dynamic impact

Turn your world upside

IT ALL started last November. Winter was setting in and memories of summer and thermals were fading fast. I was desperate to keep flying to help maintain my sanity that was rapidly being eroded by entire days spent in my university labs.

Flying from a thermal site, there was no ridge to use in the winter and wave was often spoken about in hushed tones as if it were some mythical beast only to be found far from home.

A typical day gliding had devolved into circuit bashing, which week after week was starting to lose its appeal. I had managed to maintain interest at first by converting into every glider in the club's fleet, but eventually ran out of new gliders to fly. At this point I desperately needed something new to maintain my interest during the rest of the winter.

Fortunately fate intervened; I was helping out at the launchpoint when I noticed that a strange red triangle had been attached to the wing tip of one of the clubs K-21s. My curiosity was piqued so I enquired about its purpose and, by the end of the day, had experienced my first proper aerobatic flight.

The first flight was an eye opener. I watched as the glider was threaded through a series of figures that I had previously thought it couldn't or shouldn't have been able to achieve. I was hooked.

Three flights later I was sent to fly my first solo aerobatic sequence under the watchful eye of our aerobatic instructor, Ed Lockhart.

On landing I was relieved to find I had flown the figures safely (but not very well) and qualified for my standard aerobatics badge.

With a new-found interest and a new way to rapidly lose height I continued to practice over



A chance encounter with Plumridge hooked on aerobatics. Months later, he took Gold at the National Glider Aerobatics competition.

Above and right: Matt Plumridge and Jon Ross put Lasham's K-21 through its paces

the winter. Come spring a timely letter from the British Aerobatic Association arrived encouraging me to enter one of the beginners' aerobatic competitions being held during the year. Fellow student Jon Ross and I thought this was a splendid idea and so at the end of March we headed up to the beginners' event at the Dan Smith memorial aerobatics competition at Dunstable.

In normal British fashion, the first day of the competition arrived with 25-40 kt winds and heavy rain. Naturally it was decided that these conditions were unsuitable for the main competition to fly so, in true gliding spirit, the beginners were sent up for their site checks instead...

The second day dawned and, as if in defiance to every forecast, we enjoyed a bright, sunny and rain-free day. After watching the sports pilots fly their first sequence it was time for the beginners to have a go.

Before I had time for second thoughts, I was off the ground and following the tug to the aerobatics box. (The box is effectively a square km of sky in which we aim to complete our aerobatics sequence with points being awarded by the judges for how well placed our sequence was in the box).

I pulled off tow, checked I was where I wanted to be then rocked my wings to let the judges know I was starting before plunging into the sequence. I remember being surprised when my loop went well and the first chandelle passed without incident.

The humpty bump was good with perhaps slightly too much G on the exit. My second chandelle was not as neat as the first, the only consolation being that I ended up pointing in the right direction and it flowed neatly into the final 270° turn of the sequence.

It was over quickly and, with everyone sharing the same glider, it was important to return the glider for the next pilot so against my better instincts I opened the brakes and binned



Matt on tow at the nationals earlier this year, where he picked up a Gold in the Sports Class

(Jon Ross)

e down

a red triangle got Matt
robotic flight. Just six
id in the Sports Class of the
Championships at Saltby



(Jan Ross via flightbox.net)

2000ft to return promptly to the ground to hand over the glider.

After a bacon and egg toastie and a mug of tea in the club house the results were up. I couldn't believe it, but I had won!

In fact all of the beginners had flown exceptionally well with everyone scoring within five per cent of first place and vowing to come back for the sports class at the nationals in the summer.

And so, three months later I found myself at Buckminster for the nationals. This year witnessed a record entry at the National Glider Aerobatics Championships with 24 pilots and it would be great to see it continue to grow next year.

'I watched as the glider was threaded through a series of figures that I had previously thought it couldn't or shouldn't have been able to achieve'

Despite the best efforts of the weather to the contrary with the usual low cloud and heavy rain, we managed to get everyone flown. This is testament to the organisational skills of Jim Duthie, who has stood down this year after 15 years as launchpoint controller and will be hard to replace.

The four days spent at the nationals were great and I was learning something new every day. My first sequence went well and I found myself in second place despite almost



➤ receiving zero for one of my quarter clovers, which I messed up spectacularly. I had intended to exit the figure along the main runway, but whilst inverted over the top had picked up the crossed runway and in a moment of stupidity ended up coming out pointing along the wrong runway about 300 off heading.

Lesson learned, the unknown sequence went better than I could have hoped with no major mistakes resulting in a first place for the second sequence and the overall win in the sports class.

Both the Dan Smith and the nationals were friendly and relaxed events and I was made to feel at home. Without a doubt neither win would have been possible without the help, advice and support provided by the other pilots at the events as well as the superb training provided by Ed Lockhart and Charles Baker back home at Lasham.

‘When you consider the confidence gained from this training and the obvious safety benefits for your day-to-day flying this is probably money well spent for any glider pilot’

Since first starting aerobatics I have often been asked if it gets in the way of cross-country flying or simply costs too much for most of us to afford. This simply isn't the case, anyone who knows me would tell you that I am among the first to head cross-country on a good day, or even a remotely reasonable day.

Sadly, we all know that most of the days we have free simply don't fall into this category. These otherwise wasted days can, however, provide an excellent opportunity to fly aerobatics.

As to cost, the standard aerobatics badge can be achieved within a day and a beginner's level aerobatics competition consists of a single flight and requires only a day of your time.

When you consider the confidence gained from this training and the obvious safety benefits for your day-to-day flying this is probably money well spent for any glider pilot.

So if you fancy trying something different,

■ **SO HOW** does an aerobatic competition work? Put simply, each pilot flies a sequence made up of a series of individual figures such as loops, chandelles or stall turns. The sequence is watched by a panel of judges from the ground and they award a mark out of 10 for each individual figure with marks being deducted for being off angle, or even simply flying the wrong figure. Marks are also awarded for how well the whole sequence flowed together and how well it was placed in front of the judges. The overall marks are then added up and

given as a percentage of the total possible score. At higher levels, each pilot will fly a number of different sequences, including known sequences that are published at the start of the year, unknown sequences that are given out on the day and free sequences that are designed by the pilot. The pilot's average score over all the sequences is then used to determine the winner.

take the time during the winter to obtain your standard aerobatics badge. It should only take three or four flights and can easily be completed in a day. When spring arrives you can then put it into practice at one of next year's friendly beginners' events, you never know where it might lead.

Don't be worried about finding an aircraft to fly at the competition as you can always use the host club's. There were at least 10 pilots all flying in Buckminster's K-21 at this year's nationals and every pilot flies one of Dunstable's K-21s at the Dan Smith. This significantly reduces the cost of entering the competition as you don't need to bring your own glider, plus first-time entrants don't even have to pay an entry fee!

There are now a number of clubs in the UK that offer aerobatic instruction, so even if you don't have an instructor at your home club then one is likely to be within reach.

The British Aerobatics Association has the following to say on aerobatics:

“Briefly, aerobatic training develops a pilot's flying skills to the ultimate. It demands a high level of dedication and a significant investment in terms of time and, at higher levels, money. In return it provides not only pleasure but also a real mastery of the art of flying in every attitude of flight that can be

encountered in an aeroplane. Perfecting one's aerobatic skills will inevitably lead to greater self-assurance in handling the machine and greater safety in the air. There is enormous satisfaction in the precision and the artistry involved.”

I couldn't have said it better myself.

■ **Matt recently graduated from Southampton University with a 2-1 Bsc in biochemistry. He went solo at 16 then, due to finances, took a five-year gap. He resoloed 20 months ago, followed by a cross-country endorsement at the start of this year. In April, Matt completed a 300km out and return on his third cross-country flight gaining his Silver C, Gold distance and Diamond goal from a single flight. He has just become a Basic instructor and has also been awarded a full JAA PPL scholarship by the Guild of Air Pilots and Air Navigators.**

● Competitions still remaining this year are the Saltby Open in early September and the end-of-season glider vs powered event held at Lasham on 10-12 October. This event features the best of both glider and powered aerobatic pilots from this year's nationals.



Medal-winners in all four classes at the nationals are pictured at Saltby. The photo was provided by Charles Baker and was taken on his camera by an unknown willing helper



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PW-6 put through its paces



The PW-6 proves to be a delight to fly with no obvious vices and is able to perform any of the ab-initio exercises when asked to do so

(Mike Weston)

THE telephone rang; it was Susan Newby, our new *S&G* Editor returning my call concerning an Airprox article. "By the way it would be nice to get a test of the new PW-6. I gather Aston Down have just taken delivery of one." "So I gather, who are you going to get to fly it?" "Well, we were rather hoping you..."

The following day I made my way over to find the Cotswold GC chairman and ask if I might borrow it to test and we negotiate a suitable time, winch and aerotow facilities.

While I am there I decide have a look at the PW-6 parked on the winch line. Instructors are learning all about it before it joins the fleet for club instructional flying. Already I hear stories from those who have flown it but do not generally dish out much praise of how surprised they have been with its performance and handling.

I am told of comments from those who haven't yet flown it but are given to voicing opinions none the less. "We had an SF34 that was the same as this that didn't soar... with little wings like that ... it's Polish..."

Interesting, I thought, I shall look forward to seeing what it really does in a week's time!

Matching requirements

If you are a club chairman looking to replace your aged *ab-initio* two-seat fleet, the choice available to you is quite limited. Cotswold, like many clubs, has standardised on KA-13s for basic training for the past 15 years and they have served the club very well. However, they have found an ever-widening gap between the flying characteristics of the KA-13 and the gliders new members are likely to buy or those that private owners now fly. Additionally, the market has moved on,



The PW-5 had its detractors, but how does the PW-6 shape up to the many challenges faced by a basic trainer? Hugh Woodsend takes the controls to see if it ticks all the right boxes

and many prospective members demand more modern gliders on which to progress.

The requirements for a basic trainer are challenging. It must be comfortable and fun to fly, easy to operate, even from demanding sites. It must be able to soar well to teach the pupils good techniques for the future. It should be possible for instructors to demonstrate flying exercises correctly without frightening themselves or pupils. Ideally it should have a good speed range, winch and aerotow easily, have no nasty or unusual habits, and be sufficiently strong and easy to repair. Oh and not too expensive to buy.

So how well does the PW-6 stack up to this challenge?

Testing the PW-6

The day of the flight test was blustery and showery, more like an April rather than June day. The glider lives in a hangar so no chance to rig it, although I believe it takes only three to do so as the components are quite small and light. I note the captive main pins clearly visible in the rear and the overall clean finish.

Simon Buckley has volunteered to accompany me on the tests. He explains the club tried the demonstrator, and suggested a number of modifications (nearly all of which have been carried out), before making a purchase. From the outside, the glider appears

quite small – it is obvious it has been designed with quality in mind. A large fixed main wheel gives it good ground clearance, manoeuvring on the ground is a delight as it's a one-handed exercise to lift the substantial nose wheel to pivot the fuselage.

The 16m span looks smaller than it actually is, with large single paddle brakes set in the upper surface, a mean chord just over one metre and an aspect ratio of 16.8. The tailplane sits low but well away from the ground during landing and take-off. The rudder on the 7.85m fuselage is purposeful. Everything is easy to inspect on the ground. Two good-sized cockpits with lifting canopies complete the picture.

I decide to start with aerotows. To get an



Visibility from the cockpit is superb

air-to-air photo of the PW-6, we shall be two up in both tug and glider. Minimum cockpit seat load with a solo pilot (and parachute) is 55kg and max 110kg, and not more than 200kg cockpit payload.

I will fly it from the back. The seat back has a combination of upper and lower positions; the rudders in the back are not adjustable. Getting into the rear with a parachute on is easy, grasping the hoop in front with both hands, leaning slightly forward and then lowering into the quite deep cockpit. Strapped in conventionally, controls fall readily to hand. The stick is quite long but almost completely friction free and light to move.

The air brake/wheel brake lever is mounted to the left with a very positive trimmer with numbered positions on the same side. Canopy catches are large and obvious in the back. It's a similar story for the front, but here the canopy catches are more difficult to check, however the visibility is superb. The wings are well behind but otherwise the effect is that of a very modern single-seater.

Instruments are up to the purchaser and Cotswold has elected to fit good quality LX variors, radio plus additional fittings for add-on PDAs, Flarm etc in the future.

The glider sits on its nose-wheel and therefore tracks straight ahead on the takeoff run. A positive but not demanding effort is required to get the PW-6 to sit comfortably on its main-wheel before lifting off. Immediately the well-harmonised and light controls make it easy to follow the tug. Recommended speeds are 65kts normal, to 81kts cross-country with a max of 88kts. Our combination climbs well, despite being four up.

Deviations from the centreline require positive effort as the glider will fly itself neatly back to the centre. The cockpit is quiet, just the forward ventilator intrudes and I note it could do with more air in the rear cockpit. Forward visibility from the back is adequate if not remarkable, but there are several head positions that can be used to see past the front occupant. Sideways and rearward views are excellent. There are no footrests in the back, but cocking the feet sideways in the middle achieves the same result. Later when I flew it from the front, the all-round visibility and overall comfort proved very good indeed.

Releasing, we explore the handling. The trimmer indentations give 2kts per notch, max glide 55kts, the balance between the controls is just right, and I measured the 45 to 45 degree roll rate as marginally better than the

book value of 4.3 seconds. Vne 141kts, with a rough manoeuvring speed of 89kts giving the glider a wide speed range. Quoted L/D is 34, but it does not appear to descend quickly at higher speeds. G limitations are +5.3 to -2.6 at maneuvering or +4.0 to -1.5 at Vne.

Pretending to be a rough handling solo pilot used to flying a glider with less precise controls, I move the stick about all axis. Every move was instantly translated, thereby encouraging smooth handling. Releasing the controls the glider settles immediately.

I try the stalling exercises and note at our weight it stalls at 38kts, having given lots of warning through the controls, without a wing drop providing the rudder is central. Recovery is predictable and precise. Exploring this further, I find with a little rudder held, the nose falls away, and with 1/3 travel a wing drop can be demonstrated. Recovery from both is easy. The PW6 can be held at the stall, even in a turn, providing there is no slip present, demonstrating a rapid rate of decent but without dropping a wing or spinning.

'The glider climbs well, happy leaping upwards when I finally centre it correctly. So much for the comment it won't soar!'

Incipient spins are easy to demonstrate, the process is quite gentle, leaving lots of time to recover. If left to develop, the glider will roll gently into a full spin, recovery of which requires the stick to be moved forward to stop the spin. Exit speed was measured at 100kts. Less rudder does not prevent recovery. The spin is positive, no over-pitching, not too fast and not frightening, and a good trait when teaching nervous pupils.

I tried a high-speed stall, from a mishandled recovery, and the burbling of the stall was obvious and extended, making it easy to demonstrate. Sideslipping was achieved as per the book with 20-25 degrees offset. This takes a while to settle, but once there stabilises into an easily controlled attitude.

The PW-6 is certified under the utility category to include the normal positive manoeuvres including stall turns. I tried a loop, recommended up to 3.5g, mine was much less at about 2.5g, starting horizontally at 100kts, achieving 45kts at the top and 100kts at the bottom. A stall turn, including positive pauses up and down, was easy to accomplish, the exiting at 90kts. Steep ➤

Why a PW-6U?

THE club was in the process of upgrading the fleet after purchasing a DG-500 in March 2006 for advanced training, writes Cotswold chairman Mike Weston. We had started looking at options for replacing the three K-13s used for basic training. The main reasons for the review were concerns about the longevity of the K-13 and its suitability for training pilots who, following solo, often moved into a syndicate or purchase of a glass glider.

An opportunity arose in December 2006 as Roger Hurley of C P West Ltd had a PW-6U in the UK for evaluation and, as Talgarth was waterlogged, asked if he could bring it to Aston Down for the weekend. A number of instructors evaluated the glider over the weekend using both winch and aerotow and the general comments about the PW's performance were very positive. We noted a number of ergonomic improvements and these were passed back to Roger. We had a further opportunity to evaluate the glider in February 2007 when we hosted a visit of instructors from North Hill.

Evaluation

Following this evaluation and taking note that there were not too many options in glider types available the committee decided to order two PW-6Us with expected delivery in March and April 2008. While a popular decision with most of the club, it also had its detractors – some of whom I am glad to say have changed their mind now that the first of the two gliders has been delivered.

The demonstrator was a four-year-old glider that had been in club use and we requested a number of improvements, which included changes to the trimmer to give finer graduations, modifications to the rear canopy to allow easier access, isolation of the wheel brake lever between each cockpit, relocation of the release to the side cockpit wall and easier access to the control connections. We were very pleased to see that ZSJ had incorporated all these changes into their latest production gliders.

We took delivery of G-CKRU on 1 June, slightly later than planned, together with a new UK-manufactured trailer and have been extremely pleased with the quality and performance of the glider. Our second PW was due to be delivered around the end of June when we will start to migrate basic away training from the K-13s.

This was rather a big decision for the club but having received and flown the first PW-6U we are absolutely sure that we have made the right decision. This significant improvement to the fleet puts the club in a great position to attract members and provide training on modern equipment.



The glider appears small but is designed with quality in mind



Captive mains pins clearly visible in the rear

➤ turns are easy to fly, with good positive elevator control.

Back to the field, for a landing, we elect to use 60kts for the approach. Still air at max weight is marked on the ASI at 53kts. The airbrakes are very powerful, something just under half being more than adequate for normal approaches. Lowering the nose seven degrees or so will cause the speed to rise instantly by 10kts only to return immediately the correct attitude is selected.

Landing is easy, the normal landing attitude allows the glider to touch down gently on the main wheel only, and even with positive elevator lower itself on to the nose-wheel fairly soon afterwards. Rudder is adequate for crosswind handling and the ailerons remain working down to standstill. Nose-wheel rumbling is evident during the roll from the front cockpit but is not unpleasant.

We try a winch launch, me flying from the back. The PW-6 launches on a black link, with a max speed of 65kts. Even with a fast all-out the tail does not come down hard, merely a

slight touch, before climbing away in perfect control. From the back the reference points for the climbing attitude are less obvious due to the cockpit sides, but I didn't find it difficult. We achieved 1700ft on the first, and 1800ft on the second (flown from the front) – creditable launches for conditions on the day.

We find a very rough thermal and I emulate a pupil, in and out of the lift and too little bank. Nevertheless the glider climbs well, happy between 47 and 50kts, positively leaping upwards when I finally centre it correctly. So much for the comment it won't soar!

The last landing back gives me opportunity to explore the kind of conditions often experienced on demanding hill sites. Pupil too high and in the wrong place. Full airbrakes give very positive positioning back on to the glide path and a normal landing.

Conclusions

In conclusion, this glider ticks all the boxes on our set of requirements and demonstrates a rare quality in being both delightful to fly

and with no obvious vices and yet able to perform any of the *ab-initio* exercises when asked to do so.

There are a few small things that require modifying over time. Ventilation improvements, the front canopy catches require marking to ensure they are fully shut, and the emergency release handle needs to be less prominent, but these should be easy to fix. The engineering looks good, although that will need checking after a few years' service, but the PW-6 deserves to succeed as pupils, instructors and chairmen should all be content. ✈

■ **Hugh Woodsend is a freelance test pilot on fast jets with over 20,000 hours total experience on more than 500 types of aircraft. He has been gliding for 30-plus years, with around 3500hrs total time. Hugh is a Full Category Instructor and flies a Ventus 2C and a Duo Discus. He is a member of the BGA Airspace team and is a board member of the UK Airprox Board with special responsibility for GA and gliding matters.**

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Formula One of the sky



John Bridge

IMAGINE going to Silverstone and finding a wonderful seat in the stands right opposite the starting line. The cars are rolled on to the grid, and when the order is given to start engines the intoxicating noise thrums in your chest like a Vulcan bomber's afterburner. Then they're off, scorching around the first bend and... that's it. They won't reappear for another four hours, and when they do the finishing order will be a meaningless jumble of handicaps and penalties.

Far from igniting the public imagination, a format like that would probably have kept motor racing a minority sport for the privileged few. Fortunately, the people who built the massive following for Formula One knew that only by fully engaging the spectator in the experience could the sport grow beyond an elite gentlemen's club. As the technology allowed, that is exactly what they did.

Today you can watch a motor racing Grand Prix from a dozen vantage points. Computer graphics demystify the stream of cars, teams and tactics, and when the winner thunders past the chequered flag not only do you know he has won, but you share in his triumph.

Gliding competitions face the same challenge. They are fast and exciting and full of drama, but only if you are somehow engaged in the process or sitting in the cockpit. For the casual spectator – and this could apply equally to potential sponsor, TV programming editor or sports writer – the sport of gliding and any competitive element therein is a dramatic start and an exciting finish, with little in between.

All that changed in the skies around Omarama, New Zealand, in December when the second FAI World Sailplane Grand Prix successfully brought the media, the spectator



With the UK qualifying round of the FAI Sailplane Grand Prix taking place at Lasham in September, Mike Birch asks will Grand Prix racing transform people's perception of gliding

and the action together for the first time. Likened to Formula One in the sky, the Grand Prix made competitive gliding accessible to the general public by simplifying the format with regatta starts and first-past-the-post finishes. A battery of cameras and live feeds from cockpits and helicopter camera ships brought the drama to spectators on the ground and computer screens across the world.

It was claimed to be the most technically advanced media coverage in the history of sports TV, streaming globally with real-time graphics, air-to-air footage and live commentary. The company whose computer graphics brought the America's Cup to life for millions of people was using competition tested technology to track gliders and show speeds and altitudes in a way that enthralled glider pilot and ordinary spectator alike.

Thirty miniature cameras in cockpits, two helicopters, three digital microwave channels, satellite link-ups and a \$NZ1m big screen for spectators made the contest an inclusive event. Those on the ground heard the countdown and saw the fleet start overhead, and for the next two hours were engrossed in computer graphics and live pictures until the moment the leaders came back into view.

Around the world spectators followed the race live over the internet and as they watched

the drama unfold the potential for broadcast TV coverage as achieved by the America's Cup and other niche sports became obvious.

The event's spectator appeal was enhanced at every opportunity. Start height was about 3000ft, not high enough to get away from the lowlands of Omarama, and pilots headed for one of three ridges to take their first climb. The starting line was over the airfield, and this kept the action close to home.

It was pure racing. The field of 15-metre gliders were all of comparable performance and all started at the same time. They raced the same task in the same air, and when the first one stormed over the finish line their victory was unambiguous. There were no handicaps and only the first nine of a maximum field of 20 received points; the winner got 10, second place got eight points, third got seven and so on. Beyond ninth place there was nothing.

The scoring system is designed to be volatile. The intention is to encourage flat-out racing and discourage the tactical flying associated with conventional gliding competitions. The whole event is meant to be exciting to watch, and it is.

The race took place over five days, and finished on Christmas Eve. Timing was not conducive to well-attended public days and neither was the venue; the nearest large

conurbation is Christchurch (pop 350,000), a 3.5 hours drive. However, take it to almost any populated European country and there is little doubt that the event would be a media phenomenon.

The Grand Prix has been to the UK before. In September 2006, 15 pilots competed at Gransden Lodge, Cambridgeshire, to qualify for a place in the World Sailplane Grand Prix. There were no cockpit cameras or media scrums, but the event proved the race format once again, and qualified Steve Jones and Pete Harvey for Omarama.

On 1 September, the UK Qualifying Grand Prix opens at Lasham. One of the last racing days – Saturday 6 September – will be open to the public.

Real-time tracking of the competing gliders on monitors and live commentary are planned, but the broadcast technology seen in New Zealand will have to wait.

Experimental Sailplane Grand Prix events were first held in 2001 in Australia, and two years later in Saint-Auban, France. By the time the first FAI World Sailplane Grand Prix was staged in 2005 its marketing role for the sport was enshrined in its rules: *To make gliding competitions more easy to understand and more attractive for the public and the media, and to promote world-wide expansion of the public image of soaring.*

Moment of glory

There has never been more competition for our leisure time than there is today, and the impact is being felt by gliding clubs everywhere. Many sports are sustained by an annual moment of glory such as Wimbledon for tennis and the Open Championship for golf, and even darts and snooker have found a place in the nation's heart. The World Sailplane Grand Prix has the potential for doing the same for gliding.

It was not until the involvement of New Zealander Peter Newport and his company Airsports Ltd that this premise was tested. Newport took up gliding in the early 2000's and his background in marketing and TV production gave him an appreciation of the sport's media potential. He ran the Omarama Grand Prix and its earlier qualifying event, and oversaw the introduction of the technology so vital to this concept.

Newport has a vision of gliding as a media friendly sport that is financially and politically secure, revitalised by a new wave of enthusiastic young pilots. The alternative, he fears, is bleak. He wrote at the time: "If we do succeed in making gliding into a TV sport, clubs will have to bring themselves up to date: Modern gliders, fast-track (training) courses, booking systems and most of all, a welcoming attitude.... without change, gliding will disappear." ✈

■ Mike Birch is a member of Lasham Gliding Society and took up gliding in 2000. He has a background in journalism and works as a marketing and PR consultant. Mike is active on the Lasham marketing committee, and also the Grand Prix management committee.

Speed is everything and timing absolutely critical



REPRESENTING the UK at the second World Sailplane Grand Prix were reigning Open Class European Champion and UK Grand Prix Champion, Pete Harvey (left), along with former 18m Class World Champion, Steve Jones.

S&G asked Pete Harvey about his Grand Prix experience. He told us that different tactics are required for Grand Prix racing.

"Speed is everything," he said. "You've got to stick your neck out, but the timing is absolutely critical. If you stick your neck out too early, then people eventually catch you up again – it's easy to catch up, but not so easy to get away. If you take the risk a little bit further on in the race, the others haven't got the chance to catch up if it works."

Pete also commented that while the point system is immensely simple, that simplicity is also one of the problems with scoring.

"On a three-hour task there were many occasions when the top few pilots – even half the field – finished within two minutes of each other," he said.

"You were all going around together and no one could actually escape. You would try pushing out in front and get a good bit of lift, but then everyone would pounce on you. So we all tended to save it up until the last final dive into the field when we would streak off together.

"The person in front would get points, the first getting 10, the next nine – down to one, just like in a motor racing Grand Prix.

"This meant if you came eleventh you would get nothing. Sometimes number 11 was only two or three minutes off the winner's time in three hours' flying with nothing to show for it.

"In a conventional competition, that eleventh place person would get 98 per cent of the points because they flew almost as good, but not quite.

"In the Grand Prix they get nothing, so it's savage – absolutely savage. It is not representative of the amount of skill and decision making actually taking place."

So is Peter in favour of the Grand Prix?

"The question is, are we doing it for competitors or the public?" he said.

"If we are doing it for the competitor, the complex points system and having to wait

a few hours for results to come out is not a problem.

"If you do it for the public, those results have to be pretty much spontaneous."

So what's in it for the competitor?

In New Zealand competitors had flights, accommodation, entry fees and aero time all paid for.

Pete said: "It was a once in a lifetime opportunity. We were more than happy to do this flying as it was so much fun, a real adrenalin buzz. New Zealand is an absolutely stunning place to fly – an exceptional place."

Raising the profile of gliding is essential to encourage the next generation of pilots.

"The sport is competing with the Playstation and all the other computer-based activities that kids can do these days," said Pete. "Whereas when I was a youngster, I just wanted to go flying, these days there are lots of other things that capture a youngster's interest.

"If we are not careful we will all become old fuddy-duddies enjoying our flying but not having the youngsters coming through to keep it vibrant and put that energy in.

'If we are not careful we will all become old fuddy-duddies enjoying our flying but not having the youngsters coming through'

"It's another benefit of the Grand Prix that with the filming they did the public actually saw what we were doing among the mountains. It is truly stunning stuff – going in and out of these rock faces at quite high speeds, very close to them. It's very exciting stuff and people don't usually get to see that aspect of the sport.

"So we need to do the Grand Prix in terms of getting the public interest because it is good for the health of the sport longer-term, as to whether we need to do it shorter term I am not so sure."

Attracting sponsorship is another advantage of the Grand Prix format.

"The problem is giving sponsors a good return," said Pete. "With motor sports you can guarantee exposure. With gliding, if it shines no problem, but if it's raining we won't be flying. Unless there is more TV coverage it's a job to get that exposure. With the Grand Prix you can package it up and make it neat for the television. If we can encourage sponsors and TV to get interested, then money will trickle in to all areas of the sport." ✈

Unfinished business

THIRTY-ODD years ago I went for a four-day gliding course over the Easter weekend at the Dorset Gliding Club (DGC), then based at the wartime airfield at Tarrant Rushton.

During the course and on days spread over the next few months I accumulated 23 launches. My progress was erratic. One problem was the unreliability of the launch system, a reverse auto-tow with V8 truck. This was fine until the single-strand wire broke or one of the splices wore out on the concrete runway; the wire then sprang into coils and took a long time to repair.

Eventually I gave up. Hang gliding was just starting and I got hooked on that instead. I was fortunate to experience its rapid evolution from 4:1 glide to 10:1 in the mid-to late-70s, then to switch to paragliders when they were making similar progress.

From time to time I thought about giving sailplanes another try. It seemed like unfinished business, so at the beginning of October I joined the Dorset club again, now at a leased field 10km from the coast. The gliders are different and so, fortunately, is the launching system, now a conventional winch using multistrand cable.

The power of the winch daunted me. The acceleration, partly with the wheel and skid still on the ground, seemed uncontrollably wild. I worried about the critical transition from the ground run to the climb, avoiding being in a nose-up attitude with too little speed to recover from a cable break. The full climb at 45 degrees attitude seemed very unnatural.

I thought that my HG and PG experience would help. Actually it both helped and hindered. On my HG I had my instruments on the left and tended to watch them during thermalling, so I was often looking down the wing. I realise now that I have carried this habit of looking into the turn into paragliding even though the PG instruments are central. In gliding, of course, the view should be over



Peter Robinson, who has described himself as an impatient late converter, encounters roos on the runway as he finally solos in the scenic surroundings of Australia's Lake Keepit

the nose at the horizon or scanning the sky for other aircraft - NOT DOWN THE BLOODY WING! The launch technique and control of the aircraft are so different that only part of my foot-launch aircraft experience is relevant – the bits about being comfortable in the air, being used to judging height, being familiar with the meteorology and aerodynamics, and having logged just over 7000km of UK cross-country.

But there is even a limit to the usefulness of the cross-country experience gained on HGs or PGs. Because a PG flies at little more than one-third of the speed of a sailplane, it usually thermals at a much lower angle of bank, but turns more tightly and is easier to centre.

‘There is another significant difference: I don’t recall ever needing to have the kangaroos cleared off the strip at the Dorset club’

This, coupled with the much more subtle ‘seat of the pants’ signals that you get in a glider compared with a PG, mean that working a thermal efficiently in a glider is a skill that needs to be largely re-learned.

My difficulties with winch launch, or the fact that a poor set-up or an obstructing aircraft on the strip could lead to the instructor saying “I have control” on final approach, meant that, six weeks and 26 short flights after I had started, I was making rather slow progress in launch and landing although in the circuit I was starting to get it together.

A business trip to Australia planned for late

November gave me the idea that maybe I could combine it with some gliding tuition. I was going to take my paraglider anyway. Searching the web for suitable clubs I thought Lake Keepit Soaring Club (LKSC) looked best; a seven-day a week operation with enough gliders for trainees and a nice big airfield.

When I phoned, it was a happy surprise to find that the manager and weekday instructor was Jenny Ganderton, originally from the IoW and with whom I had occasionally flown HG’s in the 80’s. Lake Keepit is a state park about 250 miles north of Sydney, and LKSC leases the airfield there. Because many of the members live a long way away, LKSC offers accommodation in cabins set amongst the trees alongside the runway.

After business in Cairns I was left with nine days at Lake Keepit. The other trainee for the week had cancelled so for much of the time I had the luxury of an instructor and aircraft all to myself.

I made a steady start in the Puchatek (Polish, aluminium) two-seater, interrupted over the weekend by members’ check flights and visitors’ “joy flights”. Then on Monday Jenny had me training intensively. The first nine flights that day included spins, stalls, simulated cable breaks, wave offs, hook-up procedure and recovery from being out of position on the tow. Preparing for the tenth flight I noticed Jenny just doing up the straps instead of getting into the back seat. When she brought some ballast over I knew it was time for my first solo.

Tow to 1600ft, release, join the circuit at about 800ft, downwind, diagonal, base leg, turn on to final, airbrakes out, and a good landing. Yippee! If the CASA (Australian CAA) hadn’t a strict rule against it I would have given my instructor a kiss! I quickly did another solo to make sure it wasn’t a fluke.

One important difference between the DGC and LKSC is that the LKSC uses aerotow instead of winching for trainees. I got to grips with that much more quickly. I enjoyed the relatively relaxed ride once the Pawnee had climbed enough to let me get below the wake turbulence. And, of course, the tug can head for lift.

There is another significant difference: I don’t recall ever needing to have the kangaroos cleared off the strip at the Dorset club.

More solo circuits followed, mixed in with more dual tuition, such as flying a circuit with



During a trip to Lake Keepit, Peter was able to fly the Silver duration and height gain tasks, this time off the winch

Lake Keepit from the Junior and (inset) roos on the runway



the altimeter covered, selecting possible outlanding “paddocks”, and tactics when joining other gliders in a thermal. The lesson that Jenny and the patient DGC instructors before her had been trying to beat into my head – don’t keep looking at the ASI, trim the glider correctly and keep your eyes out of the window – had finally sunk in and I was at last able to relax and enjoy the thermalling. After flights in the Twin Astir to adjust my landing technique to a more slippery GRP glider, by Friday I was ready for the Jantar Junior single-seater. With a fixed wheel and best glide of only about 35:1 the Junior is not a particularly high performance glider but, as I found, it is pleasant to fly.

I have flown at these heights countless times on HG’s and PG’s but this was a new fantasy come true – relaxed, lying back in a single-seat sailplane, banked up in a thermal above the Australian countryside, then pulling out and slipping easily across the sky to a distant cloud. In two flights I added nearly three hours to my solo time, only aborting the second flight because I had forgotten to top up my Camelbak and was worried about dehydration in the cockpit heat.

There is one other aspect to my gliding experience that perhaps I should mention; getting a real knot in my stomach before getting into the cockpit. In the early days it was a significant problem, to a point where it was almost only my pride that kept me going.

Why should I be so wound up when there was an instructor in the back who would always take control if things went wrong? Also, why should I be no more anxious when getting in for my first solo flight? It seems to be partly about not being in control of the timing: when you are on the flightline you have to go. You can’t just say to the tug or winch driver “Hang on a few minutes – I’ll let you know when I feel comfortable.”

‘It has gripped me more than I expected, so much so that I couldn’t resist a return visit to Lake Keepit a couple of months later’

When that cable is attached the “Take up slack” signal follows and that’s it: you are going in the next few seconds, like it or not, unless of course there is a real reason not to. Once the aircraft was rolling I was too busy to feel anxious.

Anyway I’m pleased to say that, now after 170 launches and 30+ hours solo, in various gliders, the problem has (almost) gone away.

Still unfinished business? Definitely. It has gripped me more than I expected, so much so that I couldn’t resist a return visit to Lake Keepit a couple of months later. The conditions were not epic but I had a single-seater to myself every day, and came back with another 17 hours in my logbook.

Unfortunately, and unusually, the countryside was too wet and overgrown for me to be cleared to fly the local milk runs. However on the last day I was able to fly the Silver duration and height gain tasks, this time off the winch.

Back in the UK I look forward to my first 100km flight. This distance should be no big deal in a sailplane but it appeals to me to make a boxed set with my other UK 100km+ flights, four on HGs and a couple on PGs.

I plan to go back to Lake Keepit again in the autumn.

As a footnote, on one day at Lake Keepit when the weather was unflyable I drove the 50km to the renowned Mt Borah, Manilla, hang gliding and paragliding venue (where you may remember that German paraglider pilot, Ewa Wisnierska, got taken above 29,000ft in a cu-nim during practice for the 2007 world championships, and survived!). There was a bunch of pilots stretched out on old sofas in an open shed that passed as the clubhouse, under blankets, “parawaiting”. It reminded me of nothing so much as a scene in an old-style TB sanatorium. I made my apologies and left.

■ Peter Robinson is a long-time hang glider, and now paraglider, pilot. He originally wrote this article for his local hang gliding and paragliding club to encourage them to try the stick-controlled variety.

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Preparing the gliders in the cool of the morning



Climbing through 9000ft in wave over Ontur

Training for the future

THINK our initial thoughts on the drive from Alicante to Ontur were along the lines of, "Where do you land?!". We went past field upon field of irrigation, olive trees and vineyards. It was our first glimpse of what we would spend the next week flying over and, a few wrong turns later, we arrived at a small airfield.

We were fortunate enough to have been selected for the British Junior Development Training, which was taking place in conjunction with the European Soaring Club. I, along with Stu Carmichael, Nick Smith, Will Ellis, Will Chappel and Andy Cockerell, would be coached by Andy Davis and Gill Spreckley.

The idea of the week was to provide us with the boost we need to be more successful in all aspects of our flying, and the week was run in a similar way to a competition. Waking up on the first morning, we were greeted by sunshine and blue skies. Unfortunately high cloud cover soon settled in, but we all had four or five hours local flying getting used to the area and the gliders. The airfield is situated at the bottom of a ridge, which is a great thermal generator – most tows were only taken to 1500ft, about level with the top.

The following day we settled into a routine,



Andy Davis and Stu Carmichael preparing for the task



A week's development training in Spain gave a welcome boost to the flying skills of a selected group of British Juniors. Charlie Jordan was one of them and shares his experiences

of getting the gliders ready in the cool mornings and returning for one or two hours of lectures. These were presented by Andy and Gill, and covered all the topics we could think of – from wind-shadow thermals to competition psychology!

It is a very relaxed atmosphere at Ontur – the thermals don't pop until around 1.30pm, with take-off shortly afterwards.

Day 2 was my turn in the Duo with Andy, and there were some clouds in the sky! We started quite soon after the gate opened, crossing at 7000ft (5000 QNH) straight into five knots. We were heading for a small airfield called Almansa, a TP we would visit regularly during the week. The general idea was for Andy to let me do the flying, but we would consult on decisions and I could ask questions if I was unsure about something, or the few times I forgot how to fly.

Although team flying was not really on the agenda it seemed to occur naturally, and proved how useful it can be. Andy and I were at the second turn in a deteriorating sky, with the four single-seaters shortly behind.

Although no one made it to the third and final turn, it was evident the passing of information and joint decisions prevented anyone landing out. Particular credit goes to Will Ellis, finding himself a tad low on the Almansa Ridge for a long time, yet managing to climb away. We thought he might learn from this, but Will somehow managed to visit the re-named "Ellis" Ridge every day during the week.

Day 3, and we all swapped gliders.

Realising the benefit of flying with a partner, Nick Smith and I joined forces in the LS4s. It was totally blue and, as we crept down track, we had long glides but powerful thermals. For me, this was one of the best days – with each of us searching for lift, we soon hooked a strong eight knots with an eagle and set off over the trees to Carceleau.

Having turned the TP, we carried on but soon became low. We had been briefed about the landout options, and the fact we were now below the wind turbines....I was sure we were heading for the huge circular field below us. But a miracle climb came along. It took a lot of work, but we were back in the race, albeit a long way behind now.

Stu and Will Chappel, flying in the Duos, had found a convergence which sped them to the final TP and home. Arriving some half an hour later, Nick and I climbed in a strong thermal around 80km from Ontur.

Initially thinking it was a blue street, we started gliding at 7000ft AGL and the only turn in 80km was going round the final TP. It was truly spectacular gliding alongside Nick on a comfortable final glide, considering the position we had been in just an hour earlier. Although we weren't being scored, we are competitive by nature! It was a race to the finish for the LS4s, but I think we all agreed this was a day win for Stu.

Following from the pair flying experience, the two Wills and I decided we would spend Day 4 in the LS4s together. It was an assigned area task, and it looked good – we even had a few clouds! Cruelly, they disappeared by ➤



Photographs in this feature by Charlie Jordan

> the first TP. As had Will Ellis, who we lost approximately 30 seconds into the flight... presumably he went on a jaunt to Ellis Ridge.

Chappel and I continued as a pair, following a similar route to the previous day. Passing over Ellis Ridge, we all met up (minus one – guess who) and struggled to cross the valley towards Carceleau.

Getting down to ridge height frequently, we had to work hard just to stay airborne. I went round the TP first, clipping the sector by inches. Will and I then headed back to a half decent thermal on the ridge. For me, this was the turning point in the flight – in the LS4s, we decided that with half the AAT time limit to go, we would crack on to the final TP 70km away, not head further into the sector.

It was a long, slow glide with few climbs. As the three-hour task timed out, we were on final glide, crossing the line at three hours seven minutes. LS4 drivers took the honours – though we had to find a way of attaching a leash to Ellis's glider. Unfortunately, Nick had to return to the UK after this flight for work.

One of the most beneficial parts of the course was the after flying de-briefs – an opportunity for us to talk about our flights and find out how everyone else had done. Andy and Gill would offer guidance, explanations and advice. It was a time to question each other, share what we'd learned and find different ways of doing things.

Day 5 and I was back in the Duo, this time with Gill. We made a start, but things just did not go right to start with. We all got low, and it was a scrape into and out of the sector, following the series of spine-back ridges to the North of Ontur. However, we were soon back into better air, following the Fuente Alamo ridge east of the airfield.

Taking a good climb where a motorway crossed the ridge, the Duos split up and took very separate routes into the Almansa sector. Ellis was with Andy in 98, and (naturally) headed for his ridge, while Gill and I went to the North of the sector. We could see a convergence ahead, and the climbs were



Relaxing after a hard week's training are British Juniors Charlie Jordan, Stu Carmichael, Will Ellis, Will Chappel and Andy Cockerell, who were coached by Andy Davis and Gill Spreckley with the help of Andy and Pami Davis, Pete Masson and Roger the Tuggy (who took this photo)

going higher – time was running out for the AAT, but we decided to continue pushing – if we could get high, we would be on a comfortable glide for home.

Coming under the clouds, we were climbing at nine knots! After exploring a bit we set off for Ontur – meeting 98 half way.

'He worked a small ridge for what seemed like an hour, and eventually a bubble came through to give us a much-needed 500ft'

Two very different routes had similar outcomes, and we had a fast run home. That evening we had a look at our traces, which confirmed the varied routes, including Will Chappel's tour of Spain after going around the last TP! This day was interesting for the sheer variety – from scraping ridges, to strong thermals, to a convergence – it had it all. Pair flying didn't really happen, perhaps a sign

that we were all becoming a little more independent, a bit more adventurous and a lot more confident in our ability to find climbs in the blue.

The final two days were both airborne scrubs – although it was soarable, it was not going to be possible to complete either of the tasks. Andy Cockerell and I decided to pair fly a short fall-back task – an out and return to Losa, approximately 50km.

After Lap 1, with a better understanding of the way the thermals were coming off the ridges, we tried Lap 2 – remarkably quicker.

On the penultimate day, I was with Andy in 98 – he was doing the flying. We were determined to get to Pozohonda, the first TP, even though we had all turned back earlier in fear of a mass landout. It was a long and slow run, eventually ending up at not-very-high feet above the ground.

He worked a small ridge for what seemed like an hour, and eventually a bubble came through to give us a much needed 500ft – enough to get to the next ridge. In fact, it continued like this all the way back to Ontur – utilising weak bubbles to step across to the next ridge, never going much higher than 1500ft AGL. It was flying like this that wins competition days. Two hours earlier I would have landed out, but there we were on glide for the airfield.

We were given our appraisals – a really insightful chat with the coaches to discover their thoughts on our flying, good points and areas that could do with improvement.

On behalf of the whole group I would like to thank Gill and Brian Spreckley, Andy and Pami Davis, Pete Masson and Roger the Tuggy for all their help. It was a fantastic week, very educational, good fun and now I look forward to putting it into practice.

■ Charlie has been flying for nine years, since he was 10. He soloed on his 16th birthday and has around 300 hours. He flies a Std Cirrus out of Aboyne and is about to start an architecture course at university.



With Andy Davis, flying low over the large and landable irrigation fields. A landout was looking inevitable, but then along came a miracle climb putting Charlie and Andy back in the race

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Club news



Andreas chairman Graeme Howie flew his Silver duration during a visit to Aboyne



Maddie Findon celebrated a solo at Bidford



Banbury's Ian Broom soloed in June with a flight lasting more than 45 minutes

Andreas (Isle of Man)

WITH the tug out of action it was almost a certainty that the winch engine would pack up! After stripping and rejecting several supposedly good engines, we have finally found, rebuilt and installed one that purrs. Many thanks must go to Dave Wiseman for all his hard work. Several of our members were made most welcome at Aboyne recently and had a great time despite a lack of wave. Whilst there Dylan Smith and our chairman, Graeme Howie, both flew their Silver duration in thermals and Tony Webber completed his Bronze flying tests. Brian Goodspeed managed to do his first field landing only two miles from the airfield. Following a report from a member of the public that they'd seen an aircraft go down, the local police turned up and Brian was promptly breathalysed! Needless to say the result was negative and the bobby was roped in to assist with the de-rigging.

Brian Goodspeed

Banbury (Hinton-In-The-Hedges)

IAN Broom soloed on Sunday 8 June. His first solo flight lasted 45 minutes. Ian has worked relentlessly over the past two years to achieve solo standard. We are all delighted that his unrelenting resolve to fly solo was achieved. We welcome Lloyd Beesley, Andy Donovan, James King, Ivor King, Gordon Melvin, Martin Melvin and Martin Paul as new members. Friday flying is proving very popular for training and cross-country pilots now recognise the advantage of this extra day. Poor weather led to the cancellation of our first ICL competition that was to be hosted by us, but hopefully now the weather will be kinder and lead to some good cross-country flying.

Rod Watson

Bannerdown (RAF Keevil)

FIRST of all the congratulations – Brian Poulson on his Silver height, Terry Brown on his NPPL and Merv Ridout on the arrival of our new kitchen. Our longest day party and barn dance was great fun – thanks to all who helped organise or clean up. Lots of expeditions going on with members at Romorantin and Sisteron at the moment, and a number of people planning to do competitions this year – good luck to all!

Alison Arnold/Debb Hackett

Bath, Wilts and North Dorset (The Park)

OUR open day in May dawned in rain, and most thought it was going to end up as a member bonding day, but the skies cleared at lunchtime and flying started. The day gradually turned into a great success, and thanks go particularly to Alan and Jan Bailey and Jackie Wilson who organised it and to a great number of members who turned out and worked hard on the day. Over the last few weeks members have been taking advantage of some of the better weather coming our way. One good weather day was laid on for the interclub league. Not only did we launch a large number of club and visiting members but we also flew a large number of day members. The day

was well organised by Steve and Leslie Lambourne who also, along with Laura Hawkins, arranged a superb evening hog roast for everyone to celebrate Mark Hawkin's special birthday.

Jan Smith

Bidford (Bidford)

JUNE has seen two new solo pilots – Dave Curry for the NPPL and Maddie Findon in a glider. Well done to both of you. We are expecting some good weather for our Regional Competition, which should have hopefully proved the case by the time this is issued, and we are looking forward to two fun Fly-Ins going on here – Tiger Moth Fly-In on 15 August, and the BMI 'Bash' on 27 August. The NPPL SLMG is still proving very popular, and our little stalwart is earning its keep. Visit <http://www.bidfordgliding.co.uk/npl.htm> for more details. We have a very friendly, welcoming, relaxing club here, so come along and say hello.

Lynne Burkert

Black Mountains (Talgarth)

AFTER an interesting AGM and subsequent EGM, the committee structure at Talgarth has changed considerably and is still settling down. More next issue! Bo Nilsson is hard at work as our summer instructor and we have just completed an aerobatic week and look forward to introducing our members to the joy of the BGA Duo Discus. Work is progressing well on our new briefing/training facility to comply with future EASA regulations and an excellent series of training videos is being produced under the guidance of Martin Langford, our CFL...these are on our website so have a look and then come and do the real thing! Visitors are always welcome – we operate seven days during the summer.

Robbie Robertson

Booker (Wycombe Air Park)

I WRITE this just after the 2008 AeroExpo. We sold several thousand pounds worth of courses and lessons. We also evacuated some of the club to Haddenham; our warmest thanks to the Upward Bound Charity for the warm welcome. Recent achievements: Geoff Tabbner turning Land's End from Booker (he had to turbo back from North of Exeter); Matt Cook and Tim Scott for their first 500kms of the season; Matt Cook, Alan Johnstone, Owain Walters and Jim White all completing their first 300kms of the year; Don Harvey, Hugh McDonald converting to the Junior and Don also getting his cross-country endorsement; Jeff White (BBC) managing his five hours in their K-21 and earning his cross-country endorsement; George Greenfield, John Whiting and Leon Gould soloing and converting to the K-18. Jane Moore and Bob Smith completed their Assistant Instructor ratings and Hugh McDonald has become Club Secretary. We've had to increase some charges due to rocketing fuel costs, but we're holding up. September sees our second task and "Get your Solo" weeks of the year by our Annual Aboyne expedition.

Roger Neal

Borders (Milfield)

THE weekend of 15 June proved a great start to the summer. Andy Bardgett went round what he thought was the 'Old Gits Triangle' (100km task) only to be told by one of the founder 'Old Gits' that he'd used the wrong turn point! Helen Frazer and Graham Mitcheson also completed their 100km diplomas and also in both cases completed their Silver badges. Well done to all three. The end of April and start of May saw Ian Surley claim Diamond height with a climb to 19,500ft, Mark Fielding claim his Gold height and we also saw a solo from Steve Newbold. Our chairman Alistair Fish clocked up 1000 hrs in gliding. Oh – and some bloke called Rich Abercrombie completed his Assistant Instructor rating. A big thanks to Colin Sword and Bill Stephen for all their help.

Rich Abercrombie

Bowland Forest (Chipping)

USUALLY when the words Club Week pass the lips, the rain starts. This year, however, provided very good ridge soaring, thermals and wave! Steve Nichols was sent solo and Roger Shackleton managed to complete his five hours. Congratulations to both and any others who may have completed personal goals. BFGC was present for another year at the Myerscough College open day on the 1 June. Unfortunately the weather wasn't quite so kind and umbrellas were the order of the day. The inclement weather didn't stop the hardy Lancastrians turning up to take a peek at our club Astir. Three people even bought vouchers for a trial lesson, and our usual collection raised £35 for the North West Air Ambulance. Thanks go to all who took the time to help out. A number of members will be visiting other sites this summer and anyone wishing to visit here will be very welcome to sample the delights of flying in the stunning countryside of the Forest of Bowland.

Phil Punt/Tracy Joseph

Bristol & Gloucestershire (Nympsfield)

CHAIRMAN Richard Grey and treasurer Trevor Stuart announced they will stand down at the next AGM. They have been in post for three years and Richard has done five years on the committee. Committee member Rob Thompson is also to stand down. Our thanks to them all. Matt Davis has a £500 Royal Aero Club bursary to pay for his training this year. Gavin Wrigley managed many cross-countries with pupils, mostly on grotty days. All returned with smiles and looks of amazement. Three LGC cadets had a week of cross-country training with Trevor Stuart in preparation for the Junior Nationals in August. We were sorry to hear of the passing of Keith Aldridge, an ex-Spitfire pilot who became a

Please send news to editor@sailplaneandgliding.co.uk or to Susan Newby, BGA, Kimberley House, Vaughan Way, Leicester LE1 4SE to arrive by 6 August for the next issue (later deadlines at www.gliding.co.uk)

Club news

➤ club instructor, a competition pilot and our chairman (see obituary page 63); also of the death of former member Bill Britton. We were also sad to hear of the death of Alwyn (Sutty) Sutcliffe. He was the club's longest-serving member.

Bernard Smyth

Burn (Burn)

AS Mark Twain might have said, "the report of Frank Thompson's retirement from flying was greatly exaggerated". He has, in fact, re-soloed at the age of 88. David White, also a long-serving Instructor and Technical Officer, has also re-soloed. We wish them many years of happy gliding. Our soaring season has got off to a good start with a clutch of Silver badges. Graham Higgins and Gary Vaughan also gained the 100km diploma at the same time. Ron Jubb had to take time off from his aerobatics to complete his. Congratulations to them all and also to David Dutton, who completed his first solo flight. Our airfield has come under threat again. This time it is from the ubiquitous Eco-town but we are confident that we have many years of gliding still to come at Burn.

George Goodenough

Cairngorm (Feshiebridge)

MAYFEST was a great success with visitors from Bowland Forest, Weston on the Green, Portmoak, Aston Down and Welland. We also welcomed back Walking on Air, the flying for the disabled association with their converted K-21 and LS7. Exciting flying was had by all, especially in our rough south easterly winds. Most pilots enjoyed barograph bending wave with Paul Myers topping out at 18,500ft, Nick Norman flying a Kenmore return cross-country, and Paul Myers once again flying Ben Nevis return all at 9,700ft. The bar did a roaring trade! Thanks go out to tug pilots Chris Fiorentini and Bob Forrest, CFI Bill Longstaff, and all who helped to make Mayfest a success. Octoberfest will run from 27 Sept - 12 Oct. Bookings are coming in fast, so if you would like join us please book with Chris on chris@capercaillie.flyer.co.uk asap. Check out our website for more details on www.gliding.org. We look forward to seeing you.

Chris Fiorentini

Cambridge (Gransden Lodge)

WELCOME again to Andy Beatty and Robert Theil, our resident full cat instructors. Both are now M.G. instructors so we can offer seven-day gliding and M.G. instruction. A free flying offer on both club Juniors for members and visitors is helping to combat the economic blues. Congratulations to Brent Noble (a visitor from Rattlesden) and Oliver Whitelegge, our newest solo pilots. Our open day (27 April) was a great success with refreshments, static displays and trial flights particularly popular. We are all looking forward to our Regional Comps 2-10 Aug.

Derek Coppin

Carlton Moor (Carlton Moor)

The K-13 is in bits having its CofA. We have not flown much this year due to a combination of poor weather and lack of crew. We urgently need new members at

what we believe to be the cheapest club in the land. At our recent AGM, Dave Hughes retired from being the Treasurer and was replaced by Alan Wells. All other officers volunteered to continue. Our 'Committed Flying Fees', where we pay a lump sum up front to pay for the insurance, remains in place and is keeping the club viable. Safety Officer Nigel Ling is well on the mend following his heart attack and threatening an early return. It has excused him all heavy work for a while but how long this excuse remains valid depends on his acting ability.

Nigel Ling

Channel (Waldershare Park)

THE arrival of a new K-13 begins a very positive period for Channel Gliding Club. Our fleet now consists of three two-seat aircraft and one single-seat glider. Three new instructors, Colin Fretwell, Matt Waters and Ian Keyser, sacrifice their time to hone our gliding skills. The club has had several new members join including Paul Bolton who celebrated his return by taking the K-6 soaring after his check flights. Congratulations also to Alan Tilbee on his Bronze leg. The other major project for the club has been remounting the winch machinery on a new chassis. The east European leviathan has been replaced by a more nimble and reliable Japanese Mitsubishi. Thanks to Peter Tucker and his team for the upgrade. Thanks also to regional safety officer Hugh Browning for his recent inspection and the constructive advice.

Nigel Shepherd

Chilterns (RAF Halton)

CONGRATULATIONS to Jonathan Davidson, who is now full Silver and has completed his 100km diploma - not bad as he only soloed on his 16th birthday last year (28 October).

Andrew Hyslop

Cleavelands (RAF Dishforth)

THE Yorkshire interclub league and soaring season finally got going after some recent poor weather, and hopes are high for a good summer. As a club we can have people staying overnight again thanks to the nod from our army hosts. This has been met with an enthusiastic response from the student pilots, even if it does involve being subjected to Baldrick's cooking! With the social and soaring aspects well in hand, we should say well done to Will Scallan for an exemplary circuit on solo number 1, and Yirka Matusik, who has been making rapid progress through his Bronze. Congratulations also to Phil Kelman, who has landed a job with Highlands Airways, and Bob Crick, who completed Silver with his five hours and 50km in June. Well done everyone!

Matt Woodhouse

Cotswold (Aston Down)

WE now have the first of our PW-6 two-seat trainers with the second expected shortly. The aircraft has proved very popular and appears to have an excellent soaring performance besides being well suited to basic instruction. We anticipate that our new PW-6s will

gradually fill the training role currently occupied by our K-13s. We welcomed pilots from Staffordshire and Mendip gliding clubs for a low profile task week and were lucky to have a week of good weather. Our spring expedition to Portmoak suffered from easterly wind syndrome but we did manage to fly every day. We took our DG-500 to Kemble air day as a static exhibit and this proved very successful in attracting new members. The flying display was very impressive including appearances by a number of Tornados, Hawks and the Typhoon. An un-named club member was heard to remark absolutely dead pan to the CFI. "Isn't that one of our K-13s up there above those Tornados?" It took a short while for Simon to see the joke.

Frank Birlison

Cranwell (RAF Cranwell)

CONGRATULATIONS to Peter Kingwill and Tim Davies on completing their NPPLs under the guidance of Mick Lee. The interclub competitions are well under way with Miriam and her team looking towards another fruitful year. Angus Watson came third in the annual Tibenham regional's - well done to him. Congratulations go to Becky Seyburn and Louise Beech, both who recently went solo and hopefully will progress during the forthcoming months and make some additional badge claims. We say farewell to Morag Allen who is moving up to Scotland and wish her happy gliding. Finally it has to be noted that despite finding out that an engine and propeller can keep you airborne, Tim Davies has also achieved the club's first land-out in his glider this year (That would be lack of lift!).

Zeb Zamo

Crusaders (Kingsfield, Cyprus)

THE warm weather is firmly in place now and soaring is hard to come by. May and June saw two pilots going solo. Greek Cypriots Andreas Efythychiou and Themis Mantis earned their wings. Also we have had news that one of our BI's, Ian Shepherd, passed his half cat course too - well done boys. Lots of paperwork has been flying back and forth to the UK and we are now in possession of the transitional CofA for all our aircraft. Even more work on the ground has seen fresh paint and new signs popping up everywhere! The club has passed both the Encroachment Audit and the Defence Internal Audit with flying colours due to the hard work of members. We are even reviewing and re-writing the Flying Order Book (adding safety duties, etc) and the Club Constitution.

Jo Rigby

Darlington (Darlington)

ACTIVITIES at our combined Darlington/Notts club, both flying and social, continue to develop with excellent weather conditions resulting in a crop of individual achievements. First solos, re-solos or conversions to other glider types, for Dave Cosgrove, Ivan Powis, Peter Barratt, Keith Hobbs and Barry Patterson. A first land-out for John Salvin as well! Congratulations to all. Changes in the club flying organisation too with our CFI, John Maddison,



One of Channel's three new instructors, Colin Fretwell, pictured (we are reliably informed) during an audition for Trinny and Susannah's What not to Wear



Peter Kingwill and Tim Davies pictured at Cranwell on completing their NPPLs under the guidance of Mick Lee



What's this? Could it possibly be the new fleet and a radical approach to training at Derby & Lancs? (Dave Martin)



Congratulations to Gerard Maguire who went solo at Devon & Somerset in May



Peter Smith was sent solo during a summer course week at Devon & Somerset



Dorset would like to thank Barry Thomas (above) for many years spent maintaining the club fleet

appointing two Assistant CFIs in Barry Patterson and Al Docherty. Our 1300m extended lawn is now looking in excellent after much attention by Bob Tatlow, Nick Ashton and others. The club members will be active in the competitions – Wood & Glass at Trent Valley (Kirton) on 12 July and the Two-Seat at Wolds (Pocklington) in August and, with our second Darlton Flying week commencing on 24 July, we extend and a warm welcome to all visitors.

Geoff Homan

Dartmoor (Brentor)

CONGRATULATIONS to Hugh Gascoigne who re-qualified as Asst Cat Instructor, and is already having a huge effect on Sunday flying operations, taking the heat off our CFI, Roger Matthews. So Sunday is the new Wednesday! Congratulations also go to Ray Staines who, on 18 May, was just pipped for his five hours by 10 minutes or so in the dying gasps of the day. Better start flying earlier next time, Ray, and stop helping people out on the ground! Our photo (see page 56) is a panoramic shot taken by Alan Ballard on Wednesday 27 February, looking south across the hangar on of the many easterly wave days we have experienced this year at Brentor, which shows smoke from swaying (gorse burning) activities on Dartmoor being scooped up into the wave and over the downsides.

Martin Cropper

Deeside (Aboyne)

WE enjoyed hosting the Scottish Interclub League, with Aboyne as overall winners. Both days were strong thermal conditions, with some competitors finding wave. The next Interclub is to be held at Feshiebridge. Fiona Bick has been nominated as our new chairperson and will take over from Paul Boath – thanks go to him for his work over the last couple of years. Mike Whyment took home the Chairman's Trophy at our AGM. Team Capstan will be taking on the best at the Two-Seater Comp this year, and a few of us young'uns are heading to Nympsfield for the Juniors. Our wave season is year round, so book now to extend your season. There are just a few places available in the UK Mountain



Dorset's Neil Watton went solo early in June on a day that did not get soarable until late afternoon, at which point many pilots rushed to get launched

Soaring Championships – fun and friendly but competitive – www.ukmsc.co.uk We have a new webcam, and now the ability to buy trial flight vouchers online.

Charlie Jordan

Derby & Lancs (Camphill)

WE welcome Dave Moss as instructor for summer, and John Sconce as winch driver. Lots of congratulations: five solos – Dave Lee, Peter Howden, and Mick Featherstone, on our early season members course, then Adrian Long and Martin Thorne. Colin Hinksman completed his BI course, and Tom Bell has joined us from The Park, also adding to our BI ranks. We have a new Flying Blog, accessible from our website, to show what flying from Camphill has been like. We are trialling a 10mm plastic rope on our SkyLaunch, the simulator continues to be of great benefit, perhaps it had something to do with those five solos, and we are considering a radical approach to training (see photograph below left)! The annual expedition has returned from Portmoak, reporting eleven days hill, thermals and wave. An expedition is being planned to Aboyne again in September.

Dave Salmon

Devon and Somerset (North Hill)

SEVERAL members of the club enjoyed a successful trip to Portmoak in April. Three privately-owned gliders went up as well as two club gliders, the junior and the DG-505 and each on average were flown for nearly 12 hours. Clive Williams and Lisa Humphries achieved their five hours and this means that Lisa has now completed her Silver badge, well done. Richard Barden got his Silver height and Matt Wright gained his Gold height. Congratulations to both. The 2009 trip is already organised! We have had interest and visits from two of our local papers: the reporters have written very favourable pieces and the video made by one of them is currently on our website www.dsgc.co.uk In May Gerard Maguire went solo, as did Peter Smith during a summer course week in June, congratulations.

Kaye Alston

Dorset (Eyres Field)

AT last – reasonable soaring weather. Saturday 7 June saw Carol Marshall complete an out and return to Longleat, and Ian Bateman flying to Longleat with a diversion to Salisbury. Many pilots enjoyed long flights. Shaun Reason did his Silver height and both hours for his Bronze badge. Well done. Sunday 8 June did not get soarable until 16:00, which saw many pilots rushing to get launched to make the most of the small window. That day we saw Neil Watton solo. The club's repaired and refurbished K-8 G-CFOR had its test flight and was given the all-clear. Sunday 15 June saw Paul Hale convert to the Astir, and we have a few pilots now who will be vying to get into our only Club Class glider. Gary Shaw has donated a double glazed sliding french door for the clubhouse, and thanks to his and

Dave Finch's tireless efforts it is now all fitted and means visitors can see most of the gliding field from inside the clubhouse.

Colin Weyman

East Sussex (Ringmer)

IT'S been busy in recent weeks with two of our scholars, Martyn Wilson and James Gair-Stevens, both going solo – James on his 16th birthday (see page 57). Mike Collins was sent solo and soared for over two hours. Also worthy of a mention is Simon Kahn, who managed to complete his Silver badge. We seem to be welcoming several new members who are returning to gliding and congratulate them on their rapid retraining and type conversions. Task distances are expanding from Ringmer all the time, due in no small part to Steve, our deputy CFI, and his relentless pressure to "do something". The end to our field improvement works is in sight. Phase 2 levelling should be under way soon to be followed by seeding, ready for next year when we will have full use of the field back.

Jim Izzard

Edensoaring (Skelling Farm, Penrith)

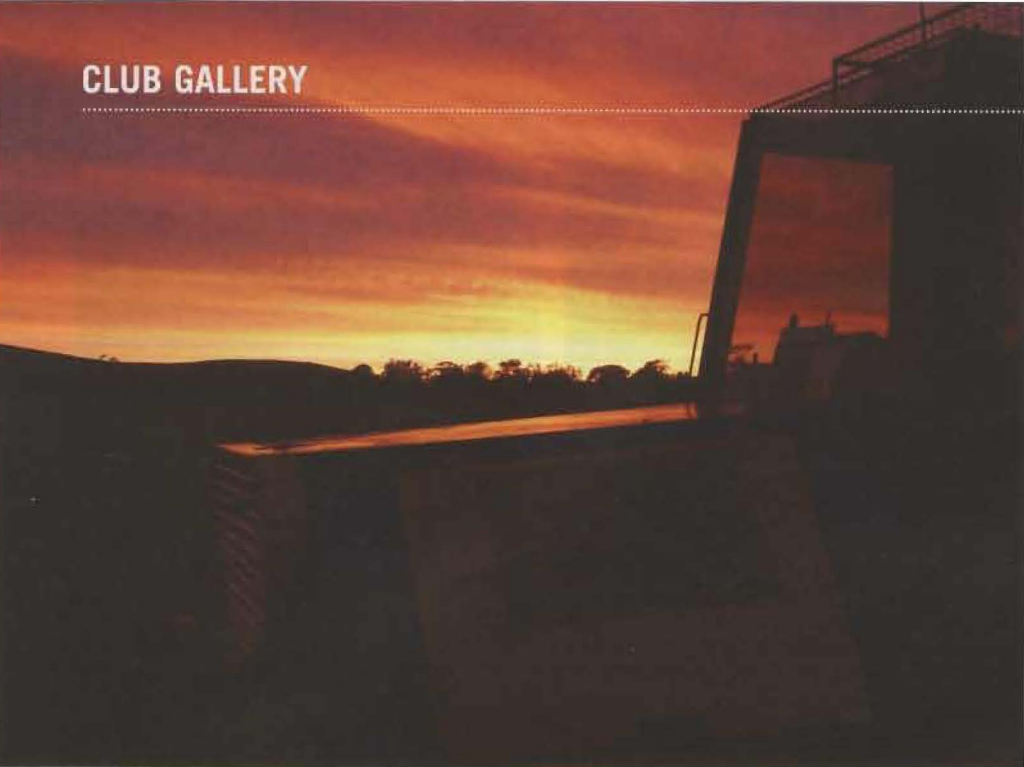
APRIL'S Lattrig expedition was fun, with our guests the Edinburgh University GC and those who weren't busy revising flying around and above the mountains in easterlies. May's Penrith week at Skelling, again in easterlies, allowed almost everyone to taste a weak and ragged Helm Wind, David McCarthy and Ian Ashton reaching 9,000ft plus. Most of the 30 pilots experienced hill and thermal flying around the Lake District mountains. As I write, Eden Epic week is going well, with a return to westerlies at last. More visitor weeks ahead, log on to www.edensoaring.co.uk for dates in September and October. We have clear airspace overhead and over the Pennines to FL195 in the lee of The Lakes allowing Diamond height from the launch. Plans are afoot to be open every day May to October in 2009, and possibly winter flying too if we harden the strip.

Pete Whitehead

Essex (Ridgewell)

THINGS have been quiet recently. However we have not been entirely inactive. We congratulate Sam Fisher on completing both soaring legs towards his Bronze and extend a very warm welcome to our new member, Lewis Brooks. It is good to see yet another youngster joining the club; it keeps us oldies on our toes. We do have a number of courses and evening flying events booked over the coming weeks, as well as trial lessons, so that should keep our treasurer Tony Brooks happy. The weather was kind for our first flying week, with one particular day producing some good strong thermals. As has become traditional the week ended with a Bar-B-Que, and once again we thank Sue and Geoff Martin for organising a most enjoyable evening with plenty of food and various liquid refreshments. Well done to everyone involved.

Peter Perry



This page, clockwise from top:
Bowland Forest's winch pictured just before first launch at sunrise on Midsummer's Day
 (Graham Rendell)

The May Feshie Fest at **Cairngorm** during the first week. Picture taken by Emily Hadley (aged 11 3/4)

Dorset's newly-refurbished K-8, G-CFOR
 (Colin Weyman)

Looking south across the hangar on one of the many easterly wave days experienced this year at **Brentor**. Smoke from swaying (gorse burning) activities on Dartmoor is scooped up into the wave and over the downside
 (Alan Ballard)

Opposite page, clockwise from top left:
Dunstable held a Girls get Gliding day which provided useful feedback on how to make the sport/club more attractive to women
 (Conny Andersson)

K-13 at **East Sussex** landing late in the evening against a backdrop of the rolling Sussex hills
 (Jim Izzard)

This bear tried to hitch a ride with Mark Parker in the camera mount on the nose of his PIK-20b glider, P20, at **Nympsfield**
 (Bernard Smyth)

Southdown has to give up its airfield twice a year for Point to Point horse racing, providing an opportunity to practice short field landings over real obstacles! John Halls and Mike Hasluck are pictured flying one of Southdown's K-21s
 (Stuart Ross)

Some of **Dorset's** fleet ready to go flying
 (Colin Weyman)

James Gair-Stevens on his 16th birthday about to winch launch on his first solo at **East Sussex** and (above) James aged four sitting with his father in his grandfather Ian Smith's Club Libelle. James won a club scholarship last year
 (Ian Smith)

Our thanks to all the photographers and to our Club News contributors for sending these in. Remember, if you'd like to submit your previously-unpublished photographs for possible inclusion somewhere in S&G, do send them to editor@sailplaneandgliding.co.uk



Club news



Many congratulations to **Kestrel's Krishna Tilley** who has soloed at 16

Essex & Suffolk (Wormingford)

WE have managed to record a good number of new achievements including first solos, re-solos, a Bronze badge and other badge legs so far this season. And of course the cross-country pilots have been out and about over East Anglia and beyond – normally, but not always, getting back successfully. The refurbished and re-fitted “German” winch is now up and running allowing the “English” winch to be brought in for some TLC. We have been pleased to see a steady flow of trial lessons and day courses for members of the public wanting to see what we are all about, and also organised groups for “corporate” gliding events and similar. A reporter from a local newspaper also flew with us; she concluded that we were all “bonkers” (in the nicest possible sense) but enjoyed the experience and rewarded us with a two-page spread – the phone was ringing within hours.

Dick Skinner

Fenland (RAF Marham)

CONGRATULATIONS to John Doubleday for attaining his BI rating. Fenland welcomes back Chrissie Alexander. The expedition to Sisteron went well. Our AGM saw a new trophy donated to the club by Graham French for member of the year as voted for by the members, which was awarded to Mitch Middleton.

Natalie Day

Four Counties (RAF Wittering)

EARLY May saw us hosting visitors from Nene Valley GC, coinciding with our BI Course, making for a very busy weekend. Congratulations go to Alan Ellis and Pete Davey, as well as to John Doubleday from Fenland GC, now all newly-qualified Basic Instructors. Congratulations also to Jon Morris and Alex Eden, who have completed their Silver distance legs. Alex was rewarded with the post of Bar Member, taking over from Pete Pearson, who can now concentrate on his other committee posts! Many thanks to both. Also joining the committee is John Bennett, taking over the position of Aircraft member from Charlie Ingram-Luck. Many thanks to Charlie for his hard work over the last year, and good luck to John. The beginning of June saw the club hosting its second ICL event at Wittering; the first day was good enough for club flying, the second provided a competition task. Our next event will be the Station flying day, with lots of launches, and hopefully some new members.

Pete Davey

Herefordshire (Shobdon)

WE welcome Peter Poole as a new member. Peter has been flying with us during the winter on our wave membership scheme and he has now converted to full membership. We are delighted to have him as an addition to the instructing rota and he brings great enthusiasm and a wealth of valuable experience from his time flying at other clubs. A club flying week was organised for the Spring Bank Holiday week, but the weather was disappointing, with very little flying. Our CFI Mike Dodd, and John France have become so disillusioned with the weather that in desperation they



Lakes has been busy constructing its own hangar, funded entirely by members

have sneaked away to try paragliding while they wait for the summer to arrive. At the time of writing this, a small group is about to leave for a trip to Jaca in search of some sun and soarable weather.

Diana King

Highland (Easterton)

THANKS to the efforts of Stuart Naylor and Billy Fisher in getting aircraft ready in time, Highland (and our friends at Fulmar) did well in the first stage of the Scottish Inter-Club League. Fulmar took 2nd place and Highland 3rd. Geddes Chalmers won the Intermediate Class for Highland. Scott Napier flying in the Novice Class for Fulmar also did well. The two tasks also gave Scott his first field landings, completed successfully.

Congratulations to Stuart Naylor on becoming a tug pilot. Well done Martin Knight and John Thomson, both of whom successfully completed the Basic Instructor course held at Easterton. Thank you to Martin Knight and Calum Reid for hosting a static display of Astir 770 at the Moray Motor Fun Day in June, thousands attended the event. Geddes Chalmers has painted the white “double cross” gliding sign on the roof of our green hangar which should make Easterton easier to identify for visiting pilots.

John Thomson

Kestrel (RAF Odiham)

A good start to the season was had over an early task weekend with a number of members progressing their badge stakes, and congratulations go to Krishna Tilley who has soloed at 16. We now have power permanently available for our launchpoint caravan – thanks to the efforts of a large group of members who turned out to help construct the required trench for the power cable. The club will again be providing a static display at the Aldershot Army Show to present gliding not only to service personnel but to a much wider public audience. Finally, a big thank you must go to Chris Hyde, our OIC, who has stood down due to his imminent departure from Odiham; we all wish Chris and his family well for the future and thanks for his efforts and skills in improving the club over his tenure.

Neil Armstrong

Lakes (Walney)

IT'S been a busy few months with hangar building, committee changes and getting the most out of the winter wave. Changes to the committee include; Rose Saunders – chairman, John Martindale – vice chairman, Andy Tebay – treasurer, Neil Braithwaite – secretary. Huge thanks to retiring officers Peter Lewis, Roger Copley and Phil Storer for all their hard work and enormous commitment to the club. Changes to BAE's fleet has meant we are in the process of constructing our own hangar to house our tug, motor glider, club aircraft and several privately-owned gliders, funded entirely by club members. The past few months have brought us a mixture of wave and thermal conditions; notable flights include a 503km flight by A3 in April. More information and photos can be found on our website www.lakesgc.co.uk

Kate Frost



Lasham's bar has won the local CAMRA Club of the Year award for the second year running.

Lasham Gliding Society (Lasham)

A number of members have done well in the National Aerobatics Championship at Saltby. In the Sports class, Matt Plumridge, Jonathan Ross and Charles Baker took Gold, Silver and Bronze respectively. In the Beginners, Johnny Mak and Emeric Massaut came first and second. Well done! Work is under way to prepare for the FAI Qualifying Grand Prix from 1-6 September. Saturday 6 September is to be a public event and, alongside the competition, we've got the British Disabled Flying Association trying to set a world record for how many people in wheelchairs it takes to pull a Boeing 757 along the runway. A variety of other displays and the 757 doing a display are anticipated with a big party to celebrate the society's 50 years to follow in the evening. Congratulations to Nigel – the bar has won the local CAMRA Club of the Year for the second year running.

Alastair Mackinnon

Lincolnshire (Strubby)

CONGRATULATIONS to Dave Ryder for his cross-country endorsement and to Dave King and Hugh Donnelly for converting to K-8. At the recent AGM, Dave King took over from John Brookes as publicity officer. The rest of the committee soldier on. The club is working with a local charity for the visually impaired, Foresight, to provide gliding experiences for their members and this is going down well.

Dick Skerry

London (Dunstable)

CONGRATULATIONS to Mike Henry and Richard Reeder on going solo, Luke Barratt for his Silver, and Bronze for Steve Mordecai. Martin Hayden and Richard Lodge have completed their Assistant Instructor ratings. Our clubhouse, which dates from the 1930s and has listed status, is being refurbished. The plumbers have finished and the electricians have moved in. The work will continue with improvements to restrooms and shower facilities, and later the attention will turn to windows and cladding. The Girls Get Gliding day was a great success with more than 40 ladies trying gliding for the first time. This was a new experiment to attract and enable more women to try our sport and to dispel the notion that it is mainly for men. We are looking forward to the Algek Cup, our beginners aerobatics competition, which takes place in July.

Andrew Sampson

Mendip (Halesland)

A correction from previous club news – Andy Whiteman completed his Gold and Diamond heights when he visited Aboyne. Following an excellent trip to Cotswold Gliding Club in June, congratulations are offered to Patrick Haxell in completion of his Silver after an 11-year wait for his height. Jeff Green managed to out soar Terry Hatton and made it to Bicester for his Silver distance, while Terry sat in a field below wondering why! A shovel has been added to the Astir HTD's retrieve kit!

Terry Hatton



Nene Valley welcomed Alan Ing, visiting from Australia, during Spring Task Week

Midland (Long Mynd)

DESPITE the weather over the last bank holiday, flying at The Mynd has been busy, with people catching up on lost time. More flights have been appearing on the BGA ladder, including Jim List's 100km in the Ka8. The recent Rockpolishers competition at Nympsfield resulted in some great flights, including one where our DG-505 reached 11,000ft. The club had a stand at the recent Cosford Air Show, which was very successful. We signed up several new members on the day and obtained the contact details for many more who had shown an interest in gliding. The BGA simulator was popular and a rigged Duo Discus Turbo drew people in. We are now actively marketing "trial membership" as an alternative to the old "trial lessons", which we hope will attract those more likely to take up the sport.

Steven Gunn-Russell

Nene Valley (Upwood)

OUR annual NVGC Open Weekend in June was well attended. Members provided a great day's entertainment including the new BGA simulator and trial flights. This year's Spring Task Week was in May. The weather did not last despite encouragement from Alan Ing, our reciprocal guest from Queensland, Australia (see picture above). Also in May NVGC paid a visit to Four Counties Gliding Club at Wittering for two days of winch launch and aerotow flying. NVGC members enjoyed a superb weekend and delicious hospitality. Congratulations to Steve Jarvis and Chris Shepperd. Steve completed his half-cat course and Chris attained his BI rating in June. We were very pleased to meet Susan Newby (new S&G Editor) in May. Sadly we have to report that Roger Emms, our chairman, has had to step down for health reasons. Roger has been a dynamic driving force at the club and we will sorely miss his tremendous contribution. Our heartfelt thanks go to Roger for all his hard work over many years.

Simon Gent

Norfolk (Tibbenham)

THE 10-day expedition to Talgarth over Easter was a great success seeing many pilots land with big smiles on their faces after flying amongst the mountains. Many thanks to Ian and Jan Atherton for the organisation and instructing. Congratulations to Ben Harker on going solo and to Tom Smith who completed his 500km Diamond distance from Tibbenham. Unfortunately the weather was less than kind for the Eastern Regionals at the end of May which were won by Peter Stafford-Allen. Thanks to all the competitors for their patience and good humour. Let's hope for better weather for the Open Nationals in July. The BGA Rotax Falke paid us a visit so that we could assess how well it would fit in with our current operation. There was no problem launching a heavy two-seater on our short runway and those who flew it all had favourable comments.

Mike Bean

North Wales (Llantysilio)

WE have much to be thankful for this year with the increase in membership, but have been plagued with



North Wales club members doing the jobs that keep them in the air, laying the base for a new LPG tank

easterlies. Fortunately the pattern has been broken, affording us some great flying. Along with our new members from Denbigh GC came a gas-powered winch which, with the recent acute rise in petrol prices, will be of considerable value. We had some good coverage in two of our local publications – their reporter was very impressed and wrote a good article with pictures and a video on the paper's website. The North West aviation scene lost a valued member in Mike Sanders, who died in May. Mike was an accomplished glider pilot and went on to share a powered aircraft and still found time to devote his considerable talents to his chosen charity. Like so many it all started with him being given a voucher as a present by his wife.

Brian Williams

Oxford (RAF Weston on the Green)

HAVING spent some few weeks motivating members to do Mode S responses, we now find ourselves doing the same with 'Ecotown' planning. I hope all members reading this managed to send off something in an attempt to save the airfield. We are currently standing at first (and last) equal in the interclub league, following a three-day wash-out at the first event. OGC are very glad to welcome a new half-cat, Simon Calvert – well done Simon. Martin Laxaback completed his Silver with a well-deserved five hours. Our 'Friday Night' groups have proved popular again, and the three teams under Martin Browns' leadership have been performing well with our visitors every week. And more good news with a re-solo after a very long break for Pat Wallace. Welcome back Pat.

Neil Swinton

Peterborough & Spalding (Crowland)

CONGRATULATIONS to Tom Edger and Mick Upex on recent solos. This brings the total number of new solo pilots over the last year, to 11. Well done too, to Nick White for completing his NPPL. Our AGM was held during May; Kev Fear was voted in as vice chairman; Mick Burridge has stepped down after eight years service as safety officer and I have taken over this role. Many thanks to Mick for his service. We now have a new publicity team headed up by Garry Lacy and Natalie Hearn and many new ideas have already been put forward. Our first flying week in May was well attended but let down by the weather. We are hoping for better in August. We are saving hard to fund the concreting of our second hangar floor with many fundraisers already held – a massive thank you has to go to all the ladies who have organised these social nights, especially Glennice and Annie. Plans for our open day on 3 August are taking shape.

Merv Bull

Portsmouth Naval (Lee on Solent)

SOARING has at times been excellent over the spring. Well done to Nathan Liddle (Bronze leg) and Neil Shaw who earned his Silver badge after completing his 50km to Parham, and then went solo in our SLMG two weeks later. In June we have a three-week RINGSA expedition to



Portsmouth Naval's Neil Shaw at Parham, having just completed a 50k – the last leg for his Silver badge

Ocana in Spain, and also a significant Longest Day event, with our first evening meal at our new clubhouse. A team of 16 were kindly welcomed by Keevil as always for the last weekend in May, but sadly the weather was poor with 35-40 knot upper winds on Day 1, and a 500ft cloudbase on Day 2! Congratulations to Fran Aitken, who came 15th in a very strong field at the Overseas Nationals in Ocana, whilst Henry Freeborn and Andy Payne competed in the much-rained upon Easter Regionals at Tibbenham. We supported our annual Marie Curie charity event day, which went very well – thanks to all who helped.

Neil Shaw

Rattlesden (Rattlesden)

ALTHOUGH the weather hasn't been very good Rattlesden have seen plenty of firsts; Congratulations go to Andy O'Sullivan and Sam Woodgate on going solo; both were sent solo by Bod Blanchard during flying week in May. Also to Brent Noble, who went solo at Gransden; his first solo flight at Rattlesden was over an hour! Well done to Colin Pitt for passing his assistant rated instructor course. Roger Cottee and Sam Woodgate have both converted to the Junior and are clocking up the flights towards their Bronze badges. Congratulations to Lynne Morley who has flown her first solo aerotow. Congratulations to Alex Szymanski, who was sent solo in June by Mark Manning; the fourth of our youth pilots to solo this year!

Helen Page

Scottish Gliding Union (Portmoak)

FIRST of all, welcome to the new editor – Susan Newby, and well done on her first solo issue of S&G. Although we have had a steady stream of visitors, most of whom have gone away with smiles on their faces and badge claim in their pockets, the weather has been persistently poor. We even thought that the windsock bearing had become seized as it doesn't seem to have moved away from easterly for ages. Those who have persevered were rewarded: Rafal Yarusz, Andrew Willder and Andrew McBenet (first solo); Devon & Somerset visitors Lisa Humphreys, Clive Williams (Silver duration), Richard Bardon (Silver height) and Matt Wright (Gold height). The BGA Assistant Instructors course run here earlier in the year produced Al Rafings for our own Tony Brown and Ricky Jackson as well as Richard Abercromby (Borders GC) and Clive Crocker (Midlands GC).

Ian Easson

Shenington (Shenington)

THE weather for our Task Week (9-15 June) was reasonably kind enabling flying and friendly competition on all but two days albeit difficult with weak thermals at times and only two land-outs. Many thanks to Alan Langlands for organising the week and task setting and congratulations to Graham Paul as overall winner of the week's events. Congratulations also to Alistair Cook, Tim Donovan, Mick Furseon and Graham Paul on gaining their Basic Instructor ratings and Gavin Preuss for completing his Silver distance. June also saw the

Club news

➤ arrival of the newly-acquired K-21 to replace our Twin Astir and group visit from Lincolnshire GC (Strubby), with further visits planned by members from Portmoak and Bowland Forest during the coming months, together with Mary Meagher's 4th July Party (Saturday 5 July) with live music, our second Task Week (9-15 Aug) and our wooden ships comp (29 Aug – 1 Sept). All welcome!
Geoff Purcell

Southdown (Parham)

WE played hosts to the Vintage Gliding club in June, and were fortunate to have seven glorious soarable days. A wide variety of gliders were on display, ranging from Slingsby Kite 2's, Hutter 17s through to a beautiful Rhone Buzzard. We averaged 40 launches a day and Chris Wills, President of the VGC, was there to present the awards, as was the local press to give us plenty of publicity. Congratulations to Norman Lavendar for completing his Silver badge after a 36-year break, to Jackie Williams and Rick Foresheaw for gaining Silver heights and to cadet Charles Price, who went solo. The club sent a party to St Auban in France, and they had the pleasure of soaring 10,000ft over the Alps. The sun shone for our club flying week and we had northerly winds with hill soaring as a bonus. We are pleased to have Pauline Flores-Moore as our new office secretary who promises to be a cheerful and welcome addition to the club.

Peter Holloway

South Wales (Usk)

SINCE the beginning of May the club has been providing a seven-day operation by having a tug pilot on standby every weekday. All thanks to the retired contingent of the club. Maureen Weaver has had a little more success in setting tasks for weekend flying when it has been soarable. Congratulations must go to Claire Helme for completing her Silver by flying the relevant duration. Also, Dave Hendry has gained large amounts of street cred by flying what has been described as 'a real Silver distance in a real glider' by flying to Bidford in an Oly 463.

George Robertson

Stratford on Avon (Snitterfield)

THE start to our summer season didn't quite go as we'd hoped for – someone forgot to order good weather for our 'Members Day' at the beginning of May! However, subsequent weeks provided much improvement. Our annual expedition to Sutton Bank proved fruitful and we anticipate good flying from our imminent trip to Camp Hill. Various working parties have been called to assist with everything from labouring duties to electrical and plumbing works and administrative tasks as work continues on both the refit of our new clubhouse and our new glider workshop. Many thanks to all those who have helped out. We held a very enjoyable and successful quiz evening at the beginning of June which raised approximately £500 towards the aforementioned projects. Many thanks to Pete and Sally Merritt for the excellent cuisine and thanks also to Val Burrows and Chris

Bingham for the questions. On the flying front, congratulations to Rob Crow, who went solo in mid May and Richard Maksymowicz, who completed his Silver in early June.

Richard Maksymowicz

The Gliding Centre (Husbands Bosworth)

CONGRATULATIONS to Stuart Jones, Oliver Thorpe, Christine Foster and Hamish Thomson, who have all gone solo. Well done to Gary Stingemore and Paul Crabb, who came 2nd and 3rd respectively at the Overseas Nationals in Spain, Martin Turnham, Neil Harrison and Steve Briggs are all now Basic Instructors. The club Pegase has been sold to a club member and been replaced with a second club Discus. Richard Kilham of East of England Sailplanes now has his workshop on site. We hosted a National Balloon competition in July. We are hosting the 15-metre Nationals from 5-13 August and Midland Regionals from 16-24 August.

Siohan Crabb

Trent Valley (Kirton in Lindsey)

THE Spring Bank Holiday proved a wash-out, spoiling the first leg of our annual Wood and Glass Cup challenge with Buckminster at Saltby. Fortunately, the Saturday night barbeque was up to its usual high standard, eaten somewhat earlier than planned. Congratulations to Rick Ballard and to John Kersley on achieving their first solos. Carl Hutson, Steve Nock and I have now joined the instructor team as BIs. We were kept busy over the weekend of 14-15 June when we were 'invaded' by 32 Scouts and their leaders from Chesterfield, who joined us for a flying weekend. The event was a tremendous success and we were able to introduce many youngsters (and a few adults) to the joys of gliding. On a sadder note, we have to report the sudden and untimely death of tug pilot Richard Jones. Richard was universally popular in the club and was hugely respected both as a person and as a pilot.

Alan Spencer

Vale of the White Horse (Sandhill Farm)

THE flying weather has finally come and things have become lively! The poor weather was not wasted and we have a nice new kitchen and computer corner fitted in the clubhouse. It seems like only yesterday that I was telling my postman about the wonderful world of gliding and I'm now very happy to congratulate him, Greg Spalding, on achieving solo last week. I am also proud to announce that we have three new or re-furbished instructors and congratulations are due to BIs: Clare Knock and Peter Scheiwiller and to Peter Berridge, who has moved up to Half Cat. We are in the final stages of planning our "Hangar Party and Hog Roast" for the weekend of the 5 July. By the time you read this it will have happened so I prophesise thus: The weather was glorious both Saturday and Sunday and everyone had lots of great gliding and consumed a great tasting hog. If you missed this year come to the repeat bash next year.

Jay Myrdal

Wyvern (Upavon)

EVERY glider in our fleet is sporting new G-registration and the promise of an EASA-compliant CofA! The club has been lucky having technical member Merv Kelly and our other inspectors to manage the process. The two interclub league heats held so far have each resulted in only one competition day but it's all to play for. Ken Moules and the Grob 109b completed their round trip of over 1,100 miles to Sisteron and back. Whilst in the Alps he and other members were able to do 55 hours of mountain gliding. Our courses continue to be well subscribed by serving soldiers and several have enjoyed their first course so much they have returned for another. Congratulations to all members who have made progress towards their Bronze and Silver badges, but particularly to Jagji Marwaha who completed his 50th solo flight, and hence his Bronze badge, one Friday evening and both Silver height and Silver duration in one flight the next day.

Andy Gibson

York (Rufforth)

IT'S been a slow start to the season around Rufforth, but signs of improvement are starting to show, as evidenced by Mark Boyle's attempt at claiming the new Yorkshire 100 speed trophy. With a time of 1hr 18mins in a Pegase, he sets a decent benchmark for our pilots to try and beat. We congratulate Richard Smith on going solo in early June. It seems that the free time afforded to him after stepping down as chair has been put to good use. We must also say a big thank you to Christine McDermott Row, who will no longer be greeting us in the office on a morning, or taking our money in the evening for that matter! Chris has done a huge amount of work for the club over the years, supporting our members and taking care of our facilities. Now nicely settled in to the new clubhouse, members are enjoying the extra space and comfort, and we thank those volunteers whose continuing work has brought it into operation.

Andrew Batty

Yorkshire (Sutton Bank)

WHAT a fantastic place Sutton Bank is, with its diverse range of conditions, pilots and gliders. On one hand we have Andy Wright (Nimbus T) clocking up his 50th 300km. On the other, we have Phil Lazenby (K6E) logging hundreds of cross-country kms too, while Lyndsey McLane (Ventus T) kept very quiet about his 640km of a declared 750km. His epic 11-hour flight was simply outstanding, well done Lyndsey. Congratulations to David Ryall who now has his Bronze and cross-country endorsement. Congratulations Jamie Quartermaine who starred in *Time Watch*. He later admitted such stardom was of little use on his recent Ass Cat course, but managed to make the grade, so now has an Ass Cat Rating. Well done Jamie! Special thanks to Anne Silver for taking over catering until our new caterers arrive.

John Marsh

S&G's thanks to Debb Evans for editing this issue's Club News – Susan Newby, Editor



The Gliding Centre welcomed Frank Stevens as a life member

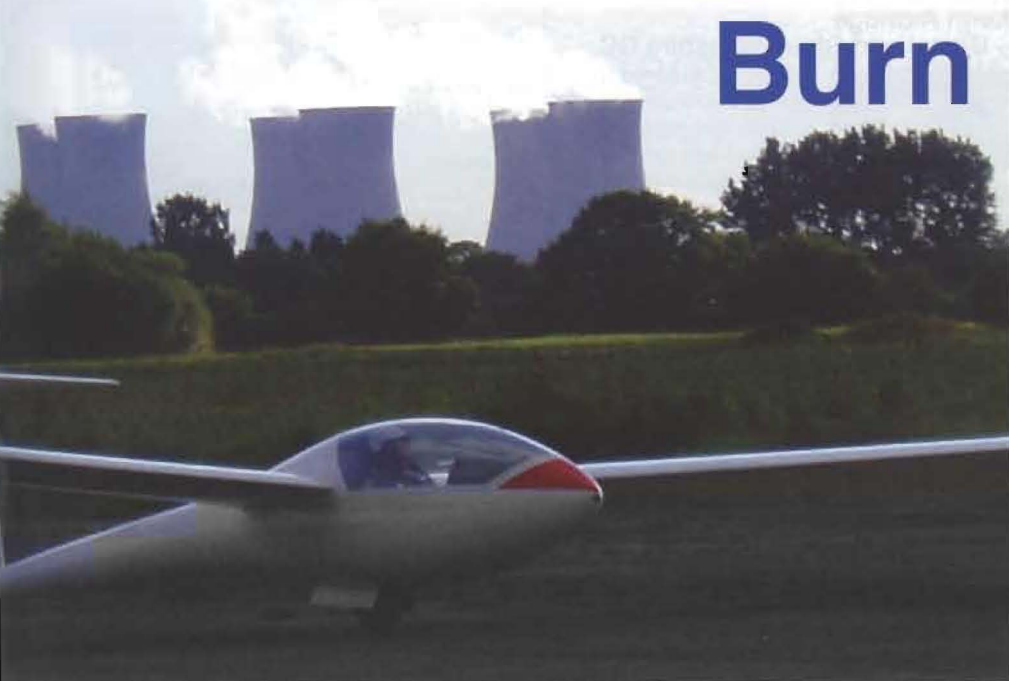


Trent Valley's Rick Ballard (left) is congratulated by Dick Hannigan on his first solo flight



Peter Scheiwiller BI, takes first student Patsy Holt through her checks at Vale of the White Horse

Burn



Three power stations enable mid-winter cross-country thermal flights

(R Baines)

SET on the edge of the Vale of York and surrounded by three of the largest coal-fired power stations in Europe, Burn Gliding Club provides soaring the whole year round. Even mini cross-country thermal flights can be carried out in mid-winter around the three power stations of Drax, Eggborough and Ferrybridge.

The club was originally established almost 50 years ago in 1959 in Doncaster as the Doncaster and District Gliding Club, John Stirk being the only existing founder member. The club hosted the Northerns and then the Nationals in 1970 but in 1984, due to encroaching development on Doncaster Airfield, it relocated to Burn airfield, three miles south of Selby on the A19, on a 20-year lease (which continues to be extended in three-year periods) and became known as Burn Gliding Club.

The airfield was built in 1942 and was the home of 578 Squadron, a Halifax Bomber Squadron. Pilot Officer Cyril Barton gained the VC captaining a Halifax out of Burn on a mission over Germany and is the only member of a Halifax aircrew ever to be awarded the VC.

The club is run on an entirely voluntary basis and there is a flying membership of 100 whose ages range from 14 to 88! All three Diamond legs have been achieved from Burn; the most memorable of which was in 1984 when Neville Spencer flew to Perranporth via Didcot. The next

objective for one of our enthusiastic cross-country pilots is to fly the first 750km from Burn. Up to now we have been free of airspace restrictions but the proposed Class D airspace for Doncaster-Sheffield airport will affect flights to the south and even local soaring. However, we are confident we can meet the challenge.

The airfield has three concrete runways, the longest of which is almost one mile in length, giving us very good winch launching usually between 1,500 and 2,000ft.

We have a substantial hangar built on the foundations of a wartime hangar which can hold the entire club fleet.

Pride of the fleet is the Janus C, with which we are able to provide advanced cross-country training and tuition in the use of flaps. There is a very comfortable clubhouse where we hold various social events throughout the year which has a bar, lounge, kitchen, briefing room and meeting room.

Close by the clubhouse is a

At a glance

Full membership: £218 pa (under-25 £147)

Launch type: Winch £6.30 (incl five mins in club gliders)

Aerotow £22 – 2000ft

Club Fleet:
JanusC, K-21, K-13 x2, PW-5 x2, K-p8, Pawnee Tug, Super Falke

Instructors/ Flying members: 15/100

Types of Lift: thermal, wave, power stations

Operates: weekends and Thursdays, plus summer weekday courses

Contact: 01757 270 296
www.burnglidingclub
george.goodenough@tesco.net

Launchpoint frequency: 130.1
Turnpoint: BRN N 53:44.624 W 001:05.031

pleasant, small caravan park for members to stay at weekends or during flying course weeks.

Most flying days we have a refreshment facility at the launch point run by a small team of volunteers, so any visiting pilot is always guaranteed good hospitality.

George Goodenough



A Mackenzie

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Obituary

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Maiden Flight
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Keith Aldridge – Bristol and Gloucestershire GC



WE were saddened to hear of the death in June of Keith Aldridge, (pictured left) ex-RAF pilot, gliding instructor and former chairman of Bristol and Gloucestershire Gliding Club, at the age of 90.

In a Battle of Britain engagement Keith shot down a Junkers 88 near Maidstone, but was himself shot down and bailed out, suffering burns and multiple fractures of an arm and shoulder.

His Hurricane L1865 crashed near Pells Farm, West Kingsdown. After suffering from a loose parachute strap that day, he always stressed the need to do them up.

He began gliding in about 1949 after stopping to watch a launch at the old Lulsgate airfield, now Bristol International. He went to investigate and ended up having a 12.5p trial lesson (and no forms to fill in, he added).

By then, Keith had flown nearly 100 types of power aircraft, single, twins and fours, both English and American, and he felt his instructor was a lunatic trying to kill them both, flying the T-21 at such low airspeed.

'He parted with a fiver for a year's membership straight away'

But the pilot, John Parry-Jones, soared away and gave him a spell at the controls – and Keith was hooked on gliding for life.

He parted with a fiver for a year's membership straight away and went on to join syndicates that owned the 33 (experimental) Skylark 2C, an Austria and later a Kestrel, a PiK and a Standard Cirrus. He took over the chairmanship at a difficult time for the club and provided the necessary calming influence.

Keith said P-J, as his T-21 instructor was known, was the most memorable gliding character he'd met.

It was the enthusiastic John whose foresight led to the club moving to Nympsfield when Lulsgate went commercial. John was a leading light of the club from after the war until his death in 1957 in a test flight in a Bristol Britannia airliner.

Sunday mornings began at 5.30am in John's flat with minute steaks and a half of Guinness before getting on the road for the first launch at 8am.

Keith, the most amiable of companions, said his greatest achievement was taking a fearful, timid pupil with little self confidence and leading them on to become a competent and enthusiastic pilot who went on to instruct.

Our sympathy goes to his wife Maureen, a former member.

Bernard Smyth

No.	Pilot	Club (place of flight)	Date
GOLD BADGE			
2674	Luke Dale	Lasham (Omarama, NZ)	24.2.2008
Gold distance			
	Tony Howe	South Wales (Benalla)	1.2.2008
	Matthew Plumridge	Lasham (Lasham)	9.4.2008
	David Crimmins	Kent (Challock)	15.4.2008
Gold height			
	Luke Dale	Lasham (Omarama, NZ)	24.2.2008
	Jeffrey Davies	Bowland Forest (Portmoak)	23.3.2008
	Geoffrey Harrison	Yorkshire (Sutton Bank)	4.4.2008
	Mark Fielding	Borders (Milfield)	26.4.2008
SILVER BADGE			
11868	Gary Simpson	SGU	1.3.2008
11869	Martin Woodcock	Bristol & Glos	3.4.2008
11870	Tony Howe	South Wales	1.2.2008
11871	Matt Plumridge	Lasham	9.4.2008
11872	Ron Jubb	Burn	16.4.2008
11873	Lisa Humphries	Devon Somerset	13.4.2008
11874	Luke Barratt	London	6.4.2008
11875	Timothy Forsey	Essex & Suffolk	9.4.2008
11876	Ronald Ogston	Deeside	27.4.2008
11877	Jonathan Ross	Lasham	16.4.2008
11878	Mark Adams	Lasham	21.5.2008
11879	Greg O'Hagan	Bristol & Glos	11.5.2008
11880	Howard Joseph	Southdown	11.5.2008
11881	Neil Shaw	Portsmouth Naval	18.5.2008
11882	Simon Kahn	East Sussex	20.5.2008
11883	Arran Armstrong	Bannerdown	18.5.2008
11884	Norman Lavender	Southdown	11.6.2008
11885	Robert Pye	Ulster	22.5.2008
11886	David Higginbottom	Wolds	14.5.2008
Diamond goal			
2-3229	Tony Howe	S Wales (Banella Australia)	1.2.2008
2-3230	Matt Plumridge	Lasham (Lasham)	9.4.2008
Diamond height			
3-1700	Luke Dale	Lasham Omarama (NZ)	24.2.2008
Diamond distance			
1-1098	David Keith	Victoria (Benalla Australia)	2.12.2007
UK CROSS COUNTRY DIPLOMA			
1073	Timothy Forsey	Essex & Suffolk	9.4.2008
1074	Christopher Bingham	Stratford upon Avon	11.8.2007

Accidents to Gliders 2007
Essential reading for pilots

Published by the British Gliding Association
January 2008

BGA Accident/incident summaries

Aircraft Ref Type	Registration	Damage	Date, time	Place	PILOT(S) Age	Injury	P1 Hours.
31 Astir Jeans Inexperienced pilot, with recent XC endorsement, became lost on a local soaring flight and landed downwind into an unsuitable field some distance from the airfield	4584 / JKW	substantial	16/04/08, 15:20	Bath, Wilts & N.Dorset GC	69	none	51
32 Astir CS Elevator struck by tow-out vehicle, no obvious damage. After a subsequent day's flying, some damage found adjacent to horizontal stabiliser attachment point attributed to this incident	G-DDKU	minor	06/04/08 12:00	Devon & Somerset GC	--	--	--
33 K-13 Glider waiting on runway, tug flew over low on approach, trailing rope & rings damaged port aileron & wing D-box	G-CHVW	substantial	30/03/08 16:15	Rattlesdon GC	66	--	--
34 Mosquito B Heavy sink over unlandable terrain left the pilot low and unable to reach either of his safe landing areas. The approach into his emergency field was over trees, the field was small and the pilot was unable to stop. The glider hit a fence before coming to rest on the bank of a small stream	2575 / ECH	destroyed	25/04/08 09:30	Edensoaring	67	minor	2200
35 ASW 19 Heavy landing	4203 / HUA	substantial	29/04/08 13:25	Burn GC	51	none	140
36 DG 800 Engined failed to start and then failed to retract; a low circuit and late change of landing field led to a slow approach and heavy landing	G-BXSH	minor	19/04/08 13:15	Yorkshire GC	48	none	1150
37 Skylark 4 Low airtime pilot landing after a turbulent flight allowed the crosswind to drift the glider towards an area of ground under repair. The wingtip struck a marker pole as the glider touched down	1043 / BLA	minor	08/05/08 16:20	Borders GC	59	none	56
38 Nimbus 3 After landing, the wingtip touched the ground early in the ground run, initiating a groundloop. The pilot noticed that although the starboard ballast tank was empty, there was still some water in the port wing	2820 / ENN	minor	12/05/08 14:15	South Wales GC	56	none	2500+
39 Mosquito Glider landed with undercarriage retracted	4711 / JTO	minor	02/05/08 14:40	Bowland Forest GC	60	none	830
40 Fournier RF5 Engine seized in flight	G-BJXK	none	07/05/08 18:00	South Wales GC	69	none	--
41 K-21 The towbar broke, the glider ran into the back of the towcar, damaging the rudder	G-EENK	minor	06/05/08 16:00	Aston Down	--	--	--
42 PIK 20D Flying into heavy sink on approach, the pilot landed in a small field outside the airfield. Unable to stop in time, the pilot groundlooped the glider, which then rolled backwards, coming to rest partially submerged in a river	2535 / EAR	minor	18/05/08 14:00	RNAS Yeovilton	56	none	--
43 Junior Immediately after taking off, the glider was seen to pitch nose down and contact the ground. The winch cable back released but the glider bounced back into the air, its attitude becoming progressively more nose up until the glider stalled, dropped a wing and fell about 40' to the ground	3951 / HHE	substantial	21/05/08 13:30	Bowland Forest GC	63	none	64
44 Sport Vega The brakes on the winch failed as it was being driven to the hangar at the end of the day, running over the glider's wingtip before stopping	2797 / EMP	substantial	20/05/08 20:35	Surrey Hills GC	--	--	--
45 Discus B After drifting downwind in weak lift, the pilot was forced to land out in an area with no suitable landing fields. After touchdown, the glider groundlooped and broke in two	4674 / --	substantial	24/05/08 14:00	Deeside GC	68	none	193
46 K13 Wing drop followed by groundloop during launch	G-CJYE	substantial	24/05/08 14:20	North Wales GC	67	none	130
47 Junior While converting to type, the pilot flew a fast approach with minimum airbrake; the glider bounced on touchdown, setting up a PIO until the glider ran off the runway onto rough ground	3847 / HCW	minor	18/05/08 14:50	Deeside GC	64	none	52
48 K-13 During the ground run after touchdown, part of the tailskid assembly caught on the concrete lip of a drain cover causing substantial damage to the rear of the glider.	4581 / R7	substantial	31/05/08 16:45	Clevelands GC	28	none	47
49 ASW28E When the engine failed to deploy, the pilot set up a field landing. The undercarriage was lowered but not locked and subsequently retracted on touchdown, damaging the gear doors and fuselage undersurface	-- / 6X	minor	31/06/08 14:10	Lasham GS	46	none	287
50 Astir CS77 During the ground run on his first flight on type, the pilot was unable to control the glider in yaw and pulled the release. The glider continued to groundloop and eventually struck a runway marker board, damaging the wing	-- / 480	substantial	07/06/08 15:00	RNAS Yeovilton	47	none	50
51 ASW 20 During a winch launch, a loose water bottle slid into the rear of the glider through the open ended oxygen cylinder holder, severely limiting airbrake control during the subsequent precautionary landing	4347 / LD	none	31/05/08 12:30	Four Counties GC	21	none	not reported

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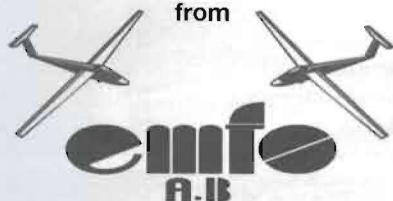
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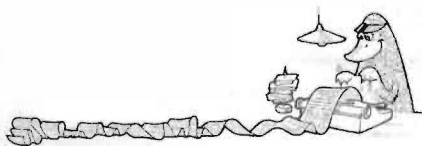
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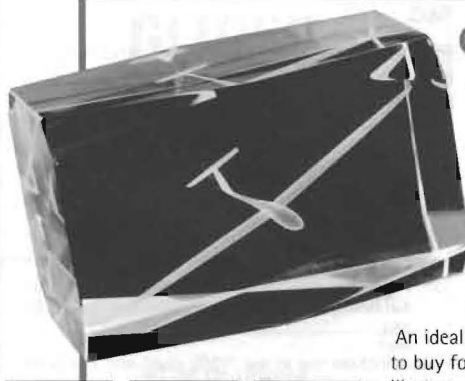
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