

SAILPLANE & GLIDING

Quarterly Newsletter 1984

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Open and 15 Metre Nationals
Tail Feathers Met

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An aerial photograph of a gliding club site. The foreground shows a green field with a small building and a paved area. A dark ridge runs across the middle ground. The background is filled with a vast expanse of white and grey clouds under a blue sky. The text 'WAVE' is at the top, 'THERMAL' is in the middle, and 'RIDGE' is at the bottom left. Contact information and the club name are on the right.

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Magazine of the
British Gliding Association

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Volume XLV No. 5

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Cover: Tony Danbury photographed Gillian Spreckley flying her LS-6 at Dunstable during the 15 Metre Class Nationals. See report on p.264.

SAILPLANE & GLIDING

Perk (Edzel) -

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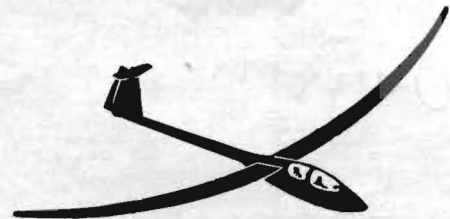
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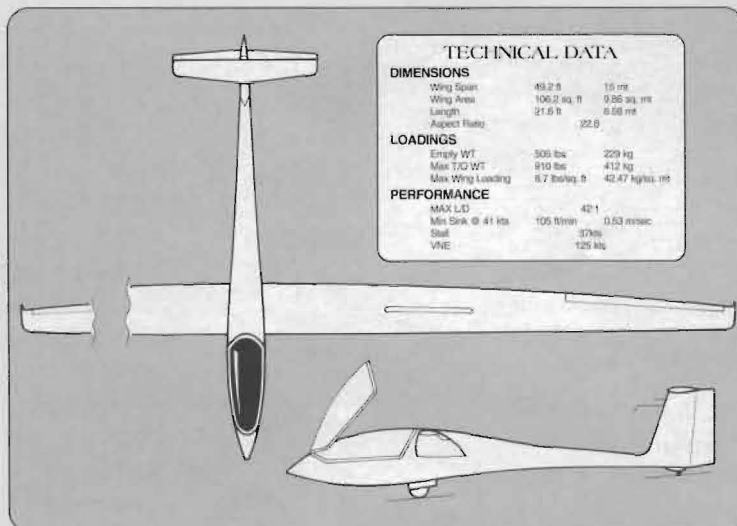
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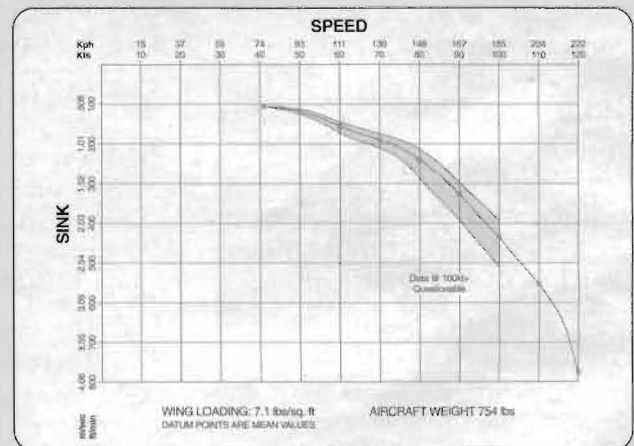
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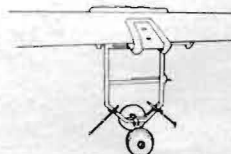
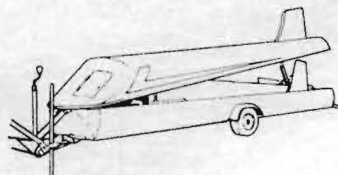
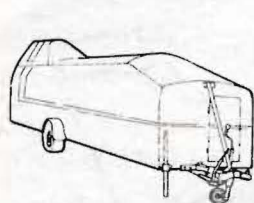
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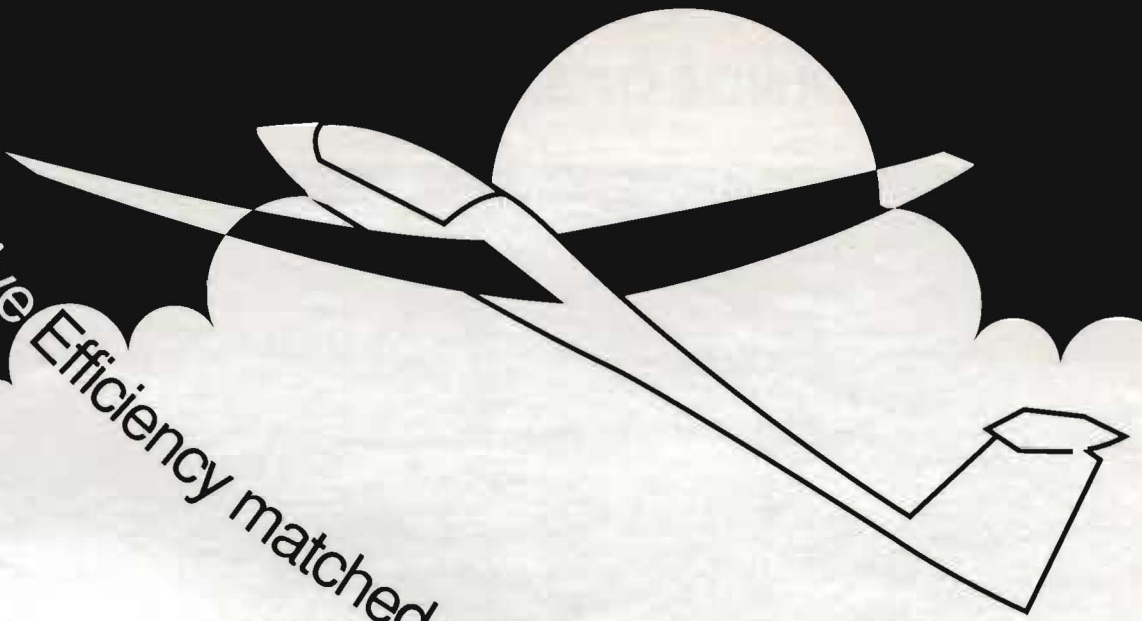
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YOUR LETTERS

LET'S BE COURTEOUS ON THE AIR

Dear Editor,

On the afternoon of Saturday, June 11, an air traffic controller from RAF Lyneham broadcast a warning on 130.40 about the air show at Wroughton and the imminent display by the Red Arrows. The message was clear, unambiguous and, above all, useful.

He was met with a reply from an anonymous station which was arrogant and completely out of order and which did absolutely nothing for the gliding movement.

Surely any station should be encouraged to transmit information concerning safety matters regardless of whether they are "intruding" on "our frequencies" or not.

FREDRIC (TONY) BOYCE, *Woodstock, Oxon*

BGA TP LIST ACCURACY

Dear Editor,

The Arm-Chair Pilot's article in the June issue, p155, highlighted the apparent accuracy of the lat and long references given for turning points in the BGA list. It seems to me the BGA is stretching things a bit far and that it is both unnecessary and misleading to quote positions to the nearest .001 min or to amend the list to make changes to the last figure. I should have thought that if the position of a TP was known to within 20m (about a wing span) and the total length of a task declaration to within 50m, few pilots would think they had anything to grumble about. Lat and long to the nearest .01 min ($\pm 10m$) would give better accuracy than that.

This kind of accuracy is about the best you can hope to get from the 1:50 000 OS map. Although it is possible to read off a reference to the equivalent of the nearest 10m, which implies within $\pm 5m$, it is very doubtful if the plotting on the map warrants it. Most of the features we use as TPs are represented symbolically and are not intended for such close scrutiny. For example roads are represented by lines of arbitrary widths and do not follow all the wriggles of the real thing, so junctions and roundabouts are not placed absolutely precisely. These mapping errors make the third place of decimals in the lat and long minutes meaningless and make any rounding errors in the conversion between National Grid and lat and long insignificant.

I suppose that there may not be too much harm in showing a spurious last figure as long as no one relies on it when it matters. But it does seem a pity after all Ian Strachan's very effective hard work in turning the idea of a TP list into such a useful and comprehensive actual document that he should have his time wasted in massaging meaningless numbers and making unnecessary amendments.

KEN BROWN, *Bristol*

Ian Strachan, BGA TP co-ordinator, replies:

Ken Brown has made a typically thoughtful contribution and I would like to thank him for helping to set the format of the BGA TP data in the first place, and for helping me with various aspects of TP geometry, mapping and mathematical aspects in general. However, when the BGA TP system started I was noting grid references only to one decimal place. I quickly realised that **with no more effort**, using a

magnifying glass, I could make a good stab at reading them to the second decimal place. So why not? Most, if not all, points are the **centre** of some feature so Ken's quite correct remarks on symbolic width of line features do not necessarily translate into inaccuracies when points such as the middle of road junctions are read as grid references. Then, some years later when we had proper programmes for conversion to lat/long from grid, we decided in the BGA list to quote to one decimal place more than the original readings rather than one less; after all, once you have a computer conversion it comes out to an infinite number of places and so you have to draw the line somewhere!

In any case, I was taught that you only rounded at the **end** of a calculation so if we are quoting figures to an unwarranted number of decimal places, at least this is better than the reverse. And the final calculation might be **your** marginal 500km! My personal experience with a well locked-on GPS is that the BGA TP figures are pretty accurate when used in conjunction with the correct geodetic datum which is, of course, OSGB 36. And, finally, mapping is getting better all the time and any inaccuracies of plotting are constantly being improved by the OS who are nothing if not perfectionists. Eventually all map lat/long and kilometre grids may change to a world geodetic datum such as WGS 84 (and successor systems) and maps will be produced to an international standard; essential if GPS is to be used internationally as a landing aid and a useful spin-off for standardisation of data for gliding TPs! The OS has published informational paper 1/94 on "Global Positioning Systems and OS Maps" and any mapping nutter can get a copy from the OS direct or by writing to me with 38p in stamps and an address sticker for the return.

BGA INSTRUCTORS' MANUAL

Dear Editor,

No one who reads the new **BGA Instructors' Manual** and follows it with a re-reading of the old one could fail to notice that much of the new was lifted straight out of the old (and a jolly good thing too, I say).

What a great pity then that the credits give not a mention to Anne and Lorne Welch, who with brilliant foresight so long ago laid such solid foundations for the present training programme. This is a grave omission that I hope will be rectified at the earliest opportunity.

KEITH NURCOMBE, *Rugby*

Dick Dixon, chairman of the BGA

Instructors' Committee, replies: Keith is, of course, absolutely correct and I am more than happy to set the record straight. I still have my own copy of **Flying Training in Gliders** by Ann and Lorne Welch which was given to me at Christmas 1972. I see from the title page that it was first published in 1952 and some 12 000 copies had already been sold by the time I acquired mine.

This was, and still is, an excellent guide to basic gliding instruction. The fundamentals do not really change, and I see that even Ann and Lorne acknowledge that - I quote - "*in this day and age no manual on basic flying is original but is the distillation of years of practical*

teaching, and earlier writings by both flying and gliding instructors, both Service as well as civilian".

The same holds good today and I am grateful to Keith for giving me the opportunity to acknowledge here that much of the careful research and wisdom incorporated in the Welch manual all those years ago still holds good and forms the basis of much which is included in the new **BGA Instructors' Manual**. I do hope in addition that Keith will also have identified some interesting new material!

THE GPS FACTOR

Dear Editor,

I had always thought that the skills necessary to be a successful competition glider pilot included soaring, navigating and map reading, being able to take clear and in-sector TP photographs, being able to calculate final glides and being able to select and land in fields without breaking the glider when necessary.

However, since GPS is now allowed and even likely to become mandatory in competitions, the need for at least two of these skills, particularly navigation, is virtually eliminated. Why don't we therefore just organise local soaring competitions where the gliders belt round a mini course, well within range of the airfield. To test field landing ability, any competitor who gets a bit low could be required to land in one of a number of pre-selected fields of varying degrees of difficulty. Perhaps the last specified TP could be just far enough away to allow a realistic final glide.

Think of the advantages. A test of soaring and speed flying ability without the airspace problems, midnight retrieves et, etc. Perhaps competition gliding might even become a successful spectator sport. How about it the BGA Comps Committee?

DEREK COPELAND, *Rickmansworth, Herts*

NOT WHAT IT SEEMS!

Dear Editor,

Just a little snip of information you may find amusing.

My dear friend John Jeffries had fairly strong views on turbo gliders, as portrayed in various S&G articles a few months ago. You notice I use the past tense.

Although remaining the agent for Schleicher gliders, John is now the proud owner of a Schempp-Hirth Ventus CT. Not only the opposition, but with a turbo!

Is there any truth in the rumour that John had to land at RAF Halton engine extended because he was unable to start the turbo?

CHRIS PULLEN, *Eaton Bray Beds*

John Jeffries replies: Chris Pullen's snippet is indeed amusing since he not only got his facts wrong but actually underlines the whole drift of my argument.

The facts are that I do not own a Ventus CT but merely fly one occasionally, thanks to the generosity of the owners whilst I am temporarily effectively "gliderless". I have taken this opportunity to try to "open my mind" to the alleged advantages of an auxiliary engine, twice in an attempt to contact wave and once to avoid a landout when the engine failed to start (no fuel

The wrong choice!



Is something we all make at one time or another.

It can be very frustrating when you've committed yourself to whatever chore is top of the list, to find you have chosen the best day of the year (as everyone at the club will be delighted to tell you later!).

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may have had something to do with it!).

Far from convincing me of the benefits of an auxiliary engine, my very limited engine-on experience with the Ventus has reinforced my view that it is a good way to kill the adventure and aesthetics, which is gliding, stone dead. As to the opposition's product, I will be kind and not comment!

WELL DONE NORTH WALES

Dear Editor,

This summer I attended a course at the North Wales GC and was taken back by the hospitality and warmth. The instructor, Ken Payne, got us flying without fuss and when I left on the Friday I was a wonderfully fit 73 year-old. FRANK TYRER, *Garswood*

THE "SCOTTISH REGIONALS"

Dear Editor,

As you have in your own words made an exception and agreed to print a contest report about the recent successful Regionals at Aboyne (last issue, p223), I think that some features of the contest should be open for comment.

First the name. Scotland is a nation and not a region within Great Britain. To call the competition the "Scottish Regionals" is not only illogical but as arrogant as if one of the English clubs unilaterally decided to seize the title of the "English Regionals".

Secondly, the accident rate. I understand the proportion of entrants who withdrew because of outlanding accident damage to be 4/17 or about 23.5%. This was during one of the best ten day periods of thermal soaring weather we have had in Scotland for many years. It would be interesting to know how this compares with the overall figure for similar accidents in competitions held in England - for those in which I have participated the rate is well under 1%.

The competitors to whom I have spoken enjoyed the contest immensely and I wish it continued success - with care and under a new name.

JOHN GALLOWAY, *Glenrothes, Fife*

Al Eddie, deputy director and task setter,

replies: Much care went into choosing an appropriate name for a Regional contest to be held in Scotland and although due consideration was given to our national identity, in UK gliding terms - with only 5% of the gliding population - we could hardly call our a contest a "Nationals". I am sorry that Mr Galloway feels differently. I am also surprised that since he feels so strongly he hasn't come up with a logical alternative - he has had since September 1993 when notification was given to clubs. I also find it perplexing that someone filled with so much national pride still feels the need to venture south to fly competitions when everything is being organised for him on his own doorstep.

I look forward to receiving Mr Galloway's entry for the 1995 Scottish Regionals, which will be held at the Scottish Gliding Centre at Aboyne. He will be made most welcome (along with Platypus and the remains of the Overseas Nationals, perhaps), and need not worry about

the attrition rate because by helping to swell the numbers he will also be helping to dilute the percentage.

Lemmy Tanner also replies: Is John Galloway a Scottish National by any chance and where was he during the outstanding Regionals (eight competition days) this year? He will get another chance to compete in the Scottish Regionals next year and so help to reduce the percentage of accidents to his, rather fanciful, figure of 1%

THE PROFESSIONALISM OF CLUBS

Dear Editor,

I was surprised to get off as lightly as I did for daring to suggest some clubs could improve their services to members. (See the June issue, p125, and replies in the August issue, p191.) Rather than just complaining, I was simply suggesting how to help improve the professionalism of my club.

As I live 50 miles from the club, I am restricted from taking the sort of active role I have done in local clubs. Nevertheless I do accept that 2hrs driving and 3hrs mixing keeping the log, towing gliders, helping with launches and sometimes just waiting around is part of the cost of the 20min to an 1hr's flying I get from a typical evening. I even accept that the cussedness of the British weather means the occasional wasted trip, but don't accept that wasted journeys due to bad information are inevitable.

I am impressed with the dedication of those who drive 90min to their club, still arrive early and set everything up. But it is important to recognise that we all have differing levels of motivation and external commitments. I have been involved in running youth clubs and if I had insisted on others putting in the same effort I would have lost 90% of the membership. Instead I tried to retain even the most marginal members and to involve them gradually. With the right encouragement the most surprising people became involved.

We need to recognise that people have other commitments, try to accommodate as many as possible and remain open to new ideas.

Anyway, sermon over! In my youth clubs I learned to recognise when ideas were unwelcome and stop banging my head against the brick wall. I have now found a club where I can fit in gliding with my other commitments. I hope I've provoked some positive thought and improvements for other trainees rather than just annoying people. Happy gliding.
NEIL YOUNGMAN, *Malvern, Worcs*

Dear Editor,

I do not know Neil Youngman, but his letter was presumably not referring to weekend operations because he wrote that he wanted to avoid wasting his leave on days when he would end up not flying. Neither of the writers who criticised his views in the last issue can know whether he does or does not pull his weight at weekends. A quick glance through the last few years of S&G will show that vehement or sarcastic replies to letters usually result from a failure to read the original letter properly. The issue he raised deserved to be either ignored or answered reasonably.

If someone wants to book a place on the

flying list an hour or two in advance, why not let him do so and pay extra (if necessary, on the understanding that he is expected to stay to the end of the day and help - but if the atmosphere of the club is right that would not need to be mentioned)? I am willing to bet that Neil doesn't mind, and probably enjoys, helping but does not want to waste a day if it could be avoided.

If a club has a telephone is it too much to ask that it is manned by someone who can answer questions on the weather and the flying list (if necessary by consulting the launch point by radio to avoid the expense of a mobile phone)?

Some clubs have realised that in the 1990s gliding has to be marketed if they are to prosper. Others appear to believe that everyone must serve the same apprenticeship ("good enough for me"..."shows who is really keen"..."promotes club spirit") without appreciating that once you are hooked on gliding you will willingly help with the daily chores but that (surprise, surprise!) newcomers to the sport have a different view and have to be won over. Smugness and unwillingness to change cause businesses to collapse or struggle along moaning about falling sales. Why should gliding be so different?

CHRIS SKEATE, *Haslemere, Surrey*

THE WOODEN TRAILER RIDES AGAIN

Dear Editor,

In olden days pilots built trailers in the evenings after flying, but with the advent of colour TV that all went by the board. Nowadays you shell out £6000 for a crocodile device which is such a close fit on the glider they sell you a pannier which fits under it and carries all the odds and ends you accumulate over the years. The result is that when you load the glider in a muddy field the pannier takes a firm grip on the terrain.

I found that you can now buy sheets of plywood in 10x5ft as well as the usual 8x4ft size, so I built a Skylark 3 trailer in the new size which carried my Nimbus 3 perfectly and had certain advantages. With 5ft 8in headroom I can stand in it and when the glider is rigged a folding chair, table and bed gives me a useful room. Loaded there is space for towing and rigging aids, tools, map cases and document boxes sufficient to satisfy the needs of any foreign bureaucrat (which is saying some).

On tow it is stable up to 55mph so up to the legal limit there is no problem, and so far it has covered 15 000 miles on the continent without major mishap. Mods required were some beefing up under the fuselage dolly which carries a heavy point load, and some stiffening up of the body at about the middle, plus the occasional coat of paint.

Weight for weight wood is stronger than steel and has the beauty that if you scrape the wing along the side of the trailer it won't get marked. It helps if there is a door at both ends and as in my case the nose of the fuselage is to the rear there is also easy access to the cockpit for getting out the 'chute, batteries etc.

I could have made better cradles which would roll in and out with the wings in them but this turned out not to be much of an advantage since normally one rigged on arrival in Spain and derigged ten weeks later. In addition, with

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India Mike Charlie

the rules about Comps there is no longer the need for rapid retrievers for a relight, but if I relive my years again I will put them in next time.

The tailplane hangs on the inside wall but all the other loads go straight into the floor which, although only of 9mm ply, has sufficient cross-members to be pretty strong. I built it in six weeks of spare time from a busy general practice, the secret being to scarf up the floor first then raise it on blocks to make a table on which the sides and roof were scarfed up. Eventually four 30x 5ft sheets were glued together to make a tube. The total cost was £800.

I am sorry I did not have an electric stapler which would have saved a lot of time and I should have made a nicer rounded nose to it because I think a clean airflow around the hull makes it more stable on the road.

Next time, and I hope there is a next time since it is a lot of fun, I might make an alligator out of wood, but I am not sure there is any great advantage in a small frontal area. Your car has already bashed a sizeable hole in the air and the difference in drag between a fat and a slender trailer must be slight.

BRENNIG JAMES, *Marlow Common, Bucks*

ANSWERS FOR THE BIRDS

Dear Editor,

Being an impecunious glider pilot I am trying to kill two birds with one stone by answering questions posed by Platypus and Penguin in the last issue with a single missive.

Arriving home drained after another hectic trial flight evening I made a random bedtime reading selection and found the **Eagle New Book of Aircraft** in my hand. P99 revealed the answer to wave flyers (see Tail Feathers, p205)

- they were taught by the ATC. I quote "you must keep within an imaginary line drawn at 45 degrees from the boundary".

Only a few pages further on there is a photo of a Horsa fuselage with a replica Comet nose (see Way Off Track, p240) and again I quote "to test the pilot's visibility and the effects of rain on the aircraft's streamlined windscreen."

Voilà! QED.

KEITH SIMMONS, *Burnham on Sea, Somerset*
(See *Way of Track* in the next issue with information from Michael Russell.)

THOSE VARIO BLUES

Dear Editor,

I read Graham McAndrew's article, "Vario Blues" in the last issue, p213, with interest and unfortunately I have to agree with his opinion on the condition of the instruments in many club gliders. So, what can we do about it? Should leak tests during a C of A inspection be made mandatory?

The plumbing **must** be leak free. This is particularly important for TE probe systems - the suction is very sensitive to the flow rate through the tube and even a small leak can be catastrophic. It is not too difficult to rig up a water manometer to test for leaks. Mechanical varios are quite delicate and while they will tolerate large overloads, a pulse of air which drives the vane hard up against the stop can damage them. "A simple variometer calibration rig" was described by me in the April 1983 issue of S&G, p66.

Taking a winch launch when there is little or no convection about will show up some problems. The rate of climb is usually well in excess of 10kt. If the vario is at all "sticky" it should be serviced. To judge the performance you need to take into account the natural "response time" of the vario. This is the time it takes for the indication to fall roughly one third of a previous high value. Thermistor and pressure transducer systems are normally fast, about 1.5sec. Winter varios take about 3sec and PZL about 7sec. The vario should have settled within 3x response time.

If the vario flask is **not** filled with metal mesh (two copper pan scrubbers), the air inside cools during the climb and then slowly heats up after you release, which gives significant false "up" readings. If you have a plastic "flask" and the glider has been sitting in the sun, taking a launch can result in rapid cooling and give false "down" readings which can last for many minutes. Either replace the capacity with a mesh filled thermos flask or wrap the plastic flask with thin lead foil (from a builder's merchant) and then add another layer of insulation. A white canopy cover will greatly reduce solar heating.

Doing 70kt pull-ups is not really a very good way of testing your TE system. With a fin mounted TE probe and a "perfect" vario, you should see a large increase in sink when you pull back (2-4kt). This is partly due to the increase in *g* load and partly due to the acceleration of the air in the connecting pipe. Mechanical varios simply do not have time to recover in the few seconds that it takes to slow up to 45kt. Having pulled up, you then have to fly "over the top". A "hammer head" stall can



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seriously effect your memory. This isn't a good time to read the vario!

For a rough check on the TE system, measure the sink rates in non-convective conditions at say 60 and 45kt. Then push fairly gently forward, accelerate and then pull fairly gently back, keeping within the speed band and repeat to give a smooth wavy flight path. If the TE system is working properly, the vario readings should stay roughly within the sink readings previously measured, or maybe give a bit more sink. A poorly compensated system will show excess positive and negative fluctuations.

Students really do need to be taught about the limitations and errors in variometer and other instrument systems and need to be made aware of the sort of conditions that can cause false or unreliable readings.

CHRIS CHAPMAN, *Petworth, Sussex*

GLIDER IDENTIFICATION

Dear Editor,

Whilst agreeing with the objectives of the new Operational Regulation (OR) announced in the last issue, p220, I feel that it is not in the interests of all BGA members.

Not all existing paint schemes lend themselves to compliance with the OR. In the case of the glider in which I have a share, the fin and rudder are of approximately equal size and are painted in contrasting colours. It would therefore not be sensible to place three letters across them "as large as practicable". The fuselage carries decorative markings, the effect of which would be ruined by the addition of the required identification.

Our glider does in fact display a lapsed (and reissued) competition number on the rudder only. This has been retained simply because the glider has long been known by this number in the club where it has always been based. No confusion is caused as it is not entered in competitions. As the glider was recently professionally refurbished to a high standard, the removal of the number would be either expensive or a bodge.

It is very possible that the new system of approved markings may not be accepted by the European authorities. First, it is a hotchpotch, not even being consistent in the number of characters required and, secondly, it is not suitable as part of a pan-European system because it does not contain an indication of the country of registration. If the system is rejected, members will have to suffer the cost and inconvenience of a further change.

It also seems to be very high-handed of the BGA to make compliance a condition of a C of A renewal since it is neither a matter of safety nor yet a legal requirement.

May I suggest that some concessions should be made. At the very least there should be a dispensation from the OR for wooden gliders until they are next repainted.

COLIN STOVES, *Runcorn, Cheshire*

CREDIT WHERE IT'S DUE

Dear Editor,

Chris Rollings has indeed had a great influence on my training but I can't really claim the credit for the threepenny bit circuit. My first

contact with the concept appears in my notes for a 1985 instructors' course run by John Ellis. No doubt John, in turn, can tell us where *he* got the idea from.

Incidentally we do appear to be a jump ahead of the "official" BGA terminology in at least one respect - we call it 20 pence circuit - at 50 pence for Booker pilots!

MIKE CUMING, *The Gliding Centre* ✉

We welcome your letters but please keep them as concise as possible and include your full name and address. We reserve the right to edit and select. The final deadline is October 11 but we appreciate contributions before this date.

BOOK REVIEW

The Glider Pilot's Manual by Ken Stewart, illustrated by Mark Taylor and published by AirLife Publishing Ltd. Available from the BGA at £18 plus £1.25 p&p.

I assume from the introduction and most of the text that this book is aimed at the *ab-initio* glider pilot. It covers, in varying amounts of detail, everything that the *ab-initio* is likely to want/need to know about the glider itself, through effects of controls to thermal, hill and wave soaring.

As you might expect from a book taking the "right from the start" view of gliding, quite a lot of the contents are "old ground" if you've read any similar publications. But this book isn't by any means a selective rehash. Far from it. The considerable depth and knowledge of Ken Stewart's years of gliding and instructing experience show through.

Ab-initios will find the book very useful and even experienced pilots will find many interesting and helpful things within. The explanation of why tug upset accidents, even at heights from which recovery ought to be possible, still end up with tugs boring vertically into the ground, was particularly interesting, and made a blindingly obvious technical point which I haven't heard before, which is almost certainly correct, and which I am not going to tell you!

The "design features" in the technical section explain exotica like turbulators; a device which must seem pretty barmy to most novice pilots ("muck up" the airflow over your expensive glider so that it goes better, whoever heard such nonsense!), and why some gliders have V-tails, winglets and so on. This is the sort of thing which early pilots with any degree of curiosity often want to know about, and here are the explanations.

It is the chapter on circuit planning which falls a fraction by the wayside in view of current BGA practices, by talking about "square circuits" as the norm. I sympathise with this as it is a continual problem in any area, such as instructional practice, which tends to change gradually over the years. Books like Ken's take a long time to write, edit and illustrate and there is always the likelihood of events and practices overtaking part of the contents.

The text is rather matter of fact, an effect enhanced (and not necessarily in the text's favour) by the use of no-nonsense and utilitar-

ian old Helvetica as the body type. It is billed as a manual and it is a good one, so it is a bit unfair to mention that it is a downbeat instead of a hilarious romp through initial training!

Mark Taylor is a talented illustrator and has done a very good job here with some pretty nifty graphics. The basic "mini gliding field" in the circuit planning and launch failure chapters is an unsquare, tree fringed little gem I might land in but not want to fly out of, which nicely illuminates the points in the text. Indeed, the book is profusely, even excessively, illustrated - almost every page has a drawing or two.

I was slightly bemused to find the example of a BGA flight limitations placard giving a K-13 a maximum auto/winch speed of 80kt (5kt faster than max rough air). I know quite a few *ab-initios* and novices have difficulty keeping the speed down on powerful winches (and not pointing vertically upwards at the same time), but changing the placard to accommodate them seems a trifle over the top!

Despite a few inconsequential reservations, I found the book a "good read" and would certainly buy it if I didn't already have the review copy, and even though it wasn't aimed at pilots like me.

STEVE LONGLAND, *BGA regional examiner*

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MERRI'S PROGRESS

**A Three
times
World
Champion
in the back
seat**



Part 1: My Flight With A Deviant

There are significant advantages to owning part of (I'll bet that shocked the rest of the syndicate) a Janus. The biggest advantage has got to be that back seat - every so often it gets filled spectacularly. Let me explain by asking a question: who is your gliding hero? Mine is George Lee, and because of a wonderful set of circumstances, I cadged a flight. Did I sleep the night before? No I did not. And this didn't help my flying, either.

The task was to be a 300km, Bicester, Melton Mowbray, Newbury. The day was patchy with good conditions south of Husbands Bosworth but quite dreadful to the north, though we didn't know this when we set out. The wind direction was south-south-east. 710 was loaded with water - the first time I'd flown him that way - and we launched. We tried a few thermals locally to get the feel of the way 710 handled and to get a feeling for the conditions. I was comforted by the fact that while I preferred turning to the right, George preferred turning to the left - in other words I was not the only person to have a preferred side.

Speed to fly was not a critical issue; the Janus tends to have only three speeds anyway: 45-50kt for thermalling, 60-65 in zero for cruising, 65-75 in -4 for wazzing (she means belting along, Ed). Where to fly, however, was absolutely crucial, hence the title of this piece. "I'll just deviate a bit to the west" was heard frequently on that northerly leg. Lesson number one: fly in the lift - for us, this was west of track. Conditions, not brilliant to start out with, soon diminished to the point where we were averaging 1.4kt under a shaggy-looking sky. (Derek says I mean "broken" but I think shaggy expresses it better - that's not just how the conditions looked, it's how they felt).

The strategy we developed as we moseyed

along was based on gliding distance to the airfields we passed - no we can't get back to Husbands Bosworth, better get on, no we can't get into Bruntingthorpe off to our west, dump the water. "George, when do you tend to start looking at fields?" "Oh, any time now, Merri." "Not much cut around here, yet, is there George?" "Not much, Merri." Oh well, we were drifting gently downwind averaging 1.4kt.

I think that it was absolutely remarkable. I am not a patient person. I do not like lurking in murk. Left (as they say) to my own devices I would probably not have got much past Husbands Bosworth, a nice, friendly cup of tea and a nice, friendly tow back home. I know I would have driven right, smack into the ground in a misguided effort to push the weather into being what it wasn't. George accepted the grot and flew it as though he was walking on tiptoes. Needless to say, we got around the TP - lowish, because that was how it was - and off we headed back into the murk. This leg, however, was into wind and it would have been nice to have had that water. Lesson number two: fly for the conditions and don't get impatient with a consistent 1.4kt if that's all there is - don't give up before you have to. After all, lift is lift.

Shortly, we could see the weather breaking up a bit and George was getting hungry (I had taken a sandwich, but had been too excited to munch - the suspense, you see), so it was my turn. Just goes to show you that when it gets easier, I find it easy to be a hero. We started to make excellent time as the energy lines were well defined and the clouds just asking to be followed. Honest with 2 to 4 kt - even I could do it! My problem was that I got a bit overly enthusiastic about flying in the lift - George was quick to point out that while wings not level wasted time (and in the Janus, this could be a lot of time), more than a 30% deviation wasted more time. Lesson number three: don't get distracted from pursuing the goal. Deviation is OK, but only up to a point.

Merri flies with her gliding hero and finds him absolutely ruthless about accelerating in the lift

I should mention lesson number four at this time, though I can't recall exactly when the point was made - I suspect it was earlier in the flight. It had to do with thermal exiting. I knew that you should accelerate in the lift so that you were really cooking when you hit the sink, but I was rather slack when putting this into practice. George was absolutely ruthless, and he sparked me to be as well. Lesson number four? Get going in the lift!!! Do it and don't handbag around - you'll see the difference it makes in your cross-country speed. It's amazing.

Well, the rest of the flight was unremarkable - rather I think that I had hit "tilt" just past Bicester. Perhaps it was that the first part of the task was so extraordinary to me. We got down past Didcot (I couldn't believe it - Oxford was working - it never works for me, but it did this time), saw a

big gap and decided that there was nothing to prove. So we headed back to Bicester. We had been in the air for 5hrs 4min, most of it up north. I don't know about George, but I sure got a lot out of it. I only hope that I didn't frighten the Lee family back to Hong Kong as they left the next day. George, Maren - it really is safe to come back! And Izzy sends her love.

Part 2: The Pilot As Interpreter

As glider pilots, we are very like interpreters - not of any conventional language, but, rather, of "glider-speak". Confused? You soon will be! No matter how many gadgets we surround ourselves with - and I write as one who has yet to get to grips with our idiot-proof GPS - if we don't act as interpreters first, then all of these aids will prove second-best when it comes to getting the most out of our flights.

Air moves. Simple - it goes up and down, and if you are airborne in a glider you too will go up and down with the air. If the first inkling you get of these movements is comprised by the shrilling (or droning) of the audio, then you need to become more of an interpreter. I don't mean to sound patronising, or pedantic, but the glider itself is a pretty good indicator of what is going on in the air and we just need to understand what it's saying to us.

For example, this means going back to basics and trying to hold the control column lightly enough to feel whether the glider is rolling slightly in one direction. If it is, and the glider inherently is balanced and doesn't want to roll of its own accord, then, in all probability, its wing is being pushed up by lift. By banking (ever so slightly if cruising along without wanting to stop and turn) in the direction of the lift, you fly more in the rising air - a good thing. If you tend to hold the stick in a livid deathgrip when excited, then think of all the chat (and lift) you could be missing out on.

Another thing to which it pays to be sensitive is how flubby your wings (or rather your glider's wings) are. Flubby, by the way, is not a newly derived technical term. I suppose my husband would rather see the word "flexible" used, but, tough! For example, I once flew a Pegasus. Lovely glider, except that it was a turbulent type of day and those wings were rattling about so much that I couldn't figure out just what was prompted by lift and what was just chatter. And, if it was lift, just what was the time differential between the wing reacting, the fuselage (and me) feeling it and my managing to get the wing into the thermal? It took me hours to figure it out, by which time I was too tired to put it to any good use.

There are a couple of points to this (Derek's just looked over my shoulder and told me to get to the point). One is a glider will tell you a lot more than you might at first presume, but you must understand what it is telling you. The second point is that, depending on glider type, this will take time - several enjoyable hours in fact. Knowing the difference between the idiosyncratic handling characteristics of your glider and bubbles in the airmass can mean getting into or falling out of that one all-important thermal. ☑

LAND-MARK

Terry relates an experience which is particularly apposite in this year of commemoration

Before I had let the cloud draw the glider into its core of silence I had been tracking the villages across country - Peatling Magna, Willoughby Waterless, Carlton Curlieu, Tur Langton - with Rockingham castle as compact as a child's model fort ten miles to the east.

But when I came out from the cloud the land below had changed and I knew none of it. There was a ridge with trees, then a lake and in the far distance a blue, ragged line of hills and all the sky beyond. I felt that old familiar excitement which always comes with the first sight of unknown territory - the feeling you have when you cross the Atlas and see the desert spread out endlessly under the sun.

One of the small marvels of soaring, however, is that the strangest country you ever find is revealed from only a few thousand feet above the shire where you live.

But now I was genuinely lost. Like an early pioneer I granted myself the authority to name the new land I was about to explore and christened the little lake, Lake Elizabeth the Second. I felt this was a tactful gesture which would please the Queen if she ever heard about it. Politicians have been knighted for less. Then I tucked my useless map under my thigh and set off eastwards in a slow, descending glide.

Five minutes later I was still lost but much nearer the ground. All around me the sky had opened up after a soft May shower and I floated in a wide blue bowl.

At 2000ft I started looking for a field. I was still drifting downwind, sinking inexorably. At 1000ft I had no choice left except to turn back into wind and organise an approach into the acres of crop alongside what looked like a disused road. A moment later I realised that the disused road was, in fact, the runway of a derelict airfield. Quickly I widened my circuit. A steep tight turn, lower than I liked. A shudder as the airbrakes extended and I found myself floating gently a few inches above a mile of grubby concrete, bulging and broken by the weeds busting through its neglected surface.



Above: The maiden flight of the DG-800b which has an engine designed by the British company, Mid-West Aero Engines, to cut the noise emission as much as possible and the results were encouraging. Glaser-Dirks report it was "very low and agreeable." The larger than usual 600cc engine (inside the fuselage to cut down the noise level) reaches 50hp at only 6000rpm and with a 3:1 reduction the propeller runs at 2000rpm. The aircraft is a completely new design compared with its predecessors, the DG-400 and DG-600m. The wings as well as the power plant use state of the art technology. There is a comfortable safety cockpit and a steerable tailwheel.

SAILPLANE NEWS

Right: Genesis 1 was photographed after being rigged for the first time at Group Genesis headquarters, Marion, Ohio, USA, and will soon be ready for its maiden flight. We first mentioned this 15 metre Standard Class sailplane in the February issue, p33. It will be sold in kit form and is made of high temperature composites and designed by John Roncz and Jim Marske.



There was a brief rasp as the tailskid touched just before the mainwheel. Damn, I thought with sudden guilt. Held the nose too high. The glider rolled a few yards and then stopped. I lowered the port wing gently to the ground and in the sudden quiet I wondered if I could hear my heart beating. Outlandings do that to you, no matter how cool you like to think you are. Well, I told myself, I may be lost but at least I'm down safely, so I guess my flying is better than my navigation.

I opened the canopy and climbed out stiffly from the warm cockpit into the sort of chilling wind that cuts across every airfield in every country. I shrugged out of my parachute and laid it on the wingtip like a lumpy bundle of laundry then looked around.

As I had made that last low turn I had glimpsed something at the far end of the runway - a stone block, a marker - I wasn't sure, and in the sweaty concentration of the landing there hadn't been time for a second glance. The runway stretched out in front of me now, narrowing to a point where I could just see the block. There seemed to be flowers growing around it. I stuffed my map into the pocket of my anorak and set off down the centre-line and into the wind to find out where I was.

Around me the old grassed areas of the airfield had been divided into cultivated plots, each one identified by sticks driven into the earth with old seed bags fluttering from them. They reminded me of markers in a newly discovered mine-field. The hedges creaked in the westerly


wind and there were larks singing overhead.

Closer to, the stone I had seen began to look like a gravestone half-covered in spring flowers. It was the right size and shape. Surely not? We've very particular to be law abiding in England and we're careful to bury people tidily in cemeteries, never casually in the long grass by the edges of old airfields. I walked up and stood next to it. And found that it was all of the things I had imagined. A marker, a memorial, and even a gravestone of sorts.

The stone was polished granite, engraved in gold with the outline of a B-17, a warplane as uncompromising as a Colt 45, and it was dedicated to the memory of the crews of the 8th Air Force who had flown from this place during the Second World War but never returned.

There was a slogan cut into the stone. Not the sort of slogan that any Englishman would ever have dreamed up, but it seemed to catch the lighthearted determination of that particular generation of Americans which had faced death a long way from home. It said "Keep the show on the road".

From somewhere above the mass of cloud that was now flooding the sky I could hear the drone of a piston engine, rising and falling, growing then fading, as if that pilot too was lost and looking for a landmark. I hoped he found one. But I no longer needed a map. Now I knew where I had to be. I looked around at the silent empty acres.

So this was Grafton Underwood. Once, this was a battle-front... 

TAIL FEATHERS

Assault and battery

I am invariably sunny and benign with people (Say again? Ed) but inanimate objects get the full force of my irritability, especially if, like cars



Full force of irritability.

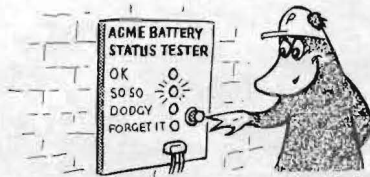
computers, radios and other gizmos, they are supposed to be animate on demand but instead just lie insolently doggo, feigning death. My particular hate these days is nickel-cadmium batteries, or Ni-Cads as they are called by people who feel on speaking terms with them. I am certainly not on speaking terms with the blasted things, and am not going to call them by pet names.

I have scores of these wretched nickel-cadmium batteries littering the house and car and glider, and none of them works with any reliability. After hours of charging, the hand-held 720 channel radio gives a brief hiss and all 720 channels expire after a minute or so. And the same goes for the two expensive batteries I bought as backups for the same radio.

Then there's my computer which dares to call itself portable and independent (Hah!) but, after the lapse of a tenth of its advertised duration away from the comfort of mains electricity, what happens but its batteries threaten to destroy my work and send it to the great databank in the sky unless I plug it in again NOW? "Be reasonable" I plead. "This is the Gobi Desert, and mains sockets are not in evidence." I get a total ignoral. Burp. Clunk. Whirr. It blinks twice and goes belly up.



Total ignoral.

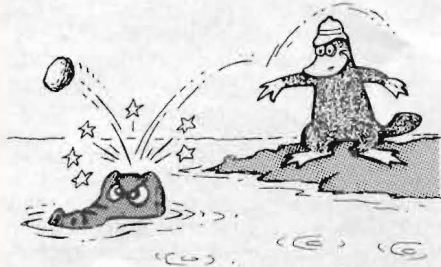


Even I can understand.

"Ah well" murmur the technically wise, or those who know it is perfectly safe to pretend to be technically wise in my presence, since they will never be rumbled, meanwhile giving the 720 a technically sophisticated wallop with the side of a fist. "What you've done is run the little thing down and charged it up again the wrong way. As a result of your ill-treatment the poor Ni-Cad has developed a memory, and so is continually imprinting itself, so to speak, with a pathetic level of charge."

"A blinkin' memory?!?" At this point I am running up the clubhouse wall and across the ceiling in a frothing paroxysm of indignation. "What the heck right has a miserable lump of nickel and cadmium to go round giving itself airs and having a memory? I suppose the nasty little creep is writing its ruddy memoirs?"

Dear Diary, I gave my master the most splendid seizure this afternoon when I arranged for his GPS to die just as he was attempting to locate one of the BGA's best loved TPs, the road-bridge over the river Kennet at Marlborough, - the road, the bridge and the river all being quite unfindable when the trees are in full leaf. A fine January TP, they all aver, but May to August, forget it. Ah, where was I? Oh, yes, hopping mad he would have been, except you can't hop much when you're lying on your back at 600ft. Serves him right, he didn't exercise me properly. I like to be taken walkies. After all, I'm only human.



Don't throw stones at the crocodiles.

It's high time these expensive little monsters and their arrogant reminiscences were put firmly in their place. Why isn't there a device that, especially throughout the winter months, shows the precise state of all my batteries on some display that even I can understand, or better still arranges for them to be automatically discharged or recharged from the mains and, while we're about it, lobotomises their naughty little memories whenever they show signs of behaving like Alan Clark?

They can do it. I know and love these designers of gadgets for glider pilots; they are crazed rocket scientists and loopy nuclear physicists, every one. One of them designed my trailer, but that's another story. They will invent a brilliant battery-monitoring device which does everything I ask -

BUT

- they will have made the nursing of all 30 of my nickel-cadmiums depend - that's right! - on one nickel-cadmium battery, which I will find next March to have given up on its guardianship duties shortly after Christmas and since then to have been writing its autobiography...

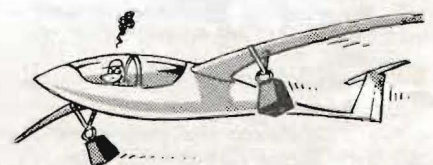
Nothing but the truth, that's all I ask

I really ought to heed the sagacious old African saying "If you are about to ford the river, do not throw stones at the crocodiles". So sensible. However it would go against my principle of strict impartiality and fairness. I have a duty to offend everyone equally. If the offended parties choose to abuse their sacred trust in order to take crafty revenge, so much the worse for them on Judgment Day. My conscience is clear.

Yes, today I shall take a tilt at scorers. (Watch it, Ed.) Well, it will probably be eight months to my next Comp, and it will all have blown over. (Don't bet on it, Ed.)

This time it is something which - to my surprise, since I tend to imagine that most of my obsessions are unique and private - bothers some other people as well as me. It is the maddening habit of scorers, in a handicap competition, of showing on the results sheet not the true speeds and distances but the massaged, mangled and distorted handicapped speeds and distances. Now this is emphatically not a gripe about the principle of handicapping - the fact that my own ship happens to have a grotesquely unfair handicap is a separate issue, and the people who concocted that silly number will have to be pilloried in another edition - but simply about the way the performances are displayed. How galling it is to know that you have done over 100km/h but to see it on the board as 78.5km/h, or to cover 510km and see it as 390.

Ordinarily I would write the official speeds and distances in my logbook, but these artificial numbers, which are merely a mid-point in the process of calculating the final handicapped score, are in themselves utterly useless things to put in any logbook. They might as well go the whole hog and publish the square roots of the speeds and the co-ordinates of the landing places and all the other stuff that normally lies hidden in the black box. Ask a scorer if he (are there any she-scorers? I think most women of spirit have better things to do in the small hours of the morning) can give you the true figures for your personal record, and he is aghast at the enormity of your demand. The systems commonly in use do not permit the simple truth, only the complicated, artificial version. After one contest, at my request the scorer kindly wasted a large part of his holi-

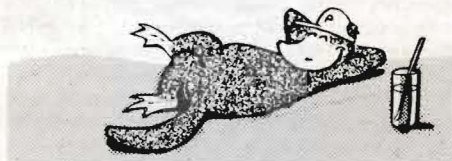


Grotesquely unfair handicap.

day working out true speeds etc to be used in my S&G Comp report, but unknown to him and me the Comp director's own version hit the editor's desk first and thus appeared in print; of course that printed version had these daft non-statistics. I felt very apologetic for wasting the young man's time.

If you insist on showing false stats, at least let's do it in a way that raises people's morale a bit, instead of depressing it as at present. Instead of using the Std Cirrus as the datum glider, which lowers the published speeds in almost every case, let's take the Nimbus 4 as the benchmark and really whack the velocities up for everybody except Ralph Jones. Then the pilots of K-6s and Darts can say "Look, I did 120km/h today! It's in print so it must be true!"

It only requires a spot of lateral thinking, you see.



Lateral thinking.

Are you doing it against the wind?

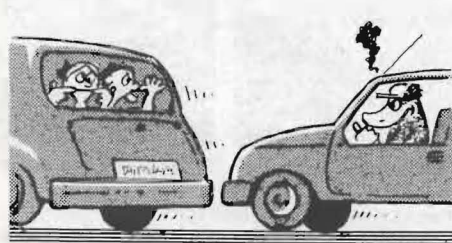
Because of my talent for getting unacceptably low on cross-country flights, even on good days, I am always deeply interested in discovering which direction the breeze is coming from, and how strong it is. I have had a couple of hard encounters with solid objects such as concrete fence-posts and barbed wire - way back in the 1970s, he adds in case his insurance broker suddenly takes to reading anything except invoices or contracts in five-point type - in each instance because of a change of wind direction of over 90° in the interval between the carefree take-off and the unhappy landing. That sounds as if I am blaming Mother Nature rather than the responsible individual; so I had better add that this responsible individual knows very well that he should have started to pick a field much earlier precisely because there were no wind indicators.

Knowing knots from knickers, and the last straw

In the good old days, when farmers ritually set fire to anything combustible from unsaleable crops to Ministry of Agriculture officials, and when washing fluttered from clothes lines in every garden because the masses could not yet afford tumble-driers, it was often easy enough



Set fire to anything.



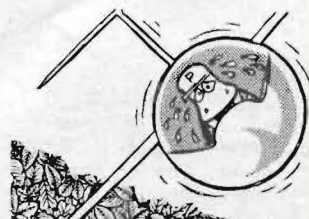
Take them by car.

to tell the wind direction and strength on the ground¹. Nowadays farmers have to bale up their straw unburnt, no doubt with the occasional bureaucrat rolled in with it, while the privileged and pampered proletariat no longer peg up their panties for petrified pilots to peer at.

GPS = Great Panty Substitute

However it is characteristic of modern times that traditionally very simple and cheap ways of doing things have been supplanted by expensive and complicated ways of getting the exact same result. So children used to walk or bicycle to school, but now this is considered so hazardous their parents take them by car. All this costly and labour-intensive activity shows up in government statistics as an improvement in our standard of living, by the way. (Get on with it. Ed.)

Well, what I was meandering my way towards was the observation that one use for a GPS that people don't mention is that of measuring the windspeed and direction while you are circling. (On the Garmin 100 there is a fancy way of doing it in level flight, which presumably depends on some triangle-of-forces calculations done by the computer, but I have never been able to get any sense out of it, probably because I never fly at a steady speed or direction for any length of time.) unless there is no wind to speak of, which is still



Tight and sweaty circles.

What I have in mind is the man-overboard button, Autostore, which gives an instantaneous position. As you start those tight and sweaty circles, hit the Autostore button, hit Enter, then hit the button that shows the nearest waypoints; you immediately see the bearing of the place you started circling, which after a few epicycles (Greek for the pretty pattern described by a point rotating around a circle whose centre is moving)

¹The nitpickers, for whom as a self-appointed Nitpicker-in-Chief to the entire soaring movement I have great respect, will point out that the 1970s surely now constitute the Good Old Days; so where was the smoke or the washing when Plat pranged? Well, on one day it had been bucketing with rain so no farmer was burning straw and no housewife was hanging up washing, and on the other day the idle so-and-so's just neglected their duties. Like police, never there when you really need one.

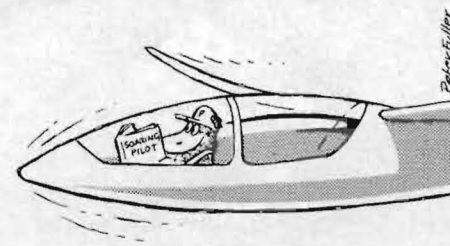
useful information.

If you have the presence of mind to start a stopwatch after you hit those three buttons, and are capable of low grade mental arithmetic under stress, you can also calculate the wind strength: after six minutes multiply the distance from that waypoint indicated on the GPS, such as 1.2nm by 10, and here's your windspeed at that height - 12kt. That is also a useful piece of data for navigation and calculating your chances of completing the task. Obviously, the longer the time you spend circling in that particular thermal the more accurate your wind speed estimate.

A few provisos:

- Try this GPS exercise while reasonably high and comfortable from time to time during every flight, so that eventually it becomes automatic. Four hundred feet up in a broken thermal is not a place to start imposing sudden intellectual overload on your brain for the first time.
- If you shift position a lot in an effort to get centred, use your common sense and don't rely too much on the bearing displayed.
- Aviating comes before navigating. Don't spiral into the ground mesmerised by the GPS read-out.
- You don't actually need a GPS for a fair idea of wind direction: the eyeball and a Bohli or Schandz compass will do the same if the wind is significant. As you drift, just note the bearing of the place you were over when you started circling. This works better when low down than higher up, as the angle between your eyeball and the bit of scenery you started circling over changes quicker. You see, getting low has its benefits!
- The technocrats may say that the thermal does not drift at the same speed as the whole airmass, but clings to the ground source and therefore travels slower than the general airmass. (GPS logger records should be able to test that hypothesis right now: another rich subject for speculation and argument at the club bar will soon be tragically eliminated by the application of hard facts.) If you get away from that low point, and the final glide is into wind, add a few knots to your estimate for safety.
- The best wind indicator when really low and committed is the way the glider crabs in the crosswind bits as you describe a nice big circuit around the chosen field. (Being a wise virgin, you have allowed plenty of height for that circuit, haven't you?) If you can't manage that by eye you shouldn't be out there on your own at all.
- None of the above absolves you from reading and heeding what Piggott, Scull, Welch and your CFI say about selecting fields and landing safely in them.

My lawyer told me to put in that last bit.



Reading and heeding.



A. Isolated wave boosted cu just downwind of the river Severn. The next little cloud shows how widely separated these cu were.



B. Close up of the side of wave cumulus. Taken while in lift on the upwind side.

Cumulus clouds come in many shapes and sizes and it is not always obvious which are useful and which disappointing. In some cases the lift is as good outside the cloud as inside. Here are a few examples.

Wave modified cumulus

Wave effects are probably much more common than many people realise. Whenever cumulus tops are limited by an inversion and there is an increase of wind with height above it there is a possibility of waves. If the airflow comes across a hilly region there is a good chance of wave flow over the cumulus tops. Such wave may then extend at least 100km downwind.

Photo A shows an isolated wave boosted cumulus which developed just downwind of the river Severn. A similar small cloud appears a few miles to the south-west beyond the Severn bridge. This spacing shows how far apart these clouds were that afternoon. The picture was taken from 7000ft looking south-west and the wind was from right to left. Waves usually produce a bar of cloud lying across wind but on this occasion there were only scattered cumuli aligned along the wind.

Wave had been encountered over a wide area as far downwind as Lasham and Booker that day but there were no obvious indications of its location. The only clue was that the thermals were very variable in strength. They were strong under the wave lift but it was necessary to keep moving upwind to stay in the lift. Although the waves did not maintain the same position for long periods Aston Down (who were running a course) complained of sink spoiling their launches and ruining some circuits throughout the day. Later, after the cu had dispersed, a pilot reached 12 000ft a short distance away.

Photo B taken a few minutes after A shows details of the upwind side of the cloud at that stage. The wave lift extended several hundred

SOME VARIATIONS OF CUMULUS

TOM BRADBURY

yards in front of the cloud. Unlike many wave cu there was no smooth top and the side was very ragged with columns or narrow pillars of cloud forming and dispersing rapidly. With most cumulus a ragged appearance like this often means the cloud is decaying but this wave cu was active in spite of its tatty looks. The air was very dry that day, so dry that the cloudbase went up to about 6500ft before burning off. This dryness may be why the cloud looked so ragged. Mixing at the windward face probably caused evaporative holes to erode the cloud.

Photo C illustrates another day when there was little to show how the wave was aligned or where it might be. It was taken from about 7500ft near Ludlow looking downwind on a day when the wind was again from the WNW. A Lasham pilot found regular waves over most of the leg to Gloucester but the clouds showed very little sign of this. The best indication seemed to be the occasional wide gaps in the cloud where wave sink had suppressed the shallow cumuli. Lift could be found on the downwind side of the gaps but the cloud there showed no obvious sign of the wave flow over it.

Toppling towers

The likelihood of finding wave decreases as the air becomes more unstable and tall thin cu rarely if ever occur on wave days. Photo D shows a tall cu with two turrets. The thermal which formed the left hand (downwind) turret had lost energy and the dissolving tower was being toppled by the stronger winds aloft. The right hand turret, being younger, still had an active thermal inside and was rising vertically. This shows that

vigorous thermals can remain upright even in a wind shear. The tilt does not start till the lift fails. Clouds like this have a very short life, especially early in the morning. Unless you contact the thermal very quickly all the lift disappears into the cloud top.

Photo E shows much heavier cumulus towers during the afternoon. They are still too narrow for their height and soon start to be tilted by the wind as the lift fades away. Only the broader and more distant cloud on the right still remains vertical. Tall turrets of cumulus often go rocketing up very fast but are usually hard to get into.

They have a particularly brief active life; by the time one has noticed how tall they have become the low level lift has ended. A bubble at the top may go on upwards a little longer; sometimes it rises so fast it breaks away from the originating column.

When approaching a series of such tall columns it is worth watching the upwind or the sunny side to see if any new puff of cloud forms. If you manage to catch it at the start a fresh puff of cu may well take you in and boost you up several thousand feet as it grows. Otherwise one can search around underneath and find nothing but scraps of lift.

Photo F shows how the wind shear can turn the cloud turret through a right angle until it lies horizontal. In this case the development of an inversion helped the process by limiting the upward penetration of the turret.

It is often worth altering course to avoid flying under the overhanging section of such clouds. The toppled part is usually about to decay and sink often starts under it. However, the left hand (upwind) side is usually where new thermals

C. Taken from about 7500ft looking downwind near Ludlow. Waves had been found all the way to Lasham but only the wider gaps hinted where the sink was.



D. Cu towers. The older ones decayed and were tilted by the wind; new ones still rose vertically.





E. A series of heavy cumulus towers being slowly toppled by the wind shear aloft.

F. Wind shear at a developing inversion making the cu top spread horizontally.

enter. The port wingtip points to the region where lift is to be expected.

Unstable altocu; a warning of thunderstorms

So far all the clouds illustrated have been caused by thermals rising from the surface. Altocumulus can develop turrets too; the cloud is then called "altocumulus castellanus".

These clouds develop above the reach of any ground based thermals. They appear when the air aloft is potentially unstable. When the temperature curve for these days is plotted on a tephigram one usually finds the air is warm but very stable low down. Higher up, usually above 10 000ft over England, the air is on the edge of instability. There is usually a moist layer at medium levels with progressively drier air above. The whole mass can become explosively unstable if it is lifted enough for cloud to form in the moist layer.

Lifting of a large area of the atmosphere usually occurs in advance of a trough in the high level contours. On most occasions the lifting makes the upper air become moist over a deep layer extending from cirrus level down to the medium level altostratus. It is only when the upper air is initially much drier aloft that potential

instability can exist. The potential is realised when the medium level moist layer is lifted enough to become saturated. As soon as even a thin layer of altocumulus forms the air above becomes absolutely unstable and cumulus towers start to grow.

A suitable situation often develops in summer ahead of a slowly advancing cold front. At low levels south or south-easterly winds carry warm moist air northwards. At medium levels the wind veers bringing much drier and relatively cool air in from the SSW. Higher still a nearby jet stream acts rather like an extractor fan sucking the air up and carrying it away in the strong flow around 30 000ft. The combination of the different winds, warm and moist below and cool and dry aloft, makes the air progressively more unstable. The first sign this is happening is when altocu castellanus appears.

Photo G shows the formation of a thin layer of high altocu looking WNW before sunset. This was the first sign of medium level condensation. Photos H and I show the thin cloud layer changed to much deeper castellanus. They show the view to the south, the direction from which the instability was developing. H shows lines of castellanus with one top growing well. The thin almost horizontal line along its base is

a feature of these clouds which has not been properly explained yet. In photo I the castellanus lines are becoming thicker. They are aligned along the wind aloft just as low level cumulus streets are aligned with the wind below.

Trailing virga

Many castellanus clouds form well above the freezing level, even in hot weather. As they grow larger they produce showers of ice crystals or in some cases snow which evaporates in the dry air below. Such trails are called "Virga" and are illustrated in photo J.

Castellanus clouds can sometimes look just like soarable cumuli and since their height is often hard to judge one can be deceived into looking for lift under them. Presumably there would be lift if one arrived at cloudbase but don't expect to find any from a 2000ft aerotow. Powered aircraft have noticed turbulence when flying among altocu cast but I have not seen any accounts of soarable lift in such clouds.

In some parts of the world, for example Australia, South Africa and the USA, thermals from ground level may go high enough to produce cu at 10 000 to 15 000ft and even higher. Over England the air is almost always too moist to give such a high cloudbase. In exceptional



Above: G Thin layer of altocu forming in the evening.

Above: H. Thin lines of altocu castellanus beginning to grow bigger turrets. Below: J. Castellanus thickened enough to produce trailing virga, (showers of snow or ice crystals which evaporate before reaching the ground).

Below: I. Lines of altocu cast lying along the upper wind and thickening from the south.



circumstances an English thermal formed a cumulus at 11 000ft but the last report of such a high cloudbase was during the drought summer of 1976. Normally altocu cast is far out of reach.

The clouds shown in H, I and J are one of the most reliable signs of hot weather thunderstorms. Storms nearly always break out within 24hrs of these clouds appearing, and usually sooner. On this occasion thunderstorms broke out about 100 miles downwind within 12hrs. ✕

A DRAMATIC WARNING

Tim Wilson, CFI of Sackville GC, says he had a horrific reminder of how dangerous loose tow ropes can be when he was tugging this summer. Coming in to land he felt the rope tighten and looked round to see it tightly wound round the head of a sheep. It jerked the animal into the air, then pulled it 20 or 30 yards up the paddock and through a hedge, decapitating it in the process.

It was also a costly exercise. Tim had to pay his brother £50 compensation for the loss of the sheep.

"But I was so relieved it was only a sheep," he added.

WELL DONE KARINA

Karina Hogson of Bicester GC has been awarded the British Women Pilots Association's O.P.Jones cup for her gliding achievements. Karina, who soloed on her 16th birthday, won the 1993 Junior Nationals.

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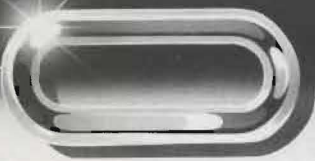
Congratulations Tug Wilson

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GRAHAM'S CORNER

This is the last piece Graham wrote as a BGA national coach before leaving to become the CFI at Lasham



Fridgidar

I spend a lot of time flying club two-seaters with various people, invariably from the front seat which, to a lot of instructors is initially at least rather strange. If you have flown a large number of hours in the rear seat, reverting to the front can be disconcerting. The lack of forward reference for a start throws a lot of pilots. I don't find this a problem but then I do it more than most. The thing that does put me off more than anything is the discomfort you have to put up with in the front.

If you haven't flown your club two-seaters from the forward seat for a long time, I suggest you try it and you'll see what I mean. It will remind you what the pupil has to put up with.

By far the biggest culprit is the chilling breeze created from unwanted and unnecessary ventilation. That pleasant draught that cools the fetid summer brow may be bearable up to 2000ft but at 5000ft it becomes a test of endurance worthy of a Japanese TV game show.

I had the misfortune to be sitting in the front seat of a glider in March and was shivering within two minutes of being airborne.

The gap between the canopy frame and the cockpit edge was wide enough to post through a decent sized novel and it produced a searing

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blast about chest height which cut me in two.

The front of the canopy had the usual demisting arrangement - a horizontal slot cut into the perspex - but to be effective at clearing the interior of condensation there has to be a strip of perspex positioned to deflect the airflow around the inside of the canopy. Needless to say this was missing. Its exclusion resulted in a scimitar sharp stream which froze a section of my face from the top lip to the lower eyelid.

The aerotow hook, on the nose where it should be, had at one time been thoughtfully provided with a rubber flap which slapped closed as soon as the rope was released - unfortunately it had dropped off some time ago and the gaping hole that houses the tow hook allowed copious quantities of the frigid spring air to blow straight up my trouser leg.

I was being attacked on at least three fronts that I could identify. No amount of extra clothing or sealing of collars and cuffs appeared to make any difference. I was perished.

This was a nuisance because it was quite soarable and there was at least an hour's flying to be done with each candidate but, try as I might, I found the whole business just too painful and had to cut the flights short to avoid frostbite. ☒

LETTER FROM AUSTRALIA

Charles Day has written with the latest news from Benalla GC.

Last season was poor by our reckoning but booming by UK standards. Nevertheless, my own flying was fairly satisfying - 8800km in 25 launches. Many days were by no means fully used.

Jill Burry broke the British women's O/R record with 630km to West Wyalong at a decent clip.

Much of SE Australia is in the grip of a drought this winter, so the omens are favourable for a good 1994/95 cross-country season. Australian droughts don't go away overnight, so get out those airline timetables! A full schedule of the professional John Williamson courses is planned, Japanese visitors being expected on some of them.

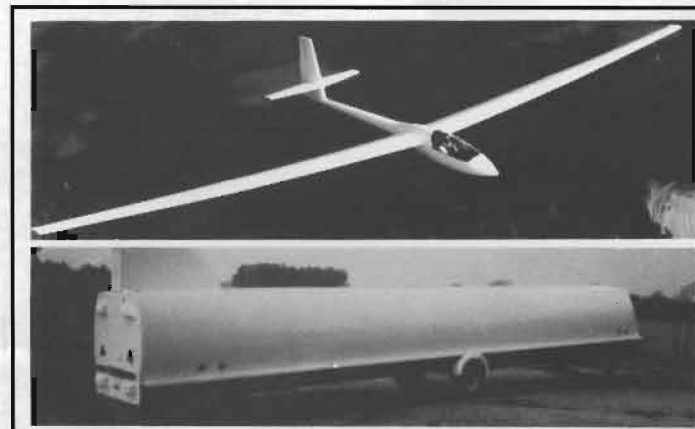
In addition the Gliding Federation of Australia has launched a national cross-country coaching scheme which has nominated a number of top local pilots (who may or may not be conventional instructors) to act as mentors to the less experienced. Benalla will be very active in this scheme.

Several members will be flying right across Australia this coming summer, coast to coast (west to east). This will be similar to the S to N crossing a while ago: a lot of spectacular soaring and, for the crews, very hot driving.

Gary Brasher, our young competition fanatic, is employing desperate measures in the forthcoming Nationals, having bought a Nimbus 3T from Britain.

Promoting Gliding Sites

Dick Stratton, BGA chief technical officer, who visits many clubs during the year, comments: "Poor or non-existent sign posting is a major deterrent to casual visitors attempting to arrange an AEI flight. We need to persuade clubs to remedy this obvious deficiency and to otherwise promote themselves through local media cover."



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Tim Scott.



Ray Payne.



Above: Steve Jones. Below: Alister Kay.



15 METRE CLASS NATIONALS

Dunstable, July 9-17 - as seen by the competition director



The colour drawing presented to Justin Wills, the 15 Metre Champion, who won Day 2 and 4. The day winners were also given black and white sketches by Martin Batten. Martin was trained in graphic design and advertising and, with his wife, has worked his way round the world.

John Jeffries' catch phrase "Fun, sport and amusement" accurately sums up the 15 Metre Class Nationals held at a very sunny and all too dry Dunstable. A new, inexperienced but enthusiastic team of organisers welcomed pilots from all over the country, a fair sprinkling of new faces intermingling with the familiar "old boys".

A very brief opening ceremony was followed by the first briefing where I set the tone for the competition by announcing that any pilot taking himself too seriously might receive administrative penalties. The dilemma facing LS agent Martyn Wells provided the pre-launch interest. He arrived with brand new winglets for his LS-6 but no experience of flying with them. Should he fit them and risk the unfamiliar handling in an important competition or fly without them and risk being lynched by all the people to whom he had sold them in the past few years.

Day 1, Saturday July 9: 289.7km bow tie, Bicester, Ely, Olney. Gary Stingemore's day at 76.1km/h in an LS-6c; 23 finishers, 11 300km flown.

Slow and careful on the first leg, getting bet-

ter and better as they went east, then worsening until desperation around Olney. Most of those who didn't get home landed on the last leg. Paul Fritche landed inside the grounds of Woburn Abbey whereupon the resident Lord asked for a £500 landing fee. Paul was not amused, neither was I because I had to grovel to get the LS-4A released. Please avoid Woburn Abbey.



Gary Stingemore.

15 METRE CLASS NATIONALS



A drawing of Warren who had to cope with Dunstable losing its water supply for 48hrs due to water pump problems.

Day 2, Sunday, July 10: 236.1km dog O/R, Bicester, Kingsclere, Bicester. Justin Wills' day at 49.3km/h in an LS-6; 12 finishers, 6000km flown.

My deliberate mistake sticking with the A task required the field to fly 20 miles south of the M4 with the inversion at 1200ft. It is, however, practically impossible to set a task that Nationals' pilots can't complete, thank God! In blue and broken conditions the finishers came home between 1845 and 1915hrs, thus saving me from wearing my "Escobar" T-shirt at briefing. Martin Durham (LS-7) caused great consternation in the local press by landing in a school playing-field at Leighton Buzzard watched by the finish line observers. Bruce Cooper, unwell, withdrew from the competition and Frank Davies, migraine, rested for the day.

Day 3, Monday, July 11: 360.2km bow tie, Marlborough, Newbury, Husbands Bosworth. Phil Jones (Ventus B) and Pete Sheard's day at 97.9km/h, Pete flying a Ventus A; 43 finishers, 15 700km flown.

Phil Jones' spectacular finish, wingtip vortices visible in the corn, summed up a real racing day with the speeds of the first five within 1km/h. The day winners' prizes, A4 sized framed pencil caricatures, produced the only serious protest of the week with Pete Sheard, at first in 2nd place, badgering the scorers until his time was corrected to give him equal 1st with Phil. The real winner this week was the artist, Martin Batten, to whom we send our thanks.

This is part of a letter from Woburn Abbey

Woburn Estates have requested that gliders do not land within the grounds of the Abbey. The reason is the close proximity of the most suitable landing areas to the stud farms. Also, considerable numbers of visitors roam freely around the estate. Whilst it is accepted that landing in a genuine emergency is unavoidable, in all other circumstances you will not be welcome and the club's reputation as a responsible body will suffer. It will cost you money to remove your glider.



Peter Sheard.



Phil Jones.

Below: John Galloway (Discus).



Ed Johnston.



Phil Jones.



Above: Gary Stingemore. Below: Dave Watt.

All photos by Tony Danbury



15 METRE CLASS NATIONALS

Day 4, Tuesday, July 12: 415.5km bow tie, Avebury, St Neots, Leicester. Justin's day (again!) at 101.2km/h; 25 finishers, 17 900km flown.

Gillian's face looked worried when Justin announced a marginal final glide. Phil Jones, however, was much lower and slower, the Ventus crossing the line just before it stopped flying and sat down in the hay for a rest. Phil received his prize of a blank "will" at briefing and followed that the next contest day with a very cautious flight prompting an award to his wife Molly for delivering an effective chat.

Tim Scott (LS-7wL) finished in the first ten again, keeping the pressure on Justin and Martyn. Cloudbase reached 7500ft asl and achieved rates of climb exceeded 400ft/min. Ray Payne produced a memorable barograph trace at 100ft turning finals into a field - some birds frightened by the sight of a Discus with winglets took off and circled. Ray flew into 8kt straight up to 6600ft!

Day 5, Thursday, July 14: 251.4km bow tie, Edgehill, Grafham Water, Pitsford. Steve Jones' day at 98.4km/h in a Ventus C; 43 finishers, 11 000km flown.

Tired pilots were grateful for a rest day followed by a straightforward race with Ted Lysakowski (Ventus B), reigning Champion, appearing on the leader board for the first time and Gillian Spreckley (LS-6c) showing that Brian isn't



Steve Jones.

the only competitive family member. Jerry Beringer (Pegasus) and Steve Robertshaw (LS-7) had landed out every day, somehow keeping their disappointment in proportion which must answer Justin's "What evolutionary purpose does a sense of humour serve?" question.

Day 6, Sunday, July 17: 349.5km bow tie, Evesham, Northleach, Pitsford. Steve White's day at 81.7km/h in an LS-7wL; 34 finishers, 13 800km flown.

Alister Kay (LS-6cw) finished in the first four for the 4th time to climb up to 4th overall. Pete Sheard just failed to catch Simon Redman (LS-6b) for 5th but thankfully for the artist who had already prepared the colour caricatures for the



Steve White.

overall 1st, 2nd and 3rd prizes those places didn't change. When Jerry Beringer crossed the line the cheer could be heard right across East Anglia.

Prizegiving was well supported by the competitors and Justin, gracious in victory, expressed the views of many by remarking that Dunstable 1994 was a competition to remember. Martyn, 2nd, was last seen gazing rather ruefully at his caricature. Tim Scott had flown magnificently to bring a Standard Class glider into 3rd place. Ed Johnston (LS-6A) in 7th was the highest placed "home" pilot. Colin Watt (ASW-20B), 15th, was the highest placed pilot flying in his first Nationals.

FINAL RESULTS

15 Metre Class Nationals

Pos	Pilot	Glider	Day 1.9.7 289.7km bow tie Bicester, Ely, Olney			Day 2.10.7 236.1km dog leg O/R Bicester, Kingsclere, Bicester			Day 3.11.7 360.2km bow tie Marlborough, Newbury, Husbands Bosworth			Day 4.12.7 415.5km bow tie Avebury, St Neots, Leicester			Day 5.14.7 251.4km bow tie Edgehill, Grafham Water, Pitsford			Day 6.17.7 349.5km bow tie Evesham, Northleach, Pitsford			Total Pts	
			Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts		
1	Wills, T. J.	LS-6	73.2	5	971	49.3	1	815	97.1	5	988	101.2	1	1000	97.3	3	951	81.3	2	994	5719	
2	Wells, M. D.	LS-6c	72.3	6	963	48.1	3	807	91.3	11	903	94.8	5	947	97.9	2	961	79.3	7	966	5547	
3	Scott, T.	LS-7wL	73.7	4	976	43.3	12	775	91.6	10	907	93.4	6	936	94.4	6	911	73.3	12	880	5385	
4	Kay, A.	LS-6cw	70.9	11	949	(104.4)	18	405	97.9	3	999	99.1	3	983	96.1	4	935	80.4	4	981	5252	
5	Redman, S.	LS-6a	61.7	23	858	44.8	10	785	89.3	17	873	92.5	7	928	93.8	7	903	69.6	17	828	5175	
6	Sheard, P.	Ventus-A	68.7	16	927	47.1	6	800	97.9	1	1000	70.7	25	748	80.2	27	711	80.7	3	986	5172	
7	Johnston, E.	LS-6A	62.0	22	861	47.3	5	802	93.2	8	911	73.6	24	773	91.1	11	865	74.8	8	902	5114	
8	Payne, R.	Discus B	70.3	12	943	48.9	2	813	87.3	23	844	(343.3)	39	477	90.1	13	850	74.3	9	895	4822	
9	Jones, S.	Ventus-C	71.9	8	959	(104.4)	18	405	91.3	12	902	75.8	23	791	98.4	1	968	65.7	23	773	4798	
10	Crabb, P.	LS-7	(239.4)	26	603	46.3	8	795	85.3	29	814	89.7	14	906	86.8	17	804	68.2	20	808	4730	
11	Jordy, M.	ASW-20L	74.7	2	986	(101.7)	29	399	89.7	16	879	90.5	12	912	91.6	12	912	67.5	21	798	4657	
12	Watt, D.	ASW-24	69.9	14	939	(63.0)	40	223	86.8	24	837	97.3	4	968	82.0	22	737	79.8	5	972	4676	
13	Jones, P.	Ventus-B	72.4	6	963	(85.1)	33	327	97.9	1	1000	100.7	2	996	61.0	43	440	74.2	10	893	4619	
14	King, P.	LS-7	67.7	20	918	(104.4)	18	405	82.5	36	774	91.9	9	923	83.6	21	758	62.7	27	729	4507	
15	Watt, C.	ASW-20B	(213.8)	38	532	47.1	11	780	81.0	38	751	83.5	18	854	91.2	10	866	59.5	28	685	4468	
16	Stingemore, G.	LS-6c	76.1	1	1000	(104.4)	18	405	97.4	4	991	(341.7)	43	474	79.3	29	699	67.1	22	792	4361	
17	Spreckley, G.	LS-6c	69.3	15	934	(104.4)	18	405	90.4	15	890	(343.3)	39	477	93.3	8	896	64.0	25	748	4350	
18	Francis, D.	Ventus-CT	67.8	19	919	(54.1)	41	182	82.2	37	770	79.9	22	824	77.6	31	675	79.7	6	971	4341	
19	Fox, R.	Ventus-B	68.6	17	926	(49.9)	42	162	89.2	17	873	90.1	13	909	74.6	35	632	70.0	16	833	4335	
20	White, S.	LS-7wL	68.6	17	926	(33.5)	43	85	94.4	6	948	(343.3)	39	477	90.1	12	851	81.7	1	1000	4287	
21	Durham, M.	LS-7	(238.1)	27	600	(198.5)	13	629	87.7	22	851	(373.2)	34	521	87.2	16	810	70.1	14	835	4246	
22	Aldis, C.	LS-4	71.5	10	955	(194.2)	14	619	91.0	13	899	(390.7)	28	547	68.9	39	552	56.1	30	636	4208	
23	Lysakowski, E.	Ventus-B	(216.4)	34	540	(104.4)	18	405	90.6	14	893	(386.0)	30	540	94.8	5	917	71.3	13	852	4147	
24	Rebbek, H.	LS-4	70.1	13	941	(104.4)	18	405	78.8	42	720	(343.3)	39	477	81.6	23	731	68.8	19	817	4091	
25	Wall, N.	Discus	(216.4)	34	540	(99.7)	30	394	84.8	32	808	84.0	17	859	81.3	24	727	63.6	26	742	4070	
26	Murphy, T.	ASW-20	(214.8)	36	536	(122.8)	16	447	86.2	26	829	91.8	9	923	64.0	42	483	70.0	15	834	4052	
27	Morris, D. G.	ASW-20L	71.7	9	957	(104.4)	18	405	88.6	19	864	(390.6)	29	546	86.2	19	795	(257.9)	36	413	3980	
28	Brice, P.	ASW-24	(234.9)	29	590	47.5	4	803	84.5	33	803	(334.1)	44	463	77.7	31	675	55.7	31	631	3965	
29	Olender, S.	LS-7	(211.2)	41	522	(74.3)	35	276	83.2	35	785	82.9	19	849	89.3	14	839	54.5	32	613	3884	
30	Gatfield, J.	ASW-20	(214.8)	36	536	46.5	7	796	85.0	31	811	(347.4)	37	483	71.1	38	562	57.4	29	655	3843	
31	King, R.	ASW-20BL	(229.3)	30	575	(93.3)	31	365	82.3	38	751	91.5	11	920	83.7	20	760	(259.1)	35	415	3786	
32	Davies, F.	LS-6c	(244.2)	24	616	(0.0)	45	0	88.1	20	856	(386.3)	30	540	91.7	9	873	74.1	11	892	3777	
33	Fritche, P.	LS-4A	(236.0)	28	594	(104.4)	18	405	82.3	41	721	(374.5)	33	523	79.6	28	702	69.1	18	821	3766	
34	Gardner, D.	LS-3A	(211.4)	39	523	(93.3)	31	365	86.8	24	837	92.1	8	925	77.7	31	675	(207.8)	39	332	3657	
35	Bromwich, R.	LS-6C	73.9	3	979	(67.4)	38	244	93.8	7	939	82.5	20	846	66.2	41	513	(113.7)	42	90	3611	
36	Mitchell, T.	Ventus	(56.5)	45	115	(104.4)	18	405	85.2	30	813	87.0	15	883	89.3	15	838	50.5	34	557	3611	
37	Galloway, J.	Discus	(191.0)	44	443	45.5	9	790	85.3	28	815	81.2	21	835	71.7	36	590	(110.7)	43	86	3559	
38	Stewart, A.	Ventus-B	82.9	21	871	(164.9)	15	544	83.8	34	792	(347.4)	37	483	78.3	30	684	(106.5)	44	80	3454	
39	Throssell, M.	Ventus-CT	(224.7)	31	563	(69.8)	36	255	85.8	27	822	85.3	16	869	68.1	40	540	(214.5)	38	343	3392	
40	Angell, J.	SZD-55	(224.4)	33	562	(83.5)	34	319	87.9	21	853	(199.6)	45	265	71.6	36	590	65.5	24	769	3358	
41	Spencer, J.	DG-600	(211.2)	41	522	(104.4)	18	405	76.4	43	685	(380.7)	32	532	80.6	26	717	(207.8)	39	332	3193	
42	Arnold, J.	Discus 3	(211.4)	39	523	(119.3)	17	419	80.7	40	748	(364.5)	35	508	76.0	34	652	(201.8)	41	316	3166	
43	Hill, D.	LS-6	(224.7)	31	563	(18.1)	44	18	91.7	9	909	(392.6)	27	549	86.8	17	804	(0.0)	45	0	2843	
44	Beringer, J.	Pegasus	(200.7)	43	481	(67.7)	37	246	(100.9)	44	114	(364.5)	35	508	(49.5)	45	52	52.8	33	589	1990	
45	Robertshaw, S.	LS-7	(44.0)	46	94	(67.3)	39	243	(101.2)	44	114	(409.9)	26	575	(165.3)	44	179	(231.1)	37	370	1575	
46	Cooper, B.	LS-6a	(241.3)	25	608	(0.0)	45	0	(0.0)	46	0	(0.0)	46	0	(0.0)	46	0	(0.0)	45	0	608	

Although this article has a general title, it was written with the French Alps very much in mind. With so many British pilots making the journey to the Alps each year S&G decided to publish it as a supplement to the three articles by William Malpas which appeared in these pages during 1988/89. Roger Biagi is one of the small band of French pilots who "invented" the Southern Alps. The article was prepared for pupils of the mountain flying school run by him with Jacques Noel at Gap and has appeared in *Aviasport*. It was translated for us by William Malpas. We follow on with a report from Brian Bateson on flying at St Auban.

MOUNTAIN FLYING

Hill soaring, ridge running and climbing sheer rock faces

It was starting from a hill that a sailplane first climbed in thermal lift. When flying cross-country in mountains in France, in Europe, or elsewhere, progress is often preceded, completed or followed by finding lift on a hill side or along a ridge.

The expression "hill soaring" applies to using lift generated by the gradient wind or the valley breeze which blows up the side of the hill. The strength and extent of the lift depends on the windspeed and the slope of the hill.

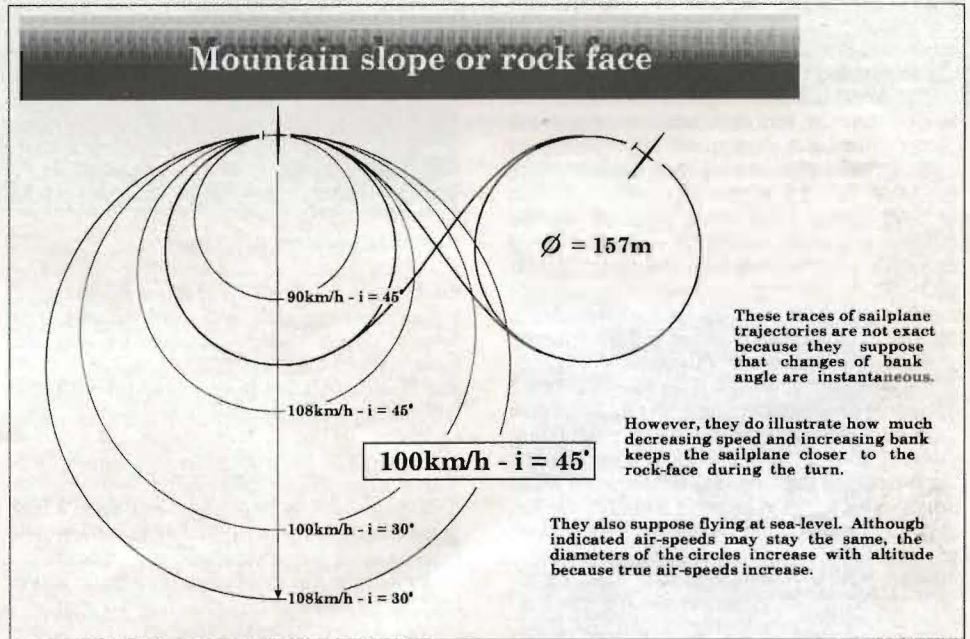
Once upon a time the principal criteria for selecting a hill soaring site were the frequency of the dominant winds, the slope of the hills and the smoothness of their contours.

Flying cross-country is a bit more complicated. The mountains, even well adapted, are very diversified. They vary from gentle slopes of 10-15°, through the natural slope of rock falls (about 58°) to vertical walls, generally without trees and excellent for soaring, which have spawned the name "rock polishing". The shape of the ridge is what it is, with its difficulties and its advantages for the generation of thermals.

In our hemisphere mountains facing north, north-west or north-east are usually fed by the gradient wind (mistral for example), whilst mountains facing in other directions can be fed by gradient winds or valley breezes, or both at the same time. To fly safely and efficiently it is necessary to take all these factors into consideration when attacking each individual mountain, adapting to its location, orientation and aerology.

Let us start with some simple examples, the north or north-west faces of Courbure de Lure, the Gache and the Beaume, well-known mountains in the Southern Alps with the mistral blowing at 15 to 30kt or more. The turbulence is strong, but paradoxically there are no traps.

Lift is wide and strong; it is assured even half-way down the face and with 6 to 8kt positive the sailplane soon arrives at the top - there is no need to fly close to the face to climb. Indicated airspeed can be 110 to 140km/h; the sailplane is very manoeuvrable. Beats along the face can be made at 140 to 150km/h "crabbing" at 10 to 20°.



If you are on the west face of the Cheval Blanc in the same situation in spring or summer, you will also enjoy the thumps of the thermo-dynamic bubbles coming up the face. But you will not be there long; you will soon be at the top and away, unless you are an instructor, in which case you will probably contrive to lose altitude somewhere and come back for more, in order to demonstrate this kind of flying to your pupil.

From hill soaring to ridge running

From spring to autumn, valley breezes are usually 12 to 15kt and most slopes (particularly the key points, *ie* the well-known mountains which pilots mark on their maps) are easy to use by visitors who have been introduced to this kind of flying. But conditions degrade to the point where it becomes difficult to stay up, even for an experienced pilot. In general, gradient winds increase with altitude, whereas valley breezes decrease and are sometimes disturbed by the gradient wind.

We will analyse this progressive increase in difficulty in as much detail as possible to emphasise the know-how to deal with it and the need for accurate piloting.

Of course, to practise these techniques it is essential to be local to an airfield. Fortunately, all the airfields in the Southern Alps which are close to the mountains have their local school slopes for two-seater and solo training. For example, Le Rocher d'Authon, which we will examine for the purposes of our analysis, with its

vertical rock face, its summit in the shape of a hat and the extension towards the south-east, and the Montagne de Melan, with its natural rock-fall slope, provide all the characteristics necessary for basic training.

As soon as the valley breeze is established Authon can be hill soared in the classic manner. All that is necessary is to make a few beats

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with turns towards the breeze. At 100 to 200m above the summit the lift is still wide and steady; the most important task is to respect ridge flying rules scrupulously and to ensure the safety of the other sailplanes. In these conditions, application of the golden rule (*ie* making every effort to arrive near the top) allows evaluation of the quality of the lift, and after two or three figure-of-eights at the birth of a strong thermal you can climb up to the altitude required to get to the next mountain.

If conditions are less favourable it may be necessary to soar the slope below the top, close to the rock face. It is still easy to maintain height but precise piloting is required. Angle of bank is the most important factor, because for a given airspeed it determines the diameter of each turn and therefore the distance away from the face. Starting with a turn away from the face, after 180° you are turning back towards the face and about one diameter from it. As you converge with the rock face at an angle of 45° you level the wings and turn 45° in the opposite sense so as to start a new beat at the chosen spot, at a comfortable distance from the face and with the appropriate crab angle.

If conditions weaken further real difficulties appear. The width of usable lift becomes less than the diameter of the turn and at each turn you lose some or all of the height gained during the beat along the face. Nevertheless it may be possible to maintain height if the lift is steady. Now you must note the sweet spots, the gullies which give little bubbles of rising air, so as to lose the minimum at each turn. In these conditions the bare rock faces are much better than natural slopes. The hat shape of Authon allows you to "cheat" slightly, *ie* to place the sailplane above the face or even a little beyond just before each turn so as to remain close to the vertical plane of the face during the turn and so limit the loss of height.

Finally we come to the last situation; for various reasons - conflict between valley breeze and gradient wind, intermittent sunshine, the air mass too stable - conditions become very difficult, not only because of poor lift but also because of turbulence. This brings us to two basic questions; at what speed to fly and at what distance from the mountain? This depends on the manoeuvre, the shape of the mountain and the turbulence.

We have already mentioned the problem of strong winds, such as the mistral. With valley winds blowing on to a slope or a rock face, it is best to fly at max glide speed at a distance of about two wing spans. This distance will vary according to the shape of the mountain because irregularities impose certain constraints. Turns towards the mountain are always made at small angles of bank and at a speed which anticipates the possibility of a sudden increase in bank caused by turbulence. On the other hand, turns away from the mountain can be made at speeds and angles of bank which are dictated by efficiency. It would be pedantic to describe all these variations in detail but they are easy to demonstrate in flight.

To summarise; the conditions on the day dictate and indicate clearly to a pilot who has been properly trained the necessary speeds when turning towards or away from the mountain, the distance to maintain from the face and the height above the



Richard Cowderoy in a Pegasus.

top at which he can safely start a thermal turn. If you scrape along at 90km/h when you should be flying at 100 or 110km/h, you are in danger. If you fly at 100 or 110, or too far from the face, when you should be starting to make a figure-of-eight at 90km/h at the right moment, you may not be able to climb.

Of course, in any conditions, unpleasantly turbulent or apparently calm and easy, you cannot exclude the possibility of a gust leading to a stall or a critical angle of bank. Therefore you must always be ready for immediate action to recover.

Diversity in the mountains on a good valley breeze day makes it possible to demonstrate all the variations in using lift, from very easy to very difficult, and to practise the three principal exercises which are basic to teaching mountain flying:-

1. Start to climb in figure-of-eights, developing into thermal turns.
2. Getting used to seeing mountains from

Below: Ian Godfrey (DG-400). Photos by Jacques Noel.

different directions and how to approach the ridge chosen for the next lift.

3. How to get from one mountain to the next and fall-back possibilities in case of winds, sink or cloud cover being unexpectedly unfavourable.

Finally a word on steel cables in the mountains. The bigger they are the less dangerous they are to us. Permanent cables such as ski lifts and high tension power lines are marked by pylons and cleared tracks through the forests. The cables themselves can usually be seen. The real danger comes, especially in the Northern Alps, from cables used to carry tree trunks down to the valley. Generally they are alone, rusty, sometimes abandoned and practically invisible. Consequently where there is reason to suppose that a cable might exist unseen, *eg* an old clearing in the forest marked by its rectangular shape, make a detour.

Let us not forget that during the holiday periods there may be as many as 500 sailplanes flying in the Southern Alps. More experienced pilots are already familiar with the problems which have been described and we hope that this article will help the less experienced to join them harmoniously.



A FRENCH HORIZON

Brian finds a way to improve his mountain flying technique by joining a course at St Auban

Despite four previous holidays in the Southern French Alps I had managed with sublime ease to avoid learning virtually any French, with the nett result that I had a grossly exaggerated fear of landing *aux vaches*, not being able to extricate myself and still being with the cows, starving hungry and totally desolate some days later!

The earlier holidays had been of the "teach yourself alpine flying variety", blundering around, scaring yourself silly, going nowhere and getting frustrated or frightened. This approach to such a challenging environment as the Alps is a silly version of re-inventing the wheel - a painfully slow learning curve.

So it was a welcome relief two years ago to fly with the European Soaring Club and experience the transition to accelerated learning with Brian and Gill Spreckley courtesy of the CFHN (Centre Francais Haut Niveau) at St Auban.

Within a relatively short period it was possible to venture over, or more often up against rocks, to climb where previously you would have fled, to explore where previously you had only dreamt of going. In short, it was a revelation.

This year we decided to double up on our annual allocated alpine time and booked a fortnight at the CFHN in late April. Spring can be very variable and arriving during heavy rain with red mud everywhere didn't auger too well, but in the event we had two weeks of magnificent weather, every day being soarable.

Bare statistics paint only half the picture for although we took only one Discus with us, Sue and I enjoyed over 60hrs of magnificent cross-country flying covering almost 3000km, enjoyed wave in the mistral to the official French ceiling of FL195, experienced mountain thermals of quite ridiculous strength, and even laid the ghost of going *aux vaches* as the photo shows. On this occasion, adding to the experience, the keys for the trailer and tow hitch were in my pocket with the spares safely locked up in the trailer, some 2hrs by road around the mountains!!!

It was a day of learning about the interaction of NE winds and SW facing thermodynamic lift, of conversing in Franglais, of superbly cooked "Lapin" and, of course, a bottle of Bordeaux.

The CFHN is I believe a unique establishment, formed to serve the French interest in gliding at the highest level. We flew for example alongside the French youth training team during the first week



Brian Bateson's photograph of the Parcours after landing *aux vache*.

and I am still not sure whether the flying or the partying was the most impressive.

The accommodation is excellent, modern and comfortable, briefings are thorough, either in French or, for the rest of the world, in English. Their fleet of aircraft is mind boggling and the whole operation seems to run like clockwork.

Geographically the site is ideally placed both for access to the high mountains via the Parcours, or for flat land flying to the south-west, and distances covered can be consistently high with the two-seaters regularly making flights in excess of 500km over both the Southern and Northern French Alps.


The training is both intensive and thorough and you are expected to want to learn quickly. If you want a laid-back holiday with some flying around the hills then St Auban is not the place to go. If you want to learn how to survive, to enjoy and appreciate the magnificence of Alpine flying then it is without parallel.

You may have noticed in a recent *S&G* a statistic that 42 people have been killed in the Southern French Alps in the past five years, a horrifying statistic, proving that without proper training the mountains can be very dangerous, but realise also that most of them have been pilots with little training in the area. They may have flown in the Bavarian, Swiss or Austrian Alps but local knowledge is essential for safety.

Until two years ago it was virtually impossible to gain acceptance to the CFHN unless you were French, but times change and they now welcome people from all over the world to learn the safe way to fly in mountains with French instructors who have thousands of alpine hours and immense local knowledge.

It gave me enormous pleasure to take off at 1750 for an evening excursion with Eric Napoleon, expecting little at that time of night, but finding out much about convergence zones; we covered 130km before landing at 2030. Finding 5kt lift against a vertical sun facing slope at 2000 was a very pleasant surprise.

There must be many glider pilots who fly the flatlands but who have a dream pushed somewhere to the back of their mind that embraces flying in the high mountains, visiting the places that normally adorn calendars but never believing that it is possible for them to achieve. Indeed, if you try to teach yourself it could take a long time and be very dangerous, but to set yourself new horizons to aim for and new goals to work towards is essential if you are to keep alive that enthusiasm for your sport.

Training courses can be booked directly with the CFHN (Fax 010 33-92 64 23 83), or if you prefer to fly with an English group contact Brian or Gill Spreckley at the European Soaring Club for details of their courses. 

ALMOST A COVER

This lovely shot of the Eagle 3 being winch launched at Bannerdown GC at RAF Hullavington would certainly have made the cover had it been taken vertically but the photographer didn't have time for this consideration. Paul Welsh just happened to be lying on the ground when it flew by and he filmed it over his shoulder. The Eagle is used to fly the disabled and called "Able".





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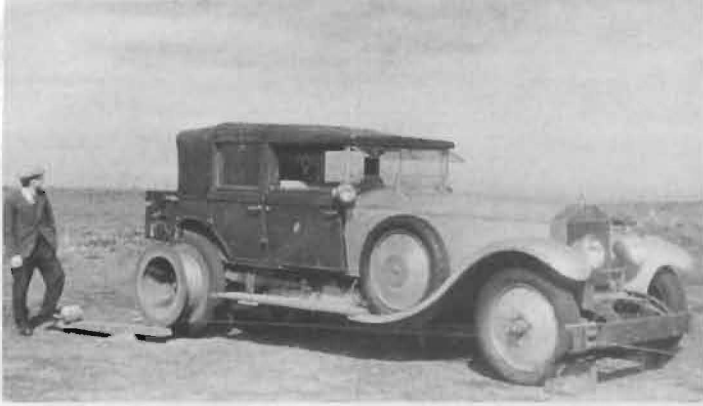
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The Silver Ghost which was used until 1939. Photo: Harold Holdsworth.



Sutton Bank in 1935.

CLUB FOCUS

For this issue we home in on the Yorkshire GC who celebrated their 60th anniversary this summer. We start with Mike Maufe's description of a day at the club in 1937 (Mike holds Silver badge No. 40) and finish with a present day account by Margaret Gomershall and John Goodall

On July 1, 1937, I arrived early and found Harold Holdsworth, the club's official ground engineer, repairing some recent crashery. He had a large batch of new skids in stock which were apparently often needed to replace those damaged in drift landings. The wheel had been invented a few years earlier but not for gliders!

Sutton Bank was soon found to be unsuitable for the traditional system of bungee launching because the steep cliff caused severe turbulence. Allowing enough room for the launching, even to stretch the bungee, meant that the glider was catapulted straight into the down draft of the curl-over, while if launched further forward the crew disappeared over the cliff.

Winch launching had been introduced in 1934 and we now had a 1923 Rolls Royce Silver Ghost. Harold took it to the winch point at the edge of the cliff and jacked up one of the rear wheels. To this a drum was attached carrying the piano wire launching cable - in emergencies this had to be cut with an axe. Automatic backward operating cable releases were not in use until 1938 when the Ottfur was invented.

After I had DI'd the Falcon I climbed in (a feat in itself because of the swept wings) and was soon launched into a fresh south-westerly wind and soared the ridge for a long time, eventually working my way up to 1800ft, the highest I had ever been. I intended trying for a Silver duration and had taken an empty milk bottle with me. (Gliding took a big step forward with the arrival of plastic bags.)

Looking down on the airfield I could see beginners being trained on primary gliders, doing ground slides and hops of increasing height until they could do circuits. Two-seaters were not

generally used for training until after the war, although a Falcon 3 was used by our club for soaring practice.

In 1937 the airfield was much smaller than now with a very ancient high dyke wall along the northern boundary close to the clubhouse. The field was not grass but heather with patches of stony and uneven ground - another cause of skid damage. One on occasion a visiting BAC 7 two-seater landed across a ridge causing the two wheeled undercarriage to collapse and the occupant of the rear seat of the cockpit went through the floor.

My Falcon was a delight to fly and with its low wing loading kept up well in light winds and weak thermals. Being under the wing I found vision on the inside of turns very poor and great care was needed, especially when ridge soaring. In spite of this I do not remember a mid-air collision with this type of glider.

One did occur, however, between a Scud 2 and a Grunau Baby, the Scud losing its nose complete with rudder pedals and landing in a large tree in the wood with no injury to the pilot. The Grunau lost its entire tail and fell inverted on to a patch of thick bracken, again without injury - in fact the pilot was able to make the long climb up to the clubhouse while the search party continued to look for him until giving up at dusk.

I landed after 5hrs 30min, coming in over the eastern boundary which then had a 5ft barbed wire fence. This had caused damage to several



Harold Holdsworth in a Slingsby Dagling in 1937.

undershooting gliders and one was cut in two when it stalled on to it.

Chains were obligatory for early towing vehicles on wet days, but this churned the surface into ruts. We thought we had this problem solved with the arrival of Major, a retrieve horse, and indeed this worked well until an ill-judged side-slip from a Kirby Kite knocked him unconscious. Major was never the same again and reacted against the sound of cracking plywood (fairly frequent in those days) by bolting at high speed with whatever glider he was retrieving at the time. I was quite thankful to haul the Falcon back the hard way with a few friends and get it in the hangar.

Before retiring for the night the clubhouse conversation would have included the latest thermal exploits or the pundits putting forward explanations of the "evening thermals". Wave soaring, like plastic bags, did not come until after the war.

1994

Even now at the YGC nothing is a certainty and we are fortunate to have a fixed "glider's eye view" some 30 000ft up known as Gordon Planesale (alias GPS) who might record for history a day in the life of the club 1994-style.

First stirrings of the day may be witnessed about 6am when two important duties are performed - name on the flying list for the eager flyers, kettle on for those suffering from the activities of the previous night. At this stage of the day all seems calm but the rumblings of indecision are about to surface: What weather should we expect? Refer to Meteosat and inspect the windssock gyrating on the clubhouse roof. Whatever weather will we get? Is it aerotow or winch today? Should we rig or have breakfast first? The arrival of the DCFI heralds the evacuation of the hangars whatever the answers to these questions are, and preparations are made for the first flight of the day.

In the absence of the legendary Silver Ghost of yesteryear two Pawnees, a Super Cub and two winches are ready to launch all from a T-21 to an ASH-25 lovingly (most times) rigged and DI'd by avid members. The club begins to buzz with workshop, computers, telephone and kettles all at full steam ... and soon flying starts.

By the end of the day the flying log will have recorded exploits that would have astonished the pre war pundits, but it still seems to take the same amount of ancient Anglo Saxon and primitive grunts to get the club fleet back in the hangars.

Since the rate of change seems to be increasing our present operation is going to look quaint in 30 years. Will Silver, Gold and Diamond have any meaning then when 50m span gliders carrying a tonne of water are doing an O/R to Brussels? ✕



Tim Wilkinson photographed this mountain range from Omarama during a visit there in June.

OMARAMA FOR 1995 WORLD CHAMPIONSHIPS



Michael Russell sets the scene of the World Championships in New Zealand where he will be reporting on it for our March issue. Michael, whose Silver badge, No. 263, was flown in a Grunau Baby in 1950, has retired as an airline pilot and now flies an ASW-22 at the Cambridge University GC where he recently gained Diamond goal

As good a place as any to start writing on gliding in New Zealand is the famous illustration of "Lenticular cloud near Dunedin" from the 1930s presented opposite p32 in Philip Wills' 1953 classic *On Being a Bird*. In so doing one would not be far from Omarama (pronounced as camera rather than panorama), centrally placed a little over half-way down South Island.

As in the northern hemisphere, the prevailing wind is westerly, but nature has set these beautiful isles so far south that, passing beneath Australia, their breezes will have last seen land far, far away to the west - on the other side of the world, well down South America's Argentine, almost as far south as the Falkland Isles; and this brings rather longer and steadier spells of wind than in our northern latitudes. In antipodal terms Omarama is almost opposite Santiago on the north-west tip of Spain.

Then have nature's evolutionary continental drift throw up the Southern Alps all along the western coast of South Island - topped out with Mt Cook's 12 349ft - and you have the perfect recipe for high soaring in mountain wave, and the long distances and high speeds that go with it. This western range and its seaward coastal strip also collects much of the air's naturally high moisture content of a long over-sea passage. Eastwards, beyond the hills, conditions are much drier, even arid, and on the right day strongly thermic.

As to the airfield - a large flat brown grassy plain - it lies near the head of a valley in the south-west MacKenzie country. Those high mountains of the southern Alps are not far away from north-east to south-west. Away to the north the valley runs around a spur of Mt Benmore and on into the oval MacKenzie basin, itself surrounded by a ring of mountains, snow-capped away to the west and south-west.

The current issue of New Zealand's *Gliding Kiwi* shows Omarama featuring in all the Gold and Diamond heights and almost half the Silver badge flights.

I first chanced upon this lovely locality while touring New Zealand in 1991. Supper was cooking in a comfortable caravan after a long day wandering northward from Queenstown when a hill soaring Blanik was spotted and just **had** to be investigated at **once**. Late in the evening no flight was possible, but there was a warm welcome within a tiny clubhouse where a single Kiwi was cooking a vast steak. There were a few trailers here and there and even then rumours about a future Omarama "Worldies".

Amazement! True, here was a gliding club, but there seemed so little then of the infrastruc-

ture essential to a full-scale contest - not more than a large field alongside a village at a main road junction, a caravan site, a pub or two New Zealand style and, for us two travellers, a long journey planned towards Christchurch. Yet here we are, four years on and just four months away from what may well be the most spectacular World Championships ever. The Kiwis have made splendid efforts to play their part in gliding's competitive traditions.

News is of 74 firm entries and efforts are underway to confirm a further 31, the high cost of travelling to and from almost the most distant possible venue being the greatest problem. Last January Kiwiglide successfully tested the developing organisation with 52 sailplanes taking part. Climbs were reported to over 22 000ft before taking-off on the day's task - and a 600km task was completed at 170km/h. Omarama is not a site for the faint-hearted! Local pilots fared well of course but, learning fast, by the end of the week invited visitors were beating the home team on their own ground.

As they race, the fortunate competitors in the 1995 World Championships will see spectacular country. Far away to the south-west is the Fiordland National Park and its famous Milford Trail, and far away to the north-east the Kaikoura ranges up towards Nelson, Blenheim and the delightful port of Picton. Outlandings are best avoided in the mountainous areas, but to the south the land is flatter and to the east, towards Christchurch, are the famous Canterbury plains. Care will be needed everywhere not to disturb the myriad of sheep. Pilots will also see many most beautiful lakes from north-east to south-east, cutting into mountains with mystical Maori names such as Tekapo, Pukaki, Ohau, Hawea, Wanaka and Wakatipu, and to the east, and per-

haps named by early Scottish settlers, Benmore and Aviemore.

This, then, is a preview of "Worldglide 95". Tremendous efforts are being made by a group of helpers led by the executive team of Bill Walker and John Roake as co-chairmen, with members Mark Aldridge, Bob Henderson and Wayne Wilson, creating lasting infrastructure to place Omarama firmly on the world list of "must visit" sites for the gliding traveller - Aboyne, Benalla, Fuentemilanos, Sisteron - to name but a few.

It is my privilege at the start of a longer holiday around New Zealand to report this fascinating contest for *S&G*. Laptop and printer are being readied and lenses cleaned. We depart as soon as the Christmas festivities are over. Watch this space!

Tim Wilkinson has a list of New Zealand GCs. If anyone wants a copy, please send a sae to *S&G*. ✉



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ONE WHEEL ON MY WAGON!

Mary says she had those "dis-in-tegrating trailer blues"

If you want to do well in competitions you should be in good practice - plenty of cross-country excursions in the springtime and your equipment should be in top condition. The exchequer would only permit one Comp this year, the Midland Regionals at Husbands Bosworth. And I hadn't had my derriere in a single-seater since last September. With this twin objective I turned up at Booker on Monday, May 9, to collect Pegasus 987, planning to tow it to Husbands Bosworth for some practice.

Didn't think much of those tyres. In fact, not only nearly flat, they looked very sick - there was only 10lbs pressure in one and 14 in the other. I decided to go via Oxford and the M40 and price a couple of replacement tyres *en route*.

Rolled the wagon just as the sun was declining in the western sky and unlike some cowboys I drove in a ladylike and restrained manner - 50mph downhill, 60mph uphill, and kept to the left on the motorway. It was therefore easy to bring the equipage to an uneventful halt beside a phone box when the left trailer tyre deflated at Stokenchurch.

No, I do not belong to a motoring organisation. Yes, if you ring the Red Baron at Booker someone may agree to come and get me. The helpful voice on the yellow phone advised me not to wait in the car but sit on the verge away from the traffic. So I did, and though warmly dressed spent a very long miserable hour being terrified as the high speed traffic roared past. At last a lorry stopped and a Glaswegian driver changed the tyre. "But ye've got nae enough nuts on the sporan," he told me, which for some reason did not set off any warning bells. And when the Booker lads turned up I told them thanks anyway, but it is sorted! I set out once more in the gathering dusk.

Three miles down the hill the whole wheel came off. Boing, boing, boing into the hinterland and lost forever. The trailer handled just as well on the hub as it had on the rim and we subsided safely to a halt on the verge just below the Chinnor exit. My dander was up. With superwoman strength I was lifting the trailer off the hitch - I had enough of dragging this joke of a rig behind a perfectly serviceable car. At this point the fuzz arrived.

"Still in trouble we see," he observed. "You can't leave that there overnight, you know."

I said I planned to go home and would arrange



Mary was behind the camera while her crew worked out how to get out of the field.

for the removal of the obstruction from the M40 as soon as possible. The Bill sensibly suggested I should take the spare wheel with puncture number one along in the car - a good move.

Once home (I live at OXF TP) I rang up a tyre service. "That will be £125 service charge for turning up" ATS told me. I thought it probable that the bits for securing the wheel to the hub might have gone missing along with the wheel. ATS admitted they had tyres but no nuts.

At last I was told to call John Neighbour, an agricultural engineer, who has a yard in Chinnor with breakdown vehicles on 24hr call. Notwithstanding the midnight hour, John was cheerful and prompt. He found a spare tyre, and robbing two nuts from the other side of the trailer, screwed them up very tight and drove slowly back to his yard where the glider and trailer stayed for the next five days while he sorted out the wheel, tyres, bearings and brakes. All of which meant I turned up for Day 1 of the Regionals still not in practice.

Day 2 a lot of us landed at Gransden Lodge and when my crew turned up with **that trailer** one back door had fallen off *en route* (it had been noticed and picked up) and the other was flapping in the breeze. Heydon McEvaddy kindly sorted out four new hinges for the doors at his Market Harborough workshop. I wondered what I was going to say to the deputy sheriff when he pulled me over with no door and no rear lights; it's a little difficult to disclaim "but officer, they were working perfectly when we departed" when the remaining half door is tied shut with 12ft of nylon rope. Fortunately we got back to site unobserved.

Day 3 the only possible field was a recently trimmed setaside. I landed with no problem and then tried to find the entrance to the field. Norman Smith had told me the day before never to concern myself with road access to a field, but I walked a long way through some very tall thistles and nettles and I couldn't find an access. I climbed over a fence, crossed a ditch and a local took me to his local. I called for a pint and four strong lads to come and get me as the only possible way into that field was over a 4ft ditch.

Four fine young people turned up with my trailer and car and we circumnavigated that field for 17 miles and could find no better access.

An option was an aerotow, wind permitting. We found the farm next door and the farmer was ever so cheerful and friendly. "I'd love to help you" he said "but I'm just taking my wife to the hospital. She's having a baby." Not exactly the moment to ask if we could borrow his tractor. We at last discovered who owned the mystery field and apologetically rang him; by now it was 10.30pm. "Nawo, that's right, there is no access to that field," he said. "That's why it's setaside."

I resigned myself, 987 would spend the night

alone on the hill. I would not fly the next day.

We left the trailer in the pub carpark and took a short cut home; our own exclusive A14, as yet unopened to the general public, dodging the odd pile of gravel, cement mixer and a million bunnies who are going to learn about traffic the hard way when the road opens this summer. I won't mention who chose this route but I was too comatose to object.

The next day, after launching the grid into a wonderful sky, Norman Smith borrowed Chris Gilbert's splendid Range Rover and with three husky men and me taking photos, bridged the ditch with the trailer itself - that was Andy Smart's idea - and we were home again triumphant in under two hours in time to meet the pilots who all got round the task in racing style. I resisted any suggestion that there was still time to rig and race round - like the trailer I'm not as young as I used to be and something might have given way!

The following day director Ron Bridges set a 511km. The first launch was 1015 and I set off (it seemed ages before they opened the gate) and got home again at 1918. Airborne 8hrs 53min, this old granny got round the Diamond distance - and so did 22 others!

If I had had any sense I would have quit while I was ahead. Friday we were launched into a nasty south wind with murky blue thermals that only occasionally crested the inversion. Getting low down seemed a very bad idea so I did not make good progress. I struggled round Bicester, back over Northampton to contemplate Frank Pozerski's ASH 25 being towed back from Sywell and was tempted by the factory roofs at Kettering, climbing back to 3000ft. It should have been possible to slip round Rushden river bridge and land at Sywell from that height, only 10km, but there was a sinister black cloud over Rushden. It put out a big wet hand and pushed me down and like a dodo I made a dash at the bridge to take a photo (out of sector again) and ended up unable to return to safety.

A farmer down there setting up a cloud of dust gave the wind direction. It seemed a good idea to attract his attention in case my landing was a disaster, so I surprised him from his reverie (enclosed cab, stereo headset) by filling his windscreen and then landing alongside. It felt like a heap of rocks and there was a graunching sound, but it was only an undercarriage door that was pretty well snuffed anyhow.

The serious damage was done in the trailer when one wing came adrift and was punctured by the spigots on the fuselage. The wingroot had developed a shimmy and the threads in the bolt for screwing down the wingroot had been stripped.

Never mind. When I look at my records I see that the trailer for 987 has given good service for eight years. Funny the way this general disintegration all seems to happen at once. I wish I could get new hinges for some of my joints. ☑

OPEN CLASS NATIONALS

Enstone Eagles GC, July 23-31

Ken Sparkes, competition director, and his team produced their kind of Open Class Nationals at Enstone and made most of the indifferent British weather.

Enstone Eagles GC was privileged to have George Lee to open the competition on the Saturday, July 23. George had to cancel a previous engagement to be at Enstone and it took a great deal of persuasion on Ken's part the day before to get George to change his plans at the last minute.

Day 1, Saturday, July 23: 501.6km polygon, Ruthland Water, Kingsclere, Watford Gap, Oundle.

The task distance was considered somewhat optimistic as convection was forecast to stop fairly early. Pilots were keen to start as soon as possible but Murphy's Law ensured that the thermals didn't start until quite late. As the grid was launched it soon became apparent that the weather wasn't as advertised.

By early evening the telephones in control were red hot as the pilots began phoning in. No one managed to get back, however the day was not devalued which pleased the director.

Sunday, July 24.

A very moist airmass covered the region and a 30% chance of thunderstorms was forecast. A

Ken Hartley (ASW-20) approaching the finishing line on Day 2.

Photos also by Mark

rebrief was called at 1300hrs and Ken decided to "stand down" everybody for the day (he carefully avoided the word "scrub").

Day 2, Monday, July 25: 224.8km triangle, Oundle, Caxton Gibbet.

Unusually Ken set a fallback task which he decided to use after monitoring the weather. Again, soarable conditions developed later than forecast and the grid wasn't launched until 1330. Some good thermals were reported and it proved to be a good race until the final TP where the pilots were faced with a final glide into a 20kt headwind.

The winners were those who didn't stop and take a climb unless they absolutely had to. The day was devalued as the fastest time was too slow.

Tuesday, July 26.

Flying was cancelled at first briefing due to solid cloud cover that was forecast to stay put for the day.

Wednesday, July 27.

Again, Ken had to cancel the day's flying due to familiar grey skies, however he offered a bottle of champagne to anybody who could get round the task he had provisionally set. Twelve pilots took up the challenge but didn't get round - two landed out and the rest turned back.



Pete Stratten, Bicester GC's DCFI, flying in his first Open



Above: The grid on Day 3. Below: Pam Hawkins in the





Open Class Nationals in the RAFGSA's Ventus.



The new Duo Discus waiting for a launch on Day 3.



Brian Spreckley (ASH-26) turning finals on Day 2.

Day 3, Thursday, July 28: 237.9km quadrilateral, Ludlow, Hereford Cathedral, Edgehill.

At 0800hrs it was pouring with rain and the only sign of life was a handful of people peering out of the catering tent muttering about the weather. It simply had to be an early scrub - or did it?

A briefing was called at 1130 where two tasks were set. The forecast showed a clearance at midday - where had we heard that before? Gliders were reluctantly put on the grid and pilots and crews prepared for a long wait. Then a miracle happened - the solid grey cleared away to reveal a clear blue sky with cumulus clouds on the horizon.

The main task was flown and it proved to be a good racing day with some spectacular finishes. Several pilots raced round at over 100km/h, resulting in a devalued day as the shortest time was too slow.

Day 4, Friday, July 29: 353.6km quadrilateral, Long Mynd, Hay on Wye, Condover.

A moist airmass covered the region and some spreadout was forecast for the start of the day with convection going blue towards the end. Cut

Below: Russell Cheetham (ASH-25wL) on the finish line on Day 2.

off was expected at about 1700.

Most pilots reported a good run down to the first TP, although some got low coming out of the TP and had a difficult time getting away again.

The fastest were those who went round the Mynd fairly high enabling them to glide to better conditions.

Back at the finish, several pilots couldn't remember which finish line was being used and had to float round overhead the control tower until they inadvertently crossed the finish line and were relieved to hear "good finish!".

Day 5, Saturday, July 30: 205.6km triangle, Gratham Water, Market Harborough.

Thunderstorms were forecast to arrive by mid afternoon.

After briefing there was a long grid squat under a grey sky. The silence was eventually broken by the director calling for the sniffer to take a launch. Reasonable soaring conditions were reported and the grid was launched. About a dozen gliders returned for a relight before the last of the grid had been launched.

This proved to be a character building experience for some landing for a relight as there were gliders all over the place, tugs landing, parked cars and a row of glider trailers to be avoided. Phil Jones nearly brought home a job for



OPEN CLASS NATIONALS

Southern Sailplanes as he turned finals with his Nimbus 3T wheel up, but Martyn Wells wasn't having any of that. He called Phil on the radio and the wheel appeared at the last minute.

The first gliders were starting off as the last of the relights got airborne.

The day proved to be rather tricky for those who didn't discover the wave. Steve Jones flew


most of the second leg and round the TP in the wave before final gliding to Enstone. At least one glider climbed to 9000ft in the wave.

Sunday, July 31.

At briefing Ken didn't set a task as he decided to monitor the Met situation and promised to make a decision on whether to fly or not by 1300.

He spent most of the morning standing on top of the control tower looking skyward.

A rumble of thunder at 1300 decided it - flying was cancelled and the prizegiving was held at 1430.

Ken Sparkes and his team must be congratulated on running another successful and safe competition. 

FINAL RESULTS

Open Class Nationals


Pos	Pilot	Glider	Day 1.23.7 501.6km polygon Rutland Water, Kingsclere, Watford Gap, Oundle			Day 2.25.7 224.8km ▲ Oundle, Caxton Gibbet			Day 3.28.7 237.9km ■ Ludlow, Hereford Cathedral, Edgehill			Day 4.29.7 353.6km ■ Long Mynd, Hay-on-Wye, Condover			Day 5.30.7 205.6km ▲ Gratham Water, Market Harborough			Total Pts
			Dist	Pos	Pts	Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts	Speed (Dist)	Pos	Pts	
1	Kay, A.	ASH-25	401.5	2	955	101.7	2	829	102.6	2	918	96.1	2	968	78.5	5	820	4490
2	Jones, S. G.	Nimbus 4	371.2	8=	863	104.5	1	861	103.0	1	924	92.9	6	922	90.7	1	907	4477
3	Cheetham, R. A.	ASH-25wl	419.1	1	1000	99.8	4	807	102.4	3	915	91.6	9	902	71.8	9	773	4397
4	Jones, P.	Nimbus 3T	371.2	8=	863	100.7	3	817	101.3	5	901	91.7	8	904	86.3	2	875	4360
5	Cardiff, J. D.	ASW-22	336.8	25	773	99.5	5	804	100.4	6	890	98.3	1	1000	63.2	15	712	4179
6	Findon, D. E.	Nimbus 40T	373.5	4=	870	93.8	7	739	95.0	10	821	93.0	5	923	71.7	10	772	4125
7	Jones, R.	Nimbus 4	380.7	3	892	98.7	6	794	94.2	11	810	90.6	10	887	63.2	16	711	4094
8	Spreckley, B. T.	ASH-26	371.2	8=	863	92.7	8	726	101.7	4	907	88.7	16	860	61.1	18	697	4053
9	Gardner, T. R.	Nimbus 3 (24.5)	372.2	6=	866	89.6	13	690	87.4	20=	724	92.1	7	910	78.8	4	822	4012
10	Boydton, M. V.	Nimbus 30M	329.9	27	756	85.9	18	648	92.8	13	793	86.3	21	826	83.7	3	857	3880
11	Moulang, A. P.	ASH-25	354.1	19	815	90.1	10	697	93.0	12	795	85.7	24	817	65.5	13	728	3852
12	Innes, D. S.	Nimbus 3T	353.1	20	813	77.9	25=	556	98.6	7	867	86.3	22	825	72.1	8	774	3835
13	Weir, N. A.	Nimbus 30T	291.4	33=	663	88.2	15	674	95.0	15=	774*	95.4	3	957	70.7	11	764	3832
14	Tanner, L. E. N.	ASH-25	362.9	17	837	75.6	31	530	81.4	32	600*	93.2	4	926	77.8	6	815	3708
15	Thick, M. J.	ASH-25	314.5	29	719	90.1	11	696	98.0	9	860	89.5	13	871	(183.9)	19=	494	3640
16	Glossop, J. D. J.	Nimbus 30T	362.5	18	836	68.2	36	444	84.5	25	686	89.5	12	872	74.0	7	788	3626
17	Webb, M. J.	Nimbus 30T	365.7	14=	846	85.7	19	645	75.7	35	574	84.8	25	803	67.6	12	743	3611
18	Davis, C. M.	Nimbus 2	371.2	8=	863	92.0	9	718	91.3	15=	774	89.2	14=	867	(155.6)	25=	376	3598
19	Stratten, P. J.	Ventus (17.6m)	385.7	14=	846	77.9	25=	556	83.1	27	668	81.7	31	758	64.2	14	719	3547
20	Bromwich, R. C.	LS-6c	365.7	14=	846	89.8	12	692	98.3	8	863	87.3	17	840	(135.0)	34	290	3531
21	Hartley, K. J.	ASW-206L	304.1	32	693	86.1	17	651	89.3	18	748	90.1	11	881	(179.3)	21=	475	3448
22	Rollings, C. C.	DG-500	341.4	23	784	77.1	28	547	87.0	26	669*	78.8	36	717	61.8	17	701	3418
23	Jordy, M. J.	ASW-20L	372.2	6=	866	67.2	38	433	86.4	23	711	86.4	18=	827	(183.9)	19=	494	3331
24	Owen, B. H.	ASH 25	368.7	21	805*	80.8	23	589	92.1	14	784	85.8	23	818	(143.4)	31	325	3321
25	Dobson, J. B.	LS-6c	373.5	4=	870	71.4	34	481	86.7	22	714	84.4	26	798	(166.2)	24	420	3283
26	Davies, F. J.	LS-6c	371.2	8=	863	82.6	20	610	89.3	19	747	81.4	32=	754	(132.5)	35	284	3258
27	Adlard, S. A.	ASW-17	330.1	26	757	79.2	24	571	90.6	17	765	83.8	27	789	(140.5)	32=	313	3195
28	Giddins, J. B.	DG-202/17c	345.6	22	794	88.3	14	676	81.6	29=	650	81.8	30	760	(130.1)	36	278	3158
29	Spencer, J. D.	DG-600/18	313.9	30	717	76.4	29	539	69.7	37	496	82.2	28	765	(179.2)	21=	475	2992
30	Nunn, A. V. W.	ASW-17	312.3	31	714	87.2	16	662	85.7	24	702	89.1	14=	867	(25.4)	38	7	2952
31	Throssell, M. G.	Discus	338.0	24	776	75.1	33	523	77.7	33	599	74.6	38	655	(155.6)	25=	376	2929
32	Cole, R. A.	Ventus (17.6m)	184.5	38=	418	77.7	27	553	82.4	28	660	86.4	18=	827	(151.5)	28	359	2817
33	Hawkins, P. S.	Duo Discus	207.4	37	469	81.4	22	596	81.6	29=	650	79.2	34	722	(147.5)	29	342	2779
34	Foremen, M. C.	Ventus (17.6m)	317.8	28	727	75.9	30	534	(227.7)	41	253	81.8	29	761	(174.4)	23	455	2730
35	Pozerskis, P.	ASH-25	246.4	35	554	82.3	21	607	69.4	38	493	72.9	39	631	(146.4)	30	338	2623
36	Pickering, K.	LAK-12	291.4	33=	663	59.8	39	349	80.8	31	639	81.4	32=	754	(99.1)	37	196	2601
37	Caunt, D.	Nimbus 2	22.9	42	18	69.2	35	456	87.4	20=	724	86.4	18=	827	(152.8)	27	365	2390
38	McLean, P.	Nimbus 2	112.3	41	259	67.2	37	434	79.5	34	577*	78.1	37	706	(140.5)	32=	313	2289
39	Burton, A. J.	LS-6c	184.5	38=	418	75.2	32	525	70.8	36	511	79.1	35	721	DNF	39=	0	2175
40	Gardiner, D. K.	Kestrel 19	217.9	36	492	(198.8)	40=	213	60.8	39	383	58.1	40	416	DNF	39=	0	1504
41	Tull, V. F. G.	Kestrel 19	184.5	38=	418	(198.8)	40=	213	60.2	40	375	(240.5)	41	172	DNF	39=	0	1178
42	Harvey, P. J.	ASW-22	370.4	13	860	DNF	42=	0	DNF	42=	0	DNF	42=	0	DNF	39=	0	860
43	Marriott, S. H. C.	Nimbus 30M	0	43	0	DNF	42=	0	DNF	42=	0	DNF	42=	0	DNF	39=	0	0
<i>Hors Concours</i>																		
(5)	Wells, M. D.	LS-6c	368.7	5	855	91.6	10	714	102.6	2	919	91.0	10	894	78.2	6	818	4200

Taskfinder Software - = penalties; DNF = did not fly

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I did not begin gliding until just after entering my seventh decade. I have a lot of catching up to do being surrounded by wrinkly pundits who have apparently been gliding since soon after Sir George Cayley founded the BGA with one coachman member. Anyway, I had been flying powered aircraft for more than 40 years before I saw the light, and I do believe time spent before the flight thinking, "What if..." is time well spent.

Laws & Rules say that I need a parachute for cloud flying, so I wear one - although I must admit I've found an artificial horizon both cheaper and more useful for cloud flying. I hope I never have to bale out and frankly wonder just how good are the chances of survival. My Scottish ancestry forces me to ponder whether the cost of my comfortable parachute was money well spent.

My last bale out was explosively assisted by a Martin-Baker seat which propelled me from air-conditioned comfort to a harsher environment in 0.25sec with an acceleration of 85ft/sec/sec and at some +25g. Technically, that was from a glider as the engine had seized, but a min sink speed of 210kt and the glide characteristics of a brick-built outhouse hardly qualify as a glider bale out.

I have noticed that some (most?) glider cockpits are quite difficult to heave oneself out of, even sitting on the ground under +1g at zero air-speed. Some of my difficulty may be due to old age, but I've yet to see a young tiger spring instantly from the glider cockpit, with or without a parachute strapped to his/her back.

The glider pilot's semi-reclining posture with the cockpit coaming somewhere between waist and shoulder level makes for minimal frontal area but also makes it difficult to get out of the cockpit. Armchair posture is not a practical design feature - unless the Hamilcar glider comes back into production. An ejection seat would cost as much as a fleet of Stemme S-10s and weigh as much as our new CFI, so is not on.

This set me thinking of some of the earlier systems designed to assist fighter pilots to escape. Springs, levers and pivoting arms were all proposed and some even tried, but usually not more than once. Volunteers became thin on the ground. I then thought of one design feature of the Martin-Baker seats which *might* be possible to apply to gliders.

During the initial part of the ejection sequence a stabilising drogue is deployed from the seat to slow and steady the seat and occupant. The drogue then withdraws a canvas seat which

A SIDEWAYS LOOK AT...

BALING OUT OF GLIDERS

John, a member of The British Airline Pilots' Association's house journal, has suggested an occasional series of articles encouraging readers to contribute their "Sideways Look" at any aspect of gliding and kicks off with this disconcerting subject

pushes the pilot and his parachute etc away from the seat and deploys the main parachute. Perhaps it would be possible to adapt this to help a glider pilot in difficulties? One could try a piece of canvas (*à la* deckchair seat) attached to the front edge of the seat below the pilot's thighs. The rear edge of the canvas would be free from the airframe and carry a drogue parachute. Jettisoning the cockpit canopy (and that's another neat trick!) could allow the drogue to deploy into the airstream, pull the canvas taut and so lift the pilot out of the seat into the airflow and, hopefully, clear of the airframe.

You could go one step further and arrange the drogue to pull the canvas fully taut, lift the pilot's buttocks from the seat and then, on fuller deployment of the drogue line, pull the pilot clear of the aircraft and stabilise him/her before automatically deploying the main parachute. One of the difficulties of baling out is the tendency to tumble before and during the time the parachute opens. A stabilising drogue would help stop this.

The most likely reasons for baling out would be structural failure, through a collision or overstressing the airframe, and irrecoverable loss of control. In either case it is impossible to forecast the behaviour of the aircraft or the likely *g* or rotational forces. Irrecoverable loss of control may be due to a rigging error or pilot error at low altitude. It is unlikely there would be time to escape from the latter, no matter what sort of assistance to get out of the aircraft. I have heard inconclusive discussions about the merits of baling out

on the inside or outside of a spin, but I if you are too low to recover from a spin then you are certainly too low to think about baling out.

I feel it would be useful for all glider pilots to have an open discussion on baling out and to consider methods of increasing our chances of survival - but I have been wrong before! How many glider pilots have tried to escape by parachute and how many were successful?

Next time you have a few spare minutes get some pals to hold your glider wings level, position a nice big mattress to catch the canopy, strap yourself into your seat complete with parachute and all the kit you usually carry in the cockpit. Don't forget the radio (and oxygen) connections. Lock the canopy. Start your stopwatch. Jettison the canopy and "bale out" over the side. Oops! Perhaps we should have a mattress on both sides of the cockpit. Count up to five for your super instant 'chute to open fully. Stop the watch. How far would you fall in that time? Interesting, isn't it?

Had a problem getting rid of the canopy? Did the canopy jettison cleanly? Forget the dog lead? Pulled the GPS out by the roots? Got your feet caught in the lap straps? Well at least you were safely on the ground. Have another go and perhaps you'll get better at it - or don't bother to try if you're sure you'll never need to jump in anger.

Looking on the bright side you may be able to trade your 'chute in for £500 worth of beer. Cheers!

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THE DAY MY BRAIN FROZE



Harold started gliding at the South Wales GC in 1988 and has a Silver badge with aspirations for Gold. He flies a DG-100 which he said he landed out 16 times last year but only six this season during which he has flown 700km cross-country. A committee member, Harold at present is installing an underground aviation fuel tank

I know someone who flew a K-10 through a hedge on final glide. At the time I thought he was a real idiot but now I know exactly what was going on in his head because it nearly happened to me.

It was a lovely day at Usk. True, there wasn't a sign of blue sky, but there was a north-westerly wind and that meant either wave or ridge soaring. I was first in the K-8. "How about Wentwood?" I asked Peter, the CFI.

"It should be fine in this wind. Mind you set off home with 1700ft and come back round the road. No nipping round the bowl", he added.

The reason for this was that although the return route by the bowl was shorter it could be fraught and it wasn't easy to find anywhere to land. Also there are a few minor hills by the road that one can usually do a few pull ups on to gain a few hundred feet.

I pulled off the aerotow at the north end of Wentwood ridge. It was immediately apparent something was wrong. There wasn't a trace of lift. I now know that there was a wave system which was out of phase with the hill lift. If I had turned into wind at that point I would have contacted wave, but at the time it was baffling.

At that point I should have made for base but the thought of having paid for the aerotow and the ribald remarks I would face (the one about beating the tug back to the field being the kindest) made me press on. I cruised along the ridge in 2 to 3kt down and should have landed in one of the plethora of ideal fields at the bottom of Wentwood. But as quite a few were waiting to fly the K-8, I set off along the road as prescribed.

I had 1200ft but thought I could make it as I knew that one had plenty of height from 1700ft and wasn't Peter known for his caution?

I made it to the minor hills with 1000ft but where were the usual friendly nudges that

FIVE HOUR BLUES

There hadn't been many opportunities for me this year to attempt my Silver duration and given that Whit Bank Holiday were the first flying days for over a fortnight at Talgarth, I didn't hope to be able to lay claim to a club aircraft for 50min, let alone 5hrs. But on the Sunday Matt had to earn a few more family brownie points and surrendered his place in the queue to me as he strode up the hill with his child in a backpack.

It was the second launch of the day: I couldn't believe it. Off tow in the Junior at 800ft into a cracking thermal (it still costs the same as a 1000ft) and straight up to 3500ft. If I had heard the dark mutterings on the ground about low tows and landing out, I might have been more cautious. But it all seemed go,go,go. I set myself

pushed you up 200ft and even allowed a couple of turns? Not there! Panic began to set in. Even here there were fields I could have landed in but my attention was rivetted on the airfield. One part of my mind was convinced I had to get back, as I always had, while the other part was saying "No chance Harold, now you've done it."

I was now so close to the field I could even identify the members. It seemed that everybody had stopped what they were doing to look at me, frozen in time. I was willing the machine on. There was a gap in the trees and surely I could just get through? There was a warning buffet from the tail. I glanced down - 35kt.

There was a field ahead and to the right so I put the nose down, banked sharply and cleared the hedge by inches. My hands and feet seemed to have moved of their own volition. It was a tiny field and slightly downhill, but long grass and desperation can work miracles and I made it comfortably with 20 yards to spare.

I sat in the glider bathed in sweat for a moment before climbing out. A fleet of cars arrived from the airfield, convinced they would be picking pieces out of the hedge. Needless to say the wits had a field day. I expected a round from the CFI but I think he was relieved, confining his remarks after the de-briefing to "You won't do that again will you?"

I now feel sorry for that K-10 pilot. I was just as bad as him only I got away with it and gained a certain notoriety in the club with the lunatic fringe who admire such deeds. My unlucky predecessor had to go round in sackcloth and ashes for weeks afterwards.

NB. The cautionary bit it that it's easy to decide to land out ten miles from base but it's not so easy to make the decision a quarter of a mile away. Think about it!



Ian with Black Mountain GC's Junior after his 5hr flight.

a private little task of flying over my house and quickly hopped several good thermals up to 3500ft.

Ahead was a large blue hole before the Eppynt and one cloud neatly stationed half way there. Without a second thought I set off. I'd expected the sink and quickly lost 1300ft. But oh the shame! There was a whisper of 1kt up, but as I looked up the cloud was dissolving before my eyes. A quick glance around ruled out the clouds near the Eppynt high ground - too marginal - and so back to Hay where a real beauty was waiting. Well I didn't make it. With sink between 6 and 12 down as I recrossed the blue, I headed for the lazy buzzard over Park Wood north of Talgarth. I'd already picked my field and a quick 360° turn confirmed that getting away from 500ft was not on. But all's well that ends well and I'd learned about large blue holes - or so I thought.

Two days later and it wasn't a blue hole: it was a blue sky - not a cloud, not even a whisper. There hadn't been a day like it at Talgarth for six months. A very gentle west-south-west stoked the hill. I launched at midday and dropped on to the hill. This was to be a photo trip.

Getting away from the hill in these conditions requires flying out to meet the thermal. Circling 50ft over the hill, even in a good thermal, is less than advisable as you drift back towards the Hermitage.

But on this blue day the thermals were marked only by the birds and nothing else. Getting away was going to be a small task in itself. With the hill just holding at 1700ft every thermal's tail end sink was not good news. I was down to 1300ft in the South bowl and scraping on to the spine at Castle Dinas. Finally at Ydas I was blessed. A quick "S" at the thermal as it passed by, then a 360° and I was off the hill and racing up to 4000ft.

But what a different blue day from my shame 48hrs earlier. Yes there was a lot of sink and the thermals found me rather than vice versa but for the next 4hrs I never dropped below 2500ft. I lazed away and it was only in the late afternoon that the thermals developed nice little clouds.

Several times I called Talgarth but no one was waiting for Hotel Foxtrot. As 4hrs 30min of glorious flying drew to a close, Ivor Shattock reminded me that for the duration a barograph was not required. I promptly parked myself under one of the few clouds now appearing and watched the RAF streaking up the Wye below me. Finally I drifted back towards Talgarth for a well earned drink. And what had I learned? Not to fear the blue but plan for the unexpected - and always carry a bottle of water.

LITUVA MAGIC

Reg, who flies with Ulster GC, describes his trip to Lithuania with his friend Nick Bosch, a retired KLM training captain, from the Dublin GC

In the 15th century the Grand Duke Vytautas may have called the state Lithuania although its old name was Lietuva. Following days of incessant rain in June I renamed it Lithurainer. But the relentless precipitation failed to dampen our spirits and we found ourselves on the receiving end of the most charming, accommodating and friendly hospitality ever experienced.

Nothing was a problem to Petras Beta, head of the Kaunas Aero Club at Pociunai. The airfield lies beside a forest on a bend of the Nemunas river.



Reg, who is an instructor with a Silver badge and PPL, photographed with the LAK-12.

I was launched into an overcast sky in a Blanik for my check flight. The tow rope was 30m, the wind across our path and squally and during the 700m tow I needed both hands to keep the wings level - a disturbing experience for one who tries to teach students to fly with three fingers. Later Nick and I flew in even worse conditions encouraging us to release at 450m at which height we remained in a line squall for nearly 30min.

At one point Petras' voice announced over the radio that the wind was 12m/sec. The heavens had opened and the visibility was limited. Our safe landing proved that the Blanik is forgiving to pilots who prefer a semi-retracted wheel.

On the only soaring day during the nine days I flew the 20.5m LAK-12. It is a beautiful soaring machine which loves thermals. It requires "get-

ting to know you" experience on the rudder which, slow to react, can object by skidding when not corrected quickly. When centred in a thermal it is a dream to fly.

We were housed in a three storey cottage on the edge of the forest with such facilities as constant hot water which is denied many people in the country including guests in the most expensive hotels. The hospitality of Petras, his family and colleagues was boundless. It is a beautiful green land covered in lakes, rivers and forests with enormous storks gliding in to land in well nourished fields verged by long stretches of sparkling purple lupins.

At £16 for dinner, bed and breakfast we were more than satisfied. Flying costs were most competitive at £10 for a 700m launch and gliders hired daily from £15 to £20.

This was a truly magical holiday in spite of the weather. We shall return. ✕



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FATAL ACCIDENT

A K-8 owned by the Norfolk GC crashed in a field just north of Tibenham on August 3. The glider being flown by Michael Harvey, a very experienced power pilot and an ex RAF instructor, had a normal aerotow but subsequently was seen "flying erratically".

Approaching the field the glider struck a powerline pole which sheared off one wing and half the tailplane close to the fuselage. The latter was relatively undamaged. The accident is being investigated by the BGA.

At the time of going to press the post mortem examination had not been completed but medical causes have not been ruled out.

Bill Scull

BGA 1000 CLUB LOTTERY

The results of the **July** draw are: First prize - C. Smith (£75.25) with the runners up - Mrs D. Greaves, J. Lamb, J. F. Green, Miss S. Hill and A. Towse - each winning £15.05.

August. First prize - Dr R.P. Saundby (£73) with the runners up - B.J. Shackle, E.A. Arthur, R.P. Wadie, G. Harwood and S. Brown - each winning £14.60.

OBITUARIES

JOHN HOLLAND



Photo: Larry Bleaken.

John Holland died on July 23 at the age of 70 and the BGA and the Cotswold GC have lost not only a friend but a great enthusiast and contributor to gliding as a whole. He has left his mark in a number of ways. So far as the Cotswold GC is concerned, members owe their site security in no small part to his efforts.

John was a relatively late starter in gliding, soloing at Aston Down in 1970, gaining his Silver badge in 1973 and Gold in 1980; he had Diamonds for height and goal. His gliders, in recent years an LS-7/17 and latterly an ASH-25, were his pride and joy. Until last season he was striving for that third Diamond.

In 1979 he was elected to the BGA Executive and served until 1983; he was chairman of the Development Committee from 1982-1987. His experience in the acquisition of Aston Down was very useful and he was able to help a number of other clubs to raise funds and buy their sites.

His next role was as chairman of the new

Political Committee, which he held until his death. He maintained regular contact with our parliamentary spokesman, Bill Walker MP, and with him helped to formalise our lobbying activity to an extent which ensured that the interests of gliding were given more consideration than they had been previously.

He was always very objective. I remember after one particularly contentious airspace issue which I interpreted as "winning" - John's view was that we had lost less than we might have done otherwise.

Whatever John did he did well. He ran a successful engineering company until his retirement and shared gliders with his business partner. He was one of the nicest people one could wish to meet, wholly reliable, always charming, indeed he was the epitome of a gentleman in every sense of the word.

I believe his greatest joy was his family. We, his extended gliding "family", friends and colleagues share their loss and their sadness.

BILL SCULL

KLAUS HOLIGHAUS

On Tuesday, August 9, Klaus Holighaus was killed in a motor glider accident. The alpine scenery, where he loved to fly, became his destiny. Not far from the place, where on July 28, 1948, the two British glider pilots, Kit Nicholson and Donald Greig, fell victims to the mountains, Klaus's body was found in the wreck of his Nimbus 4m.

In the mid 1960s the young engineering student Klaus attracted the attention of the German gliding scene. As an active member of the Akaflieg Darmstadt - together with his fellow students Wolf Lemke (LS) and Gerhard Waibel (ASW) - he had designed and constructed the legendary glass-fibre D-36, which became something of a grandfather of all the later "super orchids" of the Open Class.

After his examinations as a bachelor of engineering, Klaus became a designer with Schempp-Hirth in Kirchheim/Teck near Stuttgart. He turned out to be a real stroke of luck for the company of which he acquired the ownership some time later and which he led to worldwide recognition and reputation. All the many famous sailplanes with their names ending in "us" - eg Cirrus, Janus, Ventus, Nimbus, Discus - were designed by him and built by his factory. Doubtless his work made the world of gliding richer.

But Klaus was not only a gifted designer. As a highly talented pilot he was extremely successful in flying his own designs. He gained 16 world records, was the German Champion six times and European Champion three times. He competed in nine World Championships and had qualified for the 1995 Worlds.

In all of his World Championships he never finished lower than ninth. After coming 2nd at Paderborn in 1981, only closely beaten by George Lee on the last day, he was awarded the German Olympic Society's Fairness Medal. This was because he had loaned George his latest design, the Nimbus 3, for the Championships, although he knew very well that the British pilot was his greatest rival.

August 9 was a holiday when the Schempp-

Hirth factory closed and Klaus and his friend and collaborator, Helmut Treibar, were flying their gliders in the Swiss Alps. They had planned a goal and return flight from Samaden along the Adula massif and Ticino to Lago Maggiore, which is normally a pleasant and simple task for a skilled pilot.

But the weather conditions deteriorated rapidly. Helmut returned to Samaden and Klaus announced his flight home over radio. This was the last information received from him. The search and rescue service could not do much during the night or on Wednesday because of the bad weather. Finally on Thursday the wreckage of the glider was found 2500m up the 3400m Rheinwaldhorn mountain. Klaus, still wearing his seat belts, had obviously died from severe head injuries immediately after the crash. The exact details of the accident are not yet known and are under investigation.

Klaus leaves his wife Brigitte and two sons, Ralf (aged 30) and 25 year-old Tilo. All three are excellent glider pilots, Tilo holding a world record. The family intends to continue running the Schempp-Hirth factory as Klaus would have wished and with the strong support of their staff.

Klaus was buried on August 18 with crowds of mourners including glider pilots from all over the world. The church was nearly bursting with 1300 attending and even more accompanied the coffin to the grave.

The death of this leading figure will leave a great void in gliding worldwide. But his brilliant gliders, flying in their hundreds and thousands everywhere on the globe and thus offering their pilots a maximum of experience and fulfilment, will help to keep him in kind remembrance.

FRED WEINHOLTZ

DAN SMITH

Although all London GC members were stunned by the tragic loss of their president in a flying accident on May 30, few could have been aware of his remarkable record of service over the previous 60 years.

He started gliding at Dunstable in 1934 and being over age for RAF aircrew at the beginning of the war he joined as a Link Trainer instructor. He was soon commissioned and instructed on Tiger Moths and later Oxfords.

After the war his enthusiasm for flying training made him an obvious choice for CFI, then an honorary post, which he combined with running a successful London hardware business. When he later added the chairmanship of the club it became clear that Dan was one of those very exceptional people who thrive under stress.

There are two monuments to his untiring efforts - the tugs and the annex which both followed from Dan's second visit to Poland in 1954 (the first was in 1938) to compete in the International Gliding Contest at Leszno where he broke the British National 100km triangle speed record. Impressed by the Pole's tug operations he worked hard to convince his committee to convert our west wind hill site to an omni-directional aerotowing operation, and negotiated to give us the extensive grounds to the SW and W that safeguard our SW/NE and SE/NW runs. These extensions were added to

our existing freehold, which is our major asset.

Dan converted the club to dual instruction in T-21s and his instructor's manual with patten resulted in a team of members acquiring BGA instructor categories immediately they were instituted. Having gained Silver badge No.157 by June 1949 he flew his Olympia and later his Skylark 3 in the Nationals and was the National Aerobatic Champion (a competition later discontinued by the BGA). He gained a Gold distance and Diamond goal in 1957 before sharing a Skylark 3 with a former LGC president, the late Dudley Hiscox.

Betty was a loyal and long suffering gliding wife required for retrieves long before radio and circuit racing became the norm. Both children followed their father into gliding. Angela to break the women's 300km triangle speed record and become a very creditable Nationals and tug pilot, whilst Graham is well known today among Nationals pilots.

To all members of this dedicated gliding family we offer our sincere condolences and sympathy at this tragic loss.

KITTY WILLS

We were very sad to hear of the death of Kitty Wills at the age of 87. She was a great support to Philip and for many years crewed for him at all levels of his flying from club to World Championships.

She will be remembered with great affection and as an important part of that very special gliding family to whom we send our sympathy.

NATIONAL LADDERS

The Ladder results to the end of July show that there were more good flights but the best scores are similar to those at the end of May. Perhaps we have had better weather but fewer really good days.

Tim Macfadyen still heads the Open Ladder but Shep from Booker has just overhauled John Bridge at the top of the Weekend Ladder. Elsewhere in the results are several flights of over 600km, mostly on failed 750 attempts, with some notable stories about struggling home from Barnard Castle to Dunstable, or variously landing at Harrogate and Doncaster for the equally brave but less fortunate pilots!

Open Ladder

Pilot	Club	Pts	Fts
T.M.Macfadyen	Bristol & Glos	7858	4
P.O'Donald	Cambridge Univ	7627	4
F.J.Sheppard	Booker	7078	4

Weekend Ladder

Pilot	Club	Pts	Fts
F.J.Sheppard	Booker	5792	4
J.L.Bridge	Cambridge Univ	5768	4
P.Tolsen	Cambridge Univ	4878	4

Ed Johnston, National Ladder Steward

GLIDING CERTIFICATES

ALL THREE DIAMONDS

No.	Name	Club	1994
413	Forrest, B.R.	Booker	30.5
414	Marsh, C.D.	Booker	21.3
415	Lynch, R.F.T.	Bath & Wilts	30.5
416	Lowrie, C.J.	Southdown	22.3

417	Fox, R.L.	Wolds	30.6
418	Mills, W.R.	South Wales	30.6
419	Wood, J.M.	Bowland Forest	16.1
420	Neighbour, E.C.	Derby & Lancs	23.1

DIAMOND DISTANCE

No.	Name	Club	1994
1/619	Wilton, J.N.	Four Counties	1.5
1/620	Kindell, H.W.	Lasham	30.5
1/621	Forrest, B.R.	Booker	30.5
1/622	Simpson, R.J.	Bristol & Glos	30.5
1/623	Lynch, R.F.T.	Bath & Wilts	30.5
1/624	Darlington, A.	Imperial College	30.6
1/625	Ellis, R.C.W.	Coventry	30.6
1/626	Fox, R.L.	Wolds	30.6
1/627	Meagher, M.	Shenington	30.6
1/628	Smith, D.M.	Booker	30.6
1/629	Matcham, K.S.	Surrey & Hants	30.6
1/630	Evans, S.E.	Oxford	30.6
1/631	Asquith, D.	Coventry	30.6
1/632	Mills, W.R.	South Wales	30.6
1/633	Gilbert, C.N.R.	Bicester	30.6
1/634	Fordyce, A.W.	Lasham	30.5
1/635	Wood, J.M.	Bowland Forest (in Australia)	16.1
1/636	Neighbour, E.C	Derby & Lancs (in Australia)	23.1

DIAMOND HEIGHT

No.	Name	Club	1994
3/1153	Manktelow, S.A.	Cotswolds (in USA)	31.3
3/1154	Stone, J.B.	611 Air Cadets (in USA)	21.3
3/1155	Lee, P.A.R.	Air Cadets (in USA)	21.3
3/1156	Marsh, C.D.	Booker (in USA)	21.3
3/1157	Roddie, D.	Wolds	31.5
3/1158	Lowrie, C.J.	Southdown	22.3
3/1159	Ross, E.R.	Surrey & Hants (in Spain)	26.4
3/1160	McLaughlin, W.J.	Shropshire	18.6

GOLD BADGE

No.	Name	Club	1994
1723	Thomas, G.N.	Anglia	9.5
1724	Goodall, J.T.	Yorkshire	8.5
1725	Porter, K.M.	Shalbourne	30.5
1726	Hardwick, M.H.	Booker	30.6
1727	Norman, N.A.C.	Cairngorm	28.5
1728	Bauld, A.J.W.	SGU	28.5
1729	Oliver, M.	Cotswold	19.3
1730	Reeves, K.R.J.	Four Counties	30.6
1731	Harris, D.	Booker	30.6
1732	D'Arcy, J.F.	Lasham	30.6
1733	McLaughlin, W.J.	Shropshire	18.6
1734	Heath, J.N.	Southdown	30.6
1735	Brown, S.W.	Deeside	6.2
1736	Neighbour, P.M.	Derby & Lancs	23.1
1737	Turnbull, C.S.F.	Cairngorm	3.3

GOLD HEIGHT

Name	Club	1994
Murray, S.J.	Fenlands	22.4
Stone, J.B.	611 Air Cadets (in USA)	21.3
Lee, P.A.R.	Air Cadets (in USA)	21.3
Hamlet, B.	Derby & Lancs	27.4
Foster, G.M.	Lleweni Parc	18.6
Smith, W.E.	Devon & Somerset	16.6
McCurdie, M.	Midland	16.6
Swire, R.	Midland	15.6
Oliver, M.	Cotswold	19.3
McLaughlin, W.J.	Shropshire	18.6
Redman, G.E.	Midland	16.6
Terry, M.H.	Midland	16.6

GOLD DISTANCE

Name	Club	1994
Babb, B.	Shenington	8.5
Thomas, C.N.	Anglia	9.5
Mountain, A.R.	Fenlands	30.4
Courchée, J.W.	Anglia	9.5
Goodall, J.T.	Yorkshire	8.5
Limb, A.J.	Aquila	8.5
Walker, G.J.	Vale of White Horse	30.5
Goodall, T.	Yorkshire	26.6.92
Porter, K.M.	Shalbourne	30.5
Dawson, J.L.	Bannerdown	30.5
Brain, R.V.	Bannerdown	30.5

Weaver, M.P.	South Wales	30.5
Roberts, A.	Bicester	30.5
Stone, H.	Oxford	30.5
Price, A.	Bristol & Glos	30.5
Hindley, S.A.	Cosford	1.5
Hardwick, M.H.	Booker	30.6
Lee, G.G.	Surrey & Hants	30.6
Norman, N.A.C.	Cairngorm	28.5
Bauld, A.J.W.	SGU	28.5
Barker, P.D.	Southdown	30.5
Withall, S.L.	London	30.5
Marriott, N.P.	Southdown	30.6
Armstrong, S.K.	Four Counties	30.6
Russell, M.C.	Cambridge Univ	30.6
Reeves, K.R.J.	Four Counties	30.6
Harris, D.	Booker	30.6
D'Arcy, J.F.	Lasham	30.5
Heath, J.N.	Southdown	30.6
Asquith, D.	Coventry	30.6
Alden, N.T.	Cotswolds (in Australia)	20.1
Brown, S.W.	Deeside (in Australia)	6.2
Neighbour, P.M.	Derby & Lancs (in Australia)	23.1
Hoskins, J.W.	Lasham (in Australia)	2.3
Turnbull, C.S.F.	Cairngorm (in Australia)	3.3

SILVER BADGE

No.	Name	Club	1994
9386	Grady, T.	Rattlesden	30.4
9387	Brayne, C.R.	Ouse	28.5
9388	Perry, N.J.	Nene Valley	1.5
9389	Warren, J.	Midland	30.5
9390	Griffiths, M.	Burn	30.5
9391	Wall, N.	Stratford	6.5.93
9392	Buckley, M.J.	Booker	31.5
9393	Moll, E.D.	London	31.5
9394	Duckett, W.	Midland	25.5
9395	Turner, K.J.	Mendip	30.5
9396	Graham, T.	Trent Valley	28.5
9397	Azrawi, S.	Bicester	30.5
9398	Saunders, S.	Two Rivers	9.5
9399	Carr, A.	Marchington	30.5
9400	Norman, J.M.	Wolds	30.5
9401	Leach, M.J.	Vale of White Horse	30.5
9402	Price, S.R.	Bicester	5.6
9403	Holmes, J.	Bath & Wilts	30.5
9404	Gillians, D.	Bicester	5.6
9405	Longhurst, M. A.	Mendip	30.5
9406	Corbin, R. G.	Surrey & Hants	5.6
9407	Long, B.	Glyndwr	5.6
9408	Barnes, T.	Cotswold	26.3
9409	Horsfield, S. G.	Yorkshire	8.5
9410	Roberts, R. M.	Dartmoor	29.4
9411	Burrows, M.	Chilterns	29.5
9412	Scott, R.	Booker	9.5
9413	Carpenter, A. J.	Shenington	30.5
9414	Stapleton, E. M.	Midland	9.5
9415	Murphy, A. J.	Stratford	30.4
9416	Herd, J.	Wolds	30.5
9417	Butler, C. J.	Glyndwr	7.5
9418	Leonard, J. C.	Vectis	30.5
9419	Roberts, T.	Dartmoor	30.5
9420	Smith, R. L.	Booker	30.5
9421	McNamard, A. J.	Two Rivers	11.5
9422	Herbert, T. J.	Gliding Centre	30.5
9423	Goodall, T.	Yorkshire	19.6
9424	Simpson, D. J.	Rattlesden	23.6
9425	Shailcrass, R. J.	Kent	19.6
9426	Crampin, S. B.	Portsmouth Naval	5.6
9427	Chalmers, G. A.	Highland	4.6
9428	May, J. E.	Bristol & Glos	30.5
9429	Doig, M.	SGU	4.6
9430	Cook, T.	Cranwell	5.6
9431	Patterson, E. B.	Newark & Notts	11.6
9432	Turnbull, W. W.	Northumbria	28.5
9433	Brooks, P.	Borders	14.6
9434	Jones, M.	SGU	15.6
9435	Cuttingham, I. M.	Bicester	14.6
9436	Edlin, S. A.	Stratford	30.5
9437	Tate, A. W.	Derby & Lancs	6.6.93
9438	Dennis, A. L.	Lakes	20.6
9439	Boniface, V.	Lasham	22.6
9440	Mullen, K.	Lasham	11.6
9441	Grimes, P.	Phoenix	12.6
9442	Baxter, C.	Trent Valley	11.6
9443	Williamson, G. E.	P'boro & Spalding	19.6
9444	Sorace, C. A.	London	30.6
9445	Twiss, L. P.	Lasham	30.6
9446	Baker, E.	Cambridge Univ	29.6

9437	Tate, A. W.	Derby & Lancs	6.6.93
9438	Dennis, A. L.	Lakes	20.6
9439	Boniface, V.	Lasham	22.6
9440	Mullen, K.	Lasham	11.6
9441	Grimes, P.	Phoenix	12.6
9442	Baxter, C.	Trent Valley	11.6
9443	Williamson, G. E.	P'boro & Spalding	19.6
9444	Sorace, C. A.	London	30.6
9445	Twiss, L. P.	Lasham	30.6
9446	Baker, E.	Cambridge Univ	29.6
9447	Doyle, A. B. C.	Lasham	30.6
9448	Sharpe, A. R.	Shalbourne	30.5
9449	Moore, J.	Booker	28.6
9450	Newman, P.	Lasham	30.6
9451	Howley, M. S.	Burn	11.6
9452	Hicks, J. R.	Four Rivers	11.5
9453	Lamb, S. J.	Anglia	31.5
9454	Ashton, M. G.	North Devon	9.6
9455	Potter, J.	Derby & Lancs	8.6
9456	Horner, J. S. G.	Wolds	11.6
9457	Smith, W. E.	Devon & Somerset	16.6
9458	Hathaway, W. J.	Cambridge Univ	30.6
9459	Holmes, I.	Gliding Centre	29.6
9460	Hamilton, R. M.	Buckminster	9.7

ANGLO-AMERICAN AVIATION

We have news of a USA flying school just outside of San Diego, California, which is owned and run by British instructors who are offering glider pilots the chance to get their PPLs with a 25hr course. (See the advertisement on this page for contact numbers and more details.)

It is in a good tourist area with lots of alternative activities for families and, if wanting a change from power flying, there are a number of good gliding sites in the area. The winters are mild with flying throughout the year.

Anglo-American Aviation hold seminars throughout Britain where you can meet the instructors and see videos of the area.

GILLIAN AND BRIAN IN S AFRICA

Brian Spreckley, CFI of the European Soaring Club and a former World Champion, has joined with the Soaring Society of South Africa to open a soaring centre at Mmabatho Airfield in South Africa this November. It is 4000ft asl with a 6km runway and is close to Mafeking in the north.

The region offers fine soaring potential for pilots of all levels. Using the region to the south and east there are good outlanding areas and the chance of 300 to 500km flights while 1000km is possible using the excellent conditions to the west. Ten world records and 24 flights of more than 1000km have already been made from the airfield, the longest being 1200km.

The centre offers all facilities from glider hire, weather and task briefing with a fully equipped Met office, two-seater cross-country training, a clubhouse, accommodation, swimming pool and help with retrieves.

For those wanting to bring their own glider the ESC can organise container sharing and insurance cover for the transit and duration of your stay. Flights from Europe take about 8hrs and there are plenty of activities and interests for the family while the glider pilot member is airborne.

For further details contact the European Soaring Centre, 106 High Street, Tetsworth, Oxon OX9 7AE, tel 0844 281487, fax 0844 281580 or tel France 010 3354 373408, fax 010 33 54375072.

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SEMINARS: No charge, no reservations: GATWICK, Hilton Hotel 29th Oct, LEEDS/BRADFORD AIRPORT 30th Oct, HEATHROW, Novotel 5th Nov. Call for further details.

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see plenty
of lift
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THE SOARING SOCIETY OF AMERICA



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SPINNING MACHINES and Horses For Courses



Tony first soloed in 1962 in a Kranich with the RAE GC at Farnborough and started instructing there in 1967. Setting up the University of Surrey Gliding Club at Lasham followed. He now flies with the RAFGSA Chilterns GC, Halton and has nearly 2000hrs in some 70 types, dividing his time equally between back seat and solo flying.

Over the years much effort has been put into endeavouring to reduce spin accidents, particularly through S&G by national coaches and other luminaries. Despite this, recent double fatalities may indicate more than a statistical cluster and the training problem is rightly addressed in the June issue by Chris Rollings, p130, and Howard Torode, p131. However, perhaps the problem has been creeping up on us for a long time and so slowly that we have become partly adapted to the accumulated legacy of its causes.

An incident occurred to me a few years ago which might provide an insight into relevant aspects. The machine was an IS-28 two-seater (a type which spins demonstrably but predictably) and the P2 a young Bronze badge pilot on a check flight. Although the glider was the first he had flown with a retractable undercarriage and flaps and he had done only a couple of circuits in it a few months earlier, he did the auto launch and climbed competently in a rough thermal unaided. Thus far so good, I thought.

Confidently pulling up and rolling into a second thermal at about 3000ft, he reset the flaps but did not fully engage the flap lever in its detente slot. Before I could point this out the lever sprang out, the flaps went up (to a neutral position) and the wing already down dropped away as did the nose. He reacted instantaneously - putting the stick in the opposite back corner!

Knowing we were clear of other traffic, it seemed fortuitously appropriate to leave him to recover (aircraft control and self-esteem) but, despite entreaties from the back seat, the controls remained crossed until self-preservation instincts overcame tutorial motivation and I took over to recover (below 1500ft).

Back on the ground, his record showing no problems with pre-solo spin training, he said it was the unexpectedness of the spin which "completely phased" him and volunteered that, alone, he most likely would have spun to the ground. Later he demonstrated spin entry and recovery on the IS-28 quite satisfactorily but it was of course the usual training set piece performance for which by then he was mentally rehearsed and prepared.

This was a keen young aeronautical engineering student exposed to much received wisdom about stalling and spinning. Circumstances happened to provide him with a safety net without which he might have become a statistic but how many others, equally vulnerable, will first (and last) encounter the situation as P1?

What part does glider type and experience on type play? The club had acquired the IS-28 after he had gone solo. He had trained exclusively on the K-13 whose characteristics are mentioned in both June articles. In very few respects can it be faulted for training but, with a pilot of other than light weight in the front seat, *ie* the majority, it is difficult to effectively demonstrate a spin in it. Even when possible, the merest relaxation of spin provoking extreme control positions is invariably sufficient to transit to a steep spiral dive with rapid speed build up.

While this does involve unusual and possibly impressive aircraft attitudes and control motions, and requires prompt recovery action to avoid overspeeding, it is critically different from spin recovery in that it does not require the pilot to be seen to positively identify a spin and take ap-

propriate action. Unless the instructing regime is particularly vigilant, it is then all too easy for the less enthusiastic and/or heavier spin trainee to be "progressed" past the spin stage of the syllabus with less than complete understanding and inappropriate responses habituated.

When I trained, the CFI required pilots of all levels to occasionally take a launch in a single-seater and demonstrate a full spin observed by him (and others present, knowing their turn would come). This was part of the continuous monitoring culture of gliding at many clubs. Perhaps the advent of expensive advanced plastic/glass machines, with very rapid speed build-up, discourages this nowadays.

Are we getting the message to the right people? The many column inches about spin accidents over the years in S&G are no doubt well taken by those who appreciate the importance of understanding the spinning process (and who are probably familiar with it). The *ab-initio* may be less enthusiastic about unusual glider attitudes and less receptive to reading about spinning so are we preaching to the converted? There is evidence of flight safety publicity suffering this effect; apparently those who attend the excellent CAA General Aviation Safety evening lectures have a distinctly lower accident rate. Is this because of what they learn at the lectures or because safer pilots make the effort to attend flight safety briefings?

Added to this, for one or two reasons, pilots may not perceive there is a potential problem.. The pilot trained on, and/or who chooses to regularly spin, a "spinning machine" wonders what all the fuss is about while the pilot with little experience of a proper spin is unlikely to even perceive his/her own vulnerability. For very different reasons either can say they can't see there is a problem.

Spinning is unambiguously characterised and recognisable by reversal of the action of the control column (stick further back, nose drops; stick to one side in an effort to raise the other wing causes it to drop faster). If the pupil does not experience this during training, it is a moot point as to whether he will cope a few years later when suddenly faced with rotating rapidly approaching scenery. With 100ft/sec or more spin descent rates, but reasonable height, a combination of adrenalin and time

may allow slow reacting cases to sort things out, but at circuit heights there is little time or room for other than prompt correction. This may be beyond the capability of a pilot whose closest training experience consisted of struggling to get a docile machine into a half-hearted spin, followed consistently by auto-recovery and spiral dive with control reversal never apparent.

Spin training should prepare pilots for a prompt correct response in any glider the pilot is likely to fly. In Eastern Europe (as in Britain when gliders were made here) it seems that design philosophy has required two-seater training gliders to be capable of demonstrating safely fully developed spins. In his article Chris Rollings mentions the (Polish) Puchacz, (Czech) Blanik and (British) T-53/YS-53 to which might be added the (Polish) Bocian, (Romanian) IS-28 plus its derivatives and some Grob Twins.

These demonstrate unambiguously the transition from and to normal control responses and require positive recovery action. Their designers also produce many single-seaters with similar spin characteristics. Is training solely on the alternative docile machines a suitable prelude to flying such single-seater "spinning machines"?

Having been cleared to fly a different glider, how vulnerable are pilots during their first few flights? A single-seater introduced in the 1960s was bought new by my club and test flown by the CFI. He started with a full turn spin which we thought was intentional but he later confided that it had caught him very much by surprise. Forwarded, members were briefed (accurately) that it was a delight to fly but when provoked would spin and recover quite predictably.

Many flew it without incident, progressing via the T-21B and Olympia 2B (both of which would spin). Eventually we sold it and within a few weeks it had been spun in. I learned of two other cases of spin write-offs involving the same type, closely following changes of ownership. With perhaps 20 on the UK register, **Accidents to Gliders** show it continues to be spun in and, sadly, not too long ago one spun fatally from the top of the pilot's second wire launch in it.

It would be easy to infer a fundamental prob-

lem with the type, but my 40 or more of my fellow club pilots who flew it do not bear this out and there are *aficionados* who have owned them unscratched for more than two decades. The problem would seem to arise during *transition* to the machine in the absence of adequate briefing and/or two-seater experience.

Perhaps conditioning to particular types plays a role in improving and reducing safety and we might have something to learn from Pavlov's experiment on conditioned reactions (feeding his dog after a bell rang, he found it soon slobbered at the sound of just the bell). At one site, although the training fleet was docile, its much respected, experienced CFI arranged for spin training on a syndicate owned Bocian. Some years later, after retirement of the CFI and the Bocian, a plastic two-seater from another stable was acquired for advanced training and aerobatics.

It generated such awed talk about its spin characteristics I approached it with some trepidation. I need not have worried. It dropped a wing, spun and recovered with no particular drama irrespective of entry or how long it was held in. Others had similar experiences. We had all listened to the more youthful members who started gliding in the post-Bocian years and had rushed to fly this newcomer. It seemed that unknowingly we had trained a generation of pilots who were in awe of the spin of a machine demanding no more than the positive recovery action required in the Bocian. Maybe they had just encountered true and/or sustained spinning for the first time!

A sensitive issue that doesn't seem to have been discussed is that despite an instructors' course plus a follow-up, the characteristics of the docile machine may already be ingrained into the instructor. Although one hopes that flying hours, general experience and an interest in safety issues will make up for shortcomings, the less experienced instructor may be vulnerable when the club buys a "spinning machine".

Accidents to Gliders only gives total pilot hours so the effects of currency and experience on type can't be studied, but this data might be very useful in the case of the recent two-seater accidents. The remedy is obvious - allow more space on the BGA accident reporting form and in the published tables.

Since gliders involved are flying in many countries, international comparisons of training might also be productive.

As to possible remedies, the Bocian advocating former CFI already seems to have known and operated one. Spin recovery learnt and reinforced regularly on a "spinning machine" should reduce the chances of not promptly recognising spins and/or not applying the correct recovery control action. On the principle of teaching the teachers first it would seem that AEI/assistant instructor courses should include spin instruction on such a glider. Larger full time clubs can probably justify one for spin and general training and neighbouring smaller clubs can send their members midweek to be checked out.

The annual check by a senior instructor could include a self briefing and demonstration of spin entry and recovery in a two-seater (or single-seater observed from the ground). This would highlight those who can't spin and for whom the ability to recover otherwise remains uncertain. ☒

TEACHING SPINNING

"Tony Gee's article raises some interesting points about spin/stall training and practice. What I have written here is an attempt to explain not so much what we teach (see the BGA Instructor's Manual for that) but why we teach it", writes Chris, the BGA senior national coach

Spinning remains the biggest cause of gliding fatalities and the debate about prevention versus cure has been going on for decades. One answer, of course, is that instructors must do all they can to teach students not to spin in the first place **and** ensure that they have adequate training in spinning to enable them to quickly recognise and recover from one.

The first part of this is accomplished with training in recognising the symptoms of the approaching spin. Go and practise not stalling, how to act to prevent the stall and then recovery from the subsequent stall. For the first part of this, the training once given is constantly practised and soon becomes habitual.

"The nose is a little too high - I must lower the nose to prevent a stall; the speed is reducing a bit - I'll move the stick forward a little to speed up again; it's getting a little quieter - I'll check the speed - yes I need to speed up a bit."

There is no need to send an early solo pilot off with a brief to "go and practice" not stalling, because the whole flight is an exercise in not stalling.

If these early symptoms are missed because the pilot's attention is elsewhere then the glider has some attention-getting device of its own. Pre-stall buffet is the most easily recognised of these although a reduction in aileron effectiveness and an unusual stick position (too far back) may also be noticed.

The frequency with which pilots encounter these symptoms varies greatly with the style of flying - someone whose normal style of thermalling is steep and aggressive will probably be

very familiar with them (and so recognise them quickly when they occur). A more cautious pilot will see them far less often by accident and unless he practises stalls regularly will probably be somewhat slower to recognise and react to these symptoms.

Spin prevention here consists of flying your glider "on the buffet" sufficiently regularly that you will recognise it instantly for what it is when it occurs unexpectedly.

In the final stage of the stalling exercise prevention begins to shade into cure as the glider is taken right to the stall and then ceases to respond in a normal way to the backward movement of the stick and the nose starts to go down. Forward movement of the stick is required to unstall the glider. Practice has two purposes - the more often seen, the sooner recognised, and this practice also enables the pilot to know how far to move the stick to get an immediate recovery but without diving off unnecessary height.

Finally we come to the cure stage if prevention fails; the glider has been allowed to stall, recovery not initiated and autorotation has begun. Height loss is about 30ft in the first second, 50-60ft in the second, 80-90ft in the third and stabilised at around 90-100ft after that.

The attitude is becoming progressively more nose down during those first two to three seconds and stable (or oscillating) after that. During those first three seconds recovery is more or less instant if the stick is moved forward the right amount. Full opposite rudder may help speed things by some small fraction of a second during the second and third seconds but is not really critical. Height loss in the recovery dive varies greatly from type to type but is typically 150ft in the first second (from a less nose down attitude) and 250ft in the second and subsequent seconds, perhaps up to 350 or 400ft for some slippery types.

So a perfect recovery after one second will pull out of the dive with just under 200ft height loss, after two seconds 350ft and after three seconds 450ft. Add 100ft for every second after that.

Moving the stick too far forward will result in a sharp pitch down on recovery and an extra height loss of 100-200ft. Moving the stick forward gradually to avoid this will take time and even a one second delay will cost 100ft. Only frequent practice in the glider at the C of G position being flown will enable a pilot to immediately move the stick forward by just the right amount for a minimum height loss recovery.

This same practice will help to speed recognition of an accidental spin, and although pilot reaction times will always vary the rule must be "most often seen soonest recognised", and one second saved can be the difference between a fright and a funeral.

Finally, some practice at spin entry and immediate recovery at relatively low levels (around 1000ft) may serve to prevent panic overriding everything else in an accidental spin near the ground. ☒

Please send all editorial copy to our Cambridge address and not to the BGA office.



David Hurst (Southdown GC) being congratulated by instructor Rod Walker after going solo on his 16th birthday.



Bill Cooke (Bowland Forest GC) with instructor Bob Pettifer after his first solo.



Alice May (Staffordshire GC) after going solo.



Above: Martin Walker (Buckminster GC), front row right, celebrating his first solo with fellow university students Richard Rockley and Dave Omerod and instructor Richard Kilham. Below: John Hartley (Shenington GC) who soloed at 79 years of age.



Below: D-Day Horsa pilot Bert Farmer with Dave Simeons, photographed with Bannerdown GC's K-13.

CLUB NEWS

Copy and photographs for the December-January issue of S&G should be sent to the Editor, 281 Queen Edith's Way, Cambridge CB1 4NH, tel 01223 247725, fax 0223 413793, to arrive not later than October 11 and for the February-March issue to arrive not later than November 29.

GILLIAN BRYCE-SMITH

August 10

ANGUS (Drumshade, By Glamis)

Hard work by members sees us with a workshop and hangar and a clubhouse nearing completion. Our field is much improved and we are taking full advantage of local conditions with soaring flights reported every weekend, encouraging attempts at cross-countries.

Our membership is slowly increasing and we have been joined by Sandy Torrance, a full Cat.

Tony Housden (ASW-20) landed at Angus after a long flight attempting a 500km from Aboyne and wife Ruth did the same the following week.

We welcome visitors and are expecting a

member from a Greek club who has been following the development of the club through S&G. E.L.

AQUILA (Hinton in the Hedges)

Tony Limb and John Cooper have Gold distances, John completing his Gold badge. Eddie Chalk has his 5hrs and Chris Greengrass an AEI rating. We also have a new Dart syndicate. S.A.

BANNERDOWN (RAF Keevil)

We are entertaining ex-Keevil aircrew in September when the Keevil Society hold an Arnhem commemorative service in their church.

We have benefited from improvements to the tower, roads and taxiways. The place is hardly recognisable as the wet, depressing shambles we moved into two years ago.

We can now welcome visitors by air with prior warning via the bus phone (0374 295032).

Bob Brain (Discus) and John Dawson (Astir) have Diamond goals and Jon Arnold (Ventus) flew in the 15 Metre Nationals.

We wish success to our former chairman, Dave Walker, who has moved to South Africa. He gave us invaluable support throughout a difficult period.

D.C.F.

BATH, WILTS & NORTH DORSET (The Park)

The return visit from John O'Gaunt school Trowbridge for three days again proved very successful. Mervyn Burt and Nick Machin have gone solo.

A large number of enthusiastic members turned up for early morning flying on June 18. The first launch at 4.55am was followed by an



In the centre, Chayla Oakley and Ronnie Slatter (Shalbourne Soaring Society) holding their gliding scholarships from the Dave Maleham memorial trust fund which were presented by Ellen Maleham (Dave's widow), far right, and daughter Tracey, far left.



Bernie Morris (Booker GC) in his syndicate hot ship (SG-38).

enormous breakfast provided by Sue Cutler and helpers.

A successful course for instructors was run by Roy Gaunt. We are lying first in the Inter-Club League. A new K-6E syndicate is headed by Dave Pengilley. J.L.

Obituary - Vincent Griffith

Vincent Griffith's many friends in the gliding world will be saddened by the news of his death, particularly those who had known him since the early days of our club's existence. Vince joined us soon after the club started, having previously flown at Nympsfield and Colerne.

He assisted our first CFI, Gordon Mealing, teaching many of us to fly. Vince was a true gliding enthusiast. Such was his skill that he would take whatever glider was available and disappear for hours on an apparently unsoarable day. He loved cloud flying.

In recent years his visits had been more infrequent due to ill health. His many friends will remember him above all for his unflinching charm and gentle good nature. He was a true gentleman who endeared himself to everyone. Our deepest sympathy goes to his wife, Mary.

Joy Lynch

BICESTER (RAFGSA)

We have had several long cross-countries during these excellent soaring conditions. Chris Rollings and Barrie Elliott hope to have broken the UK Multi-Seater 100km speed record with an average of 130.7 km/h.

Tim Faver, Owen Walter and Yvonne Elliott have flown Diamond goals. June 30 was an excellent day with several achieving 500km and

Pete Stratten completing a memorable 752km.

Our ladder is very competitive. Dave Allison is leading with Pete Stratten and Derren Franc in hot pursuit.

After many years of appreciated hard work as our "soup dragon" Val Dean is leaving for a new job in the prison service and we wish her well. Y.E.

BLACK MOUNTAINS (Talgarth)

We had a very successful weekend at the Brecon Beacons National Park Outdoor Pursuits exhibition. We dealt with a large number of visitors to our stand where we had the SZD51 Junior on show.

We have also had a steady stream of visitors from all over the world, many experiencing their first wave flying. D.U.

BOOKER (Wycombe Air Park)

Too many have progressed so well this summer to mention individually, the exception being Alister Kay for winning the Open Class Nationals for the fourth successive year and Sean Cockburn, a BBC Group bursary student, on going solo on their K-21.

Instructors flying with members in the Duo Discus in competitions have included Pam Hawkins in the Open Class Nationals and Dave Watt and Alister Kay in the Regionals. All have praised its "Standard Class" handling and performance.

To keep up with the August trial lesson bookings we have an additional professional, Dave Bland from Bidford. Bookings are flooding in for the autumn Aboyne wave expedition. R.N.



Kath James (Lincolnshire GC) after going solo.



The Earl of Strathmore and Kinghome having his first flight in the Angus GC's SF-34 with Gus Christie (AEI).



Above: The latest members of Northumbria GC's "Fledgelings Club" - l to r, Mark Younger, Paul Stafford and Kevin Thwaites. Below: John Horne (Glyndwr GC) sent solo by Rob Vaughan.



BORDERS (Galewood)

After much hard work, Brian Sword has retired as CFI with Robin Johnson taking over.

Hugh Baird and Martin Cummings have soloed; Peter Fairness has a Bronze badge and Andy Hendersen an assistant Instructor rating.

Bob Cassidy and Bill Stephens took their SF-25b to the International Motor Glider fly-in at Rufforth and won 1st prize for the best turned out Falke in the *concours d'elegance*.

The good summer is attracting many visitors and we have several new members.
B.C.

BOWLAND FOREST (Chipping Airfield)

We have had good soaring weather and cross-country opportunities. George Wearing flew 300km; Barry Crellin has gone solo and Steve Robinson and Daren Evans have AEI ratings.

The rebuild of the YST-53 was recently completed along with a new paint job, and very smart it looked on its maiden flight in May. As always a warm welcome awaits all visitors.
S.R.

BRISTOL & GLOUCESTERSHIRE (Nympsfield)

Geoff Boaler and Pete Waite achieved Diamond goals, but sadly Ken Barker and Tim Macfadyen just failed their 750km attempts on June 30.

The Inter-Club League trophy has been dusted off for the first time in four years and handed over to Aston Down who are the new custodians, despite the efforts of Phil Walker's team.

Our stand at the International Air Tattoo produced an overwhelming response thanks to the efforts of Ian Lane, Rob Hanks and the team.
S.I.D.

BUCKMINSTER (Saltby)

We hosted a BGA cross-country course in May and learnt a lot despite the weather.

Martin Walker has gone solo and Lynn and Neville Cawte, Samantha Morecraft and Roger Hamilton have their Silver badges.

A very successful cross-country club task week was organised by Clive Stainer, this year's course instructor. In wonderful weather most flew at least one 100km and on one day we totalled 1400km. Daily prizewinners were Helen Cheetham (2), Lynn Cawte (2), Kate Hutchinson, Cathy Lawrance, Frank Cox, Bill Morecraft, Geoff Cotton and Neville Cawte.

Helen Cheetham gained her 500km at the Midland Regionals and her husband Russell came 3rd in the Open Class Nationals. We are through to the Inter-Club League finals.

We entertained some delightful American D-Day veterans who flew from Saltby 50 years ago. There was a party and a morning church service. We plan to commemorate Arnhem in September to remember those glider and power pilots, their crews and the paratroopers who flew from Saltby 50 years ago and didn't return.
N.R.C.

BURN (Burn Airfield)

Martin Wakefield again organised Project Trident, arranging flights in gliders for local schoolchildren which counts towards their award.

Chris Collins and Ian Gutsell gained 100km diplomas. Bob Peaks-Wood completed his Gold with a 300km 8hr 30min distance, finally (almost) landing his Mosquito back at Angers airfield, France.

Paul Smith soloed - and enjoyed it so much he only landed after 75min because the Red Arrows were due at a nearby air display. The Kenning twins have also soloed with Andrew gaining Bronze legs on successive flights.

New on site is a Ventus owned by Hedley Forshaw, Andy Toone and Mike Bennett.
P.N.

CAIRNGORM (Feshiebridge)

Bill Longstaff (Dart) came 3rd in Competition Enterprise. (See the next issue.) There was an excursion to Chauvigny, France; Andy Carter flew Diamond goal and 500km and Dave Hart 5hrs. Barry and Mo Meeks unrelentingly provided aerotowing.

Andy Carter and Alistair Robertson have run another successful five day course for beginners. We have an "Oktoberfest" for wave flying with aerotows available.
T.C.

CAMBRIDGE UNIVERSITY (Gransen Lodge)

We have had an increasing number of visitors; two competition days for the Inter-Club League and our cross-country courses have been very popular.

Colin Boness, Jill Stacey, Arthur Williamson, Andre Phillips, Rod Rennison, Gary McGrath, Roger Duke, John Scott, Dick Hadlow and Steven Sandville have gone solo as well as two more cadets, Noel Martindale and William Warboys. David Hawthorn, April Considine and Kevin Levitt, last year's cadets, have Bronze badges as have Victor Spencer and Graham Howatt, while Wendy Hatherway, John Strebrakowski, Eddie Baker and John Rogers have Silver badges. There have also been a number of Gold distances and Diamond goals.
M.H.L.

CONNEL (North Connel Airfield)

Vari Ferguson and Archie Maxwell ran a profitable breakfast-to-supper barbecue during our very successful July open weekend organised by Helen Anderson. There was considerable public interest and 87 trial lessons.

Malcolm Shaw, CFI, trailed the SGA's ASH-25 to Connel for its long weekend with us and 14 members and four visitors from Strathclyde GC flew a total of 20hrs with him in basically poor soaring conditions. Our chairman, Bill Miller, now has an AEI rating.
R.W.

CORNISH (Perranporth)

John Stewart-Smith gained Silver height in cloud in his Skylark and Martin Wilshire has a Bronze badge. We had a record tow in July - 9400ft when a German visitor decided, on a non-thermic clear day, that this was best value for money to get a long look at all of Cornwall.

We had many visitors to our stand at the Royal Cornwall show resulting in trial lessons and new members. We held another open weekend in July with a barbecue. Radio Cornwall stayed with

us all Saturday, making broadcasts from the ground and air.
S.S.

COTSWOLD (Aston Down)

Pete Teader, Mike Morrilee, Mike Dolan, Tony Saunders (re-solo), Simon Buckley and Stephen Carter have gone solo, Stephen on his 16th birthday.

Steve Manktelow flew Diamond height in the USA and Brian Birlison gained his Bronze and Silver badge less than five months after a 16th birthday solo.

Intrepid 500km seeker Peter Ward declared a downwind dash to Aboyne, landed out at Sutton Bank and flew back the following day - who wants a long retrieve?

Our late July task week's Open Class was won yet again by Paul Gentil (the organiser!) and Jonathan Beard won the Sport Class. Twelve pilots out of 14 landed out on the first day and red face of the week belonged to Rob Vaughan from Lleweni Park who, later in the week, landed on an island in the Severn - thankfully there was a little bridge.

It is with great regret that we report the death of John Holland, who will be sadly missed by our members and friends throughout the gliding world. He contributed vastly to the club over many years. (See the BGA & General News.)
M.S.

DARTMOOR (Brentor)

Ken Basterfield, Josef Nobbs, Dave Wallace, Phil Brett and Rick Morris have Bronze badges. A group went to our sister club at Perranporth to practise field landings.

Our 10th anniversary barbecue was a great success. We have a stream of holiday visitors and have welcomed pilots from many other clubs. We now have one day refresher courses to introduce temporary members to the club. Our evening flying sessions have provided welcome extra income and recruited new members.
F.G.M.

DEESIDE (Aboyne Airfield)

In a good summer with wave most days Alain White completed his Bronze, Richard Arkle got his Diamond height and 5hrs and Glen Douglas his Silver badge.

June saw us at 21 600ft and July at 28 000ft.
G.D.

DEVON & SOMERSET (North Hill)

Badge claims from the K-6CR mobsters include Peter Huggins (Silver distance and height); Ellis Smith (duration and height) and Chris Wool (duration and distance), completing Silver badges for Ellis and Chris. Ellis also flew Gold height in wave at the Long Mynd. Tim Towers has Silver height and Frank Bertonelli part 1 of the cross-country diploma.

Robert Lee, John Murray and Eric Alston have gone solo and Ron Jones (ASW-20L) has completed all three Diamonds with a 513km flight from Booker.

Simon Minson (CFI), with instructors Chris Miller and Ian Mitchell, organised a visit by Peter Mallinson (from Nympsfield) for an aerobatic instruction weekend.

There have been expeditions to Portmoak, Talgarth and the Long Mynd. The August task week is dogged with strong easterlies, snaking frontal systems and our final course week in mid-August was cancelled due to lack of support. I.D.K.

DUKERIES (Gamston Airport)

Saturday June 11 saw some of the most successful flying since the club was formed. Beryl Clarke, Graham Goucher and Mike Burrows gained their 5hrs and Keith Gregory and John Swannack flew 100km triangles.

David Clarke has flown a 150km O/R and on the same day Glenn Barratt managed 235km in the club K-8. J.C.P.

ENSTONE EAGLES (Enstone)

We hosted the Open Class Nationals and everything went smoothly even though the local water authority chose that very week to have pump failure leaving us without mains water! (See report in this issue.)

The July and August courses were well attended and we have held corporate flying evenings with barbecues almost every week throughout the summer.

Neil Edwards flew his first 300km in June and Paul Murphy completed his Silver badge. Turan Turan, Fran Brennan and Andrew Tristram have Bronze legs and Mike Weston Silver distance.

We support the reciprocal membership scheme and no longer charge day membership for those belonging to a BGA club. L.J.B.

ESSEX & SUFFOLK (Wormingford)

Dual cross-countries continue to be encouraged with CFI Paul Rice and Vivian Haley flying over 400km at the Inter-Club League at Tibenham, in the K-21.

Victor Francis, Darren Lodge and Chris Price have Bronze badges. Riaz Malik and Rupert Price completed their Silver badges with 50km flights to Tibenham, a task Rupert's father Chris also flew the next day.

The clubhouse nears completion, thanks to the efforts of many members, but especially Wally King and Pete Nicholls. Pete is now an assistant Cat instructor.

We are in the reciprocal membership scheme and welcome interest from other clubs. M.J.F.

FENLANDS (RAF Marham)

We have had a healthy influx of new members to keep our two K-13s busy. We have a privately owned Falke motor glider which we plan to use for advanced training. Our K-18 has been repaired and has a new trailer. A.R.M.

GLYNDWR (Lleweni Parc)

We have had some excellent flying with wave flights approaching 20 000ft, thermals since March and countless ridge soaring days.

Dave Bullock (CFI) and Eddie Lees have superbly refurbished our two K-13s and K-8.

Steffan Huth, John Horne and Ray Cronin Jnr (on his 16th birthday) have gone solo and also

Chris Childs - a particularly brave achievement on her part. Ben Long flew 136km in the Manchester University K-6. Dawn to dusk flying on the longest day produced wave flights to 14 000ft with a barbecue afterwards. B.L.

HEREFORDSHIRE (Shobdon Airfield)

There has been a great increase in club activity with as many launches now as in the whole of 1993. David Evans has breathed life into the club ladder, which he currently heads; the Junior has proved to be a real asset and the two-seaters are kept busy.

Mike Dodd (SHK) attempting a 300km landed out Oxford way in a field of recently cut rape, suffering nothing more than lacerated legs on walking through the stubble. He was received cordially by the owner but had to leave the aircraft rigged in the field for a week until the crop had been gathered.

When we have decided on the dates for our usual autumn wave week we will send round a note. Come and join us - 20 000ft from a big flat site with lots of places to land out! R.P.

HIGHLAND (Easterton)

With an effective four month lay-off (the longest ever) caused either by wind or flooding our year only started in April. But by June we had done almost as much as the whole of 1993 with an average flight time in excess of 30min, though still not many kilometres flown.

Geddes Chalmers gained his Silver badge only weeks after joining the Dart syndicate and on his distance flight to Feshiebridge regained the bomb.

Andy Anderson flew Silver distance; John MacLean and Stuart Harris have Bronze badges, Stuart already having his 5hrs and Silver height; Jill Matthews, Alan Bruce and Ann Burgess have their 5hrs and Teresa Bruce-Jones gained Silver height for her badge.

We are in credit for the bomb as Jill Matthews flew to Feshiebridge for her distance attempt after reaching 12 000ft. We had two successful club weeks, the first in April ending with the Fulmar tug trapped at Easterton by 2ft of snow.

We have had numerous wave flights to more than 12 000ft with Neil Anderson achieving Gold height and Mike Foreman reaching 21 500ft on the same day in June. Many were from winch launches. During the June week the SGA ASH-25 flew about 40hrs with at least two flights each day, mostly cross-country.

Robert Tait is flying his Std Jantar in the Junior Nationals. For our third club week in October we are being joined by Fulmar and the SGA ASH-25. We have planning permission for a glider store (hangars are different so it would seem!) and our estate has a new owner. We have an open day in September. A.G.V.

LAKES (Walney Airfield)

Jim Storer soloed on his 16th birthday. We had an excellent expedition to Thouars in France joined by an encouraging number of first-timers. Alan Dennis flew a Silver distance to complete his badge.

We have flown large numbers of schoolchildren as part of a local scheme to provide leisure activities during the summer holidays.

Peter Lewis and Neil Brathwaite have flown part 1 of the UK 100km diploma. A.D.

LASHAM (Lasham Airfield)

The Lasham Regionals Class A was won by our cross-country instructor, Gee Dale, with Jill Burry coming 2nd.

The Lasham aerobatic training courses run by Sam Mummery are popular. A third of the entrants for the National Aerobatic competition are from Lasham.

David Masson, of Surrey and Hants GC, has flown his first 500km in the club's Discus.

Franz Heil, a 16 year-old Frenchman, went solo on aerotow and winch after seven day's instruction from Clive Thomas. Franz's father flew at Lasham in the 1950s.

Jeff Smithers, in charge of our cadet scheme, reports that six of last year's cadets went solo when 16 years-old. This year's intake is divided equally between girls and boys. A.M.S.

LINCOLNSHIRE (Strubby Airfield)

July has been Silver month. Mike Fairburn and Dick Skerry finished their badge with 5hrs and Dave Armstrong with a distance. Angie Hearney has Silver height and distance.

Kath James, Diane Skerry and Jeanette Kitchen have gone solo. Paul James has bought a K-6CR - another addition to the private fleet. R.G.S.

LONDON (Dunstable)

We had a very successful 15 Metre Nationals, with six contest days out of the nine. It was won by Justin Wills, and rounded off with an excellent hangar dance with clowns and conjurers. (See report in this issue.)

The Vintage Glider Club Rally was held at the beginning of August in light winds and clement weather, and much flying was done with visitors from all over Europe and the USA. Some of our members visited Sisteron with the Cambridge University GC and there is an expedition to Aboyne. R.C.

MENDIP (Halesland Airfield)

Patrick Haxell has gone solo; Jack Ryland has both Bronze legs; Patrick Hogarth a 100km diploma and Kirstie Turner has soloed in the motor glider.

Mick Longhurst has taken over from Barry Goodyer as M/T officer - Barry has given much time and effort keeping the kit up and running. We are still attracting new members, thankfully some from the younger generation which is encouraging. Visiting pilots are very welcome. G.W-S.

Obituary - Paul Youhill

It is with profound sadness that I report the tragic death of Paul Youhill in a gliding accident at Halesland in June.

Paul had been a staunch member of our club for just over nine years, and in that time his dry



Vectus GC members after flying Major Pat Fergusson who helped to build the Colditz glider as a prison of war in the last war. L to r, Chris Waghorn, John Kenny (DCFI), Mike Chambers, John Leonard, Mrs Fergusson, Major Fergusson, Neil Watts (CFI), Mike Squibb, Jim Britton and Chris Bacon.

A mass competition launch by 5000 flyers from Burn Airfield. Photo: Paul Newmark.



Peter Clifford flying his Blanik demonstrator at Bicester. Peter, now 80 years-old, has been flying professionally all his working life. Photo: Dick Stratton.

sense of humour and his wizardry with electronics made him a very popular figure. No job ever seemed to be too much trouble for him; if it needed doing, he just got on with it in his quiet and unassuming way.

He will be greatly missed by his friends and all our sympathies go out to his wife Eunice and the family.

Barry Hogarth

MIDLAND (Long Mynd)

At long last, an excellent two months of summer gave plenty of cross-country and wave flying. We held another well-attended open day with our birthday party planned for August 13.

Kay Alston, Gavin Dickie, Paul Fearis, Kevin Hopkinson and Hugh Topping have soloed. Richard Coghlan has his duration. Dave Cummings and Jamie Hamilton have Silver distances, completing Silver for Dave. Alex Hartland, Martin McCurdie, Gill Reeman, Alison Rowson, Richard Swire and Mike Terry have

gained Gold heights, most on June 16 when the best climb, by Martin McCurdie, was to 18 000ft in WNW wave. June 30 was a superb day, with Paul Shuttleworth flying 396km in his Skylark 4. Other Mynd pilots were at the very enjoyable Bidford Regionals that week, with Nick Heriz-Smith getting his Gold distance that day. Simon Adlard came 3rd in the competition, having got too old for the Junior Nationals. William Brewis and John Collins have become AEIs. A.R.P.

NORFOLK (Tibenham Airfield)

We have lots of flights on the club ladder and have amended the rules to include points for first solo and Bronze and Silver badge as well as for cross-country flights, to give our up-and-coming pilots a taste for friendly competition.

Neale Banks, John Herring, Russell Pointer and Tim Davies have Bronze badges and Malcolm Stoodley a Silver badge. Phil Jones landed after 650km on a 750km attempt. Bill (Butch) Butcher, Jack Sillis, and Julie Savory have soloed, Julie staying up for her first Bronze leg. B.W.

NORTHUMBRIA (Currock Hill)

The excellent June and July resulted in Gold heights for Colin Neve, John Collinson, Wilf Turnbull and John Hogbin; Silver heights for Dave Humphreys and Ian Tate and Silver distance for Colin Saxton, with several members exceeding 17 000ft in wave.

Ian Inglis went solo and Martin Fellis and Derek Robson have entered the Northern Regionals. We have an expedition to Portmoak in September. In an effort to improve the launch rate, we have bought a retrieve winch. D.W.H.



Simon Buckley (in the glider) was the first student sent solo by Mike Oliver since become a Cotswold GC assistant instructor.

OXFORD (Weston on the Green)

Graham Barrett (Libelle) and Steve Evans (LS-6) have flown 500kms. Steve getting his photographs right his time! On the same day John Gordon (Std Cirrus) and Alex Jenkins (DG-100) came to earth after 442km.

Peter Turner has flown Silver distance. The club expedition to the Alps was an enjoyable experience with many hours spent among the mountains.

In the Open Nationals John Giddins (DG-202-17c) came 1st on handicap on one day.

We welcome several new members from the former Brackley GC. F.B.

Peter Foster's photo of Sleep Airfield, home of the Shropshire Soaring Club.

The Cornish GC's stand at the Royal Cornwall Show.



PETERBOROUGH & SPALDING (Crowland Airfield)

The drier weather has been very welcome but the predominantly easterly winds have not been conducive to cross-country flights. Robert Ellis is our second ATC cadet to go solo and Adam Laws soloed shortly after his 16th birthday. Ravi Sharman complete all three Silver legs in the same flight and Mike Edwards flew to Strubby to complete his Silver badge. Bryon Smith and Manuel Williamson have gained Silver height and George Willows his first Bronze leg.

Snoopy continues his travels, being "dog-napped" by a PIK-20E from Tibenham (with a warm engine?!). However, he was swiftly recaptured by our veteran dog catcher, Andy Griffiths, in his Skylark 3. Cloth badges of Snoopy, awarded for successful retrieves, are now as highly prized as official BGA badges.

Our clubhouse has been transformed with a fresh coat of paint and carpets, thanks to the efforts of Glennis Crowhurst, Frances Willows, Glenn Rodrigues and their helpers. G.E.W.

PORTSMOUTH NAVAL (Lee on Solent)

We have had a busy few months with some excellent soaring and cross-country flights. We were honoured to have three gliders take part in the spectacular D-Day fly past. John Hale has run two successful mini courses, making good use of our new K-13 from Germany. New solo pilots include; Simon Cox, Chris Hanks, David Schofield, Philip Morris, Dave, John Young, Nigel Reid and Morag Wilson.

Kevin Noel and Richard Noyce have their Silver badges and Paul Limburn, Greg Miller, Barrie Davies and Simon Noel have Bronze badges. Glyn Jaques and Phil Taylor have AEI ratings. Many thanks to RAFGSA Centre Bicester for hosting some fun weekends. J.P.

SACKVILLE (Sackville Lodge)

Tim Wilkinson has taken over from John Morris as CFI, though John will continue to assist and be DCFI. J.M.

SCOTTISH GLIDING UNION (Portmoak Airfield)

Our summer courses are bringing a crop of first solos - Jim Macmillan, Fred Joynes, Gerard Marshall, Ian Russell and Ian Hamilton.

The Central Gliding School Air Cadets are back for their advanced soaring courses with nearly everyone of them picking up Silver legs each week.

We have had good soaring conditions and unusual June wave gave several flights in excess of 12 000ft, Mike Edwards (Cirrus) getting to around 16 000ft. Ed Murphy completed his Silver badge with a 50km. Trevor Murphy (ASW-20) came 2nd at the Midland Regionals.

The club Junior has a new trailer in an effort to encourage more cross-countries and our K-21s are coming soon. Book now for the winter wave - don't miss out! G.S.G.

SHALBOURNE (Rivar Hill)

Our open day in June was well attended, although the weather and wind direction were not



Most of the team at Tibenham, home of Norfolk GC, responsible for the Eastern Regionals. The photo was on the club noticeboard with the caption "Running a Regionals involves a lot of hard work." Photo: Bob Fox.

very kind. The highlight was awarding gliding scholarships from the Dave Maleham memorial trust fund to Ronnie Slatter and Chayla Oakley.

Bryan Vowell has been on an instructor's course, Chris Dearman has a 5hrs and Martin Hoskins has gone solo. J.R.

SHENINGTON (Shenington Airfield)

In spite of some strange weather conditions we had another busy open weekend.

Fiona Tarrant, Samantha Weitzel, Phil Halldron and Michael Phelps have gone solo; Belinda Glover, David Weitzel and Mark Hampson have Bronze badges; Chris Kidd a Silver badge; David Weitzel duration and height; Mike Miles Silver height and Tony Heslegrove Silver distance and height. Rob Russon has an AEI rating. Alex Hartland got his Gold height at the Mynd (only retiring due to lack of oxygen!) and Mary Meagher flew 500km.

Some members went on a July expedition to France with an autumn trip to Scotland likely. T.G.W.

SOUTHDOWN (Parham)

The long hot summer has produced some pleasing badge claims. Alan Irving and Maurice Davis completed Silver badges; Les Blows and Paul Fritch flew Diamond distances while Jim Heath gained his Gold badge. Paul Marriott achieved a Diamond goal and has brought a T-21 on site.

Duncan Stuart, Pat O'Leary, Terry Buckett, Keith Rossetti, Graham Stupple and David Hurst went solo. David, recently 16 years-old, is the second generation of Hursts to fly from Parham. Peter Wege re-soloed after 38 years.

We hosted the Inter-Club League in early August and gained a narrow victory. P.J.H.

SOUTH WALES (Usk)

Good weather made the open day a great success in July with Nympsfield and the Vale of Neath loaning extra aircraft and pilots to help out with the large number of flights.

Bill Mills (Nimbus 2) has flown his first 500km; Harold Armitage a 100km triangle; Paul Macewright has Silver height and Mike Dunlop has become an assistant instructor. M.P.W.

STAFFORDSHIRE (Seighford)

This summer has seen Seighford Soaring Centre start to live up to its name. Chris Bee, Bob Frazer, Andrew Kirkland, Alice May, Colin McKenzie, John Richards and Damian Warren have soloed. Alan Self, who was last seen in a Tutor in 1963, has re-soloed after 31 years.

Andrew Kirkland and Alice May have both Bronze legs, Alice achieving hers on her third and fourth solo flights. Chris Bee, Andrew Kirkland and John Taylor have Silver heights and Graham Bowes Silver distance after several valiant attempts.

John May has Silver height and distance and Ian Davies, David Howell, Ian Martin and Nick Tatlow Silver badges. Ian was the first member to fly all Silver legs from Seighford and Ian Martin was the first to progress from *ab-initio* to Silver with all badge flights from Seighford. Peter Warren has an AEI rating and Richard Bills has reactivated his assistant instructor rating.

Wrekin GC visited in July and Mick Boyden and Richie Toon flew 300 and 100km respectively while our members clocked up more than 40hrs in club gliders on the Saturday. The first two of this summer's task weeks have been well attended with barbecues on the final Saturdays. The new bunk room for eight should be ready for the August task week. Membership is steady at more than 100 and we are considering additional facilities to attract more syndicates. I.G.P.M.

STRATFORD ON AVON (Snitterfield Airfield)

Brian Marsh came 2nd at Lasham and 3rd at the Midland Regionals and Phil King won the Bidford Regionals.

Brian Tebbitt and Sandra Wood have Silver badges with numerous Bronze legs gained each week including a Bronze badge for Fred Price, our veteran, which was a noteworthy effort.

First solos include Peter and Lesley Blair, Eric Barnacle, Bill Tromans and Mark Maberley. The club ladder is proving very popular at all levels of experience. H.G.W.

SURREY HILLS (Kenley Airfield)

After a slow start, partly due to bad weather, we are averaging extremely good weekly launch rates. Weekday courses are very popular resulting in an increase in membership.

Our May Bank Holiday fund raising day was an enormous success and raised more than £2000 on behalf of Help the Aged. We have an open day in September to raise funds for the winter semi-hibernation.

We have extended our hangar to hold eight club gliders, the occasional visitor and our retrieve vehicles.

J. Playford and Helen Chenery have soloed; Chas Spencer, Geoff Bloomer and John Taylor have Bronze legs and Ian Crang and Peter Farr Bronze badges; Mike Hughes and Peter Wann have Silver distances, Peter sadly missing his 5hrs by 3min, and Mike Hughes flew part 1 of

his 100km diploma on a BGA soaring course.

We had an excellent expedition to Edgehill, thanks to Mike Cuming, and have courses throughout the season.
S.D.

THE GLIDING CENTRE (Shenington Airfield)

Our intensive gliding courses continue to be full and we have extended the five-day courses to the end of October. We've lost track of this year's tally of new solo pilots but I know we sent five last week.
M.F.C.

THE SOARING CENTRE (Husbands Bosworth)

We had six good days for our Regionals including a 500km task completed by 20 with first 500kms for Dave Asquith, Rory Ellis, Claude Woodhouse and Keith Scott. It was a great success thanks to Ron Bridges and his team.

Steve Crabb became the Hungarian Nationals Standard Class Champion in his Discus with 14 competition days and with tasks ranging from 200-500km and speeds of over 100km/h.

Our hangar doors were repainted by a group of local venture scouts one weekend. Some members took one of our Puchacz to the local airshow, where it was of great interest to the visitors as one of the few aircraft there that could be touched or even sat in.

Tom Burton complete his Silver badge with a 5hrs and John Bevan flew a 300km. We have expeditions to Feshiebridge, Aboyne and two gliders will be based at Dishforth for the winter.
T.W.

ULSTER (Bellarena)

A member with clout has negotiated very big discounts for car/glider trailer/pax combinations on P&O's Larne-Cairnryan (Stranraer) ferry route. They can be obtained only through the UGC and normal booking agents won't be notified, so if you wanting to bring an aircraft over to fly from our fabulous site or beach next year contact our secretary.

A substantial part of our private owner fleet competed in the Irish Nationals at Kilkenny in the last week of July.

John Lavery has replaced his Dart with a smart Astir. Simon Kells has gone solo.
R.R.R.

VALE OF WHITE HORSE (Sandhill Farm)

The weather has given good flights and excellent club barbecues. Bernard Marret (Jantar) flew a 300km triangle; Pauline Leach 5hrs in the club K-8; Steve Parsonage and David Leach took the club K-13 on its furthest flight (125km) and Graham Turner surprised us by taking off in it at 3pm in late July and completing a 5hrs. David Foster and Sue Foggin have AEI ratings.

There have been successes on BGA soaring courses - Steve Parsonage (ASW-20) flew a 300km triangle; Sue Foggin (K-6E) a 100km triangle and David Leach his distance and 5hrs, as well as a 100km triangle in the club K-18 - all from Bicester.
S.F.

VECTIS (Isle of Wight, Bembridge)

The open day was very popular with 60 flights, helped by a K-13 generously loaned by the

Portsmouth Naval GC. Tom Edwards and Dave Wadham flew non-stop. One of the highlights was giving a first time glider flight to Major Pat Fergusson, who was involved with building the Colditz glider.

Our chairman John Leonard, flew Silver distance on the mainland to complete his badge and was grateful to Pete Tuppen who retrieved him after his 260km that day in the ASW-15.
M.J.H.

WELLAND (Lyveden)

Achievements to note ; Gold distance and diamond goal for Werner Leutfeld; 5hrs to complete Silver badges for Ken Wells and Nigel Betteridge; 50km to complete his Silver for Chris Hill; 50km and Silver height for Mark Prickett; Bronze badges for Andy Shaw and Roger Gray; solos for Sue Harris and Chris Seymour and a resolo for Greg Taffs after 5 years absence.

Our task week provided 310km flights for David Evans and Andrew Johnston and 195km for veteran instructor Horace Bryant.
R.H.S.

WOLDS (Pocklington)

We have had some good flying. The task week went well with several good tasks. The winner was Dave Bowes (ASW-24). The K-21 is in France with a sizeable expedition.

Alan McWurter flew 300km for a Diamond goal. "H" Craven and Shawn Camptwell have their 5hrs. We are collecting a second Junior from Poland.

We took part in a D-Day fly past over the Yorkshire Air Museum, along with Rufforth and Sutton Bank, which went well.

Don't forget that reciprocal members are always welcome!
M.F.

WREKIN (RAF Cosford)

John Sullivan has left us and handed over as CFI to Mick Davis. Chris Enmarsh and Ross Simpson have gone solo. Alan Podmore, Steve Wright, Glenda Porter, George Wilson and Dave Hayward have gained at least one Bronze leg. Alan and George also achieving Silver heights. John Sproat completed his Silver with a 50km.

Mick Davis and Terry Moyes did a marathon coast to coast flight calling at as many clubs as possible in two days; Terry has also become a tug pilot. Mick Davis, Geoff Matthews, Terry Moyes and Mick Boydon have added kilometres to the club statistics over the last two months.
I.C.

YORK (Rufforth Airfield)

It has been a busy summer with many more course members and evening groups. We have two full time motor glider instructors assisted by five others part time.

Summer wave gave Mike Cohler a 14 000ft climb whilst thermals gave Bob Sansoni Silver height. Malcolm Wood has gone solo.
H.McD-R.

YORKSHIRE (Sutton Bank)

Despite only having four competition days for the Northern Regionals, it proved to be an excellent friendly competition with Bob Fox winning the Open Class and Richard Allcoat the

Sport Class. Local lad Steve Ell won the novice trophy coming 6th in the Open Class in his Nimbus 2c.

Nick Gaunt won Competition Enterprise which we are hosting next year. (See the next issue.)

Brian Mitchel and Steven Ricketts have gone solo. The excellent soaring conditions in July brought flights of over 300km for John Goodall, Steve Hughes, Stuart Heaton, Tony Maison and Steve Ell.
C.L.

Our thanks to all those contributors who sent their addresses and a contact number with their reports for this issue. It is a great help. Also, a thank you to those who printed the names on the handwritten copy.

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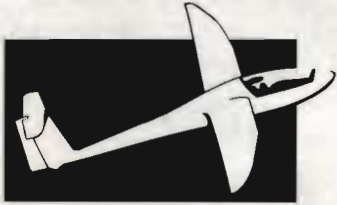
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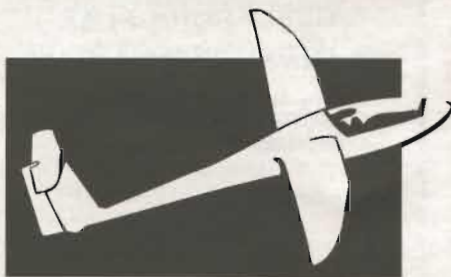
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FOR YOUR WINTER DIARY

The BGA AGM and weekend will be at the Swan Hotel, Harrogate from March 4-5, hosted by the Yorkshire GC. There will be more details in a future issue.

Have you a spare tent? Angela Sheard says that someone at the Overseas Nationals at Leszno, Poland, packed not only their own tent but one belonging to a young Leszno pilot, robbing him of accommodation for this summer's flying. He returned from a few days at home to find his two tone yellow, three-person, tent missing, which is a huge loss to a Polish teenager. As it was British or American it may be similar to yours, so please check carefully you haven't got the wrong one. If found, please contact Roman Gryś, fax 010 4865 201018.

Grateful thanks to the competition scorers this year for far better sets of results meaning considerably less chasing up. Incidentally Taskfinder Software were given credit for the Overseas Nationals table (last issue, p200). In fact, Ken Sparkes says that Specialist Systems scoring was used for the scoring but the final results were produced using his system.

Skywings

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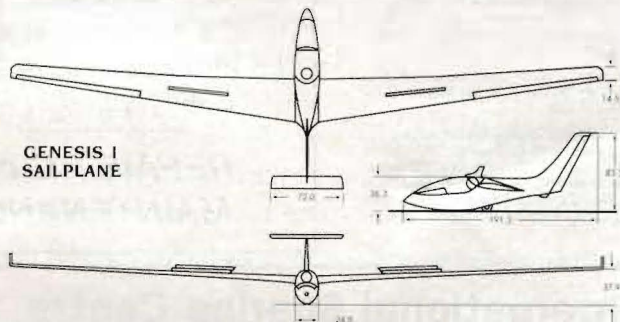
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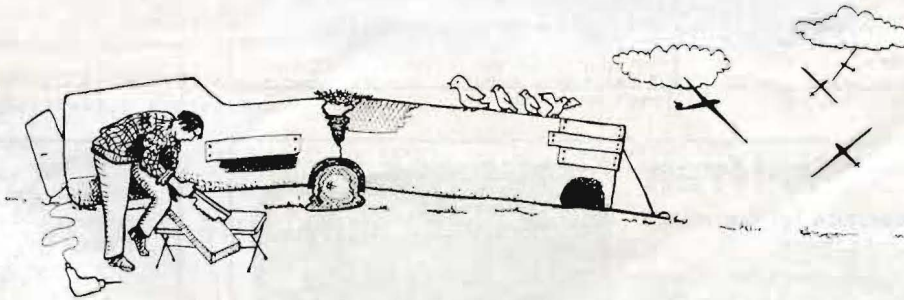
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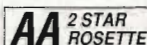
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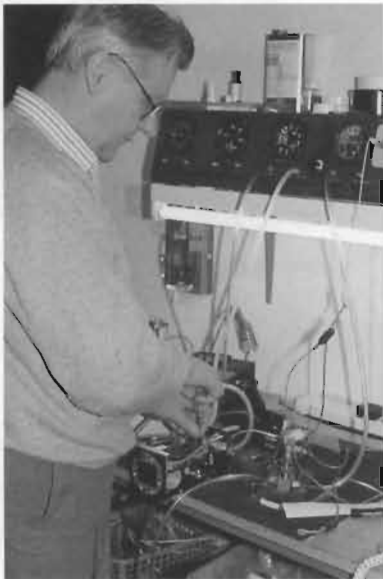
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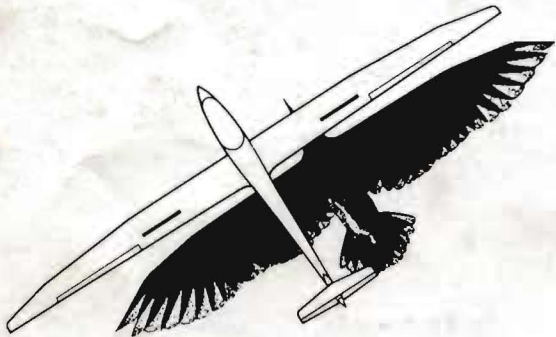
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