

**From the home of the *Scottish Gliding Centre***

# Portmoak Press

**Editorial-Ian Easson**

Well, we made it!

This issue (5) marks our 1<sup>st</sup>



Birthday - yes, this volume of Portmoak Press was launched exactly one year ago. I hope everyone has enjoyed reading it as much as I have enjoyed writing it. There has been some confusion over the paper versions of the last issue. E-mail recipients will have received issue 4 at the beginning of July but many other members may not have received their paper copies due to problems with postage. Please let me know (again) if you prefer to get a copy posted to your home address, and note that the usual box of copies will be available at the club. Also, note that my PC decided to corrupt my address book last month, which means that I have lost all e-mail addresses. If you want e-mail copies, let me know. The year has had many ups and downs and as I write this editorial we, along with every club in the UK, are grounded following the terrorist attacks in America. More close to home was the sad news of Hamish Wotherspoon's death following a long battle against cancer. Little did we know that last issue's article *An Instructors' Course*, about Hamish, would have such a sad outcome. There is a very nice memorial plaque fixed to our winch - next time you visit the club, take a look.

As well as our usual RAF and ATC summer visitors, we have been able to entertain numerous pilots from south of the border. The foot and mouth outbreak has starved many clubs of their flying and we have been delighted to play our part in helping fellow pilots get their "highs" again.

Contributors please note the cut-off dates: end of December for January, end of March for April, end of June for July. Material can be sent to me either typed or hand-written and dropped in my mailbox beside the

payphone in the clubhouse or you can e-mail me at [ian.easson@btinternet.com](mailto:ian.easson@btinternet.com). Those eagle-eyed members will notice a familiar article in the current issue of S&G. Helen Evans, (editor), is a regular reader of our own rag and I agreed that she could reprint one of our articles from the last issue. I hope this encourages more of you to submit articles for Portmoak Press because there is obviously a wider audience with the internationally renowned S&G.

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**Board Members.**

There have been some changes to our Board and their responsibilities:

Chairman, with responsibility for Buildings & Property	Brian Cole-Hamilton
Secretary	Jim Provan
Shadow Secretary	Bruce Marshall
Treasurer	Alisdair Stewart
Chief Flying Instructor	Bob Jones
Safety and Glider Fleet	Chris Robinson
Tug and Walking-on-Air	Joe Fisher
Winch & Ground equipment	Douglas Tait
Publicity	Neil Irving
Cadets & Deputy CFI	Neil McAulay
Membership Communications and Office re-org.	Ian Easson
Airfield and Duty Rosters	Kevin Hook

**CFI's Notes***Ground Handling (Hangar)*

Over recent months, there have been too many cases of gliders being damaged when they are removed from the hangar. The club rules are as follows:

- Gliders may only be removed from, or put into, the hangar with the permission of an instructor. The operation must be directed by a bronze pilot or above (i.e. Pilots holding a Yellow, Green or Blue badge).
- At least three people are required to move a glider. In the case of the Falke, four are recommended. Additional helpers may watch the tail and nose.
- An individual must be in charge of the operation.
- S/He should check around the glider for possible hazards before moving it.
- S/He should brief everyone involved so that they know what they are required to do.
- Move slowly.
- If damage occurs, mark it in the D.I. book, report the incident to the Director for Gliders (or another Board member) and the duty instructor. Get the damage inspected and, if necessary, mark the glider as unserviceable in the D.I. book (and leave it on the seat), and on the

Glider Status Board in the hangar.

*Ground Handling (Launch Point)*

There have been a number of accidents at the launch point, where vehicles towing gliders and cables have damaged gliders. At the instigation of the Regional Examiner, the SGU has revised its policy on towing gliders at, or near, the launch point:

- No glider shall be towed, by mechanical means, closer than half a wingspan from any obstacle. In principle, this means that to put any glider on line, it should be towed at 90 degrees to the launch direction to a position 20m behind the gliders already on line. The tow-vehicle should be detached and the glider manually pushed on line. The same applies to gliders with tow-out gear.
- When retrieving club two-seaters, in addition to the driver of the tow vehicle and the wing-holder, someone should walk close to the nose to prevent the glider from running on.

*Bob Jones CFI***Safety Officer's Report***Parachutes*

A life-expired parachute has been withdrawn from service and has been replaced with a new one. In addition, another new parachute has been ordered and we expect delivery at the end of November.

*Accidents/Incidents*

Pegase 591 - Heavy landing (20/07/01)

Pilot uninjured. Glider: damage to underside of nose, repaired by North Yorkshire Sailplanes (NYS) and now back in service.

ASK21 WA1 - Ground handling incident (25/07/01)

Glider: damage to rudder, repaired by NYS and now back in service.

Junior HRG - Canopy departed in flight (27/07/01)

Pilot uninjured. Glider: Perspex disintegrated, damage to starboard wing. Repaired by McLean Aviation and now back in service.

*Fire Extinguishers*

Peter Clayton has kindly offered to take on this responsibility.

*Tayside Mountain Rescue Team (TMRT)*

The TMRT held an exercise on Bishop Hill



on Sunday 26<sup>th</sup> August and visited the SGC for a briefing on our operation and familiarisation with gliders.

*Chris Robertson*

### Director for Gliders Report

*DG 505 - 5GC*

Work Done:

- U/C warning horn sounds when U/C raised and A/B shut. Micro-switch striker bonded to A/B rod. Fix failed, horn disconnected until repaired.

Ongoing:

- Replace altimeter in rear cockpit with item having mb sub-scale.
- A seat back cushion will be obtained for the front cockpit.
- 57mm T&S slow to run up. The supplier has advised that dampness is the most likely cause of the problem, the solution is to run the T&S every day the glider is flown.

Work outstanding:

- The provision of oxygen is being considered.
- Rear seat modification is being developed by another club to replace the suspended seat pan with a seat supported by structural foam. A BGA minor modification is being written and DG have been consulted. After the modification has been approved and tested, the SGU will revise and advise the Board if 5GC should be modified.

*DG 505 Trailer*

Outstanding:

- The lift top does not lift high enough to clear the glider fin, it has to be pushed up to provide clearance. The right gas-strut is a little soft. New struts were ordered but the company has ceased trading and a new supplier is being sourced.
- Fit strap to secure the tailgate and prevent inadvertent opening in transit.
- Fit strap to secure belly-dolly to fuselage.
- Fit pad to rear fuselage tie-down strap to prevent scratching the gel coat.
- Fabricate a lifting strop to assist in lifting the tail of the glider out of the trailer.
- Fabricate stowage points for the 18m wing tips and other equipment

(trestles, tail-dolly etc.)

- Fabricate panel to create stowage area in the front of the trailer.

*Junior - FUS*

Work done:

- C of G hook beak broken - replaced, nose hook release cable extended to enable C of G hook to operate correctly.

Outstanding:

- Damage to starboard wing trailing edge (temp repair carried out).
- Vario over-reads, requires to be checked for leaks.

*Junior - HRG*

Work done:

- Vario - returned from repair and refitted. Still prone to intermittent operation.
- Borgelt B40 vario has been ordered.

Outstanding:

- Battery box - fit safety pin.

*ASK21 - HPW*

Work done:

- Rudder removed to support WA1, refitted.
- Wheel-brake calliper refurbished and refitted.
- Tail-wheel replaced.

Outstanding:

- Replace TESA tape on elevator and ailerons.
- Fit DV panels with scoops.

*ASK 21 - HPV*

Work done:

- Tail-wheel replaced.

Ongoing:

- Elevator self-connecting bearing worn - new bearing delivered, to be fitted.
- G-Meter glass broken - removed, replacement item to be fitted.

Outstanding:

- Fore and aft movement of wing - Peter Wells (agent for this type) advises that the play in the wings is within limits and can be eliminated by adding shims. This requires the wings to be removed so that the mounting spigots can be driven out.
- Replace TESA tape on ailerons.

- Rear canopy cracked. New



canopy will be fitted during C of A.

- Fit DV panels with scoops.

#### Seat Covers

New seat covers with safety foam will be fitted to both Juniors, and the K8 seating comfort will be improved.

#### Pegase - 591

Work done:

- Accident damage repaired and returned to site.
- Elevator lack of authority. A new tail-wheel box has been fitted and it includes provision for weights to be added to the tail.
- The minimum cockpit load has been increased from 115lbs to 158lbs. Fitting removable ballast to the front of the glider can still accommodate lighter pilots.
- The glider was test-flown on 28<sup>th</sup> August and the handling was much improved.

Ongoing:

- The glider has been re-weighed and a new load-chart will be prepared.
- Airworthiness Directive ATA27 - Hinge Pins of Elevator and Ailerons. Note that this AD does not apply to 591 as it pre-dates the introduction of the suspect pins and none of these pins have been replaced in the interim. At present there is no UK agent supporting Centair. New pins are not yet available from Centair, but if they become available they will be replaced at the next C of A.

#### K8 - CTZ

Ongoing:

- Seat harness worn - A source of new harness is being investigated. If this is unsuccessful, a new harness will be manufactured using recovered items from the K21s.

Outstanding:

- Recover underside of wing (possibly topside as well).
- Glider does not fly straight - Fit trim-tab to rudder.
- Glider does not fly straight - Strip and rebuild fin.
- Fit new tail-skid.

#### Hangar Equipment

- A new Glider Serviceability

Board will be manufactured.

- Tail-dollies for the Juniors may have to be manufactured locally.
- Belly-dollies are being serviced in turn. New, or refurbished, castors are being fitted as are spacers to increase ground clearance.
- The hoist presently in the roof of the tug hangar will be refurbished and used in the glider hangar for weighing gliders.
- A safe method of lifting the belly of gliders is being investigated. It will have a hydraulically operated jack, with a locking mechanism. This equipment will allow the undercarriage to be serviced in the hangar, avoiding the need to de-rig and move to the workshop.

*Chris Robinson*

#### Stories from our “men in the field”

I have enrolled various club members to act as “Our men (and women) in the field”. They will be on the lookout for stories and rumours overheard, or observed anywhere on the airfield. Here’s the latest one from Slarty Bartfast:

#### Sporrans over Portmoak

Having had the following brought to my attention I feel that the members should be aware of all of the full details and their likely repercussions. Winch Operators i.e. Steve ‘the Black Pig’ Boston, Ian ‘Moley’ Meacham and Bob ‘Don Juan’ Welsh have apparently had the temerity to give voice to adverse comments on the subject of the rate of launches and the associated boredom accompanying a low launch rate. The adverse psychological effects on the well being of Winch Operators occasioned by a low rate of hurling white plastic and multi-hued cloth towards the heavens is well documented. However, it is rumoured that in order to alleviate the boredom occasioned by these circumstances the Winch Supremo ‘Papa Smurf’ has taken due account of their comments and come to an arrangement with a local weel kent purveyor of sporrans to Her Majesty. Winch Operators will therefore be required to assemble sporrans between launches, thus raising much needed revenues for the club and their own morale (under the terms





and conditions of the contract with 'Sheep Heid' it would appear that sporrans lifting is strictly verboten). As with all things in life there seem to be pitfalls and potential difficulties for club members. Should you find any other items other than those promulgated below I would be pleased if you would have the common decency to keep them to yourself and not spread dissension among the ranks.

There will be some delay between launches when the Winch Operator is required to complete the sporrans on which he is working when the call to launch is made. This may result in: -

- a) panic to complete the article, or section of the article, under manufacture with subsequent quality impairment of the product.
- b) self mutilation with a needle.
- c) blood loss.
- d) contamination of Her Majesty's sporrans.
- e) significant loss of revenue to the club.
- f) an irate Winch Operator.

To lessen this problem a 10 minute pre-launch notice must be placed with the Winch Operator. Having been placed, this may not be rescinded and a chargeable launch will take place, with or without the pilot or aircraft at the agreed time. The Winch Supremo has asked me to point out that he apologises for any inconvenience that this may cause, but he is sure that it is for the long term good of the club. He has also suggested that you should synchronise your watch with the Winch Driver prior to placing the pre-launch notice and reminds you that the club cannot be held responsible for any associated mishaps should you fail to do so.

It is anticipated that this arrangement will result in a considerable influx of orders for Portmoak sporrans for the purpose of disportment by members and their partners (if so inclined) at the annual Prize Giving. There is of course the usual 10% discount for cash if paid in cash to the Winch Director, personally, prior to the end of October 2001 for delivery on April 1<sup>st</sup> 2100. Please note that due to the unexpected high levels of demand you may find that delivery is somewhat delayed and that you should only speak to a Board Member on this matter sometime after the year 2150.

With the onset of winter, the chief



designer, 'King Charles' (an alternative supplier of sporrans) has a cunning plan for cold weather sporrans. Informed sources have revealed that they are to have a wee pouch that takes a ¼ bottle of 'usquebaugh' which will be exothermic when the remaining capacity in the sporrans has been filled by the pilot during a prolonged flight. In this politically correct age it is proving to be difficult to design such a sporrans that is suitable for use by both sexes in all circumstances, although not necessarily at the same time. This model is to be sold under the name of the 'Flying Sporrans'. It is anticipated that extensive training by Sheep Heid or King Charles, at the point of sale, will be required to ensure that members can use this device safely and to its full potential.

On the safety front, the recent unfortunate incident of one of The Glasgow Mafia ripping his breeks whilst entering the glider could have been avoided by the wearing of a kilt and a genuine Portmoak Sporrans. I have received information from sources on the airfield that the Safety Officer is about to propose the motion at the next Board Meeting that in the interests of safety on the airfield kilts must be worn by members at all times.

As the cat said before louping into The Speug (the Wright Start K8 to the uninitiated) and tearing his breeks "always expect the unexpected."

*Slarty Bartfast*

### **Cadet Corner.**

Our cadet scheme continues to grow in popularity, and the cadet week in July proved yet another success. In this issue, Sarah Buchan recalls her "epic flights". She has been a very keen and enthusiastic cadet since 14. Remember, I can't write about it if you don't tell me about it. Tell me about your experiences – good or bad. Anyone interested in the cadet scheme should contact Neil McAuley.

### **Going Solo - at last! - by Sarah Buchan**

The 9<sup>th</sup> July 2001, the start of Cadet week and the finishing touches to the training card being signed off - hopefully! The weekdays passed amazingly quickly and before I knew it, Friday had arrived.

The only exercise I'd done was spinning, so, on the Friday evening,

Neil McAuley (bravely) got in the back of the K21 to do cable-breaks with me. Four or five "breaks" later and my card was complete.

So, the 24<sup>th</sup> of July arrived and this was it, my sixteenth birthday and the day (I hoped) I'd go solo. Dad made me get up extra early to ensure I caught an instructor and a glider first thing - to get it over and done with. Gliders all out and ready, in true Portmoak style, and everyone goes for breakfast! "Great" I think, "a chance to psyche myself up." Not a chance, as I soon discovered.

Sitting, chatting away, I spy Ian Dandie appear. In he comes and says, "Right! Let's go, there's your glider sitting waiting." Totally taken aback I go, get into the glider and off we go for a check-flight. Once back at the launch point, Ian takes his parachute out of the glider and claims that I am going on my own "because you've scared me enough!" So, not having a chance to work myself up, here I was, getting the cable attached. Wings level, and dad watching from the launch-point, "All out." was called and off I went. At the top, the cable left me on my own... "Right, let's go." I thought, and as normal I went off and soared the hill for 20 minutes. "Fine" I thought as I landed and dad came to tow me back. Then Ian said that I should only have done a circuit! Oops, sorry Ian. I was chuffed as it had turned out and I was smiling non-stop for the rest of the day.

So, the hard work from me and the greying instructors (you know who you are!), and the money from dad, had finally paid off. I'd done it, and loved every minute.

### **The epic (well!) Junior Flight - by Sarah Buchan**

The day had come when Bob Petrie told me that I'd done enough solos in the K21 and I was now a *Junior* pilot. "Oh God!" I thought, the stories I had heard about what could happen when flying this single-seater had terrified me!

So, bravely I got in and got my bearings (and briefing) before going on-line.

"All out" was yet again called and I went up, at least I went up for the first 600ft or so, then I hit the wind-shear! The speed jumped from 60 knots up towards 80 in a flash and as I was pulling back, the cable broke. As taught, I put the nose down, recovered and landed

safely. Flustered and taken by surprise, I got towed back to the launch-point and told to go again. I didn't want to go again so, one week later, when the conditions were better I jumped in and soared for 20 minutes, loving every minute of it. The hill was scratchy so I decided to go back and let someone else have a flight. The *Junior* is a lovely glider (now that I have had a whole flight). You'll be lucky to get me out of it! Fly it while you still have the chance.

### **Crosswords – answers for last issue.**

**Across:** 1 Control column, 3 Full cat, 6 Sporting code, 8 Airbrake lever, 9 Trailer, 11 Longitudinal stability, 15 Pitot tube, 18 Tail wind, 19 Tail skid, 21 Cable release, 23 Side slip, 24 Altitude, 25 Base leg, 26 Weak link, 29 Flight recorder, 32 Incipient spin, 33 Negative flap, 34 Diamond goal, 35 Take up slack.

**Down:** 2 Circuit, 4 Turn and slip, 5 Drag, 7 Official observer, 8 Attitude, 9 Twin astir, 10 Cable drums, 11 Libelle, 12 Spiral dive, 13 Direct view panel, 14 High key, 15 Pegase, 16 Tailplane, 17 Speed to fly, 20 Tail dolly, 22 Rig, 25 Barograph, 27 Log book, 28 Gel coat, 30 Canopy, 31 Wind.

### **Internet updates.**

If you don't already know, the club web site can be found at <http://www.scottishglidingcentre.co.uk>.

The club also hosts an Internet Chat Forum, which can be accessed from the above "home page". This forum is only open to SGC members and covers many subjects. Check them out, or start a new one of your own. New users should follow the on-screen prompts and your details will be sent to Colin Hamilton, our resident web-master, who will set you up with access.

If you have any good web pages to share with other members, let me have the URL and some words about the site and I'll publish them here.

Anyone into Flight Sims? Try this site - [WWW.flightsim.com](http://WWW.flightsim.com), or speak to our resident guru "Steve the winch". See Walking on Air section for details of their Web site.



## Safety Matters

The following is an extract from the latest issue of Grapevine - the RAFGSA Safety Bulletin:

### Positively Connected?

- A Nimbus owner landed safely after an airbrake paddle opened during an aerotow. The control had not been connected correctly during the rig earlier that day. *The pilot, who has been rigging the nimbus for 15 years, has stated that he will carry out positive control checks from now on.*
- Another Nimbus pilot found himself struggling to control his glider on tow. He subsequently discovered that one hotelier was discounted. *At the time, this syndicate was not in the habit of carrying out positive checks.*

### Did you know that...

- in most cases, aircraft involved in mid-air collisions are travelling in a similar direction?
- in many cases of glider v glider collision, both pilots had previously been aware of each other's presence, but had momentarily lost track of each other's position in the thermal?
- "Competition Spirit" may influence pilot decision making to such an extent that some may take risks when manoeuvring in thermals during competition flying that they would normally view as unacceptable?
- the chance of successfully abandoning a disabled glider is minimal if started below about 2500ft?
- some pilots are unaware of the correct procedure for jettisoning their glider canopy - as described in the flight manual?

### An arresting experience

An Astir pilot climbed off the ground "normally" during a winch launch. Near the top of the launch, the speed reduced to 50 kts and the pilot released. An attempt to lower the nose was unsuccessful, and subsequently the pilot found that he needed full forward stick to keep the glider flying. The glider was sinking rapidly and the pilot "arrived" in a field, stopping within 30 ft.

*The glider tail-skid, fitted with a non-standard skid-plate, had picked up the second cable during the all-out phase of the launch.*

### Nearly a very final glide

During the final glide into a competition

site, a number of competitors found themselves struggling through a growing rain shower. One pilot realised late that he wouldn't make the airfield and turned very late into a field. The glider departed, but was too low for a full spin to develop. The glider was seriously damaged.

*Making the decision to pick a field out on task can be a lot easier than very late on a final glide - there's often a fine line between "yes, I'm going to make it" and falling short. There is no easy answer, but having a really good look at the fields around the competition site before you need them can be a useful exercise. Even better, try to give yourself a bit of extra final glide height - there are no prizes for landing out.*

### Winch Launch Accidents

There has been a couple of very serious winch launching accidents in recent months. To quote the BGA Instructors' Manual:-

*"During a winch launch, the wings must do extra work to oppose the pull of the cable and enable the glider to climb. As a result, the glider's stalling speed can increase by up to 40% of the unaccelerated value. On high-powered launch equipment - depending on the glider's speed at the time - climbing too steeply can either cause the glider to stall and possibly flick into a spin, or break the weak link. On low power equipment, too steep a climb can slow down or stall the engine and/or stall the glider."*

### Ted Lysakowski Trust - Comp Experience Award

Kevin Hook, along with Tim Charlesworth, recently won a competition to enable them to fly at the Lasham Regionals. Not only did they win the comp to enter the comp, they won the comp too, with 4810 points! The current issue of S&G has an edited version from both Kevin and Tim, but here is Kevin's unedited version:

#### Lasham Regionals A Class 2001

No small amount of effort had gone into the trust's planning of this week. Krystyna and the other trustees had laid on the use of Hugh Kindell's Duo Discus (570) complete with the services of Hugh and his car for crewing (should it be necessary),





together with a line up of 5 of the country's most experienced cross country and competition pilots. Ed Johnston, Steve Jones, Ken Barker and Pete Masson were each giving two days of their time, with G. Dale filling in for the ninth day. The potential for improving our cross-country flying speeds was immense.

#### *Day 1 - Saturday 28<sup>th</sup> July*

After a week of good soaring weather, day 1 was heralded with press predictions of a two-week heat wave. Would this be good soaring weather, or would it be a hot inverted disaster for the comp? For day 1 at least, the prediction was for good soaring. The A class was set a 3 turnpoint task of 336km LAS-BIE-GRW-EDG-LAS. Ed Johnston arrived in time for briefing, full of optimism for the day.

On task, there was no wind and no streeting, with difficult thermals. This apparently was no reason to be cautious. We flew fast between thermals and only stopped for the good ones. We spent much of the flight with only 2000ft on the altimeter, leaving me slightly nervous, but allowing plenty of room to climb when we found a good thermal. We completed the task in 3 hours 40 minutes at an average speed of 91kph in spite of much complaining from the back seat that we ought to be able to climb better.

Our overall position was 7<sup>th</sup> for the day. Quite an eye opener for a pilot who sometimes progresses to 7<sup>th</sup> from the bottom of the list at an average speed approaching 70 kph!!

#### *Day 2 - Sunday 29<sup>th</sup> July*

Tim's day.

#### *Day 3 - Monday 30<sup>th</sup> July*

Another optimistic briefing saw us loading the data loggers with a 229km task of LAS-CHV-NPT-BIC-LAS. P1 for the day, Steve Jones flew in an hour before launching looking very relaxed about the task. We launched into a largely blue sky, with cumulus visible 20 miles to the north.

Conditions in the start area were difficult and crowded, so we made a low early start and set off towards the cu. After one climb in the blue, we started to make very rapid progress, but became concerned by the over-development of the sky to the north. We travelled with two other Duos, gaining and losing only tens of feet relative to one another for 100km.

As we passed Oxford, there was little sunlight on the ground and the lift became much weaker. To my surprise, we hardly slowed at all, following the weak lines of lift without stopping to turn and staying close to the other two Duos. By the second turnpoint, we were making experimental turns to try and find a climb before the downwind turnpoint, but could not find anything strong enough to justify stopping. "Never mind" said Steve cheerfully, "we can make Bicester from here". "I wouldn't bank on finding a glider showing good lift there on a weak weekday," I thought to myself, but said nothing. We pressed on following a weak energy line at 80 knots without any mention of dumping water, finally stopping to take 500ft in a 3 knot thermal just before Bicester (back to the dizzy heights of 2200ft!). From here we could see the sun on the ground at Oxford, and flew even faster before picking up 5 knots from 1700ft. We were back in the good conditions and flew fast, with a 40km final glide back to Lasham.

Having lost sight of the other two Duos at the second turn, we waited for them to return.

Amazingly (to me at least), we had gained 32 minutes by pressing on through the poor conditions and neither taking a weak climb nor diverting. We won the day by an enormous margin, which, due to the vagaries of the scoring system meant that there were very few speed points, but we crept into the overall lead.

Steve truly demonstrated the talent that has made him a world champion, seamlessly changing gear to match the conditions. The day had included blue thermals, cumulus and eight-eighths overdevelopment. Who could hope for a wider range of conditions in one flight? If I can put into practice a tiny percentage of what Steve demonstrated on this flight, I might even win a regionals one day.

#### *Day 4 - Tuesday 31<sup>st</sup> July*

Another Tim's day.

#### *Day 5 - Wednesday 1<sup>st</sup> August*

P1 for the day G. Dale met up with us long before briefing and we studied the met for the day on the internet for some time. G was very optimistic. At

briefing, a 4 hour Assigned Area Task was set including a small





area south of the Birmingham TMA and an area which covered most of East Anglia. Under G's supervision, we spent two hours marking maps and preparing for the in flight calculations that would be necessary.

After waiting a long time for the previous day's frontal cloud to clear, we launched shortly before 1400, with blue to the south and an improving sky to the north. We couldn't reach start height or cloudbase, so made a low early start, not wanting to finish too late in the day. We reached the first control area at 90km at 105kph. Having decided that it looked blue to the east, we decided to go to the furthest corner of the first sector to minimise the time we needed to spend in the east. Progress became more difficult as we were now working across the streets, but G steadfastly refused to stop for weak climbs. By now, I was getting used to the idea of travelling at speed with less than 2000ft on the altimeter. As the energy lines became less obvious, we stopped travelling west near Bidford. Ruler and mental arithmetic confirmed that we had maintained our average speed of 105kph. We calculated that if we maintained this speed we would need to go east beyond Peterborough. In the event, we lost time looking for a climb near Northampton (even G felt that the clouds ahead were not looking promising) and decided to head for home before we reached Peterborough. Having escaped from Northampton for the second time, we found ourselves in a crowded sky, with both the open class and B class returning from the same area. Nobody appeared to be finding much in the way of climbs, and it looked as though we would end up taking much longer than the 4 hours. Then G spotted a good line of energy the other side of Weston on the Green. Carefully skirting the parachute drop zone, we joined the energy line and were rewarded by a 5 knot climb and a good energy line towards home. Suddenly the sky was empty, and we only saw 2 other gliders until very late on the final glide.

Our overall distance was 424km in 4 hours 8 minutes, giving us an overall average speed of 102kph. We achieved second place for the day and dropped to overall 2<sup>nd</sup> place by 12 points. Once again, we had suddenly made good progress relative to

other gliders by being prepared to move towards better conditions without wasting time struggling for a safety net first. A triumph for the power of positive thought!

On analysing the logger trace, I was astounded by the statistics. The total thermalling time was only 44 minutes at an overall average of 3.8 knots, whilst the average cruising speed was 75 knots at an average sink rate of only 0.9 knots. In other words the Duo had achieved an overall glide angle over the ground of over 80:1.

*Day 6 - Saturday 4<sup>th</sup> August*

Yet another Tim's day.

*Day 7 - Sunday 5<sup>th</sup> August*

And again (What's up Kev, don't you like flying on Sundays? [Ed])

*Summary*

We were both very impressed by the skill level of all the pilots we flew with. Their powers of observation were remarkable in terms of spotting energy lines, watching the progress of other gliders and maintaining a clear idea of where they were in the country. In amongst all of this workload, they found spare mental capacity to discuss what they were doing, why they were doing it, where they felt other pilots were making mistakes and what the weather was doing. I know I will never match their level of skill, but this week has lifted my understanding of cross-country soaring techniques to a new level. I hope that I will not have to wait long before getting the chance to experiment with my new found knowledge.

*Kevin Hook*

### **Sartorial Elegance**

Being the better half of a regular attendee at Portmoak I have noticed over the years the difference in dress code adopted by established members, as against that adopted by visitors, is pronounced. Many members who have slipped the domestic chain appear to compete for the coveted prize of "Worst Dressed Pilot" every weekend. Their attire usually dates from the heady days of high fashion in the 50's and 60's with the odd member sporting more up to date gear, which is discernibly 70's. Those younger members i.e. under 40, have, while



still in short trousers, obviously asked 'faither' to put aside his trendy gear, knowing well in advance what their own destiny was to be.

Great courage has been shown by members in the wearing of shorts in the vicinity of the 'crocodile pits' at the west end of the centre strip. This is an ill drained bit of boggy ground identifiable by the marsh grasses growing therein, where nasty, biting and blood sucking insects such as clegs, horse flies and several others, as yet not recorded by man, live. The snapping of their jaws, mandibles etc. in a manner similar to a crocodile's jaws snapping has been reported by those who have survived visiting the area. The other rather peculiar mode of summer dress is that of wearing a 'flipped bear'. On a hot summer's day this ritual is performed by members who load up their glider with drinking water, sweeties, fruit, crisps, smoked salmon sandwiches, barograph, GPS, data recorders etc. Then they pull on a garment that has the look of a bear's skin, which has been turned inside out. Wearer's of this garment have told me that it is to keep the cold out. However, with a ground temperature just short of 30°C and observing that the wearer invariably returns muttering obscenities about thermals, wave, and bloody inversions, I have come to the conclusion that this is not the case and they are probably simply trying to lose weight with their own portable sauna. Winter dress mode brings out the Michelin men, big time. They take ½ an hour to dress and then find that they really should have gone to the loo well before zipping up the final garment. It may be that the closing of the final zip is a powerful diuretic and I donate this thought free of all royalties to medical science.

The winter headgear has always been a source of great ingenuity, varying from granny's best effort made from wool unravelled from an old tea cosy (seen with and without pom-pom), the Noddy special, canary's beak look alike, lumberjack lug-flappers in various materials and voluminous Thinsulate items borrowed from outside garden gnomes. On the pullover front, Fair Isle patterns and primary colours are still holding their own at Portmoak, although the rest of the world has moved on. They are no doubt family heirlooms as can be

discerned by the multiplicity of the darns. All of these items no doubt fitted perfectly some years ago but have shrunk in the wash!

The visitors, however, seem to call on us wearing their Sunday Best casual gear sporting jewellery on their fingers, wrists, necks, ears and occasionally tongues. Now to turn away from the men to our lady visitors, they kindly turn up in high heels to aerate our hallowed turf, or in canvas shoes, which are remarkably efficient at soaking up excess surface water in the rainy season. They are often kind enough to wear perfume and hairspray that seem to attract the inhabitants of the 'crocodile pits' mentioned earlier. This gives the members some relief and their nice, soft Pringle pullovers do not damage our safety straps at all, although the pullovers do seem to 'pill' quite nicely. Full war paint has usually been applied, just in case they get into any of the 'photies', taken with the latest digital camera wheeled out of the Gucci handbag.

For those bold enough to believe they're going to eat out at Nivington House or similar, sartorial elegance knows no bounds and can we please provide a parachute that will not spoil the creases in the guid breeks. They little realise that the edge often goes off the appetite after the first trip 'round the bay'. Conversely, of course, some return after their first flight ready to eat a scabby heided horse, thus negating the benefits of nouvelle cuisine. To bring a degree of uniformity, but not a uniform, into the situation I hereby put the following suggestions on Dress Code to Board for their consideration.

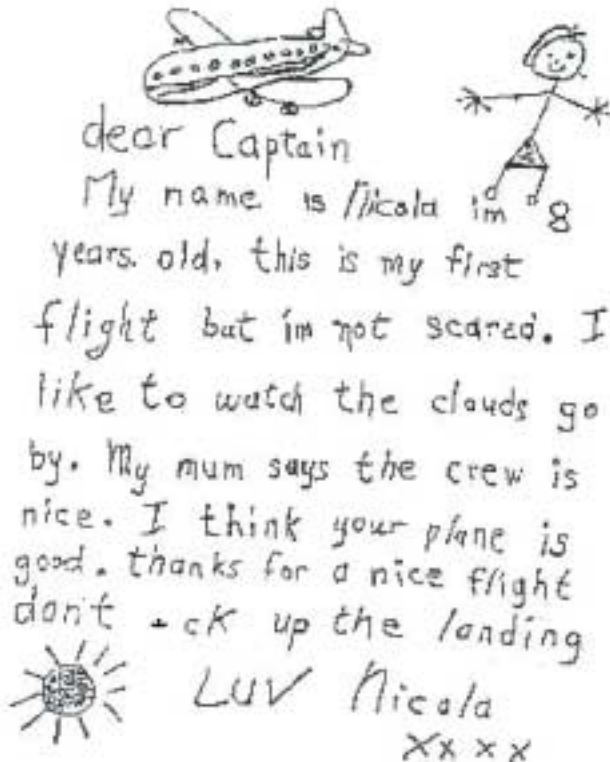
- i. Thick woolly socks to be worn summer and winter. Warm in winter, absorbs water when required.
- ii. Boots to be 3 sizes too big. Leaves room for woolly socks and flexing toes on long flights.
- iii. Trousers. Dark green to hide grass stains with brown insert at the seat to camouflage the results of flying beyond own ability.
- iv. Brown tops, so that the effects of rolling around in the mud are not readily apparent.
- v. Balaclavas to be worn back to front to hide bloodshot eyes from paying customers.

*Lois Lane*



**Robin Birch** sent the following. I have tidied it up a bit, because I know this is a family rag, so I hope it doesn't spoil the effect.

*An actual drawing handed to a flight attendant on a Qantas flight by an 8 year-old girl:*



### Walking On Air

The recent expedition to Gransden Regionals proved to be very successful for the WOA team. They finished 18<sup>th</sup> out of a field of 60 and I hope to have a report on the comp in the next issue (hint hint!). Are you a member of WOA? If so, please send me your news and views. I have been promised numerous column inches so come on everyone, get writing. I did discover that WOA have a web page. For all you webbers out there, here is the URL. [www.walkingonair.F9.co.uk](http://www.walkingonair.F9.co.uk) Anyone interested in finding out more, or volunteering to help, should contact Joe Fisher via the clubhouse.

### What did you do on the hill today?

*First published in PP Sept 76*

While all thinking pilots would agree that flying is a continuous learning process, this is not necessarily to say that it should be a tedious repetitive



series of so called check flights at the drop of the C.F.I.'s hat. While there is no doubt that check flights have their place, and occasional two-seater trips with an instructor play their part in the identifying of bad habits, there is no reason why every solo flight you make should not be a training exercise of one sort or another without in any way detracting from the sheer enjoyment of it all. We, all of us, at least I hope all of us, enjoy flying solo. Have you ever stopped to consider why? After all, if all you want to do is gaze at the scenery there are two-seaters available and people ready to fly them which would allow you to do that in a much more relaxed frame of mind. But of course you say you would not be achieving anything. What are you achieving now?

How many times have you found yourself running out of lift over, say, Balado, and decided it was time to return to the hill where you know it's all happening up to two thousand feet. When you set off, did you by any chance get a map out and try to fly back on a predetermined compass course, or, perhaps when you landed get the map out then and by measuring the height you lost against the distance flown get some sort of idea of the aircraft's performance in the prevailing conditions?

When was the last time you selected any old compass heading and tried to hold it for more than a couple of minutes, or do you just know in your bones that you will be able to do to do it "nae bother" when the time comes and, anyway, nobody in his right mind gets caught by orographic cloud? What about when you are ploughing up and down the hill on the day when there is not much excitement about: you know the sort of thing. Trying like mad to be the one at the top of the stack, up and down, one hour, two hours, all clever stuff. How many one-eighties during two hours on Bishop? Have you ever tried doing two nineties instead of a one-eighty, and marking yourself out of ten for each one? Or are you the pilot who doesn't do sloppy turns? At least when you are on your own you don't, and anyway what does it matter if there is the odd bit of yaw when you straighten up? You can't come to any harm at two thousand feet and in any case you don't fly like that in the circuit, do you? Well, anyway,



your turns on to base leg are always accurate. Well, perhaps not quite always but your final turn is always a good one. Well, seven times out of ten it is, Well .....

Three hours of dodging about in a good Westerly certainly gets the hours up so that when the time comes for a check flight the log book looks impressive, but are you sure that you're getting value for money? It's ten to one the only person to see your log book is an instructor and he is more concerned with results, so who are you out to impress?

I suggest that satisfaction from gliding comes from achievement and I don't mean being happy that you know you can fly at selected speeds in turns or with the brakes out. It means you know when it starts to rain and the field is full of other aircraft and you are in for a rough ride in an awkward crosswind on the approach, you are not suddenly having to put all your concentration into the accurate flying that should be second nature after all those hours on the hill.

Achievement is being able to do things well, but the glory of completing a Silver distance seldom lasts longer than a couple of pints after the retrieve.

So, if the C.F.I. taps you on the shoulder and says "Let's fly" you are confident that you will not suddenly have to start concentrating on the things you could have been getting right during the past few months during all those hours by yourself and that it is to your lasting benefit to do so.

What did you do on the hill today?

## Uni News

### August 4th-12th - Inter-University Task Week

#### "Surprisingly cloudy"

There are many inevitable things about task week. It will always be very windy. Tim will always be away during the best weather. Much beer will always be drunk. We will engage in unusual sports on rained-off days. We will always win. Well the last bit is not quite true, but we did come second.

Task wise, Guy and Andrew got around tasks on Sunday (70km-ish, I can't honestly remember), Gareth and Tim finished X-C endorsements but their best attempts to forge Bob's signature on the forms to go off on silver distance flights didn't fool the right people. And a good job too as Guy drifted to the

downwind turnpoint on the next good day and then landed out. Andy strolled round 111km in the RAFGSA's Duo Discus and various meagre local tasks were completed too. And of course Jonathan did his first 300km (see above).

It was the beer that was surprisingly cloudy and the other sport was kite bugging.

Thanks for a good task week to NUGC, Adrian Hatton, Dave Sharp and Buckminster GC. Next year we only have ourselves to blame, as we are hosting. Requests for the site on a postcard please.

### August 10th - A little JP goes a long way and lasts for ages

Jonathan took a break from shepherding us lot around diddy little tasks and decided to go for the big one. The forecast was good, the sky looked great, Dougal, his DG300, was ready and Saltby-Gransden-Moreton in the Marsh-Saltby was declared (305 km). Off he went and nothing more was heard for a very long time. Confirmed pundits in better machines were shot out of the sky so we-of-little-faith had long ago assumed he was stuck in a field fending off cows and praying for the farmer to rescue him. However, no small amount of skill and judgement, two pork pies and a fear of the bollocking Pete would give him if he bent Dougal kept JP aloft for 7 1/2 hours and got him all the way back.

The gold distance and diamond goal were in the bag. We are all more than a little impressed. The club now has its own pundit.

### August 25th-September 2nd - Aston Down - Junior Nationals

There are three strategies to make your mark at the Juniors.

- 1) Take a good glider and win.
- 2) Take an exceptional glider and watch everyone drool.
- 3) Take a terrible glider and do outrageous things with it.

Anyone who has seen us fly will know that No.1 is out of the question. Tim opted for No.2 and went with the SGA ASH25. Andy and Guy opted for No.3 and went armed with two K8s (Snoopy and CU from Cambridge University) and their "handful of jokers" t-shirts.

Tim was lucky. Plonk a top-notch pilot (Terry





Slater) in the back of an ASH and you'll be guaranteed to be around the head of the pack competing with the likes of world champion Pete Masson and World Junior runner-up Jeremy Hood. However the week was a difficult one for little wooden gliders.

One the first day there was a 310km task set in the blue with 3000' thermals. Andy only got 20km down track. Guy got one more climb and 30km. Things were going badly as many doubters predicted but day 2 put paid to such talk. A more modest 257km task was set. After a friendly first leg, they had to head off into the blue again. Pair-flying with more success, they got through 70km of this before things improved and they finally made it to Bicester (180km) for a formation landing.

The third day was blue again and area-assigned task was set. Andy had a nightmare and landed out locally. Guy did better and even made it back. Furthermore the myth that you can't do a screaming smoker in a K8 (oops, I actually meant a precisely executed competition finish) was disproved: 1. Point directly at the ground to achieve VNE 2. Streak along at nought feet for a very short distance 3. Pull up. 4. Is that as high as you can go?! Are you serious? Oh shit! 5. Land ahead.

Day four (299.72km) was storming to begin with. Then the day went all funny, then high cover killed it dead. The entire field landed out. Guy landed at Bicester to find ... another K8 and an ASH25?? Andy landed on the second leg, Guy on the third and Tim on the fourth. Handicapping meant Guy was 2nd on the day and the LS8 crowd were spitting blood! There were massive cheers at briefing and Guy's "how I done it" was a suitable motto for all K8 pilots: "I flew until the day ended, then I landed". It later emerged that the scorers screwed up and Guy was 25th, but let's try and ignore that.

**September 9th and 10th Portmoak**

"Guy comes out of the closet!"

Amazing wave was predicted for the weekend, and as if by magic Andy reappeared briefly. Amazing flights were had, much money was spent and beer was drunk. However through it all Guy was keeping to himself, shut away with the elders of the airfield.

Eventually on Sunday he emerged and declared himself

bi. Basic Instructor that is! So the club can now fly both onsite K13s for the duration of Freshers week. If they repair a slight unintentional modification to DQX that is... Anyway WELL DONE GUY!

*Andrew Bates*

**Club News**

You will all have seen the improvements to our front office, and I hope you agree that we now have a very professional look. The accounts PC is being left in the clubhouse and will have accounts data uploaded once a week (twice a week in the busy months). The portacabin is operational for the main accounts work and we are still planning to use the larger area for a briefing room.

Make a note in your diaries: This year's Christmas Dinner will be held on 15<sup>th</sup> December. Numbers are limited to 70 only so if you want a place, or two, add your name(s) to the list on the clubhouse noticeboard. Ticket price is £16 per person. If you can't wait for Christmas why not get yourself along to the Ceilidh at the clubhouse on 19<sup>th</sup> October, at 19:30. Tickets cost £5.00 - remember to bring your own instruments and join in the fun.

Now that this year's courses have finished we are already planning the 2002 season. Courses will run from the 1<sup>st</sup> week in May through to the last week in September. If you want to book your place, contact Irene at the club.

During the year, course members were asked to complete a questionnaire at the end of their courses. This was to gauge the success, or otherwise, of their week. Thirty-seven replies were received (about 2/3) and summaries are as follows:

	Excel'nt	V. Good	Good	Poor
Course overall	57%	30%	13%	-
Glider availb'lty	49%	32%	16%	3%
Launch availb'lty	34%	41%	22%	3%
Amount of flying	36%	27%	29%	8%
Lectures/Theory	43%	32%	17%	8%
Instructors	73%	19%	8%	-
Airfield	38%	30%	30%	2%
Clubhouse	49%	27%	24%	-
Food	62%	24%	14%	-
Accommodation	22%	39%	39%	-
Location	59%	27%	14%	-



Our club member database is nearing

completion but it's not too late to pass your e-mail addresses to: [office@Portmoak.force9.co.uk](mailto:office@Portmoak.force9.co.uk). We are considering future communications via e-mail and the first part is to gather all e-mail addresses. As mentioned in the last issue, Neil Irving is the man who sends the Club News stuff to S&G. Let him (and me) know of any new solos and badge claims. Here's the latest (as seen in the current issue of S&G):

*We have had a good summer - every course to date has been full. Thanks to our course instructor George Ross for doing such an excellent job. Several people soloed in July and August, including Andrew Gordon, John Forrest, Steve Robinson, Trevor Elliot (senior) and Sarah Buchan on his 16<sup>th</sup> birthday. Other achievements include Ricky Jackson getting Silver duration, Ian Meacham getting Silver height, and Scott Douglas and Robin Birch completing Bronze. Subject to the evidence being OK, Jonathon Pryce has just achieved Gold distance/Diamond goal. We get good soaring all year round, and always welcome visiting pilots of any standard. Feel free to come and see us.*  
Neil Irving

**Hamish Wotherspoon - Obituary**

(as seen in the current issue of S&G)  
With great regret we report Hamish's death un July after a nine-month illness. Hamish (1937-2001) joined the SGU in the 1970s, making enterprising flights in 54 (Oly 460) then Vega ECK ( a Portmoak-Doncaster declaration ended with a landing at Catterick). An instructor since 1979, he was appointed CFI in 1984. After retiring from running the family building firm, he worked as course instructor, glider repairer and inspector. He also flew and helped maintain the tug. Eye problems ended his flying in 1990, but he stayed as winch driver until last year. He will be sadly missed. We offer our sympathy to Marion, his wife for more than 40 years.  
Ian Dandie

**Friday Evening lectures**

The draft programme for this winter's Friday evenings is listed below. While aimed at aspiring Bronze Badge candidates I hope that all members will

find these talks of interest. Evenings run from 7 to 10 p.m. with a tea break. (Anyone wishing a meal before the start should contact Irene.)

26 <sup>th</sup> Oct	Radio
2 <sup>nd</sup> Nov	Safety Flying / Parachute care & use.
9 <sup>th</sup> Nov	Radio.
16 <sup>th</sup> Nov	Are you legal? / Airspace.
23 <sup>rd</sup> Nov	Radio.
30 <sup>th</sup> Nov	Design aspects of Gliders / Maintaining aircraft.
7 <sup>th</sup> Dec	Radio.
14 <sup>th</sup> Dec	Navigation / Use and abuse of GPS.
11 <sup>th</sup> Jan	Radio.
18 <sup>th</sup> Jan	Badge collection / Field and other landings.
25 <sup>th</sup> Jan	Radio.
1 <sup>st</sup> Feb	Meteorology - assessing weather.
8 <sup>th</sup> Feb	Radio.
15 <sup>th</sup> Feb	Meteorology - reading the sky / high altitude flying.
22 <sup>nd</sup> Feb	Radio.
1 <sup>st</sup> Mar	Instruments / Instrument flying.
8 <sup>th</sup> Mar	Radio.
15 <sup>th</sup> Mar	Oxygen systems / TBA.
22 Mar	Radio.
29 Mar	Glider structures and repairs.
5 <sup>th</sup> Apr	Radio.
12 <sup>th</sup> Apr	Rigging and trailers.
19 <sup>th</sup> Apr	Radio.
26 <sup>th</sup> Apr	Flying from other sites.

**Rotas for Duty Pilots and Instructors**

The following rotas are for guidance only – the clubhouse notice board will contain latest lists with last minute changes.

**Duty Supervisor Rota**

6 <sup>th</sup> Oct	Chris Robinson
7 <sup>th</sup> Oct	Frank Smith
13 <sup>th</sup> Oct	Bob Petrie
14 <sup>th</sup> Oct	Vic Blaxill
20 <sup>th</sup> Oct	Mike Carruthers
21 <sup>st</sup> Oct	Bob Jones

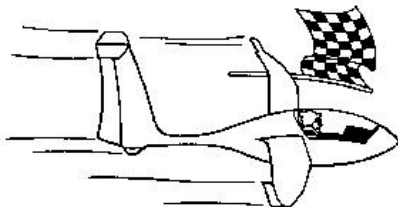


**Duty Supervisor Rota (cont..)**

27 <sup>th</sup> Oct	Ray Hill
28 <sup>th</sup> Oct	Brian Scougal
3 <sup>rd</sup> Nov	Alan bauld
4 <sup>th</sup> Nov	Ian Dandie
10 <sup>th</sup> Nov	Graham Smith
11 <sup>th</sup> Nov	Kevin Hook
17 <sup>th</sup> Nov	John Henry
18 <sup>th</sup> Nov	Ian Trotter
24 <sup>th</sup> Nov	Jonathon Pryce
25 <sup>th</sup> Nov	Joe Fisher
1 <sup>st</sup> Dec	Chris Robinson
2 <sup>nd</sup> Dec	Frank Smith
8 <sup>th</sup> Dec	Bob Petrie
9 <sup>th</sup> Dec	Vic Blaxill
15 <sup>th</sup> Dec	Mike Carruthers
16 <sup>th</sup> Dec	Bob Jones
22 <sup>nd</sup> Dec	Ray Hill
23 <sup>rd</sup> Dec	Brian Scougal
29 <sup>th</sup> Dec	Alan Bauld

**Duty Pilot Rota**

At the time of going to press, no details were available so please check the notice board to see when it's your turn.

**Ladder Latest**

*Neil Goudie has passed this task over to Dave Thompson (must have been looking the wrong way Dave).*

Thanks to Neil for doing the job so well. I am sure that your work is much appreciated (especially by me now that I know what's involved). Patience won't be required though, since everything is up to date. You were correct Neil, it did take a bit of work to figure out the spreadsheets - especially the formulae - but it was all part of taking on the job. You might be interested to know that I modified the spreadsheets and



started over as part of the learning process- we each have our own way of working.

As a happy offshoot of my struggle up the learning curve a suggestion/query to John Bridge that the Club Ladder results might be posted to the web using his National Ladder system was taken up enthusiastically by him. (We spoke on Saturday and he sent an email this morning to all the club ladder stewards to say that this had been put in place and to explain how to update results. - It was a rainy weekend in Hertfordshire). Apparently his own club, as well as many others, has club ladders with their own rules. The club ladder results can now also be uploaded to [www.bgaladder.co.uk](http://www.bgaladder.co.uk) by the club ladder steward.

Look out soon for the latest Club Ladder Rules on the SGU web site as well as a link to SGU Club and National results. Current positions are:

	<b>Pilot</b>	<b>Points</b>	<b>Flights</b>
<b>1</b>	Kevin Hook	5629	4
<b>2</b>	John Williams	3793	4
<b>3</b>	Tony Brown	3442	3
<b>4</b>	Chris Robinson	3323	4
<b>5</b>	Steve Nutley	1896	2
<b>6</b>	Dave Thompson	1035	2
<b>7</b>	Z Goudie	758	1
<b>8</b>	Alan Irving	566	1
<b>9</b>	Bon Smallman	370	1
<b>10</b>	Gerry Marshall	271	1

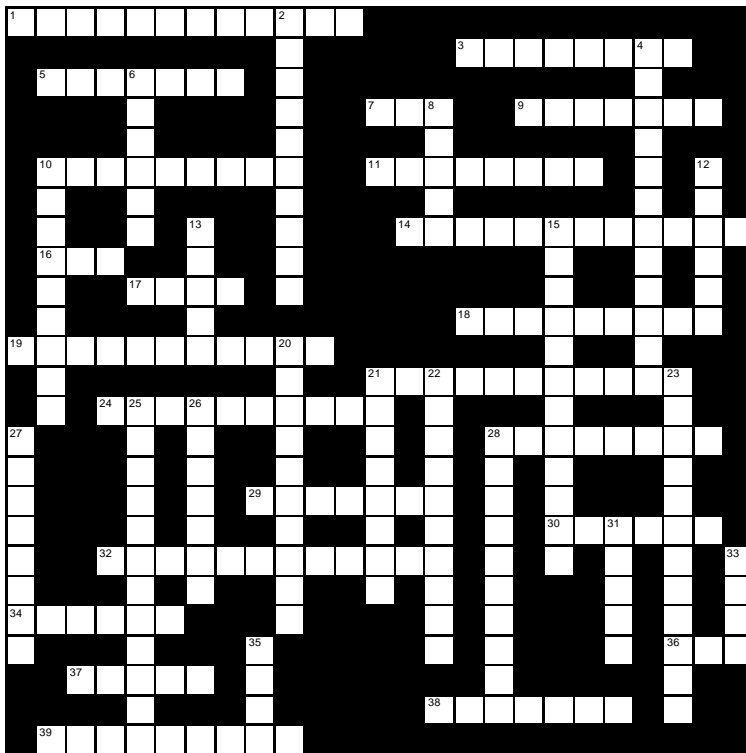
*Dave Thompson – Club Ladder Steward*

**Are you an Official Observer?**

Remember to let me know if you are an OO. I will be posting the current list, with blank lines for additions, on the notice board.

If you are interested and meet the criteria (see previous issue of *PP*), fill in the application form (copies in the clubhouse). You'll need signatures from the CFI and the Club Chairman, and a cheque for £7.50. On acceptance, you'll receive a copy of the FAI Sporting Code 1992 and the BGA notes for Official Observers 1992, as well as your Official Observer No.

## Crossword 2000-5



## Across

- 1 Don't push here, it's fragile (8,4)  
 3 On tow, stay out of this cleaning influence. (4,4)  
 5 If you swing it, you'll know where you're heading. (7)  
 7 Movement from another way. (3)  
 9 The *last lab* for weight adjustments. (7)  
 10 Some point and click here, others eat Mars Bars (4,5)  
 11 *Use at art* to show how wet the air is. (8)  
 14 An angry region? (5,7)  
 16 Something missing from Sportline Aviacija? (3)  
 17 Half hitch, or unit of speed? (4)  
 18 Small drinking establishments, or units? (9)  
 19 What a sparkling score! (7,4)  
 21 He's a tow-er of strength (5,6)  
 24 Smile, you're there! (10)  
 28 Speed (8)  
 29 Cross wind leg. (4,3)  
 30 Clouds or TV series? (6)

- 32 The writing, instructing, jockey? (5,7)  
 34 The see-through parachute? (6)  
 36 Assemble. (3)  
 37 Sideways movement. (5)  
 38 I see! and you can get burnt! (7)  
 39 A "cheater"? (9)

## Down

- 2 A sideways glance - through the panel. (6,4)  
 4 Don't sit looking at it, it's not the seaside. (8,4)  
 6 A tow from an indian? (6)  
 8 Drink it or dump it. (5)  
 10 Is *Liaise Ltd* a company on the way up - or not? (4,5)  
 12 Tight to hold. (6)  
 13 Does it have a silver lining? (5)  
 15 Two Tugs? (5,7)  
 20 Round and round, and up and down, but keep it in the box. (10)  
 21 A square thing that holds a round thing? (5,3)  
 22 The art of (not) getting lost. (10)  
 23 What would you do without them? (8,4)  
 25 The beginning of the downwind leg. (4,3,5)  
 26 Some American's live in these (on the road). (7)  
 27 Flatulent footwear (4,4)  
 28 More ups and downs. (10)  
 31 Licence to talk. (5)  
 33 His dress is slowing him down. (4)  
 35 Poetic ice? (4)

