

From the home of the *Scottish Gliding Centre*

Portmoak Press

Editorial-Ian Easson

After a quiet start to the year, we had a plethora of badge claims in May. Some intrepid members spent an excellent week at Feshie with WOA. Bill Grieve got an unusual welcome when he landed near Fraserburgh (I had to land because I had reached the Moray Firth coast!). The farmer proudly showed off his newborn foal and is now considering naming it Glider. Barograph confirmations notwithstanding, David Allan, Ricky Jackson, Bill Grieve and Archie McGurr all got their silver distances and Alan Boyd got a silver height.



Neil Irving and Andrew Bates are both assistant rated instructors, and Ron Mackie has completed bronze. We are planning to exhibit again at this year's airshow at East Fortune. Its on Sat 13th July, although we might want to go across on the Friday evening to set up. So, if you can help out in any way, please add your name to the form on the notice board at the club. There's still some time left and any help will be appreciated. Oh, any by the way, did your hear about Chris Robinson's trip to Feshie? After a couple of legs of a big triangle, he "let down" at Feshie then decided to stay overnight and take an aerotow all the way home!

CTZ K8 is now back on line, after lots of little repairs (21 fabric patches, a few ribs & trailing edge repairs, re-modelled nose, corrosion prevention measures and much touching-up of paintwork). A low power strobe has been fitted to the fairing over the wing centre section. The wiring has been designed so that it can be powered without disrupting the existing wiring. If the trial is successful the wiring will be revised at the next C of A. Please give us some feedback on the visibility of the strobe in varying light conditions.

We are currently investigating more powerful strobes and other related matters (flash rate, extra battery stowage, best location for strobe etc). As you read this, the ATC people will be with us, and I'm sure you'll join me in welcoming them back. Let's hope they bring the good weather with them. Future contributors please note the cut-off dates: end of December for January, end of March for April, end of June for July and end of September for October. 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.

In this issue:

Editorial-Ian Easson	1
Board Members.....	2
The Safety Officer's Bit.....	2
Take Care of our Canopies.....	3
Were you fooled?.....	3
Local Press Report	3
Uni News	4
Accident to the ASH-25.....	4
The RAF Falcons at East Fortune	4
Stripey	5
Always be prepared.....	6
Going for Gold or Diamonds?	7
Walking On Air.....	9
Club News.....	10
Rotas for Duty Pilots and Instructors	10
Duty Pilot Rota	10
Competition Corner	10



Board Members.

Chairman, with responsibility for Buildings & Property	Brian Cole-Hamilton
Secretary & Caravan Park	Bruce Marshall
Treasurer	Kevin Hook
Vice Chairman and Gliders	Chris Robinson
Chief Flying Instructor	Bob Jones
Tug, Walking-on-Air and Technical Officer	Joe Fisher
Winch & Ground equipment	Douglas Tait
Safety Officer	Neil Irving
Cadets & Deputy CFI & Duty Rosters	Neil McAulay
Membership Comms, Office re-org and Publicity.	Ian Easson

The Safety Officer's Bit Landing across cables

It was towards the end of a rather unpromising Easterly day, the pilot of a syndicate glider decided to fly a circuit and land in the South field, approaching from the North West. The winch was at the East end of the centre runway, with the launch point to the South East of the workshop. Before launch the pilot had informed the instructor in charge that he intended to land into the South field across the direction of launching. The instructor then relayed this message by radio to the winch driver. The glider in question was not equipped with a radio. As he started his circuit, the pilot noted that the winch was idle, although there were two gliders waiting to be launched. Just prior to turning final, he examined the situation again, although he did not look at the beacon on the winch. Once on final he concentrated on his approach and made a normal landing. At approximately the same time as the glider turned final, the instructor in charge was being launched in a K-21. When the K-21 reached approximately 400 feet, the instructor noticed the approaching glider and decided to release. At about the same time the winch driver spotted the approaching glider, and cut the power. The cable fell, and the glider passed approximately 50 feet over the cable. Had the cable made contact with the landing glider, a serious accident would certainly have ensued.

The pilot of the single seat glider was unaware of the incident, until after he had landed! This incident occurred because several, normally highly competent, people made mistakes - however although the winch driver, and the instructor and the launch crew all made errors, it was the pilot in charge of the glider who was ultimately responsible. Landings in this direction should **only** be made if the pilot is certain a launch is not going to take place - either through a positive confirmation on the radio, or because the cables are at the winch end. It would be better to make a long landing up the centre strip towards the clubhouse. Since this incident it has been brought to my attention that the same approach has caused similar (but less serious) problems on at least two other occasions this year.

Considerate flying

Last month I had to deal with a complaint from a paraglider pilot who was buzzed by a club glider whilst walking on Bishop. The glider wingtip passed "within 20 feet" (less than half a wing span) of the walker. The glider then turned, and the pilot waved at the walker. This is the second complaint we have had this year - both of which have been caused by our club members. The area around Loch Leven is an area of outstanding visual beauty, and people use the hills for (among other things), walking, bird watching, paragliding and hang gliding. They have as much right to be there as we do. Making very fast, low passes close to people can distress them considerably. This is dangerous, inconsiderate and totally unacceptable.

Thank you

I would like to thank Andrew Gordon, who has done a lot of work preparing risk assessments for club activities (which we are required to do under health and safety legislation). I would also like to thank Peter Clayton who ensures that the parachutes are being repacked

If any one has any suggestions or comments - I can be contacted at the club on most weekends, or via email at Neil.Irving@yakara.com

Neil Irving



Take Care of our Canopies

Just a reminder to everyone about taking care of glider canopies.

We had a K21 canopy broken in April when a club member reached through the dv panel to pull the release knob.

Although we do have to reach through dv panels to lock and unlock them, this should be only done with great care. Bulky sleeves can snag on the edge on a dv panel and damage can occur. Because of the force necessary to pull the release knob, and the fact release knobs tend to be a long reach through a dv panel, its all too easy to damage the canopy by trying to release the cable by reaching through the dv panel.

Its annoying for everyone to have to spend the club's money on repairing damage done through carelessness or put up with canopies that have obvious repairs. Can I ask every member to ensure that they always open the canopy before releasing the cable when manoeuvring gliders on the ground, or better still pull the cable off the back release whenever possible. You don't have to be an instructor to make sure that people around you take the same precautions, so don't be afraid to point out this best practice to other people who are not observing it.

Bob Jones CFI

Were you fooled?

The following was spotted on the noticeboard on 1st April.

Trials of Heli-aerotow method from Portmoak Week commencing 1.4.2002

All those interested in this new method please note that trials will run each day from 0930 until 1530 and will finish on Monday 8th April.

P1 in glider must have logged at least 150 aerotows of which 10 must have been taken in the preceding 60 da3t. Charges during the week will be held down to the same level as standard aerotows. For availability and schedule please see the tug-master as it will be revised on a daily basis.

Towing will be via N4EE a Hughes 500c operated by YGH Helicopters and flown by the supremely capable Sam Hooten (from Tucson Arizona). The tow

cable is attached to the 500's cargo hook, and features a spreader assembly, weights, and an extra 10 metres of length. At the glider end it is entirely standard.

Prior to launch, Sam will position N4EE relative to the glider in exactly the same manner as per the tug. Ground marshalling and signalling will also be exactly the same. At Up-Slack he will hover-taxi six feet AGL to tension the cable and will be heading about 70 degrees to the intended launch track. From this position both the glider and the direction of launch are visible to him.

Following All-Out signal he will accelerate sideways and gradually face N4EE the right way via a slow pedal turn coupled with nose down pitch (this provides the right acceleration and prevents cable snagging). Typically as soon as the yaw is removed the 500c hits transitional lift and the real climb can begin.

For the glider pilot it is only necessary to lift off and then hold a low tow position until release at altitude. Thanks to the power of the 500c a really spectacular climb of up to 3200 f.p.m. can be achieved at any airspeed from 45 to 85 kts. Of course more gentle ascents are also possible. N.B. drifting too high and/or flying too fast could put the glider in rotor-wake: this is to be avoided at all costs.

Full briefing will, of course, be available from Sam or Frank (who will operate YGHs temporary ground base). Radio callsigns will be YCJH Four Echo Echo for the iOOc and YGH One Two Lima for Frank's base.

A special flying list form will be available each day from the duty instructor and/or tug-master.

Local Press Report

The following article appeared in The Dundee Courier on 29th April 2002.

Angus (county of – Ed) was at the centre of its second glider drama in a fortnight yesterday. The pilot of a glider touched down in a field at Tealing in a textbook landing after running out of uplift.

He earlier set off from the Scottish Gliding Centre at Portmoak Airfield, near Kinross.

The man, an airline pilot, is understood to have reached Edzell before turning and, on his



return leg, found weather conditions against him. Police were alerted by a worried member of the public who saw the aircraft come down shortly after 4 pm.

Two weeks ago and air cadet had a narrow escape after she crashed while landing at RM Condor, Arbroath.

What really happened...

Keith Buchan landed out on the way back from Edzell, and the Air Cadet dropped a wing on her first solo landing!

Uni News

Easter Week - April

Easter week saw the arrival of three visiting university clubs who came and flew from sun-up to sun-down, making Kevin very happy. A few good thermal days saw a silver distance for John from Cambridge in their beautiful K8 "CU". Andrew Langton from Nottingham flew "NU", their newly acquired Astir CS, to Aberfoyle and back, in thermals. Very impressive, as he hadn't yet completed Silver distance. He didn't get in on this flight either, due to a logger failure. After driving back to Nottingham on Saturday evening, he flew his Silver distance on the Sunday.

Flying Pigs

Easter week also saw the test flight of "Pig the Pirat".

A very big **THANKYOU** to everyone who has helped us work on the machine over the winter.

Special thanks to Joe Fisher who inspected everything we did and guided us through the work to be done, Kevin Hook and the gang who got the workshop heated so that we could do the painting. It was Chris Robinson who put his life on the line to test fly the "Pig" on the Monday of Easter week, and it seems to work OK. Thanks Guys.

Andy, who is now a Half-Cat, determined to prove that the Pirat is still capable of impressive flight, took it round a 250K triangle in thermals. A very impressive flight, well done Andy.

Last week Guy managed to get a 300K wave flight - mind you, he didn't make it back home though!

Anyway, that's the Uni's first Gold Badge (pending approval) for a while. Roll on the first 500K.

Pete Williams, who has helped out with



almost everything we have achieved, is currently doing the work for the K13's C of A. Thanks Pete, we don't know what we would do without you. The 13 has had a couple of field landings recently, some more intentional than others, and miraculously, it is still in one piece despite various attempts to break it over the last couple of months. This August we are off to Sutton Bank for the Annual Inter-Uni task week, so Portmoak will be safe for two full weekends! Watch this space for the results.

Accident to the ASH-25

Sadly, after 5 years of accident-free operations, the ASH-25 has now been damaged in a landing accident at Portmoak. Fortunately no one was injured apart from a couple of bruises. The port wing is extensively damaged and both canopies smashed, plus the control linkages inside the fuselage are buckled. There may of course be other hidden damage that will only be discovered after a full and detailed examination by a repairer. We have to assume at the moment that it will be out of service for 2-3 months minimum. I will let you know when I have a better idea of when we can expect it to be available again.

Mike Carruthers
Chairman

SGA Operations Committee

Last year, Bob Petrie was "invited" to go for a flight in the back of an RAF C130 Hercules during the RAF Falcons display at East Fortune. Here is his "report".

The RAF Falcons at East Fortune

Email to all picture desk staff:- Two seats available with the RAF Falcons parachute display team in the C130 Hercules, during the drop at East Fortune's Air Show. If anyone is interested, remember that we will have to take both seats or the trip is cancelled. Am I interested? No way! But, I could be persuaded. The problem was trying to fill the other seat. This took two days, but I managed to find another idiot!

We arrived at the terminal of Edinburgh Airport and were taken

to the cargo side in the back of a Landrover. The Hercules is a big aircraft. It is massive in every way and you can stand up in every part of it. The Captain introduces himself, and explains the few simple rules when flying with Her Majesty's Airlines:

1. During the take-off and landing, we have to sit in the jump seats with seatbelts fastened – OK, I can put up with that!
2. When the doors are open and ready for the jump, EVERYONE must be seated and belted up – No problem with that, as my ears are not as big as the Senior BAE146 Pilot for H.M. Airlines!
3. During the flight, feel free to wander about to your heart's content – excellent!

Strapped in for the take-off and the engines are turning and burning. What a noise in the cockpit! This is not built for comfort or speed, but, lightly loaded, the Herc is up and away with a very short take-off roll. Five hundred feet (feel free to go for a wander). Down the ladder, along a small passage and past the W.C. (a bucket against the wall). The main part of the fuselage is large in the extreme but once again the soundproofing is lacking and you have to shout to be heard. Forty minutes later and we are at 12,000ft over the coast to the east of the Bass Rock and are asked to buckle up on the seats beside the exit doors on the side of the fuselage. The doors slide open, the noise level gets even higher, and the Falcons are itching to go. The jump master is standing next to the door and is attached to a long strop. He is quite happy to lean out of the door to get a better view of the drop zone. We fly inbound over the Bass Rock with the tannoy broadcasting "Three minutes to Jump". The seat at the door lets to sit sideways with your feet dangling over the side, and you can see straight down – from 12,000 ft! The view is amazing and somewhat cold. "3 – 2 – 1 – GO", and five Falcons go out each side in about three seconds! The doors are closed and we are free to go back to the cockpit to watch the display. By the time it takes to walk the length of the Herc, the last of the jumpers is touching down at East Fortune, and we are almost down to 400ft for a low-level fly-past over the poor sods who have to drive through the traffic back to Edinburgh. We are standing behind the Pilot and Co-Pilot during the flypast and my knees

buckle as the Pilot pulls some G in the turn and pulls up. We climb to around 4000ft and head towards Edinburgh.

I decide the best place for the return journey is standing on a plot table with my head inside the astro dome where you can have a full 360° view of the Firth of Forth estuary and the Pentland Hills. A nice, long, approach towards the runway. Sitting behind the Pilot – who is young enough to be my son – I see that he is flying a visual approach. His reference point doesn't move a jot! Makes you sick, but the wing loading on a Herc is just a little bit more than an Astir, so it can't be that hard. The landing is a greaser, right on to the numbers, so maybe the Pilot is good!

Back on Terra Firma and I've had a super afternoon – free gratis. My thanks to H.M. Airlines and the Falcons for a once in a lifetime experience.

Bob Petrie

Stripey

Once upon a time, a Bronze pilot of the Portmoak hue was in a nice wee syndicate operating an experienced glider of a venerable age along with another six or seven guys who had all got off to a wright start in their post solo gliding careers. His abilities were in tune with the age and complexity of this glider (a K8) but ambition is a terrible thing and he had decided to move forwards towards a more modern ship in about a year or two. Circumstances can be cruel at times and the bold lad spotted an advertisement on the club notice board advertising a share in, what was to him, a desirable glider of the right vintage and in an acceptable price range. Enquiries were made and a trial flight arranged after the insurance niceties had been taken care of. Despite the bold lad's apprehensions about, additional to him, bells and whistles such as flaps, retractable undercarriage, trailing edge brakes that could be used as barn doors, he had a good and enjoyable test flight and therefore concluded the deal. To reduce the number of extra knobs to twiddle the glider was winch launched with the flaps initially neutral, going to full positive during the launch and the lad left the wheel down. In this

glider the brakes can only be deployed in full



negative or positive flap settings.

Permanent insurance arrangements were made and the pilot bold went off for a whiz. Another successful flight only this time the launch was started in full negative flap, going through into positive during the climb. Again everything went well.

Third time lucky? Well not always as events were to prove. Off went the bold lad, and this time he went a step further, popped the wheel up and had a nice wee soaring flight for about half an hour. Decided to come home and, as a well-trained Portmoakian, went through his checks. A look at the wind lines on the loch, confirmed by the windsock, flaps set to full positive, trim set etc. etc. Get into the circuit pattern, set the speed and hold it. Yes it's going well, hopefully another decent landing. Turn cross wind, yes, still going fine. Turn finals and descend gracefully towards the north field. Round out and let it sink gracefully to meet the ground. Feels like a greaser, hope they are all watching. Then the doubts started. It seemed to be taking a long time for the wheel to touch. Ah there it is now, the first gentle touch. Jings the glider is decelerating rapidly! The bloody wheel brake must be jammed on! Thank God the straps are tight! Help ma Boab, the glider seems to be a bit lower than normal. Then it dawned what had happened.

Being a gentleman of shorter stature, and the aircraft sitting high on its large wheel in conventional landing mode, normally he has some difficulty in getting out of the aircraft and stepping onto the ground, but he had found a way of obviating this difficulty by landing wheels up. Red face time. Many bodies appeared and the glider was quickly lifted and the wheel dropped. On examination the undercarriage doors appeared to be intact and hanging more or less in their designated location. The glider was laid on its side and examined more thoroughly the following day, with one of the sacrificial wooden undercarriage door hinges found to be split and, more seriously, the release cable at the hook was seen to be connected by one strand, the others having severed.

I am pleased to report that there has not been a repeat performance to date and can assure those of you whom missed the show that a repeat

performance is definitely not planned. The bold lad hopes never to do it again and that if it does there is a decent interval of say some 10 to 15 years and I can confirm that a grass mark stripe is not easily removed from the bottom of glass ships

There are two types of pilot

- a) those what have done it and
- b) those what have still to it.

As one of the syndicate says, "always expect the unexpected".

Slarty Bartfast

Always be prepared

Never go cross-country flying unless you are properly prepared. I was sitting in the cockpit of our K8, fretting. The white cumulous clouds, which had marked the sky for most of the day, were evaporating as the sea breeze front moved up the Spey valley. I was in the queue of gliders waiting for the tug at Cairngorm GC's Feshiebridge.

I had been helping out with *Walking on Air's* expedition to Feshie. When the opportunity to fly the K8 in the Cairngorms arose, I jumped at it. Unfortunately, some of my gliding paraphernalia was back at the chalet, though it seemed relatively unimportant at the time.

As the tug reached 1200ft, it made a sharp turn to the left. I thought he was telling me "that's your lot", and that my altimeter was under-reading. So I pulled off. But I had misunderstood. He had intended to tow me, at right angles, to the north bowl - my inexperience of aerotow was showing already. I used the hill lift to climb to over 5000ft then realised that my silver distance might just be achievable. I headed north along the western edge of Loch Morlich, but quickly ran into steady sink from the approaching front. Ahead lay the Cromdale Hills where I thought I might find some lift, but no luck. "OK", I thought, "Let's head west over the valley then follow the river north." I reduced my altimeter by 400ft and checked out possible landing sites. I followed a small ridge on a bend in the river climbed another 100ft. Alas, this new "height" was soon lost and I was back picking fields again. I saw a large farm complex with lots of hot steel roofs and as I flew overhead I picked up a weak thermal and circled upwards. This gave me confidence to try to get over the



nearby ridge and check out the possibilities on its north face. Like most ridges, it got higher the closer I got! Then I got caught up in the curl-over and I really looked closely at a couple of good fields lying next to the A95. I ran through my checks and gently let the K8 down onto the lush grass.

I'd done it! My first field landing. After savouring the moment, for a few moments. I pulled myself together and made off towards the nearest farmhouse. My knock was answered by a teenage girl, who informed me that I was at "Mary Park", but we couldn't find it on the map!

When I tried to ring for a retrieve crew I realised that their mobile numbers were back with the rest of my stuff in the chalet. My mobile only had their home numbers, and we were more than 100 miles from our home club. I rang them all, hoping that a wife would answer and tell me their mobile numbers. No chance, they all had answer machines! Back at the glider with a coffee and a fag, my host - Louise - and her boyfriend went off to get the number for Feshie from Directory Enquiries. Unknown to me they had been given the number for Portmoak, which I already had in my mobile. About this time, the locals began to arrive with various offspring and cameras. The ensuing "photo-shoot" helped pass the time. My mobile rang and I was surprised to hear Irene from Portmoak. After explaining where I was, she agreed to contact Feshie to get them to ring my mobile for exact location details. She asked me to ring her back when Feshie had been in touch. As I lay in the sun beside the K8, the phone rang again. This time it was Ruth from Feshie. "Hi Bill, we've just had the police round at the club asking about you. Turns out that Irene could only get Feshie's answer machine too so she phoned the local bobbies at Aviemore. Ever-helpful, they agreed to pop round to Feshie to explain what was going on. Apparently, their last visit to Feshie was a "raid" following a tip-off about the lack of a drinking licence. So their latest "visit" caused all sorts of peculiar behaviour regarding the "hiding" of beer and glasses. Really strange behaviour, particularly because the original discretion had been fixed and the "clubbers" were perfectly entitled to have a drink on the premises, but in the heat of the moment, they all felt guilty! (*wonder who*

paid for the lost beer, was it you Bill? - Ed)

Anyway, communications had been established and my crew were on their way, despite their long awaited tea being about to be served. I decided to phone Irene to thank her for her efforts, but I got another answer machine! Well, no, actually it was a call-director and if I had listened to the message I would have realised I could dial 11 to get through to Irene.

My crew of Peter Clayton and the indefatigable Jim Miller from Walking On Air duly turned up. These guys had been working hard all day with our disabled people but still seemed full of beans as, 25 minutes later, we were de-rigged and on our way back to Feshie. On the dark winding road into Feshie we encountered a dear attempting suicide in front of Peter's car. It didn't succeed and Peter's car remained undented. Undaunted we went into the bar to be met with a cheer and a timely plate of hot venison (with a dash of metallic?), strawberry flan, and, for a perfect finish to a perfect day, a pint of *Isle of Skye* beer.

Bill Grieve

Going for Gold or Diamonds?

The following article has been re-issued due to a number of people raising concerns about oxygen (lack of) and its operation.

What do YOU know about OXYGEN?

When I read an article by John Stewart-Smith, I remembered this table in a little book called "Aeromedicine for Aviators" by Keith Read.

Times of useful consciousness following failure of oxygen supply at various altitudes.

AMSL	Sudden Failure of Oxygen Supply	
	Moderate Activity	Minimal Activity
25000ft	2 minutes	3 minutes
28000ft	1 minute	1 min 30 secs
30000ft	45 seconds	1 min 15 secs
35000ft	30 seconds	45 seconds
40000ft	12 seconds	15 seconds

Interesting, isn't it?

Do you know:-

1. How long your oxygen supply will last in terms of time against the pressure reading on the gauge?



2. How fast you can get down from 25,000 ft to 10,000 ft – without breaking the aircraft?
 3. How to monitor your oxygen supply so that you can be reasonable certain you are breathing adequate (or any!) oxygen?
 4. How our club gliders' oxygen systems work?
- Only **YOU** can answer all of these, but if you can't answer any one of them, then I suggest you make your personal altitude limit no more than 8,000 ft until you can answer all four.

However, let me help you with question 4. The K21s and Juniors are equipped with oxygen systems. There are portable systems for use in the DG505 and Pegasse (if you intend to use the portable system, a full briefing must be obtained from one of our instructors.). Each aircraft has a single 4 ltr (at NTP) cylinder. These systems are designed for a maximum charge of 3000psi. Beware! Many systems are only designed for 1800 or 2000psi. Our systems are called "Economiser" or "Constant Flow" systems.

Junior and K21 oxygen duration against gauge pressure

Persons using	One		Two	
	2	4	2	4
Flow (Litres/Min)				
Pressure p.s.i.	Duration (hrs:mins)			
3000	6:48	3:24	3:24	1:42
2500	5:42	2:51	2:51	1:25
2000	4:32	2:16	2:16	1:08
1500	3:24	1:42	1:42	0:55
1000	2:16	1:08	1:08	0:34
500	1:08	0:34	0:34	0:17
200	0:27	0:13	0:13	0:06

Except in dire emergency you **MUST NOT EXHAUST** the oxygen cylinder – **Always** plan to return with a minimum of 200psi remaining.

Prepare for high altitude flights before you reach the launch line.

(see fig 1, page 11) Before you get into the cockpit, open valve "C", by turning the knob clockwise, and check the pressure on the gauge (and make a note of it! – see below). If this is adequate for your intended flight (see previous table) then close the valve and clear your flight with the Duty Instructor. He/she will authorise the issue of mask/s, which you must sign out on the record sheet in the

cupboard. Masks are marked with ASK21 or Junior as appropriate. Remember to choose the correct one as the fittings are different, but will fit either regulator. Take the wrong one and, oops, no oxygen! Back at the aircraft, check the pressure reading **before** you open the valve. If the pressure has dropped more than 200psi, you have a system leak, which will reduce your flight duration and could be hazardous. Inform the Duty Instructor, mark the system U/S in the D.I. book, and go fly another aircraft this time.

If the system is OK, turn on the cylinder valve, then plug your mask into the regulator. Fit the mask to your face and adjust it to be a close fit (you will be able to breath through the air dilution valve). You can confirm the mask is fitting by covering the two outflow valves with the palms of your hands. Breathing out will lift the mask slightly and the air will escape noisily around the mask edges, breathing in will cause the mask to suck to your face. Uncovering verifies the outflow valves and the mask should stay snug on your face as you breath out.

Set the regulator to "Normal", or 2 litre/min, and turn the regulator valve ON. Check that the pink bead on the Flow Indicator disappears and that the mask balloon inflates, then deflates as you breathe IN.

Select "High", or 4 litre/min, on the regulator and repeat the same checks on the Flow Indicator and balloon. **This time, however, the balloon should not fully deflate as you breathe IN.** If all OK, select "Normal" flow rate again and turn off the regulator valve.

Warning – If you are flying a K21 solo, do **NOT** have a second mask plugged in. This is a constant flow system and the oxygen will flow to all masks plugged in, when the regulator valve is turned on. All you equipment working? Good. Go get that diamond. But – remember: If your brain is going to function FULLY, you need oxygen on normal flow at 8,000 ft and on FULL at 18,000 ft. You must also include CONTINUOUS oxygen monitoring as part of your instrument scan – pressure gauge, flow indicator, balloon inflation, flight instruments.

These systems are designed for economical



durability, NOT TO BREAK ALTITUDE

RECORDS! So break off your climb when Gold or Diamond is in the bag, and DO NOT go above 25,000 ft no matter how good the rate of climb is.

Emergencies – any fault with your oxygen at altitude is an emergency and you **MUST** start your descent the attempt to restore your supply. Your breath is saturated with water vapour and when you breathe out, this will condense or even freeze in the mask or cockpit. This is the major cause of oxygen equipment malfunction, but there are others:

Symptom 1:

Balloon does not inflate. Pressure and flow OK.

Possible Fault:

Tubing disconnected or split between flow indicator and mask, or balloon damaged.

Action:

Start descending, then reconnect or repair.

Symptom 2:

Balloon does not inflate. Flow is nil.

Possible Fault:

Inlet to mask or balloon is blocked, or gauge is faulty.

Action:

Start descending immediately. Remove the tube from the mask and put the tube into your mouth. Turn the regulator to Full. Breathe in through the mouth and out through the nose. Check that the flow is now OK. Only resort is to get down – fast!

Symptom 3:

Balloon does not deflate. Flow is OK.

Possible Fault:

Outlet valve is stuck open. You may be breathing, but YOU ARE NOT GETTING OXYGEN or air inlet valve may have stuck open.

Action:

Start descending. Cover the outlet valves individually then together as you breathe in – if balloon deflates normally use hand to manually cover the valve. If this does not work, the valve is probably stuck open.

One last thing on Oxygen masks:- If you have a hairy face and think it would be a good idea to smear your beard with Vaseline - a la scuba diving –

BEWARE!! ANY PETROLEM BASED PRODUCT (including lipsalve) CAN EXPLODE

WHEN IN CONTACT WITH OXYGEN!!!

Please **DO NOT** attempt to fill oxygen bottles yourself. Contact Joe Fisher, Kevin Hook, Chris Robinson, Ian Dandie or Graham Smith. For guidance

(Next issue will have an article on decompression sickness – Ed)

Walking On Air

Walking On Air Ltd. is a charity, registered in Scotland (SC25350), dedicated to providing a pilot training and flying facility for people with disabilities to become glider pilots and join in the life of the club.

Aims:

- To introduce as many disabled people as possible to the joys of powerless flight
- To train people with disabilities to fly solo.
- To further train disabled pilots to become gliding instructors with total understanding and empathy for the special needs of disabled pilots.
- To bring the joys of cross-country gliding, over the spectacular scenery of Scotland, within the capability of disabled pilots.
- To introduce people with disabilities to the thrills of aerobatic flight.
- To advise disabled pilots on the purchase, modification, and operation of their own single seat gliders.
- To promote gliding all year round as a sport accessible to all.
- To advise and encourage gliding clubs throughout the UK to provide flying facilities for people with disabilities.

Achievements:

Walking On Air has successfully raised funds for:

- A modern two-seater training glider (£80,000)
- Building and converting club facilities for use by disabled pilots.
- Other ancillary equipment.

Many disabled people have benefited from *Walking On Air* and five pilots have already gone solo and gained their wings.

Walking On Air operates all year round from Portmoak Airfield in Kinross-shire. Situated on the Eastern shore of Loch Leven, Portmoak is the



largest base for soaring in Scotland. A modern two-seater fibre-glass ASK21 glider has been adapted, by the manufacturer, to be entirely hand-controlled. The modification, approved by the British Gliding Association, was designed by Joe Fisher, Flying Instructor and Chairman of *Walking On Air*. A lever placed next to the air-brake replaces the usual rudder controls; the airbrake is arranged in such a way that it can be locked in several positions, allowing the left hand to return to operating the rudder.

These slight modifications still allow the normal foot operated rudder pedals to be connected for pilots with normal leg movement, or isolated from the system for pilots who cannot use their legs or suffer from muscular spasm of the legs. The reconversion only takes a couple of minutes.

A hoist is available for transferring disabled pilots from wheelchair to cockpit.

The club facilities include meals and refreshments, toilet and shower facilities, and all are readily accessible by wheelchair.

Are you a member of WOA? If so, please send me your news and views. Anyone interested in finding out more, or volunteering to help, should contact Joe Fisher via the clubhouse.

Club News

Copies of the minutes from Board Meetings can now be sent via e-mail. Anyone wanting to be added to the circulation list should contact Bruce Marshall at bruce@flyinghigh.freeserve.co.uk

Our club member database is nearing completion but its not too late to pass your e-mail addresses to: office@Portmoak.force9.co.uk.

Rotas for Duty Pilots and Instructors

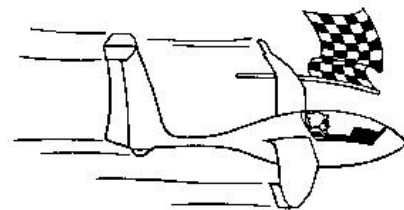
At the time of going to press, the Instructor Rotas were not available. Please check the noticeboard in the clubhouse for latest details. The Duty Pilot Rotas are as follows:

Duty Pilot Rota

6 th July	R. Jackson
7 th July	R. Mackie
13 th July	D. Tait

14 th July	G. Packer
20 th July	A. Young
21 st July	E. Crosbie
27 th July	I. Norman
28 th July	D. McLean
3 rd Aug	B. Adamson
4 th Aug	R. Birch
10 th Aug	J. McGouldrick
11 th Aug	S. Kennedy
17 th Aug	A. Rougvie
18 th Aug	
24 th Aug	I. Armstrong
31 st Aug	R. Lucas
1 st Sep	R. Rigby
7 th Sep	E. Wilson
8 th Sep	E. Melville

Remember that if you need to change any of these dates, make appropriate arrangements and update the list on the noticeboard



Competition Corner

Inter Club Update - We're Back on the Map

The Boys Done Good!

Aboyne 4th, 5th and 6th May

After a year or two of not fielding a full team, we arrived at Aboyne with Tony Brown, Kevin Hook, Neil Irving, Adrian Loening and myself, all hoping to restore our reputation among Scottish (and Borders) clubs. Feshie, Fulmar, Highland, Deeside and Borders were there in force too. We had three identical looking weather situations, which gave us three very different days - in the end, it was only Sunday that counted as a competition day - but what a day!

Pundits and Intermediates were set a 311km task around and over the Cairngorms, while the Novices were given a 170km task across to, and up, the Spey valley - all



interesting mountain thermal challenges.

Tony, in Z10, stormed round at 77kph, managing the long glide out to Rhynie and back in sea air to finish with a beat up, and achieve a remarkable dead-heat for 1st place with Nick Normal from Feshie - who was using the big wings of the ASH25 to good effect.

Neil too put in a terrific performance in T3 (recently returned from Australia) getting round the same task at 71.7kph - and would have been awarded at least second place if only the logger lead hadn't suffered a broken connection. Still... a great effort and an unquestionable moral victory.

Adrian, in 215, was in the last class to launch, into a decaying sky that turned the first leg, up the Dee valley, into a race to get away from the encroaching sea air. After a gritty grovel at Ballater, where he watched rivals drop into the field below him, he found better air and got around. Adrian was the only one in his class to do so and a full 100K further than his nearest rival. Brilliant!

All in all, we couldn't have made a better comeback to our Inter Club competition. Even with the faulty logger, we still finished the weekend with 12 points, equal first place with Cairngorm. Of course, these events are friendly affairs with emphasis on encouraging competitive cross-country flying for everyone. For some strange reason, the bar was completely out of Red Cuillin on the first evening! Oh wouldn't it be nice if we could repeat the performance at Feshie for the last event of the season, in August?

Their comp is on 10th, 11th and 12th August and we need volunteers who would like to fly for the club. Anyone with a Silver badge can compete. If you've done a 300k before, you can fly in the Novice class, but all you 500k people will have to join the Pundit class (*well, that's only fair - Ed*).

If you're interested, please add your name to the list on the notice board in the club house, or get in touch with me direct: 01592 840779 or

jd wz7@hotmail.com.

John Williams

Still on the competition front, here are the top ten on the National Ladder (well done John Williams and Kevin Hook):

Pilot	Club	Points	Flights
Mike Young	Cambridge	12935	4
David Masson	Lasham	10816	4
John Williams	SGU	8265	4
John Wilton	Four Counties	8132	4
Tim Macfadyen	Bristol&Glouc	7204	4
John Bridge	Cambridge	7152	4
Kevin Hook	SGU	7080	4
Dave Caunt	Booker	7078	3
Trevor Stuart	Bristol&Glouc	6970	3
Ian Ashdown	Southdown	6967	4

and the top twelve on our Club Ladder:

Pilot	Points	Flights
John Williams	8265	4
Kevin Hook	7080	4
Tony Brown	1983	2
Z Goudie	1468	3
Dave Clempson	1355	1
Dave Thompson	1057	3
Neil Irving	542	2
Alan Irving	474	1
Andrew Bates	428	1
Keith Buchan	400	1
Dave Allan	141	1
Ricky Jackson	130	1

Fig 1

