

# INSTRUCTOR AND COACH NEWS LETTER

Welcome to the spring edition of the Instructor and Coach News Letter. I've decided that 1999 will be a good year on the grounds that 1, we're due one, and 2, I'm getting a new glider next week. That's optimism for you!

It's usually at around this time when we, the FSC, remind everybody of the dangers of spring weather flying. Sorry to be boring but this will be no exception. Every year we publish the same old reminder stating that the combination of being (more than a little) rusty and strong seasonal thermals produce a recipe for disaster. Then every year the statistics show that the majority of accidents happen in spring. Nobody is saying "DO NOT FLY BETWEEN 1<sup>ST</sup> APRIL AND 31<sup>ST</sup> MAY". What we are saying is "BE PREPARED!" Inspect your equipment, do some ground handling, get some airtime in smooth conditions, get the 'FEEL' back...then be careful! Don't be a 1999 spring statistic!

Thanks to those who provided feedback to the last edition.

Please keep your letters and feedback coming in; it does make a difference.

All responses/contributions/suggestions/articles/letters to:

(in order of preference)

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## EXAMINATION AND INSPECTION PANEL

Candidates on examinations are still indicating that their CFIs are not carrying out mock examinations as part of their preparation. This is a pre-requirement and Examiners are becoming impatient with this oversight. No one wants to turn away a candidate, but if a TI is not properly prepared then it could be a waste of time for both. CFIs should conduct the mock exam themselves (or get a suitably qualified SI to do it) - it should parallel the real exam and cover the syllabus. Realistically it should take a day which is dedicated to it; pro-formae which Examiners use to guide them through the syllabus should be used - they can be obtained (by CFIs only) from the BHPA office.

## AIRSPACE PANEL

### CURRENT UNITED KINGDOM CHARTS

CAA 1:500,000 - ICAO

CAA 1:250,000 - Topographical

Jeppesen VFR+GPS 1:500,000

#### 1:500,000 ICAO aeronautical charts (the 'half-mil')

Sheet ref	.Area	Edition	Published
2171CD	Sthn England & Wales	24	March 98
2171AB	Nthn England & Nthn Ireland	21	March 98
2150ABCD	Scotland, Orkney & Shetland	19	May 98

#### 1:250,000 CAA Topographical Charts (the 'quarter-mil')

A new series\* of 1:250,000 topographical charts are reducing the number from eighteen to eight. Only the replacement N Ireland and Firth of Clyde charts remains to be published.

Sheet ref	.Area	Edition	Published
*	N Scotland West	1	June 98
*	N Scotland East	1	June 98
*	The Borders	1	Nov 97
*	Central England & Wales	2	April 98
*	England East	2	Feb 99
*	The West & South Wales	1	March 98
*	England South	2	March 98
18	N Ireland	13	June 95
6	N Ireland/Firth of Clyde	14	Oct 95

#### Jeppesen 1:500,000 VFR + GPS Charts

Sheet ref.	Areas	Published
EG/LF	South-East UK, Channel, Nthn France	March 98
EG-2	UK(England & Wales, South)	June 98
EG-3	UK (England & Wales, North)	June 98
EG-4	UK (Scotland South)	June 98
EG-5	UK (Scotland North)	June 98

## PILOT TRAINING PANEL

### HANG GLIDING PILOT LECTURES

As the part of the process of unifying the paragliding and hang gliding training and examination systems, the FSC has decided to remove the need to attend a 1<sup>st</sup> aid lecture from the hang gliding Pilot syllabus. Though this may seem a backward step to some, the decision was made for a number of reasons. Firstly, the first aid lectures can prove expensive and time consuming to arrange as they have to be given qualified providers. Secondly, attending a lecture in a pub is no guarantee of competence.

**NB. The FSC strongly recommend that ALL pilots gain a current 1<sup>st</sup> aid award.**

## **BIG EARS TRAINING**

The descent technique known as 'big ears' is now part of the paragliding club pilot syllabus. It has become apparent on coach courses, TI courses and during school inspections that people are unsure as to the correct procedure for teaching this task.

- 1 The student must be at the appropriate level for the exercise (latter stages of CP, preferably able to soar).
- 2 Conditions must be smooth and soarable and/or smooth with big top to bottom, i.e. plenty of clearance.
- 3 Canopy and harness must be suitable. The canopy must be configured for big ears and when in the flying position the student must be able to comfortably reach the appropriate lines. NB it is possible for students to ground practice easily only to find they can not reach the appropriate lines once in flight!
- 4 Students must be thoroughly briefed and the manoeuvre demonstrated to a high degree of proficiency by an experienced pilot/instructor. Use of a tandem can be beneficial. Before solo practice the student MUST practice on the ground where there is no possibility of achieving flight inadvertently. This can be done with the student either standing with the canopy inflated, or in the seated position with the canopy inflated. Either way the instructor must be fully confident that the student is proficient at both pulling the ears in using the correct lines, and reinflating the ears to regain normal flying configuration.
- 5 Students should also be briefed as to what to do in the event of exercise going wrong. E.g. in the event of a stall or collapse.

**This manoeuvre MUST NOT be attempted unless the student has first carried out suitable ground training.**

## **PRE-FLIGHT CHECK LIST**

An alarming amount of pilots have admitted to having taken off with one or more of their harness buckles undone at some time in their flying. Though most people have a system for completing their pre-flight checks, few people use a memory prompt such as a mnemonic. The FSC would like to suggest the following mnemonic to aid pilots in remembering their pre-flight check procedure.

**Will Geordie Have His Cat Aboard?** Conjure a mental picture of a pilot flying with a cat on his shoulder.

**W** = Wind and Weather

**G** = Glider

**H** = Helmet

**H** = Harness

**C** = Controls

**A** = All Clear

If you have a better example (rather than an alternative!) please let me know.

## **THE GERMANS! (bless them!)**

On a similar note the DHV have expressed concern over the number of German pilots taking off not properly attached to their equipment. They are trying to promote a system where pilots only don their harness when they are ready to actually take off. Therefore wandering around the hilltop with the harness on but the leg and/or chest straps undone would not be possible. This would also make detaching the canopy from the harness unnecessary. This would seem to be a good idea and used in conjunction with a good pre-flight check would eliminate all stupid errors on take off.

The following piece was written by Mat Grimes in responses to the growing number of mid-air collisions and near misses occurring recently.

## **TEACHING LOOKOUT**

### **Introduction**

Pilot lookout is perhaps the most important aspect of flight safety not only whilst we are airborne but also before we take off and, on a busy landing area, after we have landed.

Despite however it's obvious and important benefits to our safety and that of other air users do we as instructors emphasise this enough? How and when do we teach the lookout and what exactly do we teach the student to do? In this article I will try and answer these questions and address some of the more practical instructor techniques that can be employed to get these points across to the student.

### **When to start "looking out"**

We all know that on the initial skims and low flights the most we can hope for from the majority of students is that they keep their feet down whilst airborne! Indeed for the majority of an EPC course we prevent a student from looking anywhere but ahead by using mirror bats to control their flights. This of course instils some degree of tunnel vision in the student that can only be avoided by using radios in place of mirror bats.

So assuming radios are not used the earliest we can practically expect to introduce the lookout is once the student begins higher flights involving the first tentative turns. I won't presume to put a number of hours instruction on when this great event occurs as we all know students will progress at different rates throughout the whole course. I will however stick my neck out and "guesstimate" that at perhaps 3 days we can introduce the lookout part of what we refer to as the "scan" as detailed below.

### **The "Scan"**

The RAF teaches thousands of Air Cadets to glide each year and to the best of my knowledge (which is limited!) their system of "Scanning" seems to be the most effective and easiest to teach as it is clear, concise and can be broken down into easily understandable chunks. They also expect 14 year olds to understand and use it! The first part is the "Lookout" during which the pilot checks for other aircraft, then comes the "Attitude" when the speed and balance of the aircraft is checked and finally the "Instruments" checking the "big 3", airspeed indicator, altimeter and variometer. This process is abbreviated to the mental checklist of "Lookout, Attitude, Instruments" which the students repeats to himself as he flies around the circuit - we hope!

This process we call the "Scan" and there follows an adapted version for use by paragliders broken down into the three stages but substituting Airspeed for Attitude.

#### **Lookout**

Look left and behind as far as possible. Whilst turning head forward look up and down through the horizon in a saw tooth motion until facing forward again.

Note: Avoid twisting body, move head only to prevent a weight shift turn.

#### *Airspeed*

With your head now facing forward, listen and feel what your airspeed is.

Note: This check should also include the student looking for his reference point ahead of him.

#### *Instruments*

Having checked heading and speed glance down to the vario checking height and sink/climb rate.

Note: Where no vario is available "eyeball mark I" is sufficient to see if the ground is rising up to you or falling away from you.

#### *Continuing the "Scan"*

Now of course the lookout should be repeated to the right and then back to "Airspeed" and then "Instruments" before of course the whole process starts again. Once well practised the Scan will take about 15 seconds to complete both left and right side lookouts. With the eyes looking ahead for about half of this time.

### **Teaching Points**

As I have already mentioned the "Lookout" will normally be the first part of the "Scan" taught with the other parts following once the student becomes proficient at the first. The hardest thing to gauge as an instructor is the effectiveness of the student's lookout. They will all "look" and swing their heads about but not many of them will actually "see". Therefore if you teach on sites adjacent to club sites why not get them to count how many paragliders are flying or if you're on your own there are cows or sheep in the next field. A test like this of course is not "cheat-proof" but with time it will help to train the eye and enforce the importance of scanning. The effectiveness of their "Airspeed" and "Instruments" checks can be assessed during the post flight debrief by questions such as "Were you fast or slow after take-off?" and "Was the sink constant during the flight?" which is a good teaching point in itself.

### **Turns and 360's**

The Scan remains the same as in straight flight with the exception of the "Lookout". Before entering a turn the pilot should double check he is clear in the direction of the turn. So a left turn becomes Lookout Left, Airspeed, Instruments, Lookout Right, Airspeed, Instruments, Lookout Left, Turn.

Whilst maintaining the turn the Lookout should concentrate in the direction of the turn only and every 2 or 3 cycles of L.A.I. a check should be made in the other direction for aircraft approaching.

### **Conclusion**

The RAF Air Cadets place great importance on the Scan as a pilot can derive all the information he needs from it to fly safely. It tells him where he is, where everyone else is and the condition of his aircraft. By using his sink rates, height and progress over the ground he can even predict where he will be over short periods of time; i.e. it encourages the pilot to think ahead.

Wouldn't we all like our students to look out more? After all it could be us that they end up flying into. How do you sell all this to the student? Just tell them to enjoy the view!

Matt Grimes  
4<sup>th</sup> January 1999.

### **"TRAMLINER" TRAINING**

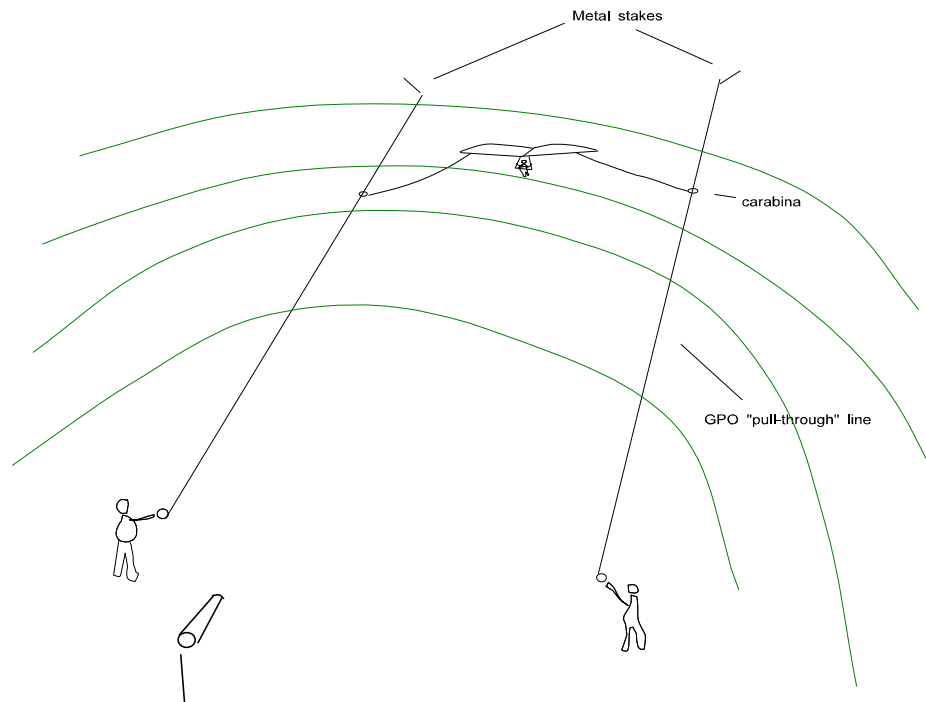
During our 98 season we introduced a new method to help with the first ground-skimming flights. The method uses two long lines of "GPO pull-through" rope laid out either side of the ground skimming runway. They are staked to the ground just behind the take-off position at about twice Stubby wingspan apart. The metal stakes should be hammered flush with the ground if there are any higher free flights going on, in case of any unintentional landings nearby. The other ends of the lines are held to a gentle tension by two fellow students positioned beyond the expected landing of the best flight possible. Comfortable handles are tied to the ends of the lines for easy grip. The Stubby is attached with normal side tether ropes from the x-tube/leading-edge junction to the "tramlines" by means of a karabiner on each side. These slide along the lines during the flight lifting them off the ground.

If the pilot veers off course the two helpers below both move apart limiting the roll movement and ready to catch the counter roll if the glider swings back. If the glider unexpectedly travels further, again the holders move apart and in doing so apply a braking pull to the wing.

At the end of the run the glider is unclipped from the lines ready for the next flight. If more than one Stubby is used, one glider is unclipped from the lines and carried up to one side while the other clips on at the top of the run. The minimum number of students is the same as for conventional tethering. With only three people the pilot changes place with one of the line-holders who pushes the gliders back up for the next flight.

This method solves many of the problems associated with the first flights on a hang-glider enabling a student to steer the wrong way without a punishing crosswind landing or bent aluminium. With some people an early blow to their confidence will be difficult to overcome no matter how good the instructor.

This is only intended as an aid for the first ground-skimming flights. Not for higher flights. Once the student shows the correct weight-shift then they can continue without the "tramlines".



John Barratt SI HG Sussex HG & PG

## TEACHING PRONE

HG schools these days teach using a prone harness, either a stirrup type with the stirrup removed or the more modern front-loader without zip strings with the footplate lifted out of the way by an extra string to the karabiner. The effect is the same in that the student learns to fly in the "budgie" position with the hands on the uprights. At Sussex HG our EPC students usually complete their course in this position aboard a Hiway Stubby. We exceed the BHPA requirements as they are expected to finish with three top-to-bottom flights of over 200ft, with 90 deg. turns, good take-off and landings. This level of competence is similar to the old "Pilot-1" rating.

Sometimes we get students from other schools where they have been taught to launch by running and diving onto the base-bar usually followed by a wheel landing belly-flop. Whilst this may be good training for future aerotow launching, it will usually lead to bad habits which are difficult to correct later.

The CPC course includes learning to fly a higher performance glider and adopting the fully prone flying position and finishes with two soaring flights as required for the full BHPA CPC rating to be signed off. Most students will complete this within five days.

Going prone involves moving the hands one-at-a-time to the base-bar and rotating the body down into the apron part of the harness, (lower the shoulders and bend the elbows). This should be achieved without altering the pitch pressure and without downward pressure on the base-bar. One foot then seeks for the footplate through the opening in the lower part of the harness, then the other foot is inserted and positioned next to it. Finally a strong push with the legs brings the pilot fully prone. The pilot must not look at his feet while searching for the footplate, nor push on the bar, and thus alter the speed, while straightening the legs.

Consider this as six stages: one hand down; put the other hand down; rotate, one foot in; the other foot in; and push. At each of these stages the pilot can stop and wait, continuing to fly the glider, the ultimate priorities being direction and airspeed. Our students are taught to go prone as a step-by-step process at each stage they can stop and continue to fly or reverse the sequence if they are approaching a landing. Each stage is a considered step given the required direction and airspeed. Students should not rush the process. Also they can fly and land into wind safely if they choose to remain at any one stage.

At Sussex HG we find a good way of teaching prone is to use static (or slow), tethering, with the wind strong enough for a slow ground speed. On a good flight the student can go from prone to upright several times under the close eyes of the instructor. Various errors, twisting the body or pushing on the base-bar, for example, can be made and corrected on the safety of tethers. In light winds a student will need flights of at least one minute

to go fully prone and out before landing so top to bottom flights of at least 200ft are required. Lower flights may allow a student to go down to the base-bar and back up. Soaring flights or very high sites provide the best opportunity for fully prone flight. It is important not to rush into prone, remember, direction and airspeed are absolute priorities through the stages of going prone. Often it is wise to take-off, turn and start the first soaring beat before going prone.

It is also good to practice going prone and effective weight-shift out of the glider by hanging from a hang-point or simulator frame, or, on the hill with a light wind, three people can lift the glider plus pilot, (two on the ends of the base-bar and one on the keel), thus suspending the student in the flying attitude.

John Barratt SI HG Sussex HG & PG

NB. Comments and feedback on "Tramline Training" and "Teaching Prone" should be sent to the Editor as outlined on the cover page.

### **HANG GLIDING AND PARAGLIDING EMERGENCIES: MENTAL PREPARATION AND THE ROLE OF PERSONALITY TYPE - BASED ON AN ARTICLE BY BILL BUFFAM, USA.**

I recently had an accident that bothered me a lot. I thought about it, analysed it to death, talked to lots of people, and came up with some interesting insights. Working on the grounds that an accident that cost me a broken wrist, concussion, and three months flying had better yield some valuable information for the sport at large, I've tried to capture the essentials in this article.

In a nutshell, I tried to fly through a tree. If that isn't the most stupid thing to attempt with a hang glider, it must at least be in the top ten. To explain a little more fully, I quote from the report I filed with USHGA: "I entered final with good speed, but was hit by strong lift at treetop height, lifting left wing and sending me over trees. On the far side of trees, now above river, strong sink pushed me below treetops. I nevertheless tried to fly back across tree line, crashing into treetop, then falling nose first 40' to ground. Left radius was cleanly broken at wrist; brief loss of consciousness and concussion; bruises."

All my thinking produced the following conclusions, again borrowing from my USHGA report: "And after much reflection, here is my analysis: in the crisis of the moment, I did my utmost to execute the only plan in my head, patent impossibility notwithstanding. This same reflex accounts, I believe, for those documented cases where 140lb women single-handedly lift automobiles off their trapped children. In the crisis of the moment, my brain simply did not have the spare processing power to construct alternative options from scratch." The same conclusion was reached independently by a very experienced pilot who watched the whole thing. He called it "brain lock" and "field fixation". Very perceptive.

Conversations with other pilots and psychologists have pretty much confirmed my analysis. A powered plane pilot friend told me it's a well-known phenomenon that your IQ drops to around 69 in a crisis. That's why general aviation pilots go through, in tedious detail, and with endless repetition, the rote procedures for all potential emergency situations—because when one of those situations turns up, you're only going to be able to perform the procedures you've drummed into your skull so that they're totally automatic. That's why Betty Pfeiffer (who runs highly praised parachute seminars in the USA) tells us to "look at the chute handle, and grasp it, on every flight," so that you know where it is and what's involved in grabbing it. The muscles remember; the autopilot department of the brain remembers. In a crisis, your CPU is going to overload—it has no capacity for deductive reasoning. If you haven't worked it out ahead of time, you aren't going to do it—whatever it is.

A psychologist (and new pilot) friend told me that Israeli commanders are specifically trained to keep their minds flexible in emergencies. They're given a hypothetical task: given so many men, so much weaponry, at such a location, how do you capture and secure the area from an enemy force? Then, some time before the test, one or more of the conditions change—they have to think it through again. Some time later, something else changes.

And the changes keep coming, at unpredictable intervals, right up to test time. The constant changes themselves cause stress. There's no place for brain lock in that situation—they have to keep their options open. They have to work out flexible solutions, because they know things are most likely going to change before they're through, and they probably won't have time to discard the entire plan and start over.

This is the kind of flexible mindset we need as pilots. What can go wrong? What if I can't make the field? What if I get rocked on final? What if I'm landing real close to the glider in front, and he's not losing altitude very fast? What if the wind switches 180 degrees? What if, what if, what if . . .

Coupled with thinking about what might go wrong, visualise how you'd handle those situations. Always visualise a successful outcome. You can't practice landing in a tree (assuming your operative IQ is above 69!), but you can visualise such a forced landing ending successfully. Jim Palmieri (a hang glider pilot and teacher from Virginia) tells a powerful and true story of how he coached his second string cross country team to a stunning victory by having them visualise passing other runners. Visualisation (together with training) really works.

It seems to me that experienced pilots tend to stay flexible more easily, and may not realise the need to discuss these things with us less experienced types. After all, the more experience you have, the less brain power you need to fly the glider, and the more brain you have free to process the unique characteristics of your particular situation.

Thinking more along these lines, I became convinced that personality type has a lot to do with how you'll respond as a pilot. Let me explain.

Work begun by Carl Jung in the 1920s, and later developed in the 1950s by the mother-daughter team of Katheryn Briggs and Isabel Myers, classified personality in four dimensions. Two of these dimensions, Introversion versus Extraversion (I vs. E), and Thinking versus Feeling (T vs. F), carry their intuitively obvious meanings. The other two dimensions, Sensing versus intuition (S vs. N), and Perceiving versus Judging (P vs. J), need a little more explanation. Sensing types relate to rules, regulations, policies, and procedures; whereas intuitive types relate to ideas, concepts, principles, and possibilities. Perceiving types prefer to avoid and postpone decision making, feeling uneasy once a decision is made; whereas judging types make decisions quickly, feeling uneasy until a decision is made.

What's interesting is how the combinations of these four aspects of personality combine and interact to produce some surprising behaviour traits. For the purposes of this article, the 'SP's (sensing, perceiving) types are the most interesting. 'SP's, unique among all the types, are absolutely superb in a crisis. Whether the crisis is a real-time crisis (like a flying emergency), or a management crisis, an SP is the personality type best equipped to deal with it. And my observations are that many, if not most, hang glider pilots are SPs. SP is the personality type you'll most find in craftsmen, mechanics, airline pilots, professional drivers. And before the 'SP's out there start feeling too smug, I should point out that another 'SP' trait is a complete detachment from the concept of time, which tends to drive the rest of us crazy (for the record, I'm an 'INTJ'). This 'SP' time detachment is why contractors and repairmen don't show up at your house when they're supposed to (if they show up at all), and it's the reason your hang gliding club meeting never gets started on time, or perhaps doesn't even have an official starting time.

So what does personality type mean for us as hang glider or paraglider pilots, Coaches and Instructors? It means that if you're an 'SP', you're a natural. You, by nature, like to keep your options open, and you're adept at handling a crisis. On the other hand, if you're a 'J' type, you need to consciously evaluate your options ahead of time, to force yourself to think through what-if scenarios. And perhaps, most important of all, if you're an 'SP' Instructor or Coach, you need to be aware that the crisis management that comes naturally to you may not come naturally to other people, especially if your student is a 'J' type of personality. Finally, we need to get more discussion of "brain lock" and its causes and remedies, into the hang gliding and paragliding literature.

Footnote: A good text on personality types is Please Understand Me, by David Keirse and Marilyn Bates, published by Prometheus Nemesis, ISBN 0-9606954-0-0. Keirse also has a Web site where you can check your own personality type by filling in 36 multi-choice questions. This is on <http://www.keirse.com/>

## **ACCIDENT PREVENTION AND MEDICAL PANEL**

### **ACCIDENTS. NOW WHERE HAVE I READ ABOUT THAT BEFORE?**

The one thing that stands out when I look at any list of accident reports or statistics is the simple fact that I continue to see the same accident occurring time and time again. Yes, it has happened to someone else, and



probably at a different site, but so often it is a repeat of several previous accidents. If we are armed with the information on how to avoid such accidents, then why do they keep repeating themselves? Usually at this stage we say, "If you tell me what kind of accident you are going to have, then I will tell you how to avoid it." Because we know what kind of accident is going to happen, we don't know who is going to have it, or where, and we don't know when it is going to happen, **but we already know how to avoid it.**

So why do they still occur?

One reason we have to consider is the fact that the BHPA has a large turnover of membership, and that anything published in Skywings more than a couple years ago has probably not been read by a large proportion of our members. This is not an easy one to address, but is one that the FSC fully recognises and is trying to resolve. However, the first line of attack must lie with both Instructors and Coaches. Generally speaking, they have been in the Sport long enough to have become aware of the accident statistics, and, in order to have achieved their qualifications, have displayed an in-depth understanding of the associated hazards. So, why not spend more time talking to both students and qualified pilots about the sort of accidents that can occur, and get them to think about ways to avoid them. After all, with the sort of weather we have been getting lately, there is plenty of "waiting time" on the hill that could be allocated to this subject.

What we have to do is to change people's attitude to their flying. To get them to realise that a **good** pilot is one who **always** demonstrates an awareness of the safety implications of every situation. You can recognise this guy the minute he starts to set up his equipment. Similarly, at the other end of the spectrum, you can usually spot the other sort. This is the one to home in on first, and spend some time with, **because the accident he is heading for is not one he will have invented. It will be one that you know how to avoid already.**

### Accident/Incident Analysis for 1998

228 reports received

Paragliding (PG) - 157, Hang Gliding (HG) – 64, Powered Paragliding (PPG) – 4, non-specific – 3.

Injuries sustained (post CP)	PG	HG	PPG
Fatal	2	2	0
Fractures - spinal/pelvis/rib	20	0	0
hip/leg/foot	21	1	0
shoulder/arm/hand	12	11	1
head/concussion	2	3	0
Internal - organ rupture	1	1	0
<b>Students injured (pre CP)</b>			
Fatal	2	0	0
Fractures - spinal/pelvis/rib	10	0	0
hip/leg/foot	15	0	0
shoulder/arm/hand	8	8	0
head/concussion	0	1	0
Minor	21	3	0

### Categorised by cause (all disciplines)

Mid-air collisions	11	
Airprox	4	
Groundprox/collisions	2	
Traffic control criticism	1	
Equipment failure		
glider	15	)
“ erratic flight	2	)
PG lines	2	) 9.5%
harness	1	)
tow release unit	3	)
Emergency parachute failures		
dummy throw	5	)

check failure	1	)	
deploy failure	2	)	
repair fault	1	)	5.8%
supply fault	2	)	
wear damage	1	)	
accidental deployment	2	)	
Em. Par. success deploy	2	)	
Abandoned glider	1	)	
Weather conditions			
on take-off	8	)	
in flight	7	)	11.3%
on approach	8	)	
on landing	4	)	
Conditions and/or pilot control			
on take-off	6	)	
in flight	6	)	
on approach	9	)	23.7%
on landing	10	)	
tuck initiated	26	)	
Pilot error - control			
on ground	1	)	
on take-off	12	)	
in flight (students)	6	)	25.8%
" (CP->)	3	)	
on approach	27	)	
on landing	13	)	
Pilot error - judgement &c			
check failure	5	)	
not clipped in	2	)	
on take off	5	)	15%
flight control	11	)	
on approach	8	)	
on landing	5	)	

## NOTES

1. In many cases there were several 'causes' (eg conditions + control errors + tucks).
2. Many of the causes are my judgement - some pilots might not agree.
3. Although I believe that most student incidents are Instructor Errors, I have not recorded this - they are mainly classed as student errors instead.
4. Many incidents do not record the full facts; when the narratives are then summarised some distortion is bound to result.

## TRAINING ABROAD

During a recent foreign trip a CP rated hang glider pilot sustained serious injuries crashing his glider shortly after take off. The planned flight involved a 1000ft top to bottom in reasonable conditions. Investigation showed that the pilot had gained a total of 3 hours airtime over a period of 5 years and had not flown for over 6 months. Though the instructor/leader knew the pilot, he was unaware of his lack of experience and the fact that he had not flown for such a long time.

As an instructor working with groups of students abroad, it is extremely important that you know your students inside out. Only by knowing the student's full history concerning their training and knowing them on a more personal level can safe instruction be given.

The same is equally true when working abroad with supposedly more able, qualified pilots, whether it be an advanced training course or merely a guided holiday. In these situations 'knowing' your students can be difficult as they may not have come through your school or you may not have seen them for some time etc. etc. Pilots and instructors leading groups of any ability on foreign trips must make it their duty to find out about the people they will be working with. Making assumptions about experience and how current someone is can have serious and potentially fatal consequences. On any trip abroad it is a good idea to 'acclimatise' your students/trainees before heading for the 'big' stuff. Something easy to begin with helps to ease nerves but more importantly gives the leader a chance to evaluate the group. Better to discover a problem on a low, easy site rather than when they've just lobbed off the ramp at Planpraz in Chamonix!

## **ADMINISTRATION**

### **1<sup>ST</sup> AID CERTIFICATES SUITABLE FOR INSTRUCTOR LICENCES.**

The following is the new system regarding 1<sup>st</sup> aid certificates for Instructors. NB. For Tow Coaches and Air Experience Instructors the requirements (minimum, 1st Response/one day course) remain the same.

The former list of accepted courses has been replaced with a set of criteria that all courses must now fulfil.

The system is as follows:

Trainee Instructors and Instructors on renewal (of their 1<sup>st</sup> aid certificate) must provide written evidence, in the form of signed declaration from their course provider, that their certificate meets the accepted criteria.

The criteria for 1<sup>st</sup> aid courses suitable for instructors must include the following:

- 1 Course provider (not necessarily the course) must be HSE approved.
- 2 Must be at least 16 hours (2 days) duration.
- 3 Must be of a pass or fail nature. (though does not require external exam).
- 4 Must contain the standard Emergency 1<sup>st</sup> Aid elements.
- 5 Must contain Incident Management (as well as casualty management).
- 6 Must involve spinal fractures, their diagnosis and management.

Items 4 and 5 should ideally involve 'Remote Location' issues.

In the case of TIs put forward for examination, the signed declaration from the course provider must accompany the actual 1<sup>st</sup> aid certificate when providing the usual documentary evidence to the BHPA office.

In the case of qualified instructors it is the responsibility of the CFI to ensure that the instructor has the correct certification.

### **INSTRUCTOR RENEWAL FORMS**

CFIs are reminded that the format of the instructor and senior instructor renewal form has been changed. The CFI must now include the number of flights/hours, days instructing/coaching and number of flights as a dual pilot, when signing the declaration of support. The FSC would like to make it clear that full responsibility for checking a pilot's details prior to signing the declaration of support lies with the CFI.

### **PROBLEMS WITH PROCEDURES**

Pilots in all disciplines are reminded that their club holds a copy of the BHPA technical manual. This will usually be the responsibility of the Chief Coach but may be another club official. If you have a technical or

procedural problem then your first line of enquiry should be to your club. If the club can not sort out the problem to your satisfaction then contact the BHPA.

## **THE MEMBERSHIP SYSTEM**

Following the change in the structure of the introductory membership categories there remain one or two areas of confusion.

The broad thrust behind the membership structure is that if you are dealing with a student who has come along with the intention to do more than just a taster, then the student should join as a 3 month member and as such receive the Training Pack at the outset of their training. If you are dealing with someone who has come along simply for a day or a weekend then you can use the day membership category. These students do not receive a training pack.

In an explicit change from the previous, confusing, position, it is now permitted to use more than a single one-day membership for an individual student. However, whilst a student is permitted to use the one day category twice on consecutive days, it is not permitted for a single student to repeatedly use one day memberships. It is partly due to the inappropriate use of the 1st flight memberships that the 1st flight and 1st Course memberships have been amalgamated into one-day membership. Inappropriate use of the one day membership will lead to further reductions in the flexibility of the membership types which are available. If a student wants to join as a Full Member from the outset, this is permitted and a Training Pack should be issued directly to the student.

Schools on the Block policy should issue Training Packs to students who have booked on EP courses. Inappropriate distribution of Training Packs by Block Policy schools will impact upon the costing of the Block Policy which could lead to a price increase or withdrawal of the system altogether. Inappropriate in this context means both over-issuing and under-issuing. The cost of the TP is covered by the 3 month or Full membership which the student is required to take out prior to the issue of an EP.

## **MEMBERSHIP BOOK RETURNS**

The time delay between the student signing up for BHPA membership at the school and receipt of this information at the BHPA office and subsequent collation and transmission on to the insurers has been a cause for concern for some time now. As a result of which, it has been agreed with the insurers that each student will be entered on the insurer's list within one month of their joining date. The office requires a week to finally collate the various categories, calculate the total premium and then post this to the insurers. Thus, membership books, together with the appropriate payments must now be submitted to the office TO ARRIVE no later than 3 weeks than the earliest date of membership on the book. Since a month is in fact usually a few days longer than 4 weeks, this allows for delays in the post. Schools who fail to comply with this run the risk that, should a claim arise in respect of a member who has been submitted late, the underwriters will use this as a reason to avoid the claim. We know that this will lead to an increase in the use of membership books since many will be returned whilst not completely used, however this is an acceptable downside in order to keep our insurers happy.

## **THE INSTRUCTOR INSURANCE SUPPLEMENT**

I am sure that by now, all Instructors, AEIs, T.I.s, CFI.s, S.I.s etc. know that they will, in future, be subject to an additional insurance supplement, which is set at £ 10.00 this year. At the Training Conference last year the insurance claims were shown in all their frightening detail. One of the statistics that caused most surprise was that almost 90% of all claims arose in the schools. It is because of this huge disparity that the instructor supplement has been introduced. (with the support of the majority of those who attended the Training Conference)

This change has revealed at least one unexpected anomaly. It has long been a rule that if you wanted to hold an Instructor Licence of any type, you needed to be a Full Annual member. Unfortunately, in the convolutions of our administrative system, a small number of T.I.s who hold Concessionary Membership have come to light. Having paid only £ 40 for their membership over the last few years, these members are about to see quite a large increase in their membership fee. This year it will rise from £ 40 to £ 72. Whilst they may feel aggrieved, they would be unjustified in doing so since they have had their membership at a substantial discount to which they were not strictly entitled over the past few years.

FINALLY

It is hoped that these changes will make the membership systems easier for all instructors and coaches. However, further developments will no doubt take place. This topic is one that is always available for discussion at the Training Conference or with our Technical Staff. Please feel free to raise any problems or positive suggestions.

Marc Asquith

## **INSTRUCTOR AND COACH TRAINING PANEL**

1. Senior Instructor and Emergency Packers & Systems Courses are arranged as required - if you are interested please contact Tony Mitchell and get your name on the list. We need minimum numbers to make a viable course eg 6 for an SI and 8 for the EP&S, but you must let us know if you are interested.

2. Incidentally, the take-up for TI Courses has been very disappointing. We have to book venues almost a year in advance and there are the usual penalties for late cancellations. The last course dropped from 11 to 7 in the two weeks beforehand which cost us dearly - to avoid this happening again we have had to introduce a non-returnable deposit of half the course fee.

3. CFIs - please note that the correct form must be used to register a student as a CP - the pink form provided in the Pilot Pack is the only acceptable way. CP Examination Papers will not be accepted as proof of CP completion.

4. The Declaration on Annual Renewals for certain licences has been improved - log books now have to be checked to make sure that the holder is current in key areas such as training days or dual flying.

5. Technical Manual and Safety Notices

Owners of the TM are asked to check that they have received to date (and incorporated) the following amendments: 01 (issued 8.7.96); 02 (not issued); 03 (issued 1.9.97).

Safety Notices issued between January 1st 1998 and March 31st 1999 are : FSC.SN.16 FLPA (powered paragliders). FSC.SN.17 HG cross tube/centrebox bolts. FSC.SN.18 towline end connectors.

6. Fitness to fly

Every year members have to 'self declare' that they are fit to fly – and this applies equally to those who teach, or coach - but especially to those who are Dual Pilots. The responsibility for a 'passenger' is absolute – and it starts with fitness. All flying is stressful, and dual flights are particularly so. But the main point of this message is aimed at those who train and assess potential instructors and/or dual pilots - you have an added responsibility to double check your protege's physical and mental fitness and if you are concerned then act on those concerns. You would do it for a student in your care; it is even more important in the case of those who are going to be issued with a Licence.

## **SCHOOL PRIORITIES**

Teaching the mechanics of paragliding and hang gliding is a relatively simple process. Paragliders, and to a slightly lesser extent hang gliders, are simple craft to fly. Pull on the right control to turn right, weight shift to the left to turn left and so on. Taking off and landing require a little practice and there you have it...or do you?

The most important element in anyone's flying armoury is the ability to make safe, sound decisions. Call it 'good airmanship' if you like. This ability is far more important than any other but is a bit more difficult to teach as it is not a physical or practical skill. Developing good airmanship and producing 'thinking' pilots must be started from day 1 in the schools. Our sport is of an adventurous nature and has inherent dangers and while nobody is suggesting that we labour the point, it should not be overlooked altogether. Students must be made aware of the potential dangers throughout their training and consequently training should be geared towards keeping them safe. Don't just 'tell' students 'what, where and how', tell them 'WHY'. Let them understand the

thought processes that enable you to make safe decisions in order that they may make them for themselves. When giving briefings and lectures, give them from a safety angle. For example, in meteorology there are two ways of looking at fluffy white cumulus clouds. 1, they are indicators of good thermic activity and potential cross-countries. 2, they indicate potentially turbulent air that could be extremely unpleasant to low airtime pilots. Instructors MUST put across the safety option in any briefing where such an option exists, along with the reasoning behind the briefing. Once students attain their club pilot and gain some experience they can then explore the other options. If the instructor has done a good job the new CP will explore those options with safety in mind.

BHPA examiners and inspectors will be looking carefully at the way schools and candidates for examination perform in these areas in the future.

## **GIVING THEORY LECTURES. Ian Curren**

I have been training and examining instructors for some years. It is apparent that most instructors find training on the hill to be no problem, they can usually get to grips with the basic admin skills needed to keep records and do BHPA stuff, (given a bit of help). However, theory lectures are for many instructors their weakest area. (It is the commonest cause of exam failures) Why?

There are two main factors. Many instructors are simply not used to this kind of situation in their everyday lives, and as a result lack confidence facing a group of students who they may feel are judging them. Secondly they are not too sure of their subject.

Both these factors stem from the same cause,- lack of decent training.

Far too many CFI's fail to actually train their instructors, they seem to expect them to pick everything up by a sort of osmosis. This works pretty well on the hill, where training involves demonstrating, watching a student try it identifying what is going wrong and showing them how to correct it.

This system is pretty hopeless in the classroom.

If you recognise yourself as either the instructor or the CFI in this situation then perhaps it is time you got on top of the situation? What can a busy school or club with freelance part-time instructors do to improve the standards?

At our school we introduced "training days" two or three times in a season where we discuss everything,-where to put the pencils on the desk, what gliders to buy, etc. etc. This is a useful forum for discussing such things as question & answer, and visual aids.

Perhaps the most useful thing is for the CFI to demonstrate a lecture but make sure the staff watch- all too often they do not sit in. Or for a TI to give a lecture and have it criticised or praised later by other instructors. This is tough work of course and it is only fair that the school pays for such training periods.

The other angle is in preparation. The school should provide good notes, slides or other help to enable the instructor to give a professional presentation. If you are confident about your kit you will project it better.

My own golden rule for lectures is to apply the "Why " test

You must not only know what you are talking about you must know why you are talking about it! I find that if you ask yourself "why do they need to know this" then you will have the answers to many of the questions you may be asked. It also helps keep you on track. Instead of trying to answer a question about the Coriolis effect, for example you will find yourself saying. "That does not concern us because it is not relevant to this situation". This kind of focused approach results in shorter, more effective, and easier lectures. This in turn gives confidence to the lecturer. As an examiner I often ask a question of the candidate that requires a long, complex or off the point answer. The best candidates mentally run through the "why" test, realise it is a red herring and politely put me off. Those that blunder off into unknown territory frequently end up boring their audience or saying "Er.. I don't know" which is good for no one.

I am sure other CFI's have their own bits of wisdom or experience to impart.. the trick is to devise a situation when it can be done.

All this assumes that you have the expertise in house to do this training. The BHPA senior instructors' or coaches courses do cover much of this, but learning about eye contact, ensuring your level is correct for your audience and keeping the students attention, are teaching skills that you must develop to do classroom work effectively.

It is the duty of all schools to ensure that all their instructors have the right stuff to do this, and are sufficiently practised to do it well. This means that all instructors and TI's should take their turn at doing lectures.

Good classroom work helps good performance in the air. It helps make safer pilots and it gives the students confidence in the skill and professionalism of the school and instructors training them. A group of 5 students are probably paying about £50 an hour between them at a commercial school for your lecture. They deserve a very high degree of professionalism for this price!

## **AIRWORTHINESS PANEL**

### **HELMETS FOR CLUB AND SCHOOL USE**

The majority of training operations have been using for some years a range of helmets which do the job adequately, but which do not conform to EN 966 for airsports.

There are very few EN966 helmets that meet the requirements for school use; that is they must be adjustable for various head sizes and washable for hygiene reasons. One that seems to fit the bill is the Laser Voyager. This is a polystyrene lined injection moulded helmet that adjusts by removable Velcro located foam pads. The strap system seems good, giving a high degree of stability on the wearer's head. The most obvious snag is the need to stock spare fitting pads, as well as the need to identify each helmet with, say, a number so that students don't pick up the wrong one part way through the day, when adjustment may be a problem.

Some schools may already be using them, and a few are on trial to see how they go. So watch this space. If you know of, or are using, EN966 helmets which suit school use then please share the information. Contact Phil Bibby, Assistant Technical Officer.

Here are the details for the Voyager helmet:

Manufactured in Belgium by Lazer, the Voyager retails at £39.95. Normal trade discounts available to schools with additional discount for orders of 5 or more helmets.

Contact Pat MacVey at Air Base UK Ltd., 1 New Street, Sedbergh, Cumbria, LA10 5AF

Tel. (01539) 621 606, Fax. (01539) 621 948 e-mail:- [mail@pmevey.prestel.co.uk](mailto:mail@pmevey.prestel.co.uk)

### **MORE HELMETS**

Pilots are reminded that though the new EN 966 standard for air sports helmets is a good indicator that a helmet meets a certain standard, it does not take into account the variety of head shapes that exist. When purchasing a new helmet make sure it fits YOU. You should not be able to remove the helmet when it is correctly fastened. When trying a new helmet fasten it correctly then attempt to remove it using considerable force (the force of an impact due to a crash will be greater than you can exert manually). If you can remove the helmet either by rolling it forward or backward off your head then DO NOT buy it.

## **ITS YOUR LETTERS...ITS YOUR LETTERS**

Though the IC News Letter is not necessarily the forum for a debate on how to save hang gliding, the following letter and subsequent responses serve to prove that there are things that can be done here and now by the schools, without changes to the system.

During my attempt to learn how to Hang-glide all the training up to EP level was on a stubby. Beyond EP up to CP level all training continued on a clubman180. It took me 5 days spread over 5 months to get to EP standard on the stubby. At this point I had mastered the weight shifting, 90deg s-turns, take-off and landings.

At this point I 'HAD' to transfer to the clubman, I found I had lost everything I had learnt over the past 5 months. I tried for three solid days to stop the self-induced oscillations/over compensation whilst attempting to fly the clubman.

A days flying would typically involve 10 flights each of duration 20-30secs i.e. at best 5 mins. airtime. The cost for this is 50 quid i.e. 10quid/min, a Cessna light aircraft is only 70quid/hr i.e. only 1.2quid/min !!!!

In retrospect I wish that the club had taken me to a big hill and let me have some airtime on the stubby! At the very least why not allow the student to continue to CP on ONE glider? Changing gliders at this point in the training is the one of the MOST soul destroying things I've experienced in aviation to date!  
I don't think I'll ever bother with HG's again as it's virtually impossible to make progress while holding down a 9-5 job.

Also the "you've got to go through pain" attitude REALLY pisses me off!

Sorry for the whinge - I'm bitter

James McLoughlin

I quite agree with James's sentiments.

Flying a Stubby (or worse, a Dictator) down a gentle grass slope does not teach you anything about hang gliding. Flying tandem at 3000ft after an, instructor flown, aerotow will teach you lots.

But it's going to cost lots of dosh.

Would the many PG pilots who've said to me 'I want to learn gang gliding, but I don't want to walk up the hills', be prepared to pay, say, 800 to 900 quid for a CP?

Dave Sollom. ParAvion.

I also agree and have sympathy with James and I am very sorry to hear that we have probably lost yet another potential hang glider pilot due to unsatisfactory training techniques.

I remember when I progressed from a Stubby to a Clubman the first impression I had was how fast it went (it seems incredible now that I ever thought a Clubman was fast!) but it only took me about half a day of short top to bottoms to get used to it. Students should not be moved on to a new glider until they are ready for it. You do not HAVE to progress off the Stubby as soon as you have completed your EP, although you do have to complete certain flying tasks on at least a 4th generation glider in order to attain your CP.

It sounds to me as if James's problems lie not so much with the glider but with his tuition not being tailored to his personal progress and ability.

James's frustration serves to underline what I and several others have been trying to get across for some time - that the current methods of teaching solo hill flying for hang gliding are largely unsatisfactory. Students need AIRTIME. This means either BIG top to bottoms (most safely and conveniently done from a tow launch so there isn't a great big hill to crash into or to carry up after every flight) and/or DUAL flights.

I know of a paraglider pilot who has recently returned from a fortnight at QuestAir in Florida learning to hang glide. The course cost around 1250 US dollars, for which she got about 9 hours airtime (dual and solo). Best of all she actually learned to fly!

If effective, quality tuition is offered, I believe that students will be quite prepared to pay for it.

Regards,

Harriet.

**Following on from the above, would all hang gliding coaches please read and respond to the following;**

## **HANG GLIDING TRAINING**

### **IMPORTANT NOTICE TO CLUBS**

In response to representations made by various hang gliding schools and interested parties the Pilot Training Panel has approached all Hang Gliding Schools for their ideas regarding the HG Club Pilot training syllabus. Following an open invitation for comments and suggestions, from which a more specific questionnaire was formulated and circulated, some changes to the current training syllabus have been proposed by a clear majority of those schools who expressed an opinion.

The changes which would directly effect the club's input to HG training is that two more tasks would be made optional within the club environment, specifically:

- i) Conversion to prone, and
- ii) Stall recovery



We need to know whether the clubs, and specifically the Coaches, would be willing and able to accept the additional responsibility of teaching these exercises to hang glider students.

NB: As is already the case, in accordance with having completed all the CP tasks which remain compulsory within a school, it is possible that these students may never have soared, never have made more than 90 degree turns, never have flown more than a fourth generation glider, never have flown with more than 250 feet ground clearance, may have less than ten minutes total airtime and have made no more than six unassisted take offs.

Please contact Harriet Pottinger asap with your comments.  
*Harriet Pottinger 01823 601202 e-mail: harriet@eclipse.co.uk*

**RACE HARNESSSES** - a response to the letter from Rob Arnold in I & C, no 5.

By Dave Sollom

Rob makes two generalisations in his letter concerning the suitability of 'race' style harnesses for recreational pilots. Firstly he maintains that there is no provision for a back plate, and secondly, that it is more difficult for the pilot to get his feet down.

Not so, at least in the case of some well known makes. There do exist race harnesses that take a standard Moose bag back protector, and are much easier to get into, and out of, than 'normal' harnesses. Also, these same harnesses have ABS geometry, and the risers attach in such a position that Big Ears is easier to reach.

What's more, these same harnesses are easier to stand up in, much easier to plf in (not that I've ever tried one in anger), and most importantly, will swing themselves into a feet down position at the slightest danger.

The real problem with these harnesses is the different sensation they give the pilot, especially when flying a DHV 1 / 2 glider. Weight shift does feel very different, especially if the harness is set wide open, and the glider is quite roll stable (hence the DHV 1 / 2 bit). Thermalling can feel weird at first; lying supine, looking and leaning inwards with the risers seeming to be at right angles to your body.

I love these harnesses, and take some persuasion to fly in a more 'normal' model. Nobody else round here likes them much (in fact Leo positively hates them) which just shows that it takes all sorts.

In 1978 I learnt to fly hang gliders prone, with Howard Edwards. I then had to convert to seated because 'that's how it's done in the BHGA'. Things change.

**Re: Hang glider Tow to Hill Conversion**, (Tony Webb. Issue 4. April 1998).

It was with great interest that I read the article by Tony on converting pilots from tow to hill, in principal I agreed with every thing that Tony said and more. As the Training Officer for the Mercian H.G.C. I have coached a number of pilots trained on the tow to hill flying. In the ideal world a trip to a training hill for the first flights would be the way to go, however in the club environment this is not always possible. The next best thing we have found is to take the pilot to a hill that has good bottom landing fields and an easy take off.

We walk the hill and show them the bottom landing fields, talk to them and ask questions to try and get a feel for their understanding of what they are seeing. The next thing we tend to do is sit down on the take off and watch a number of take offs, and discuss the differing techniques used by different pilots, This we follow by a briefing. The first flights would be a top to bottoms, these allow the students to get used to flying away from the hill and setting up their approach to the landing field accordingly.

Once used to flying away from the hill and danger \*, and we are happy with their flight plans and approaches to the landing fields, then we can concentrate on getting them to soar. These flights are late in the day when the air has smoothed out.

The most difficult thing for a tow pilot to understand is the different take off technique used on the hill launch! Light winds seem to cause more trouble than strong winds, the main problem they have is letting the nose of the glider come up (as if they were tow launching) and stalling the glider after a few steps, and although we tell them and tell them time and time again, to keep the nose down and run, they still let the nose up.

It's a process that can take many weeks (depending on the weather) and can not be rushed, its also better for the new pilot if they can team up with one particular coach, as they can get to know each other and the coach can

better assess the student

I hope this will be of help, and perhaps open up some more discussion on the matter.

Terry Locke (training officer Mercian HG)