PREPARING FOR THE BGA BASIC INSTRUCTOR COURSE - NOTES FOR COACHES AND CANDIDATES

Introduction

These notes should be used in conjunction with the Basic Instructor Course Record. An up to date record document can be downloaded from the BGA website.

These notes contain references to the BGA Instructors Manual. This is to ensure continuity and avoid any repetition or confusion. Please read the manual with the constraints of the BI course in mind. Candidates are only required to teach the exercises mentioned in these notes. The other exercises are flown to reinforce safety and good practice. There is no requirement for the candidate to teach these exercises.

The usual procedure to obtain a BI rating is to prepare with the CFI or designate then attend a 2 day course run by a BI coach or higher rated examiner. This 2 day course has a large testing element, with little time to train the candidate. Therefore the pre course training should be thorough. Candidates should carry out this training from the instructor seat of the glider.

It is also important that candidates become confident enough to be able to talk while flying the glider and, more importantly, recognize when it will be too demanding to talk AND fly (and therefore keep quiet and concentrate on the flying!).

Before embarking on any training, candidates should download this document and the BI Course record from the BGA website. The course record contains a guide to preparation before the course. Candidates are encouraged to be thorough in their preparation.

Keep in mind always that candidates are training to be a safe instructor that will be responsible for the well being of a member of the public, and will become an ambassador for the sport of gliding.

Index

1. The Basic Instructor (BI) Rating

1a. Privileges:
This rating is the minimum required in order to carry out instruction, and is issued following satisfactory completion of a course with a coach approved by the BGA and subsequent CFI checks.

1b. Minimum Requirements
The candidate should check that he/she fulfills the required standards as laid down in 'Laws and Rules', and that their home club CFI has signed the relevant parts of the record card prior to the course.

1c. Limitations:
A BI may only exercise the privileges of the rating while under the **supervision of a higher rated instructor**. The BI rating specifically excludes supervision of flying. The rating is subject to validation by the CFI of each club where the privileges are exercised.

A BI is not to allow the pupil to handle the controls below 500 feet AGL, and may only introduce the following exercises:

- Lookout
- Primary effects of the elevator (including demonstration of first stall).
- Primary effects of the ailerons.
- Primary effects of the rudder.

The BI rating specifically **EXCLUDES** the teaching of:

- Any Stalling Exercises (except first stall with effect of the elevator)
- Any Spinning Exercises.
- Launching.
- Circuit planning.
- Approach control and landing.

The BI rating specifically excludes the holder performing any form of "check flight", (including site checks).

The BI rating may be specifically endorsed to exclude either wire launching or aerotowing as appropriate to the experience of the candidate. To have this restriction removed, the candidate will be required to complete further training with a BI coach, SRE or RE.

The BI must adhere to the BGA recommendations as regards meteorological minima and maxima as listed elsewhere in this document under 'recommended weather minima'.

1d. Revalidation/Renewal
BI instructors must undergo annual standardisation check flights with the Basic Instructor's CFI, and is subject to the minimum flying requirements as laid down in BGA Laws and Rules.

Although development training may be carried out by the candidate's CFI, checking/retraining by a BI Coach, RE or SRE is mandatory in the following cases:

- A lapsed rating (including failure to achieve renewal minimums).
- After holding the rating for 5 years.

2. The Basic Instructor Course - Theory

Introduction

The ratio of students to coaches on the course will normally be two to one. The flying will normally consist of sessions in a motor glider, aerotows, and sufficient winch launches to convince the BI Coach of the ability of each BI student. The flights will be used to assess and improve the personal flying ability of the BI student, and to teach and develop trial lesson skills.

The Course ground school – Briefings 1 to

The course should be run with a view to satisfying part 4 of the Basic Instructor Record Card, and an up to date version of this document should be sourced from the BGA web site. The exercises are not necessarily listed here in the same order that they appear in the record card, or indeed how they may be tackled by the coach. These notes are for guidance for candidates and coaches only.

2a. Briefing 1 – Some principles of flight – 'Analysis of controls in a turn'

As an in depth knowledge and understanding of the "Use and effects of the controls in a turn" is fundamental to successful instructing, it will be useful to examine this exercise in greater detail.

During the course, the eliciting answers will be used and involve all members of the group. Candidates should formulate their own answers to these questions before attending the course.
"Analysis Of The Turn" Questions Answers

1. What is the first action when entering a turn?
2. What is the next action?
3. What makes the glider turn?
4. Which control roles the glider?
5. Where should you be looking when rolling the glider?
6. What stops the wings at the correct angle of bank?
7. What is the rudder used for initially?
8. Why do you need rudder whenever you use aileron?
9. What causes adverse yaw?
10. How do you check the correct use of rudder when rolling the glider?
11. Why do you have to hold off the bank?
12. How do you assess your bank angle?
13. What adjustments should be made to the rudder when "centralising the ailerons"?
14. Why is the rudder not centralised?
15. What happens if we enter a medium turn using just the aileron and rudder?
16. How do we stop the nose from pitching down?
17. How do you know whether you have the correct amount of rudder once established in the turn?
18. How do you tell whether you have used the correct amount of elevator?

2b. Briefing 2 – Safe Launching and Launch failures

Aerotow:
A guide to safe Aerotowing can be found in the BGA instructors manual. A briefing should review the points in 'The Flying' subpart of the Aerotowing section of the manual.

Wire Launch:
Note: Winch launching is statistically the highest risk launching method. It is very important that the prospective instructor realizes that it is ESSENTIAL that he/she performs the launch accurately, safely, and understands the dangers and how to mitigate risk.

A guide to safe winching can be found in the BGA instructors manual. A briefing should review the points in 'The Flying' subpart of the winching section of the manual.

2c. Briefing 3 – Safe circuit planning and approach control when conducting trial lessons

Circuit Planning:
A guide to safe circuit planning can be found in the BGA instructor's manual. A briefing should review the points the circuit planning (part one) section of the manual. It should be noted that while instructing, candidates should remain within easy gliding distance of the high key area.

Approach Control and Landings:
Note: Sub standard approach control and landings are responsible for a large proportion of all broken gliders, with about a quarter of all serious accidents as a result of pilots not being able to land back at their own airfields without breaking the glider. It is essential that the prospective instructor performs accurate approach control, whilst keeping his / her options open in case of sudden obstructions etc.

A guide to carrying out a safe approach and landing can be found in the BGA instructor's manual.

2d. Briefing 4 – Stalling and spinning
The candidate is required to demonstrate (without patter), and correctly recover from a variety of stall and spin situations. The briefing will refresh the candidate on what is required and expected from the demonstrations. Please keep in mind that all these stalling and spinning exercises have one aim in mind – accident prevention. This should be stressed during the briefings. The further spinning exercises should be linked with plausible scenarios. A further explanation of the following exercises can be found in the BGA Instructors Manual.

2d(i). Stalling
- What is a stall? Theory questions / answers
- Stall recovery procedure
- Nose drop stall
- Mush stall
- Wing drop stall

2d(ii). Further stalling
- Reduced “g” not a reliable stall symptom
- Ineffective elevator at the stall
- “g” effect on the stall – straight (high speed stall)
- Stalling speed increases in the turn

2d(iii). Spinning
- Spin and recovery
- Spiral dive & recovery

2d(iv). Further spinning
- Changing effect of rudder at or near the stall
- Spin off a thermal turn
- Stall and spin off a failed winch launch

2e. Briefing 5 – Caring for your student – from arrival to departure

2e(i). Assessment of P2 needs

The BI should ask themselves the following questions:

- Why is the pupil there?
- What sort of person is the pupil? (Sizing them up!)
- Where can I help the pupil to succeed? (Assessing the needs of the pupil).

2e(ii). Why is the pupil there?

The motivation of the pupil will vary, and can depend on whether they have come as a member of a group or as an individual. Within a visiting group there can be the additional factor of peer pressure, they will not want to miss out (or chicken out), when in company with the others. Whether as a member of the group, or as an individual, each of the following factors can apply:

- They have a genuine interest in taking up the sport. (Normally individuals)
- They are seeking a thrill.
- They have always wanted to try gliding.
- They are seeking status.

2e(iii). What sort of person?

The method of handling each "Trial Lesson" will depend on the background of the pupil. For example consider the extremes of an aeromodeller, (or person with previous flying experience) against that of the adventurer who wishes to celebrate an "80th" birthday! It is also important to communicate at a level appropriate to the pupil's background and age. Whilst maximum intelligence and minimum knowledge should be assumed, the BI should avoid "talking down" to a pupil, and take care not to confuse either gender with technicalities or jargon!

2e(iv). What do they want from the experience?

These may range from a requirement for a smooth, unexciting flight, to someone who wants a thrill. To get maximum satisfaction, the holder of a PPL or other flying licence, should always be flown by a higher rated instructor. In general, the kind considerate approach will be most appropriate (and appreciated). Remember:

- Do not push a pupil into anything.
- Do not let a friend push a pupil into anything.
- Do not let anyone push **you** into anything beyond **your limits or experience**

2e(v). Early Flying Sensations

.Sensitivity to flying sensations is normal, but in some cases may be extreme. Increased "G" or a "banked attitude in turns" can both be very unusual to a pupil when compared to life at ground level. It is a change of state which can be most disturbing to a pupil at first, (although turning can be compared to leaning a push bike when cycling round a corner). The pupil should be warned of the sensations, and given assurances that everyone adapts quite quickly to gentle turns, and normal attitude changes

NOTE 1: All candidates should, before flying with pupils, read "Sub Gravity Sensations and Gliding Accidents" by Derek Piggott

NOTE 2: Stalling, reduced "G" and more extreme maneuvers will always be disconcerting to some people. In extreme cases even reduced "G" may completely disorientate a pupil – and result in irrational behavior.

2e(vi). Adverse P2 Reaction

In general, flights should be of limited duration. Prolonged soaring is seldom appreciated, especially if it entails a lot of continuous circling. Even someone on a first short flight, may be so disconcerted (or physically ill), to justify early abandonment of the lesson. Remember the “Trial lesson” is supposed to be an enjoyable experience!

NOTE 1: The following signs are indicative of a pupil beginning to feel unhappy!

- Silence!
- Inability to respond to questions
- Tense neck muscles
- Holding on
- Leaning away from the turn
- White and perspiring

NOTE 2: Fresh air will help if they are feeling ill, and a rapid but smooth controlled descent (70 knots and full airbrake) may be necessary. Be sympathetic and tactful;”Would you like to go down now” or if you more sure the pupil is not enjoying the flight “If you are happy, we will go down and land now”, should provoke a response.

NOTE 3: Rather than just pointing out places of interest, ask questions such as “Can you see out to the left...?” (This in itself invites a response which, if not forthcoming, may be the first hint that all is not well!)

2e(vii). Emotional and Psychological Considerations

Most people will do their utmost to conceal their innermost fears. (Signs of nervousness are sweating, hyper-ventilation, talking more than normal – although the latter may be a sign of over confidence).

NOTE 4: All pupil’s should gain from the confident approach to the flight from the BI, but could easily have their worst fears “confirmed” by a poor choice of words and phrases. Examples of poor phrases and suggested alternatives are:

2e(viii). Use the Right Phraseology!

a. “It’s only wood and fabric”. a. “Some parts look flimsy, but in fact the glider is immensely strong”

b. “If nothing goes wrong we will...” b. “We have a plan which is covered in the EVENTUALITY check”

c. “The nose drops...” c. “Rope breaks are extremely rare, but if we do have one ...the nose goes down”.

NOTE 5: Pupil’s should always be assured that they are being well looked after. Needless to say, the positive and decisive attitude of the BI to flying reinforces the pupil’s confidence, and **this confidence must not be abused**.

2f - Briefing 6 - Preparation for flight

2f(i). Pre Flight Important Detail

It is most important that the instructor prepares him/herself and the glider for the flight. Many accidents are caused by poor pre flight preparation. Factors to focus on could include:

- Aircraft serviceability DI
- Pilot weights – c of g position max all up weight
- Seating position – control accessibility
- Loose articles – cameras mobile phones etc.
- Cockpit check
- Eventualities
- Cable position
- Conflicting air traffic
- Weather

2f(ii). Airfield organization / launch point control

Make sure that visitors are either escorted to and from the launch point, or accurately briefed on the following:

- How to get to the Launch Point.
- Potential hazards en route.
- Keeping behind the glider to be launched.
- Are aware of the approach paths in use.
- The possibility of aircraft landing other than at the Launch Point.

2f(iii). Recommended weather minima

Conditions are not always ideal for introductory lessons **even if general club activity is continuing**. Whilst there are always those who will enjoy being thrown about whilst flying, the majority will not appreciate it. Situations best avoided are strong convection or turbulence, poor visibility, and any condition near the limits for flying. As you acclimatise to the flying conditions, it is all too easy to overlook a gradually deteriorating situation. If the first lessons are to be a pleasant experience, and value for money for the pupil**,** they must be conducted in appropriate weather conditions. A trial lesson by any category of instructor should be carried out whilst maintaining the lowest risk possible.

The following conditions are considered **inappropriate** for “Trial Lessons”.

DO NOT LAUNCH IF:

- Launching into cloud
- Launching in rain, or if the flight is likely to be in flown in rain.
- Launching with rain/snow/ice on the glider.
- Launching with misted canopy.
-

SEEK ADVICE FROM THE INSTRUCTOR IN-CHARGE BEFORE LAUNCHING IF:

- The wind is turbulent.(Varying by more than 10 kts).
- The wind is strong (< 20 kts)
- Cloudbase is less than 1200’
- Flight visibility is less than 5km
- Launching above more than 4/8th cloud

NOTE: All flights must be completed by time of official night.

2f(iv). Briefing the P2

Briefings should not be lengthy affairs and should be carried out outside the glider, so that face to face contact can be assured away from too many distractions. Briefings serve to prepare the pupil for the experience, make sure they understand what is going on and what is expected of them, including that they don't operate any inappropriate control. They also serve to prepare the instructor for the flight. Keep it simple. Points which may be covered might include:

Outside the glider, describe the type of glider, its construction (wood/ metal / GRP), and its country of origin. Identify the main parts of the glider, and explain how the controls achieve their effect. Check the weight of your pupil, making your own assessment if they seem unsure.

Note - If any doubt remains, organize to have them weighed, or carry extra ballast to make sure that the minimum loading is exceeded. In the case of children or other very small/light pupils, they may have to be carried in the rear seat. Consideration should be given to small pupils and children as to weather the parachute fits sufficiently well that it would be effective in an emergency. The prospective BI should consider younger pupils maturity and their ability to react confidently in the event of a bail out situation. The seating height governs the view the pupil has, and a good view reduces the possibility of motion sickness. Remember - you are flying illegally if outside the weight limits for the glider, and insurance may not payout in the event of a claim.

Alongside/In the glider, the following is likely to be included in your ongoing briefing;

- Wearing and adjusting the parachute.
- Removing the parachute.
- In the unlikely event of needing it, the use of the parachute and how to exit the glider in an emergency.
- Adjusting the seating. (foam must be firm / shock absorbing if used)
- Adjusting the harness. (Is it effective)?
- Areas in the cockpit for the pupil to hold on to if required.
- Controlling the canopy. (Emphasise – **Not** the pupil)!
- Operating the release. (Emphasise – **Not** the pupil)!
- How to exit the glider. (Who will get out first)?
- Loose articles – cameras etc – extreme caution.
- Handing over and taking control.
- Explain the basis of the launch and what to expect.

Inside the glider, reinforce how to get in and out, and assist the entry of your pupil. Help the pupil settle onto the seat. Explain again how to fasten, adjust and release the harness. Point out the canopy jettison, and summarise how to exit the glider in an emergency. Explain again to the pupil where to put their hands and feet. What can, and cannot be touched! Explain the controls the pupil will use, including how to hold the stick. Reinforce the handing over/taking over control, and explain the pupil will not follow through on either the launch, or the approach and landing. It is recommended that the pupils feet are well clear of the pedals during the launch / landing ('flat on the floor'). Having used this briefing to explain the risks and how together the instructor and student are mitigating them, don't forget that the student is there to have fun and enjoy the experience!

2g. Briefing 7 - Pre-Flight Checks and the Flight

Having strapped in, briefly explain your actions as you carry out your pre-flight checks. Once the checks are complete (including EVENTUALITIES), keep the interest of your pupil whilst the final preparations are being made. If for any reason there will be a long delay, it may be best to exit the glider until flying recommences. Hot cockpits = uncomfortable or nauseous pilots. Ballast – do you believe your student? Remember the earlier comment 'Outside the Glider'.

2g(i). Objectives of the Trial Lesson

- To perform a flight with the least risk possible
- To introduce the pupil to the sport of gliding.
- To demonstrate safe accurate flying techniques.
- To convince a pupil when appropriate that they could easily learn to fly.

2g(ii). In-Flight

Use appropriate elements according to type of trial lesson. Remember to keep the flight simple and as safe and risk free as possible

- General chat, (keeping interest focused outside the glider).
- Demonstration
- Pupil attempts exercise
- Decision between further attempt with patter, re-teach, or just look at the view!
- Careful choice of words to avoid "jargon" (or disconcerting language!)
- Advice "just in advance" of typical areas of flight which are potentially upsetting:
    - Bumpy ground run.
    - Noise.
    - High nose attitude on winch launch.
    - Noise of cable release.
    - Lowering the nose.
    - Opening of airbrakes.
    - Level of turbulence to be expected.

If the flying gets difficult, *KEEP QUIET AND CONCENTRATE!*

REMEMBER: **AVIATE NAVIGATE COMMUNICATE (**in that order of priority)

2g(iii). Flight Safety

Simultaneous flying and talking involves a higher than normal work load. There are additional pressures simply due to the presence of another person. This pressure could result in your failing to cope with a situation that you would manage easily when flying solo. If the situation does get difficult, KEEP QUIET, and fly the glider! Be aware of the responsibilities to your pupil, and fly well within the normal limits used when flying solo. If due to a large pupil the view from the rear cockpit is restricted, fly the glider from the front.

2g(iv). Post flight Discussion

Share in the experience with your pupil, chatting about the flight to release the built up elation. Answer any questions that arise about the flight, or gliding in general. (How to become a member!) After the flight, ensure the pupil is not abandoned. If you are unable to look after your pupil, make sure an enthusiastic colleague continues the good work already achieved! Remember, all "Trial Lessons" pupils are potential members!

2h. Briefing 8 - Sortie / Flight Planning

2h(i). The Trial Lesson

The trial lesson has to be designed to meet the needs of the pupil and has to be modified to take account of the conditions of the day. These conditions include the weather, the aircraft available, the launching system and the time available for the flight.

The basic instructor must identify the type of flight, such as initial flight experience, or that the pupil is at the start of training as a member of the club. This is necessary to be able to plan the flight and its content.

2h(ii). The Basic Requirements of the flight plan

The prime requirements of the flight plan are:-

- Safely completing the flight
- Content required
- Achievable Content
- Conduct of the flight

Taking each of these in turn:-

2h(iii). Safety

The safety of the pupil is paramount and if there is any factor that needs consideration with regard to the safety of the flight, there is no decision necessary - the flight should not take place.

In order to make the safety decision the following factors need to be considered;

- Are you current?
- Are you familiar with the aircraft?
- Are you current on the launch method to be used?
- Is the weather suitable (see Meteorological limits within these notes)? Are you easily capable to fly in todays conditions?

Some other challenges for consideration;

- Low Sun?
- Misting canopy?
- Are there adequate options available should a launch failure occur and are you current in handling launch failures in these conditions (no wind and a short runway can be very challenging)?
- Is there time available for the flight?

Flight with members of the public should be conducted so as to keep risk to the lowest possible. **If in doubt, Keep it safe!**

2h(iv). Required Content of the Instructional Flight

The content of the flight is determined by the needs of the pupil **NOT THE NEEDS OF THE INSTRUCTOR**. The needs will vary according to the type of pupil, an obvious statement, but often ignored by instructors. **The minimum content** is a safe flight including a launch, circuit, and landing, depending on the launch type and weather. In some clubs two circuits are considered as normal for a trial lesson so the flight planning will cover two flights not just one, reducing the urgency of a single flight. The teaching element of such a flight could be as simple as introducing lookout.

The next level is to allow the pupil to control the aircraft for part of the flight. This does not necessarily mean that it is necessary to carry out the full patter as described in the rest of this course, but a simplified approach is more appropriate using a ground briefing with practical demonstration, especially if two winch launch circuits are all that is available.

The more experienced pilot – Such as a power pilot or lapsed glider pilot will need more from the flight than the BI is permitted to give so an assistant rated or full rated instructor should carry out the flight.

2h(v). Achievable Content of the Flight

The content that is possible to achieve obviously depends on the launch method and the weather available, hill soaring etc. The plan of content can go wrong in a number of ways especially in marginally soarable conditions. It is in these cases that it is essential that the flight is not wasted by trying to soar and, as a result, running out of time and height in which to give something of value to the pupil or perhaps compromising safety. It is in these conditions that the instructor can get out of position, run out of options and with one additional distraction cause an accident. It is therefore prudent to decide to carry out the briefed plan and ignore the marginal lift. Of course if the lift is good, a limited amount of soaring will be practical, but remember that thermalling is a good way of making a pupil feel unwell.

2h(vi). How the Flight will be Conducted

Having decided that the flight is possible in safety, a plan of the flight/s can now be considered. If the flight is to be a pure air experience flight the pupil should be briefed accordingly with any limitations of the flight identified (e.g. “Today there is very little lift so we will be only able to do a simple circuit”).
In order to make sure that a safe circuit is possible at the end of the flight, all soaring or exercises should be carried out upwind and to one side of the launch run. Care should be taken to stay well within gliding range of the landing area so that at the termination of the flight a safe circuit can be achieved. A high well planned circuit will allow for alternative landing areas to be reached should the originally selected area become obstructed. Being too adventurous increases workload and in consequence increases risk. If hill soaring, in marginal conditions or with high congestion, exercises will have to be curtailed to reduce workload and the flight aborted, to maintain safety limits.
Remember you will be regarded as a good instructor if your pupil reaches the ground safely. Your skill in avoiding an accident in difficult conditions does not need to be tested EVER.
Having decided what is possible, advise the pupil, and carry out the pre-flight checks. If you are interrupted whilst doing pre-flight checks **stop and start again. Don’t rush it.**

Whilst conducting the flight, it is essential to keep one eye on the airfield and not get distracted to the extent that you find yourself on a marginal glide back to the landing area. Think about the wind direction and the general direction you want the glider to be heading. Conducting the elevator demo downwind from a low height may find you struggling to get back when you turn around!
Plan to land well into the landing area, do not try to land short or into a cul-de-sac. Always keep an alternative landing area available at all times. Higher steeper approaches are safer than low shallow ones and provide more options.
During the flight be prepared to modify the plan if conditions dictate but do not dither if you need to do something to bring the flight to a safe conclusion

Remember “**Aviate, Navigate, Communicate**”

2h(vii). Accident Statistics

To date the causes of accidents can be categorised as follows:-

- Preparation, Decisions, Techniques 68
- Shortening retrieves 13
- Adverse Conditions 16
- Ambitious Flight 7
- P1 not responsible 19
- Total 123
- The largest of these can be further broken down as follows:-
- Winch 22
- Pre flight Preparation 11
- Handling 19
- Stall/spin 5
- Circuit Plan 9
- Lookout 2

2h(viii). Conclusion

Good flight planning is essentially evaluating the situation, identifying the risk, and taking action to eliminate the risk. If a risk still exists the flight is ill advised and should not be attempted. Honesty is required since as you can see from the statistics the level of expertise and the foolhardiness of the instructor are the main causes of accidents. Trial lessons should be safe and losing the revenue from an ill advised flight is much better than the alternative. Our objective is to reduce trial accidents to zero as soon as possible.

Remember the old pilots adage "A superior pilot uses his superior judgment to avoid those situations requiring his superior skill."

3. The Basic Instructor Course – Practical Skill

Introduction
The tests specified in the Basic Instructor Record Card all have to be addressed and the course coach will brief the exercises to be flown on each flight. Those elements relating to flight safety are paramount and poor performance on these aspects will result in failure of the course. If the candidate is flying from a strange site a familiarization flight will be allowed to overcome nerves. The order of the exercises is determined on the day but all aspects will be covered. If it is possible to soar and lengthen the flight some of the patter elements may be included in this section. The areas to be tested are:

Preparation for flight – This must be thorough and complete
Flying Skills – must be good, precise, and safe.
Airmanship – must take account of all aspects of the flight.
Launch and launch failures – must be faultless. Any fault will result in automatic failure.
Stalling & further stalling- recognition of the stall and correct recovery action is essential, it is recognized that although the further stalling exercises are demonstrated by the candidate some coaching may be needed in this area.
Spinning & further spinning – Again recognition of the spin or spiral dive and the correct recovery action is essential but some coaching may be necessary for the other exercises
Fault finding – fault finding may be covered in the basic flying if time permits and the most usual pupil errors demonstrated to the candidate and practice at noticing these faults.

A Trial Lesson (including dealing with your students needs on the ground)
All aspects of the trial lesson will be coached and tested to achieve the required standard, including the following:

- Assessing your students needs 'on the day' – Formulation of flight content
- Airfield and flight briefings for students 'on the day' – Appropriate to the situation and student
- Preparation for flight with a pupil – care of the pupil and safety aspects are to be tested e.g. security, control interference, etc.
- Patter – all the patter exercises will be covered, not necessarily in the context of a trial lesson although the final trial lesson will cover some of the exercises.
- Sortie Planning – planning of a safe flight with recovery to the airfield will be examined.
- Care of the Pupil – the correct handling of pupils will be examined

Final Course De-Brief.
At the end of the course the BI Coach will reinforce the following points:

- Privileges of a BI.
- Limitations and responsibility of the rating.
- Any areas of the course that the candidate requires either reinforcing or a further explanation.
- Where to go from here regarding paperwork. – The BGA must have received the paperwork from the candidate, completed, before starting to instruct.

APPENDIX 1
PATTER NOTES FOR THE BI COURSE

INTRODUCTION

1. Learning to instruct can be challenging. There are of course, different aspects of the art, and some of these can only be developed as a result of practical experience. You need to first understand the methods used, and this will depend on whether the pupil is learning a skill, or developing the ability to make correct judgment.

2. The normal framework used when teaching any SKILL is to:

- Give a demonstration with a verbal accompaniment (teach)
- Task the pupil
- Analyse the attempts of your pupil, giving guidance as required (prompts).
- Re-teach if necessary.
- Debrief.

Remember – a picture is worth a thousand words

3. This next section deals with the important aspect of teaching basic flying skills. It includes the demonstrations with the accompanying “patter”.

HOW MUCH PATTER?

4. When a flying skill is being taught, the instructor is constrained in what he / she can say by the rate at which the aircraft responds to the controls. Normally when wire launching (due to the height achieved on the launch), there is limited time available to attempt the exercises. The patter must therefore be concise, and timed accurately to coincide with the movement of the glider. Conciseness may be achieved by learning the patter word for word, linked with an appreciation of the other critical factors, timing and emphasis.

I’M NOT A PARROT!

5. The thought of learning the patter in this way may offend you. You perhaps imagine that you will end up sounding like a parrot perched on the shoulder of your pupil! Experience has shown however that learning the patter verbatim does give you **a base from which to develop a more personal style**, with a greater variety of words and phrases.

WHY BOTHER?

6. Developing a form of patter is fundamental to becoming an instructor. Having the patter at your command does give certain extra benefits. It also helps to keep the BI standard, making it possible for a pupil to fly with different instructors and receive “the same story”! The demands on your concentration are also less, enabling you to give much more attention to the airmanship aspects.

7. On your BI course, you will need to show that you know the techniques, the principle involved in instructing, timing, and emphasis – as well as the correct choice of words.

8. Each exercise will be attempted, usually in a logical order in which they appear in this section. You will not normally progress to the next exercise until you are competent in the last.
As stated elsewhere, if you learn the patter in advance, you can expect to achieve a much higher standard on the course.

HOW DO YOU LEARN THE PATTER?

9. How you learn the words is up to you. One method is to practise the words using a tape machine, and when fluent, fly in a two seat glider to practise with an experience instructor. It is essential the experienced instructor himself is standardised from these notes – his / her role should be one of guidance. If you say anything incorrectly, or have used phrases in the wrong context, they will re-teach. Note how they achieve this! You will be able to model yourself on this technique! Remember PRIMACY. (Once learned incorrectly, it is difficult to eliminate unsuitable patter).

TIMING

10. In order to achieve co-ordination between the control movements and the patter, it will normally be necessary to start with the patter before the control input. This allows time for the student to become aware of the impending action!

DEVELOPING GOOD HABITS

11. In these notes reference is constantly made to the "Laws of Primacy". Psychologists have been able to identify a number of the "Laws in relation to the process of learning". One of the most important states that initial impressions are likely to be the most enduring, and that good or bad habits, formed at the earliest exposure to a particular situation, are extremely difficult to change.

RATE OF PROGRESS

12. The patter suggested here has been arranged in sections considered suitable with an average pupil to the normal winch launch situation. When instructing in the future, you will learn to adapt to the circumstances in which you find yourself. It may, for example, be possible to run several lessons together in one flight. Or it may be necessary to re-arrange a lesson into several smaller components. The over riding principle must be that the pupil is coached at the correct rate**. All too often a pupil becomes confused, by being pushed along too fast by a well meaning instructor intent on giving "value for money".**

JARGON (The choice of words)

13. The dictionary defines jargon as, (amongst other things), "mode of speech full of unfamiliar terms"**.** Certain words used in an aviation context may be unintelligible to a lay person. Every effort should be made therefore, to ensure that the student knows exactly what a particular word, term or phrase means. The following examples indicate the problem:

a. ATTITUDE. As you know, this word is often used to define the relationship between the nose of the glider and the horizon, as seen from the cockpit. Hence "normal gliding attitude" implies a constant relationship between the nose of the glider and the horizon. But, without having been told otherwise, the pupil might take it to refer to the relationship between himself and the instructor!

b. ALTITUDE. Why not say height? Strictly speaking, height is the distance from the ground and altitude the distance above mean sea level.

c. FOLLOW THROUGH. Meaning "Place your hand (and/or feet) on the controls as directed, and when that control is moved, do not resist the movement". The purpose of "follow through" is to give the pupil a first approximation of the degree and rate of control input, as well as a sense of involvement or participation.

d. PITCH, ROLL AND YAW. The dictionary definition of pitch is “to plunge (as a ship) in a longitudinal direction”. Use of terms such as the nose rises, or “the nose goes down”, are no less concise or explicit than “the glider pitches nose down/up”. Similarly roll and yaw, although understood by sailing and flying enthusiasts, may not be clear in their meaning to the average ab-initio pupil.

e. ELEVATOR, AILERON, RUDDER. The names of the control surfaces are a part of your every day terminology, but are these words clearly understood by the pupil? They must learn both the names, and their effects.

f. BANK. The word bank, (which is a steady state), is the condition brought about by rolling.

CHOICE OF WORDS

14. The right choice of words is important. Particularly in the first exercises, there are a number of options and some phrases are more desirable than others. Examples are:

a. “MOVE/EASE”. When describing control column movements the word “move” has been used. A common alternative is the word “ease”, which implies the need for gentle movements. This could be over-emphasised as in the phrase, “ease the stick gently forward”, which could actively discourage positive use of the controls.

b. “PUSH/PULL”. In contrast “push” or “pull” may result in over-harsh use of the controls. ‘Move’ reinforced by a positive action during the lesson, should achieve the desired result.

c. “LOWER/GOES DOWN/DROPS”. Description of the response of the glider to the various control inputs should also be considered. “The nose goes down” is interchangeable with “the nose lowers”. The word “drops” would be a bad choice in the context of control movement, having associations with falling or losing control, but would be appropriate in the stalling exercise.

d. “CENTRALISE”. This doesn’t always exactly describe the actual movement of the controls, but is used in the interests of brevity.

e. “YOU HAVE CONTROL”. The full significance of this phrase must be considered. The new instructor may be quite nervous when letting someone else fly the glider. This is not surprising, since they have been at the controls in all their previous flying experiences as first pilot! Remember interference with the controls may confuse the pupil, causing the pupil to lose confidence, and any tendency of the instructor to do this must be suppressed. For ALL pupil attempts the Instructors hands and feet must be clear of the controls. If you feel the need to interfere with any control, it is better to tell the pupil you are taking control, and then sort out the problem.

WHY PATTER NOTES?

15. The patter notes serve three purposes:

a. Provides the words that you will be required to learn and subsequently link to structured flying demonstrations – in other words, teach an airborne skill. These words (the patter) are displayed in the left hand column.

b. To give a deeper understanding of the exercise, the right hand column contains remarks connected with the patter. It also emphasises points of particular importance, such as choice of words, the required emphasis, teaching techniques and airmanship. The right hand column will assume greater significance once you have had some practice at the air exercise.

c. To serve as a summary, to remind you of the points to be covered in a briefing before the exercise, or as a reinforcement after it has been completed.

THE PATTER

The aim of the following exercises is to bring the trainee to a stage where he can use all three flying controls. At the same time the fundamentals of airmanship will be taught. The exercise "lookout" is of course, like most flying exercises, in practice divided into several stages to make all the relevant instruction easier to assimilate.

Please remember that;

- The student is flying because it's fun and will become demotivated if the flight becomes a chore
- Make sure the student understands your handover and takeover commands before you get airborne!
- Teach then task, hand over and monitor your student's efforts. Then take over, praise, task a bit more, and so on – all flying exercises need to be broken down into digestible, bite size chunks including student practice. In the early stages, prompts aside, your student can only really take on board your comments if you are in control.

Lookout *While flying, we must always keep a good lookout. Help me with this. Scan the field of view, pausing from time to time, looking both above and below the horizon as well as on it. Whenever you see another aircraft or glider, tell me. I'll do the same……*	Good airmanship is fundamental to survive; hence lookout is introduced before flying skill. Introducing lookout from the outset should mean that the trainee will be scanning effectively by the time he is taught turning.
Elevator *Now I will show you how the controls work. First, elevator.*	Start the demonstration with the glider in the normal attitude.
Follow through on the stick. Look ahead over the nose and see the relationship between the nose and the horizon, or the amount of ground in view. It remains constant. This is the normal gliding attitude.	This covers conditions of both good and bad visibility, as well as the in-between case.
When I move the stick forward a small amount……..……The nose of the glider goes down. *More ground comes into view; the glider takes up a new attitude and the speed increases.*	Not so much to alarm the trainee. Alter the attitude to give a speed change of about 10kt. The trainee will not be aware of the attitude/speed relationship, but the Law of Primacy suggests that this should be introduced at the earliest opportunity.
When I move the stick back again, the nose rises, there is less ground in view and we begin to slow down. We are in another attitude.	But not to the point of stalling the glider – yet!

If I move the stick back more the nose rises, but then goes down again by itself. I must move the stick forward to regain speed. Now I'll return the glider to it's normal attitude. In fact, that was a stall!	Teaching at this stage that moving the stick back doesn't always raise the nose is a primacy issue. But don't frighten the student!!
The attitude is constant and the speed is steady. I'd like you to try that. You have control.	Make sure its clear exactly what you are asking the student to do!
I have control.	The trainee should be encouraged to respond *I have control*. Prompt a trainee's attempts if necessary, and ensure that he stalls and recovers. Remind the trainee to let go of the stick.
Ailerons *Now I'll show you the effect of the ailerons and how we roll the glider.*	
Look ahead and see that the cockpit edge is symmetrical, with the horizon. The wings are level.	The trainee should have been briefed on the jargon words.
If the wings were not level then the view ahead would look like this.	
Follow through on the stick.	
Lookout *Make sure that it is clear to the left. Look as far round to the left as you can.* *Remember to tell me if you see any other aircraft.* *Now look back over the nose.*	Sufficiently far round to see the tailplane – concentrating the lookout in the critical area
Ailerons – continued *If I move the stick to the left, the left wing goes down.* *It continues going down until I centralize the stick. The glider is now banked and therefore turning.*	Aim to achieve a positive angle of bank (about 30°) at a roll rate which is easily observable. Be ready to compromise if the trainee is especially nervous. While the word 'centralise' may not be strictly correct; it is used here in the interests of brevity.
To maintain the attitude I need to apply a slight backward pressure to the stick.	
To raise the wing I move the stick to the right and centralise it when the wings are level.	
As the wings come level I relax the backward pressure to maintain the correct attitude.	

Now you try.	Task the student carefully – rolling to a banked attitude, briefly holding it there and rolling wings level is a reasonable starting point. If the student is very under-confident, starting from a banked attitude and rolling to wings level is a very simple task.
You have control	The trainee should respond with *I have control.*
The rudder is not for turning the glider	
Now I'd like to show you that the rudder is not for turning the glider. It yaws the glider	
Follow through. Feet on the rudder pedals.	
Notice that we are flying along this road. (Line feature)	There is little point in teaching this if there is no suitable line feature.
If we press the left pedal the nose of the glider yaws left but, as long as I keep the wings level, the glider continues to travel in the same direction.	
When I centralise the rudder the nose yaws back to point in the original direction.	
The rudder yaws the glider and does not turn it.	
Now you try. *You have control of the rudder (only)*	Instructor tasks the student to yaw left/right and back to neutral etc (instructor will find that his holding the wings level during early student practice will help!)

End.