British Gliding Association
Cross Crediting – Air Cadets Solo Standard to BGA Equivalence

Notes for BGA instructors

Introduction

The Air Cadet movement in the UK sends many hundreds of students solo each year. Many of these young pilots are lost to aviation completely after their involvement with the Air Cadets. The BGA and the Air Cadets have written this document to aid the transition from Cadet to 'Sport Gliding'.

This document should be used as guidance in conjunction with the BGA syllabus as laid down on the BGA website. Post solo training including any conversion briefing and flying should be carried out with reference to the BGA syllabus and according to the BGA instructor's manual.

General

The air cadets are taught to fly using very conservative techniques to achieve essentially one aim, ie rapid progress to solo standard. Much of the training is prescriptive and flown very much by numbers using less judgement than in sport gliding where all pilots are expected to move on from solo. When converting solo cadets to sport gliding techniques, all the BGA exercises must be covered to make sure that the student displays sufficient judgement and skill at all times. This document constitutes useful guidance only.

Pilots Details

Pilots Name	
Email Address	
Date Joined Club	
Previous or current Air Cadet Gliding Unit	

Exercises and Briefings	Differences (Solo Air Cadet Motorglider)	Differences (Solo Air Cadet unpowered Glider)	Training to be carried out	Instructor Signature & Name
Airfield Supervision	Air cadets are taught in a very structured and controlled environment which does a great job of getting the students to solo standard in the minimum of time. If that young person joins a 'sporting' gliding club, they may be unaccustomed to the relaxed nature of the organisation. They may need to be supervised carefully for the first few days onsite until they realise who they can ask for advice and what activities they can take part in on the ground. Indeed they will need a briefing on what they are expected to help out with.	Air cadets are taught in a very structured and controlled environment which does a great job of getting the students to solo standard in the minimum of time. If that young person joins a 'sporting' gliding club, they may be unaccustomed to the relaxed nature of the organisation. They may need to be supervised carefully for the first few days onsite until they realise who they can ask for advice and what activities they can take part in on the ground. Indeed they will need a briefing on what they are expected to help out with.	Airfield and environment training	

Type Specific Differences	Students are trained almost exclusively on the Vigilant (Grob 109 Motorgliders) If your club uses different aircraft, you may want to discuss similarities and differences between the two aircraft, and how to enter / exit. Additionally a type specific safety brief will be required covering emergency egress both on the ground and in the air.	Students are trained almost exclusively on the Viking (Grob 103) If your club uses different aircraft, you may want to discuss similarities and differences between the two aircraft, and how to enter / exit. Additionally a type specific safety brief will be required covering emergency egress both on the ground and in the air.	Type specific training	
Pre Flight Checks (CBSIFTCBE)	Air cadets are taught to use FRC's (Flight reference cards), and will not be used to our check regime.	Air cadets are taught to use FRC's Flight reference cards, and will not be used to our check regime.	Standard Checks taught	

Effects of controls	The student will probably not be used to other types of glider and the control Coordination / Effectiveness. Air cadets are taught effects of controls in such a way that the outcome should produce similar results as the sport glider pilot. Cadets will typically under-rudder when rolling until they get used to new aircraft.	The student will probably not be used to other types of glider and the control Coordination / Effectiveness. Air cadets are taught effects of controls in such a way that the outcome should produce similar results as the sport glider pilot. Particular attention will need to be given to the airbrakes. In the G103 the airbrakes make the nose pitch down when opened, to roughly keep speed constant given the extra drag. In some other types, the airbrakes make the nose pitch up! The trim in the 103 is a spring. A tab trim will have a different feel / effectiveness.	Test / Train as appropriate	
Stalling	Although stalling is taught thoroughly, the 'stalling speed increases in a turn', 'High speed stall', and 'Lack of elevator effect at raising the nose at the stall' further BGA stalling exercises are not taught. These will need teaching before the pupil flies solo at a BGA club.	Although stalling is taught thoroughly, the 'stalling speed increases in a turn', 'High speed stall', and 'Lack of elevator effect at raising the nose at the stall' further BGA stalling exercises are not taught. These will need teaching before the pupil flies solo at a BGA club.	Further stalling taught	
Spinning / Spiral Dives	The Air Cadets do not teach spinning to pre solo students at all, so the full spinning and further spinning syllabus will need to be covered. As always, spiral dives should be covered in conjunction to differentiate the symptoms and recovery, although this aspect is part of the Air Cadet effects of control exercises.	The Air Cadets do not teach spinning to pre solo students at all, so the full spinning and further spinning syllabus will need to be covered. As always, spiral dives should be covered in conjunction to differentiate the symptoms and recovery, although this aspect is part of the Air Cadet effects of control exercises.	Spinning and further spinning taught.	
Landing	Cadets used to flying motorgliders may well round out too high.		Assess students ability to land specific aircraft.	
Aerotowing	Obviously if a cadets sole experience is on Vigilant motorgliders, no aerotowing will have taken place.	The Air Cadets primary method of launching is by Winch. Senior cadets may have experienced an aerotow for positioning flights, but this is rare.	Aerotowing taught if applicable	

Winch Launching / Launch Faliures	Once again, If the student has only flown motorgliders, he or she will have no experience of the winch launch method.	Safe winch launching speeds for the G103 are mentioned in Cadet training material – pupils will be unused to other limits / guidelines. Pupils will not be used to keeping their hand on the release during the first part of the launch. Sport gliding may use a different method of assessing climb angles whilst carrying out a winch launch. Winch launch failures are taught along similar lines to the sport gliding syllabus. Cadets are taught to pull the release twice while checking for recovery / approach speed after lowering the nose. They are taught if they cannot land ahead, to turn downwind until boundary is reached or 250', then turn into wind and land. We need to teach a little more flexibility and judgement for our smaller airfields.	Train Winching differences as appropriate.	

Approach Control	The Air Cadets still use 'Aiming Point' – students may be confused when sport glider pilots use 'reference point'. The cadets still use similar techniques to achieve the same aims however. Cadets are not taught to 'spot land'. A landing on the designated landing area suffices. The Air Cadets teach an alternative method for students who are having trouble with the conventional approach control technique, which involves waiting for the start of the landing area to disappear under the nose, then selecting half airbrake down to the ground unless the start of the landing area appears again. This technique is fine at the large airfields used by the cadets, but may lead to trouble at some smaller BGA sites, and does not address the sport glider pilots aim of landing in a specified area. It should be established if this method has been taught, and, if so, convert the student to the reference point method.	The Air Cadets still use 'Aiming Point' – students may be confused when sport glider pilots use 'reference point'. The cadets still use similar techniques to achieve the same aims however. Cadets are not taught to 'spot land'. A landing on the designated landing area suffices. The Air Cadets teach an alternative method for students who are having trouble with the conventional approach control technique, which involves waiting for the start of the landing area to disappear under the nose, then selecting half airbrake down to the ground unless the start of the landing area appears again. This technique is fine at the large airfields used by the cadets, but may lead to trouble at some smaller BGA sites, and does not address the sport glider pilots aim of landing in a specified area. It should be established if this method has been taught, and, if so, convert the student to the reference point method.	Assess and teach BGA approach control method	

Circuits	The training for the cadets in motorgliders is described by reference points, angles and heights. The normal circuit taught is a racetrack shape with continuous gentle 180 degree turns at each end. An alternative 'square' circuit is taught at airfields that demand more conformity. Heights, RPM's and speeds are fairly rigidly conformed to. Although this experience is useful, the 'sport glider pilots' circuit as used at BGA clubs should be taught completely afresh. Obviously, the sport glider pilots aim is the ability to land the glider anywhere – ultimately leading to the skills to enable the student to outland in a smallish field if necessary. The student should be taught the judgement skills and references required to achieve this – and without reference to the altimeter.	The cadets are taught to fly circuits very much 'by numbers'. Ground features are used extensively during the circuit, and procedures are followed with constant reference to the altimeter to ensure a safe landing back at the airfield where the glider was launched. The glider is normally the same type, so performance is also a constant. Although this experience is useful, the 'sport glider pilots' circuit as used at BGA clubs should be taught completely afresh. Obviously, the sport glider pilots aim is the ability to land the glider anywhere – ultimately leading to the skills to enable the student to outland in a smallish field if necessary. The student should be taught the judgement skills and references required to achieve this – and without reference to the altimeter.	Teach circuits based on judgment, after a thorough brief on differences.	

	Pilot Name	**Pilot Signature**	**Date**
I confirm that I have received and understood this training			