



# ***CATEGORY SYSTEM TRAINING MANUAL***



# Table of Contents

Table of Contents .....	i
British Skydiving Manual Update Policy .....	iii
<b>Introduction .....</b>	<b>1</b>
<i>British Skydiving Basic Instructor Courses &amp; Requirements to Attend</i> .....	1
<i>Application</i> .....	2
<i>Preparation</i> .....	2
<i>Category System Basic Instructor Course Syllabus</i> .....	3
<i>Course Reports</i> .....	3
<i>The CSBI Probationary Period</i> .....	4
<i>Summary</i> .....	4
<b>Section 1: The Category System .....</b>	<b>5</b>
1.1 <i>Stages of Learning</i> .....	5
1.2 <i>The Rate of Progression</i> .....	6
1.3 <i>Training</i> .....	6
1.4 <i>The Eight Categories and their Requirements</i> .....	6
1.4.1 <i>Category 1</i> .....	6
1.4.2 <i>Category 2</i> .....	6
1.4.3 <i>Category 3</i> .....	6
1.4.4 <i>Category 4</i> .....	7
1.4.5 <i>Category 5</i> .....	7
1.4.6 <i>Category 6</i> .....	7
1.4.7 <i>Category 7</i> .....	7
1.4.8 <i>Category 8</i> .....	7
1.4.9 <i>Additional Canopy Training (CT)</i> .....	7
1.4.10 <i>General</i> .....	8
1.5 <i>British Skydiving Category System requirements &amp; Coaching points</i> .....	9
<b>Section 2: Training Syllabus .....</b>	<b>13</b>
2.1 <i>Orientation &amp; Documentation</i> .....	14
2.2 <i>Familiarisation with and Fitting of Equipment</i> .....	17
2.3 <i>After Landing Procedures</i> .....	20
2.4 <i>The Stable Position</i> .....	20
2.5 <i>Aircraft Drills and Emergency Drills</i> .....	20
2.6 <i>Malfuncions and Reserve Procedures</i> .....	22
2.7 <i>Canopy Control and Flight Drills</i> .....	23
2.8 <i>Abnormal Landings</i> .....	25
2.9 <i>Landings, including practical Parachute Landing Fall (PLF) training</i> .....	25
2.10 <i>Written Examination</i> .....	25

2.11 Summary .....	26
<b>Section 3: Lesson Plans .....</b>	<b>27</b>
<i>Training Syllabus Lesson Plans including Canopy Training (CT) .....</i>	<i>29</i>
.....	<b>52</b>
<b>Section 4: Aircraft Loading &amp; Student Talk Down Procedures .....</b>	<b>53</b>
<b>List of Appendices.....</b>	<b>57</b>
<i>Category System Basic Instructor (CSBI) Proficiency Card .....</i>	<i>59</i>
<i>Category System Instructor (CSI) Proficiency Card .....</i>	<i>61</i>

## British Skydiving Manual Update Policy



The British Skydiving Category System Training Manual is updated periodically. As British Skydiving rules are continually evolving, the primary operational document, the British Skydiving Operations Manual, is regularly updated at meetings of British Skydiving Safety & Training Committee which are held every two months.

Therefore, in the case of any conflict between rules or requirements set out in the British Skydiving Operations Manual and any other British Skydiving manual, the provisions in the British Skydiving Operations Manual shall always have primacy as the definitive statement of the current position.

© 2023 British Parachute Association Limited trading as British Skydiving. Material in this publication may be freely reproduced for non-commercial purposes providing the source is acknowledged.

Current amended paragraphs will be marked by a vertical line on the right-hand side of the page. |

British Skydiving is the trading name of British Parachute Association Ltd. A company limited by guarantee.  
Registered in England & Wales no 875429. Registered office: 5 Wharf Way, Glen Parva, Leicester LE2 9TF.



## **Introduction**

This manual has been produced to assist Parachute Training Organisations (PTOs), Chief Instructors (CIs), Category System Instructors (CSIs) and Category System Basic Instructors (CSBIs) produce Lesson Plans, Standard Operating Procedures (SOPs) for the safe operation and training of Category System Students. This manual may also be used as a study guide for those members wishing to become Skydiving Instructors.

The role of an instructor is to teach, guide and mentor their students, ensuring the minimum requirements for the Category System Training syllabus are covered, as laid out in Section 2 of this manual, so that a safe and proficient standard is reached before the student undertakes their first solo parachute descent.

This Manual also provides an overview of British Skydiving requirements and a brief introduction to the Category System Basic Instructor (CSBI) Course.

Should you have any suggestions for amendments, you may wish to present these to your Chief Instructor or directly to British Skydiving's Safety & Technical Officer at [jeff@britishskydiving.org](mailto:jeff@britishskydiving.org)

### ***British Skydiving Basic Instructor Courses & Requirements to Attend***

To become a Category System Basic Instructor (CSBI), the candidate must fulfil all the requirements of a CSBI Course which are laid out below. These may also be found in Section 4 (Instructors) of the British Skydiving Operations Manual.

Required qualifications to attend:

1. A British Skydiving 'C' Licence.
2. Two years involved in Skydiving,
3. A written recommendation by a CI who has known the candidate for a minimum of six months and has seen him/her regularly skydiving during that period.
4. Holds a current 'Solo Skydiving Instructor Medical Certificate/Doctor's Certificate' (Form 116A).
5. Holds a British Skydiving Packing certificate.
6. Completed and fulfilled the requirements of the British Skydiving CSBI Proficiency Card ([Form 254a](#)).
7. At the start of the course, the candidate must have completed 60 descents in the previous two years.

Will be required to attend a CSBI Course of up to a week in length organised by the Safety & Technical Officer (STO) or Chief Operating Officer (COO).

After successfully completing the CSBI Course, the candidate will be awarded CSBI status, and will be permitted to instruct/coach (Category System) Student Skydivers, under supervision.

The CSBI rating is valid for a period of twelve (12) months from the date of issue.

CSBIs may dispatch and supervise AFF Students on Consolidation jumps, following a brief by at least an AFFI (logbook endorsement). CSBIs may only follow out Consolidation students after successful completion of their Level 8.

Discussion should ideally take place between the Chief Instructor (CI) and the potential Instructor to ascertain whether it is worthwhile for the latter to undertake:

1. A week for the BI Course.
2. A great deal of time over a period of up to a year for structured training and experience.
3. A further week on the CSI Course.

The requirements to attend a CSI course are also found in Section 4 (Instructors) of the Operations Manual. Becoming a British Skydiving Instructor is quite a commitment and should not be undertaken lightly. The CI should also consider in the light of this whether the candidate has the potential ability to be successful. Whilst a 'C' Licence holder is the minimum parachuting experience required the candidate should be a competent all-round skydiver; they will certainly not be able to teach if they cannot do it themselves.

### ***Application***

Application to attend a BI Course must be made as far in advance of the course as possible, as there are usually many candidates applying. Any candidate wishing to apply for a British Skydiving Basic Instructor course must ensure they meet all the requirements to attend. This should initially be done by the CI or candidate (with CI's approval) contacting British Skydiving HQ and provisionally booking a place on the Course required.

The candidate will then be sent [Form 183](#) (Instructor Course Application Form/CI Recommendation), which should be completed and returned to the British Skydiving HQ along with payment details for the administration fee. The cost for the administration fee is £150, however this may change in subsequent years.

Further information will be sent out to the candidates as part of the joining instructions once they have a confirmed place on a CSBI Course.

### ***Preparation***

Before the course, candidates should be carefully assessed by their CI as to their suitability to hold an Instructor's rating, and should have received basic instruction in the following:

1. Teaching techniques for classroom and practical periods.
2. Preparation of lesson plans.
3. Manufacture and use of training aids.

Candidates should also have had some basic dealings with Student Skydivers, which could concern involvement in initial documentation, manifesting and marshalling, packing, DZ Control, etc. Candidates should become familiar with the proficiency card required to attend a BI course and start the work towards completing the minimum requirements detailed on the proficiency card.

The proficiency cards were introduced in June 2014, as a result of a review of the training conducted on Basic Instructor courses. By completing the minimum requirements on the proficiency cards, candidates should be better prepared when attending a British Skydiving Instructor course. The Proficiency cards (forms [254a](#) & [254d](#)) are included in this manual and can also be found on page 57 & 59 of this manual.

Candidates will also find it advantageous to have a good knowledge of the British Skydiving Operations Manual. This can be downloaded from the website.



## ***Category System Basic Instructor Course Syllabus***

The Training syllabus listed below is delivered to all CSBI candidates that attend a British Skydiving Basic Instructor course.

1. Opening Address
2. Responsibilities and Qualities of a British Skydiving Instructor.
3. Methods of Instruction
4. Specimen Lessons.
5. The Training Progression (Category System, Tandem & AFF)
6. Briefing and Debriefing of Student Skydivers.
7. Equipment – Basic Maintenance and Fault Finding.
8. Parachute Training Organisation (PTO) Management.
9. Flying for Skydiving.
10. Radio Procedures.
11. Basic Meteorology.
12. Display Skydiving.
13. Incident Procedures.
14. Static Line Procedures.
15. Assessment of Practical Dispatching.
16. Assessment of Personal Skydiving Skills.
17. Discussion Periods.
18. Teaching Practices on classroom and practical periods.
19. Written Test (at the end of the week).

*N.B.(1) The Training Syllabus for Category System Basic Instructors can be found on [Form 151](#)*

### ***Course Reports***

As part of the closing phase of a basic Course, candidates receive a verbal summary of their course report. This presents an opportunity for candidates to ask the course Examiners any questions relevant to their performance and provide feedback on their experience during the week. Candidates and their CI will both receive a digital copy of their course report which details areas of performance, such as, the written examination result, teaching practices and briefs delivered by the candidate and highlighting any areas where improvement may be required. Once the CI receives the candidates course report, it should be discussed with the BI so that they may benefit from it.

## *The CSBI Probationary Period*

Once a candidate has completed the basic course and the Examiners have deemed the candidate to be successful, they will be given a time period in which the candidate must work under the supervision of their CI or CI nominated Instructor. This time period is known as the probationary period, where CSBIs can work with real students for a set period of time. Probationary periods can be from a minimum of six months and up to maximum of twelve months. However, candidates and CIs should be aware that a CSBI rating is only valid for twelve months from the date they complete their Basic Course, and they must attend their CSI Course within the twelve months. Extensions for CSBI ratings may be considered on application to British Skydiving Safety and Training Committee (STC). Once a CSBI has completed their probationary period, they may apply for the CSI course once their CI deems them ready.

CSBI's should be carefully guided through there probationary period with detailed critiques on their instruction (please not in front of Students!). During the probationary period, a CSBI may carry out most tasks of a Category System Instructor (CSI) but only under supervision.

A CSBI is a considerable addition to the workload and responsibility of a CI and this should not be undertaken lightly. Throughout the probationary period, candidates must ensure that they fill out their CSI proficiency card and this will be submitted along with the CI's recommendation detailing the work carried out by the CSBI and submit the proficiency card to the Instructor Examiners (IEs) conducting the CSI Course. The candidate should be made aware that failure to obtain a 70% pass mark on the written examination when attending the CSI Course, will result in the candidate not being permitted to complete the full CSI course.

## *Summary*

British Skydiving's system for training and qualification of instructors is a robust one, but only if implemented properly. The obtaining of an Instructor rating is a privilege, holding a large responsibility and can only be the result of considerable practice, hard work and a constant awareness of many responsibilities, both by the candidate and CI alike.

## **Section 1: The Category System**

The prime consideration of the British Skydiving's Category System is to provide a solid foundation of free fall ability through a series of progressive exercises upon which to build an all-round competence which enables the well-trained jumper to perform with freedom and safety.

The Category System training method progresses students through eight categories of proficiency (1-8) to qualify them for their British Skydiving "A" Licence. Students are also required to take a Canopy Training (CT) written examination before applying for their A Licence. Each student completes a series of required skills and knowledge sets while making the required training jumps in each category. At the end of each category, a student will have achieved certain skills and knowledge. The number of jumps to complete each category will depend on the student's performance and completion of the requirements laid down in the Operations Manual, Section 2 (Designation and Classification of Skydivers), Paragraph 4 (The Category System).

### **1.1 Stages of Learning**

Before moving on to the skills appropriate to each individual Category, let's consider a broader subdivision of the training system into two separate phases.

#### ***Stage 1: Categories 1-6 (Ground Training to 15 second delay)***

The Student Skydiver learns to exit an aircraft in a stable position and remaining on aircraft heading. This ability is achieved by three things. Adopting an arched and symmetrical body position and by good presentation to the relative airflow. The student must be able to perform a good exit counting throughout and learn to gain stability by arching and not attempting to gain stability by swinging arms or kicking legs.

Even during this phase, however, the importance of correct arm and leg positioning must be emphasised in order to ensure body symmetry is maintained, i.e. that no backsliding or inadvertent forward movement is induced. In the initial stages, the barrier to progress is fear. It is only when the Student Skydiver has gained confidence in the air, that they can begin to learn control and attempt elementary manoeuvres.

This confidence is gained by the successful completion of specified exercises and the continued propensity of their main parachute to open. Once the Student Skydiver has achieved this stage of confidence coupled with an ability, accurately to count off fifteen seconds, and been introduced to the use of an altimeter in free fall, then they may be deemed ready to progress to the secondary learning stage, skills of which are based on an increased awareness of the airflow.

#### ***Stage 2: Categories 7 and 8***

It is during this phase, where the Student Skydiver has learned to maintain body trim after the more relaxed position learned, that horizontal and vertical axes control is acquired. Confidence is gained when the ability to turn and to re-stabilise from a deliberately induced instability exercises is learned. The Student Skydiver is ready to learn back loops and maybe forward loops and barrel rolls.

The final demonstration of efficient utilisation of airflow in this stage, is achieved when the Student Skydiver can generate sufficient lift by changing their body position to enable them to track. Concomitant with these stages of learning there should develop an awareness of elapsed time in free-fall and a continuing improvement in canopy handling skills.

## **1.2 The Rate of Progression**

The rate of progression depends upon several factors, currency probably being one of the most significant whatever stage the jumper is at. Twenty jumps made in a week will be far more beneficial in terms of progress, than the same number carried out over an extended period.

It is the responsibility of the Instructor to accurately observe each descent, analyse, correct any faults and decide when, subject to the constraints of the system, progression to the next stage is appropriate.

## **1.3 Training**

A realistic objective must be given to each exercise and sufficient time allowed for its completion. Too little time will lead to the exercise being rushed whereas too much time will lead to a false sense of the tempo required. A certain amount of pressure is necessary to provide stimulus for action. If a Student Skydiver cannot practice something accurately on the ground, they may struggle to do it in the air.

When a student completes the requirements for each category, the Instructor must record it on the student's training record card. Any negative comments also need to be annotated within the training record card and the student should not be progressed until they have completed the requirements.

You must also remember that as part of any progression to the next category, revision and instruction of emergency drills and procedures must take place.

The Category System is broken down into 8 Categories. The breakdown of the different categories is laid out below as per the Operations Manual and therefore are the minimum requirements for completing the eight categories.

PTOs may wish to enhance their requirements by changing the amount or type of exercises a student may need to complete to achieve their objectives and alter exit altitudes, however these must not be lower than the minimum altitudes specified in the Operations Manual.

## **1.4 The Eight Categories and their Requirements**

### **1.4.1 Category 1**

Has attended a ground school and has successfully completed the syllabus requirements as detailed in Section 5 (Training), Paragraph 2 (The Basic Training System Syllabus), sub-para 2.1 – 2.3 of the British Skydiving Operations Manual.

### **1.4.2 Category 2**

- a. Has demonstrated the ability to fall in a stable position counting throughout.
- b. Student Skydivers may transfer to the AFF method of training, at Level 2 once they have completed at least 2 jumps and having obtained Category 2.

### **1.4.3 Category 3**

- a. Has demonstrated the ability to perform three consecutive stable Dummy Ripcord Pulls (DRPs), counting and maintaining a positive arch throughout.
- b. Progression to free fall will only take place after a minimum of five static line descents and will only be authorised by at least a Category System Instructor (see Section 4 –

Instructors), who must satisfy him/herself that the criteria laid down for progression has been attained. The first free fall descent will take place no later than the day following the last of the successful DRP descents.

#### **1.4.4 Category 4**

- a. Has demonstrated the ability to perform two consecutive stable delayed openings, counting throughout, of between three and five seconds.
- b. Category 4 descents must take place from a minimum altitude of 4,000ft AGL.

#### **1.4.5 Category 5**

- a. Has demonstrated the ability to perform two consecutive stable delayed openings of ten seconds, maintaining a heading and counting throughout.
- b. Student Skydivers may transfer to the AFF method of training, at level 3 once they have obtained Category 5.

#### **1.4.6 Category 6**

- a. Has demonstrated the ability to perform the following:
- b. Two consecutive delayed openings of fifteen seconds.  
Use an altimeter in free fall.
- c. Upon successful completion of Category 6, Student Skydivers may be converted to 'throwaway' pilot chutes. For at least the first 2 conversion jumps no further freefall progression may take place.

#### **1.4.7 Category 7**

- a. Has demonstrated the ability to perform controlled 360° turns in both directions.
- b. Category 7 descents must take place from a minimum altitude of 6,000ft AGL.

#### **1.4.8 Category 8**

Has demonstrated the ability to perform the following:

- a. An unstable exit.
- b. A dive exit.
- c. Back loops.
- d. Tracks, including a track turn as an avoidance manoeuvre.
- e. No tracking exercises may be commenced below an exit altitude of 7,000ft AGL.
- f. A back loop, 360° left turn, 360° right turn, a short track and wave off, from a minimum altitude of 8,000ft AGL.

#### **1.4.9 Additional Canopy Training (CT)**

Further Reference: [Canopy Training Manual \(CTM\)](#) & Sample Lesson plans page 39 of this Manual.

Additional Canopy Training may take place throughout Student progression.

- a. Flat turns on at least 3 descents.
- b. Increased the range of the canopy using the toggles on at least 3 descents.
- c. It is permissible to complete both 'flat turns' and 'increasing the range of the canopy using the toggles, exercises on the same descent.
- d. Displayed a reasonable level of canopy handling, flying the correct landing pattern and landing safely in the intended landing area.
- e. Canopy Training written examination.

#### **1.4.10 General**

- a. All Student Skydivers, including AFF Student Skydivers making consolidation descents, are to be observed where practicable from exit to full canopy deployment by at least a Category System Basic Instructor (CSBI). Up to Category 4, this must be done by the dispatching instructor.
- b. Details of release, count, position, arch, pull and recovery must be entered in the Student Skydiver's log for Categories 2-4 inclusive. These may be in the form of abbreviations such as GATW (Good all the way). All negative aspects must be written in full. All details of performance of Student Skydivers will be entered in their logs by an instructor.
- c. Prior to being awarded an A Licence, All Student Skydivers, including AFF Student Skydivers must receive a brief on, but not limited to; jumping in higher winds, the use of a knife, being responsible for themselves in the aircraft and making informed decisions about the actions to take in an Aircraft emergency.
- d. All briefs/lessons for progression and equipment conversions, up to 'B' Licence must be given by at least a CSBI, other than some Grading System briefs which may be given by suitably qualified coaches (see Paragraph 6, below). These briefs/lessons should be entered in the skydiver's log, dated, and signed by the instructor/coach.
- e. British Skydiving 'C' Licence skydivers and above may use 'pull-out' pilot chutes.

The table that follows, examines the Category system in some detail and emphasises coaching points in column 5. Each new free-fall exercise must be preceded by extensive repetitive practice on the ground.

Practice on the ground costs nothing

## 1.5 British Skydiving Category System requirements & Coaching points.

1	2	3	4	5
Category	Height/Delay	Requirements	Aim	Coaching Points
1	N/A	a) Has attended a ground school and has successfully completed the syllabus requirements as detailed in Section 5 of the Operations Manual.	Mental and physical preparation for jump	Different Phases: Pre-exit. Exit/Stable Position. Canopy Control and Flight Drills. Landings. After Landings. Plus, all emergency procedures.
2	3,200 ft - 3,500 ft static line	a) Has demonstrated the ability to fall in a stable position counting throughout.  b) Student Skydivers may transfer to the AFF method of training, at Level 2 once they have completed at least 2 jumps and having obtained Category 2.	i) Good exit.  ii) Good stable position.  iii) Good count.	i) Positive exit.  ii) Good arch.  iii) Symmetrical position.  iv) Counting throughout.
3	3,200 ft - 3,500 ft static line	a) Has demonstrated the ability to perform three consecutive stable Dummy Ripcord Pulls (DRPs), counting and maintaining a positive arch throughout.  b) Progression to free fall will only take place after a minimum of five static line descents and will only be authorised by at least a Category System Instructor (CSI), who must satisfy themselves that the criteria laid down for progression have been attained. The first free fall descent will take place no later than the day following the last of the three successful DRP descents	i) Good exit.  ii) Stable position maintained.  iii) Co-ordinated arm movement.  iv) Toggle pulled.  v) Good recovery.	i) Good exit first priority, jumper established in airflow.  ii) Good arch with a symmetrical body position, legs shoulder width apart. Initiate pull sequence with symmetrical arm movement and locating the toggle maintaining the arch position.
4	4,000 ft - 4,500 ft 3 to 5 seconds	a) Has demonstrated the ability to perform two consecutive stable delayed openings, counting throughout, of between three and five seconds.  b) Details of release, count, position, arch, pull and recovery must be entered in the Student Skydiver's log for Categories 2-4 inclusive. These may be in the form of abbreviations such as GATW (Good all the way). All negative aspects must be written in full. All details of performance of Student Skydivers will be entered in their logs by an instructor.	i) Good exit  ii) Stable position  iii) Stable pull and recovery.	i) Psychological barrier of first free fall.  ii) Good exit  iii) Good arch position followed by symmetrical arm movement for pull.  iv) Delay up to 5 seconds - emphasise Student has plenty of height.  v) Locate handle/toggle.  vi) Positive pull and recovery.  vii) safety count.  <i>In the event of an aircraft emergency the student may have to use their reserve parachute.</i>

*British Skydiving Category System Coaching points.*

1	2	3	4	5
Category	Height/Delay	Requirements	Aim	Coaching Points
5	4,500ft- 5,500ft or above - 10 secs	<p>a) Has demonstrated the ability to perform two consecutive stable delayed openings of ten seconds, maintaining a heading and counting throughout.</p> <p>b) Student Skydivers may transfer to the AFF method of training, at level 3 once they have obtained Category 5</p>	<p>i) Good exit.</p> <p>ii) Stable position on heading.</p> <p>iii) Count 10 second delay.</p> <p>iv) Stable pull and recovery.</p>	<p>i) Exit should have been mastered at this stage.</p> <p>ii) Heading with aircraft must be maintained - tendency to turn is often result of a poor exit - may be corrected by gentle lean back towards heading.</p> <p>iii) Pull and recovery should be perfect.</p>
6	5,500 ft or above - 15 secs	<p>Has demonstrated the ability to perform the following:</p> <p>a) Two consecutive delayed openings of fifteen seconds.</p> <p>b) Use of altimeter in free fall.</p> <p>c) Upon successful completion of Category 6, Student Skydivers may be converted to 'throwaway' pilot chutes. For at least the first 2 conversion jumps no further freefall progression may take place.</p>	<p>i) Good exit.</p> <p>ii) Stable position on heading.</p> <p>iii) Relaxed position.</p> <p>iv) Accurate 15 second delay.</p> <p>v) Accurate pull on altimeter reading or count of 15 for the 1<sup>st</sup> 15 second delay.</p>	<p>i) Relaxed position</p> <p>ii) Maintain body symmetry.</p> <p>iii) Do not progress until new position is perfected, counting 15 seconds.</p> <p>iv) Heading must be maintained - involuntary turns must be corrected. Watch for asymmetrical leg and arm positioning.</p> <p>v) Teach use of altimeter, ensure that when reading altimeter body/arm positions are not altered.</p>
7	6,000 ft or above	<p>a) Has demonstrated the ability to perform controlled 360 degree turns in both directions.</p> <p>b) Category 7 descents must take place from a minimum altitude of 6,000ft AGL.</p>	<p>i) Maintaining good, relaxed and symmetrical position.</p> <p>ii) Accurate controlled turns.</p>	<p>i) Re-emphasise importance of heading to ensure that the jumper is aware if they are turning involuntary prior to commencing the exercise.</p> <p>ii) There are several different ways to turn. Ensure that the method used is the most suitable for the Student Skydiver.</p> <p>iii) Altitude awareness after every turn.</p>



*British Skydiving Category System Coaching points.*

1	2	3	4	5
Category	Height/Delay	Requirements	Aim	Coaching Points
8	8,000 ft or above	<p>Has demonstrated the ability to perform the following:</p> <ul style="list-style-type: none"> <li>a) An unstable exit</li> <li>b) A dive exit</li> <li>c) Back loops</li> <li>d) Tracks, including a track turn as an avoidance manoeuvre.</li> <li>e) No tracking exercises may be commenced below an exit altitude of 7,000ft AGL.</li> <li>f) A back loop, 360° left turn, 360° right turn, a short track and wave off, from a minimum altitude of 8,000ft AGL.</li> </ul>	<ul style="list-style-type: none"> <li>i) Recover from instability.</li> <li>ii) Consolidate turning ability.</li> <li>iii) Dive exits.</li> <li>iv) Back loops.</li> <li>v) Tracking.</li> <li>vi) Track Turns.</li> </ul>	<ul style="list-style-type: none"> <li>i) Teach recovery from unstable exit - approximately 3 second then hard arch.</li> <li>ii) Consolidate turning ability - 360 degree turns after approximately 10 seconds after exit.</li> <li>iii) Teach dive exit - Position in the door: Student faces the tail of the aircraft, right or left arm up (position of door depending on type of A/C) presenting chest to airflow, leaving the aircraft headfirst towards the tail extending arms and tucking legs back and should remain stable throughout. Left or right arm up presenting chest to airflow legs tucked up, arms extended forward to prevent steep angle.</li> <li>iv) Teach back loops - dynamic and well-co-ordinated initiation - head position during manoeuvre.</li> <li>v) May introduce delta position - legs closer, arms swept back, flatten body, arch, angle changes, speed increases, flare early, mental count.  Tracking - introduce reverse arch. Head back, shoulders rolled forward, upper body concave, hands cupped and close to side of thighs, legs rigid, toes pointed, feet approximately 6 inches apart, whole body rigid. Watch for loose legs which can induce fishtailing.</li> <li>vi) Track turn by leaning in required direction - a curved path is followed.</li> </ul>



## **Section 2: Training Syllabus**

The Training Syllabus, as required in the British Skydiving Operations Manual, is split into 10 areas or more commonly known as lessons and this forms the required syllabus that any Category System Student taking part in a first-time Solo parachute descent must receive as part of their ab-initio training.

The term *ab-initio* is a Latin term meaning "from the beginning" and is derived from the Latin *ab* ("from") + *initio\_of initium* ("beginning").

Category System Students must receive a minimum of six hours ground training; however, this may take longer depending on the total number of students on the course and the ability of the students to respond to training.

A maximum of 12 Category System Student Skydivers will be trained on any one Course and all training and instruction must take place as required within the British Skydiving Category System and all such training and instruction shall be delivered by suitably qualified British Skydiving instructors.

1. Orientation and Documentation.
2. Familiarisation with and Fitting of Equipment.
3. After Landing Procedures.
4. The Stable Position.
5. Aircraft Drills and Emergency Drills.
6. Malfunctions and Reserve Procedures.
7. Canopy Control and Flight Drills.
8. Abnormal Landings.
9. Landings, including practical Parachute Landing Fall (PLF) training.
10. Written Examination.

These 10 areas do not mean that there should only be 10 lessons. Any number of lessons, both theoretical and practical, may take place. These will be dependent on the requirements of individual Parachute Training Organisations (PTOs) and applicable to their specific operation.

After a student has received their ground school lessons, and once they start progress through the different categories, a student may also receive Additional Canopy Training briefs as follows:

### Additional Canopy Training

1. Flat turns on at least 3 descents.
2. Increased the range of the canopy using the toggles on at least 3 descents.
3. It is permissible to complete both 'flat turns' and 'increasing the range of the canopy using the toggles, exercises on the same descent.
4. Displayed a reasonable level of canopy handling, flying the correct landing pattern and landing safely in the intended landing area.

5. A Canopy Training written examination.

The following guide is an example of what may be covered as part of each individual lesson. The final content and specific information that must be given to any Category System Student is finalised and directed by the PTO Chief Instructor (CI), hopefully after discussion and consultation with all his/her instructors. The order in which the following lessons are laid out, follows the current order as published in the British Skydiving Operations Manual and PTOs may change the order to better suit the ground school and training requirements.

Sample lesson plans are produced in Section 3.

## **2.1 Orientation & Documentation**

Paperwork should be completed before any other training takes place including the orientation. Paperwork to be covered in this lesson is described below and where practical, this may be carried out by the Instructor appointed to conduct the ground school for that training course.

a. Introduction & Welcome:

Instructors should introduce themselves to their students and welcome them on behalf of the PTO. The instructor at this point, may wish to give a short brief detailing the history of that organisation, a description of what sport parachuting is all about, how to progress within the category system and followed by an outlook in to the course content.

b. British Skydiving Membership

Every student that wishes to take part in a Solo Parachute Descent must take out Membership. British Skydiving Membership covers the student for third-party liability insurance up to the sum of five million pounds. There are several types of membership available for a student. The most common type of membership issued on a first-time jump course tends to be the Student Provisional Membership which is taken out by completing Form 102 (Application for Student Provisional Membership / Agreement) or more commonly known as P6.

Students must fill out the form and then may be issued with a provisional membership card which is valid for a twelve-month period from the date of issue. On the card, they will find their British Skydiving number and they would then fill in the date of issue. Provisional Membership covers the student for unlimited static line skydiving during for a twelve-month period from the date of issue.

Another type of membership PTOs may wish to offer is the Temporary membership and this is available on Form 104 (Application for Temporary Membership). Temporary membership covers the member for unlimited jumping (free fall progression included) for the period of one month. Students may take out as many temporary memberships as they wish. The student's British Skydiving number is on this occasion issued by British Skydiving HQ on receipt of the completed application form.

Any students that may have taken out Provisional membership (unlimited static line parachuting) and are cleared to carry out their first free fall, must become full members of British Skydiving before undertaking their first free fall descent. They can do this by completing Form 105 (Conversion to Full Membership). They could also take out a Temporary membership as an alternative.

Any British Skydiving Ratings, Qualifications and Certificates of Competence will only be awarded or issued to full Members and will only be valid whilst that membership is current, which means that any students with Temporary Membership (unlimited skydiving for one month) will not be issued with a packing certificate or a British Skydiving A Licence unless they have converted to full membership. Students with provisional or Temporary membership wishing to exercise the

privileges of a British Skydiving Packing certificate may only do so once they have converted their membership to full.

Any students aged 16 or 17 must obtain the written consent of their parent / guardian before being permitted to commence parachute training and to undertake a parachute descent. The parent / guardian must sign either Forms (102, 104, 105) to give consent.

c. Student Medical or Self-Declaration of Fitness to Parachute:

No person under the age of 16 years, or aged 55 years or over, will normally be permitted to carry out Student Solo parachute training. Exceptions to the higher age limit may be permitted if the person has previous recorded solo experience on ram-air parachutes.

Any student wishing to take part in a Parachute descent must complete a self-declaration of fitness to parachute and may do so by filling in Form 115C. The purpose of this form is for the student to declare that they are in good physical health and that they are able to exercise without restriction and that by being unfit, may render them more prone to injury.

Any student that self declares themselves fit to parachute must also obtain a witness signature whilst completing the form and this may usually be done by the instructor or a fellow student on the course.

Instructors should read and familiarise themselves with the declaration form, so they understand how to explain this to the student.

Any students aged 16 or 17 must have their parent / guardian sign the declaration of fitness to parachute in the witness section.

Form 115C is valid for 3 years from the date of signature, provided there is no change in medical condition or injury.

Some students that have booked on a one jump course may already turn up with a medical certificate signed by a Doctor. This medical certificate is Form 115D. This form is to be used by students who have some pre-existing medical conditions and have been seen by their doctor. Depending on the type of medical condition, the doctor will advise the student on the level of risk they are taking by carrying out a solo parachute descent.

The validity of the medical is for three years from the date the Doctor signs the form, unless the signing specifies a short timeframe. This means that that medical will remain valid once the student moves on to becoming a licensed skydiver.

PTOs should ideally retain a copy of the signed medical certificate for the PTO's records and return the original to the student.

d. PTO Paperwork:

This may include a PTO indemnity form, PTO membership booking applications, personal contact details, payment details, next of kin details and PTO membership rules. Students will need to sign any relevant documentation, and this should be kept by the PTO as part of their record keeping.

e. Training record Cards:

Training record cards or logbooks may be issued at this point. Instructors may explain the reason for keeping an accurate record of their descents and the annotation of any subsequent refresher training that may be carried out as part of the student's progression. One area of importance that may want to be included on a training record card is the date of purchase of the membership and the type (Provisional / Temporary), this way instructors can ensure that the student membership remains valid throughout any given time period. Some PTOs may have an electronic manifest

system that keeps track of the British Skydiving membership validity and prevents student lapsed members from being manifested.

f. PTO Orientation:

At this stage, the students will be shown the PTO facilities via a walk around. This may include showing them the locations of the classrooms, toilets, equipment store, canteen area, key members of staff, any other facilities that may be of interest and the Parachute Landing Area (PLA).

The information regarding the PLA should cover key areas that students will need to know or refer to during their training. Areas of importance may be:

- Location of the PLA.
- Locations of the windsocks and their use relevant to canopy control.
- Any reference points that the students will need to recognise and help them identify their PLA from their deployment altitude, such as buildings or hangars, runways, towns, villages, roads etc.
- Hazards or areas to avoid such as, nearby buildings, rivers, powerlines, roads, runways, built up areas or any special hazards such as national grid and wind turbines.
- These hazards must all be marked on an aerial photograph and should be shown to all the students as part of the orientation phase of the course.

## ***British Skydiving Operations Manual requirements for Documentation and Orientation***

***Section 5, Training, Para 1:*** All training and instruction must take place as required in the British Skydiving Category System, the British Skydiving Accelerated Free Fall (AFF) Levels, the British Skydiving Grading System or Tandem Skydiving; and all such training and instruction shall be by suitably qualified British Skydiving instructors.

***Section 5, Training, Para 4:*** No more than 12 Category System Student Skydivers will be trained on any one Course.

***Section 7, Parachute Landing Areas / Dropping Zones, Para 8:*** All PLAs/DZs used for routine parachuting will be equipped with an aerial photograph on which Major and Special Hazards on the overshoot areas are marked.

***Section 11, Medical, Para 1, Sub-Para 1.1:*** All Skydivers must be in possession of a completed Self-Declaration of Fitness to Parachute or Doctor's Medical Certificate appropriate to the type of activity.

***Section 11, Medical, Para 1, Sub-Para 1.1, Sub-Para 1.1.3:*** Form 115C. Solo Student Skydiver Self-Declaration of Fitness to Skydive is for Student Solo Skydivers making any Category System (static line and free fall), Accelerated Free Fall or AFF consolidation jumps. The duly completed form is also valid both for any Student jumps and for later Licenced skydiving during the period of validity of the form.

***Section 11, Medical, Para 1, Sub-Para 1.1, Sub-Para 1.1.4:*** Form 115D. Solo Student Skydiver Request for Medical Advice is for Student Solo Skydivers who may be unable to meet the requirements of Form 114C above. Validity as for Form 115C.

***Section 11, Medical, Para 1, Sub-Para 1.1, Sub-Para 1.1.9:*** Electronic Fitness to Skydive Forms issued by British Skydiving Affiliated PTOs are acceptable for ab-initio Student Skydivers provided they contain at least the same medical information as the appropriate British Skydiving Form.

**Section 11, Medical, Para 1, Sub-Para 1.4:** All Declaration of Fitness to Skydive/Doctor's Certificates are only valid providing all the requirements as listed on the forms are met.

**Section 11, Medical, Para 2, Sub-Para 2.1:** No person under the age of 16 years, or aged 55 years or over, will normally be permitted to carry out Student Solo skydiver training. Exceptions to the higher age limit may be permitted if the person has previous recorded solo experience on ram-air parachutes. Higher age limits for Student Tandem Skydivers may be acceptable (see Forms 115A – Student Tandem Skydiver Medical Information and Declaration, and Form 115B – Student Tandem Skydiver Request for Medical Advice).

**Section 12, Documentation, Para 1, Sub-Para 1.1:** All skydivers, riggers, packers, judges and DZ controllers must be current members of the British Skydiving.

**Section 12, Documentation, Para 1, Sub-Para 1.2:** All skydivers must have either a Declaration of Fitness to Skydive/Doctor's Certificate or appropriate Medical Certificate.

**Section 12 Para 1, Sub-Para 1.3:** All British Skydiving members aged 16 or 17 must obtain the written consent of their parent/ guardian before being permitted to commence skydiver training and to make skydives. This must be by the parent/guardian signing a British Skydiving Form of Agreement and a British Skydiving Declaration of Fitness to Skydive/Doctor's Certificate. Their PTO should normally hold these forms.

**Section 12 Para 1, Sub-Para 1.4:** All British Skydiving members are required to sign a Form of Agreement.

**Section 12 Para 1, sub para 1.5:** All skydivers must keep a personal log recording details of all of their skydiving descents.

**Section 12 Para 1, sub para 1.10:** CIs are responsible for ensuring that the personal documents of all Student Skydivers under their supervision are valid and up to date and that suitable documents are issued to all first jump 'solo' Student Skydivers following completion of their initial training course.

## **2.2 Familiarisation with and Fitting of Equipment**

This lesson is delivered to the students as an introduction to the equipment which they will be wearing throughout their first Solo parachute descent. The PTO CI sets out in his directive what must be covered within the lesson and what information must be given to the students. The Equipment lesson will normally be conducted in a wide-open area, normally inside the packing area or hangar, as it allows for room to deploy the main canopy without restrictions. However, it may also be taught in a classroom or outside depending on how the PTO wishes the lesson to be delivered.

Before the lesson commences, students should be reminded that they can ask questions at any stage of the lesson and inform them that the instructor will also be asking them questions to confirm their understanding of the subject matter at different stages of the lesson.

An example of the lesson plans can be found in Section 3.

The first part of the lesson usually starts by covering the ancillary items used by the students. Instructors may also wish to include any rules relevant to the operation and use of the equipment, but this may also be covered at the end of the lesson.

### **a. Ancillary Equipment:**

These are: Helmet, jumpsuit, altimeter, goggles and radio. Other ancillary equipment that may be issued to students may be: Life jacket or gloves. The instructor is to describe the use of the ancillary equipment and explain how to fit them. Instructions for the use of the radio as a backup for canopy control and the radio procedures can be briefly discussed at this stage, however a

separate lesson must be given, either as part of canopy control or as a totally separate lesson later in the ground training. Also see section 4. An example lesson plan can be found in Section 3.

Reference may also be given to suitable type of footwear and any student that is wearing, trainers or boots with hooks will require to have them taped up or change their footwear.

At this stage, the instructor can ask if any students have any questions and pose some of their own.

b. Parachute System:

The description of the equipment should be done in a logical order covering the following areas:

The student harness, lift webs, any adjustment points that can change the size of the harness, leg straps, chest strap and how to adjust these correctly. Some parachute systems may have clip on leg straps.

The position of the emergency handles and their correct method of use, the three-ring release system, the reserve static line (RSL) and its function, the type of automatic activation device (AAD) and its function, followed by any rules for the handling of the equipment.

c. Fitting of the equipment

A demonstration on the fitting of the equipment can be carried out before the end of the lesson and as directed by the CI. The correct way of fitting the chest strap, by feeding it round the back of the sliding gate and then the front, along with any safety consequences if fitted incorrectly. The use of an assistant can be considered for demonstration purposes. At this stage, the instructor may ask if any students have any questions and may wish to pose some of his or her own.

d. The deployment sequence:

This is a very good stage in which to get the class involved, as the demonstration of the deployment sequence allows for the students to undergo some practical involvement. As mentioned before, having an open area to demonstrate the next stage, will allow for a good explanation on how the static line acts as the deployment system for the main canopy.

The deployment sequence can be broken down in to stages and ending with the main canopy fully deployed and open, using the students to hold up all the material so the shape and size is clearly visible. The demonstration of the canopy size and shape may also be done outside by flying the canopy.

Once the canopy is visible, this is a good stage to talk about any specific characterises that may be of use to the students, like the canopy type, size or speed. At this stage students must know how to recognise a good canopy and how long it takes for the full deployment to take place. The time it takes to deploy then can be related to the safety count. The safety count can be practised in the stability lesson.

Students must know where the steering toggles are positioned, how to grasp them and how to release the toggles in order to take control of the canopy.

Students must also know the different types of nuisance factors that they may experience on their first descent such as: Twists, slider high, end cell closure or a potential brake fire or brake release. The actions to be carried out for each of these nuisance factors is to be directed by the CI.

At this stage, the instructor may ask if any students have any questions and may wish to pose some of his or her own to confirm the different types of nuisance factors and any other characteristics. Some PTOs will incorporate the next lesson (After Landing Procedures) and deliver this as part of the last stage of the 'Familiarisation with and fitting of equipment' lesson.



## **British Skydiving Operations Manual requirements for Familiarisation with and Fitting of Equipment.**

**Section 6, Para 2:** All equipment, other than main parachutes used by Student Skydivers must be acceptable to British Skydiving (via Riggers' Subcommittee and STC).

**Section 6, Para 2, Sub-Para 2.1, Sub-Para 2.1.1:** Main parachutes must be ram-air type and must be large and docile in relation to the skydiver's weight and height. The main and reserve parachutes must be contained in 'piggyback' type containers.

**Section 6, Para 2, Sub-Para 2.1, Sub-Para 2.1.2:** Where static line deployment is used, the static line must be continuous from deployment bag to the point of attachment in the aircraft.

**Section 6, Para 2, Sub-Para 2.1, Sub-Para 2.1.3:** The following Wing Loading criteria should be applied to main canopies:

- a. First Jump 'Solo' Student Skydivers - not to exceed 0.8 lbs/sq.ft.
- b. 'Solo' Student Skydivers having completed at least one 'solo' descent - not to exceed 0.85 lbs/sq.ft.

**Section 6, Para 2, Sub-Para 2.1, Sub-Para 2.1.4:** Exceptions to the above are permitted where a Canopy's Manufacturer has published advice that a higher wing loading is suitable. The manufacturer's higher limit may then apply.

**Section 6, Para 2, Sub-Para 2.1, Sub-Para 2.1.5:** If a Canopy's Manufacturer has published advice that a lower wing loading is used. The manufacturer's lower limit must be applied.

**Section 6, Para 2, Sub-Para 2.1, Sub-Para 2.1.6:** Equipment must be fitted with a reserve static line (RSL) and an automatic activation device (AAD), which must be switched on prior to any descent.

**Section 6, Para 2, Sub-Para 2.1, Sub-Para 2.1.7:** Category System freefall equipment must be ripcord deployed, up to at least the completion of Category 6.

**Section 6, Para 3:** All Skydivers will be equipped with suitable clothing and equipment.

**Section 6, Para 3, Sub-Para 3.1, Sub-Para 3.1.1:** Student and British Skydiving 'A' Licence skydivers must wear a suitably sturdy open faced, hard protective helmet without a peak.

**Section 6, Para 2, Sub-Para 3.1, Sub-Para 3.1.5:** Helmets are to be worn throughout the entire parachute descent.

**Section 6, Para 3, Sub-Para 3.2:** Footwear which is suitable for the planned descent.

**Section 6, Para 3, Sub-Para 3.3:** Gloves (if worn) must allow easy operation of emergency equipment.

**Section 6, Para 4, Sub-Para 4.1:** Altimeters must be worn by all Student Skydivers (other than Tandem Student Skydivers). Also, altimeters must be worn by British Skydiving Licenced skydivers carrying out planned delayed openings of 15 seconds or more.

**Section 6, Para 4, Sub-Para 4.2:** The minimum instrument is a serviceable non-sensitive visual read out altimeter, securely mounted in a suitable position.

**Section 6, Para 4, Sub-Para 4.3:** Instruments should be positioned so as not to interfere with the use of other parts of the equipment.

**Section 6, Para 4, Sub-Para 4.5:** *Category System Student Skydivers must be equipped with a radio receiver for at least the first three descents.*

**Section 6, Para 8, Sub-Para 8.1:** *All Student main parachutes are to be packed under the supervision of a person holding a British Skydiving Packing Certificate for the parachute being packed.*

**Section 6, Para 10, Sub-Para 10.3:** *Student Skydivers will maintain a record for their personal parachutes.*

### **2.3 After Landing Procedures**

Students must know how to collapse the canopy once both their feet are on the ground by using a steering toggle and how to apply this in case of an emergency if a gust of wind was to drag them over the ground.

Once the canopy has been collapsed, students must know how to gather up the canopy and must know any PTO procedures (like crossing runways) etc, that will allow them to safely return to DZ control. They must also know what items of equipment they can or cannot remove as they are making their way back from the landing area. If the PTO has specific checking in procedures for their students after landing, this can be covered at this stage or perhaps this can in the DZ orientation brief.

Students must also know how to give indication should they be injured after their parachute descent. At this stage, the instructor may ask if any students have any questions and may wish to pose some of his or her own.

### **2.4 The Stable Position**

The stability lesson is a physical and practical lesson which can take place in any open area that can allow for a maximum of 12 students to practice the required body position for exiting an aircraft in the correct manner. It is advisable that a physical warm up of the muscle groups required to achieve the stable spread position or more commonly known as the "Arch" position, is carried out prior to practising such position, as some students may not use some of these muscle groups on a regular basis.

Students must know what stability is, followed by why it is needed, and finally how to achieve this. Instructors may explain and demonstrate the position with the use of training aids, such as video, photographs or any other aids that will help the students understand the importance of a good body position during exit, followed by the practical exercise, until the instructor feels that the class has achieved the aim of the lesson. Students must know how to carry out the safety count together with the required body position, so by the end of the lesson they are fully familiar and proficient with the requirements of how to achieve a good body position on exit.

At the end of the stability lesson, some PTOs may include the aircraft drills and exit position from a mock-up of the aircraft and practice the students until proficient. Students will need to wear head protection when practising out of the mock-ups and the instructor should ensure that the correct level of support is given whilst exiting.

### **2.5 Aircraft Drills and Emergency Drills**

In this lesson students will be instructed on and must be familiar with all the safety procedures involved with approaching, boarding, seating positions, exiting position and to include emergency scenarios. Other information such as type of aircraft, pilots and servicing requirements may be useful information to reassure a student.

This lesson may be conducted utilising the real aircraft; however, it is commonly done by using an aircraft mock-up. Instructors may wish to cover the process of checking the students prior to

boarding the aircraft by describing the flight line checking procedures followed by the order in which they will walk out to the aircraft. Students must know how to approach an aircraft. Students must know that they will be hooked up by their instructor whilst entering the aircraft and that they should double check the instructor has done so.

They must know the position of the safety restraints and how to fit and release them, if the aircraft is fitted with such restraints. They must know that the aircraft is fitted with a knife as part of the aircraft equipment. They must know to keep movement inside the aircraft to a minimum and protect their emergency handles and also to ensure that their helmets are fitted for take-off.

They could also be informed that a potential a low pass over the airfield could be carried out should a Wind Drift Indicator (WDI) wished to be thrown for the purpose of obtaining further information about the wind speed and direction.

They must know that they will be given a pre-jump check by their instructor prior to moving to the door prior to exit and they must know the commands they will receive, prompting them to move towards the door once the aircraft is correctly configured for exit and the pilot has indicated as such. Students must know the correct exit position depending on the type of aircraft being used and know how to position themselves in the door correctly followed by the command "GO" which indicates to the student they should leave the aircraft.

They must also know the number of students allowed to exit on the same pass depending on the type of aircraft or PTO restrictions.

Some PTOs may wish to practice their students exiting until they are proficient before moving to any emergency scenarios. It is a requirement for all students to do a practice exit with equipment. This may be done in this lesson or prior to emplaning.

Students must know what to do in the event of an aircraft emergency and the required commands and brace positions should they experience an emergency at low altitude which would require them to remain onboard, followed by any procedures on how to move away from the aircraft once it has come to a stop.

If the aircraft experiences an emergency and the pilot or instructor deems there is sufficient altitude to exit safely, then the students must know what commands they will hear followed by the actions to be carried out by exiting in quick succession and what to expect in the case of more than two skydivers exiting on the same pass. They must also be given instructions on what to do if they are not going to make a landing on the Parachute Landing Area (PLA). This can also be covered as part of the Abnormal Landings lesson.

In the event of an emergency that includes the student's equipment inside an aircraft, such as a premature deployment of the main or reserve canopy, the students must be instructed on the actions required by the Instructor. Students must also be informed on what to do should they need to descend with the aircraft in the event of a premature deployment or simply not carrying out the planned descent. Students must re-attach their restraints for any type of landing and PTO procedures for the AAD adhered by. If a student skydiver elects to land with the aircraft no static lines are to be disconnected until the aircraft is safely back on the ground.

Students must also know what to do in the event of a static line hang up and the required PTO procedures relating to known scenarios.

Before the end of the lesson the instructor must confirm that the students understand what actions they are to take in the event of an aircraft emergency, covering the different scenarios.

## **British Skydiving Operations Manual requirements for Aircraft Drills & Emergency Drills**

**Section 8, Para 2, Sub-Para 2.3, Sub-Para 2.3.3(e):** *The Chief Instructor shall determine the exit point for Student Skydivers using information available, this could be wind forecasts, electronic information gained on the day or a WDI. A WDI must be thrown before the start of a skydiving display.*

**Section 10, Para 1, Sub-Para 1.1:** *No person will approach a moving aircraft.*

**Section 10, Para 1, Sub-Para 1.2:** *Skydivers will not approach an aircraft from forward of the wings.*

**Section 10, Para 1, Sub-Para 1.3:** *The JM is responsible to the pilot for the control of the skydivers in the aircraft. The pilot is in overall command.*

**Section 10, Para 1, Sub-Para 1.4:** *All skydivers must have been briefed as to the emergency crash procedures and brace positions relevant to their seating or kneeling positions in the aircraft.*

**N.B.(1)** *Aircraft Crash Landing Procedures can be found on Form 261.*

**Section 10, Para 1, Sub-Para 1.5:** *The JM is responsible for the orderly enplanement of his/her lift and for supervision and instruction as necessary in the aircraft and it is his/her responsibility to ensure that all embarked skydivers have been instructed in the correct method of exit from the type of aircraft concerned, to ensure adequate separation between themselves and the aircraft structure.*

**Section 10, Para 1, Sub-Para 1.6:** *All skydivers must fit helmets before take-off, except in the case of skydivers jumping with camera helmets, who may fit their helmets at the most suitable time prior to jumping. (Helmets not fitted for take-off should be securely located in the Aircraft.)*

**Section 10, Para 1, Sub-Para 1.7:** *Movement inside the aircraft should be kept to a minimum and consideration should be given to the protection of handles, pads etc.*

**Section 10, Para 1, Sub-Para 1.8:** *All skydivers landing with the aircraft wearing AADs must have them deactivated where practicable.*

**Section 10, Para 1, Sub-Para 1.9:** *Where skydivers' restraints are fitted, they are to be used during take-off and landing.*

**Section 10, Para 1, Sub-Para 1.12:** *No skydivers will exit the aircraft until there has been a clear indication from the pilot, either visually or audibly, that the aircraft is in the correct configuration for exit. This indication may be in the form of lights, sound or pre-arranged hand signals.*

### **2.6 Malfunctions and Reserve Procedures**

This lesson is safety critical, and the instructor must ensure that by the end of the lesson the students can identify a malfunction and they must know how to carry out their emergency procedure.

The lesson is normally broken down into two separate lessons, a theory part and a practical part. The first will consist of all the theory regarding the subject, describing and learning how to identify the different types of malfunctions combined with other scenarios known within the category system. An introduction into the emergency procedure via a short demonstration may be shown within the theory lesson as an insight into what would be required of the student during the practical lesson. Nuisance factors must not be revised or introduced at any stage throughout the Malfunction theory lesson.

The instructor needs be aware of the amount of information being given to the students and therefore should revise and confirm by stages before continuing with the subject.

***A minimum cutaway height must be taught as part of the theory content. The cutaway height is specific to the PTO and may vary between 1000ft to 2000ft.***

Students must also know what actions to carry out in the case of a premature deployment of the reserve, whilst flying their main canopy, also including a down plane scenario and how the actions for the down plane are the only exception to the specified cutaway height. These actions may also be taught as a separate lesson.

The second part of the lesson is the practical phase, where the students will get to practice the emergency procedure. An explanation and demonstration of the required drill must be carried out, detailing what the instructor wishes to see from the students. Students must practice the emergency drill until they are proficient. To end the practical session, the instructor must incorporate the different scenarios previously learnt in the theory lesson to confirm that the students have learnt and understood the theory.

This must also be confirmed using the suspended harnesses. Some PTOs may have their own separate lesson plan for this stage of the training. If canopy control has been covered by this stage, then revision and practical examples of how to take control of the parachute, how to turn and flare the canopy may also be done at this stage.

Procedures to deal with entanglements and canopy collisions may also be introduced within the theory lesson, however it is common to introduce these scenarios as a separate lesson and they must also be revised and confirmed by the instructor prior to jumping.

The malfunction and reserve procedure lesson, together with entanglements, canopy collisions and suspended harness drills are normally taught towards the end of the day and not necessarily in the order that it appears here.

### ***British Skydiving Operations Manual requirements for Malfunctions and Reserve Procedures.***

***Section 5, Para 2, Sub-Para 2.2:*** Nuisance Factors may not be taught or introduced to student skydivers for the first time within the Malfunctions Lesson but must be taught as part of an earlier lesson.

***Section 5, Para 2, Sub-Para 2.3:*** Nuisance Factors may not be formally introduced into the main Malfunctions Lesson until Malfunctions have been fully described, and the drill to deal with those Malfunctions has been demonstrated to, and practiced by, the participating student skydivers.

***Section 5, Para 6:*** All AFF and Category System Student skydivers must perform suspended harness drills during initial training.

## ***2.7 Canopy Control and Flight Drills***

The lesson also tends to follow the same format as the previous lesson, broken down in to two separate lessons, a theory part and a practical part. The order in what this lesson is delivered.

The aim of the lesson is to teach the student the drills required to steer the canopy and land safely on the PLA. Instructors may wish to start with revising any known information about the canopy, such as the characteristics of a good canopy and nuisance factors if already taught in a previous lesson. If these have not been covered in a previous lesson, the students must know how to recognise a good canopy, the nuisance factors and how to rectify these.

Students will be introduced the flight drills required to successfully fly their canopy. They must know how to release the steering toggles and check that the canopy is responding correctly by carrying out a control check, this tells the student that they can now steer and land the canopy. Once the control check is carried out, or before in some cases, the student must know how to identify the PLA. Revising the PTO orientation reference points may be advantageous at this stage.

They must also know that keeping a good all-around observation throughout the parachute descent is key to avoid a potential canopy collision with another student skydiver and will avoid disorientation that could result in an off landing. The actions to be carried out in the event of a canopy collision will be taught in a separate lesson.

Students must also know that the responsibility for avoiding a canopy collision rests with the higher skydiver and they must know what to do in the event of a head on collision, taking the appropriate action.

Students must know how to identify their holding area and what is required of them during their flight. During initial jumps, turns greater than 360 degrees should be discouraged, especially below 1,500ft.

The instructor needs be aware of the amount of information being given to the students and therefore should revise and confirm by stages before continuing with the subject.

A demonstration by the instructor of the required flight drills and their actions, is extremely advantageous to the student as they will better understand what is required prior to the practical lesson.

They must know the key heights to initiate and complete their landing pattern, together with any specified altitude to initiate their landing flare. The students must know the three priorities for landing as described in the British Skydiving Canopy Training Manual. The instructor must cover what to do in the case of the student misjudging the height for the flare together with the technique used, known as the Parachute Landing Fall (PLF), as this scenario is a common occurrence with first time jumpers.

The practical lesson is usually conducted in a wide-open area being, a hangar or on the actual PLA, if weather conditions allow for the instruction to take place outside.

As part of the practical lesson the instructor must ensure that the students have understood the theory content given to them in the theory lesson and must confirm this by asking the students to conduct a practical walk through. Further revision of the lesson can be included at a later stage of the ground school.

Before the students carry out their first descent, they must receive a brief detailing the procedures and instructions involving Student Talk Down (STD) so they are familiar with the terminology and commands that they could hear on the radio. This may be done within the Canopy Control lesson theory, practical or as a separate brief.

*See section 4: Aircraft Loading and Student Talk Down (STD).*

## ***British Skydiving Operations Manual requirements for Canopy Control & Flight Drills***

***Section 10, Para 5, Sub-Para 5.1:*** *After operating the main parachute, all skydivers will check that their canopy has developed normally. If it has not, emergency procedures may need to be taken.*

***Section 10, Para 5, Sub-Para 5.2:*** *Throughout the descent skydivers should be aware of other skydivers and, if necessary, take avoiding action.*

**Section 10, Para 5, Sub-Para 5.3:** Under canopy the responsibility for avoiding collision rests with the higher skydiver.

**Section 10, Para 5, Sub-Para 5.5:** Student Skydivers should land under a flat, level, flared canopy, into a hazard free area and into wind.

**Section 10, Para 5, Sub-Para 5.7** All skydivers should minimise their turns and fly in a predictable manner at all times during the landing pattern.:

## **2.8 Abnormal Landings**

The subject of this lesson is to instruct and cover the actions a student may have to take in the event of them carrying out a landing that is not a normal landing, i.e. an off landing outside of the designated PLA, including the actions to be carried out for landing on potential hazards such as:

- a. Trees
- b. Water
- c. Power Lines
- b. Buildings
- e. Any other hazards (Roads, Vehicles, etc)

The priorities for landing should be recapped. This lesson can be done in the classroom or on the PLA pointing out the different types hazards that may affect that PTO and discussing these with the students.

Some PTOs may have within their neighbourhood Special Hazards (see definition in Section 7 of the British Skydiving Operations Manual) and therefore any actions required for those are to be taught within the lesson.

## **2.9 Landings, including practical Parachute Landing Fall (PLF) training**

This is another physical and practical lesson where the students must demonstrate their capability to carry out a Parachute Landing Fall (PLF). The lesson must include demonstrations by the instructor, or an assistant already trained to do so. All students need to wear helmets to practice the exercise and the instructor should initially provide adequate support to enable the student to practice and not injure themselves in the process.

It is advisable that a physical warm up of the muscle groups required to practice the PLF is carried out prior to practising such exercise. Students should have a reasonable competency before allowing them to carry out PLFs from the ramps/platforms. The students must repeat the exercises until the instructor is satisfied that they can carry out a successful PLF without any assistance.

### ***British Skydiving Operations Manual requirements for Landings, including practical Parachute Landing Fall (PLF) training.***

**Section 5, Para 5:** Suitable training equipment, such as ramps, platforms or 'fan' trainers are to be used on practical landing sessions.

## **2.10 Written Examination**

The written examination is administered to all students at the end of their ground school and must cover key areas of safety. The common format for the written examination is to pose a question that has various alternative answers (multiple choice). Out of those answers, only one is the correct answer and the student must select what they believe is the correct answer.

There may in some occasions be a question that could involve a couple of correct answers. Instructors will need to assess the student's capability based on their performance throughout the ground school and their results from the written examination.

If any students answer any questions incorrectly, corrective training must be given to ensure that the students understand the error and therefore retain the correct information. The instructor must sign to say that they have marked the paper, followed by the student's signature, which indicates that the student has signed to state the corrective training has been administered.

The instructor must ensure that by the end of the ground school, all the lessons within the training syllabus have been signed off on the students' training record card, stating that the training has been administered by such instructor. If another instructor has administered some of the lessons within the ground school, then they must also sign to say what lessons they instructed.

### ***2.11 Summary***

All training and instruction within the Category System Training Syllabus must be delivered by suitably qualified instructors, i.e. by CSBIs and CSIs.

PTOs have the flexibility to choose the order in which any of the above lessons are delivered, how they are broken down and these should reflect their operational requirements.

The CI is the person responsible for all Safety Training and Parachuting Operations at any Affiliated PTO and therefore sets out under his or her directive the content to be taught for each subject within the Category System Training Syllabus.



## **Section 3: Lesson Plans**

The following section gives example Lesson Plans for teaching Category System first jump 'solo' Student Skydivers.

A lesson plan is there to assist the Instructor. The suggested content of these example lesson plans is there merely as a guide. Chief Instructors may require additional content, or indeed change the structure to incorporate other aspects of training relevant to their Parachute Training Organisation (PTO).

Once instructors have established what content is required by their Chief Instructor (CI) and in conjunction with these examples, then lesson plans specific to the PTO/Instructor can be produced to assist them. Lesson plans are personal to the Instructor who produces them and are there to assist during lessons: attempting to use those of other instructors, or the examples within them, may have the opposite effect.

Instructors should also produce lesson plans for all continuation briefs throughout the Category System and for any Grading System briefs/lessons likely to be taught, including Canopy Training (CT).

All training for Category System and Accelerated Free Fall skydiving must include the following:

- Orientation and documentation
- Familiarisation with and fitting of equipment
- After landing procedures
- The stable position
- Aircraft drills and emergency drills
- Malfunctions and reserve procedures
- Canopy control and flight drills
- Abnormal landings
- Landings, including practical Parachute Landing Fall (PLF) training
- Written examination.

PTO Chief Instructors should consider (canopy collision) entanglement drills.

A separate lesson may be conducted as part of the Malfunctions and Reserve Procedures and should cover body entanglements. Experience and statistics have shown that entanglements with other skydivers, although rare, are most likely to happen below 1,000 feet. Therefore, when teaching students to cut-away from entanglements, a clear distinction must be drawn between skydivers entangled with their own parachute and skydivers entangled with someone else's parachute.

### Example Layout

This layout is commonly used amongst British Skydiving PTOs. This breaks down the lesson plan in to two columns of information which will aid the instructor. The column on the left (subject) should contain the information that the students must be taught as part of that lesson. The column on the right (remarks) is used to add any information that will enhance the content of the subject and help the instructor cover other areas of importance.

<b>Lesson Title</b> <i>(This tells us the subject to be taught. It may also be given a number to show its place in the whole course)</i>	
<i>Area – (The desired location of training)</i>	
<i>Aids – (Any training aids that will assist in the lesson's aim being achieved)</i>	
<i>Aim – (This is a very important short statement on the purpose of the lesson)</i>	<i>What students will be able to achieve (This is the information that should be tested in final confirmation)</i>
SUBJECT	REMARKS
<p>1. Beginning of Lesson</p> <p style="padding-left: 40px;">Revision of previous lessons, as appropriate: Introduction. Lesson to be taught. Aim of Lesson Incentive What will be achieved.</p> <p>2. Middle of lesson</p> <p style="padding-left: 40px;">Lesson content broken into logical stages. In a skills lesson this is the part of the lesson that would incorporate: Explanation, Demonstration, Imitation, Practice (E.D.I.P). Questions &amp; answers throughout the lesson.</p> <p>3. End of lesson</p> <p style="padding-left: 40px;">This part of the lesson always incorporates final confirmation. 'Look forward' – what is next.</p>	
<i>Additional Information – (Any other information the instructor may find useful)</i>	

## Training Syllabus Lesson Plans including Canopy Training (CT)

Lesson One	
<b>Orientation and Documentation</b>	
Area – Classroom Aids – All Documentation, DZ photo, Video, Slides, 'PowerPoint'	
Aim – To Introduce the student to the PTO, its rules and facilities. To enrol the student in British Skydiving and to outline the training programme.	<p><i>By the end of the lesson student</i></p> <ol style="list-style-type: none"> <li>1. <i>Will be a member of British Skydiving</i></li> <li>2. <i>Have a brief knowledge of centre layout</i></li> <li>3. <i>Know any Do's and Don'ts</i></li> </ol>
SUBJECT	REMARKS
1. Introduction and Welcome	<i>What the sport is about. Who is instructing on the course. Clear any doubt, do not be afraid to ask questions</i>
2. All Documentation	<i>Forms membership and medical or declaration. Any relevant club membership forms. Type of British Skydiving Membership. Insurance coverage.</i>
3. Outline Training syllabus	<i>Mixture of theory and practical No great detail.</i>
4. Safety Rules	<i>Explain British Skydiving role/regulations Any rules for around the PTO.</i>
5. Layout of the centre / PLA/DZ	<i>Walk around where possible – Toilets, Canteen, training areas, parachute landing area and any reference points.</i>
6. Final Confirmation	<i>Questions to and from.</i>
7. Look Forward	<i>What's next</i>
<p>Additional Information – When documentation is covered prior to the beginning of the course the instructor should ensure that all students have filled out the required paperwork. Students are declaring to say they are fit to parachute on their declaration. Any skydiver with medical condition must have a doctor's stamp.</p> <p><b>Under 18</b> – parent or guardian must witness and give written permission for an individual to attend by signing form 106.</p>	

Lesson Two

**Equipment Familiarisation & Fitting  
Main Canopy Deployment & After Landing Drills**

Area – Classroom, Outside, Training Area

Aids – All Parachute Equipment used by the Student, Assistant (where possible)

Aim – To Introduce the student to Equipment Fitment of Equipment. Show Deployment of Main Canopy. Teach After Landing Drills

*By the end of the lesson student*

1. *Will have a brief Knowledge of Equipment*
2. *Demonstrate Reading Altimeter*
3. *Know that equipment is adjustable*
4. *State all after landing procedures*

SUBJECT	REMARKS
1. Explain use of all ancillary equipment a. Helmet b. Jumpsuit c. Altimeter d. Radio	<i>Show all equipment, include other items specific to centre (lifejackets) and possible equipment such as goggles, gloves.</i>
2. Parachute Assembly (system)	<i>2 Parachutes, main and reserve                      Adjustable harness (adjustment points)                      3 Ring release system                      Cut away &amp; reserve deployment handles                      RSL and its function                      AAD and its function                      Rules around equipment</i>
3. Fit Equipment	<i>Dress assistant, explain equipment that will be fitted to students on flight line or during this lesson</i>
4. Deployment of Main Parachute	<i>Staged deployment                      Approximate time until deployed                      Static line &amp; bag remain with aircraft                      Reason for slider                      Steering toggles location and releasing                      Nuisance factors</i>
5. Main Canopy Features	<i>Forward Speed, Number of cells                      Inflate canopy where possible. Difference between main and reserve canopies</i>
6. Canopy collapsing	<i>Pull in on one toggle (Demonstrate) or show video, emergency collapsing</i>
7. After landing Drills	<i>Pick up canopy, keep helmet on. How to indicate when injured. Walk back to packing area (route &amp; runway crossing)</i>
8. Final Confirmation	<i>Questions to and from.</i>
9. Look Forward	<i>What's next</i>

Additional Information – Some people may be sensitive about others knowing they use contact lenses – do not ask Who wears Contact lenses? Tell people if they wear contact lenses please inform a member of staff before kitting up.

It is not always practical to fit equipment to each student in this lesson. If this is not the case, each individual can fit equipment in pairs Prior to Final Confirmation.

Lesson Three

***The Stable Position & (Aircraft exits)***

Area – Training Area, Aircraft ‘mock up’ Multi exit Trainer  
 Aids – Assistant, Model, Diagram, matts, student helmets, Video or Photographs (Full Equipment see Additional information)

Aim – To Introduce the student to the Stable Position. To show how to obtain this position from the Aircraft door.

*By the end of the lesson students*

1. *Must Demonstrate a Good Position*
2. *Must Demonstrate a Good Exit*

SUBJECT	REMARKS		
Revision	<i>Where appropriate</i>		
1. Stability	<i>Control of body after exit</i>		
a. WHAT?	<i>Reasons for stability – Good platform for deployment – Progression. Factors that affect stability. Comfort</i>		
b. WHY?			
c. HOW?			
2. Practice position	<i>Demonstrate Position (No Count) Explain position symmetrical &amp; arched</i>		
3. Safety Count	<i>Lying down and standing with support until proficient.</i>		
4. Practice position with count	<i>Measures elapsed time reminds to check canopy</i>		
5. Exit	<i>Pick up faults until all demonstrate an acceptable position.</i>		
6. Practice Exit	<table style="border: none;"> <tr> <td style="border: none;"> <i>Commands given How to move to door Position in the door Release from aircraft</i> </td> <td style="border: none; vertical-align: middle;">                     } <b>DEMONSTRATE ALL</b> </td> </tr> </table>	<i>Commands given How to move to door Position in the door Release from aircraft</i>	} <b>DEMONSTRATE ALL</b>
<i>Commands given How to move to door Position in the door Release from aircraft</i>	} <b>DEMONSTRATE ALL</b>		
7. Final Confirmation	<i>All practice until proficient.</i>		
8. Look Forward	<i>Demonstrate a good exit from mock up good position and count Questions to and from.  What's next</i>		

Additional Information – This is a doing lesson less talk more action.

**All students must carry out a practice exit with equipment. This may be done in this lesson or prior to emplaning.**

Lesson Four

**Aircraft Drills & Emergency Drills**

Area – Training Area Aircraft ‘mock up’.  
Aids – Real Aircraft, mats, student helmets

Aim – To Teach students of Aircraft Drills and Aircraft Emergencies.

*By the end of the lesson students will:*

1. Know the sequence of events in aircraft.
2. Know to look at the instructor.
3. Know how to react in emergencies.

SUBJECT	REMARKS
<p>Revision</p> <ol style="list-style-type: none"> <li>1. Aircraft                             <ol style="list-style-type: none"> <li>a. Parachute Flying</li> <li>b. Type</li> <li>c. Approaching</li> <li>d. Rules around aircraft</li> </ol> </li> <li>2. Entering the aircraft</li> <li>3. Commands given.</li> <li>4. Emergencies                             <ol style="list-style-type: none"> <li>a. Emergency Landing</li> <li>b. Abandon Aircraft</li> <li>c. Premature Reserve Deployment.</li> <li>d. Premature Main Deployment.</li> <li>e. Hung up Skydiver.</li> </ol> </li> <li>5. Final Confirmation.</li> <li>6. Look Forward</li> </ol>	<p><i>Where appropriate Parachute aircraft are controlled but to a different standard than Commercial Flying.</i></p> <p><i>DANGER when approaching use diagram if necessary. Only approach when told to do so.</i></p> <p><i>Hooked up Check connected. Sit in position as instructed by instructor. Don't fidget! – sit still and guard handles. Pre-jump check before exit</i></p> <p><i>Instructions to pilot (WDI) Warning of jump run Command to move to door. GO!!!</i></p> <p><i>Command given action to be taken (brace position).</i></p> <p><i>Command given action to be taken.</i></p> <p><i>Reasons why, how to avoid and action to be taken.</i></p> <p><i>Reasons why, how to avoid and action to be taken.</i></p> <p><i>Practice runs through different scenarios.</i></p> <p><i>Questions to and from.</i></p> <p><i>What's next.</i></p>



Lesson Six

## **Entanglement & Canopy Collision Drills**

Area – Classroom and Training Area

Aids – Video, Slides, 'PowerPoint', Walk-around/Suspended Harnesses

Aim – To introduce the student the emergency procedures for body / line entanglements and to identify a clear distinction between skydivers entangled in their own parachute and skydivers entangled with someone else's parachute.

*By the end of the lesson student*

1. *Must be proficient on entanglement emergency procedure.*

2. *Must be able to carry out Emergency Procedures in the event of a canopy collision.*

### SUBJECT

### REMARKS

Revision

1. Entanglement's body / equipment.

a. Emergency procedure.

2. Canopy Collision.

a. Avoidance: All around observation. Steering away.

b. Emergency procedure

3. Final Confirmation

4. Look Forward.

*Where appropriate.*

*Explain: Cause – Bad body position on exit.  
Characteristics – Line or lines entangled around body or equipment.*

**Good Canopy:** *Action, try and get out of the entanglement, remain with good canopy.*

**Malfunctioned Canopy:** *Action, one very good attempt to clear – Unsuccessful carry out emergency procedure. pull reserve only.*

*Explain cause: Flying into the path of another skydiver causing collision.*

*Never fly towards another skydiver.  
Never fly above another skydiver.  
Never fly directly behind another skydiver.*

*Action: Check altitude, communicate with other skydiver. Attempt to clear, No CUT-AWAY, below minimum altitude, pull reserve only.  
Brace for landing.*

*Students given practical situation where they must identify problems and deal with them.  
Questions to and from.*

*What's next.*

Additional Information – Some Centres have different emergency procedures for different situations. Ensure you are teaching what your CI wants. **PTOs can include this lesson as part of the main Malfunction and Emergency procedures lesson.**



Lesson Seven

## **Canopy Control & Flight Drills**

Area – Classroom DZ

Aids – DZ photo, Video, Slides, 'PowerPoint', DZ Model Kit

Aim – To Introduce the student to the drills under canopy and how to steer the parachute to the PLA

*By the end of the lesson student*

1. *Must know how to steer the canopy.*
2. *State the flight drills.*
3. *Know terminology used on Radio.*

SUBJECT	REMARKS
Revision	<i>e.g. Nuisance Factors</i>
1. Steering	<i>How the canopy is steered using brakes. Always look before you steer.</i>
2. Opening point	<i>How the Opening Point is selected. Different Altitudes Going with the wind, Facing into wind.</i>
3. Flight Drills	
a. Check Canopy	
b. Deal with Nuisance Factors	<i>Revision or instruction: Twists, slider high, end cell closure, brake fire. Can they steer, can they land?</i>
c. Control Check	
d. All around Observation	<i>Maintain throughout the entire descent. Action on head on collision &amp; converging courses. Steer Away. Lowest canopy has priority.</i>
e. Moving to Holding Area	<i>During initial jumps, turns greater than 360 degrees should be discouraged, especially below 1,500ft.</i>
f. Landing Pattern	
4. Practical Walk through	<i>Talk through Jump sequence Include revision of Nuisance factors. Use DZ model. Use commands as given on Radio. Action if Radio fails.</i>
5. Priorities for Landing:	
a. Flat and level flared canopy.	
b. Into a hazard free area.	
c. Land into wind (if possible).	
d. Smooth Flare at correct height.	
6. Final Confirmation.	<i>Questions to and from.</i>
7. Look Forward.	<i>What's next.</i>

Additional Information – Identify the PLA Location of windsocks. **Student Talk down, Canopy collision procedures may be introduced in this lesson or taught as a separate lesson.**

Lesson Eight

**Student Talk Down Procedures**

Area – PLA, DZ Control Point

Aids – Spare radio, telemeters, binoculars, assistant.

Aim – To teach the students the PTOs student talk down procedures & terminology.

*By the end of the lesson students*  
 1. *Will understand the terminology to be used to assist them under canopy.*

SUBJECT	REMARKS
<p>Revision.</p> <p>1. PTO requirements.</p> <p style="text-align: center;"><b><u>Situation</u></b></p> <ol style="list-style-type: none"> <li>1. Steering Instruction.</li> <li>2. Steering Instruction.</li> <li>3. For Landing.</li> <li>4. Landing away from target area on/or in vicinity of active runway.</li> <li>5. To indicate not injured.</li> <li>6. To deflate canopy.</li> <li>7. Parachute Malfunction.</li> </ol>	<p><i>Where appropriate.</i></p> <p><i>Conducted by staff, location of Talk Down.</i></p> <p style="text-align: center;"><b><u>Instruction</u></b></p> <p><u><i>Pull on your left or right toggle.</i></u></p> <p><u><i>Let up on your left or right toggle.</i></u></p> <p><u><i>Stand by – Flare</i></u>  <i>(If student has flared too early do not let up. Keep feet and knees tight together.)</i></p> <p><u><i>Vacate runway Immediately.</i></u></p> <p><u><i>Raise arm if you are hurt.</i></u></p> <p><u><i>Get up and run around parachute.</i></u>  <i>(It may also be advantageous to pull in on one steering toggle to collapse the parachute.)</i></p> <p><u><i>Check your parachute.</i></u>  <i>(To be repeated until emergency procedures are initiated or until it is no longer safe to initiate emergency procedures.)</i></p> <p><b><i>N.B. Student skydivers should not be told to CUT-AWAY, except as a last resort, when it is clear this would reduce risk to the student skydivers or others.</i></b></p>

Additional Information

Lesson Nine

## **Abnormal Landings**

Area – Classroom, Outside  
Aids – Video, Photographs, 'PowerPoint'

Aim – To teach landings other than normal

*By the end of the lesson student*

- a. *Must know to avoid high.*
- b. *Know any special hazards.*
- c. *How to react for abnormal landing.*

### **SUBJECT**

### **REMARKS**

Revision

*Priorities for landing*

1. Always look and steer away.

*With such a manoeuvrable canopy hazards are easily avoided. Always avoid as high as possible Attempt to steer away gently no need for radical turns.*

2. Types of Hazard:

c. Trees

*Steer away. Protect face; Be prepared to pass through, Action if suspended.*

d. Water

*Steer away, Release RSL (unless shackles are used) Flare as normal, Operate Cut away as soon as feet get wet, Get clear of Water as soon as possible. Do not attempt to recover equipment.*

e. Power Lines

*Steer away, Action if suspended, Action if passing through and landing on ground, do not leave Kit always wait for assistance.*

f. Buildings

*Steer away, Action if on roof, Action if striking side of building, action if suspended. Any particular rules for around the centre*

e. Any other hazards (Roads, Vehicles, etc)

*Steer away. Appropriate action for that hazard*

3. Final Confirmation

*Questions to and from.*

4. Look Forward.

*What's next.*

Additional Information – At centres where Special Hazards exist more detailed drills may be required.

Lesson Ten

**Landings including practical PLF's**

Area – Classroom and Training Area.  
Aids – Video, Slides, 'PowerPoint', ramps.

Aim – To teach the student how and when to flare and the action to take if a hard landing is expected.

*By the end of the lesson student*  
1. *Must know how to initiate a flare.*  
2. *Must demonstrate a good PLF position*

SUBJECT	REMARKS
<p>Revision</p> <p>1. Ram Air Canopy Landings</p> <p>2. Flare to early</p> <p>3. Practice by student</p> <p>4. The Hard Landing Position</p> <p>5. Practice by student</p> <p>6. Final Confirmation</p>	<p><i>Landing priorities.</i></p> <p><i>Feet together</i> <i>Smooth Flare at 8 to 10 feet</i></p> <p><i>Maintain flare position.</i> <i>Keep feet and knees together.</i></p> <p><i>Once proficient move onto next phase</i></p> <p><i>Show PLF position and demonstrate roll.</i></p> <p><i>Students to practice until proficient.</i></p> <p><i>Students demonstrate all landing techniques taught.</i></p>

Additional Information.

There is no example of a written Examination lesson plan within this document, however a written Examination must be conducted at the end of the Ground Training to confirm the students have understood the content of the Category System Training Syllabus. The content of the written examination may vary from one PTO to another, and the instructor should be familiar with the answer sheet for such examination.

## **ADDITIONAL STUDENT CANOPY TRAINING**

Area – Classroom DZ

Aids – DZ photo, Video, PowerPoint, British Skydiving Canopy Training Manual

**Aim** – To Introduce the student to the Canopy Training required for their British Skydiving A Licence.

To gain their British Skydiving A licence the student must fulfil the requirements as laid down in British Skydiving Operations Manual Section 2.

4.9. Additional Canopy Training  
Additional Canopy Training may take place throughout Student progression.

4.9.1. Flat turns on at least 3 descents.

4.9.2. Increased the range of the canopy using the toggles on at least 3 descents.

4.9.3. It is permissible to complete both 'flat turns' and 'increasing the range of the canopy using the toggles, exercises on the same descent.

4.9.4. Displayed a reasonable level of canopy handling, flying the correct landing pattern and landing safely in the intended landing area.

4.9.5 A Canopy Training written examination.

**Note:** This lesson plan will reference to the Canopy Training Manual relevant sections and pages, e.g. CTM p40

**Objective** – By the end of the lesson student must understand:

1. "TAP"
2. Basic canopy flight:
  - a. Turn.
  - b. Flare.
  - c. Slow flight flat turns.
3. The "Accuracy trick".
4. Extending the range of the canopy using toggles.
5. Understand the landing priorities.
6. Why they must not start a turn below a height that will allow the canopy to recover close to the ground.

Be introduced to:

- Flight Planning.
- Assessing and updating a Flight Plan under canopy.
- Two-stage Flare.
- Common mistakes to learn from.

<b>Subject</b>	<b>Remarks</b>
<p><b>Revision</b> The students should already know:</p> <ol style="list-style-type: none"> <li>1. The "Landing Priorities"</li>   <li>2. To look before they turn.</li>   <li>3. How to avoid another canopy.</li>   <li>4. To hold the toggles down if they flare too high.</li> </ol> <p><b>Brief</b> Introduce "TAP" if not already used (CTM p23)</p> <ul style="list-style-type: none"> <li>• Traffic</li>   <li>• Altitude</li>   <li>• Position</li> </ul> <p><b>Basic canopy flight</b></p> <ul style="list-style-type: none"> <li>• <b>Turn</b> (CTM p8)</li>   <li>• <b>Flare</b> (CTM p9)</li>   <li>• <b>Slow flight "flat turns"</b> (CTM p11 &amp; 12)</li> </ul> <p><b>The "Accuracy trick"</b> (Assessing where they will land)(CTM p25)</p>	<ol style="list-style-type: none"> <li>1. Land under a flat, level, flared canopy.</li> <li>2. Land into a hazard free area.</li> <li>3. Land into wind.</li> </ol> <p>Number three is not at the expense of one or two.</p> <p>To ensure clear airspace.</p> <p>To turn away from converging paths and turn right in a head on collision scenario.</p> <p>To adopt a good PLF position</p> <p>TAP to be done before and after any manoeuvre.</p> <p>Good all-round observation, traffic avoidance to avoid canopy collisions.</p> <p>Monitoring altitude to decide what to do next.</p> <p>Where they are relative to the PLA and Holding area.</p> <p>Canopy travels forward and generates "lift" upwards.</p> <p>Canopy turns around the toggle side causing drag, will pitch down, and the pilot swing out. Lift is now not upwards, and the rate of descent and speed will increase.</p> <p>In a flare the lift and drag will increase and the pilots swing forward, timed correctly should reduce descent rate to lowest possible. If too high, pilot swings back and descent rate increases.</p> <p>By applying both breaks the rate of descent will decrease. Canopy can be turned by "elevation turn" or "depression turn". Depression turn will be the flattest and can be used in emergency situation to avoid hazards.</p> <p>Without input the canopy will descend with a glide ratio and a point where they would land can be identified as a "steady point". Anything going down in field of view will be cleared, going up in field of view will not be reached. Can be applied to Holding Area, PLA or hazards.</p>

**Extending the range of the canopy using toggles** (CTM p26)

Flying back with the wind the canopy descent can be slowed with brakes to try and cover more distance across the ground.  
Should assess if extended enough and may be able to get more from the canopy.

To do this earlier rather than later.  
Must leave enough time to ideally turn back into wind for landing.

**Understand the landing priorities.**  
(CTM p33)

Should now understand why.  
Flat – so has recovered and all lift upwards.  
Level – symmetrical inputs.  
Flared – slowed in case to reduce risk of injury.

Hazard free – be aware of colour changes and avoid hazards early with flat turns if necessary.  
Into wind – must not make a last moment turn to get into wind at expense of first two priorities.  
Must understand why must never turn low to the ground.

Student should be introduced to:

- **Flight Planning** (CTM p14)
- **Assessing and amending a Flight Plan under canopy** (CTM p24)
- **Two-stage Flare** (CTM p33)
- **Common mistakes to learn from** (CTM p37-39)

Preparation: Where you want to land / Any hazards around or on the way to the PLA / The strength and direction of the winds / The direction of jump run and your expected opening point / The flight pattern and landing direction / Where the ideal holding area is / Where do I fit in the whole lift?  
Set up heights. Landing pattern

Checking their position relative to their plan with the accuracy trick. And adjusting it (CTM p29) if not open in expected area, conditions have changed.

Adjusting the landing pattern for light/ nil winds compared to stronger winds.

How to do a two-stage flare, and the advantages and disadvantages.

Stress;  
Flare too high/low; No flare;  
Legstraps and /or harness adjusters uneven.

**How to gain the qualification:**

- Flat turns on at least 3 descents.
- Increased the range of the canopy using the toggles on at least 3 descents.
- Displayed a reasonable level of canopy handling, flying the correct landing pattern and landing safely in the intended landing area.
- A Canopy Training written examination.

Further areas that maybe introduced subject to CI approval:

- Canopy Collisions.
- Brake fires.
- Wing-loading and Downsizing.

How PTO wants students to manifest, do the exercises and who can supervise them.

Exercises to only be carried out once canopy checked, cleared of any nuisances, and in the correct area able to make it to the PLA. TAP **before and after** every manoeuvre. It is permissible to complete both exercises on the same descent.

Form 240A (also has area to record exercises)

**Intentionally blank for notes**



# CANOPY TRAINING 1

Area – Classroom DZ

Aids – DZ photo, Video, 'PowerPoint, British Skydiving Canopy Training Manual

Aim – To Introduce the student to the Canopy Training required for their British Skydiving Canopy Training 1.

To gain their British Skydiving A licence the student must fulfil the requirements as laid down in British Skydiving Operations Manual Section 2.

## 6.2. Canopy Training (CT)

To obtain Grade 1 in Canopy Training (CT1) the skydiver must be an 'A' Licence skydiver and be introduced to CT1 by a CI/Advanced Instructor nominated 'C' Licence or above CT2 Grade skydiver or equivalent of proven CT instructional ability, have received a full safety brief and been instructed, both theoretically and practically in canopy training relevant to CT1, and has successfully achieved the following:

6.2.1.a Demonstrate the ability on 5 descents to carry out the correct landing pattern for that PLA in the conditions of the day and land safely on the intended landing area.

6.2.1.b Completed 5 pre-declared safe landings, within an area of 50 metres diameter.

6.2.1.c Check the stall point, fly the canopy on deep brakes and carry out flat turns on at least 3 descents.

6.2.1.d Rear riser turns, as an avoidance manoeuvre, on at least 3 descents.

6.2.1.e A CT1 written examination.

**Note:** This lesson plan will reference to the Canopy Training Manual relevant sections and pages, e.g. CTM p40

**Objective** – By the end of the lesson student must understand:

7. To understand how to improve their accuracy.
8. Know symptoms of a toggle stall.
9. How to recover from a toggle stall.
10. How to use rear risers to avoid a canopy collision.

Be introduced to:

- Wing-loading
- Form 330
- Downsizing

<b>Subject</b>	<b>Remarks</b>
<p><b>Revision</b> The students should already know:</p> <ol style="list-style-type: none"> <li><b>The “Landing Priorities”</b> (CTM p33)</li> <li><b>“TAP”</b> (CTM p23)</li> <li><b>Slow flight “flat turns”</b> (CTM p11 &amp; p12)</li> <li><b>Canopy Collisions</b> (CTM p48)</li> </ol> <p><b>Demonstrate the ability on 5 descents to carry out the correct landing pattern for that PLA in the conditions of the day and land safely on the intended landing area.</b></p> <p><b>How to improve accuracy:</b></p> <ol style="list-style-type: none"> <li><b>A good flight plan</b> (CTM p14)</li> <li><b>Assessing the flight plan under canopy</b> (CTM p29)</li> <li><b>Flying in the “Stack”</b> (CTM p31)</li> <li><b>Good understanding of the “Accuracy trick”</b> (CTM p25)</li> </ol>	<p>Should now understand why</p> <p>1a. Flat - so has recovered and all lift upwards 1b. Level - symmetrical inputs 1c. Flared - slowed in case to reduce risk of injury 2. Hazard free - be aware of colour changes and avoid hazards early with flat turns if necessary. 3. Into wind a nicety but not at expense of.</p> <p>TAP to be done before and after any manoeuvre.</p> <p>By applying both brakes the rate of descent will decrease. Canopy can be turned by “elevation turn” or “depression turn”. Depression turn will be the flattest and can be used in emergency situation to avoid hazard.</p> <p>Good all-round observation, traffic avoidance to avoid canopy collisions. Canopy Collision drills as per CI directive.</p> <p>Should be able to brief the instructor on their flight plan, trying to predict what may affect it, and how to correct to keep to a good pattern.</p> <p>Preparation: Where you want to land / Any hazards around or on the way to the PLA / The strength and direction of the winds / The direction of jump run and your expected opening point / The flight pattern and landing direction / Where the ideal holding area is / Where do I fit in the whole lift? Set up heights. Landing pattern</p> <p>Being able to assess these relative to their plan, when and how to do it. Change in the conditions, wind changes.</p> <p>Importance of flying predictively and conservatively near others. Dealing with Traffic (CTM p31).</p> <p>Knowing where they would land as identified by the “steady point”. Anything going down in field of view will be cleared, going up in field of view will not be reached. Can be applied to Holding Area, PLA or hazards.</p>

**5. Knowing when to extending the range of the canopy using toggles** (CTM p26)

*Flying back with the wind the canopy descent can be slowed with brakes to try and cover more distance across the ground. Should assess if extended enough and may be able to get more from the canopy. To do this earlier rather than later. Must leave enough time to ideally turn back into wind for landing.*

*Knowing when to “cut their loses” and accept off landing (CTMp32). Dealing with not being into wind (CTM p35)*

**Check the stall point, fly the canopy on deep brakes** (CTM p11)

*In clear airspace in holding area, using TAP, apply the brakes steadily and observe the shape of the canopy as you swing back up it. Will “buffet” and begin to deform.*

*Will probably be cautious but should understand that only need to feel symptoms up to “buffeting” and not necessarily develop a full stall.*

*Need to know controlled recovery.*

*How to deal with potential twists and be above minimum cutaway altitude.*

**Carry out flat turns on at least 3 descents** (CTM p 12)

*Student will have practised flat turns on Student CT drill.*

*With understanding of stall symptoms can fly on deeper brakes and find the full range of the canopy. Should understand that this should be practised every time that they change canopy / downsize.*

**Rear riser turns, as an avoidance manoeuvre** (CTM p13)

*Importance of good observation when tracking, and after deployment. Used to avoid canopy collision. Should be looking to make a turn looking for clear airspace.*

*Only to be done after clearing nuisances.*

*Should be with brakes still set.*

**Wing-loading** (CTM p54)

*Demonstrate how to calculate wing-loading. Implications of increasing a wing-loading.*

**Form 330**

*Look at what their minimum canopy size will be.*

**Downsizing** (CTM p55)

*Explain CI protocols for downsizing at that PTO, in relation to the criteria in the CTM.*

**How to gain the qualification:**

- Demonstrate the ability on 5 descents to carry out the correct landing pattern for that PLA in the conditions of the day and land safely on the intended landing area.
- Completed 5 pre-declared safe landings, within an area of 50 metres diameter.
- Check the stall point, fly the canopy on deep brakes and carry out flat turns on at least 3 descents.
- Rear riser turns, as an avoidance manoeuvre, on at least 3 descents.
- A CT1 written examination.

*How PTO wants students to manifest, do the exercises and who can supervise them.*

*Emphasis is on the whole canopy flight, not just the accuracy of the landing.*

*Exercises to only be carried out once canopy checked, cleared of any nuisances, and in the correct area able to make it to the PLA.*

*TAP **before and after** every manoeuvre. It is permissible to complete both exercises on the same descent.*

*Form 240B*

**Intentionally blank for notes**

## **CANOPY TRAINING 2**

Area – Classroom DZ

Aids – DZ photo, Video, PowerPoint, British Skydiving Canopy Training Manual, Form 330

**Aim** – To Introduce the student to the Canopy Training required for their British Skydiving Canopy Training 2.

To gain their British Skydiving A licence the student must fulfil the requirements as laid down in British Skydiving Operations Manual Section 2.

6.2.5. To obtain Grade 2 in Canopy Training (CT2) the skydiver must be an B Licence skydiver and be introduced to CT2 by a CI/Advanced Instructor nominated 'C' Licence or above CT2 Grade skydiver or equivalent of proven CT instructional ability, have received a full safety brief and been instructed, both theoretically and practically in canopy training relevant to CT2, and has successfully achieved the following:

6.2.5.a. Check the stall point using toggles, fly the canopy on deep brakes and carry out flat turns on at least 3 descents.

6.2.5.b. Check the stall point using rear risers and fly the canopy using risers on at least 3 descents.

6.2.5.c. Demonstrate the ability to carry out the correct landing pattern for that PLA in the conditions of the day without conflicting with other jumpers and land safely on the intended landing area.

6.2.5.d. Completed 5 pre-declared safe landings, within an area of 25 meters diameter.

6.2.5.e. Rear riser turns, as an avoidance manoeuvre, on at least 3 descents.

6.2.5.f. Receive a full safety brief on any actions carried out under canopy that may cause distraction such as: Collapsing and stowing of the slider, loosening of chest strap, removal of booties and use of camera.

6.2.5.g. A CT2 written examination.

**Note:** This lesson plan will reference to the Canopy Training Manual relevant sections and pages, e.g. CTM p40

**Objective** – By the end of the lesson student must understand:

1. The symptoms of a rear riser stall.
2. How to improve their accuracy.
3. How to use rear risers to avoid a canopy collision in busier airspace.
4. How to deal with ancillary equipment while maintaining heading control.

Be introduced to:

- Turbulence, how to predict it.
- Turbulence, how to fly through it

<b>Subject</b>	<b>Remarks</b>
<p><b>Revision</b> The students should already know:</p> <p>4. <b>The “Landing Priorities”</b> (CTM p33)</p> <p>5. <b>Toggle Stall</b></p> <p>6. <b>Wing-loading &amp; Form 330</b></p> <p>7. <b>Downsizing</b></p> <p>8. <b>Canopy Collisions</b> (CTM p48)</p> <p><b>Check the stall point using toggles, fly the canopy on deep brakes and carry out flat turns on at least 3 descents.</b></p> <p><b>Check the stall point using rear risers and fly the canopy using risers on at least 3 descents.</b></p> <p><b>Demonstrate the ability to carry out the correct landing pattern for that PLA in the conditions of the day without conflicting with other jumpers and land safely on the intended landing area.</b></p> <p><b>Completed 5 pre-declared safe landings, within an area of 25 meters diameter:</b></p>	<p>Should now understand why.</p> <p>1a. Flat - so has recovered and all lift upwards. 1b. Level - symmetrical inputs. 1c. Flared - slowed in case to reduce risk of injury 2. Hazard free - be aware of colour changes and avoid hazards early with flat turns if necessary. 3. Into wind a nicety but not at expense of.</p> <p>Should understand symptoms and recovery technique.</p> <p>How to calculate their own and its implications.</p> <p>Minimum canopy size after completing CT2.</p> <p>As per CI directive.</p> <p>Repeat of the CT1 exercises to review. Should be able to extend range of flat turns once confident with identifying stall characteristics.</p> <p>In clear airspace in holding area, TAP, begin rear riser stall exercise. Gently as can develop quickly into full stall. <b>Show demo video</b> (CTM p65) Explain recovery must be even and controlled. How to deal with any issues after stall and must be well above minimum cut-away altitude. To fly the canopy on rears towards holding area, so that can correct heading while doing slider, or booties etc.</p> <p>Should be able to brief the instructor on their flight plan, trying to predict what may affect it, and how to correct to keep to a good pattern. Emphasis on good traffic management within the stack.</p> <p>Reiterate not to get fixated on accuracy without consideration of other canopies in the stack and landing pattern. Approach to landing should be without excessive unpredictable canopy corrections.</p>

**How to improve accuracy:**

**6. A good flight plan** (CTM p14)

Preparation: Where you want to land / Any hazards around or on the way to the PLA / The strength and direction of the winds / The direction of jump run and your expected opening point / The flight pattern and landing direction / Where the ideal holding area is / Where do I fit in the whole lift? Set up heights. Landing pattern

**7. Assessing the flight plan under canopy** (CTM p29)

Being able to assess these relative to their plan, when and how to do it.

**8. Flying in the "Stack"** (CTM p31)

Being aware of others around them and pre-empting potential close flight with other canopies.

**9. Good understanding of the "Accuracy trick"** (CTM p25)

Knowing where they would land as identified by the "steady point". Anything going down in field of view will be cleared, going up in field of view will not be reached. Can be applied to Holding Area, PLA or hazards.

**10. Knowing when to extending the range of the canopy using toggles** (CTM p26)

Flying back with the wind the canopy descent can be slowed with brakes to try and cover more distance across the ground. Should assess if extended enough and may be able to get more from the canopy. To do this earlier rather than later. Must leave enough time to ideally turn back into wind for landing.

**Rear riser turns, as an avoidance manoeuvre, on at least 3 descents.**

Will have done single turn to avoid another canopy. Now must consider in larger groups that should avoid a threat but not turn into another. Turns should be checking for clear airspace and one turn, a pause, and a second turn to simulate another potential collision.

**Receive a full safety brief on any actions carried out under canopy that may cause distraction such as: Collapsing and stowing of the slider, loosening of chest strap, removal of booties and use of camera.** (CTM p50)

Discuss techniques to deal with the ancillary equipment, different types of collapsible sliders. Issues that can come from passing slider over toggles (brake fires / toggle locks). Continuing to TAP while doing without getting distracted. Staying on correct heading with rear riser corrections.

**Turbulence** (CTM p43)

How to predict turbulence, and how to fly through it.

**How to gain the qualification:**

- Check the stall point using toggles, fly the canopy on deep brakes and carry out flat turns on at least 3 descents.
- Check the stall point using rear risers and fly the canopy using risers on at least 3 descents.
- Demonstrate the ability to carry out the correct landing pattern for that PLA in the conditions of the day without conflicting with other jumpers and land safely on the intended landing area.
- Completed 5 pre-declared safe landings, within an area of 25 meters diameter.
- Rear riser turns, as an avoidance manoeuvre, on at least 3 descents.
- Receive a full safety brief on any actions carried out under canopy that may cause distraction such as: Collapsing and stowing of the slider, loosening of chest strap, removal of booties and use of camera.
- A CT2 written examination.

Further areas that maybe introduced subject to CI approval:

- *Extending the range on rear risers*
- *Changing canopy design (CTM p56)*
- *Moving to higher performance canopies (CTM p60)*
- *Responsibilities under canopy (CTM p52)*

*How PTO wants students to manifest, do the exercises and who can supervise them.*

*Exercises to only be carried out once canopy checked, cleared of any nuisances, and in the correct area able to make it to the PLA.*

*Emphasis is on the whole canopy flight, not just the accuracy of the landing.*

*TAP **before and after** every manoeuvre. It is permissible to complete both exercises on the same descent.*

*Form 240C*

*May not be able to hold rears down long enough to get the benefit.*



**Intentionally blank for notes**

**BRITISH**  
**SKYDIVING**  
*Intentionally Blank*

## **Section 4: Aircraft Loading & Student Talk Down Procedures**

Maintaining separation between static line students is important for the prevention of canopy collisions and canopy entanglements. Therefore, the teaching of the principles of All-Round Observation and Canopy Collision Procedures must be covered during the student ground training phase.

However, when loading the aircraft and during STD, perhaps better defined as Student Radio Assistance (SRA) instructors must do what they can to help prevent the possibility of canopy contact in the first place.

### Aircraft Loading

When loading the aircraft consideration should be given to the weights of the students and wing loading of their canopies. Ideally, the heavier students and those with a higher wing loading (maximum 0.8 lbs/sq. ft. first jump. 0.85 lbs/sq. ft. after first jump) should exit the aircraft before the lighter students. This is likely to help with the vertical separation of the students. However, if the higher students carry out more turns, this could decrease the separation.

### Student Talk Down

Radio assistance to static line students can be of great benefit to the student, especially on their early jumps but can also be challenging, more so when there are several students in the air at the same time. It is therefore advisable for student talk down to be carried out without having to perform other duties, such as communication with the jump aircraft. It is also advisable that the person carrying out student talk down be positioned in an area where the best observation and monitoring may be carried out. This is likely to be the centre of the Student Landing Area (SLA) in the Parachute Landing Area (PLA), or at least from an elevated position, such as the top of a control tower or other elevated structure. However, if the student talk down is a considerable distance from the SLA, this is likely to alter the perspective of the person carrying out student talk down. The student talk down needs to be able to see the actual landing and give assistance where necessary.

Anyone carrying out student talk down on frequency 130.530, must be in possession of a Parachuting Radio Operators Certificate of Competence (see Forms 125 – 127) and must be fully briefed on their duties by the Chief Instructor (CI).

When carrying out student talk down it is important that the students are fully briefed on the following:

1. How they will be identified.

This could be by their name, the colour of their canopy, or by number. They should also need to know how to acknowledge that they are being personally spoken to. This could be by instructing the student to open and close their legs or if time and altitude allow, perform a practice flare, as this could be an easier method for the Instructor to identify from the ground, should the student still be quite high. These actions may also be used to communicate further intentions and to ensure the student has understood the communication of the student talk down person and agrees / confirms back to them, via these actions.

The student talk down should also be aware of the student exit order and a copy of the manifest would be advantageous to have. In some cases, the copy of the manifest could include the colours of the parachutes being used on that lift, should there be multiple student canopies on a lift. Any changes in the exit order, such as a student refusing to jump and other student exit orders being changed, would need to be relayed to the student talk down. Therefore, student talk down should have communications with the Dropping Zone Controller (DZC) and/or pilot in the aircraft.

## 2. The landing

One of the most importance aspects of canopy control for the student is the actual landing itself. Therefore, special attention should be paid when assisting students during their first landings until the student and the person carrying out student talk down are confident that the student will be able to perform the landing flare at the correct location, direction, height, and landing position,

Even if, prior to the jump, the student feels they are confident to carry out the landing without assistance, they may not feel quite so confident once they find themselves under canopy. Therefore, it may be sensible to ask the student once the student is on the final leg of the jump, to open and close their legs if they want landing assistance.

## 3. What commands they should expect and how to respond to them

Students must be given clear instructions during the canopy descent and landing and they should be given them in a calm voice and with enough time for the students to respond as required and in a timely manner. It is important to understand, that depending on the type of radio being used, there is likely to be delay between pressing the push-to-talk (PTT) button and seeing a physical response from the student. This is particularly important during the landing phase, as it is worth bearing in mind, that it may be advantageous maintaining the PTT button pressed, to avoid any delay during the communication given to flare the canopy for landing. To help them, the correct phraseology should be used. In addition to the examples below, PTOs should have their required words and phrases detailed in their SOPs and/or lesson plans.

SOPs should also detail the minimum power charge that student radios should have prior to being issued, to mitigate against the possibility of the battery running out prior to or during the canopy descent. Some skydiving operations may be affected by air traffic holds, other airspace users, multiple aircraft within the skydiving operation or other factors that could enhance the time since the radio was switched on and therefore possibly contributing to a radio running out of battery charge. In such scenarios it is recommended, if time permits, that a visual check of the radio is carried out to ensure the radio remains on and still has sufficient power. This can be carried out during the pre-jump check just prior to exit.

## 4. Debrief

Students must have a thorough debrief on the canopy handling and landing phase of the jump, as well as the other aspects. All points from the canopy control and landing aspects need to be covered. Also, ask about the radio aspects, such as could the instructions be heard, were they clear and were they understood? The information should be annotated within the student's logbook, to provide a complete record of the students' progress.

<u>Situation</u>	<u>Instruction</u>
Steering instruction	Pull on your left or right toggle.
Steering instruction	Let up on your left or right toggle.
On final approach	Feet and Knees tight together.
For landing	Stand by – flare / 3, 2, 1 Flare / hands up, hands up – flare now. <i>(If student has flared too early, they must not let up. Keep feet and knees tight together and prepare for a Parachute Landing Fall (PLF).)</i>
Landing away from target area on/or in vicinity of active runway	Vacate runway immediately.

To indicate not injured	Raise arm if you are hurt / wave if ok.
To deflate canopy,	Pull on one toggle or get up and run around parachute.
Parachute Malfunction	Check your parachute / canopy.  (to be repeated until emergency procedures are initiated or until it is no longer safe to initiate emergency procedures).  Check Altimeter (optional – to facilitate the ‘cut off’ height for the main canopy release if student has been taught same).

Should a student skydiver exit an aircraft and during the deployment of the parachute they are observed not responding to an emergency scenario, the student talk down should communicate to the skydiver to CHEK their CANOPY. They should continue to communicate the same words, until the student carries out their emergency procedure, as long as they remain above the minimum cut-away altitude.

***N.B. Student Skydivers should not be told to CUT-AWAY, except as a last resort when it is clear this would reduce risk to the Student Skydiver or others.***

During initial jumps, turns greater than 360 degrees should be discouraged, especially, if the student has lost awareness of their position over the ground by loss of TAP (Traffic, Altitude, Position) and below a suggested height of 1,500ft. Some PTOs may have the AAD default firing altitude raised; therefore, it is very important to know what the SOP for student turns below their cut off altitude is, which may be higher than 1500ft.

All the PTO’s requirements for aircraft loading and student talk down (radio assistance) should be included in the PTO SOPs and/or lesson plans and must be communicated to the relevant persons (instructors, Students, pilots etc).



## **List of Appendices**

Category System Basic Instructor Proficiency Card.....	57
Category System Instructor Proficiency Card.....	59







**British Skydiving**  
 5 Wharf Way, Glen Parva  
 Leicester, LE2 9TF  
**0116 278 5271**  
 info@britishskydiving.org  
**britishskydiving.org**

**CATEGORY SYSTEM BASIC INSTRUCTOR (CSBI) PROFICIENCY CARD**

**DETAILS OF APPLICANT**

Title (Mr. Ms etc) & SURNAME \_\_\_\_\_

FORENAMES \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_

POST CODE \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_

BRITISH SKYDIVING NUMBER \_\_\_\_\_ BRITISH SKYDIVING LICENCE NUMBER \_\_\_\_\_

**CSBI PROFICIENCY REQUIREMENTS**

Prior to attending a CSBI Course the candidate must have completed and recorded (on this form) the following:

- a. Must have a good understanding of the Parachute Training Organisation (PTO) lesson plans content and their format.
- b. Delivered a minimum of three lessons from the Basic System Training syllabus.
- c. Delivered a minimum of three Category System Progression briefs.
- d. Delivered a minimum of three Addition Canopy Training (CT) Progression briefs.
- e. Carried out three sessions of Student talk down under supervision (*See N.B.(2) below*).
- f. Must demonstrate competency as a DZ controller (*See N.B.(2) below*).
- g. Carried out one static line descent in the previous three months.
- h. Adequate knowledge of the British Skydiving Operations Manual.
- i. Must have observed a full static line course ground school.

*N.B(1): Any lessons or progression briefs must **NOT** be delivered to real students.*

*N.B(2): If you use 130.530 as the designated student talk down frequency, the CSBI candidate must be in possession of a Radio Operators Certificate of Competence (ROCC). DZ controllers or any person talking to a jump aircraft on frequency 129.905 must be in possession of an appropriate ROCC (details may be found in Form 125). Either task must be done under supervision of at least a Category System Instructor.*

**PRE-COURSE EVALUATION ASSESSMENTS:** (To be evaluated by an experienced, CI nominated, Category System Instructor).

Lesson 1: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Lesson 2: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Lesson 3: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Brief 1: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Brief 2: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Brief 3: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

**ADDITIONAL CANOPY TRAINING** as per Operations Manual Section 2, Para 4, Sub Para 4.9

Student CT Brief 1: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Student CT Brief 2: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Student CT Brief 3: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator: \_\_\_\_\_

**STUDENT TALK DOWN RECORD:**

Student talk down must have been carried out on a minimum of three occasions.

Date: \_\_\_\_\_ Number of Students: \_\_\_\_\_ Instructor: \_\_\_\_\_

Date: \_\_\_\_\_ Number of Students: \_\_\_\_\_ Instructor: \_\_\_\_\_

Date: \_\_\_\_\_ Number of Students: \_\_\_\_\_ Instructor: \_\_\_\_\_

**DZ CONTROL RECORD:**

I declare that I am proficient and are familiar with the requirements to carry out DZ control.

Candidate Signature: \_\_\_\_\_ Date: \_\_\_\_\_ CI Initials: \_\_\_\_\_

**CARRIED OUT A STATIC LINE DESCENT IN THE PREVIOUS THREE MONTHS**

Date: \_\_\_\_\_ Jump number: \_\_\_\_\_ CI Initials: \_\_\_\_\_

**ADEAQUATE KNOWLEDGE OF THE BRITISH SKYDIVING OPERATIONS MANUAL**

Date: \_\_\_\_\_ CI Initials: \_\_\_\_\_

**OBSERVED A FULL STATIC LINE GROUND SCHOOL:**

Date: \_\_\_\_\_ CI Initials: \_\_\_\_\_

**CANDIDATE DECLARATION**

I have completed all the requirements of this proficiency card.

I understand the content of my PTO lesson plans and will teach according to their format.

I meet all the requirements laid down in the British Skydiving Operations Manual for attending a British Skydiving Category System Basic Instructor Course.

I understand that failure to produce this completed form at the start of a British Skydiving Category System Basic Instructor Course will lead to an automatic dismissal from the course.

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_ British Skydiving No: \_\_\_\_\_

**CI DECLARATION:**

I am satisfied that the candidate has demonstrated the ability to carry out all proficiency requirements for attending a Category System Basic Instructor Course.

CI Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_ British Skydiving No: \_\_\_\_\_ British Skydiving Licence No: \_\_\_\_\_

Form



Issue 7, June 2022  
**British Skydiving**  
 5 Wharf Way, Glen Parva  
 Leicester, LE2 9TF  
**0116 278 5271**  
 info@britishskydiving.org  
**britishskydiving.org**

**CATEGORY SYSTEM INSTRUCTOR (CSI) PROFICIENCY CARD**

**DETAILS OF APPLICANT**

Title (Mr. Ms etc) & SURNAME \_\_\_\_\_

FORENAMES \_\_\_\_\_

ADDRESS \_\_\_\_\_

POST CODE \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_

BRITISH SKYDIVING NUMBER \_\_\_\_\_ BRITISH SKYDIVING LICENCE NUMBER \_\_\_\_\_

**CSI PROFICIENCY RECORD**

Prior to attending a CSI Course, the candidate must have recorded (on this form) the following:

- a. Ground school lessons taught and to how many students.
- b. Student refresher training briefs/lessons.
- c. Progression briefs – Category’s 3 to 8.
- d. Category System Students dispatched.
- e. Student talk downs (See N.B.(1) below).
- f. AFF Consolidation students dispatched.
- g. Additional Canopy Training Briefs delivered.
- h. Obtained the recommendation of the candidate’s Chief Instructor (CI) that the classroom ability of the candidate is satisfactory and that they are fully familiar with the procedures and syllabus for teaching the Category System ground school.

*N.B(1): If you use 130.530 as the designated student talk down frequency, the CSI candidate must be in possession of a Radio Operators Certificate of Competence (ROCC). DZ controllers or any person talking to a jump aircraft on frequency 129.905 must be in possession of an appropriate ROCC (details may be found in Form 125).*

**CATEGORY SYSTEM GROUND SCHOOL TRAINING RECORD:**

Enter the number of students trained in each lesson.

*NB: AFF Instructors preparing to attend a CSI course have the privileges of a CSBI and are permitted to teach the relevant course content under the direct supervision of a CI nominated current CSI.*

Date	Daily Refresher Training	Kit and Equip't After landing	The Stable Position	Aircraft Drills & Emergency Drills	Landings including (PLF)	Canopy Control	Mals Theory/ Prac	Abnormal Landings	CI Initials

**STUDENT TALK DOWN RECORD:**

Enter the number of students talked down.

Date	Students	CI Initials	Date	Students	CI Initials	Date	Students	CI Initials	Date	Students	CI Initials

**Note:** Training logs may be continued on a separate sheet, if required.

**CATEGORY SYSTEM STUDENTS DISPATCHED**

<b>Date</b>														
<b>Static Line</b>														
<b>Free Fall</b>														
<b>AFF Consolidations</b>														
<b>CI Initials</b>														

**CATEGORY SYSTEM PROGRESSION BRIEFS RECORD:**

Enter the number of students briefed.

Date	DP Brief	1 <sup>st</sup> FF	5/10 sec	15 sec & Alti	Turns/Dive & Backloops	Tracking	Cat 8 Brief	CI Initials

**ADDITIONAL CANOPY TRAINING BRIEFS RECORD:**

**CANOPY HANDLING (CH) COACH QUALIFICATION:** Coach Number: \_\_\_\_\_

Date	Students	Canopy Exercise	CI Initials	Date	Students	Canopy Exercise	CI Initials

**Note:** Training logs may be continued on a separate sheet, if required.

**CANDIDATE DECLARATION**

I declare that the information recorded and on this proficiency, card is a true record of the work carried out throughout my probationary period as a CSBI and over the duration of \_\_\_\_\_ months.

I meet all the requirements laid down in the British Skydiving Operations Manual for attending a British Skydiving Category System Instructor Course.

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_ British Skydiving No: \_\_\_\_\_

**CI RECOMMENDATION:**

I am satisfied that the applicant has demonstrated the ability to satisfactorily teach a complete Category System Ground School and is competent to deliver all subsequent progression briefs required for the British Skydiving 'A' Licence.

CI Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_ British Skydiving No: \_\_\_\_\_ British Skydiving Licence No: \_\_\_\_\_

British Skydiving is the trading name of British Parachute Association Ltd. A company limited by guarantee. Registered in England & Wales no 875429. Registered office: 5 Wharf Way, Glen Parva, Leicester LE2 9TF

**BRITISH**  
SKYDIVING  
*Intentionally Blank*