

# THE BRITISH PARACHUTE ASSOCIATION

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## OPERATIONS MANUAL

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# THE BPA OPERATIONS MANUAL



**The British Parachute Association operations Manual outlines the requirements and guidelines for the safe conduct of sport parachuting by Clubs, Schools, Centres, Teams & Associations affiliated to the British Parachute Association.**

**Amendments or variations to this manual must be the subject of formal application to and acceptance by the British Parachute Association and the Civil Aviation Authority.**

## SECTION 1

# CONDUCT AND CONTROL OF SPORT PARACHUTING

### The Ten Basic Rules

1. All parachuting within BPA Affiliated Clubs, Schools, Centres and Associations must take place under the following conditions:

- (1) Under arrangements made by a BPA Advanced Instructor who has been nominated as the Club Chief Instructor (CCI) and who is normally present, on a daily basis, when parachuting is in progress.
- (2) By parachutists who are in every respect fit, trained, dressed, equipped and briefed to undertake the descent planned.
- (3) When an adequate ground control organisation is in progress.
- (4) With an approved pilot, and a jumpmaster qualified to dispatch the parachutists concerned.
- (5) With parachutes in good condition, safe in all respects, correctly packed, well fitted, and inspected before emplaning.
- (6) From an authorised type of aircraft suitably equipped and prepared for parachuting.
- (7) When weather conditions are suitable.
- (8) Onto an approved DZ.
- (9) With all the documentation in order and up to date.
- (10) According to the conditions laid down in the BPA Operations Manual.

### 2. Responsibility

- (a) Overall responsibility within BPA Affiliated Clubs, Schools, Centres and Associations for ensuring that the conditions enumerated in Paragraph 1 above are observed, will be vested in Club Chief Instructors (CCIs).
- (b) Student Parachutists (see Section 2) may only parachute under the organised control of a BPA Affiliated Club, School or Centre and under the supervision of a CCI or BPA Instructor authorised by a CCI. Such instructors will be wholly responsible for their training and parachuting activities.

### 3. Ground Control Organisation

All Clubs, Schools and Centres will establish a satisfactory system of Ground Control to control parachuting which must be continuously operational when parachuting is in progress and which will meet the following minimum requirements.

- (a) All parachutists must be briefed and inspected before emplaning.
- (b) All aircraft lifts must be correctly manifested before take off.
- (c) DZ Control must be continuously established when parachuting is in progress, and the descent of all parachutists must be monitored from the ground.
- (d) Parachutists under instruction must be debriefed after every descent.
- (e) Parachutists log books and other relevant records must be maintained up to date.
- (f) Parachute packing by all those who do not possess a Parachute Packing Certificate must be adequately supervised.

### 4. Briefing of Parachutists before Emplaning

- (a) All Parachutists under instruction must be briefed by a CCI (or an instructor nominated by him) on the details of every planned descent before parachutes are fitted.
- (b) All other parachutists will notify the type of jump they propose to carry out to the instructor or J/M who is compiling the manifest, together with all relevant details. This will enable the J/M to complete the briefing of the entire lift.

### 5. Manifesting of Parachutists

All Parachutists must be manifested on a form designed for the purpose before emplaning. It is normally desirable for the J/M to carry a copy in the aircraft. It is essential that one copy is left in the hands of a responsible member of the Ground Control Staff. It is recommended that all Clubs should use a Manifest Board on which the names of the parachutists in every planned aircraft lift should be displayed where it can be read by all concerned.

## 6. Authorisation of Flights

All flights made for the purpose of parachute dropping are to be authorised in writing. A list of those entitled to authorise flights for this purpose is to be maintained by the CCI. A person thus entitled must be satisfied before authorising such flights to be made that:

- (a) The aircraft to be used has a valid certificate of maintenance, or there is evidence in the aircraft logbook that the requirements of the maintenance schedule have been met.
- (b) The serviceability state of the aircraft has been properly recorded in accordance with Section 9 (Flying) paragraph 3C, and the aircraft is serviceable for the flight.
- (c) The pilot of the aircraft and the parachutists embarked are qualified to carry out the flight under the conditions expected to obtain at the time of the intended parachute descent.
- (d) The parachutists embarked for the flight have been instructed on the action to be taken in the event of an aircraft or parachuting emergency.
- (e) A jumpmaster responsible to the aircraft commander for the conduct of all parachutists embarked has been nominated.

## 7. D.Z. Control

- (a) A Control organisation must be set up on all DZs to ensure that parachuting is safely and efficiently controlled at all times. It should be fully established by the time each lift takes off and must remain in force until all parachutists (and aircraft if applicable) have landed.
- (b) The DZ Controller must be a responsible parachutist who has been fully briefed on his duties by the CCI. Except in the case of a Display Team where the DZ Controller may be a responsible person, nominated by the Team Leader.
- (c) The duties of a DZ Controller may be varied as necessary in order to fit in with local conditions provided that the safety standards which they are intended to achieve are in no way reduced.
- (d) The DZ Controller may be assisted by any number of others but he/she alone is responsible for ensuring that ground control is fully established and that all the functions allocated to him/her are efficiently carried out. When parachuting is in progress his/her correct place is normally either at the target or at a control post. He/she must ensure that all parachute landings on the DZ are monitored.
- (e) The duties of a DZ Controller are that he/she:—
  - (1) Will be responsible for setting up and supervising the DZ Control Organisation as required by the CCI.
  - (2) Will be given clear instructions from the CCI on the extent, if any, to which he/she is responsible for the briefing and supervision of the marshalls, J/Ms and parachutists.
  - (3) Must ensure that the pilot's briefing includes any DZ Control Instructions or Information which is of concern to them.
  - (4) Will brief any assistants of staff who are placed at his/her disposal or who are in any way made responsible to him/her by the CCI.
  - (5) Must lay out the target at the point indicated by the CCI.
  - (6) Must display the appropriate ground to air signals for the guidance of the Pilot and J/M when necessary.
  - (7) Must set up and maintain watch on a wind meter, or be in communication with someone who holds this responsibility.
  - (8) Must ensure that the target area is cleared of parked vehicles, etc.
  - (9) Must ensure that a stretcher and First Aid Kit are at all times available and that someone with First Aid knowledge is known to him/her. He/she should also know the most direct route to the nearest hospital.
  - (10) Must prevent large groups of spectators from approaching too close to the target area.
  - (11) Will maintain a close look out for aircraft including gliders, and will suspend parachuting as soon as any interference with the safe conduct of parachuting becomes apparent.
  - (12) Will keep a close watch on wind and weather and suspend parachuting if either should exceed or threaten to exceed the limits laid down.
  - (13) Will ensure that all apparatus for wind indication on the DZ is put to proper use and the attention of the CCI drawn to any equipment which is lacking or unserviceable. (Wind socks, signal panels, smoke generators, etc.).
  - (14) Will keep in close touch with Flying Control if there are other aviation activities adjacent to the DZ.
  - (15) Whenever student parachuting is taking place will maintain radio communication with the parachuting aircraft for the purpose of suspending parachuting.
  - (16) Must ensure that all parachutists' descents are observed, preferably through telemeters or binoculars, until all parachutists have landed.

N.B. It is mandatory that all Drop Zones where student parachuting takes place are equipped with at least one set of telemeters and a stop watch.

(17) Will ensure that all landed parachutists who are in need of assistance receive it without delay.

(18) Will report all accidents, injuries, parachute malfunctions and contraventions of BPA Operations Manual and Club Rules to the CCI.

## **8. Debriefing of Parachutists**

All Parachutists under instruction should be debriefed after every descent. This should be in two parts: firstly on the exit by the instructor who acted as J/M and secondly, by the DZ Controller who observed the opening, canopy control and landing. The free fall should also be observed and noted either from the air or from the ground.

## **9. Maintenance of Records**

Club and Personal Records of parachute descents and parachute packings should be recorded in the appropriate log books, registers and record cards, the same day as they are made.

## **10. Parachute Packing**

Arrangements for the supervision of parachute packing by all who do not possess a packing certificate must be planned in detail and understood by all concerned. Clubs may use their own systems providing that:

- (a) A holder of a packing certificate covering all types of parachutes likely to be packed in the packing area is nominated by the CCI to take charge of the packing area.
- (b) All parachutes are checked for damage after use and withdrawn if found unserviceable.
- (c) All parachutes are correctly packed. They must be checked at the appropriate stages by the packing certificate holder as qualified in sub para (a) above.

## **11. Ground to Air Signals**

- (a) There will be a standard code of ground-to-air signals used by all BPA Affiliated Clubs, Schools and Centres. These will consist of red, orange, yellow or white panels of sufficient dimensions to be clearly visible by parachutists from whatever height they are jumping.
- (b) On the DZ there will be a target cross indicating the area which it is intended that parachutists will land and will be displayed whenever parachuting is in progress.
- (c) Whenever student parachuting is taken place and there has been a breakdown of radio communication between the DZ Control and the parachute aircraft, parachuting must be immediately suspended and will only recommence when radio communication has once more been established.
- (d) Whenever parachuting by experienced parachutists is taking place and radio communication is not used or in the event of a breakdown of radio communication between the DZ Control and the parachute aircraft, the signal cross will be used to signal instructions to the pilot and jumpmaster, as follows:-
  - (1) When the (X) is changed to an (I), this will indicate that parachuting is temporarily suspended, but the aircraft may remain airborne at the discretion of the pilot, pending a further change of signals.
  - (2) When the (X) is changed to an (L), it will indicate to pilot and jumpmaster that parachuting is suspended and the aircraft MUST land with all remaining parachutists on board.
- (e) Every DZ will be equipped with a windsock or other suitable means of conveying the strength and direction of wind to parachutists who are preparing to land.



## SECTION 2

# CLASSIFICATION OF PARACHUTISTS

1. Parachutists are classified in several ways:—
  - (a) **FAI Certificate** (issued by the BPA on behalf of the Royal Aero Club) see Para 2.
  - (b) **The Category System**, see Para 3.
  - (c) **Accelerated Free Fall Levels**, see Para 4.
  - (d) **Tandem Parachutist**, see Para 5.

## 2. FAI Certificates

FAI Certificate Holders are classified as follows:—

A and B Certificate holders are designated 'Student Parachutists'.

C and D Certificate holders are designated 'Experienced Parachutists'.

### FAI (BRITISH STANDARD) CERTIFICATES

The applicant must reach the following standards:—

'A' CERTIFICATE—Category 3 and 10 jumps.

'B' CERTIFICATE—Category 5 and 25 jumps to include 10 jumps landing within 50m of the target.

'C' CERTIFICATE—Category 8 and 50 jumps to include 20 jumps landing within 20m of the target.

'D' CERTIFICATE—Category 10 and 200 jumps to include 20 jumps landing within 15m of the target.

## 3. The Category System

The Category System is as follows:—

### CATEGORY 1

Has been passed out on Basic Ground Training (6 hours minimum) and is ready for first static line descent.

### CATEGORY 2

(a) Has performed a MINIMUM OF TWO ABSOLUTELY STABLE OBSERVED STATIC LINE DESCENTS in the full spread position (counting throughout).

(b) Has performed approximately 13 hours of ground training in accordance with the BPA Ground Training Programme.

### CATEGORY 3

Has performed a MINIMUM OF THREE SUCCESSFUL CONSECUTIVE, OBSERVED STATIC LINE DESCENTS WITH DUMMY RIPCORD (counting throughout).

N.B. Progression to freefall **must not** take place until at least the SEVENTH descent and may only be authorised by an Approved or Advanced Instructor.

### CATEGORY 4 (5 seconds)

(a) Has performed a MINIMUM OF THREE STABLE 5 SECOND DELAYED OPENINGS (counting throughout).

(b) Has remained stable throughout opening on each descent.

(c) Has looked at ripcord handle before and during the 'reach and pull'.

(d) Has achieved reasonable canopy handling.

### CATEGORY 5 (10 seconds)

(a) Has performed a MINIMUM OF THREE STABLE 10 SECOND DELAYED OPENINGS (counting throughout).

(b) Has learned to maintain heading during exit and in freefall.

### CATEGORY 6 (15 seconds)

Has performed a minimum of 3 flat stable delayed openings in the following sequence:

(a) One flat stable counting throughout.

(b) After introduction to instruments, two flat stable delayed openings with instruments but continuing to count throughout.

N.B. A strong position on exit for six seconds and then slowly relaxing into a natural position maintaining aircraft heading.

### **CATEGORY 7 (20 seconds)**

Has performed a minimum of 4 twenty second delayed openings in the following sequence:

- (a) 1 x 20 second delayed opening, maintaining aircraft heading and continuing to count throughout and relaxing position.
- (b) 1 X 20 second delayed opening with 360° left turn after an approximate 10 second fall away. Stopping on aircraft heading.
- (c) 1 X 20 second delayed opening with 360° right turn after an approximate 10 second fall away. Stopping on aircraft heading.
- (d) 1 x 20 second delayed opening. Alternate turns left and right with precision.

### **CATEGORY 8**

Has performed a minimum of 8 descents of 30 and 35 second delays in the following sequence:

- (a) One Unstable Exit with alternate Turns with precision.
  - (b) One Unstable Exit with Backloops.
  - (c) One Dive Exit with Backloops.
- N.B. (1) On completion of dive exits and backloops, the student may be introduced to either a Tandem System with throwaway pilot chute and high performance round canopy, or an approved AFF Tandem System (ripcord deployed) and large docile square canopy. At this time, live cutaway drills may be carried out in accordance with Section 8, Para 6 (on a specially constructed tandem system.)

The first two descents on whatever system to be used must be preceded by a lecture/lesson on tandem emergency procedures with extensive practical ground training in cutaway drills. If a high performance canopy is used, this must be preceded by a formal lecture/lesson on high performance canopies.

The first two descents should be ten second delayed openings from a minimum height of 4,200 ft AGL. CCI's must clear the jumper concerned and endorse his/her log before descents.

A further three descents for the purpose of equipment familiarisation on tandem system with throwaway pilot chute (and high performance round if used). No other exercises may be carried out during these three descents. Minimum height 4,200 ft AGL.

- N.B. (2) On completion of dive exit and backloops and a minimum of five tandem system jumps, the jumper may be recommended for Ram-Air Canopy by the CCI, who must endorse his/her logbook.

Prior to the first Ram-Air descent, a formal lecture/lesson on the Ram-Air Canopy and revision on tandem emergency procedures must be given by a CCI nominated Instructor. The first five descents must be carried out with no other exercises included.

Jumpers progressing to Ram-Air Canopies in conventional system are not required to have carried out any previous Tandem descents.

- (d) Two Tracks.
- (e) Two Track Turns (Sharp 45%/90% left or right turn as an avoiding manoeuvre whilst maintaining the track).
- (f) One Half Series with short Track and Wave Off, from a minimum altitude of 8,000 ft AGL.
- (g) Cleared for self spotting descents up to 8,000 ft AGL.

- N.B. (3) Single exercises such as dive exit, unstable exit or backloops may be carried out by the parachutist from a minimum altitude of 5,000 ft AGL. No tracking exercises may be commenced below 7,000 ft AGL.

- N.B. (4) On completion of Category 8, the student may be recommended for FAI C Certificate by his/her Instructor.

- N.B. (5) The minimum qualification for a parachutist to convert to a 'Pull Out' pilot chute will be FAI 'D' Certificate.

### **CATEGORY 9**

Has been introduced to relative work parachuting and has attempted the following supervised instructional relative work exercises with either a CCI nominated instructor or a CCI nominated Category 10 jumper of proven relative work instructional ability.

- (a) Fall rate. Fast Fall/Slow Fall.
  - (b) Horizontal Movement, Forwards/Backwards.
  - (c) Slide Slip Left and Right.
  - (d) Back ins.
  - (e) Side ins.
  - (f) 360° Flat turns left and right and levelling.
- N.B. May also be covered, Exit positions.  
Centre Floater.  
Rear Floater.  
Lead and No. 1.  
Diving techniques, target and docking approaches.

It is recommended that instructional groups be ideally two persons only, occasionally three. No more than two Category 9 jumpers per group of three, the third being an instructor or a CCI nominated Category 10 jumper.

#### **CATEGORY 10**

1 x Pin back loop pin.  
1 x Close third.  
1 x Close Fourth.

**Note:** Up to Category 6, all students are to be observed and timed from **exit to full canopy development** by an Instructor, up to Category 4, this must be done by the Instructor in the aircraft.

Details of release, count, position, pull and recovery must be entered in all students log book for Categories 2–4 inclusive. All details of performance up to and including Category 8 will be entered in the parachutists log book by the Instructor. Details of qualifying descents for progression from Category 8 through Category 10 will be entered in the parachutists log book by the Instructor.

As part of the training for progression from one Category to another revision/instruction of all emergency drills and procedures must take place.

#### **4. Accelerated Free Fall (AFF) Levels**

The Accelerated Free Fall Levels are as follows:—

##### **LEVEL 1**

Has been passed out on Ground Training and has then achieved the following:—

- (a) Heading awareness.
- (b) Focussed awareness and attention.
- (c) Co-ordinated body movements from 'free arm' to 'practice pulls'.
- (d) Attitude awareness.
- (e) Actual ripcord pull at required altitude.

##### **LEVEL 2**

Has achieved the following:—

- (a) Maximum 'free arm' time.
- (b) Practice pulls (as required).
- (c) Heading awareness.
- (d) Relaxed body position.
- (e) Solo pull at required altitude and to observe deployment of canopy.

##### **LEVEL 3**

Has achieved the following:—

- (a) Leg and arm awareness.
- (b) Heading maintenance (principles of turning).
- (c) 'Hover' control.
- (d) Solo pull at required altitude.

N.B. Levels 1–3 require two AFF Instructors (one of these may be a Potential AFF Instructor).

##### **LEVEL 4**

Has achieved the following:—

- (a) Leg and arm awareness.
- (b) Start and stop turns.
- (c) Basic forward movement may be introduced.
- (d) Waive off and pull at required altitude.

##### **LEVEL 5**

Has achieved the following:—

- (a) Actual spotting from aircraft.
- (b) Turns, left and right.
- (c) Forward movement if introduced.
- (d) Control of axes.

##### **LEVEL 6**

Has achieved the following:—

- (a) Control of spotting.
- (b) Solo exit.
- (c) Subterminal control.
- (d) Backloops.
- (e) Tracking.

## **LEVEL 7**

Has achieved the following:—

- (a) Cleared for self spotting.
- (b) Dive exit.
- (c) Alternate turns and backloop (½ series).
- (d) Track and Track turns.

## **LEVEL 8**

Has achieved the following:—

- (a) Exit aircraft in a stable position and pull within 5 seconds maintaining stability throughout.
- N.B. Levels 4–8 require at least one AFF Instructor.

All AFF instruction is to be made within the guidelines of the BPA Accelerated Free Fall Manual.

Any AFF student returning from abroad who has not completed level 7 must only continue through to Level 8/Category 8 at a BPA Approved AFF Centre.

## **5. Tandem Parachutist.**

A Tandem Parachutist is as follows:—

A person being introduced to parachuting by a BPA Tandem Instructor and has received instruction prior to and during the descent.

### SECTION 3

## JUMPMASTER (J/M)

1. A Jumpmaster is at least a 'C' Licence parachutist appointed by the CCI to take charge of the parachutists on any particular aircraft lift. He/She will normally be the most experienced parachutist on board and this will be assumed in the absence of orders to the contrary.
2. Experienced Parachutists acting as Jumpmaster may only despatch parachutists of Category 6 and above. All parachutists of Category 1 to 5 inclusive MUST be despatched by a BPA Instructor or Potential Instructor under supervision of Examiners on a Potential Instructors Course, or his/her CCI following his/her successful completion of a Potential Instructors Course.
3. All AFF students up to and including Level 8 will be despatched by an AFF Instructor.
4. Experienced parachutists training as Potential Instructors may despatch students under the direct supervision of instructors in the aircraft unless the supervising instructor is also the pilot of the aircraft.
5. No aircraft with more than one parachutist on board will take off without a J/M being appointed.
6. J/Ms are responsible for briefing their pilots before take off on all relevant points concerning the requirements of the parachutists to be dropped. They will also brief the parachutists fully BEFORE emplaning.
7. The J/M is responsible for ensuring that all parachutists on board have been checked.
8. In an emergency J/Ms will, if practicable, seek and follow the instructions of the pilot. If this is not possible they will use their own judgement and act accordingly (See Section 10, Safety, Para 5).
9. It is a standard condition of the CAA Sport Parachute Permission document that any person carried in a parachute-dropping aircraft as Jumpmaster or Instructor must be equipped with a serviceable parachute, whether or not intending to make a parachute descent (See also Section 9, para 3H).

## SECTION 4

# INSTRUCTORS

### 1. APPROVED INSTRUCTORS

To become a BPA Instructor the candidate must first become a Potential Instructor (PI) and fulfil all the requirements of a Potential Instructor's course and Final Examination Course.

(a) **Required Qualifications**

- (1) 'D' Certificate Holder.
- (2) 2 years involved in sport parachuting.
- (3) A written recommendation by a CCI who knows him/her personally and has seen him/her parachuting regularly during a period of not less than six months (Exceptions to this rule may be made on application to the STC in the case of Commonwealth or Foreign instructors on production their credentials).
- (4) Hold a BPA Packing Certificate endorsed for at least three different main and three different reserve parachutes.

(b) Will be required to attend one week Potential Instructor's course to be given instruction in:

- (1) Methods of instruction.
- (2) Use of Training Aids.
- (3) Basic ground training period such as introduction to equipment, aircraft drills, emergency procedures and parachute landing falls.
- (4) Practical periods on such as flight line inspection, pilot briefing, student briefing and de-briefing and aircraft drills.
- (5) Lectures on such subjects as training progression, safety regulations, etc.
- (6) The candidate's personal parachuting may also be assessed.

(Note—No PI Course, apart from those arranged by a National Coach and Safety Officer, may be organised without prior approval from the STC.)

- (c) (1) After receiving a recommendation from the Examiners of the Potential Instructors course, the candidate will spend 6 months working under the supervision of his/her CCI during which time he/she will be involved in training of students, up to Category 8.
- (2) At the end of the six months period the CCI will be required to write a report and recommendation on the work of the Potential Instructor and submit the report to the Examiners during the candidate's final examination.

(d) The PI will then be required to attend an examination course of up to 5 days' duration. During this time he/she will be assessed by at least 2 Examiners on lecture and ground training periods.

Despatching of S/L students and personal parachuting will be assessed if conditions permit. During this five day period a written examination will be undertaken by the Potential Instructor with a minimum pass mark to be achieved. This examination paper will be on such subjects as:—

- (1) Basic parachute maintenance (recognition of faults, bad assembly, material damage and contamination).
- (2) Student problems/situations.
- (3) Aircraft problems/situations.
- (4) Documentation.
- (5) Displays — legal requirements, etc.
- (6) Basic meteorology.
- (7) Basic first aid (fractures, concussion, shock, etc.).
- (8) Accidents/Fatalities—action to be taken.
- (9) BPA Operations Manual.

(e) On satisfactory completion of the above, two Examiners will sign the qualification of the Potential Instructor, he/she will then be qualified to instruct parachutists up to Category 8 standard.

(f) Should the Potential Instructor fail to qualify, he/she may attend a final examination course again.

(g) A PI qualification is valid for 12 months.

### 2. ADVANCED INSTRUCTORS

One of the criteria for Advanced Instructor Status is the ability to manage an active Drop Zone. Candidates should be prepared with practical experience in this aspect.

(a) **Required Qualifications**

- (1) All the qualifications laid down for BPA Approved Instructors.
- (2) Must be recommended by CCI, have been an Approved Instructor for at least three years, have done 500 plus jumps and must attend a minimum of two Instructor Courses after that time, the first being a Pre-Advanced Instructor Assessment Course. Must have been involved in the organisation of and taken part in a Water Jump, Night Jump, Demo and Cutaway before attending the first Course.

(b) **Method of Qualification**

A Potential Advanced Instructor must submit proof of the above during his/her attendance of the aforesaid Pre-Advanced Instructor Assessment Course. On either course the candidate can be asked to:

- (1) Organise and give a brief for a Water Jump, Night Jump and Demo.
- (2) Give a brief on a first square jump, first HP round jump, first RW jump, Cutaway drills and a brief for training a jump pilot.
- (3) Give a DZ Management Lecture.
- (4) Give an Incident Procedure Lecture.
- (5) Submit a written paper on an Advanced subject and may be asked to present the paper.
- (6) Critique/Coach PIs.
- (7) Run a Parachuting Programme.
- (8) Demonstrate his/her personal parachuting ability.
- (9) Complete a written examination.

On each Course the candidates will be assessed and recommendations will be made by the Examiners.

### 3. CLUB CHIEF INSTRUCTORS (CCI)

A CCI must be a BPA Advanced Instructor who is responsible for the safe conduct of all parachuting and flying operations and for ensuring that these are carried out in accordance with the BPA Operations Manual, and is also responsible for the maintenance of parachutes and safety equipment within the club. The BPA and CAA shall be notified in writing not less than 7 days in advance of any intended change of CCI.

The CCI may delegate the responsibilities to qualified subordinates as he/she thinks fit but is principally answerable to the BPA for all matters concerning safety within the Club. He/she has the full backing of the STC to ground any member of the Club or visitor using the Club's DZ on grounds of contravening BPA or Club Safety Regulations or whenever it is considered to be in the interests of the Club or members to do so. He/she may recommend to the STC that any BPA member be permanently grounded, giving the reasons in writing. In such cases members concerned will have a right to appeal. The CCI is automatically a voting member of STC, providing he/she runs a Drop Zone.

**Instructors in Charge of an AFF Programme.** For the first twelve months of an operation where an AFF Programme has not been established at a Club/Centre, the Instructor in charge of that programme must be an advanced Instructor who is a BPA AFF Instructor. At existing AFF Approved Clubs/Centres an Approved Instructor who is a BPA AFF Approved Instructor with at least twelve months experience may be in charge of the AFF programme. In all cases the Club Chief Instructor must designate the Instructor in charge of the AFF programme and lodge same with the BPA. Overall responsibility for that programme will rest with the CCI.

### 4. ADVANCED INSTRUCTOR/EXAMINER

(a) **Required Qualifications**

- (1) Must have been an Advanced Instructor for at least two years.
- (2) Must attend 2 PI Courses after being an Advanced Instructor for two years.
- (3) Present a paper on some form of parachuting (approx 1,000 words).
- (4) Be able to critique Instructors.
- (5) Prove his/her ability to examine all aspects of parachuting.
- (6) Must, after becoming an Examiner attend a PI/Exam Course at least every two years.
- (7) Must be able to give all specialist lectures on PI Course.
- (8) Present 25 questions for Basic Instructors and 10 questions for Advanced Instructors.

(b) **Responsibilities**

When examining Potential/Approved/Advanced Instructors every Examiner must be fully aware of his/her responsibilities towards the BPA, the Club, the students and the candidate himself, and the consequences which may flow from an accident due or partly due to faulty instruction. If there is any reasonable doubt in his/her mind that the candidate is too inexperienced, temperamentally or in any other way unsuitable, an Examiner must NOT sign his rating.

### 5. ACCELERATED FREE FALL (AFF) INSTRUCTOR

To become a BPA Accelerated Free Fall instructor the candidate must successfully complete a BPA AFF Instructors Course.

- (a) **Required Qualifications to attend the Course:—**
- (1) BPA Approved Instructor or Potential Instructor.
  - (2) 1,000 jumps and 10 hours of free fall time.
  - (3) A written recommendation by a CCI who knows him/her personally and has seen him/her parachuting regularly during a period of not less than six months.

(b) **Evaluation Jumps**

Candidates must make five evaluation jumps on which a pass mark of twelve points must be obtained.

## 6. TANDEM INSTRUCTOR

To become a BPA Tandem Instructor the Candidate must fulfil all the requirements of a BPA Tandem Instructor Course, organised by a JNCSO and examined by two BPA Examiners (who hold BPA Tandem Instructor Ratings).

(a) **Required Qualifications to attend the course:**

- (1) BPA Approved Instructor.
- (2) Minimum of 500 Ram Air descents and 5 hours of free fall time.
- (3) A written recommendation by a CCI who knows him/her personally and has seen him/her parachuting regularly during a period of not less than six months.

(b) **Evaluation Jumps:**

- (1) A minimum of five evaluation jumps will be made. These jumps must include turns, unstable exit and accuracy (must land within 10m of the target on at least two jumps).

N.B. The first two descents must be with a suitable container. On the remaining descents an experienced parachutist nominated by the Examiner will be used.

- (2) On successful completion of the Course the candidate will be awarded BPA Tandem Instructor status.

N.B. If a 'drogue fall' is to be made there must be a minimum of one practice descent made with an experienced parachutist acting as 'student'.

## 7. INSTRUCTOR RATING RENEWALS

At intervals of not more than two years all BPA Instructors will submit themselves for re-rating with the recommendation of their CCI before two Examiners (in the case of AFF and Tandem, the Examiners must also hold those ratings) who **must** fully satisfy themselves that those Instructors are current in all aspects of parachuting relevant to their status. Candidates may also be required to undergo a practical test if either Examiner should think it desirable. During that preceding two year period the candidate must have completed a minimum of sixty parachute descents.

8. Any instructor in breach of the BPA Operations Manual may be liable to be called upon by STC to explain his actions. If it is found that he/she has been in breach of the BPA Operations Manual his/her instructor rating may, at the discretion of the STC, ratified by the Council of the BPA, be suspended, or revoked.



## SECTION 5

# TRAINING

### 1. General

All training must take place as laid down in the BPA Category System and Basic Training Syllabus, or within the guidelines of The BPA Accelerated Free Fall Manual training syllabus or under the rules of Tandem Jumping.

### 2. The Basic Training Syllabus will include:

- (a) Orientation and Documentation.
- (b) Familiarisation with Equipment, Fitting Equipment.
- (c) After Landing Procedures.
- (d) The Stable Position.
- (e) Aircraft Drills and Emergency Aircraft Drills.
- (f) Malfunctions and Reserve Procedures.
- (g) Canopy Control and Flight Drills.
- (h) Abnormal Landings.
- (i) Parachute Landing Falls (PLFs).

3. No more than three AFF students will be trained on any one course.

4. **Parachute Landing Falls (PLFs)** will be divided into at least 3 non-consecutive sessions and there will be not less than one Instructor or Potential Instructor per twelve students.

5. All Clubs, Schools, Centres and Associations engaged in student training must be equipped with ramp/platform or wheel trainers and they must ensure that this equipment is used during the training. N.B. When the ramp and wheel trainers are in use, consideration should be given to the provision of protective headgear.

### 6. Assistants

An assistant may be used by an Instructor at the CCI's discretion.

7. **Records** should be kept showing what training has been completed in the case of every individual. It should include details of any problem encountered and the response of the student to corrective training.

8. Facilities for the training of novice parachutists in use by Clubs, Schools, Centres and Associations may be inspected each year by a BPA National Coach and Safety Officer.

### 9. PARACHUTE PACKING

Initial training in parachute packing will be given to all student parachutists as early as possible in their ground training syllabus in order to enable them to pack their parachutes under supervision. Until this instruction has been given and the necessary standard reached, no pupil will be allowed to pack his parachute without the full supervision of a qualified parachute packer.

### 10. MAXIMUM NUMBER OF DESCENTS FOR STUDENT PARACHUTISTS

- (a) Student Parachutists will not complete more than four parachute descents in a single day.
- (b) Following three full day's parachuting, one complete day of rest will be compulsory.

### 11. Progression

Parachutists who do not progress or respond satisfactorily to training may be suspended by their CCI.

### 12. Care with equipment during training

Emphasis in training will be given at all stages to the importance of the correct use of the reserve parachute, and the need to handle parachutes in aircraft with the greatest care.

13. The greatest care will be taken in the use of aircraft for the training of parachutists.

### 14. RESTRICTIONS ON PARACHUTISTS FOLLOWING A LAY-OFF

- (a) Student Parachutists who have not made a descent for two months or more will revert to the static line or a short delay before being allowed to progress.
- (b) Experienced Parachutists who have had a lay-off of six months or more will resume parachuting with a delayed drop not exceeding 10 seconds.

**15. RESTRICTIONS ON TYPES OF PARACHUTE**

- (a) Pupils will begin parachuting on acceptable round steerable canopies.
- (b) Canopies with TU modification, unless the bar is netted, should not be used by parachutists of Categories 1—4 inclusive. This does not apply to TU Canopies fitted with a net skirt.
- (c) AFF students using Ram Air Canopies may only use the large docile type.

## SECTION 6

# EQUIPMENT

### 1. PARACHUTE – GENERAL

(a) All sport parachutists intending to make a descent are to be equipped with a minimum of two airworthy parachutes attached to a common harness (Jumpmasters or Instructors not intending to make a parachute descent must be equipped with a minimum of one airworthy parachute.)

Tandem parachutists must be attached to a Tandem Instructor using equipment specifically designed for the purpose and approved by STC.

Parachutes may only be used if they have been manufactured for use by Sport Parachutists or Military Parachutists by a recognised manufacturer or parachute rigger with the necessary qualifications.

(b) The reserve parachute will be mounted integral with the main harness. Parachutists who have not completed dive exit and backloops must use a front mounted top pull reserve, unless an AFF Student or Tandem Parachutist where equipment specifically designed for the purpose, and approved by STC, will be used. (AFF rigs must include an AAD, 'Stevens' Lanyard and main ripcord that can be activated from either side.) Category system students may use side pulls reserves only if necessitated by the use of an Automatic Activation Device (AAD).

(c) Any modifications to the main or reserve parachutes must be carried out by a parachute manufacturer or a rigger with the necessary qualifications.

(d) Parachutists who have completed dive exit and backloops may use single point release systems approved by STC with the permission of the CCI.

(e) Freefall bag-developed systems (other than ¼ bag/diaper) must not be used by parachutists of Categories 3 — 7 inclusive.

### 2. PARACHUTES — RESPONSIBILITY

(a) Experienced Parachutists are wholly responsible for the safe condition of their equipment at all times and for ensuring that checks and inspections are carried out on it as required (See paragraph 3 below).

(b) Club Chief Instructors are responsible for the maintenance and safe condition of all items of Club equipment, and for the serviceability of any personal equipment used by Student Parachutists parachuting under their supervision.

### 3. PARACHUTE PACKING

(a) **Student equipment** All student main parachutes are to be packed under the direct supervision of a person holding a BPA Packing Certificate. All student reserve parachutes are to be packed under the direct supervision of a person holding a BPA Packing Certificate for the reserves being packed and has been cleared to do so by the CCI. (In this context 'direct supervision' will involve the person concerned in carrying out the necessary inspections at the required stages of packing and signing the appropriate record card AT THE TIME THE CHECKS ARE GIVEN).

(b) **Other equipment** Category 8 parachutists (and above) are not required to hold a packing certificate to pack their own main parachutes — provided they are approved to do so by their CCI.

The packing of reserve parachutes (other than student reserves) must be carried out under the direct supervision of the holder of the BPA Packing Certificate which is specifically endorsed for the canopy, deployment device and container being packed.

(c) **Repack cycles** Any parachute which has remained packed for 120 days or more must be opened, inspected and repacked.

(d) **Unserviceable parachutes** A parachute that is not fit in every respect for immediate use must NEVER be packed with the appearance of a serviceable parachute. It should be closed with the canopy clearly showing at each end of the pack, the ends of which should be open. It should be clearly marked or tagged as being unserviceable.

### 4. PACKING CERTIFICATES

Packing Certificates may be issued and endorsed by BPA Approved Instructors or Riggers. These persons must however be familiar with the equipment for which they sign endorsements.

N.B. In order to qualify for a BPA approved Instructor Rating or Basic Riggers Rating candidates must already hold a BPA Packing Certificate endorsed for at least three different main and three different reserve parachutes (Appendix A).

## 5. PACKING RECORDS

- (a) All clubs and centres will maintain a record card for every parachute that is in use as club equipment.
- (b) All student parachutists will maintain a record card for any of their personal parachutes.
- (c) Experienced parachutists will maintain a record card for their personal reserve parachute(s).
- (d) Record cards will record every packing, repacking and modification to the parachutes to which they relate.
- (e) Record cards must incorporate the date of packing and the signature of the holder of a packing certificate at each stage of the stages of packing that require inspection.

## 6. PRE-JUMP CHECKS

Pre-jump checks will be carried out after equipment has been fitted and before a parachutist emplanes. In the case of Student Parachutists this check will be made by the Instructor or nominated Potential Instructor, these checks must be recorded for each individual student and the Jumpmaster is to refer to this record before accepting responsibility for the parachutists.

Experienced parachutists may check each other. It is the responsibility of the Jumpmaster to ensure that these checks have been carried out.

## 7. PARACHUTE MODIFICATIONS

Parachutes will only be modified by those who are technically qualified to do so.

## 8. INSTRUMENTS

- (a) Instruments must be carried by all parachutists carrying out a planned delayed opening of 15 seconds or more (other than a student's first stable 15 seconds delay).
- (b) The minimum instrument is a serviceable non-sensitive visual read out altimeter, securely mounted in a suitable position. Sensitive altimeters will not be used.
- (c) Instruments must not obstruct or interfere with the opening of the reserve parachute.
- (d) **Radios.** AFF students must be equipped with ground to air radio for at least Level 1.

## 9. AUTOMATIC ACTIVATION DEVICES (AADs)

- (a) Serviceable AADs of a recognised make may be used by all Parachutists with CCI's approval (AADs must be fitted to AFF equipment)
- (b) AADs may be used in conjunction with either the main or reserve parachute, but must only back up the manual operation.
- (c) All parachutists will submit personal AADs to their CCI for inspection before taking them into use.

## 10. PERSONAL CLOTHING AND EQUIPMENT

All parachutists will be equipped with suitable clothing and equipment:

- (a) Clothing, strongly made, well fitting and providing reasonable freedom of movement.
- (b) A suitability sturdy open faced, hard protective helmet without a peak, with the exception of the following which are not suitable :
  - (1) The Raleigh Burner.

N.B. Tandem students are to wear a 'French Type' ribbed leather helmet.

- (c) Goggles (if worn) allowing good all-round vision, preferably of all-plastic or similar construction.

(d) Student parachutists should be equipped with footwear that is suitable for:

- (1) The type of descent planned.
- (2) The parachute to be used.
- (3) The planned landing area.

(e) Category 8 parachutists and above are allowed to wear footwear of their own choice.

(f) Gloves (if worn) must allow easy operation of emergency equipment, and should be worn in cold weather (when the ground temperature is 4 degrees C or below).

(g) 'All parachutists of Category 8 above are required to carry a serviceable knife about their person, or on their equipment'.

## **11. ADDITIONAL CONTROL SURFACES**

No wings or any other form of additional control surfaces may be used as part of the dress or equipment of any parachutist, other than a recognised Relative Work jumpsuit.

## **12. SMOKE GENERATORS**

(a) Smoke generators will only be carried by Experienced Parachutists and with the permission of the CCI or Team Leader. They will be of a dependable type and must be securely fitted to the parachutist's boots in such a way that they cannot work loose in the air. They must be inspected immediately before taking-off to ensure that they are correctly fitted and not primed so that they could be inadvertently detonated in the aircraft.

(b) Parachutists will detonate their smoke generators after exiting the aircraft. Only in case of extreme emergency can a parachutist jettison the smoke bracket.

## **13. STATIC LINE OPERATION**

(a) Clubs may only use Static Line Deployment Systems approved by the STC.

(b) Static Line strongpoints in single engined aircraft are to conform BPA Minor Modifications.

(c) The static line hook should be of an approved type. (The Irvin 2706 sliding snap hook is not to be used.)

(d) The static line must be secured to the aircraft strong point by means of a clip or hook which cannot be disconnected inadvertently.

(e) On static line deployed equipment, the static line must be continuous from the deployment bag to the point of attachment in the aircraft.

(f) It is the Jumpmaster's responsibility to ensure that the static line is clear and not fouling the parachutist before and immediately after despatch. Although the static line is secured to the aircraft it must be controlled by the Jumpmaster.

(g) If the strong point is in the roof of the aircraft, the static line should be left outside until the last man of the stick is despatched before being retrieved. If a low strong point is used the static line may need to be pulled in and secured inside the aircraft after each parachutist has jumped.

(h) If, after despatching static line parachutists, the Instructor/PI does not intend to land with the aircraft, all static lines and bags will be unhooked and stowed away securely. In the case of larger aircraft, i.e. Islander and Porter, where provision is made for stowing away static lines and bags, unhooking may not be necessary.

(i) When despatching, the static line and bag must be the correct length for the aircraft type in use. The airspeed must be as near to 1.1 Vs as possible with throttle closed and there must be no short lining of static lines.

## **14. TWIN EXTRACTORS**

Twin extractors when used will both be attached to a single bridle cord.

## **15. ASCENDING PARACHUTES**

The use of ascending parachutes by ground launching does not come within the provisions of BPA Regulations. The Association does NOT associate them with SPORT PARACHUTING, and it recognises that they have their own characteristics which require special training by those who use them and those who instruct others in their use. Descents made by the use of ascending parachutes will NOT be recorded in Log Books used for Free Fall or S/L descents.

## SECTION 7

# DROPPING ZONES

### 1. Basic Definitions

- (a) **A Dropping Zone (DZ)** is an area of open ground into which parachutists may be safely dropped.
- (b) **Target** is a signal of white, red, yellow or orange material laid out in the form of a cross on the DZ and easily visible from whatever height parachutists are dropping. It should normally be placed in the centre of the DZ, but may be offset to one side as dictated by wind direction and other safety considerations.
- (c) **Overshoot area.** Is an area of ground largely free of major hazards where parachutists may land safely when they have been incorrectly dropped, or have been blown off course by a change in wind conditions. They constitute a means of escape from hazardous areas into which parachutists might otherwise have to land in an emergency.
- (d) **Minor Hazard.** Is any object, other than a major object or special obstacle, either natural or artificial which should be easily avoided, but which, if struck by a parachutist is liable to result in injury.
- (e) **Major Hazard.** Is any obstacle, either natural or artificial other than a special hazard which, because of its extent may be difficult to avoid, or because of its nature is liable to cause serious injury if struck by a parachutist.
- (f) **Special Hazard.** Is a hazard which carries a special risk to parachutists. Special hazards include stretches of open deep water and deep rivers. (see paragraph 6), high voltage cables (see paragraph 7), densely built up areas, cliffs and quarries. All of them require greater attention to safety, and special consideration should be given to their presence in the neighbourhood of DZs.

### 2. Approval

All DZs intended for regular parachuting use (including airfields) must be inspected by an NCSO or an NCSO nominated Examiner. Final approval must then be obtained from the CAA, who require the following particulars with the applications for their use, at least 28 days before the DZ is required for use.

- (a) The signed permission of the owner(s) of the DZ to parachute onto the land.
- (b) An accurate map or copy of map of the area giving co-ordinates and showing the proposed DZ, overshoot areas and major/special hazards clearly marked to scale.

### 3. Classification. DZs will be classified as :—

- (a) UNRESTRICTED – Suitable for all parachutists.
- (b) RESTRICTED – Suitable for specific categories of parachutists.

### 4. Unrestricted DZs.

These should provide a large open space of even and reasonably level ground which can contain a circle of not less than 600 yards diameter free of major hazards, and largely free of minor hazards. Such DZs are not considered suitable if they are situated within built-up areas unless they are bordered on at least three sides by good overshoot areas.

### 5. Restricted DZs

Not suitable for all parachutists, but suitable for specific categories of parachutists.

### 6. Split Drop Zones

A Split Drop Zone is where the centre of the Drop Zone is more than 2000 metres from the Control /Manifest/Organisation point.

In addition to normal requirements for Drop Zones, Split Drop Zone must operate under the following conditions:

- (a) The DZ Controller must be at least an Approved Instructor with a minimum of two assistants. If more than four students are being dropped, an extra assistant will be needed for each additional two students.
- (b) The CCI will be present whenever student parachuting is taking place.
- (c) A vehicle will be available adjacent to the DZ whenever parachuting is taking place, in case of emergency.
- (d) There is to be DZ to aircraft radio communication.
- (e) The DZ will have windsock, anemometer, first aid and smoke.

## **7. Open Water and Deep Rivers**

Where open water and deep rivers (excluding minor rivers and small ponds) exist within 1,500 yards of the target, all parachutists must wear inflatable lift belts or carry life preservers ready for immediate use.

## **8. High Voltage Power Lines**

These are a special hazard to parachutists. Routine parachuting will not take place on DZs where power lines are within 1,000 yards of the target without prior approval from the BPA. If a DZ is approved where High Voltage Power Lines run within 1,000 yards of the target, special precautions must be taken i.e.

- (a) All parachutists must be briefed before taking off as to the location of the lines by means of aerial photographs.
- (b) The number of student parachutists dropped on each pass may be limited.

**N.B. PRIOR TO APPROVAL THE FOLLOWING POINTS WILL BE TAKEN INTO ACCOUNT:**

- (a) Record and experience of CCI and Staff.
- (b) Type of A/C to be used.
- (c) Intended size of operation.
- (d) Type of equipment to be used.
- (e) Local conditions (other airfield activities, prevailing wind conditions, etc.).

## **9. Trees**

Although tree landings under European conditions rarely result in injury, trees on DZs are undesirable since they increase the risk of injury. Trees are normally acceptable within overshoot areas.

## **10. Air Photographs**

All DZs used for routine parachuting should be equipped with an aerial photograph on which Major and Special Hazards are marked.

## SECTION 8

# PARACHUTE LIMITATIONS

1. **GENERAL** parachuting may only take place under the conditions laid out in the BPA Operations Manual.

2. (a) Ground wind speed limits for parachutists are as follows:—

(1) Category 1 to 5 parachutists	4.5 metres per second 10 mph 9 knots 14 feet per second
(2) Category 6 to 8 parachutists and AFF students jumping Ram Air canopies	6.5 metres per second 15 mph 13 knots 22 feet per second
(3) Category 9 and 10 parachutists and Tandem Parachutists	9 metres per second 21 mph 18 knots 30 feet per second

These limits are under no circumstances to be exceeded.

(b) **Suspension and Resumption of Parachuting.** Suspension of parachuting will be ordered for the categories of parachutists concerned after TWO gusts above the limit have taken place within FIVE minutes. After parachuting has been suspended it will not be resumed for at least 30 minutes during which time no gusts above the limit have occurred.

(c) Every club, etc., must use an anemometer for measuring ground wind speed.

(d) The strength and direction of winds below 2,200 feet AGL will be measured by the use of **Wind Drift Indicators (WDIs)**.

(e) A WDI must be dropped:

- (1) Before parachuting begins.
- (2) Following a significant change in wind velocity or direction.
- (3) Following any break of more than 30 minutes caused by winds in excess of the limits laid down (see para (a) above).
- (4) After parachutists have failed to land in the intended area and a faulty 'spot' or bad canopy control is not suspected.

### 3. CLOUD AND VISIBILITY

(a) Cloud

Parachutists may not leave an aircraft if at the point of exit the whole of the ground between the opening point and the target is not clearly visible.

(b) Visibility

The minimum flight visibility must be at least 5 km.

### 4. Night

(a) FAI 'C' Certificate is the minimum qualification to participate in night sport parachuting. D.Z. control must be organised by an Advanced Instructor who must be present during the entire programme.

(b) All parachutists are to be briefed on the position of all obstructions adjacent to the DZ.

(c) The Drop Zone is to be marked in a standardised manner (Fig. 1).

(d) Any obstructions within the DZ are to be lit.

(e) The DZ must be indicated to the parachutists by the Jumpmaster from the air prior to exit.

(f) Torches are to be available for use inside the aircraft.

(g) All parachutists must have at least one light.

(h) The pilot is to be in communication with local ATC who will look after all safety arrangements with regards to any other air traffic, such as securing adequate separation from parachutists and ensuring no ground running of aircraft engines during drop.

(i) Local Police are to be informed of proposed night descents.

(j) Notification of Night Parachuting is to be made in writing at least 5 working days in advance to:—



Airspace Utilisation Section  
National Air Traffic Services  
Building No. 76  
Attn. Co-ordinator  
Hillingdon House  
Uxbridge  
Middlesex

giving the following information:—

- (1) Name, address and telephone number of Club/Centre.
- (2) Name of CCI.
- (3) Date and time of proposed night parachuting.
- (4) Name of DZ, together with its 6 figure grid reference using Ordnance Survey 1:50,000 series.

#### **5. OPENING HEIGHTS**

- (a) Minimum height for S/L bag systems 2,000 feet AGL.
- (b) Free Fall exits will not be made below 2,200 feet AGL.
- (c) In all delayed opening descents, canopies must be opened by 2,000 feet AGL except 'D' certificate holders taking part in displays who may delay their opening so that their canopies have opened by 1,500 feet AGL.
- (d) The minimum exit altitude (other than an emergency) for a Tandem descent is 5,500 ft. AGL and the minimum main canopy deployment altitude will be 5,000 ft. AGL.

#### **6. MAXIMUM ALTITUDE**

- (a) Normal Parachuting will not take place above 12,000 feet AGL.
- (b) Parachuting will only take place between 12,000 and 15,000 feet AGL without oxygen from the following turbine-powered aircraft:—
  - (1) Shorts SC7 Skyvan or Skyliner.
  - (2) De Havilland (Canada) DHC—6 Twin Otter.
  - (3) Britten Norman BN2T, Turbine Islander.
  - (4) Pilatus PC Turbo Porter.Provided that:—
  - (i) The aircraft when loaded with parachutists can sustain at least 1,000 feet per minute rate of climb between 10,000 ft and 15,000 ft.
  - (ii) No parachuting sortie exposes parachutists to altitudes above 12,000 ft for more than 6 minutes.
  - (iii) DZ height above mean sea level does not exceed 500 feet.
- (c) Parachutists jumping from between 12,000 and 15,000 feet AGL are required to have, in addition to normal medical requirements:—
  - (1) Respiratory and cardio-vascular fitness.
  - (2) Good knowledge of respiratory physiology and hypoxia.
  - (3) A portable oxygen supply available to them aboard the aircraft in case of need.
- (d) Clubs and Members who wish to parachute above 15,000 ft AGL with oxygen will need STC and CAA approval and must submit their plans and details of their equipment to the BPA Safety and Training Committee at least four weeks in advance.

#### **7. CUTAWAYS**

Display cutaways will only be performed by 'D' Certificate holders and when a cutaway rig designed for the purpose is being used. Students passed out as Category 7 and having completed dive exit and backloops or AFF students of Level 8 can perform a cutaway on a proper cutaway rig under simulated emergency conditions, but only after the approval of the CCI has been obtained and the student has been thoroughly drilled in the cutaway procedure.

#### **8. NUMBER OF PARACHUTISTS PER PASS**

- (a) In static line parachuting not more than three students may be dropped on any run over the DZ, unless special dispensation has been given by the BPA in respect of specified DZs for a maximum of FOUR S/L parachutists to be dropped at one pass.
- (b) In delayed opening descents from 3,000 feet AGL or below, not more than four parachutists up to Category 8 will be dropped on any one run over the DZ unless it is more than 750 yards long. One pupil per 150 yards of DZ is the recommended guide, bearing in mind the need to have a good safety margin at each end.

## 9. WATER JUMPS

Water jumps may only be made in the following conditions:

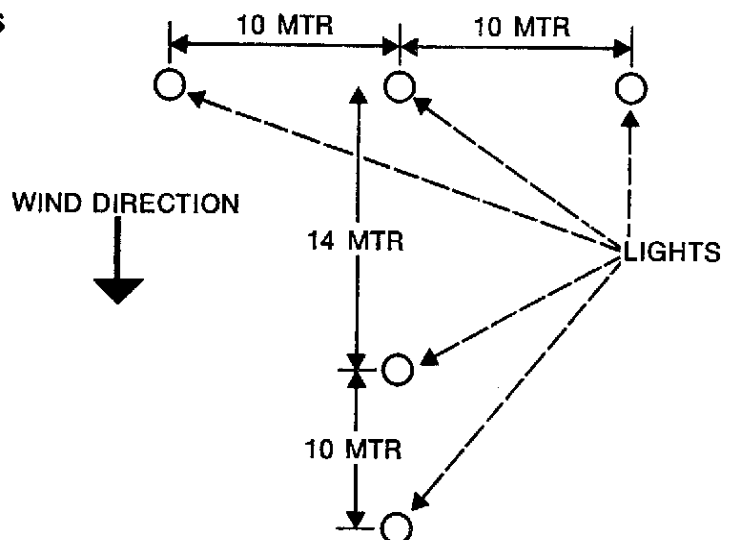
- (a) When there is not less than one powered boat to each parachutist on each pass of the aircraft over the DZ.
- (b) When the weather is suitable and the wind within normal limits.
- (c) By specially briefed parachutists wearing parachute harnesses fitted with quick ejection fasteners and/or Canopy releases and life jackets or life preservers. Life jackets for intentional water descents must be fitted with serviceable CO<sub>2</sub> bottles or similar automatic inflation device. Alternatively, the life jacket must be inflated prior to exit or be a suitable approved type of permanent buoyancy (Cork, Kapok, etc.).
- (d) DZ Control must be organised by an Advanced Instructor who must be present during the entire programme.
- (e) It is recommended that the following drills be carried out by parachutists making intentional or unintentional water descents:—
  - (1) Goggles up
  - (2) Secure ripcord
  - (3) Secure gloves
  - (4) Undo helmet chin strap
  - (5) Release reserve parachute on one side
  - (6) Both capwell covers down (unless one shots)
  - (7) Release chest strap
  - (8) Inflate life jacket
  - (9) Both hands remain on control toggles until feet touch the water
  - (10) Release canopy
  - (11) Move clear of parachute and rigging lines.

N.B. Regardless of drills the parachutist must have the life jacket inflated as the feet touch the water and all haste must be made to release canopy from harness and move clear.

10. No one under the age of 16 may make a sport parachute descent. Minors between the ages of 16 and 18 may only parachute with their parent's or guardian's written consent. The form of consent must be kept by their parachute club.

## STANDARDISED MARKING OF DROP ZONES FOR NIGHT DESCENTS

(Fig. 1)



## SECTION 9

# FLYING

### 1. PILOTS

(a) **Club Chief Pilot** CCI's will appoint a Club Pilot who will be responsible to him/her for aircraft operations, pilot selection and safety.

Upon appointment the Club Chief Pilot's name, Licence details, qualifications, hours, etc., will be notified in writing to the BPA Office.

(b) **Pilot Qualifications** A pilot shall not act as pilot in command of an aircraft for a flight during which parachutists are to be dropped unless he/she meets the following minimum requirements:-

(1) **Licence** He/She holds a valid pilot's licence for the type of aircraft to be flown including any ratings necessary for the type of flight to be undertaken, i.e. Night, IMC, RT, etc.

(2) **Experience** He/She has acquired at least 100 hours as pilot in command of aircraft, (except in the case of FAI 'D' Licence parachutists when the requirement is 75 hours as pilot in command). In addition the following hours on type are required.

Less than 150 hours PIC	—	10 hours on type
150—250 hours PIC	—	5 hours on type
Over 250 hours PIC	—	Check out only

(3) **Training** He/She has received at least 1 hour's ground instruction on parachute dropping techniques and ground signals, given by a person who holds either a valid Advanced or Approved Instructor rating issued by the British Parachute Association.

(4) **Tests** He/She has:

- i. Passed a type rating flight test conducted by an Authorised Type Rating Examiner, PPL 'X' Examiner or CAA Approved Person in accordance with Section 4 or 5 as appropriate of CAA Form 1179 or CAA/BPA Approved Test Proforma.
- ii. Has passed the PPL Technical Examination Part 2 (on specific type) or the CAA/BPA Approved Technical Examination on the type of aircraft to be used.
- iii. Flown as pilot in command of an aircraft from which a live drop of one or more experienced parachutists has been made under the supervision of a person who either holds a valid advanced or approved instructor rating certificate issued by the BPA.
- iv. The provisions of paragraphs (i), (ii) and (iii) shall not apply to any pilot if the Authority has agreed in writing that such provisions are not required subject to such conditions as the Authority may specify.

(5) **Recency** He/She has within the previous 6 months dropped parachutists and flown at least 3 take-offs and landings in the type of aircraft to be used.

(c) **Documentation** Having satisfied all the above requirements, a BPA form 108 is to be completed and sent to the BPA Office who will then issue an Authorisation to Drop Parachutists Certificate. This certificate will be valid for a maximum of two years and will be renewable on the 31st March each second year.

### 2. AIRCRAFT

(a) **Aircraft Clearance and Documentation** Aircraft for parachute dropping must have a valid certificate of airworthiness (C of A) in the category appropriate to the type of operation and which includes express provision that the aircraft may be used for parachute dropping. The aircraft must be operated in a configuration approved by the CAA for parachuting, including approved static line modifications where static line jumping is intended. The following aircraft documents must be available to the pilot and Chief Instructor/Team Leader before a flight for the purpose of parachute dropping is made:

- (1) The approved flight manual/owner's manual/pilot's operating handbook as applicable to the aircraft, including any supplement thereto.
- (2) The C of A.
- (3) A weight and CG schedule.
- (4) Any exemptions or permissions issued by the CAA relevant to the intended flight.

(b) **Aircraft First Aid Packs** First aid packs appropriate to the number of people on board are to be carried.

(c) **Aircraft Checklist** An aircraft checklist is to be carried and used on all flights.

### 3. OPERATIONS

(a) **Authorisation of Flights** All flights made for the purpose of parachute dropping are to be authorised in writing. A list of those entitled to authorise flights for this purpose is to be maintained by the chief instructor/team leader. A person thus entitled must be satisfied before authorising such flights that:

- (1) The aircraft to be used has a valid certificate of maintenance, or there is evidence in the aircraft logbook that the requirements of the maintenance schedule have been met.
- (2) The serviceability state of the aircraft has been properly recorded in accordance with sub para 3c below, and the aircraft is serviceable for the flight.
- (3) The pilot of the aircraft and the parachutists embarked are qualified to carry out the flight under the conditions expected to obtain at the time of the intended parachute descent.
- (4) The parachutists embarked for the flight have been instructed on the action to be taken in the event of an aircraft or parachuting emergency.
- (5) A jumpmaster or other person responsible to the aircraft commander for the conduct of all parachutists embarked has been nominated.

(b) **Recording of Pre and Post Flight Details** The following pre and post flight details for each flight or series of flights must be recorded in an authorisation sheet or similar document and such records shall be retained for 12 months. A series of flights means any number of consecutive flights made for the same purpose, taking off and landing at the same airfield. The record must include at least:

(1) **Pre Flight**

- (a) The date
- (b) The aeroplane registration marks
- (c) The purpose of the flight or series of flights, including the location of the dropping zone
- (d) The signature or initials of the authorising officer
- (e) The signature or initials of the pilot in command certifying that he has accepted the conditions under which the flight or flights shall be made.

(2) **Post Flight**

- (a) The actual elapsed time of each flight and the number of landings.
- (b) The signature or initials of the pilot in command certifying the serviceability of the aircraft.

(c) **Recording of Aircraft Serviceability** The authorisation sheet may be used for recording aircraft serviceability provided that details of no more than one aircraft are kept on one sheet. The record is to include a statement of the serviceability of the aircraft, the action taken to clear any defects (supported by the signature of a suitably licensed or approved engineer), and in the case of an acceptable defect a statement by the pilot of the operational limitations applicable to further flights.

(d) **Parachutist Manifest** The names of all parachutists must be entered on a designated form before they embark in an aircraft for the purpose of parachuting. A copy of this manifest is to be left on the ground.

(e) **Aircraft Performance** Before starting any flight for the purpose of parachuting the pilot is to ensure by reference to the take-off climb and landing data in the approved flight manual/owner's manual/pilot's operating handbook that the flight can be conducted safely taking into account the weight and loading of the aircraft, the meteorological conditions, the condition and slope of the aerodrome surface, the aerodrome elevation, the performance of the particular aircraft, and any guidance contained in relevant Aeronautical Information Circulars (AICs). In particular he/she is to ensure that the take-off distance required from 50 feet does not exceed the distances available.

(f) **Aircraft Weight and Balance** The pilot is to be in possession of the following information before the flight takes place and is to ensure that the weight and CG of the aircraft are maintained within the specified limits throughout the flight:

- (1) The maximum total weight authorised for take-off and landing.
- (2) The approved CG range.
- (3) The effects on CG of the dropping or movement of loads.

(g) **Flight Crew Oxygen Requirements** Oxygen is required to be used by flightcrew whenever between 10,000 feet and 13,000 feet for more than 30 minutes and at all times when above 13,000 feet.

(h) **Maintenance and Care of Aircraft away from Base** CClIs are to give instructions to the pilot on the maintenance and care of aircraft operated away from their normal base, to include specific procedures for refuelling and the elimination of water in fuel tanks before flight.

(i) **Carriage of Passengers** No passengers may be carried on a flight made for the purpose of parachute dropping except club/school/team members who are equipped for and intend to make a descent by parachute during the flight or are carried solely for the purpose of acting as jumpmaster or instructor. Any such jumpmaster or instructor, whether or not intending to make a parachute descent, is to wear a serviceable parachute throughout the flight. Restraint installations, where fitted are to be used during take-off and landing.

(j) **Pilot Fatigue** A pilot who is engaged on parachuting operations may not fly more than 2½ hours without a 30 minutes' break away from the aircraft, and may not fly more than 8 hours in any one day. Additionally pilots may not fly for more than 100 hours in any 28 day period or 900 hours in any one year.

(k) **Aeronautical Information** Up to date aeronautical information relevant to the intended flight or flights is published in the UK AIP, NOTAMs and AICs. These documents must be accessible to the pilot.

(l) **Air Traffic Control Clearance** Where it is intended to make flights for the purpose of dropping parachutists in notified areas of Controlled or Special Rules airspace, the notification procedures published in the UK AIP for 'Non-Standard Flights' shall be complied with. For parachuting operations in regulated airspace, including aerodrome traffic zones, the prior permission of the person having management of the aerodrome or of the controlling air traffic services unit shall be obtained.

(m) **Crash Rescue Procedures and Equipment** CClIs are to specify crash rescue procedures appropriate to their operation. A notice should be displayed at the DZ Control position (and/or other suitable location), giving instructions for summoning the Local Police, Fire, Ambulance, etc., services in the event of emergencies.

A vehicle carrying the following minimum equipment is to be available at each DZ whilst parachuting is taking place:

- (1) A foam extinguisher
- (2) One Axe
- (3) One bolt cropper—24 inch
- (4) One Crowbar—3 feet 6 inch
- (5) One fire resisting blanket
- (6) Two pairs fire resistant gloves
- (7) One medical first aid pack
- (8) One stretcher with blankets.

(n) **Flying Accidents**

Any flying accidents involving substantial damage to an aircraft, or fatal/serious injury to any person while upon, or by direct contact with, an aircraft during any stage of flight must be reported by the quickest available means to:—

Accident Investigation Branch  
Department of Transport  
Royal Aircraft Establishment  
Farnborough  
Hants., GU14 6TD  
(Tel: 0252-510300)  
Emergencies: 01-276-6000

## SECTION 10

# SAFETY

### 1. SAFETY IN THE AIRCRAFT

- (a) No person will approach a moving aircraft.
- (b) There will be no movement in the vicinity of any aircraft forward of the wings.
- (c) The jumpmaster is responsible to the pilot for the safety of the parachutists in the aircraft. The pilot is in overall command.
- (d) The J/M is responsible for the orderly emplanement of his lift and for their supervision and instruction as necessary in the aircraft. All parachutists are under his/her command until they leave the aircraft and it is his/her responsibility to ensure that all embarked parachutists have been instructed in the correct method of exit from the type of aircraft concerned, so as to ensure adequate separation between themselves and the aircraft structure.
- (e) All parachutists must fit their helmets before take-off.
- (f) The dropping of the WDI and subsequent spotting must be carried out, or be supervised by the J/M.
- (g) S/L Parachutists may be hooked up on the ground or in the air at the discretion of the CCI. If not hooked up on the ground this procedure should be delayed until the aircraft is above 500 feet AGL.
- (h) All movement inside the aircraft should be kept to a minimum and all handles on front mounted reserve must be protected.
- (i) All parachutists landing with the aircraft wearing AADs must have them de-activated, before the aircraft begins descending.
- (j) Where parachutist restraints are required to be fitted, they are to be used during take off and landing.
- (k) All Tandem parachutists are to be attached to the Tandem Instructor before take off and must remain attached until landing.

### 2. SAFETY IN FREE FALL

- (a) When control in free fall is lost by a parachutist who is unable to regain it, he should operate his main parachute immediately, regardless of height. Such cases should subsequently be investigated by CCIs.
- (b) In free fall parachuting the lower man always has the right of way over the higher, i.e. the responsibility for avoiding collision rests with the higher parachutist.
- (c) All relative parachuting must be planned in detail before emplaning.
- (d) All relative parachuting in pairs must stop at or above 3,000 feet AGL. The signal for break-off between two parachutists may be given by either and should be acknowledged by the other.
- (e) Larger groups of parachutists engaged in relative parachuting must 'break-off' in time for all to separate safely in different directions before they reach opening altitude.
- (f) Parachutists engaged in relative parachuting must be fully conscious of the dangers arising from mid-air collisions due to rapid closing, instructors must lay particular stress on these dangers when teaching relative parachuting.
- (g) Parachutists who are preparing to pull, and suspect the presence of others above them, should give a warning by making a pause in the pulling position, before operating their main parachutes.
- (h) If Relative Work is to take place with Tandem Parachutists, this must only be done with CCIs permission and the jumpers must be very experienced Relative Workers and will only take place if a 'drogue' chute is fitted.

### 3. USE OF CAMERAS

- (a) The use of cameras will be confined to FAI 'D' Certificate Parachutists. Their equipment and particularly the manner of its attachment to the body or helmet, should be carefully examined by an Advanced Instructor to ensure that it is capable of withstanding the stresses of parachute openings at terminal velocity.
- (b) A Jumpmaster who is at least an Approved Instructor in **current practise** and specifically approved in writing by his/her CCI, may be permitted to wear a helmet mounted camera when despatching jumpers, provided the equipment is configured so that it does not impede, in any way, the primary responsibilities of that Jumpmaster, and that no form of sighting or aiming system obscures his/her normal field of view. It must be arranged in such a way that the Jumpmaster can, in the event of a static line hang up or other emergency, be able to remove it instantly. The CCI is to take into account the type of aircraft to be used.

#### 4. SAFETY DURING PARACHUTE DESENTS

- (a) After operating the main parachute all parachutists will look upwards and check their canopy has developed normally. If a malfunction has occurred the reserve parachute may have to be brought into use.
- (b) After the canopy has been checked parachutists will look 360° around them on their own level, then below, and finally upwards. If any other parachutist is in close proximity immediate avoiding action will be taken.
- (c) Throughout every descent all parachutists will keep well separated from each other unless participating in pre-planned canopy relative work. Care will always be taken to avoid getting immediately above another parachutist, or in the case of a ram air parachute, its wake, as this could lead to collapse or entanglements. The low man always has right of way.
- (d) When two parachutists approach the same target or landing area simultaneously, the high man must give way to the low man. If both are at the same altitude the choice will lie between one or the other giving way, or either, or both being injured. Common sense should prevail.
- (e) All student parachutists must land into wind until such time as their CCI allows them to do otherwise.
- (f) Student Parachutists are forbidden to attempt stand-up or competition landings without the consent of their CCI.
- (g) Tandem Parachutists are not permitted to do Canopy Relative Work.

#### 5. EMERGENCY PROCEDURES—AIRCRAFT

- (a) If it is practicable for him/her to do so, the pilot will take command in any emergency and it is the Jumpmaster's duty to accept his/her instructions.
- (b) If the pilot is powerless to influence an emergency confronting parachutists, it is the J/Ms duty to use his/her own discretion and act accordingly.
- (c) If an aircraft gets into difficulties after take-off it is normally safer for parachutists to remain in it than to attempt to jump from less than 400 feet.
- (d) If an aircraft gets into difficulties above 400 feet parachutists should only leave it with the consent of the pilot; he/she may be quite confident of making a safe landing. At low altitudes the reserve parachute should be used in preference to the main, (unless a static line parachutist, who is hooked up).
- (e) In the event of a parachute becoming inadvertently opened in the aircraft, immediate action will be taken to prevent the canopy from taking air. The parachutist will be moved as far from the door as possible and will be assisted as necessary. Under no circumstances will any effort be made to repack the parachute in the aircraft nor will the parachutist be permitted to jump. In the case of a student the J/M will land in the aircraft with the parachutist in question. He may permit the remaining parachutists to jump with the permission of the pilot whose attention must be drawn to the incident as soon as it occurs.
- (f) In the event of a parachutist becoming hung-up outside the aircraft he/she should be pulled back inside if possible. If this is not possible he/she should be cut free unless it is suspected that he/she is unconscious. If a parachutist should be thought incapable of activating either of the parachutes after being cut free it may be possible for another parachutist to assist him/her in this respect. In the last resort the pilot must decide on the action to be taken. All parachutists must be instructed that in the highly unlikely event of them becoming hung up they should signify their readiness to be cut free by placing one or both hands on their helmet. Under no circumstances should a parachutist in this situation activate either of the parachutes until he/she is no longer attached to the aircraft.

All jumpmasters must carry a knife for use in an emergency.

#### 6. MALFUNCTIONS

- (a) All malfunctions must be noted in a special register and any parachute which is suspect must be immediately withdrawn from use for expert examination and any unusual malfunction must be reported to STC.
- (b) Parachutists who are prone to malfunctions and related problems must be given special attention by their CCIs. If the latter thinks it advisable they must be suspended in their own interests. Such cases must be reported to the BPA Safety and Training Committee.
- (c) **Investigation of Accidents**
  - (1) **Fatal** accidents involving BPA members will normally be investigated under BPA arrangements. In the case of Servicemen parachuting on duty or on Ministry of Defence property, a Board of Inquiry is held and in these circumstances a BPA Inquiry will not be set up.
  - (2) **Non-fatal** accidents, other than normal landing injuries, will be investigated under Club arrangements unless special factors make a BPA inquiry desirable. Accident reports should be submitted to the BPA Office as soon as possible after the accident.

**(d) Immediate Action to be taken following a Fatal Accident**

This is covered in a separate instruction, copies of which should be held in all clubs. They are available on demand from the BPA.

**(e) Form of Accident Investigation Report**

The BPA approved form of accident (non-fatal) is attached at Appendix B.

**(f) Annual Return of Accidents and injuries**

All BPA Affiliated Clubs, Centres, Schools and Associations are required to submit to the BPA Office annually as soon after 1st January as possible, a summary of accidents and injuries sustained by their members during the preceding 12 months. This is of great importance for statistical purposes (See Section 12 Para 3).

**7. DISCIPLINE**

(a) A CCI may suspend any member of his/her Club, School or Centre, from parachuting under his/her supervision permanently or for a specified time for any breach of the BPA Operations Manual.

The privileges of other parachutists using the Club DZ or facilities, for similar offences may also be withdrawn.

(b) A CCI who has reason for recommending the temporary or permanent suspension of any parachutist from ALL parachuting should state the case in writing to the Safety and Training Committee. The STC will then decide on its course of action in the light of the circumstances. Parachutists whom the STC believes should be suspended will always be given the right of appeal to the STC and subsequently to the BPA Council. The parachutist will continue to be grounded until this appeal has been heard.

(c) The STC may suspend any member from parachuting, and any Instructor from instructing on grounds of safety for any period it thinks fit. Such decisions will be notified to the Civil Aviation Authority and all approved BPA instructors. A right of appeal will be granted under the same conditions as those in paragraph 2 above.

(d) **Low Openings** All BPA Instructors are authorised to ground any parachutist who has made a low opening without good reason, pending further investigation.

(e) All BPA Instructors are expected to intervene whenever they observe a violation of BPA Operations Manual or an unsafe practise and bring it to the notice of the CCI.



## SECTION 11

# MEDICAL

### General

1. All parachutists must be in possession of either a Declaration of Fitness to parachute or in the case of persons over 40 years a Doctor's Certificate (Appendix C).
2. In the case of a minor (under 18 years) the signature of the witness on the Declaration of Fitness must be that of the Parent/Guardian.
3. No person above the age of fifty years will normally be accepted for parachute training. Exceptions to this rule may be allowed if:
  - (a) The person has previous experience and/or
  - (b) Is of a high standard of fitness for their age and can convince the instructor of that fitness.
4. No parachutist will take any form of alcoholic drink before he/she has completed parachuting for the day. Equally important is the need to remain sober during the evening before parachuting the following day.
5. Parachutists who do not feel fit in all respects, and particularly if they have a head cold must not parachute until they are fully recovered.
6. **ILLEGAL DRUGS/SUBSTANCES** Possession or use of illegal drugs/substances by a BPA Member on a Drop Zone will automatically lead to the withdrawal of his/her BPA Membership and all that it entails.
7. **BLOOD DONORS** Sport parachutists are advised that parachuting and giving blood are not compatible. Whilst the quantity of blood is quickly replaced after donation, the necessary oxygen retaining qualities required at altitude are not.

## SECTION 12

# DOCUMENTATION

### 1. PERSONAL DOCUMENTS

- (a) All parachutists must be current members of the British Parachute Association.  
N.B. All paid up members are automatically covered under the Association's Third Party Insurance Policy.
- (b) All parachutists must have either a Declaration of Fitness to Parachute or a medical Certificate (see Section 11 Medical, paras 1 and 2) which is valid for two years.
- (c) Parental Letters of Consent. All BPA Members between the ages of 16 and 18 must obtain a letter of consent from their parents or guardians before they are permitted to parachute. This should normally be held by their club except when it is required for production at other DZs.
- (d) All BPA members are required to sign a Form of Agreement.
- (e) **Parachutists Log Books.** All parachutists must keep a personal log book recording details of all their sport parachute descents. Military descents will not be included.
- (f) **Parachute Record Cards.** All parachutists will maintain a record card for each of their personal parachutes. These cards will record every packing, repair and modification to the parachutes to which they relate.  
N.B. In the case of Experienced Parachutists their Log Book is adequate as a packing record for the main parachute.
- (g) **FAI Sporting Licence.** Issued by the BPA Office on behalf of the Royal Aero Club.
- (h) **FAI Parachuting Certificate.** Issued by the BPA Office on behalf of the Royal Aero Club.
- (i) **Parachute Packing Certificate.** Issued by the BPA Office, application having been countersigned by a BPA Instructor or Rigger who has tested the applicant in packing procedures.
- (j) **CCIs** are responsible for ensuring that the personal documents of all Student Parachutists under their supervision are valid and up to date at all times and that suitable documents are issued to all ab-initio students immediately following the completion of their initial training course.
- (k) **Experienced Parachutists Responsibility.** Experienced Parachutists are responsible for maintaining their personal documents, and ensuring that they are valid and up to date at all times.

### 2. CLUB RECORDS

Club records must be fully and accurately maintained in accordance with this Operations Manual.

### 3. REPORTS

The following reports will be made by all Clubs and Centres:—

- (a) Annual Parachuting Return.
  - (1) This will show the number of parachute descents made on each DZ used by the Club including demonstration jumps at other locations. It will NOT include descents made by Club Members under the supervision of other Clubs and Centres.
  - (2) It will also summarise injuries sustained by members and visiting parachutists. These will be categorised as follows:
    - (i) **Fatal**
    - (ii) **Severe** (detained in hospital for 2 weeks or more)
    - (iii) **Medium** (admitted to hospital or rendered unfit for parachuting for at least 3 weeks)
    - (iv) **Slight** (unfit for parachuting for any period less than 3 weeks).
  - (3) The Annual Report will also summarise parachute malfunctions by types and state the number of occasions on which reserve parachutes have been deployed intentionally and unintentionally.
  - (4) It is recommended that the appropriate BPA Form is used for this report which is required to be submitted to the BPA Office made out as at 31st December.
- (b) BPA require incident reports in the following cases (see Appendix B):
  - (1) **Unusual Malfunctions.** This report will be of particular assistance to the STC in preparing any recommendation or regulation to prevent its recurrence.
  - (2) **Damage to persons or property.** This report is required by the BPA in order that the insurance claim may be processed as quickly as possible (See Appendix D).

- (3) **Serious Injury.** This report is required for the same reason as both (a) and (b).
- (4) **Display that misfires.** This report is required in order that the BPA Office can counter any adverse publicity that may arise.
- (5) **Fatality.** This report is the first written information concerning a fatality and should be presented to the Chairman of the BPA Board of Inquiry. It will assist both the club and the Board of Inquiry in giving them basic guidelines on which to proceed.

## SECTION 13

# DISPLAY PARACHUTING

### 1. TEAM LEADER

All display teams must have a Team Leader who is a BPA Approved Instructor, has made at least 300 jumps and has made at least 30 display jumps, or, is an FAI 'D' Certificate parachutist, has made at least 300 jumps, has made at least 30 display jumps and has passed an examination, administered by a NCSO on Display Procedures and Pilot and Aircraft requirements. The Team leader is responsible for the safe conduct of all parachuting and flying operations carried out by that team, in accordance with the BPA Operations Manual. The BPA and CAA should be notified in writing not less than 7 days in advance of any intended change of Team Leader.

### 2. TEAM REGISTRATION

Display Teams are to register annually with the BPA using the application form at Appendix E. The Team will then receive a certificate of registration together with a copy of the Operations Manual. Display Teams must also apply for permission from the CAA using the form in Appendix F.

### 3. TEAM MEMBERS

- (a) Parachutists holding FAI 'D' Certificates may give displays using DZs of not less than 75 yards diameter, which are free of major hazards and providing not more than 10% of this area is not taken up with minor hazards. In all such cases, however, adequate overshoot areas must exist on all sides.
- (b) FAI 'C' Certificate holders may give displays providing that:
  - (1) They have made at least 100 sport parachute descents.
  - (2) The DZ is at least 150 yards in diameter.
  - (3) They are approved for such demonstrations by their CCLs.
  - (4) The aircraft is carrying a jumpmaster who is a BPA Instructor.
  - (5) There are adequate overshoot areas on at least three sides of the DZ.

### 4. PREPARATION PROCEDURE

- (a) Display DZs must be visited and reconnoitred by an experienced Team Member before a display is due to be given. Existing and anticipated hazards must be plotted.
- (b) Written permission of the landowner concerned must be obtained.
- (c) Liaise with local Police and confirm that they have no objection to the proposed display.
- (d) Organise any necessary Air Traffic Clearance, on form, at Appendix G and
- (e) Notify the CAA on the form at Appendix H, a copy of which must be sent to the Airspace Utilisation Section also, if possible three weeks in advance, in case NOTAM action is necessary.

### 5. REPORTS

Full reports of all demonstrations which have NOT gone according to plan must be submitted to the BPA giving all relevant details within seven days.

### 6. ANNUAL RETURNS

All display Teams giving demonstrations in the United Kingdom are required to submit Annual Returns as at 31st December to the BPA giving the following information concerning ALL their demonstrations during the year:—

- (a) Dates.
- (b) Places.
- (c) Number of displays per year.
- (d) Number of parachutists participating.

### 7. NIGHT DISPLAYS

Parachutists wishing to make Night Displays must be FAI 'D' Certificate holders, with at least 500 descents, must have steerable reserve parachutes, and must not carry pyrotechnics of any sort.

## **SECTION 14**

# **COMPETITION**

- 1.** Competitive parachuting adds a fresh element to routine club parachuting and introduces a possible cause of distraction for the novice. It should not be undertaken by parachutists until they have shown themselves to be completely assured and dependable under normal conditions. If this is not the case there is a danger that the competition will adversely affect the judgement and performance of less experienced performers with adverse effects on Safety Standards.
- 2.** The minimum qualification to enter a competition is FAI 'B' Certificate with Chief Instructor's approval.
- 3.** The director and stewards appointed in all competitions have full BPA authority to suspend any competitor from further participation during the remainder of a meeting for violation of Parachuting Regulations or any reason which makes this course advisable in their own interests.

## SECTION 15

# RIGGING

1. The repair and manufacture of all parachute equipment may only be carried out by the following:
  - (a) BPA Advanced and Approved Riggers or Potential Riggers under training.
  - (b) Recognised parachute equipment manufactures.

### APPROVED RIGGERS

2. To become a BPA Approved Rigger the candidate must first become a Potential Rigger and fulfil all the requirements of a Potential Riggers Course and a Final Assessment Course. There are two methods of becoming a Potential Rigger:

### APPROVED RIGGERS

#### Method One:-

- (a) By attending a one week Potential Riggers Course which is run at an STC Approved full time Rigging Establishment.
- (b) These courses will be run under the auspices of at least Two BPA Rigger Examiners.

#### Method Two:-

- (c) By Registration with the BPA Offices as a Potential Rigger using the appropriate form.
- (d) This training may be conducted by a nominated BPA Approved Rigger of at least two years standing who is prepared to accept the responsibility.

### Common Requirements

3. Before Rigger training can commence using either method, a number of common qualifications must be met:

- (a) Candidates must be initially recommended by an Advanced Rigger or a CCI. This recommendation must be presented in writing to the following:

#### Method One:

- (i) The Rigging Establishment running the Potential Riggers Course.

#### Method Two:

- (ii) The BPA Offices at the time of registration for Rigger training.
  - (iii) The Rigger who will be responsible for training.
- (b) The Advanced Rigger or CCI must have known the candidate personally for not less than six months (exception to this rule may be made on application to STC via the Rigging Committee in the case of Commonwealth or Foreign Riggers on production of their credentials).
  - (c) Candidates must have held a BPA packing certificate for at least 12 months. The packing certificate must be endorsed for at least three different main and three different reserve parachutes.
  - (d) Additional to the requirement above the candidate will be required to produce documentary evidence, if not at the start of Rigger training then by the end of the assessment period, of having packed a minimum of:
    - (i) 10 Front mounted reserve parachutes.
    - (ii) 10 Reserve parachutes into conventional type piggyback systems.
    - (iii) 10 reserve parachutes into Pop Top type piggyback systems.
  - (e) Records of these repacks must include the following information:
    - (i) Container type and Serial number.
    - (ii) Canopy type, Serial number and date of manufacture.
    - (iii) Date and location of repack.
    - (iv) Name and address of equipment owner.
  - (f) The candidate must also provide evidence of having been introduced to Ram Air Reserve repacking.

### Specific Requirements

#### 4. Method One

- (a) Candidates wishing to qualify using Method One will receive, on the one week Potential Riggers Course, tuition on all the subjects covered in the Approved Rigger Training Syllabus.
- (b) On successful completion of the course the candidate will receive a recommendation from the Rigger Examiners to spend a minimum of six months as a Potential Rigger. This time will be spent working under a BPA qualified Rigger.
- (c) The Potential Riggers Rating will be valid for a period of 12 months only.
- (d) At the end of the six months period the Supervising Rigger will be required to submit a report on the work carried out. This report is to be presented to the Examiners at the start of the Potential Riggers Final Assessment Course.
- (e) The PR will then be required to attend a Final Assessment Course which will last a minimum of three days. During this time he/she will be assessed by at least two Rigger Examiners (one of which must be independent of the establishment or organisation within which the Potential Rigger was trained).

- (f) The PR will be assessed on all sections within the Approved Rigger Assessment Syllabus.

**5. Method Two**

- (a) Candidates wishing to qualify under Method Two will be required to keep a Technical Log of all the work carried out during the period as a Potential Rigger.  
 (b) The log must contain the appropriate heading as detailed below:

DATE OF COMPLETION	DESCRIPTION OF WORK	NAME AND ADDRESS OF OWNER	TIME TAKEN TO COMPLETE	MAKE, TYPE SER. No. OR OTHER ID. OF EQUIPT	WORK APPR. SERVICEABLE APP. RIGGER TO SIGN AND NUMBER
APP. RIGGERS REMARKS					

- (c) Realistic estimates for completing the work must be given and must not include time spent rectifying mistakes made in the course of completing the work.  
 (d) The nominated Rigger responsible for the PR will also be responsible for inspecting all the work carried out.  
 (e) The logged work must encompass all the subjects within the Approved Rigger training syllabus.  
 (f) The log book must be kept in a complete and legible fashion.  
 (g) The Potential Rigger Rating will be valid for a period of 18 months from the date of registration with the BPA Office.  
 (h) On completion of a minimum of 300 hours logged rigging work the Supervising Rigger must make a written recommendation to the Rigging Committee for the PR to attend an Approved Riggers Assessment Course.  
 (i) Two Rigger Examiners will then be allocated (they need not necessarily be present together) to whom the PR must present him/herself. At least one Examiner must be independent of the establishment or organisation within which the PR has trained.  
 (j) The assessment course will last a minimum of three days and will cover all the sections within the Approved Rigger Assessment Syllabus.  
 (k) The assessment will include a through scrutiny of the Technical Log by the Examiners. They must be completely satisfied that it is an accurate record of the work carried out.  
 (l) No repacks of main or reserve canopies are to be logged as part of the 300 hrs work.

**6. APPROVED RIGGER TRAINING SYLLABUS**

Under both methods of qualifying the candidate will receive training in the following subjects:

- (a) BPA Regulations with respect to Rigging and parachute equipment including current safety notices and information.  
 (b) Familiarisation with sewing machines – lockstitch and Zig Zag.  
 (c) Familiarisation with hand tools – grommet sets etc.  
 (d) Familiarisation with Fabrics, webbings, cordage and hardware.

**Canopy Work**

- (i) Canopy design and construction (round and ram air).  
 (ii) Assessment of serviceability of parachute canopies.  
 (iii) Compilation of canopy damage/inspection reports.  
 (iv) (a). Basic patch.  
       (b). Diagonal seam patch.  
       (c). Radial seam patch.  
       (d). Patching into lower and upper lateral bands.  
       (e). Cross port venting.  
       (f). Vent cap replacement on student main canopies.  
       (g). Line replacement – hem, through rigged and control line replacement (including finger trapping).

**Harness/Container work**

- (i) Theory of design and construction of harness/containers.  
 (ii) Assessment of serviceability of harness/containers.  
 (iii) Compilation of harness/container damage reports.  
 (iv) (a). Ripcord housing and pocket installation.  
       (b). Closure loop installation.  
       (c). Grommet installation.  
       (d). Container repair.

**Manufacture (to an approved standard)**

- (i) Deployment bags – S/L and FF.  
 (ii) Sliders.  
 (iii) Simple envelope containers.

- (iv) Hand deployed main parachutes.
- (v) Static Lines.

## 7. Written Examination

At the end of the one week course for those qualifying under Method One and at a suitable point during the training for those using Method Two the PR will be given a written examination consisting of ballot type questions. The examination will be used to assess the knowledge gained and to identify and weak points in the training.

- 8. The results of this test should be reflected in the report presented prior to the Final Assessment Course.

## APPROVED RIGGER FINAL ASSESSMENT COURSE

- 9. Under both methods of qualifying the PR will be required to attend a Final Assessment Course in order to qualify as a BPA Approved Rigger.
- 10. The Assessment Course in both cases will run for a minimum of three days and must be approved by the Riggers Committee.
- 11. Before the PR is assessed the Rigger responsible for training must ensure that he/she meets all the pre-requirements and is in every way prepared for the Final Assessment Course.
- 12. The PR must present the following to the examiners at the start of the Final Assessment Course:
  - (a) BPA Membership
  - (b) BPA Packing Certificate.
  - (c) Written recommendation from the supervising rigger.
  - (d) Riggers training record (method one candidates).
  - (e) Technical Log (Method Two Candidates).
  - (f) Log of reserve repacks.
  - (g) Samples of work carried out during the probationary period – to include newly manufactured and repaired items.
- 13. The PR will be assessed on all the sections within the Approved Rigger Training Syllabus.
- 14. During the assessment period a written examination will be administered by one of the Rigger Examiners. The examination will consist of ballot type questions with a minimum pass mark to be achieved. The paper will contain questions on the following subjects:
  - (a) BPA Regulations with respect to Parachute equipment and Rigging including current safety information.
  - (b) Common stitch types, patterns and lengths.
  - (c) Identification, use of and breaking strain of webbing and cordage.
  - (d) Tensile strengths and uses of parachute hardware.
  - (e) Design and construction of parachute canopies and container systems.
  - (f) Construction, assembly of and use of deployment devices.
  - (g) Basic parachute equipment maintenance (recognition of faults, bad assembly, material damage and contamination).

## Oral Assessment

- 15. During the assessment period an oral assessment will be used to assess the knowledge of techniques and practices relating to the use of parachute equipment on at least one operational Drop Zone.

## Post Course Action

- 16. On completion of the Assessment course the Examiners will submit a report of the examination and a recommendation (or not) to the BPA Riggers Committee to issue an Approved Riggers Rating. The PR will then be qualified as a BPA Approved Rigger.
- 17. Should the PR fail to qualify he/she must attend a Final Assessment Course again in accordance with recommendations made by the Examiners of the course.

## BPA APPROVED RIGGER LIMITS OF WORK

- 18. BPA Approved Riggers are cleared for all general maintenance work on parachute assemblies, including the manufacture of new component parts (main deployment bags, static lines etc). The Approved Rigger is NOT cleared for modifications to reserve canopies, containers or component parts. Also is NOT cleared for harness manufacture or work affecting the airworthiness of the harness/reserve relationship.

## UPGRADING TO ADVANCED RIGGER

- 20. After qualification the Approved Rigger may carry out all the requirements of the Advanced Rigger Assessment Syllabus. Any of this work carried out must be under the direct supervision of an Advanced Rigger.
- 21. An Approved Riggers Rating must be held for a minimum period of two years before upgrading to Advanced Rigger.
- 22. Upgrading is achieved after successful assessment of the Approval Rigger by two Examiner Riggers.

## ADVANCED RIGGERS

### 23. Qualifications

- (a) All the qualifications laid down for BPA Approved Riggers.
- (b) Must be recommended by an Advanced Rigger who has known him/her as an Approved Rigger for at least six months.
- (c) Must have held an Approved Riggers rating for a period of two years immediately preceding the date of application for upgrading.
- (d) Provide documentary evidence at the time of upgrading of having packed the following reserve canopies:



- (i) 50 Front mounted reserve parachute.
- (ii) 50 Reserve parachutes into conventional type piggyback systems.
- (iii) 50 Reserve parachutes into Pop Top type piggyback systems.

**Note:-** The candidate must hold a packing certificate for ram air reserves and it is expected that the logged repacks will reflect a reasonable number of ram air reserve repacks.

- (e) Upgrading will be achieved after successful assessment by two Examiner Riggers.

#### **24. Advanced Rigger Assessment Syllabus**

- (a) Submit a written paper on an aspect of parachute rigging and may be asked to present the paper.
- (b) Canopy Work
  - (i) Demonstrate ability to carry out a complicated repair on a ram air canopy e.g. damage at junction of C line/inner rib/bottom surface.
  - (ii) Replace D panel on a round reserve canopy.
  - (iii) Replace one complete line on hem rigged and through rigged reserve canopy.
- (c) **Harness/Container Work**
  - (i) Return a damaged harness/container system to service.
- (d) **Manufacture (to an approved standard)**
  - (i) Round reserve diaper.
  - (ii) Square reserve free bag.
  - (iii) Replacement cascaded suspension line for ram air canopy.

#### **Have also manufactured**

- (iv) Student freefall assembly – Harness, main and reserve containers.
- (v) Advanced freefall assembly – incorporating piggyback containers with single point release – to include all deployment devices.

Both these projects are to conform to an existing design.

#### **Written Examination**

- 25. The Approved Rigger will be required to sit a written examination with a minimum pass mark to be attained. The examination will be administered by an Examiner Rigger and will contain questions on the following:
  - (a) All the subjects covered in the Approved Rigger Final Assessment written examination paper.
  - (b) Reserve deployment devices/systems – their design construction and operation.
  - (c) Automatic Activation Devices – their function, installation and use.

#### **Equipment Manufacture**

- 26. Manufacture of major component parts (harness, containers, deployment devices etc.) and repair of reserve canopies must be identified by the rigger concerned with his/her label or stamp.

#### **ADVANCED RIGGER EXAMINERS**

##### **27. Qualifications**

- (a) To qualify as a BPA Advanced Rigger Examiner the candidate must:
  - (i) Have been a BPA Advanced Rigger for at least two years.
  - (ii) Have passed a BPA Methods of Instruction section on a Potential Instructors Course.
  - (iii) Have attended two Method One Potential Rigger Courses or acted as the Supervising Rigger with a minimum of four Method Two Potential Riggers.
  - (iv) Prove (his/her ability to examine in all aspects of Rigger training.
  - (v) Be able to give all rigging lectures to Potential Riggers.
  - (vi) Present 25 questions for the Approved Riggers examination paper and 10 questions for the Advanced Rigger examination paper.
  - (vii) Present a paper on an advanced aspect of rigging (approx 1000 words).

##### **Responsibilities**

- 28. The Advanced Rigger Examiner is responsible for the assessment and qualification of Approved and Advanced Riggers using the progressive qualification system outlined in this section of the Operations Manual.
- 29. Every Examiner must be fully aware of his/her responsibility towards every BPA parachutist and to the candidate him/herself, and of the consequences which may flow from an accident due to faulty rigging. If there is any reasonable doubt in the mind of the Examiner that the candidate is too inexperienced, is temperamentally unsound or is in any other way unsuitable then the Examiner must NOT sign the rating.

#### **RIGGER RATING RENEWALS**

- 30. All Riggers Ratings are valid for a period of 2 years, at the end of which time revalidation must be obtained with a certificate of competency signed by two Advanced Riggers. Riggers who do not renew their rating by the expiry date are to apply to the Riggers Committee for renewal. The Committee will then decide how the rating may be renewed.
- 31. Riggers Rating are only valid if the Rigger concerned is a member of the British Parachute Association.

#### **BREACH OF OPERATIONS MANUAL**

- 32. Any Rigger in breach of the BPA Operations Manual may be liable to be called upon by STC to explain his/her actions. If it is found that he/she has been in breach of the BPA Operations Manual his/her Rigger Rating may, at the discretion of the STC via the Riggers Committee, and ratified by Council of the BPA, be suspended or revoked.



British Parachute Association Ltd.

5 Wharf Way, Glen Parva, Leicester LE2 9TF  
Tel: Leicester (0533) 785271 X 5 Lines



**PACKING CERTIFICATE**

This is to certify that .....  
Address .....  
.....  
.....  
BPA No. ....

has been tested to the following standards:

- 1) Has reassembled a parachute assembly stripped down to the following components.
  - a) Container and harness.
  - b) Canopy and risers (or connector links).
  - c) Pilot chute.
  - d) Bridle cord.
  - e) Sleeve and retaining line : (if applicable).
- 2) Has successfully cleared the canopy/lines of twists and tangles.
- 3) Has performed a line sequence check.
- 4) Knows how to perform all the packing checks at the appropriate stages.
- 5) Has packed the parachute ready for jumping.
- 6) Has been instructed on how to inspect the assembly for damage and deterioration.

Name (BLOCK CAPITALS) ..... \*Instructor/Rigger  
BPA No. ....  
Signed ..... FAI No. ....

**BPA OFFICE USE ONLY**

Date of issue .....  
Docs. checked .....  
Approved on behalf of BPA .....

**Instructors/Riggers Please Note:**

Once the conditions above have been complied with this form should be sent to the BPA for recording. Once it has been returned the specific types of assembly that the holder is cleared for should be listed overleaf. Any Instructor or Rigger may subsequently endorse this certificate for additional types without further reference to the BPA.

\* Delete as appropriate.





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**BPA INCIDENT REPORT FORM**

**THIS FORM SHOULD ONLY BE SENT TO THE BPA OFFICE**

BPA requires incident reports in the following cases:— Unusual Malfunctions, Damage to person(s) or property (Insurance claim form may also be required, see Appendix D), Serious injury, Display that misfires and Fatality (Fatality Procedure information is available at BPA Office).

1. Name and status of Person making report .....  
(i.e. CCI, Instructor, Team Leader, Jumpmaster etc.)
2. Name of Club or Display Team .....
3. Location of Incident .....
4. Date and Time of Incident .....
5. Name of CCI or Team Leader .....
6. Name of Jumpmaster .....
7. Name of DZ Controller .....
8. Name of Pilot, Type and Registration of Aircraft .....
9. Parachutist Involved:
  - Name: .....
  - Address: .....
  - Telephone No: .....
  - BPA No: .....
  - Category: .....
  - FAI No: .....
  - Number of descents (S/L) ..... (F/F) .....
  - Sex ..... Age ..... Weight ..... Height .....
8. Date of Incident ..... Time .....
9. Nature of Injuries .....
10. Present whereabouts and condition of injured .....
11. Damage to Property (if any) .....

12. Has Appendix 'D' been lodged with BPA Office? .....
13. Type and Altitude of descent (S/L,F/F,RW,CRW etc.) .....
14. Give brief description of Incident .....
- .....
- .....
- .....
15. Was there an equipment failure or parachute malfunction involved? (Give details)
- .....
- .....
- .....
16. Type of Parachute (Main/Reserve—Make and Model) .....
- .....
17. Ground Wind Speed .....
16. Visibility .....
19. Cloud Base .....
20. Temperature (e.g. very cold/hot, thermal activity etc.) .....
- .....
21. Type of surface landed on .....
22. Type of footwear .....
23. What in your opinion was the cause of the incident? .....
- .....
24. In your opinion was anyone to blame? How much? .....
- .....
25. What action (if any) is to be taken? .....
- .....
26. What action (if any) do you recommend the BPA should take to publicise the incident or prevent a repetition? .....
- .....
- .....
27. Where the conditions of the BPA Operations Manual observed by all concerned? .....
- .....

Signed .....

Date .....

PLEASE ATTACH ANY ADDITIONAL COMMENTS OR STATEMENTS OF WITNESSES TO THIS REPORT.



**British Parachute Association Ltd.**

5 Wharf Way, Glen Parva, Leicester LE2 9TF  
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**DECLARATION OF FITNESS TO PARACHUTE**

(Please read notes overleaf before signing)

I HEREBY DECLARE that I am physically fit and do not suffer from any of the following conditions, which I understand may lead to a dangerous situation with regard to myself and other persons during parachuting:—

Epilepsy, fits, recurrent fainting, giddiness or blackouts, high blood pressure, heart trouble, diabetes, severe and active mental illness, drug or alcohol addiction.

I FURTHER DECLARE that in the event of my contracting, or suspecting any of the above conditions in the future, I will cease to parachute until I have obtained medical advice.

Parachuting **may** be permitted despite the existence of any of the above conditions provided specific clearance to do so is given by the parachutist's own medical practitioner or a consultant.

..... Name in CAPITALS	..... Date of Birth	..... Weight
..... Signature	..... Date	..... Height

.....  
Signature of WITNESS—in the case of a minor (under 18 years) this MUST be the signature of the PARENT or GUARDIAN.

IF, BECAUSE OF ANY OF THE ABOVE QUOTED CONDITIONS, YOU CANNOT SIGN THE DECLARATION, OR IF YOU ARE OVER THE AGE OF 40, YOU MUST, BEFORE PARACHUTING, OBTAIN THE SIGNATURE OF A DOCTOR.

**DOCTOR'S CERTIFICATE**

I understand that the applicant wishes to parachute but is unable to sign the above Declaration. In my opinion the applicant is physically and mentally capable of parachuting and it is safe for him/her to do so.

(Doctor's Stamp)

.....  
Doctor's signature

.....  
Date

(Notes for the guidance of the examining Doctor are given on the reverse of this form. In any case of doubt the Medical Adviser to the British Parachute Association will be pleased to assist and may be contacted at the address on the top of this form.)

## Appendix C

**NOTES FOR PARACHUTISTS:** Persons involved in parachuting should have a reasonably high standard of physical fitness and should not be overweight in relation to their sex, age and height. In addition to the medical conditions listed overleaf, the following may cause difficulty whilst parachuting and if you have ever suffered from any of these you are advised to seek medical opinion.

Chronic Bronchitis/Severe Asthma. Rheumatic Fever. Pneumothorax. Liver or Kidney Disease. Thyroid, Adrenal or other glandular disorder. Chronic Bone or Joint Condition. Disorder of the blood, severe anaemia. Chronic ear or sinus disease. Previous major head injury. Any condition which requires the regular use of drugs.

If you normally wear spectacles, these should be securely attached while parachuting and where contact lenses are used goggles should be worn. The minimum visual acuity acceptable (unless making a Tandem Parachute descent) for one eye with or without correction is 6/12. It is advised that you keep a regular check on your eyesight both for your own good and that of others involved in the Sport.

Medical Certificates issued to those over the age of 40 should be renewed biennially.

### **NOTES FOR THE GUIDANCE OF EXAMINING DOCTORS**

Parachutists make descents from unpressurised aircraft at heights between 2,000 feet and 12,000 feet above sea level without using supplementary oxygen. Parachutists jumping from between 12,000 and 15,000 feet AGL are required to have in addition to normal medical requirements (1) Respiratory and cardio-vascular fitness (2) Good knowledge of respiratory physiology and hypoxia (3) A portable oxygen supply available to them aboard the aircraft in case of need. Parachutists must open their parachutes at a safe height above the ground and be prepared to take emergency action if their main parachute fails to open correctly. Forces are absorbed by the body during landing roughly equivalent to those obtained from jumping off a platform four feet from the ground. The forces may be greater than this, depending on such factors as the weight of the parachutist or the weather conditions. It is essential therefore that parachutists are both physically and mentally capable of parachuting.

There are a few conditions which may be incompatible with parachuting. Persons who are known **EPILEPTICS, DIABETICS, DRUG ADDICTS, ALCOHOLICS** or who have **SEVERE AND ACTIVE MENTAL ILLNESS** may NOT be allowed to parachute unless you consider it safe for them to do so. Any condition which can lead to attacks of impaired consciousness makes a person unfit to parachute. A history of skull fracture, concussion or brain damage should be assessed most carefully. In case of doubt it is strongly urged that expert opinion should be sought.

It is permissible for someone to jump who has defective vision in one eye only. The other eye should have an acuity of at least 6/12 with or without correction. This does not apply to someone making a Tandem Parachute descent, where even blindness may be acceptable.

No person above the age of fifty years will normally be accepted for parachute training. Exceptions to this rule may be allowed if:

- (a) The person has previous experience and/or
- (b) Is of a high standard of fitness for his/her age and can convince the instructor of that fitness.



**British Parachute Association Ltd.**

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**THIRD PARTY LIABILITY INSURANCE  
REPORT/CLAIM FORM**

Original to BPA Insurers  
Copy to BPA HQ Office

National Employers Mutual General Insurance Association  
Claims Centre  
9th Floor  
Enterprise House  
Isambard Brunel Road  
PORTSMOUTH, PO1 2TR  
Telephone (STD 0705) 730 344

This form should be submitted immediately following any incident involving injury to person and/or damage to property of a Third Party. One copy to BPA Office and one copy to the Brokers for immediate processing. The Third Party should be given the Brokers' address and advised that any claim or correspondence be addressed to that office. No liability must be admitted.

**1. Details of BPA Member Involved**

Name ..... BPA No. ....  
Address .....  
.....  
..... Telephone No. ....

**2. Third Party Details**

Name ..... BPA No. ....  
Address .....  
.....  
..... Telephone No. ....

3. Date of Incident .....

4. Name of Drop Zone .....

5. Name of \*Club/\*Team .....

\*Delete as necessary

**6. Details of Parachute Jump**

a) Type of Jump ..... b) Height .....

c) Type of Aircraft ..... d) Name of Jumpmaster .....



**7. Details of Witnesses (other than Jumpmaster and DZ Controller)**

Name .....

Address .....

.....

.....

Name .....

Address .....

.....

.....

**8. Report by Jumper involved, including details of damage caused**

.....

.....

.....

.....

.....

.....

.....

.....

Signature ..... Date .....



# British Parachute Association Ltd.

5 Wharf Way, Glen Parva, Leicester LE2 9TF  
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## BPA REGISTERED DISPLAY TEAM APPLICATION

TO: The British Parachute Association,

I, the undersigned, being Team Leader, hereby apply for BPA Registration to the Parachute Display Team named below. All Members of the Team agree to abide by the relevant conditions of the British Parachute Association Operations Manual in the conduct of their displays.

I understand that the Display Team named below is included in the cover afforded by the BPA Third Party Public Liability Policy. The Limit is £1,000,000.

I further declare that the team will consist of ..... members and that not more than this number will participate in any display given by the team unless previously notified to the BPA in writing.

I understand that in the event of an incident involving the person or property of a Third Party, full details of the incident and persons involved are to be notified in writing to the BPA and the Insurers as soon as possible. Forms available from the BPA Office.

Date ..... Signed .....

Name (BLOCK) ..... BPA No. ....

FAI D Certificate No. .... BPA Registered No. if applicable .....

Team Title .....

Address for Correspondence:

.....  
.....  
.....

Tel Nos. ....

PLEASE ENCLOSE £25 REGISTRATION FEE.

### FOR OFFICE USE ONLY

Registered No. ....

Date .....

Checked by .....





**British Parachute Association Ltd.**

5 Wharf Way, Glen Parva, Leicester LE2 9TF

Tel: Leicester (0533) 785271 X 5 Lines



**APPLICATION FOR GRANT OR RENEWAL OF CAA SPORT  
PARACHUTING PERMISSION AND EXEMPTION  
PARACHUTE CLUB, SCHOOL, CENTRE, ASSOCIATION  
OR DISPLAY TEAM**

1. Name .....  
 Status: .....  
 (Team Leader, CCI, Manager, Director, Secretary, etc.)  
 Address: .....  
 .....  
 Tel. No(s). ..... (Office)  
 ..... (Home)
2. Name of Club, School, Centre, Association or Display Team:  
 .....
- 3.\* For a newly-formed Club, Team, etc., Proposed date for start of parachute operations:  
 .....  
 \* For an existing parachuting organisation, Date since which parachuting operations have been  
 conducted under present name and location:—  
 .....
4. Address(es) and Tel. No(s) of Aerodrome(s) from which parachute operations will be conducted: .  
 .....  
 .....
5. Type(s) of Aircraft intended to be used for parachute operations to be conducted by above-named  
 organisation and aerodromes at which such aircraft will be permanently based:  
 .....  
 .....
6. Details of designated Club Chief Instructor/Display Team Leader\*:  
 Name: .....  
 Address .....  
 .....  
 Tel. No(s): ..... (Office)  
 ..... (Home)  
 Qualifications and Experience:  
     FAI Certificates .....  
     BPA Qualifications .....  
     Total parachute descents made .....

\* Delete as applicable.

## Appendix F

	DZ1	DZ2
7. Intended Dropping Zone(s)		
(a) Name of Aerodrome/Area	.....	.....
	.....	.....
(b) National Grid Reference (Give Sheet No. and 6-figure reference— 0.5 map scale 1:50,000)	.....	.....
	.....	.....
(c) Is DZ notified? (UK Air Pilot, RAC Section)	YES/NO*	YES/NO*

### 8. Declaration

On behalf of the above named organisation, being an affiliated member of the BPA and/or BPA registered display team (Team No. ....) as applicable, I apply for the grant of a permission and exemption to enable sport parachuting to be conducted by the said organisation, in the United Kingdom. I hereby undertake that all sport parachute operations made pursuant to a permission and exemption granted by the Civil Aviation Authority will be carried out in accordance with the terms and conditions thereof, and in compliance with applicable provisions of the British Parachute Association Operations Manual for the time being in force.

Signature: .....

Name (Block Capitals) .....

Status (CCI/Team Leader, etc.) .....

Date .....

\* Delete as appropriate.

### Notes

1. When completed, this form and any attachments should be forwarded to:—
  - General Aviation Department
  - Civil Aviation Authority
  - Aviation House (South Area)
  - 1st Floor, East Wing
  - Gatwick Airport
  - Gatwick
  - West Sussex
  - RH6 0YR
 (General telephone enquiries may be made to 0293-573529).
  
2. The minimum notice required by the CAA before a Sport Parachuting Permission and Exemption can be granted is 28 days from the date of receipt of a completed application. In the case of an initial application, the interval between the date of application and grant of a CAA Permission and Exemption will depend primarily on matter within the control of the applicant, and no undertaking can be given by the CAA to reach a decision within a particular period of time.



British Parachute Association Ltd.

5 Wharf Way, Glen Parva, Leicester LE2 9TF  
Tel: Leicester (0533) 785271 X 5 Lines



**REQUEST FOR AIR TRAFFIC CLEARANCE  
FOR PARACHUTE DISPLAYS**

The information below is required by the relevant ATC authority.

Reference BPA Registered Display Team No. ....

Address and Telephone No. of Team Leader .....

.....  
.....  
.....

Display Team: .....

Date: .....

Time Period: .....

Aircraft operator: .....

Location of DZ: .....

.....

Co-ordinates (Grid Reference): .....

Proposed dropping height: .....

Type of Aircraft and Registration Letters: .....

Departure Aerodrome: .....

Signature .....

Date .....

The ATC provisional clearance information will be recorded below.

Parachute Display Number: .....

ATC Instructions to operator: .....

Frequencies to be carried: .....

Signed: .....Telephone No. and Extension: .....

Date: .....

ATC Unit: .....

**Address of requests for  
Controlled Airspace Clearance:**

<b>LONDON</b>	<b>ATC (Ops) 2 Room 23 London Air Traffic Control Centre Porter Way West Drayton Middlesex UB7 9AX Tel.: 08954-44077 Ext. 6062</b>
<b>MANCHESTER</b>	<b>Manchester ATC Sub Centre (Ops 1) Manchester Airport Wythenshaw Manchester M22 5PB Tel.: 061-499-5314 (Weekday) 061-499-5320 (Sat/Sun)</b>
<b>BIRMINGHAM</b>	<b>Birmingham ATC Watch Supervisor Birmingham International Airport Elmdon Birmingham B26 3QN Tel.: 021-782-6227</b>
<b>SCOTLAND</b>	<b>ATC Operations (Room 149A) Scottish and Oceanic Air Traffic Control Centre (SCATCC) Atlantic House Sherwood Road Prestwich Ayrshire KA9 2NR Tel.: 0292-79800 Ext. 2796/2611</b>

**Notes for Teams Requesting Displays in Air Traffic Control Zones**

1. Persuade organisers to allow flexible 'P' Hour—at least thirty minutes either way—to allow maximum flexibility.
2. Commentators must not be allowed to blame Air Traffic for a display that cannot take place. This is bad PR and creates totally unnecessary ill feeling.
3. The watch supervisor should be requested for clearance at least 1 hour prior to take off.
4. All pilots and jumpmasters are to respect a supervisor's or controller's ultimate decision—especially if it is one that does not allow the display to take place.
5. There is more chance of a display being permitted if a 1,500 feet dropping height is acceptable (London and Gatwick CTRs ONLY).
6. If pilots and/or jumpmasters are prepared to hold in the area at a lower height this may give a better chance for the display to take place.
7. Once R/T contact has been established, pilots are not to pressurise the Air Traffic Controller with repeated requests for immediate consideration—Controllers will endeavour to accommodate the display as expeditiously as possible.
8. Event organisers should be briefed as to the very real possibility of the display not being permitted on the day.



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Tel: Leicester (0533) 785271 X 5 Lines



**NOTIFICATION OF DISPLAY PARACHUTING  
TO THE CIVIL AVIATION AUTHORITY**

- 1. Event .....
- 2. Organisers of event .....
- 3a Location of landing area:
- 3b Sheet No. ....Scale .....Easting .....Northing .....
- 3c Nearest Town ..... County .....
- 4. Date(s) .....and Local Time(s) of parachuting .....
- 5. Name of parachute team ..... BPA Registered Display Team No. ....
- 6 Proposed dropping height .....
- 7. Type and Registration of aircraft to be used .....
- 8. Departure Aerodrome .....
- 9. Permission of landowner
- 10. Details of liaison with local Police Authority.  
Which police authority .....
- Have they raised any objection to the proposed parachuting? .....
- 11. Details of Air Traffic Clearance .....

I declare that I have checked the information given in this Notification and that to the best of my knowledge it is correct.

Signature ..... Date: .....

Name (BLOCK CAPITALS) and status .....

Address .....

Telephone Number (Business hours and alternate) .....



## Appendix H

**ORIGINAL TO:**        **Commanding Officer  
Airspace Utilisation Section  
National Air Traffic Services  
Hillingdon House  
Uxbridge  
Middlesex  
UB10 0RU  
Tel.: 0895-57300 Ext. 7417**

**COPY TO:**            **General Aviation Department  
Civil Aviation Authority  
Aviation House (South Area)  
1st Floor, East Wing  
Gatwick Airport  
Gatwick  
West Sussex  
RH6 0YR  
Tel.: 0293-573529**