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# **PATHFINDER INTERNATIONAL** **PARACHUTE GROUP**

## **OPERATION MANUAL**

**This document was withdrawn from use on 30<sup>th</sup> September 2019.**

It is now undergoing a review process and the new version will be issued prior to the start of the 2020 Jump Season.

(REVISED 2018)

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**WITHDRAWN** 30<sup>th</sup> September 2019.

# PATHFINDER INTERNATIONAL PARACHUTE GROUP

## OPERATION MANUAL

(REVISED 2018)

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## SECTION 1. CONDUCT AND CONTROL OF SPORT PARACHUTING.

1. Conditions. All parachuting within Clubs, schools, centres, associations or organisations affiliated to the Pathfinder Parachute Group (Europe) (PPG) must take place under the following conditions.
  - a. Under arrangements made by PIPG. An advanced instructor who is appointed Chief Instructor (CI) and who is normally present, on a daily basis, when parachuting is taking place.  
*NB A CI may leave a Category Instructor (CSI) in charge of an operation for any period of time longer than a day by handing the operation over to the named instructor authorising him/her in writing.*
  - b. By parachutists with a current declaration of Fitness/Medical/ Doctor's certificate (see Section 11 – Medical) who are trained, equipped and briefed to undertake a planned descent.
  - c. When an adequate Ground Control Organisation is in progress. (see Para 5 below).
  - d. With an authorised Pilot (see Section 9 – Flying) and a Jumpmaster (see Section 3) who is qualified to take charge of the parachutists on the aircraft.
  - e. With parachute equipment in good condition, correctly packed, well fitted, and checked before emplaning. (see Section 6 – Equipment)
  - f. From an aircraft that is correctly documented, suitably equipped and prepared for parachuting. (see Section 9 – Flying)
  - g. When weather conditions are suitable. (see Section 8 Parachute Limitations)
  - h. Onto an approved Parachute Landing Area (PLA), and within an approved Dropping Zone (DZ). (see Section 7 – Parachute Landing Area/Dropping Zones)
  - i. With all documentation in order and up to date. (see Section 12 – Documentation)
  - j. According to the conditions laid down in the PIPG Operating Manual.
  - k. When the club is in possession of a valid Civil Aviation Authority (CAA) Parachuting Permissions and Exemptions (P&E).  
*NB para k above only applies to the UK, when operating outside of the UK the Organisation will adopt the rules and regulations of the host country.*
2. Responsibility. Overall responsibility within the PIPG for ensuring that the conditions laid down in paragraph 1 above are observed, will be vested in the CI.
3. It is the CI's responsibility to make available to every employee or persons who may engage in military style parachuting activities conducted by PIPG, the PIPG Operations Manual and local Standard Operating Procedures (SOPs). The CI must also ensure that any amendments are available and incorporated.

4. Student parachutist (see Section 2 - Designation and Classification Of Parachutist) may only parachute under the control of a PIPG Affiliated Club and under the supervision of a CI or an PIPG Instructor authorised by a CI. Such instructors will be responsible for their training and parachuting activities.
5. Ground Control Organisation. All centres will establish a satisfactory Ground Control Organisation to control parachuting, which must be continuously operational when parachuting is in progress and which will meet the following minimum requirements:
  - a. Briefing and Checking of Parachutists. All parachutists must be briefed and checked before emplaning. *NB all persons conducting Flight Line Checks should receive a formal brief on the subject before being permitted to take on the task (The person conducting the brief should be at least a SI).*
  - b. All Student Parachutists must be briefed and checked by at least an authorised Assistant Instructor before emplaning. These checks must be recorded for each individual student parachutist and the Jumpmaster is to refer to this record before accepting responsibility for the parachutists. It is the responsibility of the Jumpmaster to ensure that these checks have been carried out.
  - c. A pre-jump check is an equipment check, made in the aircraft shortly before exit.
  - d. Manifest. The names of all parachutists and other persons must be entered on a designated manifest form before they embark in an aircraft.
  - e. A copy of the manifest is to remain on the ground.
  - f. All experienced parachutists will notify the Instructor in charge of the Manifest of the type of decent they intend to carry out.
6. Dropping Zone (DZ) Control. DZ Control must be continuously established when parachuting is in progress. The DZ Controller must be a nominated Experienced Parachutist who has been fully briefed on his/her responsibilities and duties for the specific activities of the day and must be in place whilst parachuting is in progress.
7. The DZ Controller responsibilities will include the following:
  - a. The setting up of and supervising the DZ control organisation as required by the CI.
  - b. Briefing any assistant(s) put at his/her disposal/
  - c. Ensuring that the PLA/DZ indicator is in the correct position as required by the CI. See Section 7.
  - d. To ensure that the appropriate ground to air signals are displayed when necessary. See para 11 below.
  - e. To ensure that the descents of all parachutists are monitored from the ground.

- f. To suspend parachuting where necessary if weather conditions become unsuitable.
  - g. To ensure that the PLA/DZ is clear of unauthorised vehicles.
  - h. To ensure that first aid assistance is given to any parachutist requiring it and that emergency services are contacted where necessary.
  - i. Maintain a close lookout for aircraft, including gliders, and suspend parachuting as soon as any interference with the safe conduct of parachuting becomes apparent. Particular attention should be paid to aircraft landing or taking off and to other aircraft with turning propellers or rotors on the ground, within or close to the PLA.
  - j. To ensure that the Club is equipped with a windsock, signal panels, telemeters or binoculars and a stop watch, and are positioned in the most suitable locations.
  - k. To maintain communications with other aviation activities on and adjacent to the PLA/DZ.
  - l. Whenever student parachuting is taken place to maintain radio communications with the parachuting aircraft for the purpose of suspending parachuting. If there has been a breakdown in radio communications between the DZ control and the parachuting aircraft, student parachuting must be suspended immediately and will be only recommence when radio communication has once more been established.
  - m. To report all injures incidents, malfunctions or contraventions of the PIPG Operation Manual and/or local SOPs to the CI. It is also the responsibility of all parachutists to ensure that any injuries, incidents or malfunctions that they witness are reported in the same way.
8. Debriefing of Parachutists.
- a. All parachutists under instruction must be debriefed when possible after every decent.
  - b. All student parachutists must be debriefed by an instructor.
9. Maintenance of Records. All parachuting logs and relevant records must be maintained up to date. (See Section 12 Documentation).
- 10 Parachute Packing. Parachute packing by those not qualified must be supervised by a suitably qualified person. (See Section 6 – Equipment)
11. Ground to Air Signals. The ground to air signals will consist of panels, which must be clearly visible by parachutists from whatever height they are jumping. Whenever parachuting by intermediate or experienced parachutists is taking place and radio communications is not used, or in the event of a breakdown in radio communications between the DZ control and the parachuting aircraft, the signal panels (which may or may not be the PLA/DZ indicator) will be used to signal instructions to the Jumpmaster a follows:



- a. When the panels are in the form of an (X) it indicates that conditions are suitable for parachuting.
- b. When the panels are in the form of an (T) it indicates that conditions are NOT suitable for all parachutists. Thereafter only parachutists authorised by the CI/Team Leader may jump.
- c. When the panels are in the form of an (I) it indicates that all parachuting is temporarily suspended.
- e. When the panels are changed to an (L) it indicates that parachuting is suspended and the aircraft must land with all remaining parachutist on board.

12. Other Activities involving Parachutes.

- a. Static Balloon Jumps – to be inserted.
- b. Air dropping of an inert object attached to a parachute for the purpose of Trials and Development of round parachutes and their associated equipment and the training of PIPG authorised personnel in the use of this equipment. This may only be carried out on large active airfields or open expanse of land where the owner of the land has given his permission in writing. The same procedures as for any parachutists must be followed.

## SECTION 2. DESIGNATION AND CLASSIFICATION OF PARACHUTIST.

13. General. Parachutists are designated as follows:
  - a. Students
  - b. Intermediate.
  - c. Experienced.
14. Parachutists are also classified in several ways:
  - a. The Category System.
  - b. The Grading System.
  - c. 'Traditional' – A Student Parachutist using equipment with a flat circular or conical type parachute with a front mounted reserve and trained within the category system.
15. Designation of Parachutists.
  - a. Student Parachutist: Ground training and one round canopy descent.
  - b. Basic Parachutist: Three round canopy descents.
  - c. Intermediate: Twenty Five round canopy descents.
  - d. Experienced/Senior Parachutist: Fifty round canopy descents.
  - e. Master Parachutist: One Hundred round canopy descents.
16. Round Canopy Certification.
  - a. 'A' Certificate: Ground training and one round static line parachute descent.
  - b. 'B' Certificate: Three round static line parachute descents.
  - c. 'C' Certificate: Twenty Five round static line parachute descents, of which five landings must be within a designated target area.
  - d. 'D' Certificate: Fifty round static line parachute descents, of which twenty landings must be within a designated target area.
  - e. 'E' Certificate: One Hundred round static line parachute descents, of which thirty landings must be within a designated target area.
  - f. Display Certificate: May be awarded to a parachutist with 'C' certificate and above after the individual has demonstrated his parachute handling and accuracy skills to the satisfaction of the Senior and Chief Instructors. The can be awarded for less jumps if the Chief Instructor considers the individual suitably proficient and confident.

- g. Previous documented round parachute static line descents including military will qualify towards the jump numbers.
17. The Category System.
- a. Category 1. Has received a minimum of 6 hours ground training and has completed one static line descent using a round parachute with steering capabilities.
  - b. Category 2. Has demonstrated the ability to leave the aircraft, without hesitation, in a compact exit position and land safely on three consecutive descents, using a round parachute with steering capabilities.
  - c. Category 3. Has demonstrated the ability to leave the aircraft, without hesitation, in a compact exit position and land safely. The parachutist will attempt to land a pre marked area of a one hundred foot radius. A 10% error may be allowed at the discretion of the supervising instructor. During this phase the parachutist must demonstrate an understanding of the wind line, use of windsocks, smoke and other wind direction aids to in a safe and accurate landing. Good Canopy handing skills must be shown.
  - d. Category 4. Has demonstrated the ability to leave the aircraft, without hesitation, in a compact exit position and land safely. The parachutist must complete twenty-five successful descents attempting to land a pre marked area of a one hundred foot radius. Five landing must be within the target area.
  - e. Category 5. Must demonstrate all previously taught skills over a duration of fifty successful descents attempting to land a pre marked area of a one hundred foot radius. Twenty landings must be within the target area.
  - f. Category 6. Must demonstrate all previously taught skills over a duration of one hundred successful descents. Thirty landings must be within the target area.

*NB1. All exits can be either the traditional military stand up exit or the more unorthodox sit down helicopter exit.*

*NB 2. All Parachutists must be observed from exit to landing by a fully briefed member of the DZ Staff. Up to Cat 3 this must be the student supervising instructor.*

*NB 3. All briefs/lessons for category progression must be given by the supervising instructor and must be entered in the parachutist logbook and signed by an instructor.*

18. The Grading System. Once Category 4 is achieved other skills may be taught at the parachutists request.

- a. Advanced canopy skills such as front and back raising, military entanglement drills may be taught.
- b. Receive a full safety brief as a member of the DZ party.
- c. Receive a full safety brief (from an Instructor) on the duties of flight line checks on other parachutist.
- d. Attend and complete a parachute packing course, under the direction of the clubs qualified rigger.

### SECTION 3. JUMPMASTERS.

19. General. A Jumpmaster (JM) is appointed by the club and will be a fully trained Instructor. A Jumpmaster may also be British Parachute Association, Army Parachute Association, RAF Sport Parachute Association, RAF PJI, qualified instructors or foreign equivalent. Full documentation must be presented at the host airfield prior to take off. His tasks include:

- a. To take charge of the parachutists on any particular aircraft lift. No aircraft with more than one parachutist on board will take off without a JM being appointed.
- b. Experienced parachutist acting as JM for continuation training purposes may only dispatch other parachutist whilst supervised by a qualified instructor jumpmaster.
- c. If for any reason a Student parachutist does not jump, an instructor (who is not the pilot) must remain in the aircraft with the student parachutist(s).
- d. Jumpmasters must have available to them in the aircraft a suitable knife for use in case of emergency.
- f. If an HUPRA system is present in any large aircraft, the Jumpmaster must be fully trained on this equipment before its use. He must also ensure that all jumpers are briefed on this system prior to take off.

### 20. RESPONSIBILITIES

- a. JMs are responsible for briefing the pilot before take-off on all relevant points concerning the requirements of the parachutists to be dropped. They will also ensure that all parachutists have been fully briefed.
- b. In an emergency JMs 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.
- c. The JM is responsible for ensuring that all parachutists on board have been checked.
- d. JMs must be satisfied that aircraft movements on the ground, or in the air, within or close to the PLA/DZ will not endanger descending parachutists before dispatching any part of the lift.
- e. The dropping of the Wind Drift Indicator (WDI) and subsequent spotting must be carried out by, or supervised by the JM.
- f. The JM must be freefall trained if he wishes to jump after the last man. On no account must the JM be on static line if he intends to leave the aircraft during the flight. A JM may be on a static line whilst dispatching but must land with the aircraft.

#### SECTION 4. INSTRUCTORS.

21. Chief Instructor (CCI). A CI must have been a senior instructor under the PIPG, who is responsible for ensuring that all parachuting activities, training and flying activities are carried out in accordance with this Operation Manual.

a. The CI may delegate various responsibilities to qualified subordinates. This may be by the subordinate signing a form to accept responsibility for a specific area/duty. The CI is to ensure that any person accepting responsibility is aware of what that responsibility entails.

b. The CI has the full backing of the PIPG to ground any member of the club or visitor using the club's facilities on the grounds of contravening the Operations Manual requirements or local SOPs, or whenever it is considered to be in the interest of the club members to do so. He/she may recommend to the group that any member be permanently grounded, giving the reason in writing. In such cases members concerned will have the right to appeal.

22. He may authorise the following to be Instructors within the PIPG:

a. Qualified RAF Parachute Jump Instructors.

b. Army Parachute Assistant Jump Instructors.

c. Senior Instructors. (See Para 26 below)

d. Basic Instructors. (See Para 25 below)

e. Assistant Instructors. Any C Certificate or above, group member may be awarded assistant instructor status on successful completion of each of the designated DZ duties and a written test by the CI, to assist in the following subjects:

(1). Parachute landing falls.

(2). Parachute packing and DZ landing drills.

(3). Canopy handling.

(4). Assistant Jumpmaster. Only to be authorised for large aircraft where 2 JMs are required, and depending on the level of experience.

f. Foreign Instructors wishing to instruct and despatch group members, must be full members of the group, have a good knowledge of the English language, and should be validated in the aircraft (at least one descent) by the CI.

g. Qualified BPA instructors.

23. Instructor Ratings Renewals. Instructors' ratings expire on the 31<sup>st</sup> March every two years, but may be renewed of up to six months after that date. To renew a rating the instructor must satisfy his/her CI that he/she is current in all aspects of parachuting relevant to his/her status. During the preceding two years the instructor must have completed a minimum of 10 Parachute descents.

24. Breach of Operations Manual. Any instructor, who is suspected breach of the Group's operation manual, may be called upon by a nominated group's Board of Inquiry to explain his/her actions. If it is found that he/she has been in breach of regulations, his/her instructor rating at the discretion of the board, may be suspended pending a disciplinary panel will be formed by 3 members of the group, where discipline action may be taken, an appeal can be submitted. The panel will consider the appeal but the second judgement will be final.

25. Basic Instructor (BI). To become a Basic Instructor the candidate must fulfil all the requirements of a BI, required qualifications to attend:

- a. Two years involved in Round Canopy Parachuting.
- c. A written recommendation by a CI or SI who has known the candidate for a minimum of 6 months and has seen/her regularly parachuting during that period.
- d. Holds packing certificates.
- e. Has been trained in ground to air radio communications use and voice procedure.
- f. Will be required to attend a BI Course, of up 1 week in length organised by the group. This may be changed to 2 consecutive weekends at the discretion of the CI.
- g. After successfully completing the BI course the candidate will be awarded BI status, and will be permitted to instruct/coach student parachutist under supervision.
- h. The BI rating is valid for a period of 24 months from the date of issue.

26. Senior Instructor (SI). To become a SI the candidate must fulfil the requirements of a Senior Instructors course, required qualifications to attend:

- a. At 12 months as a basic instructor.
- b. A written recommendation from the candidates CI, together with a report detailing the work carried out during the candidate's probationary period.
- c. Will be required to attend a Senior Instructor Course, of up to 1 week in length organised by the group. This may be changed to 2 consecutive weekends at the discretion of the CI.
- d. On successful completion of the course, a group training board will sign the qualification of the candidate. He/She will then be awarded SI status and qualified to instruct/coach student parachutists.

## SECTION 5. TRAINING.

27. General. All training must take place as required in Category System and the association grading system.
28. The Basic Training Syllabus (category system).
  - a. Orientation and documentation.
  - b. Familiarisation with and fitting of Equipment.
  - c. After Landing Procedures.
  - d. Exit positions.
  - e. Aircraft Drills and Emergency Drills.
  - f. Malfunctions and Reserve Procedures.
  - g. Canopy Control and Flight Drills.
  - h. Abnormal Landings.
  - l Landings, including practical Parachute Landing Fall (PLF) training.
  - j. Written Examinations.
29. Landings.
  - a. Student parachutist jumping traditional equipment will complete at least 3 non-consecutive sessions of PLFs. The maximum number of students per lesson will be 20.
  - b. Suitable training equipment such as ramps, platforms or 'fan' trainers are to be used on practical landing sessions.
30. Suspended Harness. Any parachutist jumping traditional equipment must complete all safety drills using a suspended harness.
31. Progression Training. As part of any progression training, revision/instruction of emergency drills and procedures must take place.
32. Assistants. An assistant may be used by an instructor, at the CIs discretion.
33. Records. Records are to be kept showing what training has been completed. The record is to include details of any problem(s) encountered and response to corrective training.
34. Training Facilities and Equipment.
  - a. Facilities for training of parachutist will be inspected periodically by an nominated person. The nominated person must document any defects in writing and submit to the CI.



b. PIPG is responsible for the maintenance and upkeep of all parachuting equipment and the keeping of all documents relevant to this task.

35. Restrictions following a lay-off (Revision Training).

a. Any student parachutist who does not complete his/her first descent within 48 hrs of completing the Basic Training System Syllabus must be given some form of revision training, as directed by the CI. This is to be recorded on/in the students training card/log book.

b. Until the first five descents have been completed Student parachutist must receive revision training prior to their first descent of the day. This is to be recorded on/in the students training card/log book.

c. Should a gap of a maximum of one calendar month elapse since the last recorded revision training session and or a parachute descent, a practical and theoretical assessment (including exits, PLFs and all emergency drills using the suspended harness) must be undertaken. This is to be recorded on/in the students training card/log book.

d. Should a gap of a maximum of three calendar months' elapse since the last recorded revision training session and or parachute descent, a full basic training syllabus must be revised. The duration of this training will be at the discretion of the instructor. This is to be recorded on/in the students training card/log book.

## SECTION 6. EQUIPMENT

Abbrev: PIPG – Pathfinder International Parachute Group.  
OEM – Original Equipment Manufacturer.

### 36. Parachutes.

a. All 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.

b. Parachutes may only be used if they are manufactured for Sport Parachutist or Military Parachutist, by recognised parachute equipment manufacturers or riggers with the necessary qualifications.

c. Any modifications to parachute equipment must be carried out by a OEM or PIPG rigger.

### 37. Equipment used by student Parachutist. All equipment used by all Parachutists must be acceptable to PIPG. Traditional system is as follows:

a. Main parachutes must be large and docile, in relation to the persons' weight and height.

b. The reserve parachute must be a chest mounted, and will be mounted with the main parachute harness.

c. The static line must be continuous from the deployment bag to the point of attachment in the aircraft.

d. Reserve handles may be centrally or side located.

### 38. Personal Clothing and Equipment. All parachutists will be equipped with suitable clothing and equipment. Parachutists are responsible for the safe condition of personally owned equipment that they use, and for ensuring that such equipment is serviced, checked and inspected as appropriate, and all documents are presented to the PIPG before using their own equipment.

a. Helmets. All parachutists must wear a suitably sturdy open faced, hard protective helmet without a peak.

b. Helmets are to be worn throughout the entire parachute descent and whilst on the Drop Zone when other parachutists are in the air.

c. Footwear, which is suitable for the planned descent.

d. Gloves, (if worn) must allow for easy operation of emergency equipment.

### 39. Instruments. Altimeters may only be worn by the JM and Instructors authorised by the CI.

### 40. Automatic Activation Devices. AADs are not required for Traditional systems.

41. Cameras. Cameras may only be used by nominated parachutists after inspection and approval of the CI. They must be securely fitted, and not interfere with emergency equipment.
42. Auxiliary Equipment. Equipment such as GPS, flags, smoke brackets etc, may be actively used by demonstration team parachutists with permission of the CI. They must be securely fitted to the parachutists. Only in the case of emergency should they be jettisoned.
43. Parachute Packing.
  - a. Student/main parachute. Students are taught how to pack a main parachute under supervision of an instructor.
  - b. A packing record book is to be used for all checks and the instructors who are checking the parachute are to ensure that they initial the relevant column.
  - c. Reserves. Only those nominated by the CI or a qualified rigger may repack reserves. The repack rules are normally 6 months from the date of the last pack, though local rules apply to foreign members.
  - d. The Reserve Packing sheet is to be completed by the nominated person and held on the master reserve list held by the PIPG.
  - e. Reserve sealing thread should only be used by approved packer/rigger. Seal thread must be a thread manufactured to break at no more than 6lbs. The sealing of reserve is optional.
44. Packing Certificates. Approved packing certificates (main parachutes and round reserve parachutes in front mounted containers). Holders of these certificates are certified to assemble and pack specified parachutes and deployment devices into specific containers. This must be endorsed by the CI PIPG.

*NB Holders of this packing certificate endorsed for front mounted reserves parachutes must keep a log of all reserves packed.*

45. Packing Records.
  - a. PIPG will maintain a record for each parachute in use as club equipment.
  - b. Student Parachutists will maintain a record for their personal parachutes.
  - c. Packing Records will log every packing, re-packing and modifications to the parachute to which they relate.
  - d. Packing of main and reserve parachutes must be recorded, with the exception that Intermediate Parachutists and Experienced Parachutists are not required to record the packing, for their own use, of personally owned main parachutes.

- e. Records must incorporate the date of packing and signature of the holder of a relevant packing certificate, at each stage of packing that requires inspection.

## SECTION 7. PARACHUTE LANDING AREAS/DROPPING ZONES

### 46. Basic Definitions.

- a. Parachute Landing Area (PLA) is a suitable area where it is intended parachutists will land.
- b. Dropping Zone DZ is a notified portion of airspace within which parachutes descents are made. The normal radius is 1.5 nautical miles and up to the attitude notified.
- c. PLA/DZ Indicator. This is a PLA/DZ location marker, which can be a cross, an arrow or some other suitable indicator and is normally placed in the centre of the PLA but may be offset to one side as dictated by wind direction and/or other safety considerations, providing that it is clearly visible from whatever height the parachutists are dropping.
- d. Overshoot Area. This is an area largely free of Major Hazards where parachutists may land if they are unable to land on the PLA.
- e. Minor Hazard. This is any object, either natural or artificial, which should be easily avoided but which if struck by a parachutist may result in injury (ie hedges, fences, ditches etc).
- f. Major Hazard. This is any object, either natural or artificial, which because of its size may be difficult to avoid and which, if struck by a parachutist may result in injury (ie large hangers, buildings, woods etc).
- g. Temporary Hazard. This is a hazard on the PLA such as an aircraft landing or taking off, other aircraft with turning propellers or rotors on the ground, or moving vehicles or agricultural machinery which may cause injury if struck by a parachutist and is not a permanent fixture on the PLA.
- h. Special Hazard. This is a hazard, which could carry a special risk to parachutists. Special hazards include stretches of deep open water and deep rivers (see para 54 below), electricity power lines (see para 55 below), densely built up areas, cliffs and quarries. All of them require a greater attention to safety and special consideration should be given to their presence in the neighbourhood of PLAs.

### 47. Approval. All PLAs/DZs intended for regular parachuting use must initially be inspected by a nominated inspector. Some operations may require operational restrictions. Once association approval has been given, a Parachuting 'Permissions and Exemptions (P&E) must be obtained from the Civil Aviation Authority (CAA), who will require the following before the P&E is issued:

- a. The signed permission of the landowner(s) or the landowner(s) agent(s).

- b. If the proposed parachuting operation is to be based at an aerodrome, a copy of the relevant sections of the operational instructions applicable to that aerodrome (at a licensed aerodrome, The Aerodrome Manual) showing the procedures to ensure non-conflict of aircraft and parachutists in the air and on the ground and procedures for aircraft landings, taking off or manoeuvring within or close to the designated PLA or the DZ.
48. Parachute Landing Areas.
- a. PLAs to be used by all designations of parachutists should provide a large open space of reasonably level ground, which can contain a circle of 500 meters diameter free from Major Hazards. These PLAs should be bordered on at three sides by suitable overshoot areas.
- b. PLAs, which do not comply with the above, may require restrictions on operational procedure and/or may not be suitable for all parachutists. These PLAs will need the approval of the CI. This does not apply to displays PLAs, see below.
49. Split Parachute Landing Areas. A split PLA is where the centre is more 2000 meters from the control/manifest point. In addition to the normal requirements for PLAs, when Student Parachuting is taking place, split PLAs must operate under the following conditions:
- a. The DZ controller must be at least a SI with a minimum of 2 assistants. If more than four student parachutists are being dropped on any one lift, an extra assistant will be needed for each additional two students.
- b. The CI or SI must be present whenever student parachutists are jumping.
50. Open Water and Deep Rivers. Where open water and deep rivers (excluding minor rivers and small shallow ponds) exist within 1200 meters of the centre of the PLAs, all parachutists must be equipped with suitable flotation aids.
51. Electricity Power Lines. Routine parachuting will not take place on PLAs where power lines are within 800 meters of the centre of the PLA without prior of STC. Where a PLA is approved when power lines run within 800 meters of the PLA centre, restrictions may be imposed.
52. Air Photographs. All PLAs/DZs used for routine parachuting will be equipped with an aerial photograph on which Major and Special hazards, and overshoot areas are marked.

## SECTION 8. PARACHUTING LIMITATIONS.

53. General. Parachuting may only take place under the conditions laid out in this Operations Manual. Local club and parachute centres rules (SOPs) also apply, when using their locations, throughout the UK and various overseas parachute centres.

54. Wind.

a. Ground wind speed limits for Parachutists.

(1) Student Parachutists jumping round parachutes. 10 knots.

(2) Intermediate, Experienced and Master parachutists. 15 knots.

b. Suspension and Resumption of Parachuting. Suspension of parachuting will be ordered for the designations 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 thirty minutes during which time no gusts above the limit have occurred.

c. Wind Speed and Direction. Every centre must use an anemometer for measuring ground wind speed. Further information about wind speed and direction will be obtained using Wind Drift Indicators (WDI), or meteorological forecasts. This information will be obtained:

(1) Before parachuting begins.

(2) Following a significant change in wind speed direction.

(3) Following any break of more than thirty minutes caused by winds in excess of the limits laid down above.

(4) After parachutists have failed to land in the intended landing area and a faulty 'spot' or bad canopy control is not suspected.

(5) A WDI must be thrown before the start of static line student jumping.

55. Cloud and Visibility.

a. Cloud. Parachutists may not leave the aircraft if, the point of exit, the ground between the opening point and the intended landing area is not visible.

b. Visibility. The minimum flight visibility must be least 5km.

56. Opening Heights. Minimum opening heights for main parachutes (static line round):

a. Students Parachutists 2000ft AGL

b. Intermediate, Experienced and Master Parachutists 1200ft AGL

c. Demonstration parachutists on display only. 800ft AGL

57. Maximum Altitude. Normal parachuting will not place above 12,000 ft. Parachuting will only take place between 12,000 and 15,000 without oxygen provided that:
- a. The aircraft when loaded with parachutists can sustain at least 1,000ft per minute rate of climb between 10,000 and 15,000 ft.
  - b. No parachuting 'lift' exposes parachutists to altitude above 12,000 ft for more than six minutes.
  - c. The PLA height above mean sea level does not exceed 500 ft.
58. Number of Parachutists per pass.
- a. No more than 6 'Traditional' static line Student parachutists will be dispatched per pass.
  - b. No more than 8 'Intermediate' parachutists per pass.
  - c. No more than 12 Demo Jumpers will be dispatched per pass.
59. Water Jumps. Water jumps may only be made under the following conditions:
- a. When there is a minimum of one powerboat to each parachutist in the air.
  - b. When all parachutists are equipped with suitable buoyancy aids and have been briefed on their use.
  - c. When DZ control is organised by an Senior Instructor, who must be present during the entire programme.
60. Night Jumps. Individual parachutists may carry out night descents, on the approval of the CI if they are considered competent to do so. The following must be adhered to:
- a. DZ Control must be organised by an Senior Instructor, who must be present throughout the entire programme.
  - b. All parachutists are to be briefed on the position of all obstructions adjacent to the PLA.
  - c. The PLA/DZ is to be marked in a standardised manner. see Fig 1 below
  - c. Any obstructions within the PLA are to be lit.
  - e. The PLA should be indicated to the parachutists by the Jumpmaster, from the air prior to exit. (if practical)
  - f. Torches are to be available within the aircraft.
  - g. All parachutists must have at least one light.

- h. The pilot is to be in communications with local Air Traffic Control (ATC).
- i. Local police are to be informed of proposed night descents.
- j. Notification of night parachuting is to be made in writing at least five working days in advance to National Air Traffic Services (see address and contact details, below) and copied to the group, giving the following information:
  - (1) Name, address and telephone numbers of club.
  - (2) Name of CI/Team leader.
  - (3) Date and time of proposed night descent.
  - (4) Name of PLA/DZ together with its 6-figure grid reference, using Ordnance Survey 1:50,000 series.
  - (5) Proposed maximum drop height.

Airspace Utilisation Section  
 Directorate of Airspace Policy  
 K1, CAA House, 45-59 Kingways,  
 London WC2B 6TE

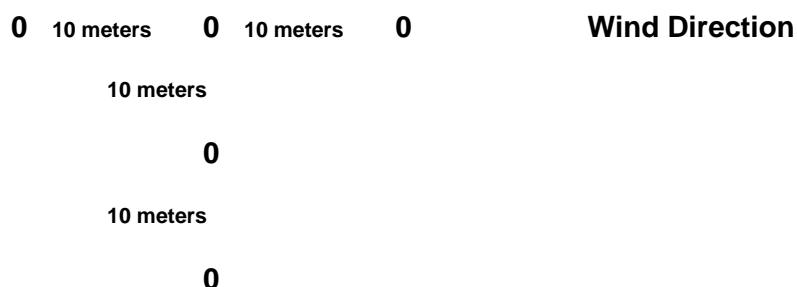
Telephone: 020 7453 6599/6582

Fax: 020 7453 6593

E mail: ausops@dap.caa.co.uk

Figure 1:

Standardised Marking of PLAs/DZs for Night Descents. 0 = Lights





## SECTION 9. FLYING.

61. Pilots. The CI shall check the pilot's qualifications to ensure that he/she has the necessary qualifications for the type of aircraft to be flown and qualified to drop parachutists.
62. Aircraft. Before an aircraft is used for parachuting, the CI is to check that it conforms to the CCA & EASA regulations ensuring that it has the following:
  - a. Aircraft Clearance and Documentation.
    - (1) British Registered Aircraft. Aircraft must have a valid Certificate of Airworthiness (CofA) in the category appropriate to the type of operation and must be approved by the CAA for the purpose of parachute dropping. Any aircraft modifications required for parachute dropping, for example the installation of parachutist's restraints (if necessary) or static line modifications, must be CAA approved. Any structural or performance limitations applicable to parachuting operations must be stated in the aircraft Flight Manual or in a CAA approved supplement which must be included in the Flight Manual for that particular aircraft. The aircraft must be operated in accordance with the Flight Manual and applicable Flight Manual Supplements.
    - (2). Foreign Registered Aircraft. Written permission must be obtained from the Department of Transport before a foreign registered aircraft is used for any aerial work. The aircraft must have a valid CofA from the country of registration in the category appropriate to the type of operation and must be operated in accordance with the aircraft Flight Manual with respect to flight with door removed or for parachuting operations. The DETR consults with the CAA prior to granting its permission.
    - (3). The approved Flight Manual/Owners Manual/pilots operating handbook and MEL's as applicable to the aircraft.
    - (4). The Certificate of Airworthiness.
    - (5). A weight and CG schedules.
    - (6). Documents recording the maintenance and serviceability of the aircraft.
    - (7). A copy of this Operation Manual and any local SOPs.
    - (8). Any Permissions or Exemptions issued by the CAA relevant to the intended flight.

## SECTION 10. SAFETY.

### 63. Safety in the Aircraft.

- a. No person will approach a moving aircraft.
- b. Parachutists will not approach an aircraft forward of the wings.
- c. The JM is responsible to the pilot for the control of parachutists in the aircraft. The pilot is in overall command.
- d. The JM is responsible for the orderly emplane of his/her lift and for the supervision and instructions as necessary in 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 helmets before take-off, except in the case of parachutists jumping with helmet camera, who may fit their helmets at the most suitable time prior to jumping. (Helmets not fitted for take-off should be securely located in the aircraft).
- f. Movement inside the aircraft should be kept to a minimum and consideration should be given to the protection of handles, pads etc.
- g. All parachutists landing with the aircraft wearing AADs must have them deactivated where practicable.
- h. Where parachutist's restraints are fitted, they are to be used during take-off and landings.
- i. No parachutist will exit the aircraft until there has been a clear indication from the pilot, either visually or audibly, that the aircraft is in the correct configuration for exit. This indication may be in the form of lights, sounds or pre-arranged hand signals.

### 64. Static line Operation.

- a. Clubs may only use Static Line deployment systems acceptable to the group's riggers.
- b. Static line 'strong points' must be of an approved type.
- c. It is the JM's responsibility to ensure that the static line is controlled correctly. Static lines are to be hooked up prior to take-off and must not be unhooked until the last static line parachutist has exited.
- d. If, after dispatching static line parachutists, the instructor does intend to land with the aircraft, all static line bags are to be unhooked and stowed away securely. In the case of aircraft with high strong points where provision is made for stowing static line bags, unhooking may not be necessary.

- e. When dispatching, the static line bags must be the correct length for the aircraft in use, the aircraft must be at the correct speed for dropping and there must be no short lining of static lines.
65. Emergency Procedures – Aircraft.
- a. In the case of an emergency the JM should follow instructions from the pilot where practicable.
  - b. Where an emergency occurs at low altitude parachutists may be required to remain on board.
  - c. If a parachute container opens inside the aircraft, the parachutist should be moved as far away from the door as is practicable and must land with aircraft.
  - d. The pilot's attention should always be drawn to any emergency situation.
  - e. Pilots and instructors must be aware of the procedures to be taken in the event of a 'Static line hang-Up'.
66. Safety during Parachute Descents.
- a. After opening the main parachute, all parachutists will check that their canopy has fully developed normally. If it has not, emergency procedures may need to be taken.
  - b. Throughout the descent parachutists should be aware of other parachutists in the air, and if necessary take avoiding action.
  - c. Under canopy the responsibility for avoiding collision rests with the higher parachutists.
  - d. Student parachutists should always land into wind.
67. Incidents. Records are to be kept of all incidents, including malfunctions, deployment problems and injuries. Reports are to be sent to the Group and forwarded to the Riggers.
- a. Investigation of Incidents.
    - (1). Fatal Accidents. The Group will co-operate fully with the relevant authorities in the event of a fatality.
    - (2). Other Incidents. Including injuries will be investigated under group arrangements unless special factors make an outside agencies investigation desirable.
68. Discipline.
- a. A CI may suspend any parachutists from his/her group for any breach of this Operations Manual.

- b. A CI who has reason for recommending the temporary or permanent suspension of any parachutist from all parachuting should state the case in writing to the group. The parachutists concerned will have the right of appeal to the group.
- c. The Group may suspend any member from parachuting, or the rating/authorisation/qualification of a member, for a breach of this Operations Manual or for any safety reason. The member concerned will have the right to appeal to the group's disciplinary board.
- d. All instructors are expected to intervene whenever they observe a breach of this Operations Manual and or local SOPs, or an unsafe practise and bring to the attention of the CI.

## SECTION 11 MEDICAL

69. Medical Requirements to Parachute. All parachutists must be in possession of a completed Declaration of Fitness to parachute, Medical/Doctors certificate. Medical form 1, which are available on the website and must be presented to Manifest prior to any descent. Also the following rules apply:
- a. In case of persons under 18 years of age, the signature of the witness of the Declaration of Fitness to Parachute/Medical Form must be that of the Parent/Guardian.
  - b. In the case of persons of 40 years of age or more, the Doctors Certificate sections must be completed.
  - c. Persons above the age of 50 years may be accepted for parachute training if:
    - (1) The person has had previous parachuting experience.
    - (2) Is of a high standard of fitness for their age and, the GP has signed their Medical form 'Fit to Parachute'.
  - d. Validity. All Declaration of Fitness to parachute, Medical/Doctors certificates are only valid providing all the requirements as listed on the form are met.
70. General. The following also applies within the group:
- a. Alcohol. No parachutists will take any form of alcoholic drink before he/she has completed parachuting for the day. Persons deemed to be under the influence of alcohol will not be permitted to parachute.
  - b. Illegal Drugs/Substances. Possession or use of illegal drugs/substances by a group member at a club or at a dropping zone will be automatically lead to the withdrawal of membership and all that entails.
  - c. Blood Donors. 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.
  - d. Foreign Parachutists. Parachutists from a foreign country may parachute onto any DZ as long as he fulfils the medical requirements and has the necessary parachuting insurance to cover personal injury, treatment and repatriation.

## SECTION 12. DOCUMENTATION

71. Personal Documents. All parachutists, riggers, packers and DZ controllers must be current members of The Pathfinder Parachute Group. They must be possession of the following documents, which are to be presented to DZ control officer before any parachute descent:
- a. Medical Certificate. Valid and up to date.
  - b. Personal Insurance for Parachuting. To cover personal injury, treatment and repatriation.
  - c. Membership of either British Parachute Association, Irish Parachute Association, or their countries own parachuting association.
  - d. Parachutist Logbook. All parachutists must keep a personal log recording details of all their sport/military parachute descents.
  - e. Parachute records. All members who own their own parachute are to ensure that they maintain the records for each parachute up to date.
  - f. Parental Consent. All those under the age of 18 must obtain the written consent from their parent/guardian before being permitted to parachute. (No person under the age of 16 years of age is permitted to parachute).
  - g. Parachute Packing Certificates. Issued by the Group for the main and reserve parachutes and checked as laid down by the Group rigger/CI. Individuals who own their own parachute are to maintain their own records and ensure that they are inspected by the Group rigger.
72. Club Records. The Group will maintain the following records:
- a. Course Attendance. The Group will maintain a list of all student courses held throughout the year, this will also include individuals who need to get in date for a parachute date.
  - b. Parachute Main and Reserve Register. This is to include type of main, in service date, type of reserve and next repack date, and any information relevant to the parachute.
  - c. A record of all incidents, parachute deployment problems, malfunctions and accidents.

73. Reports. The Group will make the following reports:
- a. Annual Parachuting Returns. This will show the number of parachute descents made within the groups DZ's including displays descents.
  - b. It will also summarise injuries sustained by parachutists within the DZ's. These will be categorised as follows:
    - (1) Fatal.
    - (2). Serious – Detained in hospital for two weeks or more.
    - (3). Medium – Admitted to hospital or rendered unfit for parachuting for at least three weeks or more.
    - (4). Slight – Unfit for parachuting for any period less than three weeks
  - d. The Annual return will also summarise parachute malfunctions and give other statistical information as requested by the group. (Section 12 - 72.c).

## SECTION 13 DISPLAY PARACHUTING

The Pegasus Display Team is currently the only Display Team authorised by Pathfinder International Parachute Group to operate in the United Kingdom and Territories.

The Team have developed their own general arrangements and operational procedures to ensure that they comply with all statutory instruments and regulations made thereunder.

74. Team Leader. All display teams must have a Team Leader, who must fulfil the requirements of a Team Member, see below, plus the following:

a. Additional Requirements.

(1). A minimum of 100 round canopy descents (exemptions see Section 2 – Paragraph 16 – f & g).

(2). A minimum of 10 display descents.

(3). Has passed a written examination administered by the CI or SI on display procedures and flying operations. A written recommendation of a CI or AI who is a current display leader is required before taking the examination.

b. The Team Leader is responsible for the parachuting and flying operations carried out by that display team.

c. It is the Team Leader's responsibility to make available to every team member a copy of this Operations Manual and other information as may be necessary to enable them to perform their duties.

d. The Group are to be notified, in writing, not less than seven days in advance of any intended changes to the Team Leader.

e. The Team Leader may delegate various responsibilities to qualified subordinates. This may be by the subordinate signing a form to accept responsibility for a specific area/duty. The Team Leader is to ensure that any person accepting responsibility is aware of what that responsibility entails.

75. Team Registration.

a. Display teams are to register annually with the group; they will receive a Certificate of Registration.

b. Team Registration as per local requirements.



76. Team Members.
- a. Jumpmaster (JM).
- (1). Minimum of 100 descents.
  - (2). A minimum of 15 display descents.
  - (3). Must be nominated and fully briefed on his/her responsibilities as a JM by the Team Leader.
  - (4). Must satisfy the Team leader of his/her capability to carry out his/her responsibilities, a logbook endorsement will suffice.
  - (5). May give displays using a PLAs of not less than 5,000 square meters, of which the minimum width must be 50 meters. The PLA must be free from Major Hazards and not more than 10% of the area may be taken up with Minor Hazards. In all such cases adequate overshoot areas must exist on all sides.
  - (6). The minimum opening height for round canopy static line parachutists on displays is 800ft AGL.
  - (7). Must have their CI's written approval, logbook endorsement will suffice.
- b. Drop Zone Control. The DZ Safety Officer on a display must be a responsible Group Member, and has been fully briefed on his/her duties and responsibilities by the Team Leader. He must have the at least the following on a display:
- (1). Ground to Air Signals, ie DZ maker panels.
  - (2). A method of measuring wind speed and direction.
  - (3). Ground to Air comms with aircraft.
  - (4). Access to first aid equipment and emergency services.
  - (5). A written 'Incident Procedure'. The team leader must have briefed the DZ controller on that procedure.
77. Equipment. Parachutists must be fully familiar with the equipment they intend to use.
78. Competency.
- a. Team leaders are responsible for ensuring the competency of all team members, in relation to the display and any associated risks with that display.

79. Preparation Procedures.

- a. Display PLAs must be visited and reconnoitred by an experienced team member before a display is due to be given. Existing and anticipated hazards are to be plotted.
- b. Complete a risk assessment in advance
- c. Written permission of the Landowner(s) or landowner(s) agent(s) must be obtained.
- d. Liaise with local emergency services and authorities and confirm that they have no objections to the proposed display.
- e. Organise any necessary local air traffic clearances.

80. Reports. Reports are to be submitted to the group as laid down in Section 12 above.

See Appendix 1 – Key Personnel and Contact Details

## Appendix 1 – Key Personnel and Contact Details

Airfield:

Aircraft / Owner:

Air Traffic Control:

Radio Frequency:

Airfield DZ / Event Control:

Emergency Services:

Team Leader:

Group Co-ordinator:

Assistant Group Co-ordinator:

Team DZ Control:

Team Safety Consultant:

**WITHDRAWN** 30<sup>th</sup> September 2019.