XXX Flights Ltd.
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Distribution List

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Amendment Record

A/L No.	Amendment incorporated	Date	Signature
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1.1 General

1.1.1 Throughout this Manual the word "Company" shall be taken to mean XXX Flights Ltd. trading as XXX Flights.

1.1.2 The Operations Manual must be carried in the balloons operated by the Company on all public transport flights except as detailed in paragraph 4.5.2.

1.1.3 In addition to this volume the following are deemed to be part of the Operations Manual:

a) The CAA approved Flight Manual for each balloon operated

b) Relevant extracts from the UK Aeronautical Information Package in the form of General & Temporary Navigation Warning Bulletins and Aeronautical Information Circulars

1.1.3.1 The flight manual contains a technical appraisal of the balloon.

1.1.4 Aeronautical Information need not be carried in flight when such information as is necessary for the safe conduct of the flight is noted by the pilot prior to the flight.

1.1.5 The pilot in command must ensure that he carries current topographical maps and aeronautical charts covering the planned route.

1.1.6 Pilots are reminded that they must familiarise themselves with the relevant parts of the Air Navigation Order and any Notices, NOTAMs or Information Circulars published by the CAA. This is to include any equivalent documentation relevant to flying in any country outside of the UK as made available by the Authority in question.

1.2 Purpose

1.2.1 This Operations Manual is compiled in accordance with the statutory requirements and is issued by the company.

1.2.2 The object of this Operations Manual is to promote safety in the flying operations of the company by providing guidance to aircrew and operations personnel in the discharge of their duties.

1.3 Use

1.3.1 This Operations Manual is to be studied frequently by all aircrew and operations personnel.

1.3.2 This Manual is intended for experienced balloon pilots and is in no way intended to cover all aspects of ballooning which should be part of normal training and knowledge.

1.3.3 Only certain statutory orders and regulations have been specifically mentioned in this manual. It is the responsibility of aircrew and operations personnel to be aware of, and comply with, all current regulations and instructions issued by the Civil Aviation Authority for operations in the UK.

1.3.4 The Captain has overall authority for the safety of all flights and may depart from this Operations Manual only when he/she considers the safety of persons or property are endangered but must file a written report on each occasion that he/she does so.

1.4 Distribution

1.4.1 Each copy of this manual will have a serial number.

1.4.2 The master copy (No. 1) will be kept in The Operations Office.

1.4.3 Every pilot will have access to a copy of the Operations Manual.

1.4.4 Extra numbered copies of the Operations Manual will be held in operations for temporary issue to authorised personnel or officials in connection with company operations.

1.5 Amendments

1.5.1 All amendments to the Operations Manual will be actioned by the Operations Manager, who will be responsible for the distribution of amendment lists to all holders.

1.5.2 Crews and officials will inform operations of any errors or omissions in the Operations Manual

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or any associated manuals in order that corrective action may be taken.

1.5.3 Amendments will be allocated an AL number and will be indicated by a vertical line in the left margin and noted on the check list of pages P4 and amendment record P5.

1.5.4 Individual copy holders are responsible for amending their copy of the Operations Manual.

1.5.5 Manuscript amendments are not permitted.

1.6 Balloon Types

1.6.1 The Company will operate the balloons listed in Appendix A

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CHAPTER 2 OPERATING STAFF

2.1 Company Management

2.1.1 The Company shall appoint the following officers:

Managing Director
Accountable Manager
Chief Pilot (Minimum experience 150 hours as P1 balloons)
Operations Manager
Continuing Airworthiness Co-ordinator (may be combined with other positions)
Training Pilot
Type Rating Examiner

2.1.2 **Duties of the Chief Pilot**

The Chief Pilot will be responsible for:

(a) The safe conduct of all flight operations undertaken by the Company.
(b) The selection, conduct, discipline, training, supervision and welfare of all aircrew.
(c) Ensuring that all operations are carried out in accordance with the current statutory regulations and liaising with CAA.
(d) All decisions and instructions pertaining to flight safety and flight duty and rest periods.
(e) Ensuring that the balloon is technically able to carry out the planned flight and ensuring the suitability of the launching site for the type of balloon used on a flight. This does not absolve the balloon captain from any responsibility in the matter.
(f) The contents of the Operations Manual.

2.1.3 **Duties of The Operations Manager**

The Operations Manager will be responsible for:

(a) Ensuring that the flight and duty times of all aircrew are within the mandatory limitations for public transport flights carried out by the company.
(b) Keeping records of all public transport flights for the minimum period specified after flight. The records to include flight time and duty times of all aircrew to ensure that mandatory limits are not exceeded.
(c) Making available an adequate supply of maps, charts, flight guides and other equipment.
(d) Keeping a record and check on the validity of aircrew thirteen monthly check as detailed in this manual. Maintaining the training records of each pilot operating public transport flights for the company including lists and dates of checks and ratings that are required. This does not absolve the individual of any responsibility in keeping his own licence and medical current.
(e) Liaison with the engineering company responsible for the balloon maintenance on matters concerning airworthiness, maintenance and certification.
(f) Maintaining safety standards and submitting MORs.
(g) Monitoring the Flight Times limitation Scheme.

2.1.4 **Duties of The Continued Airworthiness Co-ordinator**

The Continuing Airworthiness Co-ordinator will be responsible for

(a) Having a general understanding of the Maintenance Programme
(b) Having a general understanding of Regulation (EC) 2042/2003 (Part M) as amended
(c) Ensure that the contracts remain valid for the Continuing Airworthiness Management Organisation (CAMO) & Maintenance Organisation

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(d) Monitor the balloons for continued airworthiness on a day to day basis
(e) Liaising with the contracted CAMO and Approved Maintenance Organisation(s)
(f) Present the balloon for maintenance to the approved maintenance organisation at the due time.
(g) Ensure Works Orders are in place for maintenance.
(h) Not to modify the balloon without first consulting the contracted CAMO
(i) Inform the CAMO of all maintenance exceptionally carried out without the knowledge of the CAMO
(j) Report to the CAMO through Logbooks of all defects found during operations
(k) Inform the CAA GAU of changes to the operated fleet of balloons
(l) Carry out all mandatory occurrence reporting particularly associated with continuing airworthiness and maintenance
(m) Inform the CAMO on a regular basis (as contracted) of flying hours and other utilisation data
(n) Operator held logbooks remain updated and stored safely
(o) Conduct a documented annual audit of the effectiveness of the CAMO contract.

2.1.5 **Duties of the Training Pilot**

The Training Pilot is responsible for:

(a) Training of all company pilots on the balloon types used by the Company, in accordance with Chapter 9 of the Operations Manual.
(b) Assisting the Chief Pilot in maintaining the highest possible standard of flying in the Company.

2.1.6 **Duties of Accountable Manager**

The Accountable Manager is accountable to the CAA for maintaining safety standards required by regulation and additional standards specified by XXX. The Accountable Manager has the corporate authority for ensuring that all operations and maintenance system activities can be financed and carried out to the standard required. The Accountable Manager should monitor the activity of the key personnel detailed in 2.1.2, 2.1.3, 2.1.4 and 2.1.5 and ensure that all required records and systems are kept up to date. The Accountable Manager shall ensure that any changes to the current declaration are notified to the CAA as per BOP.ADD.105 prior to any changes becoming effective.

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2.2 Operating Crew

2.2.1 The minimum crew shall consist of one pilot. If a crew consists of more than one pilot, then one pilot will be designated the captain. The captain is responsible for briefing the passengers before and during flight. (See Appendix I).

2.2.2 The Captain will be responsible for the safe operation of the balloon throughout the flight. The Captain will also be responsible for seeing that the balloon documents are correct and on board the balloon and that the Technical Log is checked and signed.

2.2.3 The Captain is responsible for the correct loading of the balloon and for ensuring that sufficient fuel is carried for the intended flight.

2.2.4 In all cases the Captain has the final authority in matters pertaining to the safe operation of the balloon and should it be deemed necessary is fully authorised to use higher weather minima than those specified by the company.

2.2.5 The captain is authorised to deny the following entry into a company balloon:

(a) Those under the influence of alcohol or drugs.

(b) Those suffering from an infectious disease.

(c) Any person whose presence may endanger the balloon.

2.2.5.1 Captains are reminded that it is contrary to the EASA Balloon Rules Book for a person to be drunk in a balloon.

2.2.6 Before flying a balloon the captain shall satisfy himself that:

(a) The prescribed instruments and equipment required to be carried in the balloon are carried in the balloon and are fit for immediate use.

(b) The balloon carries the required radio equipment in good condition as required for the route, weather and time of day that the flight takes place.

(c) That a Certificate of Release to Service and a Certificate of Maintenance Review in respect of the balloon are in force and will not cease to be before the expected end of the proposed flight.

(d) That the balloon is fit in every way for the proposed flight and that the defects recorded in the Technical Log have been rectified or transferred to the Deferred Defect Record and that no defect in the Deferred Defect Record renders the balloon unfit for flight.

(e) That all required precautionary measures have been taken to promote the safety of the flight.

(f) That the load carried by the balloon, with regard to its weight, distribution and security, may be safely carried on the proposed flight.

(g) That the view of the pilot is not obstructed by any object that is not part of the balloon.

(h) That sufficient fuel is carried for the proposed flight including a safe margin for contingencies. Also, that battery capacity will be sufficient to operate all the equipment required on the flight.

(i) That the performance of the balloon is adequate for the proposed flight.

(j) That in the forecast wind conditions the balloon will reach an area suitable for landing within the planned flight time.

(k) That information is available to the pilot on sensitive areas likely to be encountered along the route.

2.2.7 A balloon captain is required to allow an inspector of the CAA to board and fly in any Company balloon operating a public transport flight.

2.2.8 No flight crew member may consume alcohol within a period of 8 hours before flying nor drink to any excess at any time. It would be prudent for a pilot to abstain from alcohol for at least 24 hours before flying.

2.2.9 No flight crew member may fly whilst under the influence of any drugs, which may affect his abilities as a crew member. For further advice, crew members should consult an aeromedical specialist.

2.2.10 Pilots must seek advice aeromedical advice before returning to flying duties following any surgical procedure.

2.2.11 Pilots must seek advice aeromedical advice before returning to flying duties following any immunisation.

2.2.12 No flight crew members may fly for at least 24 hours after giving blood.

2.2.13 No flight crew members may fly within 24 hours of any diving activity in excess of 10 metres.

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2.3 Region of Operation

2.3.1 The region of operation is Region AA which is the mainland UK. Balloons may only cross areas of inland open water or coastal features under circumstances that will allow the balloon, in the event of burner failure, to reach land in safety, and no further than one nautical mile from the nearest point of land, measured at the ordinary high-water mark.

2.3.2 Company balloons are not permitted to operate public transport flights over areas which are not covered by topographical maps carried in the balloon and held in Operations.

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CHAPTER 3 FLIGHT TIME LIMITATIONS

3.1 Introduction

This chapter provides a scheme, as required by the EASA Balloon Rule Book, for the regulation of flight time for crew members and is approved by the CAA. It also provides guidance to pilot crew members on their responsibilities regarding the avoidance of fatigue. This scheme is only valid as long as the company DBO is limited to balloons.

3.1.1 Applicability

3.1.1.1 The provisions of this chapter apply to any pilot who operates a CPB flight in a company balloon and shall include all flying undertaken for that purpose.

3.1.2 Requirements of the EASA Balloon Rule Book

3.1.2.1 The BRB requires that a crew member shall not fly, and an operator shall not require him to fly, if either has reason to believe that the crew member is suffering from, or having regard to the circumstances of the flight to be undertaken, is likely to suffer from fatigue as may endanger the safety of the aircraft or its occupants.

3.1.3 General Principles

3.1.3.1 The prime objective of this scheme is to ensure that crew members are adequately rested at the beginning of each flying duty period. Account must be taken of inter-related planning constraints on individual duty and rest periods, on the lengths of cycles of duty and associated periods of time off and on cumulative duty hours within specific periods.

3.1.4 Responsibility of Crew Members

3.1.4.1 Responsibility for the proper control of flight and duty times cannot rest with the company alone. It is the responsibility of all pilots to make optimum use of the opportunities and facilities for rest provided and to plan their rest periods properly so as to minimise the risk of fatigue. The formal responsibilities of crew members under the BRB are described in Paragraph 3.1.2 above.

3.1.4.2 Pilots are reminded that under the BRB a person shall not be entitled to act as a member of the flight crew of an aircraft registered in the United Kingdom if he/she knows or suspects that his/her physical or mental condition renders him/her temporarily unfit so to act.

3.2 Definitions

3.2.1 For the purpose of this document various terms used have the meanings defined below:

(a) **DAYS OFF:** Periods available for leisure and relaxation, no part of which forms part of a duty period. A single day off shall include two local nights. Consecutive days off shall include a further local night for each additional day off. A rest period may be included as part of a day off.

(b) **DUTY PERIOD:** Any continuous period, during which a pilot does any duties for the company whether flying or otherwise, this includes administrative duties.

(c) **FLIGHT DUTY PERIOD (FDP):** Any duty period during which a crew member flies a balloon for the company. It starts at the time the crew member is required by the company to report for duty and ends when he has completed all post-flight duties and is released from duty.

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(d) **LOCAL NIGHT:** A continuous period of 8 hours falling between 2200 and 0800 local time.

(e) **REST PERIOD:** A period before starting a Flight Duty Period which is intended to ensure that a crew member is adequately rested before a flight.

(f) **SPLIT DUTY:** A Flight Duty Period which consists of two or more duties which are separated by less than the minimum rest period.

3.3 FDP Limits

3.3.1 A single Flight Duty Period shall not exceed 10 hours except as in paragraph 3.4 below.

3.3.2 A pilot shall not spend more than 7 hours at the controls in any one FDP.

3.4 Extension of FDP by Split Duty

3.4.1 When an FDP consists of 2 or more duties separated by less than the minimum rest period the FDP may be extended beyond that permitted in paragraph 3.3.1 by the following amounts.

Consecutive Hours Rest	Extension of FDP
Less than 3	Nil
3 to 10	A period equal to half the consecutive time taken

3.4.2 The rest period shall not include the time required for pre-flight and post flight duties.

3.4.3 When a rest period is not more than 6 hours it will be sufficient if a quiet and comfortable place is available that is not open to the public. When the rest period is more than 6 hours then a bed must be provided.

3.5 Rest Periods

3.5.1 The minimum rest period which must be provided before undertaking an FDP shall be:

(a) At least as long as the preceding duty period.

(b) Not less than 11 hours.

3.5.1.2 If the preceding duty periods exceed 18 hours then the rest period must include an eight-hour period between 22:00 and 08:00 local time.

3.5.1.3 In order that balloon operations may take place for short periods in the morning and evening a reduction in rest periods from the above limits may be made provided the following conditions are observed.

(a) The duty period before and the planned duty period after the rest period do not exceed 3 hours each.

(b) The crew member has a total of 16 hours rest in any 24-hour period (midnight to midnight).

(c) The crew member does not go for a period of more than 3 days with less than 12 hours continuous rest.

If all the above conditions are met rest may be reduced to a minimum of 8 hours.

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3.6 Days Off

3.6.1 On a day off a pilot shall not fly in Company balloons except as a passenger. He shall not fly more than 8 days between days off and shall have a minimum of 6 days off in any 4 consecutive weeks. He shall have an average of at least 8 days off in each consecutive 4-week period averaged over 3 such periods.

3.6.2 Where flight operations only take place in the mornings, a pilot shall not fly more than 12 days between days off and shall have a minimum of 4 days off in any 4 consecutive weeks. He/she shall have an average of at least 6 days off in each consecutive 4-week period averaged over 3 such periods.

3.6.3 If any duty period in Italy exceeds 5 hours (including non-flying duty time), or evening flights are to be undertaken, the pilot will revert to the scheme in paragraph 3.6.1

3.7 Cumulative Duty & Flying Hours

3.7.1 **DUTY HOURS:** The average weekly total of duty hours shall not exceed 50 hours averaged over any 4 consecutive weeks; all types of duty shall be counted in full for this purpose. Any period of 7 or more consecutive days within which the crew members is employed on ground duties only shall not count toward this total.

3.7.2 **FLYING HOURS - 28 DAY PERIOD:** The maximum number of flying hours which a flight crew member may be permitted to undertake during any 28 days is 50.

3.7.3 **FLYING HOURS - 1 YEAR PERIOD:** A person shall not act as a flight crew member if the total of his flying in the period of 12 months expiring at the end of the previous calendar month exceeds 500.

3.8 Records

3.8.1 Records must be kept of the duty and rest periods and flying times of all flying staff. These records must include the following:

(a) Duration of each FDP and function performed.
(b) Duration of each duty period whether or not it includes an FDP.
(c) Duration of each rest period prior to an FDP.
(d) Dates of days off.
(e) Weekly totals of duty.
(f) Daily and weekly flying hours.

3.9 Preservation of Records

3.9.1 Records shall be preserved for at least 12 calendar months from the date of the last relevant entry.

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CHAPTER 4 FLIGHT PREPARATION

4.1 Fuel Required

4.1.1 The minimum fuel to be carried is sufficient for the intended flight plus 30 minutes.

4.1.2 If the balloon is to be operated over terrain unsuitable for a landing then there must be sufficient fuel to reach an area suitable for landing plus a reserve of 30 minutes.

4.1.3 Before departure the captain will calculate the fuel required in the space provided on the Technical Log Sector Record Page and his/her signature in the "Fuel Certificate" box confirms that the fuel required is correct and that the fuel on board is as shown.

4.1.4 Fuel required figures for Company balloons are shown in Appendix B.

4.2 Terrain Clearance & MSA

4.2.1 Captains must comply with the requirements of SERA 5005 F(2). Captains flying from congested area sites must carry a copy of the current exemption issued by the CAA.

4.2.2 Captains are reminded of the dangers of flying in areas of reported or expected lee waves downwind of mountains. Further information can be found in Aeronautical Information Circulars.

4.2.3 Captains are reminded of the dangers of wake turbulence when flying close under the flight path of large aircraft for up to 15 minutes after the aircraft has passed. Should it be necessary to cross such a path it is advisable to climb above it. Further information can be found in Aeronautical Information Circulars.

4.2.4 Captains must ensure lifejackets are provided for each person on board when planning a flight that involves one of the following,

a) When flying over water where it is reasonably possible that the balloon might be forced to land onto the water,

b) When taking off or landing at a site where the take off or approach path is so disposed over water that in the event of a mishap there would be a likelihood of ditching: or

c) When the wind is less than 5kts onshore at a take off from a site located within 1 nm. of water measured at the ordinary high-water mark.

Where required, passengers must be briefed on the correct use of life jackets including stowage, fitting and operation.

4.3 Balloon Performance

4.3.1 Balloons shall not be operated outside the performance limitations detailed in the CAA approved Flight Manual for the balloon concerned.

4.4 Navigation Equipment Required

4.4.1 The following equipment will be carried on all flights

a) Current topographical and aeronautical charts to cover the entire route.

b) Suitable pencil for marking the chart.

c) A timepiece.

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4.5 Flight Documents

4.5.1 The following documents are to be carried on CPB Flights other than as detailed in para. 4.5.2

a) Certificate of Registration.
b) Certificate of Airworthiness.
c) Certificate of Maintenance Review.
d) Radio licence.
e) Pilots licence.
f) Aircraft Technical Log pink page.
g) Operations Manual.
h) The CAA approved Flight Manuals.
i) Copy of Balloon Insurance Certificate

4.5.2 For CPB pleasure flying all the above documents, except the Technical Log pink page, may be carried in the dedicated retrieve vehicle.

4.6 Technical LOG

4.6.1 Sector Record Page (SRP)

4.6.1.1 Because the Company operates balloons for pleasure flying, the balloon Technical Log Sector Record Page (SRP) is designed to include the functions of load-sheet, weather record and passenger manifest.

4.6.1.2 A new SRP will be used in the Technical Log for each flight. However, a new page is not required for intermediate landings in one flight.

4.6.1.3 Before signing the "Pre-flight Carried Out" box the captain will ensure that the Pre-flight as detailed in Appendix E has been carried out and that the Airworthiness Review Certificate is valid and will remain valid for the proposed flight, that the balloon has sufficient fuel for the proposed flight, that any defects reported on the previous technical page have been rectified or transferred to the Deferred Defects Record and that no defect already deferred will affect the safety of the flight.

4.6.1.4 Before departure the Captain will calculate the available load using the method described in Appendix L. The Captain is to sign the loading certificate on the sector record page when he/she is satisfied that the balloon is correctly loaded.

4.6.1.5 Before departure the Captain shall record the weather at the departure site on the SRP either by contacting the most suitable weather recording place (ie. an airfield) or by making an observation. If the Captain makes his/her own observation, he/she must use a suitable wind measuring instrument. In all cases the captain must record the source of the information and complete all the boxes.

4.6.1.6 The Technical Log is to be left on the ground with a responsible member of the retrieve crew but the pink copy of the SRP should be removed from the Technical Log and be carried in the balloon.

4.6.1.7 The yellow copy of the SRP will be returned to the company's maintenance organisation within 1 week of the date of the flight.

4.6.1.8 The white copy of the SRP will remain in the Technical Log cover.

4.6.1.9 The place and time of take off and landing will be recorded in the appropriate boxes on completion of the flight, the hours to check will be calculated and the Captain will record any defects or make a "nil" or "nil further" entry and sign the Technical Log to confirm its accuracy.

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4.6.2 Defects

4.6.2.1 All defects which are known to the Captain must be recorded on the SRP unless already entered on a previous SRP. The defects will fall into two categories, either they affect the airworthiness of the balloon and are unacceptable or they are in the manufacturer's deferred defects list and are acceptable.

4.6.2.2 Acceptable defects are listed in the latest manufacturer's flight or maintenance manual. Any defect that is not acceptable must be rectified and certified by an approved inspector before the next flight using the Certificate of Release to Service (CRS) at the foot of the SRP, giving details of the action taken.

4.6.2.3 A defect that is acceptable may either be rectified as above or be transferred to the Deferred Defect Record (Appendix C2) in the Technical Log. The SRP entry must state ".....defect deferred, DD No. ...../....." with the page and defect number entered as appropriate. For example, DD No.2/4 is the fourth defect entered on page 2 of the Deferred Defect Record.

4.6.2.4 Deferred defects should be rectified as soon as practicable and at least during the next scheduled inspection. The person carrying out the rectification should enter brief details on the current SRP with the date, name and signature to identify the source of the repair and certified by an approved inspector before the next flight using the Certificate of Release to Service (CRS) at the foot of the SRP.

4.6.3 Scheduled Maintenance

4.6.3.1 The balloon is subject to several items of scheduled maintenance as detailed below:

(a) A pre-flight check to be carried out before each flight. (see Appendix E).

(b) An inspection to be carried out after 1 year has elapsed or the balloon has flown 100 hours since the last check, whichever is the sooner.

4.6.3.2 For details of any extensions to these requirements see the maintenance programme.

4.6.3.3 A Certificate of Release to Service must be signed for the last scheduled inspection and must remain valid for the intended flight.

4.7 Navigation Log

4.7.1 No Navigation Log is required provided the weather at point of departure is recorded on the Technical Log SRP.

4.8 Unlicensed Airfields

4.8.1 A balloon may be launched from an unlicensed site provided that the captain is satisfied that the launching area is in all ways suitable with particular regard to obstacles, wind speed and the effect of false lift and sink.

4.9 Night Operations

4.9.1 CPB operations are not permitted between 30 minutes after sunset and 30 minutes before sunrise.

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4.10 Loading

4.10.1 Calculation of the maximum take off weight for the ambient conditions will be made before each flight.

4.10.2 The maximum take-off weight is the total permitted lift calculated for the ambient conditions.

4.10.3 For all CPB flights, the load sheet section in the Technical Log must be completed using actual passenger and crew weights. The maximum number of passengers in a balloon is 19 or the maximum specified in the CAA approved flight manual whichever is the lower.

4.10.4 CPB flights in balloons capable of carrying more than 6 occupants must only be made if the basket is so compartmented that no more than 6 occupants are carried in each compartment.

4.10.5 The number of occupants in any compartment of the balloon basket shall not exceed 6.

4.10.6 Dangerous goods are not to be carried in company balloons. The term "dangerous goods" means any explosive substance or any other substance that is liable to endanger the balloon or its occupants.

4.10.7 The carriage of animals or cargo in balloons is not permitted.

4.11 Basic Weights

4.11.1 The basic weights and maximum number of occupants for company balloons are listed in Appendix A of this manual.

4.11.2 The basic weights refer to the balloons in the Company's basic state that is: -
Unusable fuel,
Aircraft library in stowage,
First aid kit in stowage,
Fire Extinguisher.

4.11.3 Fuel tank weights and capacities are listed in the approved manufacturers flight and maintenance manual and in Appendix A.

4.12 Balloon Library

4.12.1 The Balloon Library will comprise current editions of –
a) Cameron and Lindstrand Flight Manuals,
b) ICAO 1:500,000 Air Chart,
c) UK Frequency Guide,
d) Ordnance Survey 1:50,000 maps, marked with known Sensitive Areas for intended track.

The above documents must be carried on all CPB flights.

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CHAPTER 5 BALLOON OPERATING MINIMA

5.1 VFR FLIGHT

5.1.1 All CPB flights in Company balloons will be carried out under Visual Flight Rules.

5.2 CONDITIONS FOR VFR FLIGHT

5.2.1 A pilot may request a VFR clearance from an Air Traffic Control unit by day in controlled airspace which has not been notified as permanently subject to instrument flight rules, provided he/she is able to remain clear of cloud and in sight of the surface and in a flight visibility of at least 5km.

5.2.2 Outside controlled airspace above 3000 ft (and below FL 100) a pilot may fly VFR provided he/she is able to remain at least 1500m horizontally and 1000 ft vertically from cloud and a flight visibility of at least 5km.

5.2.3 Outside controlled airspace below 3000 ft a pilot may fly VFR if he/she remains clear of cloud and in sight of the surface and with a flight visibility of at least 3km.

5.3 BASIC MINIMA

5.3.1 A balloon must not be flown for CPB transport:

(a) At night.

(b) When the visibility prevailing at the departure airfield or forecast for the route is less than 3km

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CHAPTER 6 FLIGHT OPERATIONS

6.1 ALTIMETER SETTING AND MAXIMUM ALTITUDE

6.1.1. The balloon's altimeter will be set on the lowest available QNH for the area over which the balloon is flying unless the balloon is operated in the close vicinity of an airfield when the QFE may be set at the discretion of the balloon commander.

6.1.2. A balloon must not be operated above the maximum operating altitude nor allowed to climb or descend at a greater rate then the maximum specified in the CAA approved Flight Manual.

6.2 Oxygen Requirements

6.2.1 The Company balloons do not carry oxygen equipment therefore they must not fly above 10,000 ft.

6.3 Radio Watch

6.3.1 If in the course of a CPB flight if it is reasonably possible that the balloon will infringe Controlled or Special Rules Airspace, an Aerodrome Traffic Zone or a Military Aerodrome Traffic Zone then an aeronautical radio station must be carried. If the balloon's flight takes it within 3nm horizontally and / or 1,000 feet vertically of the above-mentioned airspace, then 2-way communication must be established with the appropriate ATC unit.

6.3.2 Where a local agreement has been negotiated with the appropriate ATC unit, agreed lower minima may be applied.

6.4 Wind Speed Limits

6.4.1 Balloons shall not normally be operated in wind speed exceeding 8 knots on the surface, and not in wind speeds between 8kts and the Flight Manual limit of 15kts without the specific approval of the Chief Pilot.

6.4.2 Pilots upgrading to significantly larger balloons should not fly in wind speeds exceeding 8Kts.

6.5 Distressed Aircraft

6.5.1 If a captain observes another aircraft or surface craft in distress, he/she should if possible:

(a) Keep the other craft in sight until such times as his/her presence is no longer necessary, or he/she is no longer able to stay in the vicinity.

(b) Report to ATC as much information as possible and to act as instructed by ATC or the rescue services as far as is possible.

6.6 Reporting of Met Observations

6.6.1 Pilots are to inform the relevant ATC unit if they encounter severe icing or turbulence, an active area of thunderstorms, a sever line squall, heavy hail or mountain waves.

6.7 Passenger Handling (see Appendix I)

6.7.1 A Company representative must brief all passengers on the correct way to approach the balloon and on all emergency procedures that they may be required to know. Passengers must be briefed not to touch any of the controls, and to pay attention to instructions given by the pilot during the flight and on landing. Passengers are to be advised in advance about appropriate clothing for ballooning. Advice must include wearing long trousers and sleeves, preferably in natural fibres, and suitable footwear – a baseball cap is also a good idea, as it offers protection from the radiant heat of the burner. Protective helmets must be provided for the use of passengers if it is likely that other than normal conditions could be encountered during the course of a flight, for example, a landing on steep or rocky terrain or at a high ground speed. Any specific Company procedures detailed in Appendix Z must be followed.

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6.7.2 Passengers must be escorted to the balloon by a Company representative.

6.7.3 Parachutists will only be dropped in compliance with the conditions of a Permission and Exemption granted by the Civil Aviation Authority.

6.8 Ground Handling

6.8.1 Ground handling, inflation and launching will be carried out in accordance with the procedure laid down in the Flight Manual.

6.8.2 Only persons properly trained and approved by the Operations Manager will supervise the launching of balloons – this will include any XXX Pilot, XXX Crew or XXX Operations Department staff.

6.8.3 The balloon is to be secured prior to launch by an approved quick release system.

6.8.4 CPB operations will always have available a dedicated retrieve vehicle for the balloon. The retrieve vehicle will have on board the documents and equipment normally required in operations.

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CHAPTER 7 ACCIDENT & EMERGENCY

7.1. Emergency Procedures

7.1.1 The Captain should be familiar with all emergency procedures listed in the CAA approved Flight Manual including:

(a) Emergency landings
(b) Pilot flame failure
(c) Fire on the ground
(d) Fire in the air
(e) Blast valve failure
(f) Contact with power lines
(g) Electrical failure

7.2 Occurrence Reporting

7.2.1 A report is to be made, by the Chief Pilot, to the CAA on form SRG 1601 within 72 hours of any significant defect or malfunction of the balloon or its equipment and of any incident likely to endanger the balloon, its occupants, or persons or property on the ground. An online report can be submitted at - https://www.aviationreporting.eu/AviationReporting/

7.3 Airprox Reports

7.3.1 Should an airprox occur, a report should be made, by the Chief Pilot, on form CA1094.

7.4 Accident Procedure

7.4.1 Upon notification that a Company balloon has been involved in an accident resulting in death, serious injury or substantial damage to the balloon, its occupants, and persons or property on the ground, or is significantly overdue and radio contact has been lost, the Operations Manager will carry out the following procedure.

(a) Advise the Chief Pilot, where applicable.
(b) Advise the Air Accident Investigation Branch (AAIB) by telephone and then by FAX using the format shown in paragraph 7.4.4.
(c) Obtain the current weather over the route and crash site and copies of the load-sheet, Technical Log and passenger manifest.
(d) Make available transport to convey AAIB and ANSV officials to the crash site.
(e) Notify the next of kin of the crew and passengers (in conjunction with the police) – this information will be held in the Operations Department – Passengers Jobsheets File.
(f) Liaise with the local police at the crash area.

7.4.2 All enquiries by the public and media must be passed to the Operations Manager. The Operations Manager will arrange for a telephone to be manned or monitored during flying operations. The Company pilots will be notified of the appropriate telephone number(s) before each flight.

7.4.3 Each balloon flight is to be planned for a specific duration and pilots must report with Operations on completing each flight. If a balloon becomes significantly overdue, then Operations should try to contact the pilot or retrieve crew. If this is unsuccessful, they should contact the local emergency services.

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7.4.4 The following format is to be used in the accident telephone of Fax message to the AAIB. (See Appendix X for telephone number).

(a) The type, model and registration marks of the balloon.
(b) The name of the owner, operator and hirer (if any) of the balloon.
(c) The name of the commander of the balloon.
(d) The date and time of the accident.
(e) The point of departure of the balloon.
(f) The position of the balloon by reference to some easily defined geographical point and grid reference.
(g) (i) The number of crew on board the balloon at the time of the accident and the number of them injured as a result of the accident.
(ii) The number of passengers on board the balloon at the time of the accident and the number of them injured as a result of the accident.
(iii) The number of other persons injured as a result of the accident.
(h) The nature of the accident and the extent of the damage to the balloon as far as is known.
(i) Name and contact telephone number of the reporter of the accident.

7.4.4 Comprehensive definitions of accidents and incidents can be found on the Air Accident Investigation Branch web site www.aaib.gov.uk

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CHAPTER 8 CHECK LISTS (see also balloon flight manual)

8.1 All Company pilots must familiarise themselves with the pre flight check, pre take-off, in-flight and pre landing checks. The checks are detailed in Appendix E.

8.2 It is the responsibility of the Chief Pilot to review and update the checks.

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CHAPTER 9 TRAINING

9.1 General

9.1.1 The instructions and recommendations in this Manual are intended for the use and guidance of all personnel engaged in the training and periodic checking of company pilots.

9.1.2 When the opportunity allows the Chief Pilot should carry out check flights to ensure the highest possible standards of flying are being maintained.

9.1.3 Training and periodic checking of balloon pilots may be carried out at suitable unlicensed fields.

9.1.4 All training flights must be carried out in balloons equipped to the same standards as are required for a public transport flight.

9.2 Recency

9.2.1 Before operating a public transport flight a pilot must have completed at least 3 free flights of at least 5 minutes duration for any purpose as a pilot in command in the preceding 90 days.

9.3 Training Pilot's Duties

9.3.1 The training pilot duties are described in chapter 2.

9.4 Minimum Qualifications

9.4.1 The minimum qualifications for Company pilots are:
A Current UK Un-restricted CPL (Balloons) Licence, or European Part BFCL Licence for the group to be flown.
A total experience of at least 150 hours as Pilot in Charge.
A current EU Class 2 Medical Certificate.

9.4.2 The minimum experience may be reduced at the discretion of the Chief Pilot with the agreement of the CAA.

9.5 Pilot Training

9.5.1 A pilot joining the Company will carry out such training as the Chief Pilot may require bearing in mind his/her flying experience. This training will consist of conversion to balloon type and line flying under supervision.

9.5.2 Prior to starting Company flying, specialist Safety Equipment Procedure (SEP) training must be completed and certified on the Training Check Form (Appendix G) by the Chief Pilot or Authorised Examiner and must be repeated at 2 yearly intervals.

9.5.3 Prior to starting Company flying a combined Base/Line check will be carried out and certified on the Combined Check Form by a Type Rating Examiner, unless the training record of another operator is accepted. (see paragraph 9.6.5).

9.5.4 A pilot may be required to perform further line checks under supervision followed by a final check. These flights may be public transport flights with passengers on board provided that the initial line check was carried out during the preceding combined check. In the case of an experienced pilot joining the Company the Chief Pilot may use his discretion and accept the training record of another operator. (see paragraph 9.6.5).

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9.5.5 Pilots upgrading to significantly larger balloons should not fly in surface wind speeds exceeding 8Kts for the first 10 public transport flights on the larger balloon. Subsequent to this, and following a line check, the restriction may be removed upon the positive recommendation of the Chief Pilot or TRE. For the purpose of this requirement “significantly” is defined as “envelope capacity in excess of 50% larger than the largest envelope capacity upon which the pilot has undertaken 10 public transport flights within the past 24 months.” For example, a pilot who had previously operated a balloon of 120,000 cu ft, this requirement would be applicable for balloons in excess of (but not including) 180,000 cu ft.

9.6 Periodic Checks

9.6.1 Pilots are required to complete a combined check flight once every 13 months to check their continued competence to operate a public transport flight. This check will include emergency procedures, normal operation and safety and emergency equipment. The check will be certified on the Combined Check Form (Appendix G) by a Type Rating Examiner. The check flight must be a free flight.

9.6.2 The Company check flight includes all items required for a "Certificate of Test" signature in the pilot's professional licence and will include all items shown on the Combined Check Form (see Appendix G). Some of the emergency procedures are not required to be carried out in flight during the check. These items may be simulated on the ground.

9.6.3 Individual checks are not required for each existing balloon group in the pilot's licence if a balloon in that group is to be flown for public transport. A test in a Group B balloon is also valid for Group A balloons; a test in a Group C balloon is also valid for Groups A and B balloons.

9.6.4 On completion of a check the Check Form will be put in the pilot's training file for a period of at least 2 years.

9.6.5 As the Operations Manual for each Company Balloon has the same training content, the company may accept Training Records of any other DBO using a BBAC approved Operations Manual.

9.7 Crew Training

9.7.1 Good safety management practice indicates that ground-based personnel should have adequate training in first aid and fire fighting procedures and be briefed on the Company's Emergency Response procedures. In the event of a serious accident it is possible that the pilot may be incapacitated and it is likely that the retrieve crew would be first to attend the scene.

9.8 Survival Equipment Training and Testing

9.8.1 The following equipment must be included in Company training:

a) First aid kits
b) Fire extinguishers
c) Pyrotechnics (if carried on board the balloon)
d) Lifejackets (if carried on board the balloon)

9.8.2 A Company pilot's knowledge of the location and use of the emergency and life saving equipment will be tested by the Type Rating Examiner as part of the line check.

9.8.3 Company personnel should be given every opportunity to familiarise themselves with all equipment on a regular basis.

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CHAPTER 10 CONTINUING AIRWORTHINESS AND MAINTENANCE

10.1 Continuing Airworthiness and Maintenance Arrangement

10.1.1 This operation is required under Regulation (EC)2042/2003 to either hold a Part M subpart G (CAMO) approval and maintenance approval (Part-145 or Part M subpart F) or contract this out.

10.1.2 Continuing airworthiness and maintenance arrangements if contracted must be in place for all balloons operated. The details of the contracted organisations are listed in Appendix A.

10.2 Maintenance Programme

10.2.1 Each balloon is maintained to a Part M approved maintenance programme as follows:
Cameron Balloons Programme Ref…MP/02099/P

10.2.2 Maintenance consists of scheduled and unscheduled tasks. These must be released with a Certificate of Release to Service statement as per Part M subpart H with exception of a Pre-Flight inspection, which may be performed by the pilot.

10.3 Scheduled Maintenance

10.3.1 This must be completed by the approved maintenance organisation and must be co-ordinated through the CAMO. The frequency and tasks being listed in the approved maintenance programme.

10.4 Unscheduled Maintenance

10.4.1 When the balloon is required to have maintenance outside of its scheduled period, the operator will contact the approved maintenance organisation as contracted, except that when another approved maintenance organisation is utilised. The operator must advise the CAMO, forwarding on copies of any maintenance documentation after the work has been performed.

10.4.2 For unscheduled defect rectification the pilot must be aware of whom to contact particularly outside normal working hours. The contact details should be included within the Technical Log and or as part of the appendix A.

10.5 Airworthiness Review Certificate and The Controlled Environment

10.5.1 The balloon will require during a 3-year period for the Airworthiness Review Certificate to be renewed, validating the Certificate of Airworthiness. As this operator contracts a CAMO and Approved Maintenance Organisation(s). Providing the balloon remains contracted with the same CAMO for the appropriate time. The Airworthiness Review need only be carried out on a 3-yearly basis with the intermediate years just being validated. If the balloon does not maintain its controlled environment status, then the balloon may need an Airworthiness Review annually.

10.6 Operator's Responsibilities

10.6.1 It is the responsibility of the operator at all times to ensure the balloon is fit to fly, compliant with the continuing airworthiness tasks and the balloon has a valid Airworthiness Review Certificate.

10.7 Records

10.7.1 It is the responsibility of the Continuing Airworthiness Co-ordinator to ensure all records held at the operations base are kept up to date and secure. This includes the flying time, equipment fitted and records of maintenance including applicable Airworthiness Directives and Service Bulletins.

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10.7.2 With regard to the Technical Log Sector Record Pages (SRP). Copies are to be returned to CAMO along with any details of Deferred Defects. The yellow SRPs are to be returned on a weekly basis after being reviewed by the operator for completeness.

10.8 Continued Airworthiness Approved Data

10.8.1 The operator holds or has access the documents required to determine continuing airworthiness. These can be found as follows: -

(i) Airworthiness Directives & Service Information Bulletins:
EASA website - http://ad.easa.europa.eu

(ii) For Balloon Maintenance information:
Cameron/Lindstrand website www.cameronballoons.co.uk or www.lindstrand.co.uk

10.9 **Quality Audit**

10.9.1 As the operator contracts a separate CAMO, that CAMO will already have an audit programme to comply with its Part M subpart G approval. Therefore, to fulfil the requirement within the operator, The Continuing Airworthiness Co-ordinator will conduct an annual documented review to ensure both parties have been fulfilling their obligations under the terms listed on the CAMO and Maintenance contract(s).

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CHAPTER 11 SAFETY MANAGEMENT

11.1 Company Safety Management Policy

11.1.1 The Company safety management policy is defined in Appendix K. All Company personnel should be familiar with the policy and be trained in the requirements of any risk assessments.

11.2 Emergency Response Plan

11.2.1 The Company Emergency Response plan is defined in Appendix J. All Company personnel must be familiar with the policy and be trained in its implementation.

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