CIVIL AVIATION AUTHORITY, BANGLADESH
AIR NAVIGATION ORDER
FLIGHT OPERATIONS REQUIREMENTS

PART B-GENERAL OPERATIONS PROCE DURES

SUB- PART (OPS) B-1. OPERATIONS MANUAL

SECTIONS

1. INTRODUCTION

1.1 This ANO has been restructured as per requirements of rule 124, CAR' 84 and according to the format given in ICAO Annex –6, part 1, Appendix 2.

1.2 A Bangladeshi operator shall provide, for the use and guidance of operations personnel concerned an operations manual in accordance with this ANO. The operations manual shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date. All such amendments or revisions shall be issued to all personnel that are required to use this manual. Advance approval of amendments and revision shall be obtained from the Chairman before the effective date.

1.3 The operator shall submit two copies of the proposed operations manual at least ninety (90) days before the intended date of commencement of first operation for review, acceptance and approval of the Chairman. The operator shall submit two copies of all amendments and /or revisions at least 15 days prior the intended effective date, for review, acceptance and, approval by the Chairman. The operator shall incorporate in the operations manual such mandatory material as the Chairman, CAAB may require.

1.4 The operator shall revise the operations manual from time to time where necessary as a result of changes in its operations, aircraft or equipment, or in the light of experience.

1.5 The operator shall furnish copies of the operations manual to such of its personnel, as the operator considers necessary.

1.6 The operator shall ensure that a copy of the manual is kept in a convenient and accessible place for use by all operations personnel employed by the operator who have not been furnished with a copy in accordance with section 1.5 of this order.

1.7 The operator shall ensure that all copies of the operations manual are kept up to date.

1.8 Each member of the operations personnel employed by the operator shall comply fully with all instructions is relation to his duties contained in the operations manual.

1.9 Responsibility of the pilot-in-command of a Bangladesh aircraft in circumstances where maintenance has been carried out outside Bangladesh under the Rule 199 of the CAR 1984.

1.10 The operator shall prepare operations Manual in English language.

1.11 The operator must ensure that the contents of the operations manual are presented in a form in which they can be used without difficulty.

1.12 The operations manual must describe the content and use of the operational flight plan.

2. SCOPE :

The operations manual shall have the following provisions: -

2.1 A statement that the manual complies with all applicable regulations and with the terms and conditions of the applicable Air Operator Certificate (AOC).

2.2 A statement that the manual contains operational instructions that are to be complied with be the relevant personnel.

2.3 A list and brief description of the various parts, their contents, applicability and use.

2.4 Explanations and definitions of terms and words needed for the use of the manual.

2.5 Details of the person (s) responsible for the issuance and insertion of amendments and revisions.

2.6 A record of amendments and revisions with insertion dates and effective dates.

2.7 A statement that handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety.

2.8 A description of the system for the annotation of pages and their effective dates.

2.9 A list of effective pages.

2.10 Annotation of changes (on text pages and, as far as practicable, on charts and diagrams).

2.11 List of effective Temporary Revisions.

2.12 A description of the procedures for amendments and temporary revisions of the manual.

2.13 Distribution list of the Manual.

2.14 (a) Corporate organogram. (b) FLT. OPS organogram.

2.15 Nominated post holders with address (e-mail) phone & Fax. No

2.16 The name of each nominated post holder responsible for flight operations, crew training and ground operations. A description of their function and responsibilities must be included.

2.17 A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and the compliance with the applicable regulations.

2.18 A statement defining the authority, duties and responsibilities of the commander.

2.19 Duties and responsibilities of crew members other than the commander.

2.20 A description of the system for supervision of the operation by the operator. This must show the safety of flight operations and the qualifications of personnel are supervised. In particular, the procedures related to the following items must be described:

(a) Licence and qualification validity;
(b) Competence of operations personnel; and
(c) Control, analysis and storage of records, flights documents, additional information and data.

2.21 A description of any system for promulgating information, which may be of an operational nature but is supplementary to that in the Operations Manual. The applicability of this information and the responsibilities for its promulgation must be included.

3. CONTENTS OF OPERATIONS MANUAL

3.1 An operations manual may be issued in separate parts corresponding to specific aspects of operations and shall be organized with the following structure;

A. General
B. Aircraft Operating information
C. Routes and Aerodromes
D. Training.

A

4. GENERAL

4.1 Instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations.

4.2 Rules limiting the flight time and flight duty periods and providing for adequate rest periods for flight crewmembers and cabin crew.

4.3 A list of the navigational equipment to be carried including any requirements relating to operations in RNP airspace.

4.4 Where relevant to the operations, the long-range navigation procedures, engine failure procedure for ETOPS and the nomination and utilization of diversion aerodromes.

4.5 The circumstances in which a radio listening watch is to be maintained.

4.6 The methods for determining minimum flight altitudes.

4.7 The methods for determining aerodrome operating minima.

4.8 Safety precautions during refueling with passengers on boards.

4.9 Ground handling arrangements and procedures.

4.10 Procedures, as prescribed in Part XII of CAR'84 for pilots-in-command observing an accident.

4.11 The flight crew for each type of operation including the designation of the succession of command.

4.12 Specific instructions for the computation of the quantities of fuel and oil to be carried, having regard to all circumstances of the operation including the possibility of the failure of one or more power plants while en route.

4.13 The conditions under which oxygen shall be used and the amount of oxygen determined in accordance with Rule 146 of CAR 84.

4.14 Instructions for mass and balance control.

4.15 Instructions for the conduct and control of ground de-icing /anti-icing operations.

4.16 The content and use of the operational flight plan described.

4.17 Standard operating procedures (SOP) for each phase of flight.

4.18 Instructions on the use of normal checklists and the timing of their use.

4.19 Departure contingency procedures.

4.20 Instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude call out.

4.21 Instructions on the use of autopilots and auto throttle in IMC.

4.22 Instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved.

4.23 Departure and approach briefings.

4.24 Route and destination familiarization.

4.25 Stabilized approach procedure.

4.26 Limitations on high rates of descent near the surface.

4.27 Conditions required to commence or to continue an instrument approach.

4.28 Instructions for the conduct of precision and non-precision instrument approach procedures.

4.29 Allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach and landing operations.

4.30 Instructions and training requirements for the avoidance of controlled flight into terrain and policy for the use of the Ground Proximity Warning System (GPWS).

4.31 Policy, procedures and training requirements for the avoidance of collisions and the use of the Airborne Collision Avoidance System (ACAS).

4.32 Information and instructions relating to the interception of civil aircraft including:

(a) Procedures, as prescribed in ANO (Rules of the Air) A-1, Chapter- 6, for pilots-in-command of intercepted aircraft; and

(b) Visual signals for use by intercepting and intercepted aircraft, as contained in ANO (Rules of the Air) A.1 Chapter-6.

4.33 For aeroplanes intended to be operated above 15000 m (49 000 ft):

(a) Information which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation; and

(b) Procedures in the event that a decision to descend is taken, covering:

1) The necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance; and
2) The action to be taken in the event that communication with the ATS unit cannot be established or is interrupted.

4.34 Details of the accident prevention and flight safety programme with statement of safety policy and the responsibility of personnel involved.

4.35 Information and instructions on the carriage of dangerous goods, including action to be taken in the event of an emergency.

4.36 The search procedure checklist provided in accordance with Rule 136(2) of CAR'84.

4.37 Policy, procedure and maintenance of Safety Management System (SMS).

4.38 Instruction and policy for flight crew to record and report on routine metrological observation during en-route and climb-out phases of the flight and special and other non-routine observations during any phase of the flight.

4.39 Instruction policy and procedure for flight crew to record and report volcanic activity.

4.40 Policy and procedure for the preparation and dissemination of the information contained in the Aeronautical Information Publication (AIP) to flight crew and operations personnel.

4.41 Instruction for the preservation of flight recorder records and, in the event that the aeroplane becomes involved in an accident or incident.

4.42 Instructions on procedures for the retention of flight recorder records and flight recorders in safe custody pending their disposition as determined in accordance with Annex 13.

4.43 Instruction on the establishment of flight safety documents system in accordance with ANO (OPS) H-2.

4.44 Instruction specifying the minimum requirements for air operators to select and appoint cabin crew instructors and inspectors.

4.45 Instruction policy and procedures to enable cabin crew to discreetly communicate to flight crew in the event of suspicious activity or security breaches in the passenger cabin.

4.46 Policy and procedures in relation to the flight crew compartment access.

4.47 Instruction for training requirements on :

(a) RVSM.
(b) RNAV/RNP.
(c) MNPS.
(d) ETOPS.
(e) ILS CAT II / CAT III

B

5. AIRCRAFRT OPERATING INFORMATION

5.1 Certification limitations and operating limitations.

5.2 The normal, abnormal and emergency procedures to be used by the flight crew and the checklists.

5.3 Operating instructions and information on climb performance with all engines operating.

5.4 Flight planning data for pre-flight and in-flight planning with different thrust/power and speed settings.

5.5 Instructions and data for mass and balance calculations.

5.6 Instructions for aircraft loading and securing of load.

5.7 Aircraft systems, associated controls and instructions for their use.

5.8 The minimum equipment list and configuration deviation list for the aeroplane types operated and specific operations authorized, including any requirements relating to operations in RNP airspace.

5.9 Checklist of emergency and safety equipment and instructions for its use.

5.10 Emergency evacuation procedures including type specific procedures, crew coordination, assignment of crew's emergency positions and the emergency duties assigned to each crew's emergency positions and the emergency duties assigned to each crewmember.

5.11 The normal, abnormal and emergency procedures to be used by the cabin crew, the checklists relating thereto and aircraft systems information as required, including a statement related to the necessary procedures for the coordination between flight and cabin crew.

5.12 Survival and emergency equipment for different routes and the necessary procedures to verify its normal functioning before take-off, including procedures to determine the required amount of oxygen and the quantity available.

5.13 The ground –air visual signal code for use by survivors.

C

6. Routes and Aerodromes.

6.1 A route guide to ensure that the flight crew will have, for each flight information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures as applicable for the operation, and such other information as the operator may deem necessary for the proper conduct of flight operations.

6.2 The minimum flight altitudes for each route to be flown.

6.3 Aerodrome operating minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes.

6.4 The increase of aerodrome operating minima in case of degradation of approach or aerodrome facilities.

6.5 The necessary information for compliance with all flight profiles required by regulations, including but not limited to, the determination of:

(a) Take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by system failures which affect the take-off distance;

(b) Take-0ff climb limitations;

(c) En-route climb limitations;

(d) Approach climb limitations and landing climb limitations;

(e) Landing runway length requirements for dry, wet and contaminated conditions, including systems failures which affect the landing distance; and

(f) Supplementary information, such as tire speed limitations.

D

7. Training.

7.1 Details of the flight crew-training programme.

7.2 Details of the cabin crew duties training programme.

7.3 Details of the flight operations officer/flight dispatcher training programme, when employed in conjunction with a method of flight supervision requiring the services of licensed flight operations officers, shall be licensed in accordingly.

This order (ANO) supercedes and replaces ANO (OPS) B-1 issued dated April 2002.

Chairman
Civil Aviation Authority, Bangladesh

Part A

GENERAL

1. Administration and control of Operations Manual

1.1 Introduction

(a) A statement that the manual complies with all applicable regulations and with the terms and conditions of the applicable Air Operator Certificate.
(b) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel.
(c) A list and brief description of the various parts, their contents, applicability and use.
(d) Explanations and definitions of terms and words needed for the use of the manual.

2. System of amendment and revision

(a) Who is responsible for the issuance and insertion of amendments and revisions.
(b) A record of amendments and revisions with insertion dates and effective dates.
(c) A statement that handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety. Such temporary amendments must be authenticated by signature and stamp of a responsible person as per standard revision procedure.
(d) A description of the system for the annotation of pages and their effective dates.
(e) A list of effective pages.
(f) Annotation of changes (on text pages and, as far as practicable, on charts and diagrams).
(g) Temporary revisions.
(h) A description of the distribution system for the manuals, amendments and revisions.
(i) A type of manual (ring binder) where replacement of sheets is possible.
(j) A handy type of manual possible to study in the cockpit.

1. Instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations

1.1 **Organisation and responsibilities.**

1.1.1 Organizational structure. A description of the organizational structure including the general company organogram and operations department organogram. The organogram must depict the relationship between the Operation Department and the other Departments of the company. In particular, the subordination and reporting lines of all Divisions, Departments etc., which pertain to the safety of flight operations, must be shown.

1.1.2 Supervision of the operation by the operator. A description of the system for supervision of the operation by the operator. This must show how the safety of flight operations and the qualifications of personnel are supervised. In particular, the procedures related to the following items must be described:

(a) License and qualification validity;
(b) Competence of operations personnel; and
(c) Control, analysis and storage of records, flight documents, additional information and data.

1.1.3 System of promulgation of additional operational instructions and information. A description of any system for promulgating information which may be of an operational nature but is supplementary to that in the Operations Manual. The applicability of this information and the responsibilities for its promulgation must be included.

1.1.4 Accident prevention and flight safety program. A description of the main aspects of the flight safety program.

1.1.5 Operational control. A description of the procedures and responsibilities necessary to exercise operational control with respect to flight safety.

1.1.6 Approved personnel. The name of each approved personnel responsible for flight operations, the maintenance system, crew training and ground operations.

1.1.7 Responsibilities and duties of operations management personnel. A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and the compliance with the applicable regulations.

1.1.8 Authority, duties and responsibilities of the commander. A statement defining the authority, duties and responsibilities of the commander.

1.1.9 Duties and responsibilities of crew members other than the commander.

2. **Rules limiting the flight time and flight duty periods and providing for adequate rest periods for flight crew members and cabin crew**

2.1 A description of the flight and duty time limitations and rest requirements as applicable to the operation.
2.2 Conditions under which flight and duty time may be exceeded or rest period may be reduced and the procedures used to report these modifications.

3. **A list of navigational equipment to be carried**

3.1 Information about navigation equipment required to be carried for the type of operation.

4. Where relevant to the operation, the long-range navigation procedures, engine failure procedure for ETOPS and the nomination and utilization of diversion aerodromes.

4.1 A description of the ETOPS operational procedures.

5. **The circumstances in which a radio listening watch is to be maintained.**

5.1 ICAO rules require an aircraft operated as a controlled flight to maintain continuous air-ground voice communication watch, and the operator may have the same requirement for other types of operations.

5.2 Continuous monitoring on emergency frequency.

6. **The method for determining minimum flight altitudes**

6.1 A description of the method of determination and application of minimum altitudes including:

(a) A procedure to establish the minimum altitudes/flight levels for VFR flights and;

(b) A procedure to establish the minimum altitudes/flight levels for IFR flights.

7. **The method for determining aerodrome operating minima**

7.1 The method for establishing aerodrome operating minima for IFR flights in accordance with ICAO Annex 6. Reference must be made to procedures for the determination of the visibility and/of runway visual range (RVR) and for the applicability of the actual visibility observed by the pilots, the reported visibility and the reported RVR.

8. **Safety precautions during refueling with passengers on board**

8.1 A description of fuelling procedures, including:

(a) Safety precautions during refueling and de-fueling when passengers are embarking, on board or disembarking; and

(b) Refueling and de-fueling including when an APU is in operation.

(c) Precautions to be taken to avoid mixing fuels.

9. **Ground handling arrangements and procedures**

9.1 A description of the handling procedures to be used when allocating seats and embarking and disembarking passengers and when loading and unloading the aeroplane. Further procedures, aimed at achieving safety whilst the aeroplane is on the ramp, must also be given. Handling procedures must include:

(a) Children/infants, sick passengers and persons with reduced Mobility;

(b) Transportation of inadmissible passengers, deportees or persons in custody;

(c) Permissible size and weight of hand baggage;

(d) Loading and securing of items in the aeroplane;

(e) Special loads and classification of load compartments;

(f) Positioning of ground equipment;

(g) Operation of aeroplane doors;

(h) Safety on the ramp, including fire prevention, blast and suction areas;

(i) Start-up, ramp departure and arrival procedures;

(j) Servicing of aeroplanes;

(k) Documents and dorms for aeroplane handling; and

9.2 Procedures for the refusal of embarkation.

Procedures to ensure that persona who appear to be intoxicated or who demonstrate by manner or physical indications that they are under the influence of drugs, except medical patients under proper care, are refused embarkation.

10. **Procedures, as prescribed in Annex 12, for Pilots-in-command observing and accident.**

10.1 The procedures are described in ICAO Annex 12 chapter 5.

11. **The flight crew for each type of operation including the designation of the succession of command.**

11.1 Crew Composition. An explanation of the method for determining crew compositions taking account of the following:

(a) The type of aeroplane being used;
(b) The area and type of operation being undertaken;
(c) The phase of the flight;
(d) The minimum crew requirement and flight duty period planned;
(e) Experience (total and on type), recency and qualification of the crew members; and
(f) the designation of the commander and if necessitated by the duration of the flight, the procedures for relief of the commander of other members of the flight crew.
(g) The designation of the senior cabin crew member and, if necessitated by the duration of the flight, the procedures for the relief of the senior cabin crew member and any other members of the cabin crew.

11.2 Flight crew incapacitation. Instructions on the succession of command in the event of flight crew incapacitation.

11.3 Qualification requirements. A description of the required license, rating(s) qualification/competency (e.g. for routes and aerodromes), experience, training, checking and recency for operations personnel to conduct their duties. Consideration must be given to the aeroplane type, kind of operation and composition of the crew.

11.3.1 Flight crew

(a) Commander
(b) Pilot relieving the commander
(c) Co-pilot.
(d) Pilot under supervision.
(e) Flight Engineer.

11.3.2 Cabin crew

(a) Senior cabin crew member
(b) Cabin crew member.

(i) Required cabin crew member
(ii) Additional cabin crew member and cabin crew member during familiarization flights.

(c) Operation of more than one type.

11.3.3 Training, checking and supervision personnel

(a) For flight crew.
(b) For cabin crew.

11.3.4 Other operations personnel

11.4 Crew Health Precautions

11.4.1 The relevant regulations and guidance to crew members concerning health including;

(a) Alcohol and other intoxicating liquor;
(b) Narcotics;
(c) Drugs;
(d) Sleeping tablets;
(e) Pharmaceutical preparations;
(f) Immunisation;
(g) Scuba diving;
(h) Blood donation;
(i) Meal precautions prior to and during flight;
(j) Sleep and rest.

12. Specific instructions for the computation of the quantities of fuel and oil to be carried, having regard to all circumstances of the operation including the possibility of the failure of one or more power-plants while en route.

12.1 The methods by which the quantities of fuel and oil to be carried are determined and monitored in flight. This section must also include instructions on the measurement and distribution of the fluid carried on board. Such instructions must take account of all circumstances likely to be encountered on the flight, including the possibility of in-flight re-planning and of failure of one or more of the aeroplane's power plants. The system for maintaining fuel and oil records must also be described.

13. The conditions under which oxygen shall be used and the amount of oxygen determined.

13.1 An explanation of the conditions under which oxygen must be provided and used.
13.2 The oxygen requirements specified for:

(a) Flight crew;
(b) Cabin crew; and
(c) Passengers

14. Instructions for mass and balance control

14.1 The general principles of mass and center of gravity including:

(a) Definitions;
(b) Methods, procedures and responsibilities for preparation and acceptance of mass and center of gravity calculations;
(c) The policy for using either standard and/or actual masses;
(d) The method for determining the applicable passenger, baggage and cargo mass;

(e) The applicable passenger and baggage masses for various types of operations and aeroplane type;
(f) General instruction and information necessary for verification of the various types of mass and balance documentation in use;
(g) Last Minute Changes procedures;
(h) Specific gravity of fuel and oil;
(i) Seating policy/procedures.

15. Instructions for the conduct and control of ground de-icing/anti-icing operations

15.1 A description of the de-icing and anti-icing policy and procedures for aeroplanes on the ground. These shall include descriptions of the types and effects of icing and other contaminants on aeroplanes whilst stationary, during ground movements and during take-off. In addition, a description of the fluid types used must be given including:

(a) Proprietary or commercial names;
(b) Characteristics;
(c) Effects on aeroplane performance;
(d) Hold-over times; and
(e) Precautions during usage.

16. The specifications for the operational flight plan

16.1 Procedures and responsibilities for the preparation and acceptance of the operational flight plan. The use of the operational flight plan must be described including samples of the operational flight plan formats in use.

17. Standard operating procedures (SOP) for each phase of flight.

17.1 Flight preparation Instructions. As applicable to the operation:

17.1.1 Minimum Flight Altitudes.
17.1.2 Criteria for determining the usability of aerodromes
17.1.3 Methods for the determination of aerodrome operating minima.
17.1.4 Presentation and Application of Aerodrome and En-route Operating Minima.
17.1.5 Interpretation of meteorological information. Explanatory material on the decoding of MET forecasts and MET reports relevant to the area of operations, including the interpretation of conditional expressions.
17.1.6 Determination of the quantities of fuel and oil carried.
17.1.7 Mass and balance control.
17.1.8 ATS Flight Plan. Procedures and responsibilities for the preparation and submission of the air traffic services flight plan. Factors to be considered include the means of submission for both individual and repetitive flight plans.
17.1.9 Operational Flight Plan.
17.1.10 Operator’s aeroplane Technical Log. The responsibilities and the use of the operator’s aeroplanes Technical Log must be described. including samples of the format used.
17.1.11 List of documents, forms and additional information to be carried

17.2 Ground handling arrangement and procedures.
17.3 Flight Procedures

17.3.1 VFR/IFR Policy. A description of the policy for allowing flights to be made under VFR, or of requiring flights to be made under IFR, or of changing from one to the other. (Information can be found in ICAO Annex 2, chapter 3).

17.3.2 Navigation Procedures. A description of all navigation procedures relevant to the type(s) and area(s) of operation. Consideration must be given to:

(a) Standard navigational procedures including policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the aeroplane;
(b) MNPS and POLAR navigation and navigation in other designated areas;
(c) RNAV;
(d) In-flight re-planning;
(e) Procedures in the event of system degradation;
(f) RVSM

17.3.3 Altimeter setting procedures

17.3.4 Altitude alerting system procedures

17.3.5 Policy and procedures for in-flight fuel management

17.3.6 Adverse and potentially hazardous atmospheric conditions. Procedures for operating in, and/or avoiding. potentially hazardous atmospheric conditions including.

(a) Thunderstorms;
(b) Icing conditions;
(c) Turbulence;
(d) Windshear;
(e) Jet stream;
(f) Volcanic ash clouds;
(g) Heavy precipitation;
(h) Sand storms;
(i) Mountain waves; and
(j) Significant Temperature inversions.

17.3.7 Wake Turbulence. Wake turbulence separation criteria, taking into account aeroplane types, wind conditions and runway location.

17.3.8 Crew members at their stations. The requirements for crew members to occupy their assigned seats during different phases of flight or whenever deemed necessary in the interest of safety.

17.3.9 Use of safety belts for crew and passengers. The requirements for crew members and passengers to use safety belts and/or harnesses during different phases of flight or whenever deemed necessary in the interest of safety.

17.3.10 Admission to Flight Deck. The conditions for the admission to the flight deck of persons other than the flight crew.

17.3.11 Use of vacant crew seats. The conditions and procedures for the use of vacant crew seats.

17.3.12 Incapacitation of crew embers. Procedures to be followed in the event of incapacitation of crew members in flight. Examples of the types of incapacitation and the means for recognizing them must be included.

17.3.13 Passenger briefing procedures. The contents, means and timing of passenger briefing.

17.3.14 Procedures for aeroplanes operated whenever required cosmic or solar radiation detection equipment is carried. Procedures for the use of cosmic or solar radiation detection equipment and for recording its readings including actions to be taken in the event that limit values specified in the Operations Manual are exceeded. In addition, the procedures, including ATS procedures, to be followed in the event that a decision to descend or re-route is taken.

17.4 AWO. A description of the operational procedures associated with All Weather Operations.

17.5 ETOPS. A description of the ETOPS operational procedures.

17.6 Use of the minimum equipment list.

17.7 Non revenue flights. Procedures and limitations for:

(a) Training flights;
(b) Test flights;
(c) Delivery flights;
(d) Ferry flights;
(e) Demonstration flights; and
(f) Positioning flights

including the kind of persons who may be carried on such flights.

18. Instructions on the use of normal checklists and the timing of their use

Instructions on the use of normal checks lists and the timing of their use with details on the Silent Checks, Challenge and Response Checks and the Verbal Checks.

19. Departure contingency procedures

19.1 Departure contingency procedures shall include:

(a) Departure procedures described in the airport manual
(b) Noise abatement procedures

20. Instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude call-out.

20.1 A description of procedures used to maintain altitude awareness.

21. Instructions on the use of autopilots and auto-throttles in IMC.

21.1 A description of procedures used in IMC.

22. Instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved.

22.1 Instructions to include conditions under which deviations from clearances may be accepted.

23. Departure and approach briefings.

23.1 Description of briefing procedures for departures and approaches.

24. Route and destination familiarization.

24.1 A description of the required qualification/competency for routes and aerodromes.

25. Stabilized approach procedure.

25.1 A description of conditions required to obtain a stabilized approach.
25.2 Minimum altitude for being stabilized and a description of procedures to be followed in case approach is not stabilized at minimum altitude.

26. Limitations on high rates of descent near the surface.

26.1 A description of limitations and procedures to be followed when limitations are exceeded.

27. Conditions required to commence or to continue an instrument approach

27.1 A description of procedures to be used under which decisions are taken to commence, continue or discontinue an instrument approach.

28. Instructions for the conduct of precision and non-precision instrument approach procedures

28.1 A description of the operational procedures associated with precision and non-precision instrument approach procedures.

29. Allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach and landing operations.

29.1 A description of the procedures for night and IMC instrument approaches and landing operations taking in consideration all safety precautions.

30. Instructions and training requirements for avoidance of controlled flight into terrain and policy for the use of the ground proximity warning system (GPWS).

31. Policy, instructions, procedures and training requirements for the avoidance of collisions and the use of airborne collision voidance system (ACAS).

32. Information and instructions relating to the interception of civil aircraft including:

(a) procedures, as prescribed in Annex-2, for pilots-in-command of intercepted aircraft; and
(b) visual signals for use by intercepting and intercepted aircraft, as contained in Annex-2

33. For aeroplanes intended to be operated above 15000 m (49 000 ft):

(a) procedures which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation; and
(b) procedures in the event that a decision to descent is take, covering:

(1) the necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance; and
(2) the action to be taken in the event that communication with the ATS unit cannot be established or is interrupted.

34. Details of the accident prevention and flight safety programme, including a statement of safety policy and the responsibility of personnel.

34.1 A description of the main aspects of the flight safety programme including;

(a) Programmes to achieve and maintain risk awareness by all persons involved in operations;
(b) Evaluation of relevant information relating to accidents and incidents and the promulgation of related information.

35. Information and instructions on the carriage of dangerous goods, including action to be taken in the event of an emergency.

35.1 Information, instructions and general guidance on the transport of dangerous goods including:

(a) Operator's policy on the transport of dangerous goods;
(b) Guidance on the requirements for acceptance, labeling, handling, stowage and segregation of dangerous goods;
(c) Procedures for responding to emergency situations involving dangerous goods;
(d) Duties of all personnel involved; and
(e) Instructions on the carriage of the operator's employees.

35.2 The conditions under which weapons, munitions of war and sporting weapons may be carried.

36. The search procedure checklist provided

37.6 An operator shall ensure that there is on board a checklist of the procedures to be followed in searching for a bomb in case of suspected sabotage. The checklist shall be supported by guidance on a course of action to be taken should a bomb or suspicious object be found.

37. The Safety Management System (SMS)

37.1 An operator shall ensure SMS through company policy and by establishing procedure and proof for implementation.

38. Operators Policy on weather reporting by crew.

38.1 Instruction for crew to record and report on routine meteorological observation and other non routine observations on any phase of flight.

38.2 Instructions for crew to record and report meteorological observation on climb-out phases of flight.

39. Report on volcanic activity.

39.1 Policy instructions and procedure for flight crew to record and report on volcanic activity observed/encountered.

40. Policy on Aeronautical Information Publication (AIP)

40.1 Instruction and procedure for the preparation and dissemination of information contained in AIP.

41. Policy for preservation of flight recorder.

41.1 Instruction and procedure for preservation of flight recorders in the event an aeroplane is involved in an accident or incident.

42. Instructions on procedures for the retention of flight recorder records and flight recorders in safe custody pending their disposition as determined in accordance with Annex 13.

43. Instruction on the establishment of flight safety documents system in accordance with ANO (OPS) H-2.

44. Minimum qualification of selection of cabin crew instructors.

44.1 Instruction specifying the minimum requirements to select and appoint cabin crew instructors.

45. Policy on discrete communication between cabin and cockpit.

45.1 Instruction and procedures for cabin crew to discretely communicate with cockpit crew in the event of suspicious activity or security breaches in the passenger cabin.

46. Policy on flight crew compartment access.

46.1 Instruction and procedure to the cockpit crew compartment access in detail.

47. Instruction for training requirement

47.1 Instruction for initial, recurrent and re-qualification training requirements on

(a) RVSM
(b) RNAV/RNP
(c) MNPS
(d) ETOPS and
(e) ILS CAT II / CAT III

47.2 Operators commitment that only appropriately trained & qualified Flight crews are detailed for operations mentioned above except in the case of flight crews under training for the purpose of becoming qualified and are required for training and certification for grant or renewal of qualification.

Part B

Aircraft operating information.

1. **Certification limitations and operating limitations.**

1.1 A description of the certified limitations and the applicable operational limitations including:

(a) Certification status;
(b) Passenger seating configuration for each aeroplane type including a pictorial presentation;
(c) Types of operation that are approved (e.g. IFR/VFR, CAT II/III, RNP Type, flights in known icing conditions etc.);
(d) Crew composition;
(e) Mass and center of gravity;
(f) Speed limitations;
(g) Flight envelope(s);
(h) Wind limits;
(i) Performance limitations for applicable configurations;
(j) Slope;
(k) Airframe contamination;
(l) System limitations.

2. **The normal, abnormal and emergency procedures to be used by the flight crew and the checklists relating thereto.**

2.1 The normal procedures and duties assigned to the crew, the appropriate check-lists, the system for use of the check-lists and a statement covering the necessary coordination procedures between flight and cabin crew. The following normal procedures and duties must be included:

(a) Pre-flight;
(b) Pre-departure;
(c) Altimeter setting and checking;
(d) Taxi, Take-Off and Climb;
(e) Noise abatement;
(f) Cruise and descent;
(g) Approach, Landing preparation and briefing;
(h) VFR approach;
(i) IFR approach;
(j) Visual approach and circling;
(k) Missed approach;
(l) Normal Landing;
(m) Post landing.

2.3 The emergency procedures and duties assigned to the crew, the appropriate check-lists, the system for use of the check-lists and a statement covering the necessary coordination procedures between flight and cabin crew. The following emergency procedures and duties must be included:

(a) Crew Incapacitation;
(b) Fire and Smoke Drills;
(c) Lightning Strikes;
(d) Distress Communications and alerting ATC to Emergencies;
(e) Engine failure;
(f) System failures;
(g) Guidance for Diversion in case of Serious Technical Failure;
(h) Windshear;
(i) Emergency Landing/Ditching.

3. Operating instructions and information on climb performance with all engines operating.

4. Flight planning data for pre-flight and in-flight planning with different thrust/power and speed settings.

4.1 Data and instructions necessary for preflight and in-flight planning. Where applicable, procedures for engines(s) out operations and flight to isolated airports must be included.
4.2 The method for calculating fuel needed for the various stages of flight.

5. Instructions and data for mass and balance calculations

5.1 Instructions and data for the calculation of the mass and balance including:

(a) Calculation system (e.g. Index system);
(b) Information and instructions for completion mass and balance documentation, including manual and computer generated types;
(c) Limiting masses and centre of gravity for the types, variants or individual aeroplanes used by the operator; and
(d) Dry Operating mass and corresponding centre of gravity or index.

6. Instructions for aircraft loading and securing of loads.

6.1 Procedures and provisions for loading and securing the load in the aeroplane.

7. Aircraft systems, associated controls and instructions for their use.

7.1 A description of the aeroplane systems, related controls and indications and operating instructions.

8. The minimum equipment list for the aeroplane types operated and specific operations authorized.

8.1 The Minimum Equipment List (MEL) taking account of the aeroplane types and variants operated and the type(s) / area(s) of operation. The MEL must include the navigational equipment and take into account the required navigation performance for the route and area of operation.

9. Checklist of emergency and safety equipment and instructions for its use.

10. Emergency evacuation procedures, including type-specific procedures, crew coordination, assignment of crew's emergency positions and the emergency duties assigned to each crew member.

    10.1 Instructions for preparation for emergency evacuation including crew coordination and emergency station assignment.

    10.2 Emergency evacuation procedures. A description of the duties of all members of the crew for the rapid evacuation of a aeroplane and the handling of the passengers in the event of a forced landing, ditching or other emergency.

11. The normal, abnormal and emergency procedures to be used by the cabin crew, the checklists relating thereto and aircraft systems information as required, including a statement related to the necessary procedures for the coordination between flight and cabin crew.

    11.1 Instructions of procedures for the coordination between flight and cabin crew under all conditions.

12. Survival and emergency equipment for different routes and the necessary procedures to verify its normal functioning before take-off, including procedures to determine the required amount of oxygen and quantity available.

    12.1 A list of the survival equipment to be carried for the route to be flown and the procedures for checking the serviceability of this equipment prior to take-off. Instructions regarding the location, accessibility and use of survival and emergency equipment and its associated check list(s) must also be included.

    12.2 The procedure for determining the amount of oxygen required and the quantity that is available. The flight profile and number of occupants and possible cabin decompression must be considered. The information provided must be in a form in which it can be used without difficulty.

13. The ground-air visual code for use by survivors, as contained in Annex-12.

Note: *When necessary information can be found in the Aircraft Flight Manual (AFM)/FCOM a reference to the manual including the Para, is sufficient.*

Part – C

Routes and aerodromes.

1. A route guide to ensure that the flight crew will have, for each flight, information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures as applicable for the operation, and such other information as the operator may deem necessary for the proper conduct of flight operations.

   1.1 A Jeppesen manual is a good example of a route guide.

2. The minimum flight altitudes for each route to be flown.

3. Aerodrome operating minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes.

4. The increase of aerodrome operating minima in case of degradation of approach or aerodrome facilities.

5. The necessary information for compliance with all flight profiles required by regulations, including but not limited to, the determination of:

   (a) take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by system failures which affect the take-of distance;
   (b) take-off climb limitations;
   (c) en-route climb limitations;
   (d) approach climb limitations and landing climb limitations.
   (e) landing runway length requirements for dry, wet and contaminated conditions, including systems failures which affect the landing distance; and
   (f) supplementary information, such as tire speed limitations.

Part D

Training

1. Details of flight crew training programme

   1.1 Training syllabi and checking programmes for flight crew.

   (a) Initial training
   (b) Transition / conversion training
   (c) Re-qualification training
   (d) Up-gradation training
   (e) Recency of experience
   (f) Familiarization training
   (g) Difference training
   (h) SMS training
   (i) Other special training

   1.2 Recurrent training and checking as applicable.
   1.3 Route/Area competence qualification.
   1.4 Special training for special operations.

2. Details of cabin crew duties training programme.

   2.1 Training syllabi and check programmes for cabin crew including:

   (a) Basic indoctrination in the different functions, duties and responsibility of cabin crew members.
   (b) Introduction to aircraft systems and limitations.
   (c) Aircraft emergency evacuation, in life safety equipments & related information to passengers.
   (d) Cabin crew members assignment, co-ordination and two way communication.
   (e) Knowledge and skills related to the transport of dangerous goods.

   2.2 Recurrent training and checking as applicable

   2.3. Security procedure for both flight and cabin crew

   (a) Security of flight crew compartments
   (b) Aircraft search procedure checklist
   (c) Determination of the seriousness of any occurrences
   (d) Crew communication and co-ordination
   (e) Appropriate self defense responses
   (f) CAAB authorized non-lethal protective devices assigned to crew members
   (g) Understanding behavior of terrorist
   (h) Use situational training exercise regarding various threat conditions
   (i) Post flight concerns for the crew.

3. Details of the flight operations officer/flight dispatcher training programme when employed in conjunction with a method of flight supervision.

3.1 Training syllabi and checking programmes for all relevant items pertaining to their duties.

The above training programmes shall include the following training:

(a) Civil Air Law & Regulation.
(b) Aviation Indoctrination
(c) Use of Operations Manual
(d) Aircraft performance
(e) Navigation
(f) Flight planning and monitoring
(g) Rules of the air, communication and air traffic management
(h) Meteorology
(i) Mass and balance control
(j) Use of MEL / CDL
(k) Transport of Dangerous Goods by air
(l) Security procedure
(m) Emergency response plan
(n) Flight observations

3.2 Recurrent training as applicable.