ENR.1 GENERAL RULES AND PROCEDURES
ENR 1.1 GENERAL RULES

1 General

1.1 The Air Traffic Rules and Procedures applicable to Air Traffic in Bangladesh Territory conform with Annexes 2 and 11 to the Convention on International Civil Aviation and with the portions applicable to aircraft, of the Procedures for Air Navigation Services, Rules of the Air and Air Traffic Services, and the Regional Supplementary procedures applicable to the MID/ASIA Region, except in the cases indicated below. All differences have been registered with the International Civil Aviation Organization (ICAO).

Note:- Special flight operations which cannot be conducted in accordance with the provisions of Annex 2 and 11 to the Convention on International Civil Aviation or the Regional Supplementary Procedures MID/ASIA Region, such as air races, air displays, aerobatic flights, or certain aerial work operations require, prior to the commencement of the operation, a certificate of waiver which may be obtained from the Chairman, Civil Aviation Authority.

2 Radio Communication Failure Procedure

2.1 The procedures to be followed by aircraft required to maintain two-way radio communications experiencing radio equipment failure conform to those specified in ICAO Annex-2 Rules of the Air.

2.2 The Procedures to be followed by aircraft experiencing radio communication equipment failure whilst under radar control are specified in ENR 1.6-4

3 Air Traffic Advisory Service (ATAS).

3.1 Introduction

3.1.1 Provision of service.

3.1.2 Air Traffic Advisory Service is provided to aircraft conducting IFR flights within the advisory areas or advisory routes outside controlled airspace.

3.1.3 Advisory service and advisory routes are specified in ENR 3. Along the routes Air Traffic Advisory Service is provided above level 150. Aircraft operating below this level on such routes to be provided flight information services only.

3.2 Procedure Applicable to Aircraft using the ATAS.

3.2.1 IFR flights when operating along advisory routes, are expected to comply with the same procedures as those which apply to controlled flights except that :

(a) the flight plan and changes thereto are not subjected to a clearance since the ATS furnishing Air Traffic Advisory Service, will only provide ADVICE on the presence of essential traffic or SUGGESTIONS as to a possible course of action.

(b) it is the responsibilities of Pilot-in-Command of the aircraft to decide whether he will comply with the advice or suggestion received and to inform the ATS unit providing Air Traffic Advisory Services without delay of his decision.

(c) Air-ground communication shall be made with the Air Traffic Services Unit designated to provide Air Traffic Advisory Service within the advisory airspace or portion thereof.

3.3 PROCEDURE APPLICABLE TO AIRCRAFT CROSSING ADR'S

3.1.1 Aircraft are expected to comply with the following procedures.-

(a) Cross an advisory route as nearly as possible at an angle of 90 degrees to the direction of the route and at a level appropriate to its track, selected from the table of cruising levels (semi-circular system) for IFR flights.

(b) Appropriate ATS Unit shall be informed before and after crossing in ADR.

4. Flight Information Service

Flight Information Service is provided by the Dhaka "Area Control Centre" within Dhaka FIR excluding the portion of the route L507 between AVPOP and ESDOT where the provision of Air Traffic Services from FL280 to FL460 is delegated to Kolkata ACC/FIC.

5 Special Air Traffic Services Procedures for VVIP Flight (AIR TRAFFIC RESTRICTIONS)

5.1 The following procedure shall be enforced at all airports in Bangladesh when VVIP Flights are notified.

5.1.1 AERODROME CONTROL

No aircraft shall be allowed to land or depart from the aerodrome or operate in the circuit for the period:

(a) 5 minutes before ETA of VVIP Flight till `Door Open Time'.

(b) 'Door Close Time' till 5 minutes after take-off.

Note-The Airport authorities may adjust the above timings to ensure that there is no disturbance during the period of ceremonies at the Airport and if required they may close the airfield to other operations.

5.1.2 CONTROLLED AIRSPACE

Standard separation shall be provided in Controlled Airspace. When vertical separation is applied, the vertical separation minimum shall be 2000 feet up to FL280 and FL290 to FL410 for RVSM equipped ACFT and 4000 feet between FL290 and FL410 for non RVSM equipped ACFT and FL410 to UNL for all ACFT.

No VFR operations shall be allowed during the period of VVIP Flight is expected to operate in Controlled Airspace.

5.1.3 OUTSIDE CONTROLLED AIRSPACE (EN-ROUTE)

When the VVIP flight is flying in Bangladesh, no other aircraft shall be cleared to operate in the block of uncontrolled airspace defined below:-

"2000 feet below and above cruising level and 25 nautical miles either side of the intended route of the VVIP flight in uncontrolled airspace".

This restriction will not be applicable when it is known that horizontal separation based on current flight plans will exist between the VVIP flight and other aircraft.

5.1.4 RADAR SEPARATION

Minimum 10NM within coverage of Radar.

6 Reporting the Location of Birds in the Vicinity of Airports

6.1 INTRODUCTION

In order to enable the Pilot to locate the position of birds with reference to the airport, 'Bird Reporting' by aerodrome control tower at civil aerodrome will be done as given in the following paragraph.

6.2 QUADRANTAL REPORTING PROCEDURES

For the purpose of giving report of location of birds observed in the vicinity of aerodromes, the airspace within the aerodrome traffic zone will be divided into 4 sectors (Quadrants):-

Sector	(Quadrant)	Bearing from Control Tower		
NE	(First)	000 deg	to	089 deg.
SE	(Second)	090 deg	to	179 deg.
SW	(Third)	180 deg	to	269 deg.
NW	(Fourth)	270 deg	to	359 deg.

6.3 Report: Caution Birds in South East Sector between 1500 feet and 2000 feet.

7.1 Special Procedure for Dhaka FIR.

ENTRY IN DHAKA FIR.

7.1.1 The following co-ordination procedure shall apply for flights entering and/ or transition Dhaka FIR.

(i) AFPL/ DEP message shall be addressed to Dhaka ACC/FIC.

(ii) Aircraft shall establish radio contact with Dhaka ACC/FIC (with position report and estimates) 10 minutes before entering Dhaka FIR boundary except those flights departing from Indian aerodromes located close to the FIR boundary which shall contact Dhaka ACC/FIC as early as possible but not later than crossing the FIR boundary.

7.2 FLIGHTS THROUGH AIRSPACE DELEGATED TO KOLKATA ACC.

7.2.1 Within the airspace on the route L507 between AVPOP and ESDOT the provision of Air Traffic Services from FL280 to FL460 is delegated to Kolkata ACC/FIC.

7.2.2 (i) No aircraft shall operate through that part of Dhaka FIR which has been delegated to Kolkata ACC/FIC without prior approval from Chairman, Civil Aviation Authority of Bangladesh.

(ii) Flight plans, departure and delay messages pertaining to flights through this airspace shall be addressed to Dhaka ACC/ FIC.

(iii) Prior to entering the aforementioned airspace Aircraft shall contact Dhaka Radio on 3491/6556/10066 KHz (MWARA) and 2947KHz (RDARA) or Dhaka ACC on VHF 125.7 MHz Kolkata and pass the following information:

(a) Aircraft call sign.
(b) Place/ Time of Departure
(c) Destination/ETA
(d) Estimated time over reporting points AVPOP and ESDOT.

Subsequent reports will only be necessary if the estimates differ by 5 minutes or more.

<u>DESCENT OF AIRCRAFT BOUND FOR KOLKATA</u>

7.2.2.1 The following procedure shall apply for flights operating through Dhaka FIR intends to start descent before FIR boundary:
The aircraft shall request Dhaka ACC/FIC for descent. Dhaka ACC/FIC shall provide the aircraft with available traffic information and advise the aircraft to co-ordinate with Kolkata directly for descent.

7.2.3 CRUISING LEVELS

All aircraft are required to be at a level (semi-circular system) appropriate to their magnetic tracks, prior to entering or leaving Dhaka FIR otherwise cleared when prior coordination has been effected between Dhaka Kolkata ACC/FIC.

7.2.4 TRANSFER OR COMMUNICATION-AIR/GROUND

The transfer of Air/ Ground communication to adjacent FIC/ACC is normally made at the agreed transfer point or at the common FIR boundary.

8 Reduction of Longitudinal Separation Minima.

8.1 Without the application of Mach Number, Technique the longitudinal separation minima of 15 minutes is reduced to 10 minutes on ATS Routes L507, A599, A201, B465, G463, A462, R344, R472, B593 and R598 within the Dhaka FIR. The application is to be exercised in the following manner:-

1) Aircraft on the same track and the same cruising level.
2) Aircraft flying on crossing track and at the same level.
3) Aircraft climbing and descending.

9 Transfer of Control while Dhaka approach is in operation.

a) Departing Traffic shall be handed over to Dhaka approach by Dhaka Tower after airborne. Dhaka Approach shall hand over Air Traffic to Dhaka Control or Dhaka radar as appropriate while leaving ACA boundary.

b) Arriving traffic shall be handed over by Dhaka Control/ Dhaka radar to Dhaka Approach Control before entering ACA boundary or while descending through FL160 within TMA boundary. Dhaka Approach control shall hand over traffic to Dhaka Tower while field-in-sight on final approach.

c) Dhaka Approach Control may delegate a portion of Airspace within Aerodrome Traffic Zone to Dhaka Tower for a particular period if necessary.

d) Normally operation of Aerodrome Control TWR shall remain confined within the movement area and while aircraft reports field-in-sight on final approach and till airborne except as mention in (c) above.

10 Signals for aerodrome traffic.

LIGHT AND PYROTECHNIC SIGNALS		
LIGHT	FROM AERODROME CONTROL TO	
Direct towards aircraft concerned	Aircraft in flight	Aircraft on ground
Steady green	Cleared to land	Cleared for take-off
Steady red	Give way to other aircraft and continue circling.	Stop
Series of green flashes	Return for landing*	Cleared to taxi
Series of red flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use
Series of white flashes	Land at this aerodrome and proceed to apron*	Return to starting point on the aerodrome.
Red pyrotechnic	Notwithstanding any previous instructions, do not land for the time being.	--
* Clearances to land and to taxi will be given in due course.		

ENR 1.2 VISUAL FLIGHT RULES

1. Visual Flight Rules conform to the rules published in ANO(Rules of the Air) A.1, Chapter 4 Visual Flight Rules. Any Difference are published in GEN 1.7

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ENR 1.3 INSTRUMENT FLIGHT RULES

1. Instruments Flight Rules Conform to the rules published in ANO(Rules of the Air) A.1, Chapter 5 Instrument Flight Rules. Any difference is published in GEN 1.7.

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ENR 1.4 ATS AIRSPACE CLASSIFICATION

Following classes of Airspace are used in Bangladesh.

Airspace	Classification of airspace
1. Airways	Class-B
2. Control Zone and Terminal control Area and controlled Aerodrome inside control zone	Class-C
3. Controlled Aerodromes outside control zone.	Class-D
4. ATS Routes	
a) Advisory routes above FL 150 to lower limit of airway or FL 460 or FL 255 where applicable.	Class-F
b) Other ATS routes (Except Advisory routes and Airways)	Class-G
5. Airspace within FIR (Outside controlled Aerodromes, controlled Airspace and Advisory routes.)	Class-G

ATS AIRSPACE CLASSIFICATION USED IN BANGLADESH

Class	Type of Flight	Separation provided	Service Provided	VMC visibility and distance from cloud minima	Speed limitation	Radio Communications required	ATC Clearance
B	IFR	All aircraft	Air traffic control service	Not applicable	Not applicable	Continuous two-way	Yes
	VFR	All aircraft	Air traffic control service	8 km at and above 3050m (10000 ft) AMSL 5km below 3050m (10000 ft) AMSL clear of clouds 1500m horizontal; 300m vertical distance from cloud	Not applicable	Continuous two-way	Yes
C	IFR	IFR from IFR IFR from VFR	Air traffic control service	Not applicable	Not applicable	Continuous two-way	Yes
	VFR	VFR from IFR	(1) Air traffic control service for separation from IFR 2) VFR traffic information (traffic avoidance on request)	8 km at and above 3050m (10000 ft.) AMSL. 5 km below 3050m (10000 ft) AMSL 1500m horizontal; 300m vertical distance from cloud	250 kt IAS below 3050m (10,000ft) AMSL	Continuous two-way	Yes

Class	Type of Flight	Separation provided	Service Provided	VMC visibility and distance from cloud minima	Speed limitation	Radio Communications required	ATC Clearance
D	IFR	IFR from IFR	Air traffic control service about VFR flights (and traffic avoidance advice on request)	Not applicable	250kt IAS below 3050m (10000ft.) AMSL	Continuous two-way	Yes
	VFR	not provided	Traffic information between VFR and IFR flights (and traffic avoidance advice on request)	8km at and above 3050m (10000ft) AMSL 5km below 3050m (10000ft) AMSL 1500m horizontal : 300m vertical distance from cloud	250kt IAS below 3050 (10000ft) AMSL	Continuous two-way	

Class	Type of Flight	Separation provided	Service Provided	VMC visibility and distance from cloud minima	Speed limitation	Radio Communications required	ATC Clearance
F	IFR	IFR from IFR as far as practicable	Air traffic advisory service; flight information service	Not applicable	250kt IAS below 3050m (10000ft.) AMSL	Continuous two-way	Nil
	VFR	Nil	Flight information service	8km at and above 3050m (10000ft) AMSL 5km below 3050m (10000ft) AMSL 1500m horizontal : 300m vertical distance from cloud and below 900m AMSL or 300m above terrain whichever is higher-5km, clear of cloud and in sight of ground or water.	250kt IAS Below 3050m (10000ft)	No	Nil

Class	Type of Flight	Separation provided	Service Provided	VMC visibility and distance from cloud minima	Speed limitation	Radio Communications required	ATC Clearance
G	IFR	Nil	Flight information Service	Not applicable	250 kt IAS below 3050m (10000 ft.) AMSL	Continuous two-way	No
	VFR	Nil	Flight information service	8km at an above 3050m (10000 ft) AMSL 1500m horizontal; 300m vertical distance from cloud and below 900m AMSL or 300m above terrain whichever is higher; 5km, clear of cloud and in sight of ground or water	250kt IAS Below 3050m (10000 ft) AMSL	No	No

ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES

1. **General**

The Holding, Approach and Departure procedures in use are based on those contained in the latest edition of ICAO Doc 8168-OPS/611 (PANS-OPS).

2. **Landing Flights (Arriving Flights)**

2.1 IFR Flight entering and landing within a Terminal control Area/Control zone will be cleared to a specified holding point and instructed to contact Tower at a specified time, level or position. The terms of this clearance shall be adhered to until further instructions are received from Tower. If the clearance limit is reached before further instructions have been received, holding procedure shall be carried out at the level last authorized.

2.2 Due to the limited airspace available, it is of importance that the approaches to the pattern and the holding procedures are carried out as exactly a possible. Pilots are strongly requested to inform ATC if for any reason the approach and / or holding cannot be performed as required.

3. **Departing Flights**

3.1 IFR flights departing from controlled aerodromes will receive initial ATC clearance through Aerodrome control Tower. The clearance will normally be limited to the controlled airspace.

3.2 Detailed instructions will be issued with regard to routes and turns etc., before take-off.

3.3 IFR flights departing from outside controlled airspace shall file flight plan with the ATC Unit unless filed earlier and shall follow ATC instructions.

4 Air Traffic Services Procedures

4.1 GENERAL

4.1.1 ICAO Standards and Recommended practices contained in ANO (Rules of the Air) A.1; ANO (ATS) A.1 and Rules of the Air and Air Traffic Services Procedures contained in Doc 4444(PANS -ATM) and Regional Supplementary Procedures contained in Doc 7030 for MID Asia Region are applicable. Differences are enumerated in GEN 1.7

4.1.2 The Semi Circular system of Cruising levels is followed in Bangladesh (ENR 1.7-4 and 1.7-5).

4.1.3 Aircraft shall operate along the ATS routes as applicable in accordance with ENR-3 if not otherwise cleared.

4.1.4 The data shown in ENR 1.5 and GEN 3.2.3 charts conform to the following:

a) Bearings - degrees magnetic
b) Distance (longitudinal) - Nautical miles
c) Distance (vertical) - feet related to MSL
d) Rate of turn - Degrees per second
Turns will be made at rate 1(3 degrees per second) unless otherwise specified.

e) Rate of descent - feet per minute
500 FPM (Plus or minus 100 FPM) for standard instrument approach procedures.

4.1.5 Plan & procedure diagrams for holding and approach charts are designed on the basis of the following values.

(a) Tangible values (holding arc)

(1) Maximum TAS of 240 KTS
(2) Minimum TAS of 90 KTS
(3) Still air condition.
(4) Tolerance for ground and airborne equipment as prescribed in Annex 10.

(b) Intangible values.

(1) Pilot proficiency.
(2) Width of ambiguity at heights above beacons.
(3) Effects of Turbulence.
(4) Corrections by pilot for wind effect.

Note: Pilots are expected to know the current holding, approach & departure procedures (although ATC will provide this information on request).

4.2 Holding Procedures

4.2.1 Initial approach tracks and holding patterns associated with Hazrat Shahjalal International Airport, Dhaka; Shah Amanat International Airport, Chittagong Osmani International Airport, Sylhet and other domestic aerodromes are detailed in AD-2 on specific charts prepared for the purpose along with approach procedures.

4.2.2 Holding patterns are race track and the following procedures apply :-

(a) Follow the prescribed track inbound to the holding point.
(b) Execute a 180 deg. turn in the direction specified so as to fly outbound on a track parallel to the inbound track.
(c) Continue outbound for the time specified, and
(d) Execute a 180 deg. turn so as to realign on to the inbound track.

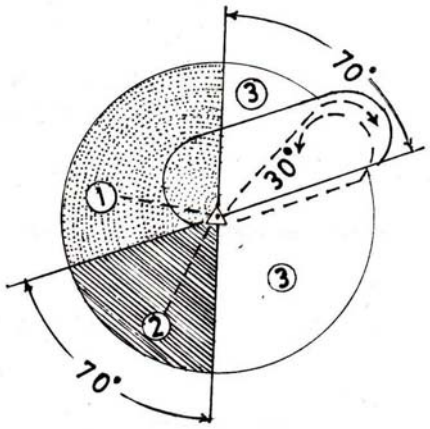
4.2.3 Commencement of timing**.** Outbound timing should start from abeam the fix or on attaining the outbound heading, whichever comes later.

4.2.4 Outbound timing**.** The outbound timing should be one minute up to and including 4250 m(14000 ft) and one and half minutes above 4250m(14000 ft). However, it may be increased provided the protected airspace is adjusted in accordance with the principles contained herein. With DME available the outbound timing may be expressed in terms of distance. Where this is done care should be taken to ensure that at least thirty seconds should be available on the inbound track after completion of the turn to inbound and that slant range is taken into account.

4.3 HOLDING PATTERN ENTRY PROCEDURES

The three sector holding pattern entry procedures for entry to the basic holding area of the entry procedures are as follows:

In Bangladesh holding over the facilities in different Airports & aerodromes are right hand pattern unless otherwise specified,



Entry Sectors
Right Hand Holding Pattern

4.3.1 Sector (1) Procedure (parallel entry)

(i) Having reached the fix, turn on an outbound heading for the appropriate period of time; then

(ii) Turn left to intercept the inbound track or the fix; then

(iii) On second arrival over the fix turn right and follow the holding pattern

4.3.2 Sector (2) Procedure (offset entry)

(i) Having reached the fix turn into a heading to make good a track making an angle of 30 deg. or less from the inbound track on the holding side; then

(ii) Continue for the appropriate period of time; then

(iii) Turn right to intercept the inbound track and follow the holding pattern.

4.3.3 Sector (3) procedure (direct entry)

Having reached the fix turns right and follow the holding pattern.

4.3.4 Time/Distance outbound

The still air time for flying the outbound entry heading should not exceed one minute if below or at 4250m (14000ft) or one and one half minutes if above 4250m (14000ft). Where DME is available, the length of the outbound leg may be specified in terms of distance instead of time.

4.3.5 Aircraft which enter holding patterns at altitude in excess of the altitude prescribed for the commencement of the instrument approach procedure may lose excess of the altitude by descending in the holding pattern as and when instructed by ATC. Descent may be continued during turns.

4.3.6 At controlled aerodromes (where approach control service is provided) when an expected approach time (EAT) is specified, the pilot may shorten his holding pattern in order to leave the holding point at that time. If the EAT is such that prolonged holding is anticipated, the Pilot-in-Command may request that the length of the holding pattern be increased or may absorb time by other approved means. Where traffic permits such request will be granted subject to such conditions as may be specified due to prevailing conditions.

4.3.7 In uncontrolled airspace the Pilot-in-Command may increase the length of the holding pattern if he informs the FIC of his intention and is able to ensure obstacle clearance to approved standards.

4.3.8 Instrument approach procedures

Unless otherwise specified all aircraft will follow the procedures shown in Instrument Approach Charts of respective aerodrome.

4.3.9 In case of communication failure, pilot shall act in accordance with the communication failure procedures in ICAO Annex-2.

ENR 1.6 RADAR SERVICES AND PROCEDURES

1. General

1.1 Radar Air Traffic Control Service will be provided in accordance with ICAO Doc 4444/PANS--ATM/(Rules of the Air and Air Traffic Service) to determine the position of aircraft with the main purpose of expediting the flow of Air Traffic as well as providing a smoother flight profile to aircraft by employing reduced horizontal separation standards.

2. Principles of Operations

2.1 The radar unit will operate during the notified hours of operation as an integral part of the parent ATS units and will provide radar control service to aircraft subject to volume of traffic, limitations of radar controllers workload, equipment capabilities, communication difficulties, radar coverage and at the discretion of ATC. The radar controller has complete discretion in determining the extent of services to be provided.

2.2 The identification of each aircraft shall be established and maintained wherever radar separation is applied between two or more aircraft.

2.3 When exercising radar control, the radar controller has complete freedom to instruct an aircraft to turn in any direction as dictated by circumstances. A pilot will know when radar services are being provided because the radar controller will use the following call sign(s): -

a) Aircraft within the area of Dhaka ACA – Dhaka Approach
b) Aircraft under Dhaka control – Dhaka Radar (on request)

Radar Range – Primary 80 NM, Secondary – 200 NM.

2.4 A pilot will be advised when radar service is discontinued or whenever radar identification is lost.

2.5 Radar control will be exercised outside controlled airspace only in respect of aircraft which are intending to enter or cross controlled airspace.

2.6 Radar assistance will be provided to aircraft flying outside controlled airspace at the request of the pilot. The extent to which this assistance can be provided will be determined by the radar controller and it should be borne in mind that the sudden appearance of unknown aircraft on the radar display; the inability of the radar controller to predict changes of flight paths of these aircraft may prevent or neutralize avoiding action. This assistance therefore, cannot always guarantee to provide positive separation from unknown aircraft.

2.7 Controlled aircraft should not be vectored into uncontrolled airspace except in case of emergency or in order to circumnavigate severe weather (in which cases the pilot should be so informed) or at the specific request of the pilot.

3. Minimum Radar Separation

3.1 Within the coverage area of primary radar, separation is 5 (five) nautical miles.

3.2 Outside the coverage area of primary radar but within the coverage of SSR, inside Dhaka FIR the separation is 10 (ten) nautical miles.

3.3 Radar separation will not be applied between aircraft holding over the same navigational aid.

4. Transfer of Control Procedures

4.1 Inbound aircraft shall contact Dhaka control on 125.7 MHz/126.7 MHz. When radar services is provided, the aircraft will be asked to change to Dhaka Approach on 121.3 MHz.

4.2 When within the area of Dhaka ACA, inbound aircraft will be hand over to Dhaka Approach on 121.3 MHz.

a) Dhaka Approach will hand over inbound aircraft to Dhaka tower on 118.3 MHz when on final approach or when field-in-sight for visual approach.

b) Departing aircraft will receive aerodrome information, taxi instruction from Dhaka Ground on 121.8MHz, ATC clearance and departure clearance will receive from Dhaka Tower on 118.3 MHz.

c) Dhaka Tower will advise departing aircraft to contact Dhaka Approach on 121.3 MHz immediately after departure. Dhaka Approach will hand over departing aircraft to Dhaka Control on 125.7 MHz/126.7 MHz as appropriate when the aircraft is leaving the TMA.

d) Dhaka Tower will issue departure clearance after coordination with Dhaka Approach.

5. Surveillance Radar Approach

5.1 When considered practicable and operationally necessary surveillance radar approach will be provided and will be terminated at 2 nautical miles from touch down.

6. SSR Operating Procedure

6.1 Departing aircraft shall operate transponders in accordance with instructions given by ATC. Pilots who have received specific instructions from ATC concerning the setting of the transponder shall maintain that code setting except in circumstances detailed in paragraphs below. Aircraft bound for Hazrat Shahjalal International Airport or over flying Dhaka FIR shall transponder on the SSR code last assigned to them by the adjacent FIR, or if no such code has been previously assigned advise the ATC unit concerned who will provide the required code.

6.2 IMPLEMENTATION ON SSR CODE ASSIGNMENT SYSTEM

6.2.1 The ICAO SSR code Assignment system for MID/Asia Region and the Asian part of the USSR is implemented. The general procedures relating to the system are contained in ICAO DOC – 7030/4.

6.3 PROCEDURES APPLICABLE IN DHAKA FIR

6.3.1 All SSR transponder equipped aircraft departing from aerodromes within Dhaka FIR operating on IFR flight plan for Destination outside Bangladesh are to be assigned discrete mode. A codes from the block 4700 to 4777. The codes shall be assigned subsequently by inserting in the flight plan by the ATC unit accepting the flight plan to each aircraft and to be included in the FPL, DEP, DLA, EST and TNR messages pertaining to the aircraft.

6.3.2 The code shall cease to be valid when the aircraft lands at the next point of landing or in case of diversion to an aerodrome.

6.3.3 In the event of such a flight diverting to an aerodrome within the Dhaka FIR the assigned code to be retained until the aircraft has landed at its new destination. When it would subsequently depart for a destination outside Dhaka FIR , a new discrete code to be assigned by ATC.

6.3.4 All SSR transponder equipped aircraft departing from any aerodrome within Dhaka FIR operating or IFR flight plan for Destination inside Bangladesh are to assign discrete mode. A codes from the block 4100 to 4177. The codes shall be assigned subsequently by inserting in the flight plan by the ATC unit accepting the flight plan to each aircraft and to be included in the FPL, DEP, DLA messages pertaining to the aircraft. The code shall cease to be valid when the aircraft lands at destination or in case of diversion assigned code to be retained until the aircraft landed at its new destination (whether within Dhaka FIR or not). Subsequently when the aircraft depart for its destination. a new discrete code to be assigned by Dhaka ACC in case the new departure aerodrome is within Dhaka FIR. The code to be obtained by concerned ATC unit on Inter Tower RTF or telephone. In case no communication with Dhaka ACC the aircraft may be allowed to depart with instruction to obtain code on first contact with Dhaka Radar or Dhaka approach as appropriate.

7. Emergency Procedure

7.1 If the Pilot of an aircraft encountering a state of emergency has previously been directed by ATC to operate the transponder on a specific code, this code setting shall be maintained until otherwise advised. In all other circumstances; the transponder shall be set to mode "A" code "7700".

8. Failure of Equipment

8.1 RADAR FAILURE : - In the event of radar failure or loss of radar identification, instructions will be issued to restore non-radar separation and the pilot will be instructed to communicate with the parent ATS unit when applicable.

8.2 RADAR COMMUNICATION FAILURE

a) The radar controller will establish whether the aircraft radio receiver is working by instructing the pilot to carry out a turn or turns. If the turns are observed, the radar controller will continue to provide radar services to the aircraft.

b) Where SSR equipment is on board the aircraft the pilot shall set the transponder to mode "A" code "7600". The radar controller will instruct the Pilot to operate the special position indicator (SPI) or to change mode. Where it is determined that the aircraft receiver is functioning the radar controller will continue to provide radar services to that aircraft.

c) If the aircraft radio is completely unserviceable, the Pilot should carry out the procedures for radio failure in accordance with ICAO Annex-2. If radar identification has already been established, the radar controller will vector other identified aircraft clear of its track until such time as the aircraft leaves radar coverage.

8.3 In the event of complete failure of ground radio transmitting equipment: -

a) The radar controller shall take the necessary action to provide radar services by means of other available communication.

b) If not possible the radar controller shall request the non-radar controller to take over control of the traffic affected. The aircraft shall contact Area control/Approach control/Tower under whose area of jurisdiction it is flying.

9. Unlawful Interference

9.1 The Pilot of an aircraft in flight which is subjected to unlawful interference shall endeavor to set his transponder to mode “A” code “7500”.

10. Withdrawal of Radar Services

10.1 Factors such as limitations of the radar, and volume of traffic may preclude the provision of radar services, in such situation Dhaka Control and Dhaka tower will advise in advance the arriving or over flying and departing aircraft respectively the non-availability of radar services.

11. ADVERSE WEATHER OPERATION

11.1 Due to inherent weather suppression characteristics, radar system may not be used at all time for weather avoidance purpose. If the heading instructions given are unacceptable to the pilot due to weather ahead, he shall advise ATC immediately and suggest suitable headings to steer until clear of weather.

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ENR 1.7 ALTIMETER SETTING PROCEDURES

1 Introduction

The following procedures for the Altimeter Setting are in force in Bangladesh:

1.1 Transition altitudes and transition level for all aerodromes are given on page Para 2.1.1

1.2 QNH reports and temperature information for use in determining adequate terrain clearance is available on request from air traffic services unit. QNH values are given in hectopascal rounded down to the whole hectopascal.

1.3. QNH value in inches up to second place of decimal may be made available on request.

1.4 QFE value shall be available on request in tenths of hectopascal and hundredth's of inches.

2. Basic procedure

2.1 General

2.1.1 Transition altitude and transition level in all aerodromes in Bangladesh are 4,000 ft (1312.3 meters) and Flight level 60 respectively. No transition Altitude is less than 3,000 ft (900 meters) above an aerodrome.

2.1.2 Vertical displacement of aircraft when at or below the transition altitude is expressed in terms of altitude whereas such displacement at or above the transition level is expressed in terms of flight level. While passing through the transition layer, vertical displacement is expressed in terms of altitude when descending and in terms of flight level when ascending.

2.1.3 Flight level zero is located at the atmospheric pressure level 1013.2 hPa (29.92 inch) consecutive flight levels are separated by a pressure interval corresponding to 500 feet (152.4 meters) in the Standard Atmosphere.

Note: - Examples of the relationship between flight levels and altimeter indications are given in the following table the metric equivalents being approximate:

Flight Level	**Altimeter Indication**	
Number	Feet	Meters
5	500	150
10	1000	300
15	1500	450
20	2000	600
25	2500	750
30	3000	900
35	3500	1050
40	4000	1200
45	4500	1350
50	5000	1500
100	10000	3050
150	15000	4550
200	20000	6100
500	50000	15250

2.2 Take – off and climb

2.2.1 A QNH altimeter setting is made available to aircraft in taxi-clearance prior to take off.

2.2.2 Vertical displacement of aircraft during climb is expressed in terms of altitudes until reaching the transition altitude above which vertical displacement is expressed in terms of flight level.

2.3 Vertical Separation-En-route

2.3.1 Aircraft shall be flown En-route at flight levels at all times.

2.3.2 It is the Pilot’s responsibility to select a flight level which will give adequate terrain clearance using forecast pressure information.

2.3.3 Aircraft approaching an airfield below the notified transition level shall set the airfield’s QNH value.

2.3.4 Cruising levels shall be flown at flight levels corresponding to the magnetic tracks shown in the table of paragraph 4 of page ENR 1.7-4 and 1.7-5.

2.4 Approach and Landing

2.4.1 A QNH altimeter setting is made available in approach clearances and landing instructions.

2.4.2 A QFE altimeter setting shall be made available on request. ←

2.4.3 Vertical displacement of aircraft during approach is controlled by reference to flight levels until reaching the transition level, below which vertical displacement is controlled by reference to altitude.

2.5 Missed Approach

The relevant portions of 2.2 & 2.4 shall be applied to the case of a missed approach.

3. Procedures Applicable to Operators Including Pilots.

3.1 Flight Planning.

3.1.1 The level(s) at which a flight is to be conducted shall be specified in flight plan ;

a) In terms of flight level(s) (due consideration may be given to minimum safe altitude for the route sector) if the flight is to be conducted at or above the transition level, and

b) In terms of altitude if the flight is to be conducted in the vicinity of an aerodrome and at or below the transition altitude.

Note: Flight levels are not specified in terms of feet or meters as is the case with altitudes, but only specified by number.

4. TABLE OF CRUISING LEVELS

The cruising levels to be observed when so required are as follows:

a) in areas where, on the basis of regional air navigation agreements and in accordance with conditions specified therein, a vertical separation minimum (VSM) of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive:*

TABLE OF SEMI-CIRCULAR CRUISING LEVEL SYSTEM

MAGNETIC TRACK											
From 000° to 179°						From 180° to 359°					
IFR FLIGHT			VFR FLIGHT			IFR FLIGHT			VFR FLIGHT		
FL	ALTITUDE		FL	ALTITUDE		FL	ALTITUDE		FL	ALTITUDE	
	M	FT		M	FT		M	FT		M	FT
10	300	1000	....	.....	.....	20	600	2000	.....	.....	.....
30	900	3000	35	1050	3500	40	1200	4000	45	1350	4500
50	1500	5000	55	1700	5500	60	1850	6000	65	2000	6500
70	2150	7000	75	2300	7500	80	2450	8000	85	2600	8500
90	2750	9000	95	2900	9500	100	3050	10000	105	3200	10500
110	3350	11000	115	3500	11500	120	3650	12000	125	3800	12500
130	3950	13000	135	4100	13500	140	4250	14000	145	4400	14500
150	4550	15000	etc	etc	etc	160	4900	16000	etc	etc	etc
170	5200	17000				180	5500	18000			
190	5800	19000				200	6100	20000			
210	6400	21000				220	6700	22000			
230	7000	23000				240	7300	24000			
250	7600	25000				260	7900	26000			
270	8250	27000				280	8500	28000			
290	8850	29000				300	9150	30000			
310	9450	31000				320	9750	32000			
330	10050	33000				340	10350	34000			
350	10650	35000				360	10950	36000			
370	11300	37000				380	11600	38000			
390	11900	39000				400	12200	40000			
410	12500	41000				430	13100	43000			
450	13700	45000				470	14350	47000			
490	14950	49000				510	15550	51000			
etc	etc	etc				etc	etc	etc			

b) In other areas:

MAGNETIC TRACK											
From 000° to 179°						From 180° to 359°					
IFR FLIGHT			VFR FLIGHT			IFR FLIGHT			VFR FLIGHT		
FL	ALTITUDE		FL	ALTITUDE		FL	ALTITUDE		FL	ALTITUDE	
	M	FT		M	FT		M	FT		M	FT
10	300	1 000	–	–	–	20	600	2 000	–	–	–
30	900	3 000	35	1 050	3 500	40	1 200	4 000	45	1 350	4 500
50	1 500	5 000	55	1 700	5 500	60	1 850	6 000	65	2 000	6 500
70	2 150	7 000	75	2 300	7 500	80	2 450	8 000	85	2 600	8 500
90	2 750	9 000	95	2 900	9 500	100	3 050	10 000	105	3 200	10 500
110	3 350	11000	115	3 500	11500	120	3 650	12 000	125	3 800	12 500
130	3 950	13 000	135	4 100	13500	140	4 250	14 000	145	4 400	14 500
150	4 550	15 000				160	4 900	16 000	.		16 500
170	5 200	17 000				180	5 500	18 000			18 500
190	5 800	19 000				200	6 100	20 000			20 500
210	6 400	21 000				220	6 700	22 000			22 500
230	7 000	23 000				240	7 300	24 000			24 500
250	7 600	25 000				260	7 900	26 000			26 500
270	8 250	27 000				280	8 550	28 000			28 500
290	8 850	29 000				310	9 450	31 000			32 000
330	10050	33 000				350	10 650	35 000			36 000
370	11 300	37 000				390	11 900	39 000			40 000
410	12 500	41 000				430	13 100	43 000			44 000
450	13 700	45 000				470	14 350	47 000			48 000
490	14 950	49 000				510	15 550	51 000			52 000
etc	etc.	etc.				etc.	etc.	etc.			etc.

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ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES

RVSM Policy and Procedures in the Dhaka FIR

1.0 Introduction

1.1 Reduced Vertical Separation Minimum (RVSM) has been introduced in Dhaka FIR as recommended by The International Civil Aviation Organization (ICAO) Third Asia/Pacific Regional Air Navigation Meeting for the benefits of Aircraft operators and Air Traffic Service (ATS) providers. ICAO Document 9574, Manual on Implementation of a 300 m [1000 ft] Vertical Separation Minimum between FL 290 and FL 410 inclusive contains an explanation of RVSM.

1.2 Benefits to be gained from RVSM include;

(a) adoption of an ICAO endorsed navigation requirement.
(b) improved utilization of airspace for ATC conflict resolution.
(c) fuel savings of 1% for flight closer to optimum cruise altitude, and
(d) reduction in ground delays.

1.3 CONTENT. The ICAO Asia/Pacific RVSM Task Force has harmonized the basic content of this document. The following policies are addressed in the paragraphs of this document.

a) Identification of RVSM Airspace
b) Airworthiness and Operational Approval and Monitoring
c) ACASII and Transponder Equipage
d) In-flight Procedures within RVSM Airspace
e) Special Procedures for in-flight Contingencies
f) In-flight Contingency Procedures for Subsonic Aircraft Requiring Rapid Descent, Turn-back or Diversion in Oceanic Airspace.
g) Weather Deviation Procedures
h) Special Procedures to Mitigate Wake Turbulence Encounters and Distracting Aircraft System Alerts in the Oceanic Airspace.
i) Transition Areas
j) Flight Planning Requirements
k) Procedures for Operation of Non-RVSM Compliant Aircraft in RVSM Airspace.
l) Delivery Flights for Aircraft that are RVSM Compliant on delivery
m) Procedures for Suspension of RVSM
n) Guidance for pilot and Controller for Actions in Event of Aircraft System malfunction of Turbulence Greater than Moderate
o) Procedures for Air-Ground Communication Failure

2.0 **Identification of RVSM Airspace**

2.1 **DHAKA FLIGHT INFORMATION REGION (DHAKA FIR).** Effective 27 November 2003 at 0200 UTC, RVSM is prescribed within the DHAKA FIR within controlled airspace between FL 290 and FL 410 (inclusive) applying Single Alternate Flight Level Orientation Scheme (FLOS) RVSM levels will be progressively assigned on prescribed routes such that by 0230 UTC, the transition will be complete.

2.2 On Special circumstances, aircraft that are not RVSM compliant will be cleared to operate in the Dhaka FIR between FL 290 and FL 410 (inclusive). A vertical separation of 2,000 ft will be applied to such aircraft.

2.3 Flight Level Arrangement within the Dhaka FIR will be as follows:

SN	ATS Routes	East Bound Levels	Wes Bound Levels	Remarks
01	A201	FL290,310,330,350,370, 390,410	FL300,320,340, 360,380,400	Nil
02	B465/A599	FL290,310,330,350,370, 390,410	FL300,320,340, 360,380,400	Nil
03	L507	FL290,310,330,350,370, 390,410	FL300,320,340, 360,380,400	Nil
04	G463	FL290,310,330,350,370, 390,410	FL300,320,340, 360,380,400	Nil
05	R472/R598	FL290,310,330,350,370, 390,410	FL300,320,340, 360,380,400	Nil

3.0 **Airworthiness and Operational Approval and Monitoring**

3.1 **APPROVAL PROCESS**. Operators must obtain operational approval from the state of registry or state of operator, as appropriate, to conduct RVSM operation. On behalf of the Pacific Air Traffic Service Providers, the FAA is maintaining a website containing documents and policy for RVSM approval Address is www.ffaa.gov/ats/ato/rvsm1.htm

Bangladesh registered aircraft are requited to follow Para 17 of the **Air Navigation Order E.6** issued by Civil Aviation Authority of Bangladesh on 28th Feb 2002, for approval of RVSM E-mail address is dfsrcaab@bracnet.net

3.2 IF TCAS is installed in RVSM compliant aircraft, the equipment should be upgraded to ACAS II or TCAS II version 7, or a later approved version, for optimum performance in RVSM airspace.

3.3 **AIRCRAFT MONITORING.** Operators are required to participate in the RVSM aircraft monitoring program. This is an essential element of the RVSM implementation program in that it confirms that the aircraft altitude –keeping performance standard is being met. The Monitoring Agency for Asia Region (MAAR) will process the result of monitoring for further information on RVSM monitoring; the MAAR website can be accessed by:

E-mail : maar@aerothai.co.th
Fax: 662-287-8155
Address: Monitoring Agency for Asia Region (MAAR)
ATS Operation Bureau, AEROTHAI
102 Ngamduplee Tungmahamck, Sathorn
Bangkok 10120, Thailand.

4.0 In-flight Procedures within RVSM Airspace

4.1 Before entering RVSM airspace, the pilot should review the status of required equipment. The following equipment should be operating normally.

a) two primary altimetry systems;
b) one automatic altitude-keeping device; and
c) one altitude-alerting device
d) One altitude operating transponder (if required for operation in that specific RVSM airspace)

4.2 The pilot must notify ATC whenever the aircraft

(a) is no longer RVSM compliant due to equipment failure; or
(b) experiences loss of redundancy of altimetry systems; or
(c) encounters turbulence that affects the capability to maintain flight level.

4.3 **TRANSITION BETWEEN FL's.** During cleared transition between levels, the aircraft should not overshoot or undershoot the assigned FL by more than 150 ft (45 m)

4.4 PILOT's LEVEL CALL. Except in an ADS or radar environment, pilots shall report reaching any altitude assigned within RVSM airspace

5.0 **Special Procedures for In-flight contingencies in the Dhaka FIR**

General Procedures

5.1 Paragraphs 5.0, 6.0, 7.0 and 8.0 below contain procedure for in-flight contingencies that have been updated for RVSM operations.

5.2 The following general procedures apply to both subsonic and supersonic aircraft and are intended as guidance only. Although all possible contingencies cannot be covered they provide for cases of inability to maintain assigned level due to:

(a) weather;
(b) aircraft performance;
(c) pressurization failure; and
(d) problems associated with high-level supersonic flight

5.3 The procedures are applicable primarily when rapid descent and/or turn-back or diversion to an alternate airport is required. The pilot's judgment shall determine the sequence of actions to be taken, taking into account specific circumstances.

5.4 If an aircraft is unable to continue flight in accordance with its air traffic control clearance, a revised clearance shall, whenever possible, be obtained prior to initiating any action using a distress or urgency signal as appropriate.

5.5 If prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time and, until a revised clearance is received, the pilot shall.

(a) if possible, deviate away from an organized track or route system,

(b) establish communications with and alert nearby aircraft by broadcasting, at suitable intervals; flight identification, flight level, aircraft position, (including the ATS route designator or the track code) and intentions on the frequency in use as well as on frequency 121.5 MHz (or as a back-up, the VHF inter-pilot air-to-air frequency 123.45 MHz);

(c) watch for conflicting traffic both visually and by reference to ACAS; and

(d) turn on all aircraft exterior lights (commensurate with appropriate operating limitations)

6.0 In-flight Contingency Procedures for Subsonic Aircraft Requiring Rapid Descent, Turn-Back or Diversion in the Dhaka FIR.

Initial action

6.1 If unable to comply with the provisions of paragraph 6.3 to obtain a revised ATC clearance, the aircraft should leave its assigned route or track by turning 90 degrees right or left whenever this is possible. The direction of the turn should be determined by the position of the aircraft relative to any organized route or track system (for example, whether the aircraft is outside, at the edge of, or within the system). Other factors to consider are terrain clearance and the levels allocated to adjacent routes or tracks.

Subsequent action

6.2 AIRCRAFT ABLE TO MAINTAIN LEVEL; An aircraft able to maintain its assigned level should acquire and maintain in either direction a track laterally separated by 25 NM from its assigned route or track once established on the offset track, climb or descend 500ft (150m).

6.3 AIRCRAFT UNABLE TO MAINTAIN LEVEL. An aircraft NOT able to maintain its assigned level should, whenever possible, minimize its rate of descend while turning to acquire and maintain in either direction a track laterally separated by 25 NM from its assigned route or track. For subsequent level flight, a level should be selected which differs by 500 ft (150m) from those normally used.

6.4 DEVERSION ACROSS THE FLOW OF ADJACENT TRAFFIC. Before commencing a diversion across the flow of adjacent traffic, the aircraft should, while maintaining the 25 NM offset, expedite climb above or descent below levels where the majority of aircraft operate (e.g., to a level above FL 400 or below FL290) and then maintain a level which differs by 500 ft (150 m) from those normally used. However, if the pilot is unable or unwilling to carry out a major climb or descent, the aircraft should be flown at a level 500 ft above or below levels normally used until a new ATC clearance is obtained.

6.5 ETOPS MASPS AIRCRAFT. If these contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or a failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved and requesting expeditious handling.

5.0 **Weather Deviation Procedures in the Dhaka FIR.**

General procedures

7.1 The following procedures are intended to provide guidance. All possible circumstances cannot be covered. The pilot's judgment shall ultimately determine the sequence of actions taken and ATC shall render all possible assistance.

7.2 If the aircraft is required to deviate from track to avoid weather and prior clearance cannot be obtained, an air traffic control clearance shall be obtained at the earliest possible time. In the meantime, the aircraft shall follow the procedures derailed in paragraph 7.9 below.

7.3 The pilot shall advise ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to the centerline of its cleared route.

7.4 When the pilot initiates communications with ATC, rapid response may be obtained by stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response.

7.5 The pilot still retains the option of initiating the communications using the urgency call "PAN PAN" to alert all listening parties to a special handling condition, which may receive ATC priority for issuance of clearance or assistance.

7.6 When controller-pilot communications are established, the pilot shall notify ATC and request clearance to deviate from track, advising, when possible, the extent of the deviation expected. ATC will take one of the following actions:

(a) if there is no conflicting traffic in the horizontal dimension, ATC will issue clearance to deviate from track; or

(b) if there is conflicting traffic in the horizontal dimension, ATC will separate aircraft by establishing vertical separation or, if unable to establish vertical separation, ATC shall;

i) advise the pilot of inability to issue clearance for requested deviation,

ii) advise pilot of conflicting traffic,

iii) request pilot's intentions.

SAMPLE PHRASEOLOGY:

"Unable (requested deviation), traffic is (call-sign, position, altitude, direction), advise intention."

7.7 The pilot will take the following actions:

(a) Advise ATC of intentions by the most expeditious means available.

(b) Comply with air traffic control clearance issued or....

(c) Execute the procedures detailed in 7.9 below. (ATC will issue essential traffic information to all affected aircraft).

(d) If necessary, establish voice communications with ATC to expedite dialogue on the situation.

Actions to be taken if a revised air traffic control clearance cannot be obtained

7.8 The pilot shall take the actions listed below under the provision that the pilot may deviate from rules of the air (e.g. the requirement to operate on route or track center line unless otherwise directed by ATC), when it is absolutely necessary in the interests of safety to do so.

7.9 If a revised air traffic control clearance cannot be obtained and deviation from track is required to avoid weather, the pilot shall take the following actions:

(a) if possible, deviate away from an organized track or route system;

(b) establish communication with and alert nearby aircraft by broadcasting, at suitable intervals: flight identification, flight level, aircraft position (including the ATS route designator or the track code) and intentions (including the magnitude of the deviation expected)on the frequency in use, as well as on frequency 121.5 MHz (or, as a back-up, the VHF inter-pilot air-to-air frequency 123.45 MHz);

(c) watch for conflicting traffic both visually and by reference to ACAS;

(d) turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

(e) for deviation of up to 10 NM, aircraft should remain at the level assigned by ATC;

(f) for deviations of greater than 10 NM, when the aircraft is approximately 10 NM from track, initiate a level change based on the following criteria:

Route center line track	Deviations>10 NM	Level change
EAST 000-179° magnetic	LEFT	DESCEND 300 ft
	RIGHT	CLIMB 300 ft
WEST 180-359° magnetic	LEFT	CLIMB 300 ft
	RIGHT	DESCEND 300 ft

Note: 7.9 (b) and (c) above calls for the pilot to: broadcast aircraft position and pilot's intentions, identify conflicting traffic and communicate air-to-air with nearby aircraft. If the pilot determines that there is another aircraft at or near the same FL with which his aircraft might conflict, then the pilot is expected to adjust the path of the aircraft, as necessary, to avoid conflict.

(g) if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

(h) when returning to track, be at its assigned flight level, when the aircraft is within approximately 10 NM of center line.

6.0 **Special Procedures to Mitigate Wake Turbulence Encounters and Distracting Aircraft System Alerts in the Oceanic Airspace of the Dhaka FIR.**

8.1 The following special procedures are applicable to mitigate wake turbulence or distracting aircraft system alert (e.g. ACAS, Ground Proximity Warning System (WGPS) in airspace where RVSM is applied:

Note: in the contingency circumstances below, ATC will not issue clearances for lateral offsets and will not normally respond to actions taken by the pilots.

8.2 An aircraft that encounters wake vortex turbulence or experiences distracting aircraft system alerts shall notify ATC and request a flight level, track or speed change to avoid the condition. However, in situations where such a change is not possible or practicable, the pilot may initiate the following temporary lateral offset procedure with the intention of returning to centerline as soon as practicable:

(a) the pilot should establish contact with other aircraft. if possible, on the appropriate VHF inter-pilot air to air frequency, 123.45 MHz; and

(b) one (or both) aircraft may initiate lateral offset(s) up to 2 NM either Left or Right of track, provided that;

i) as soon as practicable to do so, the off setting aircraft notify ATC that temporary lateral offset action has been taken and specify the reason for doing so (ATC will not normally respond); and

ii) the offsetting aircraft notify ATC when re-established on assigned route(s) or track(s) (ATC will not normally respond).

9. **Flight Planning Requirement.**

9.1 Unless special arrangement is made as detailed below, RVSM approval is required for operators and aircraft to operate within designated RVSM airspace. The operator must determine that the appropriate State authority has granted them RVSM operational approval and they will meet the RVSM requirements for the filed route of flight and any planned alternate routes. The letter **"W"** shall be inserted in item 10 (Equipment) of the ICAO standard flight plan to indicate that both the aircraft and operator are RVSM approved.

9.2 Procedures for Operation of Non-RVSM Compliant Civil Aircraft in RVSM airspace.

9.2.1 Non-RVSM compliant civil aircraft shall not file flight plan between FL290 and FL410 inclusive within RVSM airspace, except non-RVSM civil aircraft unable to fly to an appropriate destination at or below FL280 and unable to fly at or above FL410 may, after special coordination as detailed in 9.2.2 below, flight plan at RVSM flight levels in the RVSM stratum provided the aircraft:

(a) is being initially delivered to the state of registry or operator; or

(b) was formerly RVSM approved but has experienced an equipment failure and is being flown

(c) to a maintenance facility for repair in order to meet RVSM requirements and / or obtain approval; or

(d) is transporting a spare engine mounted under the wing; or

(e) is being utilized for mercy or humanitarian purposes; or

(f) is a State aircraft.

9.2.2 Aircraft operators requesting approval as above shall:

(a) if departing within Dhaka FIR, obtain approval from Dhaka Area Control Center normally not more than 12 hrs and not less than 4 hrs prior to the intended departure time. Dhaka Area Control Center will provide notification of approval via Fax or E-mail or AFTN; or

(b) if transiting Dhaka FIR notify Dhaka Area Control Center after approval is received from the first affected center and prior to departure. (Note that filing of flight plan is not appropriate notification), and

(c) include the remarks " APVD non RVSM'' in field 18 of the ICAO flight plan.

9.2.3 Contact details for approval request or notification are as follows:

Dhaka Area Control Center

Telephone : +880-2-8901463
AFTN : VGHSZQZX
E-mail : acc_dhaka@caab.gov.bd
Fax : +880-2- 8901924

9.2.4 Non RVSM aircraft operation in the RVSM stratum will be separated from all other aircraft by a minimum 2,000 ft vertical separation.

9.2.5 This approval processes is intended exclusively for the purposes indicated above, and not as a means to circumvent the normal RVSM approval process.

10. Procedures for Operation of Non-RVSM Compliant State Aircraft in RVSM airspace.

10.1 Operation of State aircraft (military, customs or police service) that are not RVSM compliant may flight plan within Dhaka FIR RVSM airspace in accordance with the requirement of paragraph 9.2.2(b), 9.2.2(c), 9.2.3 and 9.2.4. Also, Bangladesh requires operators of State aircraft that are not RVSM approved intending to operate in Dhaka FIR to notify Dhaka Area Control Center not more than 72 hrs and not less than 4 hrs prior to the intended departure time. If transiting Dhaka FIR, notify Dhaka Area Control Center of intentions prior to departure. (Note that filing of flight plan is not appropriate notification. Notification constitutes approval).

11. Separation applied to non-RVSM compliant aircraft and Provision for continuous Climb/ Descent of non-compliant aircraft through RVSM airspace.

11.1 VERTICAL SEPARATION APPLIED. It should be noted that RVSM approved aircraft will be given priority for level allocation over non-RVSM approved aircraft. The vertical separation minimum between non-RVSM aircraft operating in the RVSM stratum and all other aircraft is 2000 ft.

11.2 CLIMB AND DESCENT THROUGH RVSM AIRSPACE. Non- RVSM compliant aircraft may be cleared to climb to and operate above FL410 or descend to and operate below FL290 provided that they

(a) Do not climb or descent at less than the normal rate for the aircraft and
(b) Do not level off at an intermediate level while passing through the RVSM stratum.

12.0 **Delivery Flights for Aircraft that are RVSM Compliant on Delivery**

12.1 An aircraft that is RVSM compliant on delivery may operate in the RVSM airspace of Dhaka FIR provided that the crew is trained on RVSM policies and procedures applicable in the airspace and the responsible State issues the operator a letter of authorization approving the operation. The State notification to the MAAR should be in the form of a letter, e-mail or fax documenting the one-time flight. The planned date of flight, flight identification and registration number and aircraft type/series should be included. **The details of such flights shall also be forwarded to the Dhaka Area Control Center at least 3 days in advance.**

Address is:

Dhaka Area Control Center

Telephone : +880-2-8901463
AFTN : VGHSZQZX
E-mail : acc_dhaka@caab.gov.bd
Fax : +880-2-8901924

13. **Procedures for Suspension of RVSM**

13.1 Air Traffic Services will consider suspending RVSM procedures within affected areas of the Dhaka FIR when there are pilot reports of greater than moderate turbulence. Within areas where RVSM procedures are suspended, the vertical separation minimum between all aircraft will be 2,000 ft.

14. **Guidance for Pilots and Controllers for Actions in the Event of Aircraft System Malfunction or Turbulence Greater than Moderate.**

14.1 See Attachment A for Guidance in these circumstances.

15. Procedures for Air-Ground Communication Failure.

15.1 An aircraft operated as a controlled flight shall maintain continuous air–ground voice communication watch on the appropriate communication channel of, and establish two-way communication as necessary with the appropriate Air Traffic Control unit. For aircraft forming part of aerodrome traffic at a controlled aerodrome the conditions given in Para 15.2 shall apply.

Note 1: **SELCAL** or similar automatic signaling devices satisfy the requirement to maintain an air-ground voice communication watch.

Note 2: The requirement for an aircraft to maintain air-ground voice communication watch remains in effect after **CPDLC** has been established.

15.2 **Communication failure.**

If a communication failure precludes compliance with para 15.1, the aircraft shall comply with the communication failure procedures of Annex 10, Volume II, and with such of the following procedures as are appropriate. In addition, the aircraft, when forming part of the aerodrome traffic at a controlled aerodrome, shall keep a watch for such instructions as may be issued by visual signals.

15.2.1 **Action by pilot-in-command.**

15.2.1.1 If in VMC, the aircraft shall:

a) continue to fly in VMC;
b) land at the nearest suitable aerodrome; and
c) report its arrival by the most expeditious means to the appropriate Air Traffic Control unit.

15.2.1.2 If in IMC or when conditions are such that it does not appear feasible to complete the flight in accordance with Para 15.2.1.1 (see Note 1), the aircraft shall:

a) maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 20 minutes following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan;

b) proceed according to the current flight plan route to the appropriate designated navigation aid serving the destination aerodrome and, when required to ensure compliance with c) below, hold over this aid until commencement of descent;

c) commence descend from the navigation aid specified in (b) at, or as close as possible to, the EAT last received and acknowledged, at, or as close as possible to, the EAT resulting from the current flight plan;

d) complete a normal instrument approach procedure as specified for the designated navigation aid; and

e) land, if possible, within thirty minutes after the ETA specified in (c) or the last acknowledged EAT, whichever is later.

Note1: As evidenced by the meteorological conditions prescribed therein, Para 15.2.1.1 relates to all controlled flights, whereas Para 15.2.1.2 relates to IFR flights only.

Note 2: The provision of air traffic control service to other flights operating in the airspace concerned will be based on the premise that an aircraft experiencing communication failure will comply with the rules in Para 15.2.1.2.

15.2.2 **Action by Air Traffic Control Unit**

Note1. See also PANS- ATM Doc 4444 Chapter 6, Para 6.3.2.4 concerning departure clearances containing no geographical or time limit for an initial level and procedures to be applied in relation to an aircraft experiencing air-ground communication failure under such circumstances.

15.2.2.1 Action by Air Traffic Control units when unable to maintain two-way communication with an aircraft operating in a control area or control zone shall be as outlined in the following paragraphs.

15.2.2.2 As soon as it is known that two-way communication has failed, action shall be taken to ascertain whether the aircraft is able to receive transmissions from the Air Traffic Control unit by requesting it to execute a specified maneuver which can be observed by Radar or to transmit, if possible, a specified signal in order to indicate acknowledgement.

15.2.2.3 In the continental Airspace of Dhaka FIR the applicable vertical separation minimum between an aircraft experiencing a communication failure in flight and any other aircraft shall be 600 m (2000ft), unless an appropriate horizontal separation minimum exists. If the aircraft fails to indicate that it is able to receive and acknowledge transmissions, the separation shall be maintained between the aircraft having the communication failure and other aircraft, based on the assumption that the aircraft will:

a) if in VMC: comply with the provisions in para 15.2.1.1

b) if in IMC or when conditions are such that it dose not appear feasible to complete the flight in accordance with (a): comply with the provisions in para 15.2.1.2 above.

Note 1: Since ATC is often unable to determine the extent of any equipment failure for an aircraft experiencing a communication failure in flight, ATC shall provide a vertical separation as mentioned in para 15.2.2.3 above. However, no specific procedures are prescribed for the flights experiencing a communication failure in the oceanic airspace of Dhaka FIR where the communication coverage may not be adequate. In such cases, subject to traffic conditions, and with the subsequent FIR/ACC, the ATC may provide additional separation to such flights experiencing a communication failure in the oceanic airspace.

Note 2: Provisions related to minimum level are contained in Annex 2, para 5.1.1

Note 3: As evidenced by the meteorological conditions prescribed therein, para 15.2.2.2 (a) relates to all controlled flights, whereas para 15.2.2.3 (b) relates to IFR flights only.

15.2.2.4 Action taken to ensure suitable separation based on the assumption stated in para 15.2.2.3 shall cease when:

a) it is determined that the aircraft is following a procedure differing from that in para 15.2.2.3; or

b) through the use of electronic or other aids, Air Traffic Control units determine that action differing from that required by para 15.2.2.3 may be taken without impairing safety; or

c) positive information is received that the aircraft has landed.

15.2.2.5 As soon as it is known that two-way communication has failed, appropriate information describing the action taken by the Air Traffic Control unit, or instruction justified by any emergency situation, shall be transmitted blind for the attention of the aircraft concerned, on the frequencies available on which the aircraft is believed to be listening, including the voice frequencies of available radio navigation or approach aides. Information shall also be given concerning:

a) whether conditions favorable to a cloud-breaking procedure in where congested traffic may be avoided; and

b) weather conditions at suitable aerodromes.

15.2.2.6 Pertinent information shall be given to other aircraft in the vicinity of the presumed position of the aircraft experiencing communication failure.

15.2.2.7 As soon as it is known that an aircraft, which is operating in its area of responsibility, is experiencing an apparent radio communication failure, an ATS unit shall forward information concerning the radio communication failure to all ATS units concerned along the route of flight. The ACC in whose area the destination aerodrome is located shall take steps to obtain information on the Alternate Aerodrome(s) and other relevant information specified in the filed flight plan, if such information is not available.

15.2.2.8 If circumstances indicate that a controlled flight experiencing a communication failure might proceed to (one of) the alternate aerodrome(s) specified in the filed flight plan, the ATC unit(s) serving the Alternate Aerodrome(s) and any other Air Traffic Control units that might be affected by a possible diversion shall be informed of the circumstances of the failure and requested to attempt to establish communication with the aircraft at a time when the aircraft could possible be within communication range. This shall apply particularly when, by agreement with the operator or a designated representative, a clearance has been transmitted blind to the aircraft concerned to proceed to an alternate aerodrome, or when weather conditions at the at the aerodrome of intended landing are such that a diversion to an alternate is considered likely.

15.2.2.9 When an Air Traffic Control unit receives information that an aircraft, after experiencing a communication failure has re-established communication or has landed, that unit shall inform the Air Traffic Service unit in whose area the aircraft was operating at the time the failure occurred, and other Air Traffic Service units concerned along the route of flight, giving necessary information for the continuation of control if the aircraft is continuing in flight.

15.2.2.10 If the aircraft has reported within 30 minutes after:

a) the Estimated Time of Arrival furnished by the pilot;
b) the Estimated Time Arrival calculated by the ACC; or
c) the last acknowledged Expected Approach Time,
d) whichever is latest, pertinent information concerning the aircraft shall be forwarded to aircraft operators, or their designated representatives, and pilots-in-command of any aircraft concerned and normal control resumed if they so desire. It is the responsibility of the aircraft operators, of their designated representatives, and pilots-in-command of aircraft to determine whether they will resume formal operations or take other action.

15.2.2.11 The Radar Procedures

15.2.2.11.1 Aircraft radio transmitter failure

15.2.2.11.1.1 If two-way communication is lost with an aircraft, the Radar controller should determine whether or not the aircraft's receiver is functioning by instructing the aircraft on the frequency so far used to acknowledge by making a specified manoeuvre and by observing the aircraft's track, or by instructing the aircraft to operate IDENT or to make code changes.

Note: Transponder-equipped aircraft experiencing radio-communication failure will operate the transponder on Mode A Code 7600.

15.2.2.11.1.2 If the action p0rescribed in para 15.2.2.11.1.1 is unsuccessful, it shall be repeated on an other available frequency on which it is believed that the aircraft might be listening.

15.2.2.11.1.3 In both the cases covered by para 15.2.2.11.1.1 and para 15.2.2.21.1.2, any maneuvering instructions shall be such that the aircraft would regain its current cleared track after having complied with the instructions received.

15.2.2.11.1.4 Where it has been established by the action in para 15.2.2.11.1.1 that the aircraft's radio receiver is functioning, continued control of transponder equipped aircraft where SSR is available can be effected using code changes or IDENT transmissions to obtain acknowledgement of clearances issued to the aircraft.

15.2.2.11.2 Complete aircraft communication failure.

When a controlled aircraft experiencing complete communication failure is operating or expected to operate in an area and at flight levels where Radar separation is applied, such separation may continue to the used. Whoever, if the aircraft experiencing the communication failure is not identified, Radar separation shall be applied between aircraft under Radar control and all unidentified aircraft observed along the expected route of the communication failure aircraft, has passed through the airspace concerned, has landed, or has proceeded elsewhere.

15.2.2.11.2.1 Aircraft transponder failure in areas where the carriage of a functioning transponder is mandatory.

15.2.2.11.3.1 When ad aircraft experiencing transponder failure after departure is operating or expected to operate in and area where the carriage of a functioning transponder with specified capabilities is mandatory, the ATC units concerned should endeavour to provide for continuation of the flight to the Aerodrome of first intended landing in accordance with the flight plan. However, in certain traffic situations, either in terminal areas or en-route, continuation of the flight may not be possible, particularly when failure is detected shortly after take0off. The aircraft may then be required to return to the Departure Aerodrome or to land at the **nearest suitable aerodrome** acceptable to the operator concerned and to ATC.

15.2.2.11.3.2 In case of a transponder failure which is detected before departure from and Aerodrome where it is not practicable to effect a repair, the aircraft concerned should be permitted to proceed, as directly as possible, to the nearest suitable Aerodrome were repair can be made. When granting clearance to such aircraft, ATC should take into consideration the existing or anticipated traffic situation and may have to modify the time of departure, flight level or route of the intended flight. Subsequent adjustments may become necessary during the course of the flight.

CONTINGENCY SCENARIOS. The following paragraphs summarize pilot actions to mitigate the potential for conflict with other aircraft in certain contingency. They should be reviewed in conjunction with the expanded contingency scenarios detailed on pages 13-15, which contain additional technical and operational detail.

***Scenario 1: The pilot is : 1) unsure of the vertical position of the aircraft due to the loss or degradation of all primary altimetry systems, or 2) unsure of the capability to maintain cleared flight level (CFL) due to turbulence or loss of the automatic altitude control systems.**

The Pilot should:	ATC can be expected to:
Maintain CFL while evaluating the situation;	
Watch for conflicting traffic both visually and by reference to ACAS, if equipped;	
If considered necessary, alert nearby aircraft by 1) making maximum use of exterior lights; 2) broadcasting position, FL, and intentions on 121.5 MHz (as a back up, the VHF inter-pilot air-to-air frequency, 123.45 MHz, may be used)	
Notify ATC of the situation and intended course of action. Possible courses of action include.	Obtain the pilot's intentions and pass essential traffic information.
1) maintaining the CFL and route, provided that ATC can provide lateral, longitudinal or conventional vertical separation.	1) If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so apply the appropriate minimum.
2) requesting ATC clearance to climb above or descend below RVSM airspace if the aircraft cannot maintain CFL and ATC cannot establish adequate separation from other aircraft.	2) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible.
3) executing the contingency maneuver shown in paragraphs 6.0 and 7.0 of this AIP Supplement to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.	3) If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation.
	4) Notify adjoining ATC facilities /sectors of the situation.

Scenario 2: There is a failure of loss of accuracy of one primary altimetry system (e.g., greater than 200 feet difference between primary altimeters)

The Pilot should:
Cross check standby altimeter, confirm the accuracy of a primary altimeter system and notify ATC of the loss of redundancy. If unable to confirm primary altimeter system accuracy, follow pilot actions listed in the preceding scenario.

EXPANDED EQUIPMENT FAILURE AND TURBULENENCE ENCOUNTER SCENARIOS.

Operators may consider this material for use in training programs.

Scenario 1: All automatic altitude control systems fail (e.g., Automatic Altitude Hold).

The Pilot should :	ATC can be expected to:
Initially:	
Maintain CFL	
Evaluate the aircraft's capability to maintain altitude through manual control	
Subsequently:	
Watch for conflicting traffic both visually and by reference to ACAS, if equipped.	
If considered necessary, alert nearby aircraft by 1) making maximum use of exterior lights. 2) broadcasting position, FL, and intentions on 121.5 MHz (as a back up, the VHF inter-pilot air-to-air frequency, 123.45 MHz, may be used).	
Notify ATC of the situation and intended course of action. Possible courses of action include:	
1) maintaining the CFL and route, provided that ATC can provide lateral, longitudinal or conventional vertical separation.	1) If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.
2) requesting ATC clearance to limb above or descend below RVSM airspace if the aircraft cannot maintain CFL and ATC cannot establish adequate separation from other aircraft.	2) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible.
3) executing the contingency manoeuvre shown in paragraphs 6.0 and 7.0 above to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.	3) If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation.
	4) Notify adjoining ATC units of the situation.

Scenario 2: Loss of redundancy in primary altimetry systems.

The Pilot should:	ATC can be expected:
If the remaining altimetry system is functioning normally, couple that system to the automatic altitude control system, notify ATC of the loss of redundancy and maintain vigilance of altitude keeping.	Acknowledge the situation and continue to monitor progress.

Scenario 3: All primary altimetry systems are considered unreliable or fail.

The Pilot should:	ATC can be expected:
Maintain CFL by reference to the standby altimeter (if the aircraft is so equipped)	
Alert nearby aircraft by 1) making maximum use of exterior lights; 2) broadcasting position, FL, and intentions on 121.5MHz (as a back-up, the VHF inter-pilot air-to-air frequency, 123.45 MHz, may be used).	
Consider declaring an emergency. Notify ATC of the situation and intended course of action. Possible courses of action include.	Obtain the pilot's intentions and pass essential traffic information.
1) maintaining the CFL and route, provided that ATC can provide lateral, longitudinal or conventional vertical separation.	1) If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.
2) requesting ATC clearance to climb above or descend below RVSM airspace if the aircraft cannot maintain CFL and ATC cannot establish adequate separation from other aircraft.	2) If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously. if possible.
3. executing the contingency maneuver shown in paragraphs 6.0 and 7.0 above to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFI	3) If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information notify other aircraft in the vicinity and continue to monitor the situation.
	4) Notify adjoining ATC units of the situation.

Scenario 4: The primary altimeters diverge by more than 200 ft (60 m).

The Pilot should :
Determine the defective system through the normal airplane integrated comparator warning system or, in the absence of such a system, establish trouble-shooting procedures comparing the primary altimeters to the standby altimeter (corrected using the correction card).
If the defective system can be determined, couple the functioning altimeter to the altitude keeping device in use.
If the defective system cannot be determined, follow the guidance in Scenario 3 for failure or unreliable altimeter indications of all primary altimeters.

Scenario 5: Turbulence (greater than moderate), which the pilot believes, will impact the aircraft's capability to maintain flight level.

The Pilot should :	ATC can be expected to :
Watch for confliction traffic both visually and by reference to ACAS, if equipped.	
If considered necessary, alert nearby aircraft by 1) making maximum use of exterior lights; 2) broadcasting position, FL , and intentions on 121.5 MHz (as a back-up, the VHF inter-pilot air-to-air frequency, 123.45 MHz, may be used).	
Notify ATC of the situation and intended course of action. Possible courses of action include:	
1) maintaining the CFL and route, provided the ATC can provide lateral, longitudinal or conventional vertical separation.	1) Assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.
2) requesting flight level change, if necessary.	2) If unable to provided adequate separation, advise the pilot of essential traffic information and request pilot's intention.
3) executing the contingency maneuver shown in paragraphs 6.0 and 7.0 above to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.	3) Notify other aircraft in the vicinity and monitor the situation.
	4) Notify adjoining ATC units of the situation.

Attachment 'B'

Phraseology Related to RVSM Operations

Controller –Pilot phraseology:

Message	Phraseology
For a controller to ascertain the RVSM approval status of an aircraft:	(call sign) **CONFIRM RVSM APPROVED**
For a pilot to report non-RVSM approval status: i. on the initial call on any frequency within the RVSM airspace (controllers shall provide a read back with this same phrase). and ii. in all requests for flight level changes pertaining to flight levels within the RVSM airspace; and iii. in all read-backs to flight level clearance pertaining to flight levels within the RVSM airspace. Additionally, except for state aircraft, pilots shall include this phrase to read back flight level clearances involving the vertical transit through FL 290 or FL 410, See examples that follow.	**NEGATIVE RVSM**
For a pilot to report RVSM approval status.	**AFFIRM RVSM**
For a pilot of a non-RVSM approved State aircraft to report non-RVSM approval status, in response to the phrase (call sign) **CONFIRM RVSM APPROVED.**	**NEGATIVE RVSM STATE AIRCRAFT**
Denial of clearance into the RVSM airspace:	**(call sign) UNANBLE CLEARANCE INTO RVSM AIRSPACE ,** **MAINTAIN [or DESCEND TO, or CLIMB TO] FLIGHT LEVEL** **(NUMBER)**
For a pilot to report when severe turbulence affects the aircraft's capability to maintain the height-keeping requirements for RVSM.	**UNABLE RVSM DUE TURBULENCE***
For a pilot to report that the aircraft's equipment has degraded en-route below that required for flight within the RVSM airspace. (See Attachment A). This phrase is to be used to convey both the initial indication of the non-MASPS compliance, and henceforth, on initial contact on all frequencies within the lateral limits of the RVSM airspace until such time as the problem ceases to exist or the aircraft has exited the RVSM airspace.	**UNABLE RVSM DUE EQUIPMENT***
For a pilot to report the ability to resume operations within the RVSM airspace after an equipment or weather related contingency.	**READY TO RESUME RVSM**
For a controller to confirm that an aircraft has regained its RVSM approval status, or to confirm that pilot is ready to resume RVSM operations.	**REPORT ABLE TO RESUME RVSM.**

16. IMPLEMENTATION OF STRATEGIC LATERAL OFFSET PROCEDURE.

16.1 Introduction.

16.1 ICAO Separation And Airspace Safety Panel (SASP) has prepared the guidelines and has asked the States in the Asia/Pacific Region to implement the 2 NM lateral offset procedures on 20 JAN 2005. As per guidelines from ICAO the 2 NM lateral offset procedures have been introduced in Dhaka FIR from same date.

16.2 Procedures applicable in Dhaka FIR:

16.2.1 Offsets are only applied in oceanic (or remote continental) airspace in the Dhaka FIR.

16.2.2 Offsets are applied only by aircraft with automatic offset tracking capability.

16.2.3 The decision to apply a strategic lateral offset is the responsibility of the flight crew.

16.2.4 The offset shall be established at a distance of 2 (two) NM to the right of the centerline relative to the direction of the flight.

16.2.5 The strategic lateral offset procedure has been designed to include offsets to mitigate the effects of wake turbulence of preceding aircraft. If wake turbulence needs to be avoided one of the three available options (centerline, 1 NM or 2 NM right offset) shall be used.

16.2.6 In airspace where the use of lateral offsets has been authorized, pilots are not required to inform Air Traffic Control (ATC) that an offset is being applied.

16.2.7 Aircraft transiting areas of Radar coverage in airspace where offset tracking is permitted may initiate or continue an offset.

17. The supplementary procedures in force are given in their entirety; "differences" are printed in capital letters.

17.1 Visual Flight Rules (A2-4.6) – VFR flight is to be operated within a control zone established at an aerodrome serving international flights and in specified portions of the associated terminal control area shall:

a) have two-way radio communication;

b) obtain clearance from the appropriate air traffic control unit; and

c) report positions, as required.

N. B: (i) ONLY CONTROLLED VFR FLIGHTS ARE PERMITTED TO OPERATE VMC WITHIN CONTROL ZONE;

(II) SPECIAL VFR FLIGHTS ARE NOT PERMITTED WITHIN A CONTROL ZONE WHEN GROUND VIS LESS THAN 3KM AND CEILING LESS THAN 1,000 FEET.

17.2 Special application, Instrument Flight Rules (IFR): Flights shall be conducted in accordance with the Instrument Flight Rules (even when not operating in instrument meteorological conditions) when operated above flight level 150.

17.3 Air Traffic Advisory Service (PANS-ATM/DOC4444) – All IFR Flight shall comply with the procedures for air traffic advisory service when operating in advisory airspace.

17.4 Application (PANS-ATM/DOC4444) – All aircraft on VFR Flights and aircraft on IFR flight outside controlled airspace, shall maintain a watch on radio station furnishing communications for the unit providing flight information service in the flight information region and file with that station information as to their position unless otherwise authorized by appropriate ATS unit.

17.5 Addressing of position reports (PANS-ATM/DOC4444) – The last position report before passing from one flight information region/control area to an adjacent flight information region/control area shall also be made to the air traffic services unit serving the airspace about to be entered.

17.6 Where adequate point-to-point communication do not exit, flight information service will be provided as far as practicable by the centre whose flight information region the aircraft is leaving until reliable communication contact has been established with the centre whose flight information region it is entering.

17.7 When an aircraft files a Flight Plan at the first aerodrome of departure for subsequent sectors, the initial clearance will be to the first destination only. A new clearance must be obtained for subsequent sectors.

17.8 Flight Plans filed in the first aerodrome of departure for subsequent sectors of a route will become active for ATS and SAR purposes only when the appropriate ATS Unit has received the departure message from the aerodrome of departure indicated in the Flight Plan.

17.9 Information on runway conditions (PANS-ATM/DOC4444) – Area Control centre and approach control offices shall have available for transmission to aircraft on request immediately prior to descent, information on the prevailing runway conditions at the aerodrome of intended landing.

17.10 Transmission of SIGMET information (PANS-ATM/DOC4444) – Appropriate SIGMET information shall be disseminated to aircraft by one or more of the means mentioned below: -

a) Direct transmission by appropriate ATS unit and ensuring acknowledgement.
b) General call, unacknowledged transmission to all aircraft concerned or
c) Broadcast.

The SIGMET information to be passed to aircraft on ground initiative and cover a portion of the route up to one hours flying time ahead of the aircraft except where another period has been determined on the basis of regional Air Navigation agreement.

17.11 Transmission of selected special reports and amended aerodrome forecast (PANS-ATM/DOC4444) – Selected special reports and amended aerodrome forecast shall be transmitted on request and supplemented by: -

a) Direct transmission from the appropriate Air Traffic Services Unit of selected special reports and amended aerodrome forecast for the departure, destination and its alternate aerodromes, as listed in the flight plan, or
b) A General call on appropriate frequencies un-acknowledged.
c) Continuous or frequent broadcast of current Aerodrome reports and forecast in areas determined on the basis of Air Navigation congestion where traffic conditions dictates.

17.12 Altimeter Setting procedure applicable to Air Traffic Services and minimum levels (PANS-ATM/DOC4444) – THE LOWEST USABLE FLIGHT LEVEL FOR HOLDING AND APPROACH MANOEUVERS ARE GIVEN IN ATS ROUTES AND IN INSTRUMENTS APPROACH CHARTS. THESE ARE CALCULATED AND ESTABLISHED GIVING DUE CONSIDERATION TO ATMOSPHERIC VARIATION.

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ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT

IMPLEMENTATION OF AIR TRAFFIC FLOW MANAGEMENT PROCEDURES OVER BAY OF BENGAL, SOUTH ASIA AND PAKISTAN THROUGH KABUL FIR.

1. Introduction.

1.1 On 24 July 2006, the States of the ICAO Asia/Pacific Region within the Bay of Bengal, South Asia and Pakistan airspace implemented an operational trial of an automated Air Traffic Flow Management (ATFM) service under the auspices of the ICAO Bay of Bengal ATS Co-ordination Group-ATFM Task Force.

1.2 Pursuant to comprehensive reviews of the performance of the operational trial by the ATFM Task Force, ATFM procedures are permanently implemented in accordance with the provisions of this AIP Supplement.

2. Provision of ATFM Services

2.1 ATFM services are provided by Aeronautical Radio of Thailand LTD (AEROTHAI) from the Bangkok Air Traffic Flow Management Unit (ATFMU) at Bangkok ACC. ATFM services will be limited to calculation, promulgation and management of mandatory Allocated Wheels Up Time (AWUT) and Kabul FIR flight level, ATS routes and entry fix time for each affected flight.

2.2 Civil Aviation Authority, Bangladesh (CAAB) retains responsibility for the tactical management of flights that are subject to ATFM. In discharging tactical responsibilities, Civil Aviation Authority, Bangladesh (CAAB) will manage non-ATFM compliant flights using delayed pushback and start clearances, non-preferred routes and/or flight levels, en-route holding and/or diversion around Kabul FIR.

2.3 The ATFMU utilizes the automated, web based Bay Bengal Cooperative ATFM System (BOMCAT) system in meeting its ATFM responsibilities. These responsibilities will be managed in co-ordination with aircraft operators and ANSPs in the FIRs concerned.

2.4 The ATFMU Operates on a 24 hour basis and is responsible for westbound flights entering the Kabul FIR at specified times, flight levels and ATS routes in accordance with paragraph 3 of AIP Supplement. The Objective of these ATFM services are to:

a) Reduce ground and en-route delays;
b) Maximize capacity and optimize the flow of air traffic within the area;
c) Provide an informed choice of routing and flight level selection;
d) Alleviate unplanned in flight re-routing and technical stops; and
e) Assist regional ANSPs in planning for and managing future workload in the light of forecast increased traffic flows within the area.

3. ATFM affected ATS routes, flight levels and applicable hours.

3.1 All westbound flight intending to enter the Kabul FIR between 2000UTC and 2359UTC daily on ATS routes A466, L750, N644 from FL280 to FL390 inclusive and G792/V390 from FL310 to FL390 inclusive shall comply with the ATFM procedures contained in this AIP Supplement. This includes a mandatory requirement for all flights to obtain a specific ATFM slot allocation form the ATFMU (including AWUT) for entry into the Kabul FIR during the period mentioned above.

3.2 Flight who plan to enter Kabul FIR without an AWUT and entry slot (comprising flight level, ATS route and entry fix time) will be accommodate only after flight with slot have been processed. Such flight should expect delayed pushback and start clearance, non-preferred routed and/or flight level, en-route holding and/or diversion around Kabul FIR.

3.3 In order to ensure availability of slot for westbound departure from designated airport in northern India and Pakistan, departure from these airports are give priority for FL280 in the slot allocation. This does not preclude these flights from requesting higher flight level with initial slot request.

4 Flights Exempted from BOBCAT ATFM

4.1 The following flight are exempt from the ATFM procedures in this AIP Supplement

a) Humanitarian or medical flight
b) State aircraft with Head of State onboard

4.2 Flights exempted from ATFM procedure shall indicated the exemption in their flight plan (Field 18-STS-BOB ATFM EXPM)

4.3 Dhaka ACC shall forward the flight plan information to the ATFMU at AFTN address VTBBZDZX.

5. Mandatory AWUT and Kabul FIR slot allocation

5.1 Affected flight shall obtain the mandatory AWUT, Kabul FIR entry time, flight level and ATS route from the BOBCAT system. The AWUT and Kabul slot allocate will enable CAAB to tactically control westbound flight transiting the Kabul FIR at specified times by assigning minimum spacing requirement at established gateway fix point in the vicinity of the eastern boundary of the Kabul FIR.

5.2 The application, calculation and distribution of AWUT and Kabul FIR entry fix slot allocation will be managed via internet access to the BONCAT system in accordance with the ATFM operation procedures in paragraph 6.

6. BOBCAT-Operating Procedures

6.1 All affected flight are required to submit slot requests to the BOBCAT system by logging onto https://www.bobcat.aero between 0001 and 12000UTC on day of flight and completing the electronic template provided.

6.2 Affected operators who do not have dedicated BOBCAT username/password access should complete the attached application form in Appendix A and fax the form the ATFMU as soon as possible.

6.3 Slot Allocation Process.

6.4 Submission of ATS Flight Plan

6.4.1 Once aircraft operators are in receipt of the slot allocation, they shall submit the ATS flight plan using the time, ATS route and flight level parameter of the BOBCAT allocate slot.

6.4.2 In addition to normal AFTN address, operator should also address flight plan (FPL) and related ATS message (e.g. DLA, CNL, CHG) to the ATFMU via AFTN address VTBBZDZX for all flight that have submitted a slot request.

7. Aircraft Operator/Pilot in Command and CAAB Responsibilities.

Aircraft Operator/Pilot in Command

7.1 In accordance with ICAO PANS ATM provision, it is the responsibility of the Pilot in Command (PIC) and the aircraft operator to ensure that the aircraft is ready to taxi in time to meet any required departure time. PIC shall be kept informed by their operator of the AWUT, Kabul FIR entry fix times and flight parameters (route/level) nominated by BOBCAT.

7.2 The PIC, in collaboration with ATC, shall arrange take-off as close as possible to the AWUT in order to meet the Kabul FIR slot time.

CAABs

7.3 In accordance with ATC PANS ATM provisions, light with an ATFM slot allocation should be given priority for take off to facilitate compliance with AWUT.

7.4 AWUT shall be included as part of the initial ATC clearance. In collaboration with PIC, Dhaka ACC shall ensure that every opportunity and assistance is granted to a flight to meet AWUT and allocated entry fix times at Kabul FIR.

8. Coordination between aircraft operator/pilot in command, CAABs and Bangkok ATFMU.

8.1 The PIC shall include the AWUT in the initial ATC clearance request.
8.2 PIC shall adjust cruise flight to comply with slot parameters at the Kabul FIR entry fix, requesting appropriate ATC clearance including speed variation in accordance with published AIP requirement.

8.4 Prior to departure, in circumstance where it become obvious that the Kabul slot time will not be met, a new slot allocation should be obtained as soon as possible and via the most expeditious means (e.g. via coordination between flight dispatcher. PIC, Dhaka ACC and Bangkok ATFMU). Early advice that the Kabul slot time will be missed also enables the slots so vacated to be efficiently reassigned to other flights.

8.5 Prior the departure, in the event that the aircraft is unable to meet the Kabul slot time, when requested by the PIC after the aircraft has left the gate Dhaka ACC shall assist the PIC to coordinate with the ATFMU for a revised slot allocation.

8.6 The ATFMU (VTBBZDZX) shall be included in the list of AFTN address for NOTAMs regarding any planned activities that may affect slot availability (e.g. reservation of airspace/closure of airspace, non-availability of routes etc).
8.7 The ATFMU (VTBBZDZX) shall be included in the list of AFTN address for ATS message (e.g. FPL, DEP, DLA, CHG, CNL) relating to flights subject to ATFM procedure.

8.8 A missed slot results in dramatically increased coordination workload for ATC and PIC and should be avoided. To minimize coordination workload in obtaining a revised slot allocation, the following procedures are recommended.

a) If the flight is still at the gate, coordination should take place via operator/flight dispatcher to ATFMU.
b) If the flight has left gate, coordination to ATFMU may also take place via the ATS unit present communicating with the flight.

9. Basic computer requirement

9.1 Aircraft operators and Dhaka ACC are required to have computer equipment capable of connecting to the BOBCAT website https://www.bobcat.aero via the internet and satisfying the following minimum technical requirements:

a) A personal computer of any operating system with the following characteristics:

i) Processor minimum CPU clock speed of 150 MHz.
ii) Operating System: Any that operates one of the following web browsers (i.e. Windows 2000/XP, Linux, Unix or Mac OS)
iii) Web Browser: Internet Explorer 5.5 or newer, Mozilla, 1.0 or newer, Mozilla Firebox 1.0 or newer, Netscape 7 or newer.
iv) RAM: 64 MB or larger (depending on operating system)
v) Hard Disk Space: minimum of 500 MB or larger (depending on operating system)
vi) Monitor Display Resolution: Minimum of 800 x 600 pixels; and
vii) Internet connection: 56 Kbps Modem or faster.

10. ATFM Users Handbook

10.1 Supporting documentation, including detailed information in respect of the ATFM operations described above and other pertinent information has been included in the Bay of Bengal and South Asia ATFM Handbook (the ATFM users handbook), available at https://www.bobcat.aero

10.2 CAAB and aircraft operators shall ensure that they are conversant with and able to apply the relevant procedures described in the ATFM user handbook.

11. Contingency procedures

11.1 in the event that an aircraft operator or CAAB is unable to access the ATFMU website, the ATFMU shall be contracted via the alternative means (telephone, fax AFTN) described in paragraph 13.

11.2 Contingency procedures for submission of slot request including activation of contingency slot request templates (CSRT) are included in the ATFM users handbook.

11.3 In the event of system failure of BOBCAT, ATFMU shall notify all parties concerned and advise that ATMF slot allocation procedures are suspended, in this event all parties concerned will revert to the existing ATM procedures as applicable outside the daily period of ATMF meeting.

12. ATFM system fault reporting.

12.1 An ATFM system fault is defined as a significant occurrence affecting an ATS unit, an aircraft operator or ATMFU resulting from the application of ATFM procedures.

12.2 Aircraft operators and Dhaka ACC experiencing an ATFM system fault should complete an ATMF system fault report form from the ATFM users handbook (see Appendix B) and forward it to the ATFMU at the address indicated on the form. The ATFMU will analyze all reports, make recommendation/suggestion as appropriate and provide feed back to the parties concerned to enable remedial action.

13. Address of air traffic flow management unit (ATFMU)

13.1 The ATFMU may be contacted as follows:

- Unit Name: Bangkok ATFM
- Telephone : + 66-2-287-8024, +66-2-287-8025
- Fax : + 66-2-287-8027
- Tel/Fax : + 66-2-287-8026
- E-mail : atfmu@bobcat.aero
- ATFN : VTBBZDZX
- Website : https://www.bobcat.aero

14. Implementation

This AIP supplement becomes effective from 0707051200UTC.

APPENDIX - A

BOBCAT USERNAME/CONTACT INFORMATION MODIFICATION FORM
To submitted to Bangkok ATFMU

SECTION I:ADD NEW USERS

Prefix	First Name	Last Name	Proposed Username Up to 20 characters	E-mail address

SECTION II: REMOVE USERS

Prefix	First Name	Last Name	Username	E-mail address

SECTION III:ADD NEW USERS

BOBCAT USE

Prefix	First Name	Last Name	Username	E-mail address

SECTION IV: NOTIFICATION E-MAIL ADDRESS

Change our organization notification e-mail address to .....

SECTION V: CONTACT NOTIFICATION

Organization .....
Full Name: .....
Tel: .....
E-mail: .....
Signature: .....
Date/Time of Request : .....

APPENDIX- B

ATFM SYSTEM FAULT AND EVENT REPORT FORM
To submitted to Bangkok ATFMU

SECTION I: GENERAL INFORMATION

1. Date and Time (UTC) of Occurrence ____/____/____/____/____
yy/ mm/ dd/ hh/ mm

2. Type of Event ☐

2.1 Failure of BOBCAT system ☐

2.2 Communication Link failure ☐

2.3 Non compliance with ATFM procedure by Pilot/Airline Operator/ ANSP ☐

2.4 Error in FPL and associated message ☐

2.5 Failure in ATFM slot monitoring (i.e. TWR at Aerodrome of Departure) ☐

2.6 Non compliance with slot allocation ☐

3. Restrictions applicable to the flight.....

SECTION II: DETAILED NOTIFICATION

1. Organization/ Administration submitting the report: .....

2. Flight Data (if applicable) – Call Sign: .....

Attach copies of flight progress strip indicating DEP, EOBT, WUT, DES or Entry Point & ETO over entry point, FL to ATC Unit/Sector areas of activity as applicable.

3. Other details necessary for analysis of the incident

Attach copies of FPL or RPL, subsequent ATS modifying messages etc. if appropriate

SECTION III: SUPPLEMENTARY NOTIFICATION

1. Actions already initiated: .....

.....

2. Contact information follow-up action: .....

2.1 Name : .....

2.2 Designation: .....

2.3 Tel : .....

2.4 E-mail: .....

3. Signature: .....

4. Date/Time of Report: .....

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ENR 1.10 FLIGHT PLANNING

1. Flight Plan

1.1 Flight Plan Form as prescribed by ICAO in **latest** DOC-4444 (PANS- ATM) is used for the preparation and submission of flight plans.

1.2 Flight Plan Form shall be filled as per the guidance in Amendment-1 to the 15th Edition of ICAO Doc.4444 .

1.3 The simultaneous mode of addressing ATS messages is used. The step by step mode will not be followed.

1.4 Multiple flight plans in lieu of a "THROUGH FLIGHT PLAN" will be accepted only in respect of flights whose first departure point is in Bangladesh. An intermediate stop flight plan for the next individual stage will be accepted only when filed within 2 hours before ETD.

2. Procedures for the submission of a flight plan

2.1 **Requirement to submit a Flight Plan**

Written Flight plan shall be filed with the appropriate ATS units for all flights prior to departure.

Exceptions and special procedures

a) <u>Local flights</u>:

i) Local flights at all uncontrolled aerodromes in control zones and at all controlled aerodromes must file a flight plan prior to departure by any available means with the appropriate ATS unit;

ii) Local flights at all uncontrolled aerodromes outside control zones may be undertaken without a flight plan provided they are operated during day in VMC below 1,000 feet;
Note: A local flight is a flight conducted wholly in the vicinity of an aerodrome i.e. take-off from an aerodrome, remain in the traffic circuit and land back at the same aerodrome.

(b) Flight departing from aerodrome (controlled or uncontrolled) in accordance with the multiple flight plan previously filed at a controlled aerodrome i.e. separate flight plan for each stage of the flight through intermediate stops filed at the aerodrome of first departure need not re-submit a flight plan.

(c) Other flights departing from an uncontrolled aerodrome may file a flight plan prior to departure by any available means of communication with the FIC or a controlled aerodrome.

Note: - Flight departing from an uncontrolled aerodrome within a control zone, shall operate in accordance with instructions from the appropriate ATC unit. Such instructions shall be obtained prior to departure by any available means of communication.

(d) Under exceptional circumstances submission of Flight Plan during a flight may be accepted by the appropriate ATS unit at least ten minutes prior to estimated entry to controlled airspace.

2.2 Submission of Flight Plans before departure:

Flight Plans will be accepted within two hours prior to departure. Flight Plans should be submitted at least sixty minutes before departure.

In the event of delay of one hour in excess of the proposed departing time of flight for which a Flight has been submitted, the flight plan should be amended or a new flight plan submitted.

2.3 Meteorological Briefing:

Requirement for submitting flight plan at Chittagong Airport by Bangladesh registered aircraft originated from HSIA may be waived provided that the aircraft is returning to HSIA within 8 (eight) hours. It will however, be incumbent upon the Pilot-in-Command or his designated representative to obtain meteorological briefing for the return flight also, before departure from Dhaka. It will be imperative, however, for the Pilot-in-Command to obtain and satisfy himself with necessary meteorological information when:

a) The return flight is delayed beyond the stipulated eight hours, irrespective of weather.

b) Bad weather prevails en-route or at destination, irrespective of stipulated eight hours.

2.4 From Para 2 to 2.3 above are the difference from ANNEX 2.

2.5 PROCEDURES FOR AIR NAVIGATION SERVICES, RULES OF THE AIR AND AIR TRAFFIC SERVICES (DOC 4444- ATM)

Reference	Difference
Part VIII	

2.5.1 Flight plans i. e. separate Flight Plans for each stage of the flight through intermediate stops may be filed at the aerodrome of first departure only in respect of flights whose first departure point is in Bangladesh.

3. Repetitive Flight Plan System

Not introduced.

ENR 1.11 ADDRESS OF FLIGHT PLAN MESSAGES

1. Flight movement messages relating to traffic into or via Dhaka FIR shall be addressed as stated below in order to warrant correct relay and delivering.

1	2		3
Category of flight IFR/VFR or Both	ROUTE		AFS Message Address
	Enter/Exit Dhaka FIR	Landing/Departing Aerodrome	
Both	Transit FIR		
Both	Enter/Exit	VGHS	VGHSZQZX
Both	Enter/Exit	VGEG	VGEGZTZX VGHSZQZX
Both	Enter/Exit	VGSY	VGSYZTZX VGHSZQZX

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ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT

1. Interception procedures

The following procedures and visual signals are applicable in the event of interception of an aircraft over the territory and territorial waters of Bangladesh.

(i) Interception of civil aircraft shall be governed by appropriate regulations and administrative directives issued by the Chairman in compliance with the Convention on International Civil Aviation.
(ii) The pilot-in-command of a civil aircraft, when intercepted, shall comply with the instructions as published by the Chairman.

(iii) If a Bangladesh registered aircraft or an aircraft operated by a Bangladeshi operator, while over flying the territory of another contracting state, is intercepted by the authority of that State shall follow the applicable rules of that authority.

1.1 An aircraft which is intercepted by another aircraft shall immediately to:

(a) follow the instructions given by the intercepting aircraft, interpreting and responding to the visual signals listed in ENR 1.12-2, ENR 1.12-3, ENR 1.12-4 and ENR 1.12-5
(b) notify, if possible, the appropriate air traffic services unit;
(c) attempt to establish radio communication with the Intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 MHz, giving the identity and position of the aircraft and the nature of the flight.

2. If radio contact with the intercepting aircraft is established but communication in a common language is not possible, attempts shall be made to convey instructions and acknowledgement of instructions and essential information by using the following phrases and pronunciations, and transmitting each phrase twice:

Phrase	Pronunciation	Meaning
CALL SIGN (call- sign)	KOL SA-IN	MY call-sign is (call-sign)
WILCO	VILL-KO	Understood will comply
CANNOT	KANN NOTT	Unable to comply
REPEAT	REE-PEET	Repeat your instruction
AMLOST	AM-LOSST	Position unknown
MAYDAY	MAYDAY	I am in distress
HIJAK	HI-JAK	I have been hijacked
LAND (place name)	LAAND (place name)	I request to land at (place name)
DESCEND	DEE-SEND	I require descent

(1) In the second column, syllables to be emphasized are underlined.
(2) The call sign required to be given is that used in radio telephony communications with Air Traffic services units and corresponding to the aircraft identification in the flight plan.
(3) Circumstances may not always permit nor make desirable, the use of the phrase “HIJACK”.

Note: The following phrases are expected to be used by the intercepting aircraft in the circumstances described above:-

Phrase	Pronunciation	Meaning
CALL SIGN	KOL SIGN	What is call-sign
FOLLOW	FOL-LO	Follow me
DESCEND	DEE-SEND	Descend for landing
YOU LAND	YOU LAAND	Land at this aerodrome
PROCEED	PRO-SEED	You may proceed

3. If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.
4. If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.
5. The visual signals are detailed in the following table:

Signals initiated by intercepting aircraft and responses by intercepted aircraft.

Series	Intercepting Aircraft Signals	Meaning	Intercepted Aircraft Responds	Meaning
1.	DAY: Rocking wings from a position slightly above and ahead of normally to the left of the intercepted aircraft and after acknowledgement, a slow level turn, normally to the left,(or to the right in the case of a helicopter) on the desired heading. NIGHT: Same, and in addition, flashing navigational lights at irregular intervals. Note:1. Meteorological conditions or terrain may require the intercepting aircraft to take up a position in front and to right of the intercepted aircraft and to make the subsequent turn to the right.	You have been intercepted. Follow me.	AEROPLANES : At Day: Rocking and following. At Night: Same, and in addition, flashing navigational lights at irregular intervals. HELICOPTERS: DAY or NIGHT – Rocking aircraft, flashing navigational lights at irregular intervals and following.	Under-stood, will comply.

Series	Intercepting Aircraft Signals	Meaning	Intercepted Aircraft Responds	Meaning
	Note 2: If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock its wings each time it passes the intercepted aircraft. DAY or NIGHT : An abrupt break-away maneuver from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.		Note: Additional action required to be taken by intercepted aircraft is prescribed in para 1 and 2.	
2.	Day-Circling aerodrome lowering landing gear and over flying runway in direction of landing or, if the intercepted aircraft is a helicopter, over flying the helicopter landing areas. NIGHT: Same and, in addition, showing steady landing lights.	You may proceed.	AEROPLANES : DAY or NIGHT : Rocking wings. HELICOPTERS : DAY or NIGHT : Same as the Series 1 Helicopter Signals	
3.		Land at this aerodrome	AEROPLANES : DAY – Lowering landing gear following the intercepting aircraft and if after over flying the runway landing is considered safe, proceeding to land. NIGHT: Same and, in addition, showing steady landing lights (if carried).	Under-stood, will comply Under-stood, will comply

Series	Intercepting Aircraft Signals	Meaning	Intercepted Aircraft Responds	Meaning
4.	AEROPLANCES: DAY – Raising landing gear while passing over landing runway at a height exceeding 300m (1000 ft) but not exceeding 600m (2000 ft) above the aerodrome level, and continuing to circle the aerodrome. NIGHT: Flashing landing lights while passing over landing runway at a height exceeding 300 m (1000 ft) but not exceeding 600 m (2000 ft) above the aerodrome level, and continuing to circle the aerodrome. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate	AEROPLANES : DAY or NIGHT : Following the intercepting aircraft and proceeding to land, showing a steady landing light (if carried) DAY or NIGHT : If it is desired that the intercepted aircraft following the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the series 2 signals prescribed for intercepting aircraft.	Understood, follow me Understood, you may proceed
5.	AEROPLANES: DAY or NIGHT : Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply	DAY or NIGHT : Use Series 2 Signals prescribed for intercepting aircraft	Understood
6.	AEROPLANES : DAY or NIGHT: Irregular flashing of all available lights. HELICOPTERS : DAY or NIGHT: Irregular flashing of all available lights.	In distress	DAY or NIGHT: Use Series 2 Signals prescribed for intercepting aircraft.	Understood

ENR 1.13 UNLAWFUL INTERFERENCE

1. The pilot of an aircraft in flight which is subjected to unlawful interference shall endeavour to set his transponder to Code 7500.

2 When a pilot has selected Mode A and Code 7500 and is subsequently requested to confirm his Code by ATC he shall either confirm this or not reply at all. The absence of a reply from the pilot will be taken by ATC as an indication that the use of Code 7500 is not due to an inadvertent false code selection.

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ENR 1.14 AIR TRAFFIC INCIDENTS

1. Incident Reporting Procedures

1.1 An incident is an occurrence in which the safety of an aircraft or its operation is or has been involved or jeopardized or which results in such damage to the aircraft as to make it unfit for immediate flight.

1.2 An incident may be caused by any of the followings: -

(a) Ground Organization: -

(i) Abnormal function or operation of radio communication or navigation aids, faulty organization or procedure.

(ii) Personal negligence, incompetence, error or misapplication of procedures or instructions.

(b) Aircrew-negligence, incompetence, error of judgment, misapplication of procedures or failure to comply with procedures or instructions.

(c) Aircraft-Defects in the aircraft or its equipment.

(d) Severe meteorological conditions.

1.3 In order to speed up the process of investigation of the various categories of incidents aircraft occurrence reporting form “Appendix B & C ” has been revised. This form is available as mentioned in page ENR 1.14-4 AND ENR 1.14-5.

2. Air Traffic Incident (AIRPROX/PROCEDURAL/FACILITY) Report.

2.1 An Air Traffic Incident Report should be filed by the Pilot-in-command whenever he considers that :

A serious occurrence involving air traffic, such as:
(a) Aircraft proximity (AIRPROX) or
(b) serious difficulty resulting in a hazard to aircraft caused by
(i) faulty procedures
(ii) Non-compliance with procedures PROCEDURAL, or
(c) failure of ground facilities “FACILITY”

2.2 The Pilot-in-Command should whenever possible file the initial report by R/T to the ATS unit with which the aircraft is in communication at the time of the incident, or by telephone to the appropriate controlling authority soon after arrival. The initial report should be made in the following sequence: -

(a) Aircraft identification

(b) Type of incident (Airprox/Procedural/Facility)

(c) Position, heading or route, true airspeed

(d) Flight Level, Altitude (including/climbing, descending or level flight)

(e) Flight weather conditions (e.g. VMC/IMC; above/below cloud/or, flight vis etc)

(f) Time of incident in UTC

(g) Description of other aircraft, if relevant

(h) Brief details of incident, including when appropriate sighting distance and miss distance.

2.3 WRITTEN REPORT:

2.3.1 Where to submit the report:
The written confirmatory report on an incident of major significance initially reported by radio or the initial report on any other means should be submitted to the Pre-Flight Information Unit (PFIU) (or Control Tower where PFIU not located on Air Traffic incident report Form (Appendix-C). A copy of the incident report form should also be forwarded to the Chairman, Civil Aviation Authority of Bangladesh.

2.3.2 When to submit:
The written incident report should be submitted as soon as possible but

(a) In case the initial report was not made on air/ground frequency or any other means, the written report should reach the Chairman. CAAB not later than 7 (Seven) days from the date of incident occurred.

(b) In case the initial report was made on air/ground frequency or any other means, the written report should reach the Chairman. CAAB not later than 10 (Ten) days from the date of incident occurred.

2.4 REPORTING OF AIR TRAFFIC INCIDENT; BY ATS

2.4.1 Following are the procedures to be following by the ATC unit involved in the incident:-

a) Identify and designate the incident in accordance with the procedure detailed in 2.1.

b) If the aircraft is bound for a destination located within the area of responsibility of the ATS unit in whose area the incident occurred, arrangements should be made with the operator to obtain the pilot's report on landing.

c) If the aircraft is bound for a domestic destination, the ATS unit of destination should be requested to obtain the pilot's report on landing.
d) If the aircraft is bound for an international destination, the ATS authority at destination aerodrome should be notified and given full details of the incident (By AFTN) and request to obtain the pilot's report.

e) The civil aviation authority of the state of registry and the state of the operator should be notified of the incident.
f) If the incident involves another aircraft, similar action should be taken in regard to both parties.

g) Complete the air traffic incident form (when necessary).

h) Ensure that the appropriate authority and the national ATS authority are notified of all reportable incidents.

2.5. **HANDLING OF AIR TRAFFIC INCIDENT REPORT.**

2.5.1 On receipt of the incident reports, the SATO or the airport manager or the officer-in- charge concerned should investigate in to the case. The degree of the risk involved in an aircraft proximity incident should be determined in the incident investigation and classified as 'risk of collision" Safety not assured " no risk of collision" "risk not determined" . Every effort should be made for these reports to reach Chairman, Civil Aviation Authority of Bangladesh within 48 hours of receipt of the report in case of AIRPROX and for other incident within 7 days of receipt.

2.5.2
The following enclosure shall be attached with report while forwarding to the Chairman, Civil Aviation Authority.

a) Statements by personnel involved.

b) Tape transcription of relevant radio and telephone communications.

c) Copies of the flight progress strips and other relevant data including recorded radar data if available.
d) Copies of the meteorological reports and forecast relevant to the time of the incident.

e) Technical statements concerning the operating status of equipment, if applicable.

f) Unit Findings and recommendations for corrective action, if appropriate.

The copies of the enclosures shall also be attached to the original report retained at the station.

APPENDIX "B"
C. A. 470 (C)

CIVIL AVIATION AUTHORITY
AIRCRAFT OCCURRENCE REPORT

All Special Occurrences as defined in paragraph 13 of C. A. 471 "Reporting and Investigation of aircraft accidents, incidents and Special Occurrences" shall be reported immediately on this form.

A. Name of the officer reporting occurrence:

B. Station making report:

C. Telephone at which further information can be obtained:

D. Aircraft Type & Registration Marks:

E. Name of Owner/Operator:

F. Base of Aircraft:

G. Pilot's Name:

H. Place of occurrence:

I. Date, time and flight conditions:

J. Purpose of Flight:

K. Brief description of occurrence and possible cause:
L. Weather:
M. Occurrence classification and possible cause:
N. Damage to Civilian Property:
O. Details of Casualties:
P. Whether a formal Investigation has been ordered :

Signature of A.T.C.O.

Name in block letters

APPENDIX "C"

AIR TRAFFIC INCIDENT REPORT

For use when submitting and receiving reports on air traffic incidents. In an initial report by radio, shaded times should be included

A. AIRCRAFT IDENTIFICATION	B. TYPE OF INCIDENT AIRPROX/ PROCEDURE/ FACILITY

C. THE INCIDENT

1. General

a) Date/Time of incident _____ UTC

b) Position _____

2. Own aircraft

a) Heading and route

b) True airspeed _____ Measured in ( ) kt _____ ( ) km/h _____

c) Level and altimeter setting _____

d) Aircraft climbing or descending _____

( ) Level flight ( ) Climbing ( ) Descending

e) Aircraft bank angle

( ) Wing level ( ) Slight bank ( ) Moderate bank

( ) Steep bank ( ) Inverted ( ) In know

f) Aircraft direction of bank

( ) Left ( ) Right ( ) Unknown

g) Restrictions to visibility (Select as many as required)

( ) Sun glare ( ) Windscreen pillar ( ) Dirty windscreen

( ) Other cockpit structure ( ) none

h) Use of aircraft lighting (Select as many as required)

( ) Navigation lights ( ) Strobe lights ( ) Cabin lights

( ) Red anti-collision ( ) Landing/taxi lights ( ) Logo (tail fin) Light

( ) Other ( ) None

i) Traffic avoidance advice issued by ATS

( ) Yes, based on radar ( ) Yes based on visual ( ) Yes based on other information

( ) No sighting

j) Traffic information issued

( ) Yes, based on radar ( ) Yes based on visual ( ) Yes based on other information

( ) No sighting

*** Delete as appropriate**

k) Airborne Collision avoidance system-ACAS

( ) Not carried ( ) Type ( ) Traffic advisory issued

( ) Resolution advisory issued ( ) Traffic advisory or resolution advisory not issued

l) Radar identification

( ) No radar available ( ) radar identification ( ) No radar identification

m) Other aircraft sighted

( ) Yes ( ) No ( ) wrong aircraft sighted

3. Other aircraft

(a) Type and call sign/registration (if known)

(b) if a) above not known, describe below ( ) Mid wing ( ) Low wing

( ) 1 engine ( ) 2 engine ( ) 3 engines

c) Aircraft climbing of descending

( ) Level flight ( ) Climbing ( ) Descending

( ) Unknown issued

d) Aircraft bank angle

( ) Wing level ( ) Slight bank ( ) Moderate bank

( ) Steep bank ( ) Inverted ( ) Unknown

e) Aircraft direction of bank

( ) Left ( ) Right ( ) Unknown

f) Lights displayed

( ) Navigation Lights ( ) Strobe lights ( ) Cabin lights

( ) Red anti-collision ( ) Landing/taxi lights ( ) Logo (tail sign)

( ) Other ( ) None ( )Lights

( ) Unknown

* Delete as appropriate

g) Traffic avoidance advice issued by ATS
( )Yes, based on radar ( ) Yes, based on visual sighting
( ) Yes, based on other information ( ) No ( ) Unknown

h) Aircraft information issued
( ) Yes, based on radar ( ) Yes, based on visual sighting
( ) Yes, based on other information ( ) No ( ) Unknown

i) Avoiding action taken
( ) Yes ( ) No ( ) Unknown

4. Distance
a) Closest horizontal
b) Closest vertical distance

6. Any other information considered important by the pilot-in-command

* Delete as appropriate

D. MISCELLANEOUS

1. Information regarding reporting aircraft

a) Aircraft registration _____

b) Aircraft Type _____

c) Operator _____
d) Aerodrome of departure _____
e) Aerodrome of first landing _____destination_____
f) Reported by radio or other means to _____(name of ATS unit) at time _____UTC
g) Date/time/place of completion of form _____

2. Function, address and signature of person submitting report
a) Function _____
b) Address _____
c) Signature _____
d) Telephone Number _____

3. Function and signature of person receiving report
a) Function _____ b) Signature _____

E. SUPPLEMENTARY INFORMATION BY ATS UNIT CONCERNED

1. Receipt of report

a) Report received via AFTN/radio telephone/other (specify)*_____

b) Report received by _____(name of ATS unit) _____

2. Details of ATS action

3.

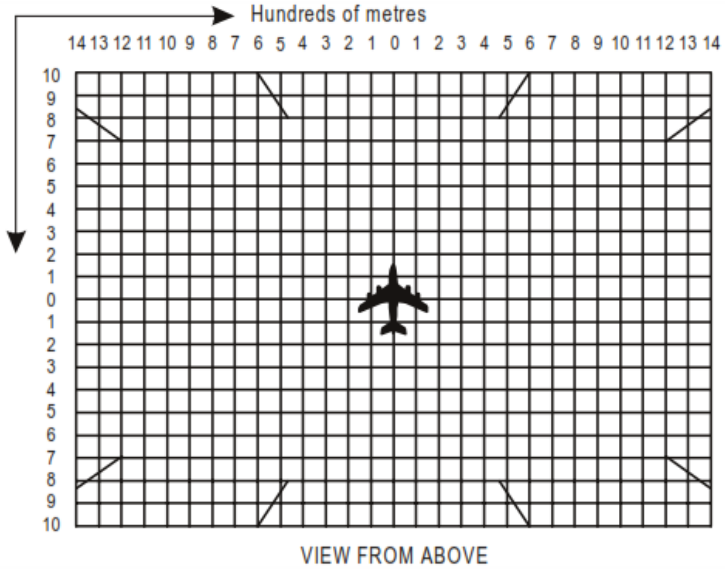
Clearance, incident seen (radar/visually, warning given, result of local enquiry. etc.

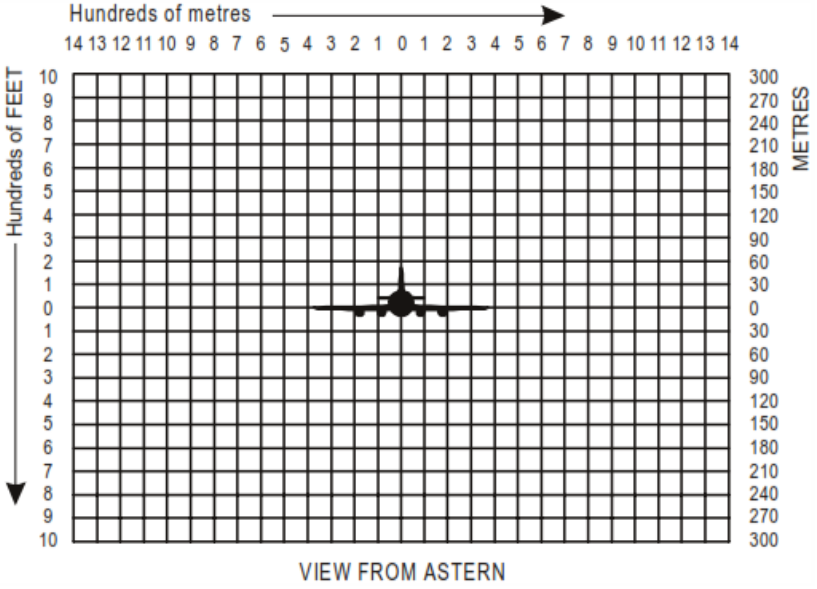
_____

* Delete as appropriate

DIAGRAMS OF AIR PROX

Mark passage of other aircraft relative to you, in plan on the left and in elevation on the right, assuming you are at the centre of each diagram. Include first sighting passing distance.





2. Instruction for the completion of the air traffic the incident report form

Item

A Aircraft identification of the air craft filing the report.

B An AIRPROX report should be filed immediately by radio

C 1 Date/time UTC and position in bearing and distance from a navigation aid or in LAT/LONG

C2 Information regarding aircraft filing report, tick as necessary.

C3c E.g. FL350/1 013 hpa or 2500 ft/QNH 1 007 hpa or 1 200 ft/QFE 998 hpa

C3 Information regarding aircraft other air craft involved.

C4 Passing distance state units used.

C5 Attach additional paper as required the diagrams may by used to show aircraft's positions.

D1 f) State name of ATS unit and Date/time in UTC.

D1 g) Date and time in UTC.

E2 Include details of ATS unit such as service provided, radiotelephony frequency, SSR Codes assigned and altimeter setting. Use diagram to show the aircraft's position and attach additional papers as required. \