



AMENDMENT SUMMARY

Amendment No. 3 incorporates additions/changes to:

- a) AFI/SUPPS, Chapter 7, concerning RVSM (7.2.4.1.1);
- b) EUR/SUPPS, Chapter 2, concerning controller-pilot data link communications (CPDLC) (2.1.14.2) and Chapter 3, concerning controller-pilot data link communications (CPDLC) (3.3.1, 3.3.1.1, 3.3.1.2, 3.3.1.3);
- c) MID/ASIA SUPPS, Chapter 4, concerning reduced vertical separation minimum (RVSM) (4.2.1) and Chapter 12, concerning aircraft observations and reports (12.1.2, 12.1.3, 12.1.4, 12.1.5);
- d) NAM/SUPPS, Chapter 12, concerning aircraft observations and reports (12.1.1);
- e) NAT/SUPPS, Chapter 2, concerning data link services (2.1.14, 2.1.14.1), Chapter 4 (4.1.1.5.1.2 c)), Chapter 9 (9.6.1.1), and Chapter 12, concerning aircraft observations and reports (12.1.1, 12.1.2, 12.1.3); and
- f) PAC/SUPPS, Chapter 3, concerning position reports (3.1.3.1).

as well as changes of an editorial or structural nature.

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Chapter 7. SAFETY MONITORING

7.1 STRATEGIC LATERAL OFFSET PROCEDURES (SLOP)

Nil.

7.2 AIRSPACE MONITORING

7.2.1 General

Nil.

7.2.2 RNAV

7.2.2.1 A target level of safety (TLS) of 5×10^{-9} fatal accidents per flight hour per dimension shall be established for route systems operating a 93 km (50 NM) lateral separation minimum. The safety level of such airspace shall be determined by an appropriate safety assessment.

Note.— Detailed guidance material on conducting safety assessments is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689).

7.2.2.2 The following criteria are used in the operational assessment of airspace system safety:

- a) the proportion of the total flight time spent by aircraft 46 km (25 NM) or more off the cleared track shall be less than 7×10^{-4} ; and
- b) the proportion of the total flight time spent by aircraft between 74 km and 110 km (40 NM and 60 NM) off the cleared track shall be less than 4.1×10^{-5} .

7.2.2.3 Adequate monitoring of flight operations shall be conducted to provide data to assist in the assessment of continuing compliance of aircraft with the lateral navigation performance capabilities of RNP 10 and 7.2.2.1. Such data shall include operational errors due to all causes. A safety assessment shall be carried out periodically, based on the data collected, to confirm that the safety level continues to be met.

Note.— Detailed guidance on monitoring is contained in the Air Traffic Services Planning Manual (Doc 9426) and the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689).

7.2.3 RNP

Nil.

7.2.4 RVSM

7.2.4.1 Target level of safety (TLS)

7.2.4.1.1 Application of RVSM in the airspace designated in 4.2.1 should meet a TLS of 5×10^{-9} fatal accidents per aircraft flight hour due to all causes of risk in the vertical dimension.

7.2.4.1.2 Adequate monitoring of flight operations in the EUR/SAM RVSM airspace shall be conducted to assist in the assessment of continuing compliance of aircraft with the height-keeping capabilities in 4.2.2. Monitoring shall include assessment of other sources of risk to ensure that the TLS specified in 7.2.4.1.1 is not exceeded.

Note.— Details of the policy and procedures for monitoring established by the South Atlantic Monitoring Agency (SATMA) are contained in the Guidance Material on the Implementation of a 300 m (1 000 ft) Vertical Separation Minimum (VSM) for Application in the EUR/SAM Corridor.

- b) the requested flight level below FL 290 for that portion of the route commencing at the entry point.

Note.— Refer to 6.10.2.4.1 for related ATC requirements.

2.1.6.3 Operators of non-RVSM-approved aircraft intending to operate from a departure aerodrome to a destination aerodrome, both of which are within the lateral limits of RVSM airspace, shall include, in Item 15 of the flight plan, a requested cruising level below FL 290.

Note.— Refer to 6.10.2.4.2 for related ATC requirements.

2.1.6.4 Operators of non-RVSM-approved aircraft intending to operate from a departure aerodrome within the lateral limits of RVSM airspace to a destination aerodrome outside the lateral limits of RVSM airspace at a cruising level of FL 290 or above shall include the following in Item 15 of the flight plan:

- a) the requested flight level below FL 290 for that portion of the route within the lateral limits of RVSM airspace; and
- b) the exit point at the lateral limits of RVSM airspace and the requested flight level for that portion of the route commencing at the exit point.

Note.— Refer to 6.10.2.4.3 for related ATC requirements.

2.1.6.5 Operators of non-RVSM-approved aircraft intending to operate at a cruising level between FL 290 to FL 410 inclusive from a departure aerodrome to a destination aerodrome, both of which are outside the lateral limits of RVSM airspace, with a portion of the route within the lateral limits of RVSM airspace, shall include the following in Item 15 of the flight plan:

- a) the entry point at the lateral limits of RVSM airspace and the requested flight level below FL 290 or above FL 410 for that portion of the route commencing at the entry point; and
- b) the exit point at the lateral limits of RVSM airspace and the requested flight level for that portion of the route commencing at the exit point.

Note.— Refer to 6.10.2.4.4 for related ATC requirements.

2.1.7 Non-RVSM-approved State aircraft

2.1.7.1 Operators of non-RVSM-approved State aircraft with a requested cruising level of FL 290 or above shall insert STS/NONRVSM in Item 18 of the flight plan.

Note.— Refer to 2.1.6.4 and 2.1.6.5 for flight planning provisions related to operating to/from RVSM airspace from/to adjacent non-RVSM airspace.

2.1.8 Indication of 8.33 kHz channel spacing capability

2.1.8.1 For flights conducted wholly or partly in the volume of airspace where the carriage of 8.33 kHz channel spacing radio equipment is mandatory, as specified in 3.2.1, in addition to the letter S and/or any other letters, as appropriate, the letter Y shall be inserted in Item 10 of the flight plan for aircraft equipped with 8.33 kHz channel spacing capable radio equipment, or the indicator STS/EXM833 shall be included in Item 18 for aircraft not equipped but which have been granted exemption from the mandatory carriage requirement. Aircraft normally capable of operating above FL 195 but planning to fly below this level shall include the letter Y as specified above.

Note.— In the case of “STS/EXM833”, a list of exemptions will have to be published in the States’ AIPs.

The absence of the letter Y in Item 10 will be taken as a lack of 8.33 kHz capable equipment.

2.1.8.2 In case of a change in the 8.33 kHz capability status for a flight planned to operate in the area specified in 3.2.1, a modification message shall be sent with the appropriate indicator inserted in the relevant Item.

2.1.9 Route

Nil.

2.1.10 Estimated times

Nil.

2.1.11 Mach number

Nil.

2.1.12 Alternative flight level

Nil.

2.1.13 Special handling (STS)

Nil.

2.1.14 Controller-pilot data link communications (CPDLC)

2.1.14.1 Flights planning to use CPDLC over the aeronautical telecommunication network (ATN) shall include in Item 18 of the flight plan the indicator CODE/ followed by the 24-bit aircraft address (expressed in the form of alphanumeric code of six hexadecimal characters).

Example: CODE/F00001

2.1.14.2 For flights conducted wholly or partly in the EUR CPDLC airspace specified in 3.3.1.1, and not equipped with CPDLC capabilities but which have been granted an exemption, the indicator RMK/CPDLCX shall be included in Item 18 of the flight plan.

2.2 CONTENT – AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)

2.2.1.1 When RVR information is included in Item 18 of the flight plan (“RVR/nnn”) to indicate the minimum RVR requirement of the flight, it may be used for air traffic flow management (ATFM) purposes.

Chapter 3. COMMUNICATIONS

3.1 AIR-GROUND COMMUNICATIONS AND IN-FLIGHT REPORTING

(A2 – Chapters 3 and 5; P-ATM – Chapter 4)

Note.— Annex 2, 3.6.5.1 and 5.3.3, require controlled flights and certain IFR flights outside controlled airspace to maintain a continuous listening watch on the appropriate radio channel. The PANS-ATM, 4.11.2, allows the appropriate ATS authority to limit the elements required in position reports in specified circumstances. The following expands such requirements and specifies additional details regarding the transmission and content of in-flight reports.

3.1.1 Communications equipment

Nil.

3.1.2 Continuous listening watch in uncontrolled airspace

3.1.2.1 Aircraft flying within uncontrolled airspace may be requested to maintain a continuous watch on the appropriate air-ground frequency of the ATS unit serving the flight information region within which the aircraft is flying.

3.1.3 Position reports

Nil.

3.1.4 Abbreviated position reports

3.1.4.1 Abbreviated position reports should only contain the aircraft identification, position, time and flight level or altitude, unless otherwise specified.

3.1.4.2 In defined portions of the airspace, designated by the appropriate ATS authority, where:

- a) through secondary surveillance radar (SSR), individual identity and verified Mode C information are permanently available in the form of labels associated with the radar position of the aircraft concerned; and
- b) reliable air-ground communications coverage and direct pilot-to-controller communications exist,

the initial call after changing a radio channel may contain only the aircraft identification and level; subsequently, position reports may contain only aircraft identification, position and time.

3.1.5 Read-back of VHF channels

3.1.5.1 When instructed to contact an ATS unit on a different VHF communication channel, the pilot shall read back the newly assigned channel.

3.2 MANDATORY CARRIAGE OF 8.33 KHZ CHANNEL SPACING CAPABLE RADIO EQUIPMENT

(A10, Vol. V – Chapter 4)

3.2.1 All aircraft operating above FL 195 in the European Region shall be equipped with 8.33 kHz channel spacing capable radio equipment.

3.2.2 Exemptions may be granted by States concerned for certain types of aircraft operation and for certain areas of operation.

Note.— All exemptions granted by States, including the extent to which aircraft from other States can be exempted, should be specified in States' AIPs.

3.2.3 When ultra-high frequency (UHF) ground infrastructure permits a close operational link to a State's airspace management procedure, UHF-equipped State aircraft not equipped with an 8.33 kHz channel spacing capable radio will be allowed to operate in the airspace designated for 8.33 kHz channel spacing operations.

Note.— Details of UHF coverage meeting the above infrastructure requirements should be specified in States' AIPs.

3.3 CONTROLLER-PILOT DATA LINK COMMUNICATIONS (CPDLC)

3.3.1 Area of applicability

3.3.1.1 All concerned aircraft operating flights as general air traffic in accordance with instrument flight rules in the airspace defined below shall be equipped with context management (CM) and controller-pilot data link communications (CPDLC) applications capable of supporting the following data link services: data link initiation capability, air traffic control clearance, air traffic control communications management and air traffic control microphone check:

- a) from 7 February 2013, in the following FIRs/UIRs above FL285:
Amsterdam FIR, Wien FIR, Barcelona UIR, Brindisi UIR, Brussels UIR, Canarias UIR, France UIR, Hannover UIR, Lisboa UIR, London UIR, Madrid UIR, Milano UIR, Rhein UIR, Roma UIR, Scottish UIR and Shannon UIR; and
- b) from 5 February 2015, in the following FIRs/UIRs above FL285:
Bratislava FIR, Bucuresti FIR, Budapest FIR, Kobenhavn FIR, Ljubljana FIR, Nicosia FIR, Praha FIR, Sofia FIR, Warszawa FIR, Finland UIR south of 61°30', Hellas UIR, Malta UIR, Riga UIR, Sweden UIR south of 61°30', Tallinn UIR, Vilnius UIR.

Note.— Requirements for the CM and CPDLC applications to support the data link services described are contained in RTCA DO-280B/EUROCAE ED-110B Interoperability Requirements Standard For ATN Baseline 1 (INTEROP ATN B1) and RTCA DO-290/EUROCAE ED-120 Safety and Performance Requirements Standard for Air Traffic Data Link Services in Continental Airspace (Continental SPR Standard), including Changes 1 and 2, with the exceptions that:

- a) *uplink message 135, CONFIRM ASSIGNED LEVEL, and uplink message 233, USE OF LOGICAL ACKNOWLEDGEMENT PROHIBITED, will not be used by the ground systems; and*
- b) *downlink message 38, ASSIGNED LEVEL (level), is not required by the aircraft.*

3.3.1.2 Conformance to the equipage requirement and operator's approval shall be verified by the State of Registry or the State of the Operator, as appropriate.

3.3.1.3 Aircraft are exempted from the requirement stipulated in 3.3.1.1 in the following cases:

- a) aircraft with an individual certificate of airworthiness first issued before 1 January 2011 are exempted until 5 February 2015;
- b) aircraft with an individual certificate of airworthiness first issued before 1 January 2014 and fitted with data link equipment certified against requirements specified in RTCA DO-258A/EUROCAE ED-100A (or ED-100) are exempted for the life of that particular airframe;
- c) aircraft which have a certificate of airworthiness issued before 31 December 1997 and which will cease operation in the airspace referred to in 3.3.1.1 before 31 December 2017 are exempted from the requirement stipulated in 3.3.1.1;
- d) state aircraft;
- e) aircraft flying in the airspace referred to in 3.3.1.1 for testing, delivery and for maintenance purposes; and
- f) operators of types of aircraft reaching the end of their production life and being produced in limited numbers, or types of aircraft for which re-engineering costs required would be disproportionate due to old design, may, based on this criteria, request from the appropriate authority the granting of an exemption. Such requests shall be made prior to 30 September 2012 and include detailed information justifying the need for the granting of the exemption.

3.4 SATELLITE VOICE COMMUNICATIONS (SATCOM)

Nil.

3.5 AERONAUTICAL MOBILE SERVICE

3.5.1 Selective calling (SELCAL)

Nil.

3.5.2 HF operations

Nil.

3.5.2.1 Assignment of voice traffic to HF families

Nil.

3.5.2.2 Procedures for mutual assistance

Nil.

3.6 AERONAUTICAL FIXED SERVICE**3.6.1 AFTN rationalization**

Nil.

3.7 RADIO CHANNELS/FREQUENCIES**3.7.1 VHF Datalink (VDL) Mode 2 – system characteristics of
ground and airborne installations
(A10, Vol. III, Part I)**

3.7.1.1 With effect from 1 January 2010P, all VDL Mode 2 ground transmitters in the European Region shall meet the provisions specified in Annex 10, Volume III, Part I, 6.2.4.1.1, 6.2.4.2.1, 6.2.4.2.2 and 6.2.4.3.1, relating to adjacent channel emissions.

3.7.1.2 With effect from 1 January 2010, all VDL Mode 2 airborne transmitters in the European Region shall meet the provisions specified in Annex 10, Volume III, Part I, 6.3.4.1.1, 6.3.4.2.1, 6.3.4.2.2 and 6.3.4.3.1, relating to adjacent channel emissions.

3.7.1.3 With effect from 1 January 2010, the receiving function of all VDL Mode 2 installations in the European Region shall meet the provisions specified in Annex 10, Volume III, Part I, 6.3.5.3.1, relating to the specified error rate.

Amman, Auckland Oceanic, Bahrain, Bangkok, Beijing, Beirut, Brisbane, Cairo, Chennai, Colombo, Damascus, Delhi, Dhaka, Emirates, Fukuoka, Guangzhou, Hanoi, Ho Chi Minh, Hong Kong, Honiara, Incheon, Jakarta, Jeddah, Karachi, Kathmandu, Kolkata, Kota Kinabalu, Kuala Lumpur, Kunming, Kuwait, Lahore, Lanzhou, Male, Manila, Melbourne, Mumbai, Muscat, Nauru, New Zealand, Phnom Penh, Port Moresby, Pyongyang, Sana'a, Sanya, Shanghai, Shenyang, Singapore, Taipei, Tehran, Ujung Pandang, Urumqi, Vientiane, Wuhan and Yangon.

Means of compliance

(A2 – Chapter 5 and Appendix 3; A6, Part I – Chapters 3, 4 and 7;
A6, Part II – Chapters 3 and 7; A8, Part IIIA – Chapter 8; A11 – Chapter 2)

4.2.2 Operators intending to conduct flights within the MID/ASIA Region where RVSM is applied shall require an RVSM approval either from the State of Registry or the State of the Operator. The State of Registry or the State of the Operator, as appropriate, should verify that the height-keeping performance capability of approved aircraft meets the requirements specified in Annex 6, Parts I and II.

Chapter 12. METEOROLOGY

12.1 AIRCRAFT OBSERVATIONS AND REPORTS

12.1.1 When air-ground data link is used and ADS is being applied, from the aircraft intending to operate on high-density air routes, ACCs shall designate those which shall be required to include the meteorological information block in the ADS messages every 15 minutes. The designation shall be made by the ACC delivering the clearance by including the required meteorological reporting frequency in the ADS contract. The designation should normally be made so as to designate one aircraft per air route and per flight level at approximately hourly intervals.

12.1.2 Aircraft cleared on high-density routes in the Amman, Bahrain, Damascus, Emirates, Jeddah, Kabul, Muscat, and Tehran FIRs between 2300 and 0500 UTC shall be required to transmit routine meteorological observations only when so designated at the time of receiving their clearance in accordance with 12.1.1.

12.1.3 Aircraft cleared on high-density routes between Tokyo and Hong Kong, Tokyo and Taipei, Hong Kong and Taipei, Hong Kong and Bangkok, Hong Kong and Singapore, Hong Kong and Kuala Lumpur, Bangkok and Kuala Lumpur, and Bangkok and Singapore shall be required to transmit routine meteorological observations only when so designated at the time of receiving their clearance in accordance with 12.1.1.

Chapter 12. METEOROLOGY

12.1 AIRCRAFT OBSERVATIONS AND REPORTS (A3 – Chapter 5)

Nil.

2.1.9.5 Flights operating along fixed ATS routes

2.1.9.5.1 For flights operating along the fixed ATS route network between Canada, the United States, Bermuda and the CAR Region, the track shall be defined by appropriate reference to this route network.

2.1.10 Estimated times

2.1.10.1 For flights conducted along one of the organized tracks from the entry point into the NAT FIRs to the exit point, the accumulated estimated elapsed time only to the first oceanic FIR boundary should be specified in Item 18 of the flight plan.

2.1.10.2 For flights conducted wholly or partly outside the organized tracks in the NAT Region, accumulated estimated elapsed times to significant points en route shall be specified in Item 18 of the flight plan.

2.1.11 Mach number

2.1.11.1 For turbo-jet aircraft intending to operate within the Bodø Oceanic, Gander Oceanic, New York Oceanic, Reykjavik, Santa Maria Oceanic and Shanwick Oceanic control areas, the planned true Mach number for any portion of their flight within these control areas shall be specified in Item 15 of the flight plan.

2.1.12 Alternative flight level

2.1.12.1 For turbo-jet aircraft intending to operate within the Gander Oceanic, New York Oceanic, Reykjavik, Santa Maria Oceanic and Shanwick Oceanic control areas, requests for a suitable alternative flight level may be included in Item 18 of the flight plan.

2.1.13 Special handling (STS)

Nil.

2.1.14 Data link services

2.1.14.1 All flights planning to operate in the NAT Region and intending to use data link services shall include in Item 18 of the ICAO flight plan the indicator REG/followed by the aircraft registration.

2.2 CONTENT – AIR TRAFFIC FLOW MANAGEMENT (ATFM)**2.2.1 Runway visual range (RVR)**

Nil.

2.2.2 Flight plan addressing and distribution

Nil.

2.2.3 Slot allocation exemptions

Nil.

2.3 SUBMISSION

(A2 – Chapter 3; P-ATM – Chapter 4)

2.3.1 General

2.3.1.1 Flight plans for flights departing from points within adjacent regions and entering the NAT Region without intermediate stops shall be submitted as early as possible.

2.3.2 Amendments

Nil.

2.4 REPETITIVE FLIGHT PLANS (RPLs)

Nil.

Chapter 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

Note.— As the North Atlantic (NAT) Region transitions to PBN as contained in the Performance-based Navigation (PBN) Manual (Doc 9613), the contents of 4.1 will be amended.

4.1.1 Area navigation (RNAV) specifications

4.1.1.1 RNAV 10 (RNP 10)

Note.— RNAV 10 retains the RNP 10 designation, as specified in the Performance-based Navigation (PBN) Manual (Doc 9613), 1.2.3.5.

Area of applicability

4.1.1.1.1 A lateral separation minimum of 93 km (50 NM) may be applied between flights operating within the control area of the New York Oceanic FIR.

Means of compliance

4.1.1.1.2 For application of 4.1.1.1.1, operators and civil aviation authorities must follow the provisions listed below.

4.1.1.1.3 The aircraft and operator must be approved RNP 10 or RNP 4 by the State of the Operator or the State of Registry, as appropriate. RNP 10 is the minimum navigation specification for the application of 93 km (50 NM) lateral separation.

4.1.1.1.4 States shall ensure, when granting approval for RNP 10 or RNP 4, that operators establish programmes to mitigate the occurrence of large lateral track errors due to equipment malfunction or operational error.

Note.— The Performance-based Navigation (PBN) Manual (Doc 9613) provides guidance on aircraft, operations and maintenance programmes for the initial achievement and continued compliance with the authorized navigation specification.

4.1.1.2 RNAV 5

Nil.

4.1.1.3 RNAV 2

Nil.

4.1.1.4 RNAV 1

Nil.

4.1.1.5 Pre-PBN navigation specifications

4.1.1.5.1 Minimum navigation performance specifications (MNPS)

Area of applicability

4.1.1.5.1.1 The MNPS shall be applicable in that volume of airspace between FL 285 and FL 420 within the Oceanic Control Areas of Santa Maria, Shanwick, Reykjavik, Gander Oceanic and New York Oceanic, excluding the area west of 60°W and south of 38°30'N.

Note.— This volume of airspace is referred to as the “MNPS airspace”.

Means of compliance

(A2 – Chapter 5; A6, Part I – Chapters 3, 4 and 7; A6, Part II – Chapters 3 and 7; A8 – Chapter 8)

4.1.1.5.1.2 Except for those flights specified in 4.1.1.5.1.5, aircraft operating within the volume of airspace specified in 4.1.1.5.1.1 shall have lateral navigation performance capability such that:

- a) the standard deviation of lateral track errors shall be less than 11.7 km (6.3 NM);
- b) the proportion of the total flight time spent by aircraft 56 km (30 NM) or more off the cleared track shall be less than 5.3×10^{-4} ; and
- c) the proportion of the total flight time spent by aircraft between 93 and 130 km (50 and 70 NM) off the cleared track shall be less than 1.3×10^{-4} .

4.1.1.5.1.3 The State of Registry or the State of the Operator, as appropriate, should verify that the lateral navigation capability of approved aircraft meets the requirements specified in 4.1.1.5.1.2.

Note.— Guidance material of use to those involved in the initial achievement and continued maintenance of the navigation capability set forth in 4.1.1.5.1.2 has been issued by ICAO under the title Guidance and Information Material Concerning Air Navigation in the North Atlantic Region (NAT Doc. 001) and will be supplemented and updated as required and as new material becomes available.

4.1.1.5.1.4 When granting approval for operations in MNPS airspace, States of Registry shall ensure that in-flight operating drills include mandatory navigation cross-checking procedures which will identify navigation errors in sufficient time to prevent the aircraft inadvertently deviating from the ATC-cleared route. Guidance on procedures are detailed in NAT Doc 001 and North Atlantic MNPS Airspace Operations Manual.

4.1.1.5.1.5 Flights not subject to an Oceanic Clearance, which flight plan to route through Brest Oceanic Transition Area (BOTA) and/or Shannon Oceanic Transition Area (SOTA), are not subject to MNPS approval.

Note 1.— SOTA is defined as that airspace from DINIM (510000N 0150000W) — LESLU (510000N 0080000W) — 483000N 0080000W — BEDRA (490000N 0150000W) to DINIM (510000N 0150000W).

Note 2.— BOTA is defined as that airspace from 483400N 0084500W — 483000N 0080000W — 450000N 0080000W — 450000N 0084500W to 483400N 0084500W.

9.5 LOSS OF VERTICAL NAVIGATION PERFORMANCE REQUIRED FOR RVSM

9.5.1 General

Nil.

9.5.2 Degradation of aircraft equipment – pilot reported

Nil.

9.5.3 Severe turbulence – not forecast

Nil.

9.5.4 Severe turbulence – forecast

Nil.

9.6 EN-ROUTE DIVERSION

9.6.1 En-route diversion across the prevailing NAT air traffic flow

9.6.1.1 Before diverting across the flow of adjacent traffic, the aircraft should climb above FL 410 or descend below FL 280 using the procedures specified in 15.2.2 of the PANS-ATM. However, if the pilot is unable or unwilling to do so, the aircraft should be flown at a level as defined in 15.2.2.3 b) of the PANS-ATM for the diversion until a revised ATC clearance is obtained.

9.7 INTER-REGION INTERFACE FOR NON-RVSM-APPROVED AIRCRAFT

Nil.

9.8 MANNED BALLOON FLIGHTS

9.8.1 Manned balloon flights authorized to operate in the NAT Region shall operate outside the MNPS airspace.

9.8.2 Within the NAT Region, manned balloons shall have a communications capability in accordance with Annex 2.

Chapter 12. METEOROLOGY

12.1 AIRCRAFT OBSERVATIONS AND REPORTS

Nil.

Chapter 3. COMMUNICATIONS

3.1 AIR-GROUND COMMUNICATIONS AND IN-FLIGHT REPORTING

3.1.1 Communications equipment

Nil.

3.1.2 Continuous listening watch in uncontrolled airspace

(A2 – Chapters 3 and 5; P-ATM – Chapter 4)

3.1.2.1 All VFR flights, and IFR flights outside controlled airspace, shall maintain a listening watch on the frequency where flight information service is provided and report position unless otherwise authorized by the State overflown.

3.1.3 Position reports

Time or place

(A2 – Chapters 3 and 5; P-ATM – Chapter 4)

3.1.3.1 States should establish reporting points at locations fulfilling operational requirements as set forth in Annex 11, 2.14.1, 2.14.3 and Appendix 2. Except where operational considerations dictate otherwise, those points should be located at intervals of 5 degrees of latitude or longitude (latitude if the route is predominantly north-south, longitude if east-west).

3.1.3.2 Within the Anchorage Oceanic, Auckland Oceanic, Nadi, Oakland Oceanic (excluding the Honolulu terminal area), and Tahiti control areas/FIRs, flights shall provide position reports as follows:

- a) if operating on a fixed route, report over designated reporting points using the specified name of such points;
- b) if operating on a route without designated reporting points, aircraft traversing 10 degrees of latitude or longitude in 1 hour and 20 minutes or less should normally be required to report only at 10-degree intervals. Slower aircraft should normally be required to report at 5-degree intervals.

Transmission

(P-ATM – Chapter 4)

3.1.3.3 The last position report before passing from one FIR to an adjacent FIR shall also be made to the ATS unit serving the airspace about to be entered.

3.1.3.4 Responsibility for the transmission of position reports to the additional ATS units specified in 3.1.3.3 may be delegated to the appropriate communications station(s) through local arrangements.

Position and time

(P-ATM – Chapter 4)

3.1.3.5 Verbal position reports shall be identified by the spoken word “position” transmitted immediately before or after the aircraft call sign/identification.

3.1.3.6 The position of the aircraft shall be transmitted in reference to a reporting point name, name-code designator or, if not named:

a) for flights operating in a predominantly east-west direction:

1) latitude in degrees and minutes; and

2) longitude in degrees only;

b) for flights operating in a predominantly north-south direction:

1) latitude in degrees only; and

2) longitude in degrees and minutes.

3.1.3.7 The time at which the aircraft is over the reporting point shall be transmitted in four digits, giving both the hour and the minutes.

Next position and time over

3.1.3.8 Estimated time over next position shall be expressed in four digits.

3.1.4 Abbreviated position reports

Nil.

3.1.5 Read-back of VHF channels

Nil.

3.2 MANDATORY CARRIAGE OF 8.33 KHZ CHANNEL SPACING CAPABLE RADIO EQUIPMENT

Nil.

3.3 CONTROLLER-PILOT DATA LINK COMMUNICATIONS (CPDLC)

Nil.