

EUR Regional Supplementary Procedures (SUPPS) (Doc 7030)
Working Copy – 5th Edition - 2008

This version of the Working Copy of the 5th Edition of the EUR *Regional Supplementary Procedures* (SUPPS) (Doc 7030), dated 30/11/07, includes the following approved amendment(s) which have not yet been published:

P. f. Amdt. Serial No.	Originator	Brief Description	Date Approved	Date Entered
S06/36	EANPG	Paragraph 3.7 - VHF VDL Mode 2	20/06/08	15/10/08
S08/01	EANPG	Paragraph 2.1.14 – CPDLC	14/11/08	20/11/08

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The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

FOREWORD

1. The ICAO Regional Supplementary Procedures (SUPPS) form the procedural part of the Air Navigation Plans developed by Regional Air Navigation (RAN) Meetings to meet those needs of specific areas which are not covered in the worldwide provisions. They complement the statement of requirements for facilities and services contained in the Air Navigation Plan publications. Procedures of worldwide applicability are included either in the Annexes to the Convention on International Civil Aviation as Standards or Recommended Practices, or in the Procedures for Air Navigation Services (PANS).

2. In the development of Regional Supplementary Procedures, the following criteria must be satisfied:

- a) Regional Supplementary Procedures should indicate a mode of implementing procedural provisions in Annexes and PANS, as distinct from a statement or description of required facilities and services as published in the Air Navigation Plan publications. Regional Supplementary Procedures may also indicate permissible additions to provisions in Annexes and PANS, subject to the restrictions in b) and c).
- b) Regional Supplementary Procedures must **not** be in conflict with the provisions contained in the Annexes or PANS. They must either specify detailed procedural regional options for those provisions or promulgate a regional procedure of justifiable operational significance, additional to existing provisions in Annexes or PANS.
- c) In the drafting of Regional Supplementary Procedures, variations in the text of procedures with similar intent applicable to more than one area should be avoided.

3. The Regional Supplementary Procedures do not have the same status as Standards and Recommended Practices. The latter are **adopted** by Council in pursuance of Article 37 of the Convention on International Civil Aviation, subject to the full procedure of Article 90. PANS are **approved** by the President of the Council of ICAO on behalf of the Council and SUPPS are **approved** by the Council; the PANS are recommended to Contracting States for worldwide use, whilst the SUPPS are recommended to Contracting States for application in the groups of flight information regions to which they are relevant.

4. PANS were originally developed from common recommendations of regional meetings and were given worldwide application by the ICAO Council after action thereon by ICAO Divisions. Subsequently, there has been a gradual evolution of procedures from the regional to the worldwide category as ICAO Divisions have been able to adapt regionally developed procedures to worldwide requirements. Concurrently, some of the worldwide procedures have been found suitable for classification as Standards or Recommended Practices and therefore are gradually being incorporated into the Annexes to the Convention.

5. Application of the Regional Supplementary Procedures in certain areas of the world has been specified according to groups of flight information regions (FIRs) as shown on page (xiii). The abbreviations on the chart identifying the groups of flight information regions in which specific sets of SUPPS apply have been chosen in reference to ICAO region designators, but the limits of the areas of application do not necessarily coincide with the boundaries of the ICAO regions.

6. Whenever there is a specific relationship between a supplementary procedure and an Annex or PANS, such relationship has been indicated by reference to the parent document and relevant chapter, appendix, etc. These references appear above the text, together with the appropriate abbreviation as follows:

A — Annexes to the Convention
P — Procedures for Air Navigation Services

Examples: (A2 – Chapter 3) — Refers to Chapter 3 of Annex 2 — *Rules of the Air*
(P-ATM – Chapters 7 and 9) — Refers to Chapters 7 and 9 of Doc 4444 — *Procedures for Air Navigation Services — Air Traffic Management*.

7. The degree of non-application of the Regional Supplementary Procedures or national differences are notified in Aeronautical Information Publications in accordance with the provisions of Annex 15 — *Aeronautical Information Services* (cf. 4.1.1, 4.1.2 c) and Appendix 1).

8. This document is maintained by amendments as required. Any errors or omissions should be brought to the attention of the Secretary General, ICAO, 999 University Street, Montréal, Quebec, Canada H3C 5H7.

PROCEDURE FOR THE AMENDMENT OF REGIONAL SUPPLEMENTARY PROCEDURES

(Approved by Council (25-2) 20/5/55, (84-5) 7/3/75, (153-3) 25/2/98)

1. INTRODUCTION

1.1 Regional Supplementary Procedures are normally formulated at regional air navigation meetings and become effective after review by the Air Navigation Commission and approval by the Council.

1.2 Amendments to Regional Supplementary Procedures may be proposed by a Contracting State or group of States as set out in Section 2 or by an international organization as set out in Section 3 or may become necessary as a consequence of action by Council in adopting or amending Standards and Recommended Practices or in approving or amending Procedures for Air Navigation Services as set out in Section 4.

2. AMENDMENTS PROPOSED BY A CONTRACTING STATE OR GROUP OF STATES

2.1 If any Contracting State or group of States of a region wishes to propose an amendment to Regional Supplementary Procedures for that region, it should submit the proposal, adequately documented, to the Secretary General through the Regional Office accredited to that State. The proposal should include the facts that led the State to the conclusion that the amendment is necessary.

2.2 The Secretary General will circulate the proposal, adequately documented, with a request for comments to all provider and user States of the region considered affected, as well as to user States outside the region and international organizations that may be concerned with the proposal. If, however, the Secretary General considers that the proposed amendment conflicts with established ICAO policy or that it raises questions which the Secretary General considers should be brought to the attention of the Air Navigation Commission, the proposal will be first presented, adequately documented, to the Commission. In such cases, the Commission will decide on the action to be taken.

2.3 If, in reply to the Secretary General's inquiry to States and selected international organizations, no objection is raised to the proposal by a specified date, the Secretary General will circulate an amendment memorandum to Representatives on the Council and to Members of the Air Navigation Commission inviting each recipient to advise, normally within seven days,^{*} whether formal discussion of the proposed amendment is desired. The memorandum will explain the proposed amendment, summarize the comments received and include Secretariat comments as appropriate. If, in reply to the Secretary General's inquiry to States and selected international organizations, any objection is raised and if the objection remains after further consultation, the matter will be documented for formal consideration by the Air Navigation Commission and appropriate recommendations of the Commission to the Council.

2.4 If, at the end of the seven-day period,^{*} there has been no request for discussion of the amendment, it will be submitted to the President of the Council who is authorized to approve the amendment on behalf of the Council.

^{*} During recess, a period of three weeks will normally be allowed.

2.5 If, on the other hand, any Representative on the Council or Member of the Air Navigation Commission indicates a desire for formal discussion of the proposed amendment, the matter will be documented for formal consideration by the Commission and appropriate recommendations of the Commission to the Council.

3. AMENDMENTS PROPOSED BY INTERNATIONAL ORGANIZATIONS

3.1 Proposals for the amendment of Regional Supplementary Procedures submitted by international organizations directly concerned with the operation of aircraft, which may be invited to attend suitable ICAO meetings and which attended the meeting(s) where the relevant procedures were prepared, will be dealt with in the same manner as those received from States, except that, before circulating a proposal to States and selected international organizations pursuant to 2.2, the Secretary General will ascertain whether it has adequate support from the State or group of States whose facilities, services and procedures will be affected. If such support is not forthcoming, the proposal will be presented to the Commission, and the Commission will decide on the action to be taken.

4. CONSEQUENTIAL AMENDMENTS

4.1 In the event of an amendment to Regional Supplementary Procedures becoming necessary as a consequence of action by Council in adopting or amending Standards and Recommended Practices or in approving or amending Procedures for Air Navigation Services, the amendment will be drafted by the Secretary General.

4.2 The Secretary General will circulate the amendment, together with relevant explanatory material, in a memorandum to each Member of the Air Navigation Commission inviting each recipient to notify him, normally within seven days,* whether formal discussion of the proposed amendment is desired.

4.3 If, at the end of the seven-day period,* there has been no request for discussion of the amendment, formal approval will be given by the Air Navigation Commission acting on behalf of the Council** or, if the Commission is in recess, by the President of the Council.

4.4 If any Commissioner indicates a desire for formal discussion of the amendment, the matter will be documented for formal consideration by the Air Navigation Commission. If the Commission concludes that the amendment is necessary, it is authorized to approve the amendment on behalf of the Council,** in its original form or modified.

5. PROMULGATION OF APPROVED AMENDMENTS

5.1 Amendments to Regional Supplementary Procedures that have been approved in accordance with the above procedures will be promulgated in Doc 7030, *Regional Supplementary Procedures*.

* During recess, a period of three weeks will normally be allowed.

** The Air Navigation Commission has been authorized [17-1, Doc 7328-1, (C/853-1)] to approve consequential amendments on behalf of the Council.

Glossary

ACAS	airborne collision avoidance systems
ACC	area control centre
ADLP	aircraft data link processor
ADS-B	automatic dependent surveillance – broadcast
ADS-C	automatic dependent surveillance – contract
AFCS	automatic flight control system
AFTN	aeronautical fixed telecommunication network
AIM	ATFM information message
AIP	aeronautical information publication
AIRAC	aeronautical information regulation and control
AIS	aeronautical information service
ANM	ATFM notification message
ANP	air navigation plan
ARO	air traffic services reporting office
ASDA	accelerate-stop distance available
ASE	altimetry system error
ASTER	ATFM system of the EUR region
ATC	air traffic control
ATFM	air traffic flow management
ATIS	automatic terminal information services
ATM	air traffic management
ATS	air traffic service
B-RNAV	basic area navigation
CAP	Code allocation plan
CARSAMMA	CAR/SAM monitoring agency
CFMU	central flow management unit
CHG	modification message
CNL	cancellation message
CPDLC	controller-pilot data link communications
CRAM	conditional route availability message
CTA	control area
CTOT	calculated take-off time
DAP	downlink aircraft parameter
DES	de-suspension message
DME	distance-measuring equipment
DOF	date of flight
EAD	European AIS database
EOBT	estimated off-block time

FIR	flight information region
FIS	flight information service
FL	flight level
FLAS	flight level allocation scheme
FLS	flight suspension message
FPL	flight plan
GAT	general air traffic
HF	high frequency
IFBP	in-flight broadcast by pilots
IFF	identification friend/foe
IFPS	initial flight plan processing system
IFR	instrument flight rules
IGA	international general aviation
INS	inertial navigation system
LAM	logical acknowledgement message
MASPS	minimum aviation system performance standards
MFA	minimum flight altitude
MNPS	minimum navigation performance specifications
MSA	minimum sector altitude
NOF	NOTAM offices
NOTAM	notice to airmen
OCA	oceanic control area
OTS	organized track system
PACOTS	Pacific organized track systems
PIB	pre-flight information bulletin
P-RNAV	precision area navigation
RFP	replacement flight plan
RNAV	area navigation
RNP	required navigation performance
RPL	repetitive flight plan
RTF	radiotelephony
RVR	runway visual range
RVSM	reduced vertical separation minimum

SAM	slot allocation message
SRM	slot revision message
SATMA	South Atlantic monitoring agency
SAT NAV	satellite navigation
SATCOM	satellite voice communications
SD	standard deviation
SELCAL	selective calling
SID	standard instrument departure
SIF	selective identification feature
SLC	slot cancellation message
SLOP	strategic lateral offset procedures
SSR	secondary surveillance radar
STAR	standard instrument arrival
STS	special handling
TA	transition altitude
TAS	true airspeed
TLS	target level of safety
TMA	terminal control area
TODA	take-off distance available
TORA	take-off run available
TVE	total vertical error
UAC	upper area control centre
UIR	upper flight information region
VSM	vertical separation minimum
VFR	visual flight rules
VOLMET	meteorological information for aircraft in flight
VOR	VHF omnidirectional radio range
WATRS	West Atlantic Route System

EUROPEAN (EUR) REGIONAL SUPPLEMENTARY PROCEDURES

These procedures are supplementary to the provisions contained in Annex 2, Annex 6 (Parts I and II), Annex 10 (Volumes IV and V), Annex 11, Annex 15, PANS-ATM (Doc 4444) and PANS-OPS (Doc 8168). The area of application of the EUR Regional Supplementary Procedures is included on the Index to Application of Supplementary Procedures chart.

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Chapter 1. FLIGHT RULES

1.1 VISUAL FLIGHT RULES (VFR)

1.1.1 Special application

Nil.

1.2 INSTRUMENT FLIGHT RULES (IFR)

(A2 – Chapters 2 and 5)

Note.— Annex 2, 2.2, permits a flight to operate using either instrument flight rules or visual flight rules when operated in visual meteorological conditions subject to the limitations listed in Chapter 4 of the Annex. The following indicates certain additional restrictions.

1.2.1 Special application

1.2.1.1 Flights shall be conducted in accordance with instrument flight rules when operated above flight level (FL) 150 within the Amman, Beirut, Cairo, Damascus, Nicosia and Tel Aviv flight information regions (FIR).

1.2.1.2 Flights shall be conducted in accordance with instrument flight rules when operated within or above the EUR RVSM airspace as specified in 4.2.1.

1.2.2 Flight level changes

Nil.

1.3 AIR TRAFFIC ADVISORY SERVICE

(P-ATM – Chapter 9)

Note.— The circumstances under which it is compulsory to obtain air traffic advisory services are listed below.

1.3.1 All IFR flights shall comply with the procedures for air traffic advisory service when operating in advisory airspace within the Amman, Beirut, Cairo, Damascus and Tel Aviv flight information regions.

Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL

(A2 – Chapter 3; P-ATM – Chapter 11)

2.1.1 Date of flight

Note.— The PANS-ATM, 11.4.2.2.2.5, states that “if a flight plan is filed more than 24 hours in advance of the estimated off-block time of the flight to which it refers, that flight plan shall be held in abeyance until at most 24 hours before the flight begins so as to avoid the need for the insertion of a date group into that flight plan”. The following specifies details regarding the insertion of a date group into the flight plan.

2.1.1.1 If a flight plan for a flight conducted wholly in the EUR Region is filed more than 24 hours in advance of the estimated off-block time (EOBT), it is mandatory to provide the date of the flight (DOF). If the flight plan is filed less than 24 hours in advance of the EOBT, the date of the flight may be optionally indicated. This information will be inserted in Item 18 of the flight plan as a 3-letter indicator (DOF) followed by an oblique stroke and date of flight in a 6-figure group format:

DOF/YMMDD (YY = year; MM = month; DD = day)

2.1.2 Area navigation (RNAV) specifications

2.1.2.1 Operators of aircraft approved for basic area navigation (B-RNAV) operations, as set out in 4.1.1.5.2, shall insert the designator “R” in Item 10 of the flight plan.

2.1.2.2 Operators of aircraft approved for precision area navigation (P-RNAV) operations, as set out in 4.1.1.5.2, shall, in addition to the designator “R”, also insert the designator “P” in Item 10 of the flight plan.

2.1.2.3 Operators of State aircraft not equipped with RNAV shall not insert the designators “S” or “R” or “P” in Item 10 of the flight plan. Instead, STS/NONRNAV shall be inserted in Item 18 of the flight plan.

2.1.2.4 Where a failure or degradation results in the aircraft being unable to meet the P-RNAV functionality and accuracy requirements of 4.1.1.5.2.4 before departure, the operator of the aircraft shall not insert the designator “P” in Item 10 of the flight plan. Subsequently, for a flight for which a flight plan has been submitted, an appropriate new flight plan shall be submitted and the old flight plan cancelled. For a flight operating based on a repetitive flight plan (RPL), the RPL shall be cancelled and an appropriate new flight plan shall be submitted.

2.1.2.5 In addition, where a failure or degradation results in the aircraft being unable to meet the B-RNAV functionality and accuracy requirements of 4.1.1.5.2.6 before departure, the operator of the aircraft shall not insert the designators “S” or “R” or “P” in Item 10 of the flight plan. Since such flights require special handling by ATC, Item 18 of the flight plan shall contain STS/RNAVINOP. Subsequently, for a flight for which a flight plan has been submitted, an appropriate new flight plan shall be submitted and the old flight plan cancelled. For a flight operating based on an RPL, the RPL shall be cancelled and an appropriate new flight plan shall be submitted.

2.1.3 Required navigation performance (RNP) specifications

Nil.

2.1.4 Minimum navigation performance specifications (MNPS)

Nil.

2.1.5 Reduced vertical separation minimum (RVSM)-approved aircraft

2.1.5.1 Operators of RVSM-approved aircraft shall indicate the approval status by inserting the letter W in Item 10 of the flight plan, regardless of the requested flight level.

2.1.5.2 Operators of RVSM-approved aircraft shall also include the letter W in Item Q of the RPL, regardless of the requested flight level. If a change of aircraft operated in accordance with an RPL results in a modification of the RVSM approval status as stated in Item Q, a modification message (CHG) shall be submitted by the operator.

2.1.5.3 Operators of formation flights of State aircraft shall not insert the letter W in Item 10 of the flight plan, regardless of the RVSM approval status of the aircraft concerned. Operators of formation flights of State aircraft intending to operate within the EUR RVSM airspace as general air traffic (GAT) shall include STS/NONRVSM in Item 18 of the flight plan.

Note.— The area of applicability of EUR RVSM airspace is specified in 4.2.1 and 4.2.2.

2.1.5.4 Operators of RVSM-approved aircraft and non-RVSM-approved State aircraft intending to operate from non-RVSM airspace to adjacent RVSM airspace shall include, in Item 15 of the flight plan, the entry point at the lateral limits of RVSM airspace and the requested flight level for that portion of the route commencing at the entry point.

Note.— Refer to 6.10.2.2 for related air traffic control (ATC) requirements.

2.1.5.5 Operators of RVSM-approved aircraft and non-RVSM-approved State aircraft intending to operate from RVSM airspace to adjacent non-RVSM airspace shall include, in Item 15 of the flight plan, the exit point at the lateral limit of RVSM airspace and the requested flight level for that portion of the route commencing at the exit point.

Note.— Refer to 6.10.2.3 for related ATC requirements.

2.1.6 Non-RVSM-approved aircraft

Note.— The flight planning requirements for non-RVSM-approved State aircraft are specified in 2.1.7.

2.1.6.1 Except for operations within RVSM transition airspace as defined in 6.10.2.1.1 and within airspace designated in accordance with 9.7.1.1, operators of non-RVSM-approved aircraft shall flight plan to operate outside RVSM airspace.

Note.— Refer to 6.10.1.1 regarding ATC clearance into RVSM airspace.

2.1.6.2 Operators of non-RVSM-approved aircraft intending to operate from a departure aerodrome outside the lateral limits of RVSM airspace at a cruising level of FL 290 or above to a destination aerodrome 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

- 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 telecommunications 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 alphanumerical code of six hexadecimal characters).

Example: CODE/F00001

Source: Proposal for amendment No: EUR/NAT-S 08/01-EUR 2-4, approved on 14 November 2008, ICAO Letter Ref: PFA/SUP/EUR/2008/0801 - 08-0475.TEC dated 20 November 2008 refers

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.

2.2.2 Flight plan addressing and distribution (P-ATM – Chapter 11)

2.2.2.1 Flight plans and associated messages for all IFR flights, including the IFR portions of mixed IFR/VFR flights, entering, over flying or departing the IFPS zone (IFPZ), shall be addressed only to the two integrated initial flight plan processing system (IFPS) addresses for that portion of the flight within the IFPZ. The IFPS addresses to be included in flight plans and associated messages submitted by operators that intend to fly into or through the IFPZ are as follows:

Network	IFPS Unit Addresses	
	IFPU1 Haren, Belgium	IFPU2 Brétigny, France
AFTN	EBBDZMFP	LFPYZMFP
SITA	BRUEP7X	PAREP7X

2.2.2.2 IFPS will ensure distribution of the accepted flight plan to all relevant ATS units within their area of responsibility. Flight plan message originators filing to IFPS are responsible for ensuring that the flight plan and any modifications made thereto are addressed to all the relevant ATS units outside the IFPZ. In order to ensure consistency between the flight plan data distributed within the IFPZ and that distributed outside the IFPZ, the Central Flow Management Unit (CFMU) has established a “re-addressing function”. The “re-addressing function” is intended primarily for flights originating within the IFPZ and proceeding outside the IFPZ.

Note.— Detailed procedures and information applicable to flight plan addressing and distribution are contained in the EUROCONTROL “Basic CFMU Handbook”.

2.2.3 Slot allocation exemptions

2.2.3.1 The following flights are exempted from ATFM slot allocations:

- a) flights carrying Head of State or equivalent status [“ST/HEAD”]; and
- b) flights conducting search and rescue operations [“STS/SAR”].

2.3 SUBMISSION

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

2.3.1 General

2.3.1.1 A centralized flight planning processing and distribution service has been established under the authority of the EUROCONTROL CFMU. The service is provided through the IFPS and covers part of the ICAO EUR Region known as the IFPZ.

2.3.1.2 For all IFR flights, including the IFR portions of mixed IFR/VFR flights, entering, overflying or departing the

IFPZ, a flight plan shall be submitted to IFPS either directly or via the Air Traffic Services Reporting Office (ARO) serving the aerodrome of departure.

Note 1.— The area of applicability and detailed procedures pertaining to the IFPZ are contained in the EUROCONTROL “Basic CFMU Handbook”.

Note 2.— See 2.2.2 for information concerning flight plan addressing and distribution.

2.3.1.3 Flight plans for flights which may be subject to ATFM shall be submitted at least 3 hours before the EOBT.

2.3.2 Amendments

(P-ATM – Chapter 11)

2.3.2.1 Any changes to the EOBT of more than 15 minutes for any IFR flight within the IFPZ shall be communicated to the IFPS.

2.3.2.2 When an individual flight plan (FPL) or a repetitive flight plan (RPL) has been filed but it is decided, within 4 hours of EOBT, to use an alternative routing between the same aerodromes of departure and destination, either a modification message (CHG) may be sent or alternatively:

- a) a cancellation message (CNL) with priority “DD” shall be sent to IFPS;
- b) not less than 5 minutes after sending the CNL message, a replacement flight plan (RFP) in the form of an FPL with identical call sign shall be transmitted;
- c) the RFP shall contain, as the first element of Item 18, the indication “RFP/Qn”, where RFP signifies “Replacement Flight Plan” and “n” is “1” for the first replacement, “2” for the second replacement, and so on; and
- d) the last RFP shall be filed at least 30 minutes before EOBT.

Note.— The submission of a replacement flight plan is normally accepted as fulfilling a State’s requirement for advance notification of flight (diplomatic clearance).

2.4 REPETITIVE FLIGHT PLANS (RPLs)

(P-ATM – Chapter 16 and Appendix 2)

Note.— Detailed provisions for the handling of RPLs within the IFPZ are specified in the EUROCONTROL “Basic CFMU Handbook”.

2.4.1 In order to avoid a disproportionate workload on ATS units, RPLs will not be accepted for any flight conducted on 25 December. On this day, individual flight plans shall be filed for all flights.

2.4.2 All operators filing RPLs shall include, in Item Q of the RPL, all equipment and capability information in conformity with Item 10 of the flight plan. This includes appropriate indicators/designators as specified in 2.1.2.1, 2.1.2.2, 2.1.5.1 and 2.1.8.1.

2.4.3 When there is a change of equipment or capability for a flight which is subject to an RPL, a modification message (CHG) for the day of operation shall be sent not earlier than 20 hours before the estimated EOBT.

2.4.4 Similarly, other changes, delays, or cancellations for the day of operation shall be sent not earlier than 20 hours before the EOBT.

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 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)

Nil

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.

3.6 AERONAUTICAL FIXED SERVICE

3.6.1 AFTN rationalization

Nil.

3.7 RADIO CHANNELS/FREQUENCIES

~~Nil~~

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 2010, 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.

Source: Proposal for amendment No: EUR/NAT-S 06/36-EUR 3-3, Approved on 20 June 2008, ICAO Letter Ref: PFA/SUP/EUR/2006/06-36-08-0285.SLG dated 27 June 2008 refers

Chapter 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

Note.— As the European (EUR) Region transitions to PBN as contained in the Performance-based Navigation 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)

Nil.

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 RNP 5

Area of applicability

4.1.1.5.1.1 The following RNP 5 provisions shall apply to operations conducted under IFR on designated RNP 5 routes within the following FIRs:

Amman, Beirut, Cairo, Damascus and Tel Aviv.

^{*} In preparation.

Means of compliance

4.1.1.5.1.2 Within the FIRs specified in 4.1.1.5.1.1, only RNAV-equipped aircraft having a navigation accuracy meeting RNP 5 may plan for operations under IFR on those ATS routes and within those level bands which have been specified as requiring RNP 5 in the relevant State AIP or NOTAM.

4.1.1.5.1.3 Aircraft operating under IFR on designated RNP 5 routes shall be equipped with, as a minimum, RNAV equipment meeting the following requirements:

- a) a system use accuracy equal to, or better than, 4.6 km (2.5 NM) for one standard deviation, with a 95 per cent containment value of ± 9.26 km (± 5 NM), thereby meeting the accuracy requirements for RNP 5; and
- b) an average continuity of service of 99.99 per cent of flight time.

4.1.1.5.1.4 Until such time as VOR or DME facilities cease to be available, the carriage of a single RNAV system having a navigation accuracy meeting RNP 5 but not meeting the above continuity of service requirements may be approved for RNAV operations if the aircraft is also carrying VOR and DME equipment.

4.1.1.5.1.5 Conformance to the navigation requirement shall be verified by the State of Registry or the State of the Operator, as appropriate.

Note.— Guidance material concerning navigation accuracy requirements is contained in the Performance-based Navigation Manual (Doc 9613).

4.1.1.5.1.6 The cross-track distances required to achieve a given level of containment for RNP 5 routes shall be as specified in the following table:

Percentage containment for RNP 5						
	95	96	97	98	99	99.5
km	9.3	10.2	10.2	11.1	12.0	13.9
NM	5.0	5.5	5.5	6.0	6.5	7.5

4.1.1.5.1.7 Correct operation of the aircraft RNAV system shall be verified before joining and during operation on an RNP 5 route. This shall include confirmation that:

- a) the routing is in accordance with the clearance; and
- b) the aircraft navigation accuracy meets RNP 5.

4.1.1.5.2 Precision RNAV (P-RNAV) and basic RNAV (B-RNAV)

4.1.1.5.2.1 The provisions in respect of en-route operations, as specified in 4.1.1.5.2.6 and 4.1.1.5.2.7, shall apply to all such operations conducted under IFR on the entire ATS route network as notified by the appropriate authorities in the following flight information regions (FIRs)/upper flight information regions (UIRs):

Amsterdam, Ankara, Athinai, Barcelona, Berlin, Bodø, Bordeaux, Bratislava, Bremen, Brest, Brindisi,

^{*} In preparation.

Bruxelles, Bucuresti, Budapest, Canarias (AFI area of applicability), Casablanca, Chisinau, Düsseldorf, France, Frankfurt, Hannover, Istanbul, Kharkiv, København, Kyiv, Lisboa, Ljubljana, London, L'viv, Madrid, Malta, Marseille, Milano, München, Nicosia, Odessa, Oslo, Paris, Praha, Reims, Rhein, Riga, Roma, Rovaniemi, Scottish, Shannon, Simferopol, Skopje, Sofia, Stavanger, Sweden, Switzerland, Tallinn, Tampere, Tbilisi, Tirana, Trondheim, Tunis (FL 245 and above), Varna, Vilnius, Warszawa, Wien, Yerevan, Zagreb.

4.1.1.5.2.2 The provisions in respect of precision area navigation (P-RNAV) shall be applied whenever RNAV terminal control area (TMA) procedures, excluding the final and missed approach segments, are used.

Note.— The carriage of P-RNAV equipment has not yet been mandated in the EUR Region.

Means of compliance – general

4.1.1.5.2.3 Conformance to the navigation requirement shall be verified by the State of Registry or the State of the Operator, as appropriate.

Note.— Guidance material concerning navigation requirements associated with basic area navigation (B-RNAV) operations is contained in Joint Aviation Authority (JAA) Advisory Circular Joint (AC)J 20X4 (previously published as TGL No. 2, Rev 1) and for P-RNAV in JAA Temporary Guidance Leaflet (TGL) No. 10.

Means of compliance – terminal

4.1.1.5.2.4 Except as detailed in 6.6.3.2 and 4.1.1.5.2.5, only RNAV-equipped aircraft having a lateral track-keeping accuracy of ± 1 NM (2 SD), together with an ability to determine horizontal position to an accuracy sufficient to support the track-keeping requirement and having appropriate functionality and operational approval, may operate under IFR on the RNAV terminal area procedures. Such RNAV equipment is designated hereafter as P-RNAV.

Note.— The functional and operational approval requirements appropriate to P-RNAV are set out in JAA TGL No. 10, or equivalent.

4.1.1.5.2.5 Aircraft equipped with GNSS-based RNAV equipment may be used only on RNAV area procedures designated for GNSS and where it is identified that P-RNAV approval is not required to operate on the procedure.

Note.— To meet the requirement of GNSS-based RNAV, aircraft need to be approved in accordance with JAA ACJ 20X5 (previously known as TGL No. 3, Rev. 1), or equivalent.

Means of compliance – en route

4.1.1.5.2.6 Only aircraft approved for B-RNAV operations may plan for operations under IFR on the ATS routes of the FIRs/UIRs identified in 4.1.1.5.2.1. Aircraft not equipped with RNAV but having a navigation accuracy meeting RNP 5 will be restricted to operations on ATS routes which States may designate within their lower airspace in accordance with 4.1.1.5.2.7.

Note.— To meet the requirements of B-RNAV, aircraft need to be approved in accordance with JAA ACJ 20X4 (previously known as TGL No. 2, Rev. 1), or equivalent.

4.1.1.5.2.7 Until such time as VOR facilities cease to be available, the carriage of a single RNAV system not meeting an average continuity of service of 99.99 per cent of flight time may be approved for B-RNAV operations if the aircraft is also carrying VOR and distance-measuring equipment (DME) equipment.

Note.— States may designate domestic routes within their lower airspace to be available for aircraft not fitted with RNAV equipment but having a navigation accuracy meeting RNP 5.

4.1.2 Required navigation performance (RNP) specifications

4.1.2.1 RNP 4

Nil.

4.1.2.2 Basic RNP 1

Nil.

4.1.2.3 Advanced RNP 1

Nil.

4.2 REDUCED VERTICAL SEPARATION MINIMUM (RVSM)

Area of applicability

4.2.1 RVSM shall be applicable in that volume of airspace between FL 290 and FL 410 inclusive in the following FIRs/UIRs:

Amsterdam, Ankara, Baku, Barcelona, Beograd, Berlin, Bodø, Bratislava, Brindisi, Bruxelles, Bucuresti, Budapest, Casablanca, Chisinau, France, Hannover, Hellas, Istanbul, Kaliningrad, Kharkiv, København, Kyiv, Lisboa, Ljubljana, London, L'viv, Madrid, Malta, Milano, Minsk, Nicosia, Odesa, Oslo, Praha, Rhein, Riga, Roma, Rostov, Rovaniemi, Sarajevo, Scottish, Shannon, Simferopol, Skopje, Sofia, Stavanger, Sweden, Switzerland, Tallinn, Tampere, Tbilisi, Tirana, Trondheim, Tunis, Varna, Vilnius, Warszawa, Wien, Yerevan, Zagreb.

Note.— In the Rostov FIR, RVSM will be implemented over the high seas only.

4.2.2 RVSM shall be applicable in that part of the volume of airspace between FL 290 and FL 410 inclusive in the Canarias UIR (African-Indian Ocean (AFI) Region).

Note.— The volume of airspace specified in 4.2.1 and 4.2.2 shall be referred to as "EUR RVSM airspace".

Means of compliance

(A2 – Chapter 5; A6, Part I – Chapters 4, 7 and Appendix 4;
A6, Part II – Chapter 7 and Appendix 2)

4.2.3 Except for State aircraft, operators intending to conduct flights within the volume of airspace specified in 4.2.1 and 4.2.2 where RVSM is applied shall require an RVSM approval either from the State in which the operator is based or from the State in which the aircraft is registered. To obtain such an RVSM approval, operators shall satisfy the said State that:

- a) aircraft for which the RVSM approval is sought have the vertical navigation performance capability required for RVSM operations through compliance with the criteria of the RVSM minimum aviation system performance standards (MASPS);
- b) they have instituted procedures in respect of continued airworthiness (maintenance and repair) practices and programmes; and
- c) they have instituted flight crew procedures for operations in the EUR RVSM airspace specified in 4.2.1 and 4.2.2.

Note 1.— An RVSM approval is not restricted to a specific region. Instead, it is valid globally on the understanding that any operating procedures specific to a given region, in this case the EUR Region, should be stated in the operations manual or appropriate crew guidance.

Note 2.— Aircraft that have received State approval for RVSM operations will be referred to as “RVSM-approved aircraft”.

Note 3.— Aircraft that have not received State approval for RVSM operations will be referred to as “non-RVSM-approved aircraft”.

Note 4.— Detailed technical guidance material on the airworthiness, continued airworthiness, and the operational practices and procedures for the EUR RVSM airspace is provided in the Joint Aviation Authorities Administrative and Guidance Material, Section One: General, Part 3: Temporary Guidance Leaflet No. 6. The content of these documents will be supplemented and updated as required and as new material becomes available.

Chapter 5. SURVEILLANCE

(P-ATM – Chapter 8; P-OPS, Vol. I, Part III)

5.1 SECONDARY SURVEILLANCE RADAR (SSR)

5.1.1 Carriage of pressure-altitude reporting SSR transponders

Nil.

5.1.2 Code allocation methodology

5.1.2.1 All aircraft engaged in international flight shall be assigned an appropriate SSR code by the initial ATS unit at the beginning of the flight if it is to be conducted under instrument flight rules. The code shall be assigned in accordance with the *Air Navigation Plan — European Region, Volume II — FASID* (Doc 7754), Part IV, Attachment H, Principles and Procedures for the Distribution and Use of SSR Codes in the EUR Region.

5.1.3 Assignment of SSR codes

Nil.

5.1.4 Operation of pressure-altitude reporting SSR transponders

Nil.

5.1.5 Monitoring of SSR-derived information

Nil.

5.2 SSR MODE S

5.2.1 Carriage and operation of SSR Mode S

(A10, Vol. IV – Chapter 2)

5.2.1.1 The carriage and operation of Mode S airborne equipment shall be mandatory in airspace designated by the appropriate ATS authorities pursuant to the implementation of SSR Mode S enhanced surveillance in accordance with the following requirements:

- a) for all IFR flights, including general air traffic (GAT):
 - 1) Level 2 transponder, as a minimum, with downlink aircraft parameter (DAP) capability denoted as basic functionality and enhanced surveillance functionality as detailed in 5.2.1.2, Tables 1 and 2;

Note.— The employment of Level 4 transponders, as a minimum, with an aircraft data link processor (ADLP), is envisaged as a possible future requirement in association with the extended use of Mode S data link in an integrated air-ground communications network. A date will be proposed once a strategy for surveillance and communications has been defined, with due regard to an agreed minimum five-year notification period.

b) for VFR flights, conducted in Class B and C airspace as designated by the appropriate ATS authority and in defined portions of Class D, E, F and G airspace where the carriage and operation of SSR transponders have already been prescribed:

1) Level 2 transponder, as a minimum, with downlink aircraft parameter capability denoted as basic functionality as detailed in 5.2.1.2, Table 1;

c) Mode S equipped aircraft shall report, automatically, basic functionality which includes aircraft identification (call sign used in flight);

Note 1.— This aircraft identification is not provided by the 24-bit aircraft address.

Note 2.— Level 1 transponders are not prescribed for international flights in the EUR Region.

d) Mode S equipped aircraft with a maximum mass in excess of 5 700 kg or a maximum cruising true air-speed in excess of 324 km/h (175 kt) shall operate with antenna diversity.

5.2.1.2 Specific requirements for DAPs are classified separately as shown in Tables 1 and 2.

Table 1. Basic surveillance functionality

<i>Basic functionality</i>	<i>Associated register or protocol</i>
Automatic reporting of flight identity (call sign used in flight)	BDS 2.0
Transponder capability report	BDS 1.0 (enabling transponder data link capacities to be determined) BDS 1.7 (enabling registers that the transponder provides to be established)
Altitude reporting in 25-ft intervals (subject to aircraft availability)	Mode C transmission
Flight status (airborne/on the ground)	Provision of flight status filed data in the Mode S protocol

Table 2. Enhanced surveillance functionality

<i>Enhanced surveillance functionality</i>	<i>Associated register</i>
Magnetic heading Speed (IAS/Mach no.) Vertical speed (barometric rate of climb/descend or, preferably, baro-inertial)	BDS 6.0
True airspeed (TAS) Roll angle Track angle variation True track angle Ground speed	BDS 5.0

Note.— Additional DAPs that relate to aircraft intention are currently under evaluation, in particular, selected parameters contained in Comm-B Data Selector (BDS) Register 4.0 which have been recommended for inclusion once certain technical and institutional issues have been resolved. Any further requirements that may become necessary after the initial implementation of Mode S enhanced surveillance will be promulgated with due regard to an agreed minimum five-year notification period.

5.2.1.3 Dispensation from these requirements may be granted by the appropriate ATS authorities in accordance with the harmonized exemption arrangements, which have been coordinated on a regional basis, as follows:

- a) for VFR flights conducted by aircraft:
 - 1) already equipped with non-Mode S transponders having Mode A 4096 code capability and Mode C altitude reporting; or
 - 2) when the carriage of a transponder is impracticable; or
 - 3) when an exception to the requirement is authorized for a specific purpose;
- b) for IFR flights conducted by State (military) aircraft required to occasionally¹ operate as GAT, subject to the availability of a Mode 3/A transponder with 4096 code capability and Mode C altitude reporting. This concession should also apply, in the same circumstances, to State (military) aircraft equipped with a Mode S transponder but without the capability, either technically or operationally, to downlink the full set of prescribed DAPs.

These coordinated exemption arrangements shall be subject to periodic review and, in the first instance, should be for a period not exceeding three years.

Note.— Aircraft operators who are granted exemptions are advised that it will not be possible to provide the same level of air traffic service as that applied to aircraft which comply with the Mode S transponder carriage and operation requirements.

5.2.1.4 Operators of older aircraft that are equipped with Mode S transponders but where the avionics do not permit the extraction and transmission of the full set of prescribed DAPs shall be granted air traffic services to the maximum extent possible without penalty. However, this dispensation will be subject to review as in 5.2.1.3.

¹. In this context, “occasionally” is taken to mean an average total flying time of 30 hours annually in the airspace subject to the mandatory carriage of operation of Mode S transponders.

5.2.2 Transition between Mode A/C and Mode S

Nil.

5.3 AIRBORNE COLLISION AVOIDANCE SYSTEMS (ACAS)

5.3.1 Carriage and operation of ACAS II

(A10, Vol. IV – Chapter 4; P-OPS, Vol. I)

5.3.1.1 ACAS II shall be carried and operated in the EUR Region (and the Canarias FIR) by all turbine-engined aeroplanes having a maximum certificated take-off mass exceeding 5 700 kg or authorized to carry more than 19 passengers.

5.4 AUTOMATIC DEPENDENT SURVEILLANCE – CONTRACT (ADS-C)

Nil.

5.5 AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B)

Nil.

Chapter 6. AIR TRAFFIC SERVICES (ATS)

6.1 AIR TRAFFIC CONTROL (ATC) CLEARANCES

(A11 – Chapter 3; P-ATM – Chapter 4)

6.1.1 Content

Nil.

6.1.2 Adherence

Nil.

6.2 SEPARATION

6.2.1 Lateral

Nil.

6.2.2 Longitudinal

(P-ATM – Chapter 5)

6.2.2.1 Longitudinal separation minimum based on time and radar-observed distance

6.2.2.1.1 A minimum longitudinal separation of three minutes may be applied between aircraft on the same track or crossing tracks, whether at the same level, climbing or descending, provided that:

- a) their flight progress is continuously monitored by radar forming an integral part of the ATC unit concerned; and
- b) the distance between the aircraft, as observed by radar, is never less than 37 km (20 NM).

Note.— Use of this separation is subject to all the limitations in the use of radar specified in the PANS-ATM, 8.1.

6.2.3 Composite

Nil.

6.2.4 Vertical

(P-ATM – Chapter 5)

6.2.4.1 Between FL 290 and FL 410 inclusive, within the EUR RVSM airspace as specified in 4.2.1 and 4.2.2, the vertical separation minimum shall be:

- a) 300 m (1 000 ft) between RVSM-approved aircraft;
- b) 600 m (2 000 ft) between:
 - 1) non-RVSM-approved State aircraft and any other aircraft operating within the EUR RVSM airspace;
 - 2) all formation flights of State aircraft and any other aircraft operating within the EUR RVSM airspace; and
 - 3) non-RVSM-approved aircraft and any other aircraft operating within the EUR RVSM transition airspace, as specified in 6.10.2.1, and within airspace designated in accordance with 9.7.1.1.

6.2.4.2 ATC shall provide a minimum vertical separation of 600 m (2 000 ft) between an aircraft experiencing a communications failure in flight and any other aircraft when both aircraft are operating within the EUR RVSM airspace.

6.2.5 Radar

6.2.5.1 For transfer of radar control

6.2.5.1.1 Transfer of radar control based on the procedures specified in the PANS-ATM, 8.6.2 and 8.6.3, may be carried out without systematic use of the bidirectional speech facilities available between the adjacent units concerned, provided that:

- a) the detailed conditions applicable for the transfer are the subject of a bilateral agreement; and
- b) the minimum distance between successive aircraft during the period of transfer is agreed as one of the following values:
 - 1) 19 km (10 NM) when SSR information is used in accordance with the provisions of the PANS-ATM, provided that an overlapping radar coverage of at least 56 km (30 NM) between units involved exists; or
 - 2) 9.3 km (5 NM) when the conditions of 1) apply and both units involved possess electronic aids for immediate recognition of release and acceptance of aircraft under radar transfer.

6.2.6 Reduction in separation minima

Nil.

6.2.7 Airspace reservations

Nil.

6.3 MINIMUM FLIGHT LEVEL

6.3.1 Establishment

(P-ATM – Chapter 4)

6.3.1.1 Based on current and anticipated atmospheric pressure distribution, area control centres shall coordinate, when required, the lowest flight level to be used.

6.4 ATS ROUTES

6.4.1 Track systems

Nil.

6.4.2 RNAV

(A11 – Appendices 1 and 3)

6.4.2.1 All RNAV standard instrument arrival and departure procedures shall be suitably designated as RNAV in accordance with Annex 11, Appendix 3.

6.4.2.2 All other RNAV routes shall be designated in accordance with Annex 11, Appendix 1.

6.5 AERODROME OPERATIONS

6.5.1 Area of applicability

6.5.1.1 The provisions in Sections 6.5.2 to 6.5.4 and 13.2.1.1 shall apply in Canarias FIR (AFI Region) and all FIRs of the EUR Region except the following, which are located in the AFI or MID Regions:

Alger, Beirut, Cairo, Casablanca, Damascus, Tel Aviv, Tripoli and Tunis.

6.5.2 Intersection take-off

6.5.2.1 An aircraft may be cleared to depart from a published intersection take-off position upon request of the pilot, or if initiated by ATC and accepted by the pilot, provided that all of the conditions of 6.5.2.2 to 6.5.2.5 are met.

6.5.2.2 The reduced runway declared distances for each published intersection take-off position shall consist of the following:

- a) reduced take-off run available (reduced TORA);
- b) reduced take-off distance available (reduced TODA); and

- c) reduced accelerate-stop distance available (reduced ASDA).
- 6.5.2.3 The reference point from which the reduced runway declared distances for a published intersection take-off position are measured shall be in accordance with the relevant provisions in the *Air Navigation Plan — European Region*, Volume II — *FASID* (Doc 7754), Part III — AOP.
- 6.5.2.4 Reduced runway declared distances for an intersection take-off position shall be published in the relevant AIP, clearly distinguishable from full runway declared distances.
- 6.5.2.5 Signs shall be in accordance with Annex 14, Volume I.

6.5.3 Multiple line-ups on the same runway

- 6.5.3.1 Line-up instructions may be issued to more than one aircraft at different points on the same runway, taking into account that intersection take-off criteria shall be complied with, provided that:
- a) minimum visibility is established by the appropriate authority. Those minima shall permit the controller and the pilot to continuously observe the position of the relevant aircraft on the manoeuvring area by visual reference;
 - b) local considerations, such as the airport layout, available radar equipment and local weather phenomena, are defined. The effect of jet blast/prop wash shall be taken into consideration;
 - c) air traffic service for aircraft involved in multiple line-ups on the same runway is provided on the same radio frequency;
 - d) pilots are advised of the position of any essential traffic on the same runway;
 - e) the slope of the runway does not render preceding aircraft in the departure sequence invisible to succeeding aircraft on the same runway;
 - f) pilot read-back of line-up instructions is required and contains the runway designator, the name of the intersection (if applicable) and the number in the departure sequence; and
 - g) wake turbulence separation is applied.

6.5.4 Visual departures

- 6.5.4.1 A visual departure is a departure by an IFR flight when either part or all of an instrument departure procedure (e.g. standard instrument departure (SID)) is not completed and the departure is executed in visual reference to terrain.
- 6.5.4.2 An IFR flight may be cleared to execute a visual departure upon request of the pilot or if initiated by the controller and accepted by the pilot.
- 6.5.4.3 To execute a visual departure, the aircraft take-off performance characteristics shall allow them to make an early turn after take-off. When implemented, visual departure shall be applied under the following conditions:
- a) the meteorological conditions in the direction of take-off and the following climb-out shall not impair the procedure up to an altitude to be established and published by the appropriate authority, e.g. minimum flight altitude (MFA) or minimum sector altitude (MSA);

- b) the procedure shall be applied during the daytime. The procedure may be considered for application at night following a separate aeronautical study by the appropriate air traffic services (ATS) authority;
- c) the pilot shall be responsible for maintaining obstacle clearance until the specified altitude. Further clearance (route, heading, point) shall be specified by ATC; and
- d) separation shall be provided between an aircraft cleared to execute a visual departure and other departing and arriving aircraft.

6.5.4.4 Prior to take-off, the pilot shall agree to execute a visual departure by providing a read-back of the ATC clearance.

6.5.4.5 Any additional local restrictions shall be agreed on in consultation between the appropriate ATS authority and operators.

6.5.5 Visual approaches

Nil.

6.6 RNAV PROCEDURES

6.6.1 General

6.6.1.1 RNAV system operation

6.6.1.1.1 Correct operation of the aircraft RNAV system shall be established before joining and during operation on an RNAV route. This shall include confirmation that:

- a) the routing is in accordance with the clearance; and
- b) the RNAV navigation accuracy of the aircraft meets the navigation accuracy requirements of the RNAV route and arrival or departure procedures, as applicable.

6.6.1.2 Obstacle clearance

(A2 – Chapter 5; P-ATM – Chapters 4 and 8)

6.6.1.2.1 Unless an IFR aircraft is receiving navigation guidance from ATC in the form of radar vectors, the pilot is responsible for obstacle clearance. Therefore, the use of RNAV does not relieve pilots of their responsibility to ensure that any ATC clearance or instruction is safe in respect to obstacle clearance. ATC shall assign levels that are at or above established minimum flight altitudes.

6.6.2 En-route

Nil.

6.6.3 Terminal

6.6.3.1 For operation on RNAV arrival and departure routes, where clearance is given by ATC for an RNAV procedure for which the aircraft is not approved, the pilot is to advise ATC who will then seek to provide an alternative routing.

Note.— See 10.1 for relevant radiotelephony (RTF) phraseology.

6.6.3.2 Aircraft equipped with RNAV equipment having a lateral track-keeping accuracy of ± 5 NM (2 SD) with an ability to determine horizontal position to an accuracy sufficient to support the track-keeping requirement and having appropriate functionality, hereafter designated as basic area navigation (B-RNAV), may use RNAV (segments) of arrival and departure routes where these meet the following criteria:

a) the B-RNAV portion of the route must:

- 1) be above the appropriate minimum flight altitude (MFA) (e.g.: minimum radar vectoring altitude (MRVA) and minimum sector altitude (MSA)); and
- 2) be in accordance with established PANS-OPS criteria for en-route operations; and
- 3) conform to B-RNAV en-route design principles;

Note.— For minimum flight altitudes, see Annex 11, 2.22.

- b) the departure procedures must be conventional (non-RNAV) up to a conventional fix (or a minimum altitude). Beyond that fix (or minimum altitude), a B-RNAV procedure can be provided in accordance with the criteria in a); and
- c) the B-RNAV portion of an arrival route must terminate at a conventional fix in accordance with the criteria given in a) and b). Beyond that fix, the arrival shall be completed by a conventional (non-RNAV) procedure or by the provision of radar vectors; and
- d) due regard must be taken of those operating procedures of the users which may affect system performance. Examples include, but are not limited to, initial position fixing on the runway and minimum automatic flight control system (AFCS) engagement altitudes; and
- e) arrival and departure procedures, which can be flown by B-RNAV equipment, shall be identified explicitly as approved for application of B-RNAV.

6.6.4 State aircraft (A11 – Chapter 3)

6.6.4.1 ATC procedures for State aircraft not equipped with RNAV but having a navigation accuracy meeting RNP 5

6.6.4.1.1 Within TMAs, State aircraft may only be routed via the RNAV terminal area procedures if they are equipped with the appropriate RNAV equipment (4.1.1.5.2 and 6.6.3.2 apply).

6.6.4.1.2 For such aircraft operating en route, the following procedures apply:

- a) State aircraft should be routed via VOR/DME-defined ATS routes; or

b) if no such routes are available, State aircraft should be routed via conventional navigation aids, i.e. VOR/DME.

Note.— State aircraft routed in accordance with a) or b) may require continuous radar monitoring by the ATC unit concerned.

6.6.4.1.3 When the above procedures cannot be applied, the ATC unit shall provide State aircraft with radar vectors until the aircraft is capable of resuming its own navigation.

6.7 RNP PROCEDURES

6.7.1 General

Nil.

6.7.2 En-route

Nil

6.7.3 Terminal

Nil.

6.7.4 State aircraft

Nil.

6.8 COMPOSITE PROCEDURES

Nil.

6.9 MNPS PROCEDURES

Nil.

6.10 RVSM PROCEDURES

6.10.1 General

6.10.1.1 Except for operations within the EUR RVSM transition airspace, as specified in 6.10.2.1, and within airspace designated in accordance with 9.7.1.1, only RVSM-approved aircraft and non-RVSM-approved State aircraft shall be issued an ATC clearance into the EUR RVSM airspace.

6.10.1.2 ATC clearance into the EUR RVSM airspace shall not be issued to formation flights of aircraft.

6.10.2 Transition to/from RVSM airspace

6.10.2.1 General

6.10.2.1.1 Transition tasks associated with the application of a 300 m (1 000 ft) vertical separation minimum within the EUR RVSM airspace, as specified in 4.2.1 and 4.2.2, shall be carried out in all or parts of the following FIRs/UIRs:

Ankara, Baku, Barcelona, Canarias (AFI Region), Casablanca, France, Hellas, Kharkiv, Kyiv, Madrid, Malta, Minsk, Nicosia, Riga, Rostov, Rovaniemi, Simferopol, Tallinn, Tampere, Tbilisi, Tunis.

Note.— The volume of airspace specified in 6.10.2.1.1 shall be referred to as the “EUR RVSM transition airspace”.

6.10.2.2 RVSM-approved aircraft and non-RVSM-approved State aircraft entering the EUR RVSM airspace from a non-RVSM environment

6.10.2.2.1 RVSM-approved aircraft and non-RVSM-approved State aircraft entering the EUR RVSM airspace from a non-RVSM environment shall be established at a flight level:

- a) in accordance with the table of cruising levels, as published in Annex 2, Appendix 3, a); and/or
- b) in accordance with a flight level allocation scheme (FLAS), if applicable; and/or
- c) as specified in an inter-area control centre (ACC) letter of agreement.

6.10.2.2.2 Any changes from non-RVSM flight levels to RVSM flight levels shall be initiated by the first ACC/upper area control centre (UAC) providing ATC service to the aircraft within the EUR RVSM airspace and shall be achieved before the aircraft passes the transfer of control point to the adjacent ACC/UAC, unless otherwise specified in an inter-ACC letter of agreement.

6.10.2.3 Aircraft entering a non-RVSM environment from the EUR RVSM airspace

6.10.2.3.1 Aircraft entering a non-RVSM environment from the EUR RVSM airspace shall be established with the applicable vertical separation minimum.

6.10.2.3.2 The applicable vertical separation minimum shall be established by the last ACC/UAC providing ATC service to the aircraft within the EUR RVSM airspace and before the aircraft passes the transfer of control point to the adjacent ACC/UAC.

6.10.2.3.3 Such aircraft shall be established at a flight level:

- a) in accordance with the table of cruising levels, as published in Annex 2, Appendix 3, b); and/or
- b) in accordance with a flight level allocation scheme, if applicable; and/or
- c) as specified in an inter-ACC letter of agreement.

6.10.2.4 Non-RVSM-approved civil operations

6.10.2.4.1 Non-RVSM-approved aircraft operating from a departure aerodrome outside the lateral limits of the EUR RVSM airspace with a destination aerodrome within the lateral limits of the EUR RVSM airspace shall be cleared to a flight level below 290. Such flight level changes shall be initiated by the first ACC/UAC providing ATC service to the aircraft within the EUR RVSM airspace and shall be achieved before the aircraft passes the transfer of control point to the adjacent ACC/UAC.

Note.— Refer to 2.1.6.2 for related flight planning requirements.

6.10.2.4.2 Non-RVSM-approved aircraft operating from a departure aerodrome to a destination aerodrome, both of which are within the lateral limits of the EUR RVSM airspace, shall be cleared to a flight level below 290.

Note.— Refer to 2.1.6.3 for related flight planning requirements.

6.10.2.4.3 Non-RVSM-approved aircraft operating from a departure aerodrome within the lateral limits of the EUR RVSM airspace to a destination aerodrome outside the lateral limits of the EUR RVSM airspace:

- a) shall be cleared to a flight level below 290; and
- b) may be cleared to FL 290 or above by the last ACC/UAC providing ATC service to the aircraft within the EUR RVSM airspace. Such flight level changes shall be achieved before the aircraft passes the transfer of control point to the adjacent ACC/UAC.

Note — Refer to 2.1.6.4 for related flight planning requirements.

6.10.2.4.4 Non-RVSM-approved aircraft operating from a departure aerodrome to a destination aerodrome, both of which are outside the lateral limits of the EUR RVSM airspace, with a portion of the route within the lateral limits of the EUR RVSM airspace:

- a) shall be cleared to a flight level below 290 or above 410 by the first ACC/UAC providing ATC service to the aircraft within the EUR RVSM airspace. Such flight level changes shall be achieved before the aircraft passes the transfer of control point to the adjacent ACC/UAC, in accordance with the FLAS, if applicable, and/or as specified in an inter-ACC letter of agreement; and
- b) may subsequently be cleared to a requested flight level within or through the EUR RVSM airspace by the last ACC/UAC providing ATC service to the aircraft within the EUR RVSM airspace. Such flight level changes shall be achieved before the aircraft passes the transfer of control point to the adjacent ACC/UAC.

Note.— Refer to 2.1.6.5 for related flight planning requirements.

6.11 ATS COORDINATION

6.11.1 Between units providing area control services

(P-ATM – Chapter 10)

6.11.1.1 If a flight should enter an adjacent area, information concerning any revision of the estimate of three minutes or more shall be forwarded to the adjacent area control centre normally by telephone.

6.11.2 RNAV
(P-ATM – Chapter 11)

**Aircraft experiencing degradation or failure of RNAV –
computer-assisted coordination of estimate**

6.11.2.1 In the case of automated messages not containing the information provided in Item 18 of the flight plan, the sending ATC unit shall inform the receiving ATC unit by supplementing the ACT message verbally with the phrase “RNAV OUT OF SERVICE” after the call sign of the aircraft concerned.

**Aircraft experiencing degradation or failure of RNAV –
verbal coordination of estimate**

6.11.2.2 When a verbal coordination process is being used, the sending ATC unit shall include the phrase “RNAV OUT OF SERVICE” at the end of the message.

**State aircraft not equipped with RNAV –
computer-assisted coordination of estimate**

6.11.2.3 In the case of automated messages not containing the information provided in Item 18 of the flight plan, the sending ATC unit shall inform the receiving ATC unit by supplementing the ACT message verbally with the phrase “NEGATIVE-RNAV” after the call sign of the aircraft concerned.

**State aircraft not equipped with RNAV –
verbal coordination of estimate**

6.11.2.4 When a verbal coordination process is being used, the sending ATC unit shall include the phrase “NEGATIVE-RNAV” at the end of the message.

6.11.3 RNP

Nil.

6.11.4 RVSM

6.11.4.1 If the receiving unit has not received a flight plan, the sending ATC unit shall verbally inform the receiving unit whether or not the aircraft is RVSM-approved.

6.11.4.2 When an automated message does not contain the information filed in Item 18 of the flight plan relevant to RVSM operations, the sending ATC unit shall inform the receiving unit of that information by supplementing the ACT message verbally, using the term “NEGATIVE RVSM” or “NEGATIVE RVSM STATE AIRCRAFT”, as applicable.

6.11.4.3 When a verbal coordination process is being used, the sending ATC unit shall include the information filed in Item 18 of the flight plan relevant to RVSM operations at the end of the verbal estimate message, using the term “NEGATIVE RVSM” or “NEGATIVE RVSM STATE AIRCRAFT”, as applicable.

6.11.4.4 When a single aircraft is experiencing an in-flight contingency that impacts on RVSM operations, the associated coordination message(s) shall be supplemented verbally by a description of the cause of the contingency.

6.11.5 SSR codes

Nil.

6.12 ATS MESSAGES

6.12.1 Flight plan and departure

(P-ATM – Chapter 11)

6.12.1.1 Filed flight plan messages for flights intending to operate within the NAT Region at a distance of 110 km (60 NM) or less from the northern and southern boundaries of Gander Oceanic and Shanwick Oceanic FIRs shall be addressed to the ACCs in charge of the NAT flight information regions along the route and, in addition, to the ACCs in charge of the nearest adjacent NAT FIRs.

6.12.1.2 For flights departing from points within adjacent regions and entering the NAT Region without intermediate stops, filed flight plan messages shall be transmitted to the appropriate ACCs immediately after the flight plan has been submitted.

6.12.1.3 Provided reliable ATS speech circuits exist between the successive ATS units concerned with the flight, departure messages may be omitted for IFR flights operated within areas or along routes designated by mutual agreements between the States concerned.

6.12.2 Arrival

Nil.

6.12.3 Boundary estimates

6.12.3.1 When so specified in appropriate aeronautical information publications by the States concerned, flight plans and associated flight plan messages concerning flights within or intending to enter the airspace where the State(s) concerned are responsible for the provision of ATS shall not include FIR boundary estimates.

6.12.4 Computer-assisted coordination

(P-ATM – Chapter 10)

6.12.4.1 General

6.12.4.1.1 When so agreed between adjacent ATC units, a computer-assisted coordination process shall be introduced to eliminate the need for verbal coordination of boundary estimates and to reduce the amount of manual data input into ATC computers.

6.12.4.1.2 When introduced between adjacent area control centres for the purpose of activation and updating of FPL messages or RPLs, data processing shall be based upon the messages and procedures described in 6.12.4.2, 6.12.4.3 and 6.12.4.4.

6.12.4.1.3 The minimum requirement for the activation of flight plan data shall be the content of the boundary estimate (EST) message. When so agreed between adjacent units, the activate (ACT) message shall be used instead of the EST message, enabling additional information to be transmitted.

6.12.4.1.4 The means of communication to be employed and the procedures to be applied for the exchange of messages in the computer-assisted coordination process shall be specified by bilateral agreement between the ATC units concerned.

6.12.4.2 Messages

6.12.4.2.1 The EST message and the ACT message shall be the alternative means employed to achieve flight plan activation. The EST message shall contain Field Types 3, 7, 13a, 14 and 16a. The ACT message shall contain Field Types 3, 7, 13a, 14 and 16a, identical to that of the EST message and, in addition, one or more Field Types 22 as bilaterally agreed between adjacent ATC units for the inclusion of other current information associated with the flight plan.

6.12.4.2.2 The safeguarding of the transmitted message is achieved through the logical acknowledgement message (LAM) which is sent by the receiving ATS unit to the sending ATS unit. The LAM shall contain Field Type 3 (message type, number and reference data) with reference to the appropriate ATS message which it acknowledges.

Example: (LAMP/M178M/P100)

Meaning: LAM sent by Paris (P) to Maastricht (M) followed by the sending unit serial number (178) of this message, followed by the ATS unit identifiers (M/P) and serial number (100) or related estimate.

6.12.4.3 Operational procedure

6.12.4.3.1 The following basic rules shall apply for the use of EST and ACT messages:

- a) These messages shall be automatically generated, exchanged and processed to obviate human intervention to the extent practicable.
- b) A single message shall be sent in respect of each flight due to be transferred and any subsequent revision shall be the subject of verbal coordination.
- c) The message shall provide the most recent information available on all transfer conditions at the time of transmission.
- d) Acceptance by the receiving unit of the transfer conditions implied in the message shall be assumed, unless the receiving unit initiates verbal coordination to amend the transfer conditions.

Note.— Bilateral arrangement may be required to cover the event of failure of the ATS direct speech circuit.

- e) There shall be bilateral agreement as to the boundary point and transmission times for each route. The normal transmission time shall be 15 minutes before the flight concerned is expected to cross the boundary.

- f) In the event of data not being correlated by the receiving computer with an appropriate entry in its flight plan database, the computer shall originate a warning to the appropriate ATC sector to take necessary action for the acquisition of missing flight plan details. This shall normally involve a telephone inquiry.
- g) In the event of incomprehensible or illogical data being detected within the message, the computer shall initiate an appropriate warning to the ATC sector involved, if this can be determined, for further action.

Note.— Any system-initiated warning shall require reversion to verbal coordination.

6.12.4.4 Data protection procedure

6.12.4.4.1 Appropriate safeguards in the automatic communication process shall be provided using a logical acknowledgement procedure.

6.12.4.4.2 This procedure shall be based on the following basic rules:

- a) The receiving computer shall transmit a LAM in response to an activation message received and processed, up to the point where the operational content will be presented to the appropriate air traffic controller.
- b) The transferring ATC unit shall set an agreed reaction parameter time of up to two minutes from transmission of the activation message. If the LAM is not received within that time frame, an operational warning shall be initiated and reversion to telephone and manual mode shall ensue. If the appropriate ATC sector cannot be determined, a LAM shall not be transmitted.

6.13 FLIGHT INFORMATION SERVICE (FIS)

6.13.1 Automatic terminal information services (ATIS)

(A11 – Chapter 4)

6.13.1.1 An ATIS broadcast shall not require the assignment of a VHF channel that is subject to international channel assignment.

6.13.1.2 An ATIS broadcast, when containing departure information only and when requiring transmission on a discrete channel, shall be transmitted on a ground control VHF channel.

6.13.1.3 ATIS broadcast messages need not contain an instruction that, on initial contact with the appropriate ATS unit, the pilot acknowledge receipt of the ATIS message.

6.13.2 SIGMETs

(P-ATM – Chapter 9)

6.13.2.1 Transmission of SIGMET information to aircraft shall be at the initiative of the appropriate ATS unit, by the preferred method of directed transmission followed by acknowledgement, or by a general call when the number of aircraft would render the preferred method impracticable.

6.13.3 Special air-reports

(P-ATM – Chapter 9)

6.13.3.1 Special air-reports shall be transmitted with the least possible delay to aircraft likely to be affected and shall cover the portion of the route up to one hour's flying time ahead of the aircraft.

6.13.4 Amended aerodrome forecast

(P-ATM – Chapter 9)

6.13.4.1 Amended aerodrome forecasts shall be passed to aircraft within 60 minutes from the aerodrome of destination, unless the information has been made available through other means.

6.13.5 Landing forecasts

Nil.

6.14 ALERTING SERVICES

(P-ATM – Chapter 9)

6.14.1 The procedures for an alerting service detailed in PANS-ATM, 9.2, are applicable to all sectors of flights over mountainous or sparsely populated areas, including sea areas.

Chapter 7. SAFETY MONITORING

7.1 STRATEGIC LATERAL OFFSET PROCEDURES (SLOP)

7.2 AIRSPACE MONITORING

7.2.1 General

Nil.

7.2.2 RNAV

Nil.

7.2.3 RNP

Nil.

7.2.4 RVSM

7.2.4.1 Monitoring of flight operations in the EUR RVSM airspace shall be conducted to assess the continuing compliance of aircraft with the height-keeping performance requirements.

Note.— Monitoring will be conducted in accordance with the appropriate material issued by ICAO. When notified, operators will be required to cooperate in the monitoring programme.

Chapter 8. AIR TRAFFIC FLOW MANAGEMENT (ATFM)

8.1 PROVISION

(P-ATM – Chapter 3)

8.1.1 ATFM is available to all States of the EUR Region and is provided in accordance with the provisions contained in the PANS-ATM (Doc 4444) and the EUR Air Navigation Plan (Doc 7754).

Note.— A list of the States receiving services from the ATFM System of the EUR Region (ASTER) is contained in the Air Navigation Plan — European Region, Volume II — FASID (Doc 7754), Part V.III, Attachment B.

8.2 APPLICATION

8.2.1 All IFR flights, including the IFR portions of mixed IFR/VFR flights, regardless of status, are taken into account when measuring demand against ATC capacity. Whenever it becomes necessary to manage this demand, ATFM may be used and departure slots issued by means of calculated take-off times.

8.2.2 Flights departing from areas beyond adjacent FIRs as set out in the ANP — EUR FASID, Part V.III, Attachment C, are exempted from CFMU ATFM slot allocation.

Note 1.— A list of the FIRs/UIRs adjacent to the EUROCONTROL CFMU area of responsibility which receive ASTER services from the CFMU is contained in the ANP — EUR FASID, Part V.III, Attachment C.

Note 2.— Detailed procedures applicable to the CFMU area of responsibility are contained in the EUROCONTROL “Basic CFMU Handbook”.

8.3 EXEMPTIONS FROM ATFM SLOT ALLOCATION

(P-ATM – Chapter 3)

8.3.1 Flights carrying Heads of State (or equivalent status) and flights conducting search and rescue operations are exempted from ATFM slot allocations.

Note.— The corresponding ATFM flight planning requirements are provided in 2.2.3.

8.3.2 States receiving services from ASTER, as defined in the ANP — EUR FASID, Part V.III, Attachments B and C, may approve additional exemptions from the ATFM slot allocation for specific flights departing from an aerodrome located within their territory.

8.3.3 States shall publish the procedures for requesting ATFM slot allocation exemptions in their national AIPs.

Note.— Detailed procedures and information pertaining to ATFM slot allocation exemptions, for the area covered by the CFMU, are contained in the EUROCONTROL “Basic CFMU Handbook”.

8.3.4 States shall carry out compliance monitoring of ATFM slot allocation exemptions granted in accordance with 8.3.1 and 8.3.2.

8.4 DEPARTURE SLOT MONITORING

8.4.1 ATC is responsible for departure slot monitoring at departure aerodromes. The exact procedures to be followed will depend on the way that ATS is organized at each aerodrome. There are, however, three requirements:

- a) States shall ensure that an ATFM slot, if applicable, be included as part of the ATC clearance. ATC shall take account of an applicable slot or flight suspension when a clearance is issued.
- b) ATC units responsible for departure slot monitoring shall be provided with the necessary information concerning the restrictions in force and slots allocated.
- c) Aircraft operators shall inform themselves of and adhere to:
 - 1) general ATFM procedures including flight plan filing, strategic ATFM measures and message exchange requirements; and
 - 2) current ATFM measures (e.g. specific measures applicable on the day in question such as ATFM slot or flight suspension).

8.5 PROMULGATION OF ATFM MEASURES

8.5.1 Strategic ATFM measures

(A15 – Chapter 4; P-ATM – Chapter 3)

8.5.1.1 Following the agreement of all States concerned, ATFM units shall promulgate a traffic orientation scheme, when required, together with any other ATFM measures.

8.5.1.2 Coordinated strategic air traffic flow measures shall be promulgated in accordance with AIRAC procedures on the basis of the following principles:

- a) the information shall be promulgated in English as aeronautical information regulation and control (AIRAC) ATFM Bulletins in accordance with the following requirements of Annex 15 concerning AIRAC AIP Supplements:
 - 1) the effective date of the ATFM Bulletin shall be specified;
 - 2) an ATFM Bulletin number shall be assigned; and
 - 3) the ATFM Bulletin distribution shall be on the basis of a pre-determined distribution list including, but not limited to, all international AIS offices of EUR provider and user States; and

Note.— If required, national distribution will be determined by each State in accordance with its needs. Furthermore, if an ATFM Bulletin is redistributed, it should reference the original serial number.

- b) following the publication of an AIRAC ATFM Bulletin, a trigger NOTAM in series F shall be promulgated in accordance with Annex 15 provisions (8.5.2.1 also refers).

8.5.2 Amendments to promulgated strategic ATFM measures

(A15 – Chapter 5; P-ATM – Chapter 3)

8.5.2.1 Changes to promulgated strategic ATFM measures, as defined in 8.5.1.1, shall be promulgated using a NOTAM in series F. This NOTAM shall be coordinated and provided in accordance with Annex 15 provisions. It shall include the following:

a) Item Q) shall include:

FIR: EUCF or EUXX

CODE: QPFCA (respectively QPFCD or QPFCH, whichever is appropriate)

TRAFFIC: I

PURPOSE: NBO

SCOPE: E

LOWER/UPPER: AS APPROPRIATE

COORDINATES/RADIUS: THE EPICENTRE AND RADIUS OF THE AREA OF CONCERN.

b) As regards the FIR field in Item Q): EUCF should be used if Item A) contains one four-letter location indicator only or EUXX if Item A) contains more than one four-letter location indicator. EU relates to European multinational air navigation facilities whereas CF relates specifically to the CFMU. (XX are the letters usually used to identify NOTAMs with multiple locations in Item A).)

c) Item A) shall include EU plus the two-letter ICAO identifier of the State concerned; it could include one to seven four-letter ICAO location identifiers representing the State(s) affected by the ATFM measures or it could include EUCF if the restrictions apply to the entire area concerned; and

d) Item C): because of the temporary nature of ATFM measures, the abbreviation PERM shall not be used.

8.5.3 ATFM circulars and information

(A15 – Chapter 7)

8.5.3.1 General information pertaining to air traffic flow management issues shall be promulgated using an ATFM Circular in accordance with the requirements of Annex 15 concerning Aeronautical Information Circulars. Distribution of the ATFM Circulars shall be in accordance with the procedures specified in 8.5.1.2 a) 3).

Note 1.— If required, national distribution will be determined by each State in accordance with its needs. Furthermore, if an ATFM Circular is redistributed, it should reference the original serial number.

Note 2.— Provisions for promulgation of information on ATFM measures, including updates of local ATFM measures and other additional information, are described in the EUROCONTROL “Basic CFMU Handbook”.

8.5.4 Pre-flight information bulletin (PIB)

(A15 – Chapter 8)

8.5.4.1 Information concerning ATFM measures promulgated using NOTAM in series F shall be included in the PIB.

8.5.5 Query procedures

8.5.5.1 Standard NOTAM query procedures shall be used to access NOTAM series F information.

Chapter 9. SPECIAL PROCEDURES

9.1 EMERGENCY DESCENT PROCEDURES

(P-ATM – Chapter 15)

9.1.1 Action by the pilot-in-command

9.1.1.1 When an aircraft operated as a controlled flight experiences sudden decompression or a malfunction requiring an emergency descent, the aircraft shall, if able:

- a) initiate a turn away from the assigned route or track before commencing the emergency descent;
- b) advise the appropriate air traffic control unit as soon as possible of the emergency descent;
- c) set transponder to Code 7700 and select the Emergency Mode on the automatic dependent surveillance/controller-pilot data link communications (ADS/CPDLC) system, if applicable;
- d) turn on aircraft exterior lights;
- e) watch for conflicting traffic both visually and by reference to ACAS (if equipped); and
- f) coordinate its further intentions with the appropriate ATC unit.

9.1.1.2 The aircraft shall not descend below the lowest published minimum altitude that will provide a minimum vertical clearance of 300 m (1 000 ft) or, in designated mountainous terrain, of 600 m (2 000 ft) above all obstacles located in the area specified.

9.1.2 Action by the ATS unit

9.1.2.1 Immediately upon recognizing that an emergency descent is in progress, air traffic control units shall acknowledge the emergency on radiotelephony.

9.1.2.2 In particular, they may, as required by the situation:

- a) suggest a heading to be flown, if able, by the aircraft carrying out the emergency descent in order to achieve separation from other aircraft concerned;
- b) state the minimum altitude for the area of operation, only if the level-off altitude stated by the pilot is below such minimum altitude, together with the applicable QNH altimeter setting; and
- c) as soon as possible, provide separation from conflicting traffic, or issue essential traffic information, as appropriate.

9.1.2.3 When deemed necessary, air traffic control will broadcast an emergency message, or cause such message to be broadcast, to other aircraft concerned to warn them of the emergency descent.

9.2 CONTINGENCY PROCEDURES INCLUDING TURN BACKS

Nil.

9.3 AIR-GROUND COMMUNICATION FAILURE

Note.— Refer to 6.2.4.2 for ATC procedures regarding aircraft experiencing a communications failure in EUR RVSM airspace.

9.4 DEGRADATION OR FAILURE OF THE RNAV SYSTEM

9.4.1 Action by the pilot-in-command

9.4.1.1 When an aircraft cannot meet the requirements as specified in either 4.1.1.5.2.4 or 6.6.3.2, as required by the RNAV route or procedure, as a result of a failure or degradation of the RNAV system, a revised clearance shall be requested by the pilot.

Note.— See 10.1 for relevant radiotelephony (RTF) phraseology.

9.4.1.2 If an aircraft cannot meet the requirements as specified in 6.6.3.2 due to a failure or degradation of the RNAV system that is detected before departure from an aerodrome where it is not practicable to effect a repair, the aircraft concerned should be permitted to proceed to the nearest suitable aerodrome where the 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.

Note.— See 10.1 for relevant RTF phraseology.

9.4.1.3 With respect to the degradation/failure in flight of an RNAV system, while the aircraft is operating on an ATS route requiring the use of B-RNAV:

- a) aircraft should be routed via VOR/DME-defined ATS routes; or
- b) if no such routes are available, aircraft should be routed via conventional navigation aids, i.e. VOR/DME; or
- c) when the above procedures are not feasible, the ATC unit should, where practicable, provide the aircraft with radar vectors until the aircraft is capable of resuming its own navigation.

Note.— Aircraft routed in accordance with a) or b) may, where practicable, require continuous radar monitoring by the ATC unit concerned.

9.4.1.4 With respect to the degradation/failure in flight of an RNAV system, while the aircraft is operating on an arrival or departure procedure requiring the use of RNAV:

- a) the aircraft should be provided with radar vectors until the aircraft is capable of resuming its own navigation, or
- b) the aircraft should be routed by conventional navigation aids, i.e. VOR/DME.

9.4.2 Action by the ATS unit

9.4.2.1 Subsequent ATC action in respect of an aircraft that cannot meet the requirements as specified in either 4.1.1.5.2.4 or 6.6.3.2, due to a failure or degradation of the RNAV system, will be dependent upon the nature of the reported failure and the overall traffic situation. Continued operation in accordance with the current ATC clearance may be possible in many situations. When this cannot be achieved, a revised clearance, as specified in 9.4.1.3 and 9.4.1.4, may be required to revert to VOR/DME navigation.

9.5 LOSS OF VERTICAL NAVIGATION PERFORMANCE REQUIRED FOR RVSM

9.5.1 General

9.5.1.1 An in-flight contingency affecting flight in the EUR RVSM airspace pertains to unforeseen circumstances that directly impact on the ability of one or more aircraft to operate in accordance with the vertical navigation performance requirements of the EUR RVSM airspace as specified in 4.2. Such in-flight contingencies can result from degradation of aircraft equipment associated with height-keeping or from turbulent atmospheric conditions.

9.5.1.2 The pilot shall inform ATC as soon as possible of any circumstances where the vertical navigation performance requirements for the EUR RVSM airspace cannot be maintained. In such cases, the pilot shall obtain a revised ATC clearance prior to initiating any deviation from the cleared route and/or flight level, whenever possible. When a revised ATC clearance cannot be obtained prior to such a deviation, the pilot shall obtain a revised clearance as soon as possible thereafter.

9.5.1.3 ATC shall render all possible assistance to a pilot experiencing an in-flight contingency. Subsequent ATC actions will be based on the intentions of the pilot, the overall air traffic situation and the real-time dynamics of the contingency.

9.5.2 Degradation of aircraft equipment – pilot reported

(A6, Part I – Chapter 7 and Appendix 4; A6, Part II – Chapter 7 and Appendix 2)

9.5.2.1 When informed by the pilot of an RVSM-approved aircraft operating in the EUR RVSM airspace that the aircraft's equipment no longer meets the RVSM MASPS, as specified in 4.2.3, ATC shall consider the aircraft as non-RVSM-approved.

9.5.2.2 ATC shall take action immediately to provide a minimum vertical separation of 600 m (2 000 ft) or an appropriate horizontal separation from all other aircraft concerned that are operating in the EUR RVSM airspace. An aircraft rendered non-RVSM-approved shall normally be cleared out of the EUR RVSM airspace by ATC when it is possible to do so.

9.5.2.3 Pilots shall inform ATC, as soon as practicable, of any restoration of the proper functioning of equipment required to meet the RVSM MASPS.

9.5.2.4 The first ACC/UAC to become aware of a change in an aircraft's RVSM status shall coordinate with adjacent ACCs/UACs, as appropriate.

9.5.3 Severe turbulence – not forecast

9.5.3.1 When an aircraft operating in the EUR RVSM airspace encounters severe turbulence due to weather or wake vortex that the pilot believes will impact the aircraft's capability to maintain its cleared flight level, the pilot shall inform ATC. ATC shall establish either an appropriate horizontal separation or an increased minimum vertical separation.

9.5.3.2 ATC shall, to the extent possible, accommodate pilot requests for flight level and/or route changes and shall pass on traffic information as required.

9.5.3.3 ATC shall solicit reports from other aircraft to determine whether RVSM should be suspended entirely or within a specific flight level band and/or area.

9.5.3.4 The ACC/UAC suspending RVSM shall coordinate such suspension(s) and any required adjustments to sector capacities with adjacent ACCs/UACs, as appropriate, to ensure an orderly progression to the transfer of traffic.

9.5.4 Severe turbulence – forecast

9.5.4.1 When a meteorological forecast is predicting severe turbulence within the EUR RVSM airspace, ATC shall determine whether RVSM should be suspended and, if so, for how long and for which specific flight level(s) and/or area.

9.5.4.2 In cases where RVSM will be suspended, the ACC/UAC suspending RVSM shall coordinate with adjacent ACCs/UACs with regard to the flight levels appropriate for the transfer of traffic, unless a contingency flight level allocation scheme has been determined by letter of agreement. The ACC/UAC suspending RVSM shall also coordinate applicable sector capacities with adjacent ACCs/UACs as appropriate.

9.6 EN-ROUTE DIVERSION

Nil.

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

9.7.1 European/North Atlantic (NAT) interface

9.7.1.1 The State authorities responsible for Bodø (Domestic), Stavanger, Trondheim, Scottish, Shannon, London, Brest, Madrid and Lisboa FIRs may establish designated airspace within their FIRs for the purpose of transitioning non-RVSM-approved aircraft operating to and from the NAT Region.

9.7.1.2 ACCs/UACs providing ATC service within airspace designated in accordance with 9.7.1.1 may clear such non-RVSM-approved aircraft to climb or descend through RVSM airspace.

9.7.1.3 Climbs or descents through RVSM airspace, in accordance with 9.7.1.2, shall be achieved before the aircraft passes the transfer of control point to the adjacent ACC/UAC, if applicable, unless otherwise specified in an inter-ACC letter of agreement.

9.8 MANNED BALLOON FLIGHTS

Nil.

Chapter 10. PHRASEOLOGY

(P-ATM – Chapter 12)

10.1 RNAV

<i>Circumstances</i>	<i>Phraseologies</i>
RNAV arrival or departure procedure cannot be accepted by the pilot	*UNABLE (<i>designator</i>) DEPARTURE [<i>or</i> ARRIVAL] DUE RNAV TYPE
Pilot is unable to comply with an assigned terminal area procedure	*UNABLE (<i>designator</i>) DEPARTURE [<i>or</i> ARRIVAL] (<i>reasons</i>)
ATC unable to assign an RNAV arrival or departure procedure requested by a pilot due to the type of on-board RNAV equipment	UNABLE TO ISSUE (<i>designator</i>) DEPARTURE [<i>or</i> ARRIVAL] DUE RNAV TYPE
ATC unable to assign an arrival or departure procedure requested by the pilot	UNABLE TO ISSUE (<i>designator</i>) DEPARTURE [<i>or</i> ARRIVAL] (<i>reasons</i>)
Confirmation whether a specific RNAV arrival or departure procedure can be accepted	ADVISE IF ABLE (<i>designator</i>) DEPARTURE [<i>or</i> ARRIVAL]
Informing ATC of RNAV degradation or failure	*(<i>aircraft call sign</i>) UNABLE RNAV DUE EQUIPMENT
Informing ATC of no RNAV capability	*(<i>aircraft call sign</i>) NEGATIVE RNAV
* Denotes pilot transmission	

10.2 RNP

Nil.

10.3 SURVEILLANCE

Nil.

10.4 AERODROME OPERATIONS

<i>Circumstances</i>	<i>Phraseologies</i>
Request for departure from an intersection take-off position	*REQUEST DEPARTURE FROM RUNWAY (<i>number</i>), INTERSECTION (<i>name of intersection</i>)
Approval of requested departure from an intersection take-off position	APPROVED, TAXI TO HOLDING POINT RUNWAY (<i>number</i>), INTERSECTION (<i>name of intersection</i>)
Denial of requested departure from an intersection take-off position	NEGATIVE, TAXI TO HOLDING POINT RUNWAY (<i>number</i>), INTERSECTION (<i>name of intersection</i>)
ATC-initiated intersection take-off	ADVISE ABLE TO DEPART FROM RUNWAY (<i>number</i>), INTERSECTION (<i>name of intersection</i>)
Advising reduced take-off run available	REDUCED TAKE-OFF RUN AVAILABLE RUNWAY (<i>number</i>), FROM INTERSECTION (<i>name of intersection</i>), (<i>distance in metres</i>)
Issuing multiple line-up instruction	LINE UP AND WAIT RUNWAY (<i>number</i>), INTERSECTION (<i>name of intersection</i>), (<i>essential traffic information</i>)
Request for a visual departure	*REQUEST VISUAL DEPARTURE [DIRECT] TO/UNTIL (<i>navaid, waypoint, altitude</i>)
ATS initiated visual departure	ADVISE ABLE TO ACCEPT VISUAL DEPARTURE [DIRECT] TO/UNTIL (<i>navaid, waypoint/altitude</i>)
Clearance for visual departure	VISUAL DEPARTURE RUNWAY (<i>number</i>) APPROVED, TURN LEFT/RIGHT [DIRECT] TO (<i>navaid, heading, waypoint</i>) [MAINTAIN VISUAL REFERENCE UNTIL (<i>altitude</i>)]
Read-back of visual departure clearance	*VISUAL DEPARTURE TO/UNTIL (<i>navaid, waypoint/altitude</i>)
* Denotes pilot transmission	

10.5 ATFM

<i>Circumstances</i>	<i>Phraseologies</i>
Calculated take-off time (CTOT) delivery resulting from a slot allocation message (SAM). (The CTOT shall be communicated to the pilot at the first contact with ATC.)	SLOT (<i>time</i>)
Change to CTOT resulting from a Slot Revision Message (SRM).	REVISED SLOT (<i>time</i>)
CTOT cancellation resulting from a Slot Cancellation Message (SLC).	SLOT CANCELLED, REPORT READY
Flight suspension until further notice (resulting from Flight Suspension Message (FLS)).	FLIGHT SUSPENDED UNTIL FURTHER NOTICE, DUE (<i>reason</i>)
Flight de-suspension resulting from a De-suspension Message (DES).	SUSPENSION CANCELLED, REPORT READY
Denial of start-up when requested too late to comply with the given CTOT.	UNABLE TO APPROVE START-UP CLEARANCE DUE SLOT EXPIRED, REQUEST A NEW SLOT
Denial of start-up when requested too early to comply with the given CTOT.	UNABLE TO APPROVE START-UP CLEARANCE DUE SLOT (<i>time</i>), REQUEST START-UP AT (<i>time</i>)

Chapter 11. SEARCH AND RESCUE

11.1 INTERNATIONAL GENERAL AVIATION (IGA)

(A6, Part II – Chapter 6; A6, Part III – Chapter 4)

11.1.1 General aviation aircraft operating over designated areas, land or sea, where search and rescue operations would be difficult, should:

- a) carry appropriate survival equipment; and
 - b) follow the routes or specified procedures if not equipped with two-way radio, except that under special circumstances, the appropriate authority may grant specific exemptions from this requirement.
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Chapter 12. METEOROLOGY

12.1 AIRCRAFT OBSERVATIONS AND REPORTS

Nil.

Chapter 13. AERONAUTICAL INFORMATION SERVICES

13.1 NOTAM ADDRESSING AND DISTRIBUTION

13.1.1 In addition to the distribution to individual States, all NOTAM originated worldwide shall also be addressed to the European AIS Database (EAD) using the AFTN address EUECYIYN as destination address.

Note.— Bilateral addressing agreements between States remain unchanged.

13.1.2 The EAD shall ensure distribution of NOTAM to all relevant NOTAM Offices (NOF) within its area of responsibility (EAD Clients).

13.1.3 NOTAM originated by EAD Clients shall be channelled through the EAD system and therefore indicate the EAD AFTN origination address.

13.1.4 The EAD AFTN destination and origination addresses are as follows:

Type of message	EAD destination address	EAD origination address (where applicable)
NOTAM	EUECYIYN	EUECYIYN
SNOWTAM	EUECYIYS	EUECYIYN
ASHTAM	EUECYIYA	EUECYIYN
BIRDTAM	EUECYIYB	EUECYIYN
ATFM (ANM, AIM, CRAM)		EUECYIYN
Freetext	EUECYIYX	EUECYIYX
Request for: — repetition of NOTAM — original version of NOTAM — list of valid NOTAM	EUECYRYX	EUECYIYN
Reply message	EUECYRYX	EUECYIYN

Note.— “Request for...” messages will be processed automatically by the EAD in case the standard request format is applied.

Note 1.— Detailed procedures and information applicable to the European AIS Database (EAD) is contained in the EUROCONTROL “EAD Operational User Handbook”.

Note 2.— BIRDTAM is not an official ICAO term. BIRDTAM is an acronym for AFTN messages originated by military services based on a NATO Standard to provide information about bird strike risk/warning particularly in lower level flying areas. The EAD covers those messages for specific military clients.

Note 3.— ATFM includes Air Traffic Flow Management messages such as ANM (ATFM Notification Message), AIM (ATFM Information Message) and CRAM (Conditional Route Availability Message).

13.2 AERONAUTICAL CHART INFORMATION

13.2.1 Visual procedures

13.2.1.1 Information essential for the conduct of visual departures and visual approaches (e.g. significant obstacles, topographical and cultural features), including any specific limitations as prescribed by the appropriate authority (e.g. designated airspace, recommended tracks) shall be displayed on the visual approach chart and standard instrument departure (SID) chart or standard instrument arrival (STAR) chart, as appropriate.
