

OPERATIONS ADVISORY NOTICE (OAN)		 Transport Malta Civil Aviation Directorate Flight Operations Inspectorate Transport Malta Malta Transport Centre Pantar Road Lija LJA 2021 Malta
OAN Number: 03/18	Issue Date: 6 February 2018	
Subject: Performance Based Communication and Surveillance (PBCS) in the ICAO North Atlantic Region		

1.0 INTRODUCTION

Developments in aircraft avionics and air traffic management flight data processing systems have resulted in an initiative to analyse whether the lateral separation standard in the current North Atlantic High Level Airspace (NAT HLA) could be reduced from 60 NM to 25 NM thereby increasing the number of route options available and capacity at optimum flight levels.

An ongoing trial implementation of 25 NM lateral separation, referred to as Reduced Lateral Separation Minimum (RLatSM), has established tracks that are spaced by one-half degree of latitude with the inclusion of an extra track between the core tracks of the NAT Organised Track System (OTS) from Flight Level FL 350 to FL 390.

Phase 2 will extend the trial to the whole OTS and is planned to commence by the end of 2017. A similar trial has been ongoing in the Shanwick Oceanic Control Area (OCA) with the aim to reduce longitudinal separation between aircraft following the same track to 5 minutes. This initiative is referred to as Reduced Longitudinal Separation Minimum (RLongSM). These trials will be terminated on 29 March 2018.

Note: However, the application of both reduced lateral and longitudinal separation will still be possible after 29 March 2018 with the introduction of Performance Based Communication and Surveillance (PBCS).

2.0 REFERENCES

- ICAO Annex 6 Operation of Aircraft
- ICAO Annex 11 Air Traffic Services
- ICAO Doc 9869 Performance Based Communication and Surveillance (PBCS) Manual
- ICAO Doc 10037 Global Operational Data Link (GOLD) Manual
- ICAO Doc 4444 PANS ATM Manual
- ICAO Doc 7030 Regional Supplementary Procedures Manual
- NAT Doc 007 North Atlantic Operations and Airspace Manual

3.0 SCOPE

This OAN applies to air operators holding a Maltese Air Operators Certificate and also to Maltese private operators, both referred to as 'operator', which are looking to benefit from increased route options and optimum flight level allocation in the NAT Region based on PBCS requirements.

4.0 PERFORMANCE BASED COMMUNICATION AND SURVEILLANCE (PBCS)

4.1 Basic Information

Performance Based Communication (PBC) and Performance Based Surveillance (PBS) refers to communication and surveillance based on performance specifications applied to the provision of air traffic services. The standards and procedures for an air traffic management (ATM) operation that are predicated on communication and surveillance capabilities, such as the application of reduced separation minima, must refer to the appropriate Required Communication Performance (RCP) and Required Surveillance Performance (RSP) specification.

The RCP and RSP specifications are a set of requirements for air traffic service provision and associated ground equipment, aircraft capability and operations needed to support performance based communication and surveillance.

4.2 Extent and Time Frame

Performance based operations and monitoring have been implemented in the North Atlantic (NAT) High Level Airspace (HLA) to ensure the ongoing safety and efficiency of ATM operations. The performance of FANS 1/A (and equivalent), Controller Pilot Data Link communications (CPDLC) and Automatic Dependent Surveillance – Contract (ADS-C) are monitored in the NAT HLA against the RCP 240 and RSP 180 specifications.

Note: From 29 March 2018 flights will be required to indicate compliance with the RCP 240 and RSP 180 specifications in order to qualify for reduced lateral and/or longitudinal separation minima.

Note: Initially, this will apply to the OTS from FL 350 to FL 390, but will be extended to the whole of the NAT HLA in due course. In the future, it is expected that RCP and RSP compliance will also be required in other airspaces.

5.0 RCP 240 and RSP 180

5.1 Provision of PBCS

The provision of PBCS in the NAT HLA applies RCP 240 and RSP 180 specifications. This permits ATC to apply 30 NM, 50 NM or five minutes longitudinal separation minima; and to apply 23 NM lateral separation minimum.

An RCP specification includes communication performance requirements that are allocated to system components in terms of the communication to be provided and the associated transaction time, continuity, availability, integrity and safety and functionality needed for the proposed operation in the context of a particular airspace concept. The following table shows the RCP 240 specification:

RCP Specification	RCP Transaction Time (seconds)	RCP Continuity (probability)	RCP Availability (probability)	RCP integrity (acceptable rate / FH)
RCP 240	240	0.999	0.999 0.9999 (efficiency)	10-5

An RSP specification includes surveillance performance requirements that are allocated to system components in terms of the surveillance to be provided and the associated data delivery time, continuity, availability, integrity, accuracy of the surveillance data and safety and functionality needed for the proposed operation in the context of a particular airspace concept. The following table shows the RSP 180 specification:

RSP Specification	RSP Delivery Time (seconds)	RSP Continuity (probability)	RSP Availability (probability)	RSP integrity (acceptable rate / FH)
RSP 180	180	0.999	0.999 0.9999 (efficiency)	FOM=Navigation Specification Time at Position Accuracy +/- 1 Sec 10-5 (malfunction)

6.0 FLIGHT PLANNING

- **FANS 1/A CPDLC equipped aircraft** planning to operate in the NAT HLA shall insert the appropriate designator (J2, J3, J4, J5 and/or J7) in Item 10a of the flight plan.
- **FANS 1/A CPDLC RCP 240 compliant aircraft** intending to operate in the NAT HLA shall insert the designator P2 in Item 10a of the flight plan.
- **FANS 1/A ADS-C compliant aircraft** planning to operate in the NAT HLA shall insert the designator D1 in Item 10b of the flight plan.
- **FANS 1/A ADS-C RSP 180 compliant aircraft** planning to operate in the NAT HLA shall insert SUR/180 in Item 18 of the flight plan.
- **RNP 4 compliant aircraft** planning to operate in the NAT HLA shall insert PBN/L1 in Item 18 of the flight plan.

7.0 OPERATOR ELIGIBILITY

7.1 Minimum Requirements

Only those operators that satisfy the requirements of RCP 240 and RSP 180 will be eligible for the reduced separation minima in the NAT HLA. Minimum Navigation Performance Specification (MNPS) approval (issued prior to 1 January 2015) or NAT HLA approval remain a requirement. Operators will be eligible to indicate compliance with RCP 240 and RSP 180 provided that the aircraft are:

- **Required Navigation Performance (RNP-4) capable;**
- **Automatic Dependent Surveillance – Contract (ADS-C) equipped; and**
- **Controller Pilot Data Link Communications (CPDLC) equipped.**

7.2 Contracted Services

The operator shall ensure that contracted services, such as CSP / SSP are bound by contractual arrangements stipulating the RCP / RSP allocations, including any monitoring or recording requirements.

The operator shall also ensure that contractual arrangements include a provision for the CSP / SSP to notify the appropriate ATS units of failure conditions impacting PBCS operations.

8.0 APPLICATION

8.1 For existing operator with NAT HLA approval:

Submit a covering letter with [Form TMCAD 0068](#) together with all relevant documents, the revised parts of the Operations Manual (OM) containing instructions and information regarding RCP / RSP, AFM statements confirming capability, as a complete package and submit to your principal inspector and copy the Aiops.tm@transport.gov.mt email address.

8.2 For new requests of NAT HLA operation:

Submit [Form TMCAD0099](#) as well as a covering letter, [Form TMCAD 0068](#) together with all relevant documents, the revised parts of the Operations Manual (OM) containing instructions and information regarding RCP / RSP, AFM statements confirming capability, as a complete package and submit to your overseeing inspector and cc the Aiops.tm@transport.gov.mt email address.

8.3 Operational Approval

The Operations Specification RCP / RSP shall be listed in the OM together with all operations specifications of the operator concerned.

8.4 Route Competence for RCP / RSP

For flight crew members, the qualification “Route Competence for RCP / RSP” shall be declared in OM-A, Chapter 5.

8.5 Operating Procedures

For operations, where an RCP / RSP specification is required, the operator shall establish and document the following requirements:

- a) Normal, abnormal and contingency procedures;
- b) Flight crew qualification and proficiency requirements, in accordance with appropriate RCP / RSP specifications;
- c) A training programme for relevant personnel consistent with the intended operations;
- d) Appropriate maintenance procedures to ensure continued airworthiness, in accordance with the required RCP / RSP specifications;
- e) Reporting procedure for any failure or malfunction of GNSS, ADS-C or CPDLC equipment;
- f) Procedures to participate in ANSP and regional PBCS monitoring programmes.

Flight Operations Inspectorate