



SIERRA LEONE CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR

SLCAA-AC-ANS004-Rev. 00

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Guidance for the Development of Information and Application of Reduced Vertical Separation Minima (RVSM)

A handwritten signature in blue ink, appearing to read 'M. Ban', is positioned to the left of the official seal.



Director General

Sierra Leone Civil Aviation Authority

1. GENERAL

The Sierra Leone Civil Aviation Authority's Advisory Circulars contains information about standards, practices and procedures that the Authority has found to be an Acceptable Means of Compliance (AMC) with the associated Regulations.

An AMC is not intended to be the only means of compliance with a Regulation, and consideration will be given to other methods of compliance that may be presented to the Authority

Information considered directive in nature is described in this AC in terms such as "shall" and "must", indicating the actions are mandatory. Guidance information is described in terms such as "should" and "may" indicating the actions are desirable or permissive, but not mandatory

1.1 Purpose

This guidance provides instruction for the revision of documents, procedures and programs to enable the maintenance of a 300 m (1 000 ft) VSM between FL 290 and FL 410 inclusive within their particular regions in accordance with the criteria and requirements developed by ICAO.

It serves as Guidance to air traffic service provider on those measures necessary to ensure that the criteria and requirements are met within their area of responsibility.

1.2 Applicability

This AC is applicable to Air Navigation Service Providers (ANSPs) providing Air traffic services in Sierra Leone.

1.3 Description of Changes

This AC is the first to be issued on this subject

1.4 References

- (a) SLCAR Part 6- Aircraft Operations
- (b) SLCAR Part 8A- Airworthiness of Aircraft
- (c) SLCAR Part 25- Instrument and Equipment
- (d) SLCAR Part 11- Air Traffic Services
- (e) ICAO Doc 9574

1.5 Cancelled Documents

Not Applicable

1.6 Abbreviations

The following abbreviations used in this document:

AC - Advisory Circular

ANS - Air Navigation Service

ANSP - Air Navigation Service Provider
CFL - Cruising Flight Level
FL - Flight Level
ICAO - International Civil Aviation Organization
MASPS - Minimum Aircraft Systems Performance Specification
RMA - Regional Monitoring Agency
RVSM - Reduced Vertical Separation Minima
SMS - Safety Management System
SLCAA - Sierra Leone Civil Aviation Authority
SLCARs - Sierra Leone Civil Aviation Regulation
VSM - Vertical Separation Minima

2. BACKGROUND

This guidance provides information and application of reduced vertical separation minima (RVSM). The objective of information and application reduced vertical separation minima (RVSM) is important for maintaining the safety, regularity and efficiency of international air navigation.

RVSM approval will encompass the following elements:

- (a) Airworthiness approval (including continued airworthiness). The aircraft will be approved as meeting the requirements of the appropriate State airworthiness document derived from the height-keeping capability requirements as defined by the RVSM MASPS. Furthermore, the aircraft altimetry and height-keeping equipment must be maintained in accordance with approved procedures and servicing schedules; and
- (b) Operational approval. As defined by ICAO regional air navigation agreements, it may be necessary for an operator to hold a separate RVSM-specific operational approval in addition to an RVSM airworthiness approval to operate in RVSM airspace.

3. ROLE OF THE APPROPRIATE ATC AUTHORITY IN MONITORING HEIGHT-KEEPING PERFORMANCE

3.1 The ATC authority has a vital role to play in the monitoring process in that there is a need to gather information on and report any deviation equal to or greater than 90 m (300 ft), for any reason, from cleared levels whether the deviation causes an incident or not. This information will contribute to the assessment of the level of overall risk in the system. The information required by the RMA to conduct the risk assessment might, depending on the region of implementation, include the following data:

- (a) reporting unit;
- (b) location of deviation, either as latitude/longitude or a bearing and distance from a significant point;
- (c) date and time of large height deviation;
- (d) sub-portion of airspace, such as established route system, if applicable;
- (e) flight identification and aircraft type;

- (f) assigned flight level;
- (g) final reported flight level or altitude and basis for establishment (e.g. pilot report or Mode C);
- (h) duration at incorrect level or altitude;
- (i) possible cause of deviation;
- (j) any other traffic in potential conflict during deviation;
- (k) crew comments when notified of deviation; and
- (l) Remarks from ATC unit making report.

4. GUIDANCE

4.1 The continuity of RVSM operations safely in relation to the provision of air navigation services requires that ATC procedures be periodically reviewed and appropriate recurrent training provided. As a basis for the periodic review of regional procedures, consideration should be given to the appropriate action to be taken by controllers in the following situations, as applicable:

- (a) Aircraft known not to be suitably equipped are flight planned into RVSM airspace;
- (b) An aircraft informs ATC that the capability to maintain a CFL appropriate to RVSM requirements has been lost;
- (c) The pilot advises that the automatic altitude-keeping device has been turned off; and
- (d) The displayed altitude differs from the CFL by 90 m (300 ft) or more.

4.2 Confirmation of approval status

- (a) Continuity of RVSM operations is dependent on the establishment of an aircraft approval confirmation process, which is intended to exclude unqualified aircraft and operators from operating in RVSM airspace unless the appropriate separation is applied. The primary responsibility for confirmation of the approval status of an aircraft/operator must rest with the State of the Operator/State of Registry.
- (b) At the appropriate level, a secondary responsibility should rest with the air traffic services (ATS) provider States to institute routine checks of the approval status of aircraft operating within their area of authority and intending to operate in RVSM airspace. Apart from the scrutiny activities conducted by the relevant RMA, this responsibility could be met by:
 - (i) Scrutinize ATS flight plans;
 - (ii) Conducting cross-checks against the regional RVSM-approvals database, taking into account the currency of its contents; and
 - (iii) Querying operators that are suspected of not being in compliance with the airspace requirements.
- (c) Depending on regulations, ATC clearances may be withheld for operations that are not in compliance with the airspace requirements.

In conjunction with the ATS provider, a further level of confirmation of approval can be affected by the RMA of a region in which RVSM applies. This can be achieved by the RMA taking action.