



SIERRA LEONE CIVIL AVIATION AUTHORITY

# ADVISORY CIRCULAR

SLCAA-AC-ANS010-Rev. 00

EFFECTIVE DATE: 31<sup>ST</sup> AUGUST 2021

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## Guidance on Communication, Navigation and Surveillance Facilities Approval

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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 AC provides guidance on the approval of CNS facilities under the Sierra Leone Civil Aviation Regulations.

### **1.2 Applicability**

This AC is applicable to Air Navigation Service Providers (ANSPs) providing Communication Navigation and Surveillance 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 10 (A, B, C, D & E)
- (b) Annex 10 (Vol I-V)
- (c) ICAO DOC 8070 Vol 1

### **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
- AIP – Aeronautical Information Publication
- ATC – Air Traffic Control
- ATM – Air Traffic Management
- CNS – Communication Navigation and Surveillance
- ICAO - International Civil Aviation Organization
- SLCAA – Sierra Leone Civil Aviation Authority

SAT - Site Acceptance Tests  
FAT - Factory Acceptance Tests

## **2. GUIDANCE AND PROCEDURES**

### **2.1 Approval requirements**

The provisions in the Sierra Leone Civil Aviation Regulations requires that;

- (a) No person shall install, operate, decommission, upgrade or re-locate a CNS facility/equipment in the designated airspace and aerodromes without the approval from the Authority.
- (b) An ANS Provider shall ensure that the installation, operation and maintenance of CNS facilities are in accordance with the requirements specified in the Sierra Leone Civil Aviation Regulations and conform to the applicable system characteristics and specification standards prescribed in the;
  - (i) SLCAR Part 10A (Radio Navigation Aids).
  - (ii) SLCAR Part 10B (Communication Procedures).
  - (iii) SLCAR Part 10C (Communication Systems).
  - (iv) SLCAR Part 10D (Surveillance and Collision Avoidance systems).
  - (v) SLCAR Part 10E (Aeronautical Radio Frequency Spectrum Utilization).

### **2.2 Approval Procedures**

#### **2.2.1 General**

The approval procedure applies to ANSP requesting installation, operations, upgrading, commissioning, decommissioning or relocation of CNS facilities.

#### **2.2.2 Approval request**

An ANSP wishing to obtain an approval for installation, operations, upgrading, commissioning, decommission or relocation of CNS/ATM facilities shall in addition to Appendix 1 send an application letter to the Authority providing details, of the concept of the change (s), including any design, specifications, purpose of introducing the change and initial safety assessment performed, to facilitate assessment and approval before continuing with the process.

### **2.3 Assessment Procedure**

#### **2.3.1 Evaluation:**

The document(s) shall be evaluated to ensure it is compliant with applicable regulations and requirements.

#### **2.3.2 Equipment inspections:**

CNS Inspector(s) shall have unrestricted access to CNS facilities to be approved for the purpose of inspecting it and record therein and for the purpose of testing or observing the operation of such facility. The equipment shall be assessed by the Authority to ensure that they meet the requirements published in the Sierra Leone Civil Aviation Regulations. The ANSP shall not conduct any Factory Acceptance Tests (FAT) without the involvement of the Regulator (CNS

Inspector(s)). This is to enable the Regulator make appropriate evaluation prior to the acceptance of the equipment to ensure compliance with the Sierra Leone Civil Aviation Regulations.

#### **2.4 Installation and commissioning requirements**

- (a) The facility installed and commissioned shall meet the operational specifications.
- (b) The facility shall conform to the applicable system characteristics and specification standards prescribed in Sierra Leone Civil Aviation Regulations.
- (c) The facility shall have been allocated an identification code or call sign where applicable.
- (d) Installation and implementation processes of new CNS/ATM equipment shall be monitored and assessed by the Authority's CNS Inspector(s) to ensure proper procedures are being adhered to for safety assurance

#### **2.5 Performance requirements of the facilities**

The facility shall have an acceptable level of operational reliability and an acceptable standard of performance

#### **2.6 Flight inspections**

This must include details of the standards and procedures to be used for flight inspections, the time interval between flight inspections, and the identity of the flight inspection organization that will be contracted to carry out the flight inspections. All these should be provided to the Authority in advance before the conduct of the Flight Inspection.

#### **2.7 Protected Power Supply system**

Each facility listed in the application shall be installed with suitable power supplies and means to ensure continuity of operation appropriate to the needs of the air traffic service or radio navigation service being supported. Standby power supplies and UPS systems of required capacities shall be provided in all the essential units to ensure continuous operation of communication facilities.

#### **2.8 Adequate and accurate records**

Records of installations, initial testing, commissioning and re-commissioning of the facility shall be prepared and submitted by the installation team while handing over the facility/equipment to the ANSP.

#### **2.9 Reliability and Availability**

The air navigation services provider shall ensure that the availability and reliability of its services meet the Sierra Leone Civil Aviation Regulations. The inspector shall inspect the following during approval;

- (a) Redundancy of equipment (main & stand by)
- (b) The dedicated power supply and standby power supply/Battery backup
- (c) Inherent reliability of equipment
- (d) Controlled temperature & humidity

- (e) Adequate test equipment
- (f) Quality maintenance by trained/skilled personnel
- (g) Availability of necessary spares
  - (i) The facility listed in the application shall be installed in accordance with the applicable Sierra Leone Civil Aviation Regulations to minimize any risk of destruction, damage or interference with the operations of the facility;
  - (ii) Upon completion of the assessment, the ANSP shall receive a written approval for the facility. The approval shall be subject to withdrawal at any time the facility fails to meet the aforementioned requirements.
  - (iii) The ANSP must not conduct any Site Acceptance Tests (SAT) without the involvement of the Regulator (CNS Inspector(s)). This is to enable the Regulator make appropriate evaluation prior to the acceptance of the equipment to ensure compliance with the Sierra Leone Civil Aviation Regulations.
  - (iv) The ANSP shall establish procedures in their operations Manual to ensure the above requirements are met for efficiency, safety and regularity of air navigation.

**3. Surveillance**

Upon approval of the facilities, the Authority shall be responsible for conducting periodic inspections of CNS facilities to ensure continued compliance with the Regulations and Standards.

**Appendix 1 Application for ANS Facilities Approval**

<b>1.</b>	<b>Particulars of Applicant</b>	
	a) Name/Title:	
	b) Permanent address:	
	c) Telephone:	
	d) Fax:	
	e) Email:	
<b>2.</b>	<b>Equipment Data</b>	
	a) Equipment Type:	
	b) Manufacturer:	Model No:
	c) Dates for Installation:	
	d) Dates for Commissioning:	
	e) Date of Proposed Operation:	
	f) Power Output (Nominal):	
	g) Assigned Frequency:	Identification:

