



SIERRA LEONE CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR

SLCAA-AC-ANS021-Rev. 00

EFFECTIVE DATE: 31st AUGUST 2021

Guidance for the Development of Air Traffic Services Surveillance, Voice and Other Data Recording

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 on how to record voice and data in order to provide information for safety, accident and incident investigation.

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 11- Air Traffic Services
- (b) SLCAR Part 10B and 10D (Aeronautical Telecommunications)

1.5 Cancelled Documents

Not Applicable

1.6 Abbreviations

The following abbreviations used in this document:

AC - Advisory Circular
ADSB – Automatic Dependent Surveillance Broadcast
ATS - Air Traffic Services
ANS - Air Navigation Service
ANSP - Air Navigation Service Provider
DME – Distance Measuring Equipment
ILS - Instrument Landing System
SLCAA - Sierra Leone Civil Aviation Authority
SLCARs - Sierra Leone Civil Aviation Regulations
UTC – Universal Coordinate Time

VOR – VHF Omnidirectional Range

2. STANDARDS AND PRACTICES

- (a) Recording facilities shall be provided on all voice communication channels and surveillance systems data. Standalone replay equipment shall be provided at every ATS center.
- (b) Procedure to be developed for the purpose of data recording should assure the availability, integrity, legibility and security of the data.

2.1 Recording of Surveillance Data

- (a) Surveillance data from ADS-B, Primary and Secondary radar equipment shall be recorded automatically and continuously in the storage disc of the computer. It is required that back-up of the recorded data files be taken every day for retention.
- (b) The surveillance data from ADS-B, primary and secondary radar equipment used as an aid to air traffic services shall be automatically recorded for use in accident and incident investigations, search and rescue, air traffic control and surveillance systems evaluation and training.
- (c) Automatic recording shall be retained for a period of at least thirty days. When the recordings are pertinent to accident and/or incident investigations, they shall be retained for longer periods until no longer required.

2.2 Retention of Surveillance Data Recordings

The recorded tapes / storage disc shall be labelled properly with date of recording and details of the recorded files and shall be preserved under safe custody of a designated responsible officer. The recorded tapes/ storage disc may be erased after thirty days unless there has been an incident/accident within that period and is required for incident and accident investigation

2.3 Recording of Communication facilities

- (a) Each station shall be provided with multichannel voice recording systems (analog/digital) for recording of channels.
- (b) The channels to be recorded shall include:-
 - (i) Operational voice communications on all ATS channels;
 - (ii) All-important telephones and intercoms.
 - (iii) All radar positions
 - (iv) Synchronized time. (UTC)
 - (v) All intercoms
 - (vi) All navigational aids

2.4 Voice recording and retention

- (a) Voice recording facilities shall provide a chronological record of all voice communications for each operational position of Air Traffic Services.
- (b) All recordings shall incorporate time injection or stamping which will provide for the reestablishment of the real time of events.

- (c) Status monitoring of all recording facilities shall be undertaken at all times that the ATS unit is operative.
- (d) All recording media shall be clearly labelled or indexed un-ambiguously in accordance with standard practice. Labels shall include start and end times and the subject recording(s)/position(s).
- (e) Recordings shall be retained in safe storage for at least 30 days. When the recording is pertinent to accident or incident investigations they shall be retained for longer periods until they are no longer required.
- (f) The quantity of removable recording media on site shall be sufficient to cover the rotation period before re-use with contingency provided for a loss of media through impounding for investigations or unforeseen damage arising from equipment fault or normal wear.
- (g) Recording media that is designated for disposal shall be erased before disposal, or otherwise treated as classified waste. Magnetic storage media is to be bulk erased before disposal.
- (h) On receipt of notice of an accident or incident from the appropriate authority, recorded media pertinent to investigation shall immediately be removed from the recording facilities, regardless of the available recording time remaining, and placed, after sealing in safe custody of the designated officer. The removal of the media shall ensure that there is no loss of recording during the process. All such media shall be clearly labelled.
- (i) Recording media may only be released to a designated accident/incident Investigation Unit.
- (j) All media placed in custody must be retained until a formal release request is received from the designated authority. The actual release of the media shall be by means of person-to-person handover.

3. PERSONNEL LICENSING RECORDS

Records of ATS personnel licensing and competency certification must be kept for a minimum of 5 years, including after an employee ceases to be employed by the ATS provider. This includes details of:

- (a) Training;
- (b) Renewal and currency of ratings, endorsements and qualifications; and
- (c) Other proficiencies required by the ATS provider to be demonstrated.

3.1 Record retention for investigation.

Where requisitioned, by an appropriate authority, for the purposes of investigation, records must be isolated and kept in a secure place until their release by that authority.

3.2 Maintaining Records

- (a) Deletions from communications records are not permitted. All entries must be written in non-erasable ink, and must be legible.
- (b) Active forms or strips, fault reports, records and Log Books must be changed, or errors corrected by:
 - (i) Drawing a line through the incorrect data and writing the correct data adjacent thereto;
 - or

- (ii) Cancelling the old and rewriting the record, retaining both the old and the new for later reference purposes.
- (c) Methods of recording. Information transmitted or received by verbal means must be recorded by electronic means. Voice records must be supported by one or more of the following methods:
 - (i) Writing on a flight progress strip;
 - (ii) Typewritten on authorized forms;
 - (iii) Teletype on page copy machine units;
 - (iv) Handwritten in accordance with local requirements;
 - (v) Handwritten on appropriate forms;
 - (vi) Entered directly into computer-based equipment.
- (d) Flight notifications. A copy of all flight notifications received must be held for 90 days. Printed flight notifications shall be filed with the day's traffic. Electronic records should be archived via a suitable "off-line" media such as tape, disk array or optical disk.

4. MAINTAINING OPERATIONAL LOG BOOKS

- (a) The Log Book must be used to record all significant occurrences and actions relating to operations, facilities, equipment and staff at an ATS unit.
- (b) A working record or Log Book entry must not be inserted between earlier entries. In the event of an out of sequence entry being necessary, it must be entered as soon as possible, and annotated that it is out of sequence.
- (c) All Log Book entries must be recorded against the times of the occurrence, or time of the Log Book entry.

5. VOICE AND DATA RECORDING

- 5.1 Where appropriate voice recording facilities are available, details of opening and closing watch, or the identification of staff assuming responsibility for a position may be recorded orally in lieu of a logbook entry. In either case, the procedures used must be sufficient to readily establish, for the purposes of investigation, the status of the position (active/inactive) and the person responsible for any active position, at any given time.
- 5.2 When an automatic voice recording facility fails, a manual record of communications must be maintained, to the extent that this is possible.

6. ADDITIONAL AIR TRAFFIC SERVICES DATA TO BE RECORDED

- (a) Daily traffic movement records journal
- (b) progress strips
- (c) facility serviceability log book
- (d) ATS messages records:
 - (i) Filed flight plans standard and
 - (ii) Filed flight plans repetitive plans
 - (iii) Meteorological and aeronautical information
 - (iv) Aeronautical information
- (e) Operation log book

- (f) Incident log book
- (g) Voice records (tape records)
- (h) Emergency log book
- (i) Permission log book
- (j) Violation records format
- (k) Investigation records
- (l) occurrence investigation
- (m) Daily traffic movement records format
- (n) Search and rescue log book
- (o) record of each internal audit report
 - (i) audit findings
 - (ii) corrective action
 - (iii) preventive action
 - (iv) management review
 - (v) any necessary follow-up corrective and
 - (vi) preventive actions
- (p) Duty roster for
 - (i) Area Air Traffic Controller
 - (ii) Approach Air Traffic Controller
 - (iii) Aerodrome Air Traffic Controller
- (q) record of navigational aids
 - (i) VOR /DME
 - (ii) ILS
 - (iii) Surveillance data Audio / video