

	TANZANIA CIVIL AVIATION AUTHORITY DIRECTORATE OF SAFETY REGULATIONS AIR NAVIGATION INSPECTORATE	Revision: 2 Advisory Circular
Document No.: TCAA/QSP/SR/AC/ANI - 20	Title: RECORDING OF VOICE COMMUNICATION AND SURVEILLANCE DATA	Page 1 of 4

1.0 Purpose

- 1.1 The purpose of this advisory circular is to give guidance to CNS Provider on how to record Voice Communication and Surveillance data in order to provide information for safety, accident and incident investigation. Consequently, the availability, integrity, legibility and security of the recording procedures, recording facilities and recording media management practice, shall be assured.
- 1.2 Recording voice communication or surveillance data in aviation, particularly in the context of flight operations and air traffic control, plays a crucial role in ensuring safety, regulatory compliance, and operational transparency. This type of recording is commonly used to monitor communications between pilots and air traffic controllers (voice recording) or track aircraft movements and behavior (surveillance data recording). The use and handling of such recordings are governed by specific regulatory requirements and best practices.

2.0 References

- 2.1 Civil Aviation (Radio Navigation Aids) Regulations.
- 2.2 Civil Aviation (Surveillance and Collision Avoidance systems) Regulations.
- 2.3 Civil Aviation (Air Traffic Services) Regulations.
- 2.4 Civil Aviation (Communications Procedures) Regulations.
- 2.5 Civil Aviation (Aeronautical Radio Frequency Spectrum Utilization) Regulations

3.0 Standards and Practices

- 3.1 Recording facilities shall be provided on all voice communication channels and surveillance data systems. Stand alone replay equipment should be provided at every ATS centre.

4.0 Recording of Surveillance Data

Surveillance data recording typically refers to the tracking of aircraft movements using radar, satellite, and other surveillance technologies, ensuring continuous monitoring of air traffic.

- 4.1 Surveillance data from Primary and Secondary radar equipment provided at different airports shall be recorded automatically and continuously in an appropriate storage media. It is required that back-up of the recorded data files be taken every day for retention.
- 4.2 The surveillance data from 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.
- 4.3 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.

5.0 Retention of Surveillance Data Recordings

- 5.1 The recorded data shall be **labeled properly** with date of recording and details of the recorded files shall be secured. The secured data shall only be accessed by authorized officer(s)
- 5.2 The recorded data may be erased after thirty days unless there has been an incident/accident within that period and if required for incident and accident investigation.

6.0 Recording of Communication facilities

- 6.1 Each station shall be provided with multi channel voice recording systems (analog/digital) for recording of channels.
- 6.2 The channels to be recorded shall include:-
 - a) operational voice communications on all ATS channels;
 - b) all important telephones and intercoms.
 - c) all radar positions
 - d) Synchronized time (UTC)

7.0 Voice recording and retention

Voice recordings are used to document communications between air traffic controllers and pilots, as well as other relevant communications, for safety, compliance, and training purposes.

Key Aspects of Voice Recording:

Purpose:

Safety: In the event of an accident or incident, voice recordings can provide critical data that can be used for investigations, helping to clarify events and decisions made during the flight.

Training and Quality Assurance: Voice recordings can be used to evaluate and improve the performance of air traffic controllers and pilots.

Regulatory Compliance: Maintaining and storing voice recordings is a regulatory requirement.

Regulatory Requirements:

TCARS: Tanzania Civil Aviation Authority Regulations mandates that ATC (Air Traffic Control) facilities maintain recordings of radio communication for a specified retention period. The typical retention period is 30 days.

- 7.1** Voice recording facilities shall provide a chronological record of all voice communications for each operational position of an ATS service.
- 7.2** All recordings shall incorporate time injection or stamping which will provide for the re-establishment of the real time of events.
- 7.3** Status monitoring of all recording facilities shall be undertaken at all times that the ATS unit is operative.
- 7.4** All recording media shall be clearly labeled or indexed unambiguously in accordance with standard practice. Labels shall include start and end times and the subject recording(s)/position(s).
- 7.5** 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.
- 7.6** 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.

- 7.7 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.
- 7.8 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 labeled.
- 7.9 **Request on Recorded voice communication and surveillance data** shall only be released to an authorized appointed officer of a designated accident/incident Investigation Unit and in doing so, the respective authorized officer shall indicate the dates of data records in request and sign a formal official document as an evidence of receiving the corresponding recorded information.
- 7.10 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.



Tanzania Civil Aviation Authority