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| Document title Guidance for the development of Air Traffic Services Surveillance, Voice and other data recording | | Issue No. 1 | Page No. Page 1 of 8 |

The Air Navigation Regulation Directorate has issued this guidance material to be used by ANSP to prepare procedure manuals and other working documents for implementation of ICAO SARPS and National Regulations.

It is important to note that this guidance material improve the safety of air navigation services within Ethiopian air space .

The Director General of Ethiopian Civil Aviation Authority has here by approved this guidance material on September 18,2017 to be used as a guidance to air navigation services provider..


Approved by



Date September, 2017

Wossenyetah Hunegnaw (Col.)
Director General



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1. Purpose

1.1 *This guidance provides instruction on how to record voice and data in order to provide information for safety, accident and incident investigation.*

2. References

2.1 ICAO Annex 11 Air Traffic Services

2.2 ICAO Annex 10 Volumes II:

2.3 ICAO Annex 10 Volumes IV:

3. Standards and Practices

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

3.1 Recording of Surveillance Data

3.1.1 *Surveillance data from ADS-B, Primary and Secondary radar equipment shall be recorded automatically and continuously in the hard disc of the computer. It is required that back-up of the recorded data files be taken every day for retention.*

3.1.2 *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.*



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3.1.3 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.

3.2 Retention of Surveillance Data Recordings

The recorded tapes / DVDs shall be labeled 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/DVDs may be erased after thirty days unless there has been an incident/accident within that period and is required for incident and accident investigation

3.3 Recording of Communication facilities

3.3.1 Each station shall be provided with multi channel voice recording systems (analog/digital) for recording of channels.

3.3.2 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)*
- e) All intercoms*
- f) All navigational aids*

3.4 Voice recording and retention

3.4.1 Voice recording facilities shall provide a chronological record of all voice communications for each operational position of an ATS service.

3.4.2 All recordings shall incorporate time injection or stamping which will provide for the reestablishment of the real time of events.

3.4.3 Status monitoring of all recording facilities shall be undertaken at all times that the ATS unit is operative.



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- 3.4.4 All recording media shall be clearly labeled or indexed un-ambiguously in accordance with standard practice. Labels shall include start and end times and the subject recording(s)/ position(s).
- 3.4.5 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.
- 3.4.6 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.
- 3.4.7 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.
- 3.4.8 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.
- 3.4.9 Recording media may only be released to a designated accident/incident Investigation Unit.
- 3.4.10 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.

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4. *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.*

4.1 *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.*

4.2 *Maintaining Records*


4.2.1 *Deletions from communications records are not permitted. All entries must be written in non-erasable ink, and must be legible.*

4.2.2 *Active forms or strips, fault reports, records and Log Books must be changed, or errors corrected by:*

- a) *Drawing a line through the incorrect data and writing the correct data adjacent thereto; or*
- b) *Cancelling the old and rewriting the record, retaining both the old and the new for later reference purposes.*

4.2.3 *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:*

- a) *Writing on a flight progress strip;*
- b) *Typewritten on authorized forms;*
- c) *Teletype on page copy machine units;*

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- d) *Handwritten in accordance with local requirements;*
- e) *Handwritten on appropriate forms;*
- f) *Entered directly into computer-based equipment.*

4.2.4 *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 shall be archived via a suitable "off-line" media such as tape, disk array or optical disk.*

5. *Maintaining Operational Log Books*

5.1 *The Log Book must be used to record all significant occurrences and actions relating to operations, facilities, equipment and staff at an ATS unit.*

5.2 *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.*

5.3 *All Log Book entries must be recorded against the times of the occurrence, or time of the Log Book entry.*

5.4 *Minimum information to be recorded. The minimum information to be recorded is shown in the following table.*

6. *Voice and Data Recording*

6.1 *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.*



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6.2 When an automatic voice recording facility fails, a manual record of communications must be maintained, to the extent that this is possible.

7. Additional Air Traffic Services data to be recorded

7.1 Daily traffic movement records journal

7.2 progress strips

7.3 facility serviceability log book

7.4 ATS messages records

- a) Filed flight plans standard and*
- b) Filed flight plans repetitive plans*
- c) Meteorological and aeronautical information*
- d) Aeronautical information*

7.5 Operation log book

7.6 Incident log book

7.7 Voice records (tape records)

7.8 Emergency log book

7.9 Permission log book

7.10 Violation records format

7.11 Investigation records

7.12 occurrence investigation

7.13 Daily traffic movement records format

7.14 Search and rescue log book

7.15 record of each internal audit report

- a) audit findings*
- b) corrective action*
- c) preventive action*



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- d) *management review*
- e) *any necessary follow-up corrective and*
- f) *preventive actions*

7.16 Duty roster for

- a) *Chief Air Traffic Controller*
- b) *Senior Air Traffic Controller*
- c) *Area Approach Air Traffic Controller*
- d) *Approach Air Traffic Controller*
- e) *Aerodrome Air Traffic Controller*

7.17 record of navigational aid

- a) *VOR / DME*
- b) *NDB*
- c) *GP/ILS*
- d) *Surveillance data Audio / video*