



Advisory Circular

UCAA-AC-CNS005

December 2022

GUIDANCE ON COMMUNICATION, NAVIGATION AND SURVEILLANCE (CNS) FACILITIES' APPROVAL AND SURVEILLANCE

1.0 PURPOSE

- 1.1 This Advisory Circular (AC) provides guidance on the approval of CNS facilities under the Civil Aviation Regulations.

2.0 REFERENCES

- 2.1 Regulation 8 of the Civil Aviation (Aeronautical Radio Navigation Aids) Regulations, 2022.
2.2 Regulation 8 of the Civil Aviation (Aeronautical Communication Procedures) Regulations, 2022.
2.3 Regulation 8 of the Civil Aviation (Aeronautical Communication Systems) Regulations, 2022.
2.4 Regulation 8 of the Civil Aviation (Surveillance and Collision Avoidance systems) Regulations, 2022.
2.5 UCAA-AC-CNS 001 Availability and Reliability Standards for CNS Facilities.
2.6 UCAA-AC-CNS 003 Guidance on Flight Inspection of Radio Navigation Aids.

3.0 GUIDANCE AND PROCEDURES

3.1 Approval requirements

- 3.1.1 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.
- 3.1.2 An CNS Provider shall ensure that the installation, operation and maintenance of CNS facilities are in accordance with the requirements specified in Civil Aviation Regulations and conform to the applicable system characteristics and specification standards prescribed in the;
- a) The Civil Aviation (Aeronautical Radio Navigation Aids) Regulations, 2022.
 - b) The Civil Aviation (Aeronautical Communication Procedures) Regulations, 2022
 - c) The Civil Aviation (Aeronautical Communication Systems) Regulations, 2022.
 - d) The Civil Aviation (Surveillance and Collision Avoidance systems) Regulations, 2022.
 - e) The Civil Aviation (Aeronautical Radio Frequency Spectrum Utilization) Regulations, 2022.

3.2 Approval Procedures

3.2.1 General

The approval procedure applies to Air Navigation Services Provider (ANSP) requesting installation, operations, upgrading, commissioning, decommissioning, or relocation of CNS facilities.

3.2.2 Approval request

The CNS provider wishing to obtain an approval for installation, operations, upgrading, commissioning, decommissioning, or relocation of CNS facilities shall apply to the Authority providing details of the new systems or change(s).

3.2.3 Assessment Procedure

- a) **Evaluation:** The document(s) shall be evaluated to ensure compliance with applicable regulations and requirements.
- b) The equipment shall be assessed by the Authority to ensure that they meet the requirements published in the appropriate Civil Aviation Regulations.
- c) **Equipment inspections:** The 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.

3.2.4 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 Civil Aviation Regulations.
- c) The facility shall have been allocated an identification code or call sign where applicable.

3.2.5 Performance requirements of the facilities

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

3.2.6 Flight inspections

The flight Inspection process shall 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.

3.2.7 Protected Power Supply system

- a) Each facility to be used for provision of CNS services shall be installed with suitable power supplies and means to ensure continuity of operation appropriate to the needs of the services being supported.
- b) Standby power supplies and UPS systems of required capacities shall be provided in all the essential units to ensure continuous operation of communication facilities.

3.2.8 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.

3.2.9 Reliability and Availability

The CNS services provider shall ensure that the availability and reliability of its services meet the 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

3.2.10 The facility listed in the application shall be installed in accordance with the applicable Civil Aviation Regulations to minimize any risk of destruction, damage or interference with the operations of the facility;

3.2.11 Upon completion of the assessment, the ANSP shall receive an approval by the authority for the facility. The approval shall be subject to withdrawal at any time the facility fails to meet the aforementioned requirements.

3.3 Surveillance

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



DIRECTOR SAFETY, SECURITY AND ECONOMIC REGULATION