# CHECK LIST FOR
# COMMUNICATION, NAVIGATION AND SURVEILLANCE INSPECTOR

| Company Name | ETHIOPIAN CIVIL AVIATION AUTHORITY | Document No.<br>ECAA/ANR/CL/009 | |
|---|---|---|---|
| Document Title: | CNS Inspection Checklist | Issue No.<br>1 | Page No. |

## APPROVAL PAGE

This Checklist for CNS Inspector has been prepared by Air Navigation Regulation Directorate to assist the effort of the Ethiopian Civil Aviation Authority to maintain the provision of effective Air Navigation Services with in Ethiopia airspace.

It is important to note that the Checklist for CNS Inspector improves the safety of Civil Aviation Operation in Ethiopia.

The Director General of the Ethiopian Civil Aviation Authority has here by approved the Checklist for CNS Inspector on June 2016 to be used as guidance to Communication, Navigation and Surveillance Inspector.

Approved by ....................................................

Wosenyeleh Hunegnaw (CoL)
Director General

Date June 2016

PLEASE MAKE SURE THAT THIS IS THE CORRECT ISSUE BEFORE USE

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# Requirement - CNS Equipment Performance Condition

**Reference** - ECARAS Part 16 and Equipment Operational and technical manual

Equipment type_____ Frequency _____ Equipment Location_____
ID _____ Power output _____

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| 1. Do both Main and SD/BY transmitters Operational? | *Yes* ▢ *No* ▢ | |
| 2. Check transmitter nominal output power Accuracy As the equipment Manufacturer specifications | *Satisfactory* ▢<br>*not satisfactory* ▢ | |
| 3. Availability of dual monitor system for controlling an incorrect signal or any deviation from nominal value. | *Yes* ▢ *No* ▢ | |
| 4. If dual do they indicate the parameters with equal indication or as minimum difference as possible within the tolerance of ICAO Annex 10 and the equipment Manufacturer specifications? | *Yes* ▢ *No* ▢ | |
| 5. Is there any Monitor warning or Alarm? if any, which parameter?) | *Yes* ▢ *No* ▢ | |
| 6. Does the automatic transfer/shutdown system show alarm when critical parameters Alarming? | *Yes* ▢ *No* ▢ | |

**Recommendations :-**

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**Requiremen**t - **CNS Equipment Performance Condition**

 **Reference** -    ECARAS Part 16  and  Equipment Operational and technical manual

| Checklist Questions | Compliance verified | Evidence and/or Observations |
| --- | --- | --- |
| 7.  Does CNS service provider Check correct radiation of Transmitters with appropriate test instrument?<br> • Observe the checking process indications are actual | *Satisfactory* ☐<br>*not satisfactory* ☐ | |
| 8.  Does the CNS service provider have a scheduled field check or ground check done?<br> • Review the recorded data. | *Satisfactory* ☐<br>*not satisfactory* ☐ | |
| 9. Is there standby power system generator or battery? | *Satisfactory* ☐<br>*not satisfactory* ☐ | |
| 10.Check weather the equipment operation holds during battery supply as specified by equipment manufacturer<br> • Put off main power supply and check the equipment if it works with battery and for how long it works? | *Satisfactory* ☐<br>*not satisfactory* ☐ | |
| 11. Is  the parameter status indicators indicating Normal reading on (Both Transmitters)? | *Satisfactory* ☐<br>*not  Satisfactory* ☐ | |
| 12. Check  Availability of operational and technical manual  with complete circuit diagrams | *Satisfactory* ☐<br>*not satisfactory* ☐ | |
| **Recommendations :-** | | |

**Requiremen**t **- CNS Equipment Performance Condition**

  **Reference** -    ECARAS Part 16 and Equipment Operational and technical manual

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| 13. Check the availability of spare parts/modules for the Equipment. | *Satisfactory* ☐<br>*not Satisfactory* ☐ | |
| 14.Check the availability of proper test instrument as well as their serviceability : -<br>• Oscilloscope<br>• frequency counter<br>• Wattmeter<br>• signal generators<br>• spectrum analyzer | *Satisfactory* ☐<br>*not satisfactory* ☐ | |
| 15. Does the CNS service provider conduct calibration for test instrument?<br>• Periodic calibration<br>• Check records | *Satisfactory* ☐<br>*not Satisfactory* ☐ | |
| 16. Does Navigational Aid Equipment remote control and monitoring system parameter status indicator operational? | *Satisfactory* ☐<br>*not Satisfactory* ☐ | |

**Recommendations :-**

**Requiremen**t - **CNS Equipment Performance Condition**

 **Reference** -    ECARAS Part 16 and  Equipment Operational and technical manual

| Checklist Questions | Compliance verified | Evidence and/or Observations |
| --- | --- | --- |
| 17. Check the periodical calibration records of test instruments of AFIS. | *Satisfactory* ☐<br>*not Satisfactory* ☐ | |
| 18. Does the CNS Service provider has a periodic flight calibration /inspection report?<br>  • Check the regularity of flight inspection<br>  • Verify the flight inspection report | *Satisfactory* ☐<br>*not satisfactory* ☐ | |
| 19.Does the CNS service provider apply safety regulation during any preventive /corrective activities . Check for the use ESD | *Satisfactory* ☐<br>*not Satisfactory* ☐ | |
| 20.Check the availability of proper maintenance tools. | *Satisfactory* ☐<br>*not Satisfactory* ☐ | |
| 21. Check the routine logbook records and/or Preventive / corrective maintenance performance reports. | *Satisfactory* ☐<br>*not Satisfactory* ☐ | |

**Recommendations :-**

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**Requiremen**t -  **CNS Equipment Performance Condition**

 **Reference** -    ECARAS Part 16  and  Equipment Operational and technical manual

Equipment type_____ Frequency _____ Equipment Location_____

ID _____          Power output _____          Channel  _____

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| 1. Do both Main and SD/BY Transponders Operational? | *Yes* ▢   *No* ▢ | |
| 2. Check transmitter nominal output power Accuracy As the equipment Manufacturer specifications | *Satisfactory* ▢ *not satisfactory* ▢ | |
| 3. Availability of dual monitor system for controlling an incorrect signal or any deviation from nominal value. | *Yes* ▢   *No* ▢ | |
| 4. If dual do they indicate the parameters with equal indication or as minimum difference as possible within the tolerance of ICAO Annex 10 and the equipment Manufacturer specifications? | *Yes* ▢   *No* ▢ | |
| 5.  Is there any Monitor warning or Alarm? if any, which parameter?) | *Yes* ▢   *No* ▢ | |
| 6. Does the automatic transfer/shutdown system show alarm when critical parameters Alarming? | *Yes* ▢   *No* ▢ | |

**Recommendations :-**

**Requiremen**t - **CNS Equipment Performance Condition**

  **Reference** -    ECARAS Part 16 and Equipment Operational and technical manual

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| 7. Is there standby power system generator or battery? | *Yes* ☐    *No* ☐ | |
| 8. Check weather the equipment operation holds during battery supply as specified by equipment manufacturer<br>  • Put off main power supply and check the equipment if it works with battery and for how long it works? | *Satisfactory* ☐<br>*not satisfactory* ☐ | |
| 9. Is the parameter status indicators indicating Normal reading on (Both Transmitters) ? | *Yes* ☐    *No* ☐ | |
| 10. Check Availability of operational and technical manual with complete circuit diagrams | *Satisfactory* ☐<br>*not satisfactory* ☐ | |

**Recommendations :-**

**Requiremen**t - **CNS Equipment Performance Condition**

 **Reference** -    ECARAS Part 16 and  Equipment Operational and technical manual

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| 11. Check the availability of spare parts/modules for the Equipment. | *Satisfactory*        ☐ *not  Satisfactory*    ☐ | |
| 12. Does Navigational Aid Equipment remote control and  monitoring system parameter status indicator operational? | *Yes* ☐     *No*     ☐ | |
| 13. Does the CNS service provider apply safety regulation during any preventive /corrective activities . Check for the use ESD | *Yes*   ☐  *No*  ☐ | |
| 14. Check the availability of proper  maintenance tools. | *Satisfactory*        ☐ *not  Satisfactory*    ☐ | |
| 15. Check the routine logbook records and/or Preventive / corrective  maintenance performance reports. | | |

**Recommendations :-**

**Requiremen**t: **The CNS service provider shall develop an overall training plan and program for its staff. (Manual of Training Programme for CNS personnel)**

**Reference** Manual ECAA/ANRD/OP/001 , Chapter 4 ,4.1.3 & Inspectors' Handbook,9.4)

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| 1. Does the CNS service provider develop training program for CNS staff. | *Yes* ▢ *No* ▢ | |
| 2. Is the training program approved by the air navigation regulation directorate? | *Yes* ▢ *No* ▢ | |
| 3. Does the training program indicate initial, recurrent and specialized training? | *Yes* ▢ *No* ▢ | |

**Recommendations :-**

**Requiremen**t: - **The CNS service provider shall maintain individual training records for each technical staff.**

(Doc 9734 part A,3.7 , Manual ECAA/ANRD/OP/001 , Chapter 4 ,4.1.3 & Inspectors' Handbook,9.4)

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| 1. Does the CNS service provider keep the training records of its staff? | *Yes* ☐ *No* ☐ | |
| 2. Does the training record indicate certificate awarded, duration and name of institute? | *Yes* ☐ *No* ☐ | |
| 3. Has the CNS service provider established a method for maintaining individual training records in hard copy or soft copy? | *Yes* ☐ *No* ☐ | |
| 4. Does the CNS service provider Develop Job description for its staff? | *Yes* ☐ *No* ☐ | |
| 5. Is the Job description approved by the HRM and submitted to air navigation regulation directorate? | *Yes* ☐ *No* ☐ | |

**Recommendations :-**

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**Requirement: COMMUNICATION FACILITIES:**

**( VHF air to ground Voice Communication Systems)**

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| A. Availability and Serviceability status of 118.1MHZ main Aerodrome Frequency | *Yes* ☐ *No* ☐ | |
| B. Availability and Serviceability status of 118.1MHZ standby Aerodrome Frequency | *Yes* ☐ *No* ☐ | |
| C. Availability and Serviceability status of 121.9 MHZ main GMC Frequency | *Yes* ☐ *No* ☐ | |
| D Availability and Serviceability status of 121.9 MHZ standby GMC Frequency | *Yes* ☐ *No* ☐ | |
| **Recommendations :-** | | |

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| **Requirement: VSAT/ADS-B Communication Systems** | | |
|---|---|---|
| **Checklist Questions** | **Compliance verified** | **Evidence and/or Observations** |
| A. Availability and Serviceability status of Mekele 125.2 MHZ main | *Yes* ☐  *No* ☐ | |
| B. Availability and Serviceability status of Mekele 125.2 MHZ standby | *Yes* ☐  *No* ☐ | |
| C. Availability and Serviceability status of Dire Dawa 125.2 MHZ main | *Yes* ☐  *No* ☐ | |
| D Availability and Serviceability status of Dire Dawa 125.2 MHZ standby | *Yes* ☐  *No* ☐ | |
| **Recommendations :-** | | |

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**Requirement: VSAT/ADS-B Communication Systems**

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| A. Availability and Serviceability status of Gode 125.2 MHZ main | Yes☐   No☐ | |
| B. Availability and Serviceability status of Gode 125.2 MHZ standby | Yes☐   No☐ | |
| C. Availability and Serviceability status of Gore 125.1 MHZ main | Yes☐   No☐ | |
| D. Availability and Serviceability status of Gore 125.1 MHZ standby | Yes☐   No☐ | |
| E. Availability and Serviceability status of Arbaminch 125.1 MHZ main | Yes☐   No☐ | |
| F. Availability and Serviceability status of Arbaminch 125.1 MHZ standby | Yes☐   No☐ | |

**Recommendations :-**

| Requirement: - VHF air to ground Voice Communication Systems | | |
|---|---|---|
| **Checklist Questions** | **Compliance verified** | **Evidence and/or Observations** |
| A. Availability and Serviceability status of Gawassa 125.1 MHZ main | Yes ☐   No ☐ | |
| B. Availability and Serviceability status of Gawassa 125.1 MHZ standby | Yes ☐   No ☐ | |
| C. Availability and Serviceability status of Gawassa 119.7 MHZ main Approach Frequency | Yes ☐   No ☐ | |
| D. Availability and Serviceability status of Gawassa 119.7 MHZ standby Approach Frequency | Yes ☐   No ☐ | |
| **Recommendations :-** | | |

**Requirement: VHF air to ground Voice Communication Systems**

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| A. Availability and Serviceability status of 121.5 MHZ main Distress Frequency | *Yes* ☐  *No* ☐ | |
| B. Availability and Serviceability status of 121.5MHZ standby Distress Frequency | *Yes* ☐  *No* ☐ | |
| **Recommendations :-** | | |

**Requirement:  Voice switching and control systems**

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| *A.* Serviceability status | Yes ☐  No ☐ | |
| *B.* Remote status monitors | Yes ☐  No ☐ | |
| C. Standby system | Yes ☐  No ☐ | |
| D. Standby power supplies | Yes ☐  No ☐ | |
| **Recommendations :-** | | |

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| Requirement: - Voice and Data recording systems | | |
|---|---|---|
| **Checklist Questions** | **Compliance verified** | **Evidence and/or Observations** |
| A Does the Voice and Data recording system status Replay from Long-term storage and copying to portable media. | *Yes* ☐ *No* ☐ | |
| B. Does Surveillance recording and storage system provide a means of identifying and retrieving records from long-term storage at any time during the minimum storage period of 90 days? | *Yes* ☐ *No* ☐ | |
| C. Is there a Standby Voice and Data recording equipment? | *Yes* ☐ *No* ☐ | |
| **Recommendations :-** | | |

| | Company Name | Document No. | |
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**Requirement: - Voice and Data recording systems**

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| A. Availability of SAR VHF radios | *Yes* ☐ *No* ☐ | |
| B. Serviceability status of SAR VHF radios | *Yes* ☐ *No* ☐ | |
| C. Availability of SAR HF radios | *Yes* ☐ *No* ☐ | |
| D. Serviceability status of SAR HF radios | *Yes* ☐ *No* ☐ | |
| E. Availability of Direct telephone | *Yes* ☐ *No* ☐ | |
| F. Serviceability of Direct telephone | *Yes* ☐ *No* ☐ | |

**Recommendations :-**

**Requirement: - SAR communication Equipment/Facilities**

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| A. Availability of Extension telephone | Yes ☐  No ☐ | |
| B. Serviceability of Extension telephone | Yes ☐  No ☐ | |
| C. Availability of Intercom | Yes ☐  No ☐ | |
| D. Serviceability of Intercom | Yes ☐  No ☐ | |
| **Recommendations :-** | | |

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**Requirement: UPS (Standby Power)**

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| A Availability of UPS | *Yes*☐  *No*☐ | |
| B.  Serviceability status of UPS | *Yes*☐  *No*☐ | |
| **Recommendations :-** | | |

**Requirement: - SAR communication Equipment/Facilities**

| Checklist Questions | Compliance verified | Evidence and/or Observations |
|---|---|---|
| • on TWR radio Equipment | Yes☐  No☐ | |
| • On TWR consoles | Yes☐  No☐ | |
| • on TWR computers/servers | Yes☐  No☐ | |
| • on ACC/FIC radio Equipment | Yes☐  No☐ | |
| • on ACC/FIC consoles. | Yes☐  No☐ | |
| • on ACC/FIC computers/servers | Yes☐  No☐ | |
| • on Equ.Room radio Equipment | Yes☐  No☐ | |
| • on Equ.Room consoles | Yes☐  No☐ | |
| • on AMSS radio Equipment | Yes☐  No☐ | |
| • on AMSS consoles/racks | Yes☐  No☐ | |
| • on computers/servers | Yes☐  No☐ | |
| • on Voice/Data tape records | Yes☐  No☐ | |

**Recommendations :-**