

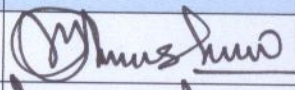
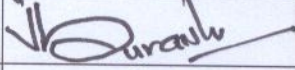
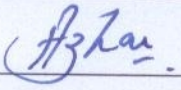

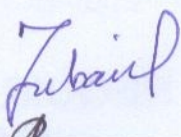
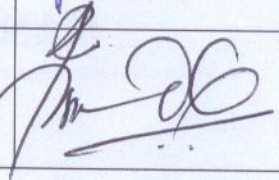


## **REQUIREMENT OF “COMMUNICATION OPERATION MANUAL” FOR AIRPORTS / LOCATIONS**

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### **AIR NAVIGATION ORDER**

**VERSION :** 1.0  
**DATE OF IMPLEMENTATION :** 31-01-2013  
**OFFICE OF PRIME INTEREST :** Technical Standards Branch (DAAR)

	NAME	DESIGNATION	SIGNATURE
PREPARED BY	SHAMSUDDIN HAKRO	D.M. Technical Standards (Com.)	
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REVIEWED BY	Engr. M. AZHAR SALEEM	G.M. Technical Standards	
	Air Commodore MUHAMMAD ZIA KHAN	Director Airspace & Aerodrome Regulations / Principal Director (Regulatory)	
VERIFIED BY	ZUBAIR H. PARACHA	G.M. Legal Services (S&A)	
APPROVED BY	Air Marshal (R) KHALID CHOUDHRY	Director General, Pakistan Civil Aviation Authority	
TYPE OF DOCUMENT	AIR NAVIGATION ORDER (ANO)		
STATUS OF DOCUMENT	CONTROLLED		

**A. AUTHORITY:**

**A1.** This Air Navigation Order (ANO) is issued by the Director General, Pakistan Civil Aviation Authority in pursuance of Rules 5, 70, 74, 75, 84, 164, 360 and other enabling provisions of Civil Aviation Rules, 1994 (CARs, 94).

**B. PURPOSE:**

**B1.** This ANO is being issued for development of a comprehensive "Communication Operational Manual", for Aeronautical Communication Centres at the Airports/ Locations. It also provides general guidance to the CNS service provider for preparation of a "Communication Operation Manual (COM)" in the light of various ANO(s), CAAO(s) and other guidance material issued by Directorate of Airspace & Aerodrome Regulations (DAAR), HQCAA from time to time.

**C. SCOPE:**

**C1.** This ANO is applicable to all CNS Service Providers rendering services in the field of Aeronautical Telecommunication (under the umbrella of CAA or in their private capacity) for preparation of their Station's "Communication Operation Manual" which will act as the principal reference document for future CNS Inspections relating to Aeronautical Telecommunication operational services and related matters.

**D. DESCRIPTION:**

**D1. DEFINITIONS:**

The following terms when used in this ANO have the meanings assigned to them respectively. Any Term used in this document but not defined herein shall have the same meaning as given in the Civil Aviation Ordinance, 1960, Pakistan Civil Aviation Authority Ordinance, 1982, Civil Aviation Rules, 1994 (CARs, 1994) and relevant Air Navigation Orders.

**D1.1 AERONAUTICAL FIXED TELECOMMUNICATION NETWORK (AFTN):**

A worldwide system of aeronautical fixed circuits provided, as part of the Aeronautical fixed service, for the exchange of messages and/or digital data between Aeronautical fixed stations having the same or compatible communication characteristics.

**D1.2 AIR NAVIGATION ORDER (ANO):**

These are the orders requiring compliance of regulatory requirements on specific subjects and are issued by the OPIs concerned under the delegated powers and with the approval of DG CAA in accordance with Civil Aviation Rules (CARs).

**D1.3 AIR TRAFFIC SERVICES:**

A generic term meaning variously, flight information services, alerting services, air traffic advisory service, air traffic control services, area control services, approach control services or aerodrome control services established under Rule 66.

**D1.4 CIVIL AVIATION RULES (CARs):**

The rules promulgated by Federal Government in 1994, apply to Flight Operations within Pakistan by Aircrafts other than the Military Aircrafts and, except where otherwise prescribed, to Flight Operations by Aircraft registered, Acquired or Operating under these Rules.

**D1.5 NOTAM:**

A notice distributed by means of telecommunication containing information concerning

the establishment, condition or change in any Aeronautical facility, Service, Procedure or Hazard, the timely knowledge of which is essential to the personnel concerned with Flight Operations.

**D1.6 STANDARDS AND RECOMMENDED PRACTICES (SARPs):**

Standards and Recommended Practices (SARPs) are adopted by the Council under the provisions of the convention. They are defined as follows:

**D1.6.1 STANDARDS:**

Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of International Air Navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38.

**D1.6.2 RECOMMENDED PRACTICES:**

Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of Safety, Regularity or Efficiency of International Air Navigation and to which Contracting States will endeavor to conform in accordance with the Convention.

**D1.7 STANDARD OPERATING PROCEDURES (SOP):**

Standard Operating Procedures are specific instructions / ways to perform various activities, processes and practices used by Aviation related service providers, private or state owned, such as Directorates / Branches at HQCAA and sections at Airports / Locations. These SOPs shall be in line with the relevant Standards / CARGs / ANOs / CAAOs. SOPs are issued by the General Manager concerned with the approval of respective Director, where applicable or by the Sectional Head concerned with the approval of respective APM /General Manager Operations / Head of Unit.

**D2. COMMUNICATION OPERATION MANUAL (COM):**

“Communication Operational Manual”, shall be an essential requirement for all CNS service providers in Pakistan with immediate effect.

**D2.1 PREPARATION OF THE MANUAL:**

The proposed “Communication Operation Manual” shall be prepared for each Communication Centre by the Station Communication Officer or a qualified Communication Trade Official under consultation of Airport Manager / Chief Operation Officer in accordance with the format given in CAAO-001-MSXX-2.0.

**D2.2 VERIFICATION OF THE MANUAL:**

D2.2.1 The format of the Manual will be verified by the MR or DMR of SQMS Directorate in case of CAA only.

D2.2.2 The contents of the manual will be verified by the concerned Airport Manager / Deputy Airport Manager / Chief Operation Officer (COO) or any other Officer nominated by General Manager Com-Ops, HQCAA.

**D2.3 REVIEW OF THE MANUAL:**

The draft of the said Manual will be reviewed by General Manager Technical Standards, DAAR or his authorized representative i.e. Corporate Manager Technical Standards (Com), prior to finalization.

**D2.4 APPROVAL OF THE MANUAL:**

The said manual will be approved by the concerned Chief Operation Officer or General Manager Communication Operations, HQCAA in case of HQCAA Communication Centre. Manual may be approved by the Airport Manager for private Airports.



**D2.5** **CONTENTS OF THE MANUAL:**

The proposed "Communication Operation Manual" should meet the requirements laid down in ANO-008-ARTS-1.0 and should contain all relevant information from Organogram, relevant JDs', and detailed relevant SOPs.

**D2.5.1** **ORGANOGRAM:**

It shall contain the Organization Chart or Organogram of that particular station showing clearly the administrative and functional control of Communication Operational personnel. Furthermore following information should also be included:

D2.5.1.1 the approved establishment of Communication Operation Officials.

D2.5.1.2 the present strength of Communication Officials against the approved establishment.

D2.5.1.3 The Job description of Communication officials for each established work position / terminal.

**Note:** *Establishment should be rationalized as per operating positions and workload.*

**D2.5.2** **TRAINING NEED ANALYSIS (TNA):**

It shall contain:

D2.5.2.1 The record of trainings availed by each Communication official of the location (Refer CAAF-006-ARTS-1.0).

D2.5.2.2 The annual training plan indicating the future requirements of trainings in respect of each Communication official of the location (Refer CAAF-007-ARTS-1.0).

D2.5.2.3 The syllabus and certificates, record of On-Job-Training (OJT) for each personnel deployed on communication operation duties should be attached as exhibits and updated on regular basis (Refer CAAF-006-ARTS-1.0).

**D2.5.3** **COMMUNICATION FACILITIES:**

This section of the Manual shall describe all assets regarding Communication Operations and will include information on available Communication Facilities / Channels at that particular location for example:

**D2.5.3.1** **COMMUNICATION CENTRE:**

D2.5.3.1.1 Number of Operational Positions

D2.5.3.1.2 Number of AMHS Channels and their functions

D2.5.3.1.3 Stations connected with on HF-SSB and frequencies being used.

D2.5.3.1.4 Stations working with on HF-R/T (Ground to Ground) and frequencies being used.

D2.5.3.1.5 Primary and Secondary means of communication for each particular station working with

D2.5.3.1.6 Telephone Number / Fax Number

D2.5.3.1.7 In station message handling procedure (incoming/ out going/ transit)(SOPs)

D2.5.3.1.8 Average Message Handling Transit Time

D2.5.3.1.9 Congestion Delays (if any)

D2.5.3.1.10 Occupancy Rate of each channel

D2.5.3.1.11 Any other information

**D2.5.3.2** **CONTROL TOWER:**

D2.5.3.2.1 Frequencies and their usage

D2.5.3.2.2 AMHS Terminal / Printer (if any)

D2.5.3.2.3 Hot lines/Telephone Numbers, CAA / PAF Telephone extensions, DEFCOM etc.

D2.5.3.2.4 Fax No. (if any)

- D2.5.3.2.5 Availability of CLI facility on Phones / Fax
- D2.5.3.2.6 Recording facility on Phones and Frequencies
- D2.5.3.2.7 Communication (Signal strength) with Fire Vehicles on maneuvering area
- D2.5.3.2.8 Availability of discrete communication with Fire Station
- D2.5.3.2.9 Availability / Serviceability of Eldis lamp and verilight pistol
- D2.5.3.2.10 Media for conversation with communication centre and other adjacent ATS Units such as Hot lines/ Telephones/ PABX extension, intercom, walkie talkie etc.
- D2.5.3.2.11 Any other information

**D2.5.3.3 APPROACH CONTROL OFFICE:**

- D2.5.3.3.1 Frequencies and their usage
- D2.5.3.3.2 AMHS Terminal / Printer (if any)
- D2.5.3.3.3 Hot lines/Telephone Numbers, CAA / PAF Telephone extensions
- D2.5.3.3.4 Fax Number (if any)
- D2.5.3.3.5 Availability of CLI facility on Phones / Fax
- D2.5.3.3.6 Recording on Phones and Frequencies
- D2.5.3.3.7 Media for communication with adjacent ATS units
- D2.5.3.3.8 Media for communication with HF- R/T Channel
- D2.5.3.3.9 Media for communication with HF- SSB channel
- D2.5.3.3.10 Any other information

**D2.5.3.4 AREA CONTROL CENTRE (ACC):**

- D2.5.3.4.1 Frequencies and their usage
- D2.5.3.4.2 AMHS Terminal / Printer (if any)
- D2.5.3.4.3 Hot lines/Telephone Numbers, CAA / PAF Telephone extensions
- D2.5.3.4.4 Fax Number (if any)
- D2.5.3.4.5 Availability of CLI facility on Phone / Fax
- D2.5.3.4.6 Recording facility on Phones and Frequencies
- D2.5.3.4.7 Media for communication with adjacent ATS units
- D2.5.3.4.8 Media for communication with HF-R/T Channel
- D2.5.3.4.9 Media for communication with HF-SSB channel
- D2.5.3.4.10 Any other information

**D2.5.3.5 OPERATIONS CONTROL CENTRE (OCC):**

- D2.5.3.5.1 Facility for guarding frequencies being used by ATS units
- D2.5.3.5.2 Telephone Number including dedicated / switched hot lines (PTCL/NTC) Intercom , Hot lines and Telephone Extensions (CAA / PIA / PAF etc)
- D2.5.3.5.3 log book indicating daily routine check of Hot lines, aphones , frequencies and other facilities with designated offices
- D2.5.3.5.4 Availability of Grid map
- D2.5.3.5.5 Recording facility on Phones and frequencies
- D2.5.3.5.6 Media for communication with ATS unit(s) / ASF / Military agencies/ Communication Centre etc.
- D2.5.3.5.7 Any other information

**D2.5.3.6 TELEPHONE EXCHANGE:**

- D2.5.3.6.1 Make/ Model of Telephone exchange
- D2.5.3.6.2 Date of Installation
- D2.5.3.6.3 Total Number of Junction (telephone) lines (PTCL & NTC)
- D2.5.3.6.4 Availability of list of telephone numbers of various offices at Airport
- D2.5.3.6.5 Availability of list of total number of telephone extensions with record of facilities provided on each extension

- D2.5.3.6.6 Availability of approval for installation of telephones and approval for facilities on various telephone extensions
- D2.5.3.6.7 Valid Maintenance Contract of EPABX
- D2.5.3.6.8 Total Number of Consoles (working Positions)
- D2.5.3.6.9 A reasonable separation/ isolations between working positions
- D2.5.3.6.10 Up- dated list of telephone numbers (CAA/ other important numbers)
- D2.5.3.6.11 Availability of Display/ Notice board
- D2.5.3.6.12 Cable layout diagram with number of pairs
- D2.5.3.6.13 Any other information

#### **D2.5.3.7 FLIGHT ENQUIRY:**

- D2.5.3.7.1 Total Number of telephones lines
- D2.5.3.7.2 Telephone Numbers designated for 114
- D2.5.3.7.3 Telephones other than on 114 (Landline, CAA, PIA, Other Extensions)
- D2.5.3.7.4 Number of Operational Positions
- D2.5.3.7.5 Availability of Public Address System and its performance.
- D2.5.3.7.6 Recording on Phones
- D2.5.3.7.7 CLI facility on Phones
- D2.5.3.7.8 Job Description of each position / Duty Roster
- D2.5.3.7.9 Segregation of areas for PA System
- D2.5.3.7.10 Record indicating procedure / system for obtaining information from airline concerned/ ATS unit
- D2.5.3.7.11 Availability of flight schedules
- D2.5.3.7.12 Procedures indicating coordination with Flight Information Display System
- D2.5.3.7.13 Procedure for up-dating information on web site
- D2.5.3.7.14 Procedure / system for playing recorded messages
- D2.5.3.7.15 Standardization of recorded messages
- D2.5.3.7.16 Serviceability/ availability of Automatic Voice Recorder (AVR)

**D2.5.3.8** Any other facility related to Telecom services may also be described in detail

**D2.5.3.9** Any other additional information

#### **D2.5.4 RECORD OF COMMUNICATION:**

In addition, following records are also to be maintained separately by each station and their location should be mentioned in the manual on an exclusive page.

- D2.5.4.1 log books of each communication channel having proper date, time and entries in accordance with para D3.5.1.6 of ANO-003-ARTS.
- D2.5.4.2 Summary of total number of flight Safety/ Regularity/ Met and admin (Non aeronautical) messages per month being handled on each channel.
- D2.5.4.3 Summary record of all incoming / out-going messages along with hard copies of all messages with proper annotation for a past duration of 90-days.
- D2.5.4.4 Record of valid / current NOTAMs of that particular location and the Airports for which normal scheduled flights depart from this Airport.
- D2.5.4.5 Traffic returns and un-serviceability returns (monthly, quarterly and yearly) being sent to HQCAA in accordance with CAAO-002-OPCO, CAAO-003-OPCO and CAAO-004-OPCO.
- D2.5.4.6 Peon books, diary or register etc. indicating record of delivery of messages with proper initials, date and time of recipient.
- D2.5.4.7 Attendance register
- D2.5.4.8 Duty roster indicating normal working hours for an individual during a week in accordance with ANO-008-ARTS.
- D2.5.4.9 Record of previous inspections with their reply along with relative Corrective Action Plans
- D2.5.4.10 Any record related to periodical / Surprise inspection of APM or Head of unit in accordance with ANO-008-ARTS.

**D2.5.5**

**PROCEDURES:**

COM shall contain all local SOPs for :

**D2.5.5.1**

**RECEIVING OF MESSAGES:**

Local procedures regarding acceptance of messages meant for transmission in accordance with ANO-003-ARTS.

**D2.5.5.2**

**DELIVERY OF MESSAGES:**

Local procedures for delivery of incoming messages being received on communication channels in accordance with ANO-003-ARTS.

**D2.5.5.3**

**SOP FOR DEALING UN-SERVICEABILITY:**

Standard Operating Procedures for dealing with power failure or un-serviceability of Communication Equipment / Channels / Circuits, Hotlines, DXX lines, Telephone lines etc. describing clear actions required on the part of duty Supervisor/ operators.

**D2.5.5.4**

**SOP FOR DEALING EMERGENCY:**

Standard Operating Procedures for dealing with Emergency such as Fire, Flood, Hijacking etc.

**D2.5.6**

Any other SOP or document considered essential for the Operation of Telecommunication services.

**D2.5.7**

**DOCUMENTS:**

Each Communication Centre shall contain following documents and their location must be mentioned in the COM on an exclusive page:

**D2.5.6.1**

ICAO Doc 7910

**D2.5.6.2**

ICAO Doc 8585

**D2.5.6.3**

ICAO Doc 8400

**D2.5.6.4**

ANO-003-ARTS

**D2.5.6.5**

ANO-004-ARTS

**D2.5.6.6**

ANO-006-ARTS

**D2.5.6.7**

Any other regulatory document issued subsequently including this ANO.

**D2.6**

**ACTION REQUIRED:**

Station Communication Officer or In charge Communication Centre of each Airport / location is required to prepare the Communication Operation Manual in consultation with Airport Manager / Chief Operation Officer or GM Com-Ops under the guidance provided above at the earliest, but not later than 30<sup>th</sup> June, 2013.

**E.**

**EVIDENCES (ACRONYMS / RECORDS / REFERENCES):**

**E1.**

**ACRONYMS:**

AFTN	:	AERONAUTICAL FIXED TELECOMMUNICATION NETWORK
AMHS	:	AERONAUTICAL MESSAGE HANDLING SYSTEM
ANO	:	AIR NAVIGATION ORDER
APM	:	AIRPORT MANAGER
ATS	:	AIR TRAFFIC SERVICE
CARs	:	CIVIL AVIATION RULES
CATI	:	CIVIL AVIATION TRAINING INSTITUTE
CNS	:	COMMUNICATION, NAVIGATION & SURVEILLANCE
COM	:	COMMUNICATION OPERATION MANUAL
DAAR	:	DIRECTORATE OF AIRSPACE AND AERODROME REGULATIONS
DGCAA	:	DIRECTOR GENERAL OF CIVIL AVIATION AUTHORITY



DMR	:	DEPUTY MANAGEMENT REPRESENTATIVE
DXX	:	DIGITAL CROSS EXCHANGE
FIDS	:	FLIGHT INFORMATION DISPLAY SYSTEM
HQCAA	:	HEADQUARTERS CIVIL AVIATION AUTHORITY
ICAO	:	INTERNATIONAL CIVIL AVIATION ORGANIZATION.
JDs	:	JOB DESCRIPTIONS
MR	:	MANAGEMENT REPRESENTATIVE
NDB	:	NON-DIRECTIONAL BEACON
NOTAM	:	NOTICE TO AIRMEN
OCC	:	OPERATIONAL CONTROL CENTRE
OJT	:	ON THE JOB TRAINING
PA	:	PUBLIC ADDRESS
PCAA	:	PAKISTAN CIVIL AVIATION AUTHORITY
SARPS	:	STANDARDS AND RECOMMENDED PRACTICES
SQMS	:	SAFETY & QUALITY MANAGEMENT SYSTEM
SOP	:	STANDARD OPERATING PROCEDURE
TNA	:	TRAINING NEED ANALYSIS

**E2. RECORDS:**

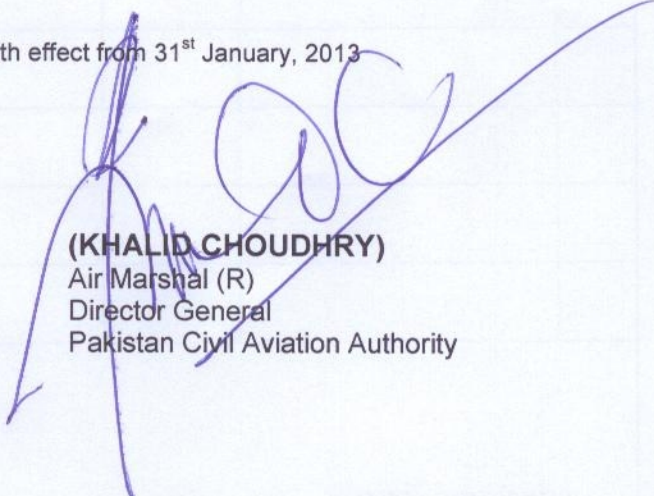
E2.1	CAAF-006-ARTS-1.0
E2.2	CAAF-007-ARTS-1.0

**E3. REFERENCES:**

E3.1	ICAO Doc 7910
E3.2	ICAO Doc 8585
E3.3	ICAO Doc 8400
E3.4	ANO-003-ARTS
E3.5	ANO-004-ARTS
E3.6	ANO-006-ARTS
E3.7	ANO-008-ARTS
E3.8	CAAO-001-MSXX

**IMPLEMENTATION:**

This ANO shall be implemented with effect from 31<sup>st</sup> January, 2013

  
**(KHALID CHOUDHRY)**  
 Air Marshal (R)  
 Director General  
 Pakistan Civil Aviation Authority

Dated: 31<sup>st</sup> January, 2013

  
**(MUHAMMAD ZIA KHAN)**  
 Air Commodore  
 Director Airspace & Aerodrome Regulations

Dated: 31<sup>st</sup> January, 2013  
 File No. HQCAA/ 1122/509/ARTS/I



