ENR 1.6 RADAR SERVICES AND PROCEDURES

1. GENERAL

1.1 SERVICES

a) Radar units in the Amman FIR operate as integral parts of the ATS system and provide Radar Control Service and Radar information service as applicable to the maximum extent practicable;

b) Unless otherwise requested by ATC, position reports may be omitted when receiving Radar Service

1.2 APPLICATION OF RADAR CONTROL SERVICE

a) Radar is used for the provision of Air Traffic Services in accordance with ICAO DOC 4444), Part X.;

b) Radar Services are provided by the units listed below within their areas of responsibility.

(i) Amman Control Center/ East Sector (Radar Control Service)
(ii) Amman Control Center/West Sector (Radar Control Service).
(iii) AmmanTMA (Radar Control Service).

1.3 RADIO AND RADAR FAILURE PROCEDURES

1.3.1 In case of communication failure aircraft shall conform to the general procedures specified in Annex 2, Chapter 3, para. 3.6.5.2.

1.3.2 Aircraft Radio Transmitter Failure

If two-ways communication is lost with an aircraft, the radar controller should first determine whether or not the aircraft's receiver is functioning by instructing the aircraft on the frequency to operate IDENT or to make code changes.

NOTE: Transponder equipped aircraft experiencing Radio communication failure will operate the transponder on Mode A code 7600.

1.3.2.1 If the action prescribed in para 1.3.2.is unsuccessful, it shall be repeated on any other available frequency on which it is believed that the aircraft might be listening;

1.3.2.2 In both cases covered in para 1.3.2. and 1.3.2.1, any maneuvering instructions shall be such that the aircraft would regain its current cleared track after having complied with the instructions received ;

1.3.2.3 Where it has been established by the action in par 1.3.2 that the aircraft's radio receiver is functioning, continued control of transponder equipped aircraft where MSSR is available can be effected using IDENT transmissions or Code changes to obtain acknowledgment of clearances issued to the aircraft.

1.3.3 Complete Aircraft Communication Failure

1.3.3.1 When a controlled aircraft experiencing complete communication failure is operating or expected to operate in an area and at flight levels where radar separation is applied, such separation may continue to be used. However, if the aircraft experiencing failure is not identified, radar separation shall be applied between aircraft under radar control and all unidentified aircraft observed along the expected route of the aircraft with the communication failure, until as such time as it is known, or can safely be assumed, that the aircraft with radio failure has passed through the air-space concerned, has landed, or has proceeded elsewhere.

1.3.3.2 Aircraft transponder failure in areas where the carriage of functioning transponder is mandatory.

1.3.3.2.1 When an aircraft experiencing transponder failure after departure is operating or expected to operate in an area where the carriage of a functioning transponder with specified capabilities is mandatory, the ATC units concerned should endeavor to provide for continuation of the flight to the aerodrome of first intended landing in accordance with the Flight Plan. However, in certain traffic situations, either in terminal areas or en-route, continuation of the flight may not be possible particularly when failure is detected shortly after take-off. The aircraft may then be required to return to the departure aerodrome or to land at nearest suitable aerodrome acceptable to the operator concerned and to ATC.

1.3.3.2.2 In case of a transponder failure which is detected before departure from an aerodrome where it is not practicable to effect a repair, the aircraft concerned should be permitted to proceed, as directly as possible, to the nearest suitable aerodrome where repair can be made. When granting clearance to such aircraft, ATC should take into consideration the existing or anticipated traffic situation and may have to modify the time of departure, flight level or route of the intended flight. Subsequent adjustments may become necessary during the course of the flight.

2. MONOPULSE SECONDARY SURVEILLANCE RADAR (MSSR)

2.1 RADAR EMERGENCY PROCEDURES

Aircraft are required to operate MSSR transponder in accordance with ICAO PANS-OPS (DOC 8168), Volume 1, Part VIII.

2.2 RADIO COMMUNICATION FAILURE AND UNLAWFUL INTERFERENCE PROCEDURES

Radio communication failure procedure whilst under radar control is as detailed in ENR 1.6-1, and ENR 1.6-2

b) Aircraft subject to unlawful interference shall follow the procedures specified in Attachment B to Annex 2- Rules of the Air.

c) Whenever possible aircraft experiencing unlawful interference shall select MSSR Mode 3/A Code 7500.

d) If known traffic is not identified due to Aircraft MSSR failure procedural separation must be used.

2.3 SYSTEM OF MSSR CODE ALLOCATION

Jordan is part of Middle East Region MSSR code allocation plan. All States in the region are allocated code Blocks from the Mode 3/A codes.

a) Aircraft entering the Amman FIR shall retain the MSSR code previously issued by ATC in an adjacent FIR.

b) The following MSSR codes (Mode A) will be assigned by Amman TACC:

1. Inbound Flights

Flights inbound or overflying the Amman FIR will be allocated codes by the first country in the region. Amman ACC will accept this code as part of the ACFT estimate and use it for the flight in the FIR until landing or pass the code with the ACFT estimate to the next FIR.
Any inbound flight that dose not have a code allocated by the originating FIR will be allocated a Code from the block 0400 - 0477

2. Outbound Flights

Outbound flights will be allocated a code from the series 0700 - 0777

3. Domestic Flights

All internal flights will be allocated codes from the Block 1500 - 1577
For flights without stored Flight Plan and automatic code allocation, the following codes Will be allocated manually by the sectors

Approach	2400 - 2437
West Sector	2440 - 2457
East Sector	2460 - 2477

3.1 Code Allocation

All codes will normally be allocated up to 3 hours according to Radar system Mode.

Codes allocated by regional states acceptable for allocation.

Aden	7000 -7077	
Baghdad	1000 -1077	
Bahrain	2100 -2177	2200 -2277
Beirut	2500 -2577	
Damascus	3000 -3077	
Jeddah	3100 -3177	3500 -3577
Kabul	7100 -7177	
Kuwait	0600 -0677	
Muscat	4000 -4077	
Tehran	1100 -1177	6700 - 6777
Addis Ababa	0500 -0577	
Cairo	2300 -2377	
Khartoum	0100 –0177	
Tel-Aviv	3200 -3277	

3.2 Domestic Code Allocation

→All uncontrolled VFR Flight within Amman FIR should use the conspicuity code 2400 to improve Radar detection. Discrete codes will not normally be allocated to VFR Flights unless traffic is to receive Radar service.

2.4 RADAR SEPARATION MINIMA

The horizontal and lateral Radar separation Minima prescribed for use in Amman TACC are:

Within TMA	5NM	Radar Control Service
Within West Sector	5NM	Radar Control Service
Within East Sector	- 10NM for parallel separation for climb and descend purposes - 30NM longitudinal separation constant or increasing	Radar Control Service