ENR 1.6

ENR

CATEGORY	EFFECTIVE DATE	AMENDMENT	STATUS
ENR	27 Mar 2026	AMDT 01/2026	Published

ATS Surveillance Services and Procedures

خدمات وإجراءات المراقبة الجوية

ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES

1. General

1. Primary/Secondary Radar

1.1 Services

a) Radar units in DAMASCUS 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 PANS - ATM, Chapter 8.

b) Radar services are provided by Damascus Area Control Center/ Damascus Radar Control - Call Sign: Damascus Radar .

2. RADAR COVERAGE

Total radar coverage within the Damascus FIR.

DAMASCUS PRIMARY RADARS		
LOCATION	**TYPE**	**MAX RANGE (NM)**
Damascus	PSR	80 NM

DAMASUS SECONDARY RADARS		
LOCATION	**TYPE**	**MAX RANGE (NM)**
Damascus	SSR	200NM

3. APPLICATION OF RADAR CONTROL SERVICE

3.1 Radar identification is achieved to provisions specified by ICAO.

3.2 Radar control services are provided in all controlled airspace. This service may include:

a) radar separation of arriving, departing, and en route traffic;

b) radar monitoring of arriving, departing, and en route traffic to provide information on any significant deviation from the normal flight path;

c) radar vectoring when required;

d) assistance to aircraft in an emergency;

e) assistance to aircraft crossing controlled airspace;

f) warnings and position information on other aircraft considered constituting a hazard;

g) information to assist in the navigation of aircraft;

h) information on observed weather.

3.3 The minimum horizontal radar separations are:

a) 20 NM between all traffic routing, longitudinal, same speed, same track, and level.

b) 10 NM minimum longitudinal separation for descending and climbing same track.

c) 10 NM minimum lateral separation for descending and climbing the same track or reciprocal tracks shall be no tracks converging.

4. SECONDARY SURVEILLANCE RADAR (SSR)

4.1 Operating procedures

4.1.1 Except as provided below, pilots will operate transponders and select modes and codes according to ATC instructions. In particular, when entering the Damascus FIR, pilots who have already received specific instructions from ATC concerning the setting of the transponder will maintain that setting until otherwise instructed. Mode C will be selected at all times unless otherwise instructed or in exceptional cases as stated below.

4.1.2 System of SSR Code Assignment.

a) Damascus uses code blocks assigned under the originating region code allocation method. (OSTT)

b) Aircraft entering the Damascus FIR shall retain the SSR code previously issued by ATC in an adjacent FIR

c) The following Transit SSR codes (Mode A) will be assigned by Damascus ACC for flights entering Damascus 5700 to 5777 FIR and flights departing Damascus airports to another different IFR.

d) The following Domestic SSR codes (Mode A) will be assigned by Damascus ACC for flights remaining within the Damascus FIR:3000 to 3777

e) The following Domestic SSR codes (Mode A) will be assigned by Damascus ACC for flights crossing Damascus FIR:3000to 3777

4.2 Emergency procedures

4.2.1 If the pilot of an aircraft encountering a state of emergency has previously been directed by ATC to operate the transponder on a specific code, this code setting will be maintained until otherwise advised. In all other emergency circumstances, the transponder will be set as follows:

a) Mode A/3 code 7500 - Unlawful interference.

b) Mode A/3 code 7600 - Radio communication failure.

c) Mode A/3 code 7700 - Other states of emergency.

4.2.2 Notwithstanding the procedure in paragraph 4.1.1 above, a pilot may select mode A/3 code 7500, 7600, or 7700, as appropriate, whenever the nature of the Emergency is such that this appears to him to be the most suitable course of action.

5. RADAR AND RADIO FAILURE PROCEDURES

5.1 Radar Failure

In case of radar failure or loss of radar identification, instructions will be issued to restore non-radar standard separation and the pilot will be instructed to communicate with the parent ATS unit.

5.2 Radio Failure

5.2.1 Aircraft not equipped with a transponder

The radar controller will establish whether the aircraft radio receiver is working by instructing the pilot to perform a turn, maintain the new heading for a period of time (specified), and then resume normal navigation. The magnitude of the turn will be such as to enable the identification to be achieved should the aircraft not previously have been identified. The direction of the turn will be determined by the operational requirements.

5.2.2 Aircraft equipped with a transponder

The radar controller will establish whether the aircraft radio receiver is working by instructing the pilot to perform one or more of the following:

a) change transponder mode,

b) change transponder code,

c) operate the SPI feature.

The method used will be such as to enable the identification to be achieved should the aircraft not previously have been identified.

5.2.3 Action by radar control

a) If subsequent movement of the radar echo or subsequent radar responses indicate that the aircraft radio receiver is working, the radar controller will assume or resume radar control, as the case may be, and continue to pass instructions as for a normal radar service.

b) If subsequent movements of the radar echo or subsequent radar responses indicate that the aircraft radio receiver is not working, the radar controller will take action, according to the circumstances prevailing, as detailed in paragraph 5.2.3.c) and d) below as appropriate.

c) If, prior to the communication failure, the radio failure aircraft was identified, the radar controller will ensure that all known traffic is provided with a minimum of 20 NM horizontal radar separation from the radio failure aircraft, performing identification as necessary, until such time as the radio failure leaves radar coverage or lands.

d) If, prior to the communication failure, the radio failure aircraft was not identified or its position is not known, the radar controller will continue to provide a radar service to the identified aircraft only, provided that primary radar coverage is sufficient for him to ensure a minimum of 20 NM horizontal radar separation from all unknown traffic, until such time as the radio failure aircraft is known to have left the area or landed.

5.2.4 Action by aircraft

a) Aircraft able to receive transmissions from radar control will comply with such instructions as are issued, acknowledging as indicated by the radar controller, as detailed in paragraph 5.2.3 a) above.

b) Aircraft not able to receive transmissions will comply with the ICAO radio communication failure procedures as prescribed in Annex 2, 3.6.5.2, and PANS-ATM Chapter 15.2

c) It is essential that the procedures as detailed above, as appropriate, are rigidly adhered to as the action by radar control, detailed above, are based upon aircraft compliance therewith; failure

to comply may result in loss of separation.

5.2.5 Action in the event of air-ground communication failure

As soon as it is known that two-way communications has failed, ATC shall maintain separation between the aircraft having the communication failure and other aircraft based on the assumption that the aircraft will operate in accordance with 5.2.6 and 5.2.7.

5.2.6 Visual meteorological condition (VMC)

Except as provided in 5.2.7, a controlled flight experiencing communications failure in VMC shall:

a) set transponder to code 7600;

b) continue to fly in VMC;

c) land at the nearest suitable aerodrome; and

d) report its arrival time by the most expeditious means to the appropriate air traffic control unit.

5.2.7 Instrument meteorological conditions (IMC)

A controlled IFR flight experiencing communications failure in IMC or in VMC when it does not appear feasible to continue in VMC within the Damascus FIR shall:

a) set transponder to code 7600; and

b) maintain the last assigned speed and level or the minimum flight altitude, if the minimum flight altitude is higher than the last assigned level, for a period of 7 minutes.

The period 7 minutes commences:

1) if operating on a route without compulsory reporting points, or has been instructed to omit position

report:

a) at the time the last assigned level or minimum flight altitude is reached, or

b) at the time the aircraft sets the transponder to code 7600,

whichever is later; or

2) if operating on a route with compulsory reporting points and no instructions to omit position reports has been received:

a) at the time the last assigned level or minimum flight altitude is reached, or

b) at the previously reported pilot estimate for the compulsory reporting point, or

c) at the time the aircraft fails to report its position over a compulsory reporting point,

whichever is later, or

c) thereafter, adjust level and speed in accordance with the filed flight plan;

Separation

A) Minimum longitudinal separation shall not be less than 20NM) between aircraft on the same level, same track.

B) Minimum longitudinal separation shall not be less than 20NM) between aircraft on crossing tracks.

C) Minimum longitudinal separation for descending or climbing aircraft on the same route and same tracks shall not be less than (10NM) at the time the level is crossed.

D) Minimum lateral separation for descending or climbing aircraft on the same route or reciprocal tracks shall not be less than (10nm) provided no track converges.

E) In case of radar failure, the air traffic controller may apply temporarily a minimum vertical separation of (500ft) below (FL410) and (1000ft) at or above (FL410) between aircraft temporarily till standard Non-radar Separation can be established.

Note: With regard to changes to levels and speed, the filed flight plan, which is the flight plan as filed with an ATS unit by the pilot or designated representative without any subsequent changes, will be used.

d) if being radar vectored or proceeding offset according to RNAV without a specified limit, proceed in the most direct manner possible to rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude;

Note: Concerning the route to be flown or the time to begin descent to the arrival aerodrome, the current flight plan, which is the flight plan, including changes, if any, brought by subsequent clearances, will be used

e) proceed according to the current flight plan to the appropriate designated navigation aid serving the destination aerodrome and, when required to ensure compliance with 5.2.7 f), hold

over this aid until commencement of descent;

f) commence descent from the navigation aid specified in 5.2.7 e) at, or as close as possible to, the expected approach time last received and acknowledged or, if no expected approach time has been received and acknowledged, at, or as close as possible to, the estimated time of arrival resulting from the current flight plan;

g) complete a normal instrument approach procedure as specified for the designated navigation aid; and

h) land, if possible, within thirty minutes after the estimated time of arrival specified in 5.2.7 f) or the last acknowledged expected approach time, whichever is later.

Amendment History

AMENDMENT NO.	CHANGE SUMMARY	EFFECTIVE DATE
AMDT 01/2026	Content updated	27 Mar 2026
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GACA-SECTION-ENR 1.6-20260605-234934-9D10102F3178FBAF

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