ENR 1.6 ATS surveillance services and procedures

1 Primary radar

1.1 Supplementary services

1.1.1 Radar service is provided in areas of sufficient radar coverage. The radar service is based on the information received by Primary Surveillance Radar (PSR) and Monopulse Secondary Surveillance Radars (MSSR).

1.1.2 The following call signs of the ATC units used by the air traffic controllers indicate to the pilot that radar services are being provided:

a. Aircraft under Area control - "Tbilisi Control";
b. Aircraft under Tbilisi Approach -"Tbilisi Approach";
c. Aircraft under Kutaisi Approach - "Kutaisi Approach";
d. Aircraft under Batumi Approach - "Batumi Approach".

1.1.3 Tbilisi area control service operates the following radar stations:

a. MSSR – station at Tbilisi position, range 250 NM;
b. PSR/ MSSR – station at Tbilisi position, range 80 NM/250 NM;
c. MSSR – station at Senaki position, range 250 NM;
d. MSSR – station at Poti position, range 250 NM.

1.1.4 Tbilisi approach control service operates:

a. MSSR – station at Tbilisi position, range 250 NM;
b. PSR/MSSR – station at Tbilisi position, range 80 NM/250 NM.

1.1.5 Kutaisi approach control service operates:

a. MSSR – station at Senaki position, range 250 NM;
b. MSSR – station at Poti position, range 250 NM.

1.1.6 Batumi approach control service operates:

a. MSSR – station at Senaki position, range 250 NM;
b. MSSR – station at Poti position, range 250 NM.

1.2 The application of radar control service

1.2.1 Radar identification is achieved according to the provisions specified by ICAO.

1.2.2 Radar control service is provided in controlled airspace to aircraft operating within Tbilisi TMA (above 4500 FT MSL), Kutaisi TMA (above 1500 FT MSL), and Batumi TMA (above 1500 FT MSL). 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 normal flight path;
c. radar vectoring when required;
d. assistance to aircraft in emergency;
e. assistance to aircraft crossing controlled airspace;
f. warnings and position information on other aircraft considered to constitute a hazard;
g. information to assist in the navigation of aircraft.

Note: Radar vectoring for CB avoidance is not provided.

1.2.3 The minimum horizontal radar separations are:

a. in TBILISI, KUTAISI and BATUMI TMA – 5 NM;
b. in TBILISI FIR – 10 NM.

1.3 Radar and radio failure procedures

1.3.1 Radar failure

1.3.1.1 In the event of complete failure of the radar equipment the radar controller shall:

a. fix the positions of all aircraft already identified and, in conjunction with the non-radar controller when applicable, take the necessary action to establish non-radar separation between the aircraft; and when relevant;
b. request the appropriate non-radar controller to assume control of the traffic affected.

1.3.1.2 As an emergency measure, use of flight levels spaced by half the applicable vertical separation minimum may be resorted to temporarily if standard non-radar reparation cannot be provided immediately.

1.3.1.3 Except when there is assurance that the complete radar equipment failure will be of a very limited duration, steps should be taken to limit the number of aircraft permitted to enter the area to that which can be safely handled without the use of radar.

1.3.2 Radio failure

1.3.2.1 The radar controller will establish whether the aircraft radio receiver is functioning by instructing the pilot to carry out a turn or turns. If the turns are observed the radar controller will continue to provide radar service to the aircraft. Also IDENT mode or change of code can be used.

1.3.2.2 If the aircraft radio is completely unserviceable, the pilot should carry out the procedures for radio failure in accordance with ICAO provisions.

If radar identification has already been established, the radar controller will vector other identified aircraft clear of its track until the time the aircraft leaves radar cover.

1.4 Graphic portrayal of radar coverage area

To be developed.

2 Secondary surveillance radar (SSR)

2.1 Emergency procedures

2.1.1 Except when encountering a state of emergency, pilots shall operate transponder and select modes and codes in accordance with ATC instructions. In particular, when entering Tbilisi FIR pilots who having already received specific instructions from ATC to set transponder, shall maintain that setting until otherwise instructed.

2.1.2 Pilots of aircraft about to enter Tbilisi FIR who have not received specific instructions from ATC concerning the setting of the transponder shall operate the transponder on mode A+C code 20 (or 2000) before the entry and maintain that code setting until otherwise instructed.

2.1.3 If the pilot of the aircraft encountering a state of emergency has previously been directed by ATC to operate the transponder on a specific code, this code setting shall be maintained until otherwise advised. In all other circumstances, the transponder shall be set to mode A+C code 77 (or 7700).

2.1.4 Despite the procedure set out in paragraph 2.1.1 above, a pilot may select mode A+C code 77 (or 7700) whenever the nature of the emergency is such that this appears to him to be the most suitable course of action.

Note: Continuous monitoring of responses on mode A+C code 77 is provided.

2.2 Radio communication failure and unlawful interference procedures

2.2.1 Radio communication failure procedure

Radio communication failure procedures are prescribed in ICAO Annex 2 paragraph 3.6.5 and Doc 7030/4-EUR, Part 1 (see AIP ENR-1.8.3).

2.2.2 Unlawful interference procedure

Pilots of aircraft in flight subjected to unlawful interference shall endeavor to set the transponder to mode A Code 7500 to give indication of the situation, unless circumstances warrant the use of A+C code 77 (or 7700).

Note: Mode A Code 7500 is permanently monitored in the Tbilisi FIR.

2.3 System of SSR Code assignment

2.3.1 The following SSR mode A/3 codes are assigned to international flights: 6740 - 6777

2.3.2 The following SSR mode A/3 codes are assigned to local flights: 7040 - 7057

2.3.3 The following SSR mode A/3 codes are assigned to search and rescue flights: 7711 - 7717, 7721 - 7723

2.3.4 The following SSR mode A/3 codes are assigned to VFR flights: 0060 - 0077

2.4 Graphic portrayal of radar coverage area

The charts portray SSR coverage area at the following flight levels: FL90, FL195, FL290, and FL410.

Index chart Graphic portrayal of SSR coverage area at FL 090 on page ENR 1.6-5

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Index chart Graphic portrayal of SSR coverage area at FL 195 on page ENR 1.6-7

Index chart Graphic portrayal of SSR coverage area at FL 290 on page ENR 1.6-9

Index chart Graphic portrayal of SSR coverage area at FL 410 on page ENR 1.6-11

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