ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES

1. PRIMARY RADAR

A radar unit normally operates as an integral part of the parent ATS unit and provides radar service to aircraft, to the maximum extent practicable, to meet the operational requirement.

Radar derived information will be used in the provision of air traffic control service to the maximum extent practicable, depending on radar coverage, technical reliability of radar operation, radar data processing system, radar displays, radio communication, etc.

1.1 SUPPLEMENTARY SERVICES

NIL

1.2 THE APPLICATION OF RADAR CONTROL SERVICE

Air traffic services by use of radar are provided in accordance with the procedures in ICAO Doc 4444, Part X and Doc 7030 by Sarajevo Area Control using five radar stations:

a. MSSR, - station at Butmir
Position: 434911.76N 0182023.47E;
PSR range: 60 NM;
MSSR range: 256 NM.

b. MSSR, Mode S - station at Jahorina
Position 434333.44N 0183306.14E; range 256 NM.

For additional three, MSSR stations Kozjak, Psunj and Murtenica, data is to be found in relevant publications of Croatia and Serbia.

Sarajevo Approach control using two radar stations, stations Butmir and Jahorina.

1.2.1 Radar separation

The radar separation minima shall be as follows:

a. Sarajevo Area Control - 5 NM;

b. Sarajevo Approach Control - 5 NM.

1.3 RADAR AND AIR-GROUND COMMUNICATIONS FAILURE PROCEDURES

If the aircraft's radio is completely unserviceable, the pilot should carry out the procedures for radio failure in accordance with provisions from Regulations on Rules of the Air and ATS. If radar identification has already been established, the radar controller will vector other identified aircraft clear of its track until such time as the aircraft leaves radar cover.

1.4 CONTROLLER-PILOT DATA LINK COMMUNICATIONS (VOICE AND CPDLC POSITION REPORTING REQUIREMENTS)

NIL

1.5 GRAPHIC PORTRAYAL OF AREA OF RADAR COVERAGE

NIL

2. SECONDARY SURVEILLANCE RADAR (SSR)

2.1 EMERGENCY PROCEDURES

In emergency situations, the pilot shall maintain the last assigned code, unless otherwise instructed.

In addition to ENR 1.6.2.1.1, the pilot may select Mode A, Code 7700, whenever he believes that would be the best course of action, in view of the nature of the situation.

A pilot experiencing the radio communication failure shall operate the SSR transponder to Mode A, Code 7600 and take actions prescribed for such a situation.

The pilot of an aircraft being subject to unlawful interference, shall endeavour to set Mode A, Code 7500, to give the indication of the situation, unless circumstances justify the use of Code 7700.

When SSR transponder operates incorrectly on Mode C, the pilot shall, unless otherwise instructed, immediately inform ATC unit concerned and switch off altitude reporting and transmit the framing pulses of the Mode C response. Alternately, he shall switch off completely Mode C if the design of the SSR transponder does not permit procedures stated above and maintain the Mode A transmission. If the design of the SSR transponder does not permit Modes A and C being switched off separately, the SSR transponder shall not be switched off without explicit instruction by ATC, to ensure continuous transmission of identification and position information via Mode A. When entering the area of responsibility of an ATC unit, the pilot shall maintain undertaken measures and inform the ATC accordingly.

Note: *Mode A/C, Codes 7500, 7600 and 7700 are permanently monitored in the Sarajevo FIR.*

2.2 AIR-GROUND FAILURE AND UNLAWFUL INTERFERENCE PROCEDURES

NIL

2.3 SYSTEM OF SSR CODE ASSIGNMENT

2.3.1 Transit and local codes allocated to Bosnia and Herzegovina

According to SSR Code Allocation List for the EUR Region, local codes in the series 00 are allocated to Sarajevo FIR for use by designated ATC units for local purposes. Transit codes are allocated to Sarajevo ACC for assignment to an aircraft engaged in transit flights within the Participating Area (PA) EUR-D. Aircraft will retain the assigned code within the geographical limits of the PA or, in the case of the agreement between States concerned, across PA boundaries.

2.3.2 SSR codes shall be used for ATS purposes only.

Sarajevo FIR	Series	Codes	Remarks
Transit	41	4130 – 4137 4140 – 4147 7301 – 7307	Allocated to aircraft departing from any aerodrome within the Sarajevo FIR with destination to other countries
	73		
Local	00	0060 - 0077	Allocated for use by aircraft remaining within the boundary of the Sarajevo FIR
Local	42	4201 - 4277	Temporary allocated to EUFOR/NATO for use by helicopters operating not above 3000 FT AGL

2.3.3 Transponder operating procedures

The provisions of ICAO Doc 8168 – Secondary surveillance radar (SSR) transponder operating procedures are applied. The pilot-in command will:

a. if proceeding from an area where a specific code has been assigned to the aircraft by the competent ATC unit, maintain that code setting unless otherwise instructed;

b. select or reselect codes or switch off the equipment when airborne, only when instructed by the competent ATC unit;

c. acknowledge code setting instructions by reading back the code to be set by the competent ATC unit;

d. select mode C simultaneously with mode A unless otherwise instructed by the competent ATC unit; and

e. when reporting flight levels under routine procedures, or when requested by ATC, state the current altimeter reading to the nearest hundred FT.

2.3.4 Special purpose Mode A codes

Specific codes are reserved internationally for special purposes and should be selected as follows:

Code 0000: is available as a general purpose code for local use by any State.
Code 2000: shall be used by flight crew in the absence of any ATC instructions or regional agreements unless the conditions for the use of codes: 7000, 7500, 7600 and 7700 apply.
Code 7000: shall be used by flight crew not receiving ATC service in order to improve detection or suitably equipped aircraft, in areas specified by States, unless otherwise instructed by ATS.

Code 7500: is reserved for use in the event of unlawful interference.
Code 7600: is reserved for use in the event of radio communications failure.
Code 7700: is reserved for use in the event of emergencies and interception.
Code 7775 and Code 7777: are reserved for SSR ground transponder monitoring.

2.4 VOICE AND CPDLC POSITION REPORTING REQUIREMENTS

NIL

2.5 GRAPHIC PORTRAYAL OF AREA OF RADAR SSR COVERAGE

NIL

3. AUTOMATIC DEPENDENT SURVEILLANCE-BROADCAST (ADS-B)

NIL

4. OTHER RELEVANT INFORMATION AND PROCEDURES

NIL

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