

ENR 1.6 RADAR SERVICES AND PROCEDURES

1. PRIMARY RADAR

1.1 Supplementary Services

1.1.1 A radar unit normally operates as an integral part of the ATS unit and provides radar services to aircraft, to the maximum extent practicable, to meet the operational requirement. Many factors, such as radar coverage, controller workload and equipment capabilities, may affect these services, and the radar controller shall determine the practicability of providing or continuing to provide radar services in any specific case.

1.1.2 A pilot will know when radar services are being provided because the radar controller will use the following call signs:-

- a) Aircraft under approach control - "Brunei Radar"
- b) Aircraft carrying out a surveillance radar approach - "Brunei Arrival"

1.1.3 Brunei Approach Control Service operates a radar station at Brunei International Airport at 0459008N 114552804E, range 70NM.

1.2 The Application Of Radar Control Service

1.2.1 Radar identification is achieved according to the provisions specified in ICAO PAN-ATM within the Brunei Control Zone and TMA.

1.2.2 Radar Control Service is provided in controlled airspaces to aircraft operating within the Brunei TMA and along all AWYs. This service may include :-

- a) Radar separation of arriving and 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) Separation of en-route traffic when so requested by other ATC Units.
- d) Position information to assist in the navigation of aircraft.
- e) Radar vectoring and sequencing.
- f) Assistance to aircraft in emergency.
- g) Warnings and position on other aircraft considered to constitute a hazard.
- h) Information on observed weather for pilots and other controllers.
- i) Assistance to aircraft crossing controlled airspace.

1.2.3 The minimum horizontal radar separation is 5NM within 60NM and 10 NM beyond 60 NM.

1.2.4 Levels assigned by the radar controller to pilots will provide a minimum terrain clearance according to the phase of flight.

1.2.5 Radar monitoring service is provided to all flight whether IFR or VFR within the airspace under Brunei responsibility.

1.3 Radar And Radio Failure Procedures

1.3.1 Radar failure procedure

In the event of radar failure or loss of radar contact, instructions will be issued by the Radar Controller to restore procedural separation and terrain clearance.



1.3.2 *Radio failure procedure*

In the event of failure of two way communications whilst operating on the radar frequency, the pilot should change to an alternative frequency and request instructions (see para. 2.1 re-transponder equipped aircraft).

Pilot is to squawk on SSR 'RCF' Code 7600.

If unable to establish contact on an alternative frequency the pilot should comply with standard radio failure procedure.

If able to receive but not transmit, the pilot shall remain on the frequency on which he has been communicating and comply with instructions issued by the Radar Controller so designed to established that the aircraft is receiving. If this is established, further instructions appropriate to the circumstances will be issued.

1.4 Graphic portrayed of area of radar coverage (see ENR 1.6.2.3)

2. **SECONDARY SURVEILLANCE RADAR (SSR)**

2.1 *Operation of SSR transponders*

All suitable equipped aircraft flying in the Brunei Control Zone and Terminal Control Area are required to operate SSR transponders, selecting Mode 3/A and mode C simultaneously.

2.2 *Operating Procedures*

2.2.1 Aircraft departing Brunei International Airport shall operate transponders as instructed by ATC.

2.2.2 Aircraft inbound to Brunei shall transpond on the SSR code assigned at their point of departure. If no code has previously been assigned Brunei Approach will allocate a code.

2.3 *Emergency procedures*

If an aircraft in an emergency is already transponding on an operational code, the pilot will not normally select Code 7700 unless he decides, or is advised to do so.

2.4 *Radio communication failure*

The pilot of an aircraft in flight which is subject to unlawful interference shall set his transponder to code 7600.

2.5 *Unlawful interference*

The pilot of an aircraft in flight which is subject to unlawful interference shall endeavor to set his transponder to code 7500.

Note:- Continuous monitoring of responses on Mode A/3, Code 77, Code 76, Code 75 is provided.

2. 6 GRAPHIC PORTRAYAL OF AREA OF COVERAGE OF RADAR/SSR

TO DEVELOPED