

STANDARD OPERATING PROCEDURES FOR
AIR TRAFFIC CONTROL RADAR UNITS

INTRODUCTION

1. Area radar services are provided to military and certain civil aircraft by MATO Air Traffic Control Units (ATCRUs) within their respective areas of radar cover. To enable the ATCRUs to undertake their task, standard operating procedures have been detailed in MATO Air Staff Instructions.

UNIT TASKS

2. As detailed in Unit SOPs, the MATO ATCRUs undertake, within their respective areas of responsibility, some or all of the following tasks:

- a. Assistance to aircraft in emergency as detailed in MATO ASIs.
- b. Upper Airspace (UAS) service, as directed by HQ MATO, within respective radar service areas (FL 245 and above) in conjunction with CAA staffs.
- c. Airways Crossings.
- d. Centralised Approach Control (CAC) service for designated airfields.
- e. Middle/Lower Airspace (MAS/LAS) transit service (below FL 245).
- f. Special tasks as directed by HQ MATO (priority as allocated).
- g. Traffic Information Service (TIS) (priority as allocated).

3. While carrying out their tasks units will provide, as appropriate:

- a. Radar separation and sequencing of arriving, departing and en route traffic.
- b. Radar monitoring to provide information on any significant deviation from normal flight path.
- c. Radar vectoring.
- d. Warnings and position information on aircraft considered to be a hazard.
- e. Navigational assistance when requested by the pilot.
- f. Weather information based on hourly meteorological observations.

TYPES OF SERVICE AND DEFINITIONS

4. The types and definitions of the area services provided by MATO controllers are:

a. Radar Services

(1) Radar Control. Radar Control is an area radar air traffic service in which pilots are given mandatory instructions to enable the prescribed separation from other traffic to be maintained. Such mandatory instructions will generally be associated with essential details of the conflicting traffic. No changes of heading or flight level are to be made without the prior approval of the radar controller.

(2) Radar Advisory. Radar Advisory is an area radar air traffic service in which pilots are informed of the bearing and distance and (if available) flight level of conflicting traffic, together with advisory instructions on the action to be taken to enable the prescribed separation minima to be maintained if the pilot cannot see the reported traffic. In exceptional circumstances and at the controller's discretion, pilots may first be given advisory instructions to maintain separation from conflicting traffic followed by information on the confliction. If a pilot elects to ignore the advice given, he is responsible for initiating any avoiding action that may subsequently prove necessary. No changes of heading or flight level are to be made without prior warning to the radar controller. When advice on traffic is passed to a pilot this is to be followed by further reports until the traffic is no longer relevant. If radar contact is subsequently lost on conflicting traffic the pilot is to be advised immediately.

(3) Traffic Information Service. Traffic Information is an area radar service in which pilots are informed of the bearing and distance and, if possible, the flight level of conflicting traffic whilst carrying out manoeuvres incompatible with other forms of service. No avoiding action advice will be offered and it is the responsibility of the pilot to maintain the necessary separation from other traffic. This service is subject to the provision of paragraph 11 below.

b. Procedural Service. Procedural Service is an air traffic service provided by MATO controllers, in which the prescribed minimum separation between participating aircraft is based on reported flight levels and positions. This service may be provided, where aircraft cannot be given a radar service, in the following circumstances:

(1) MRSAs. Immediately following a ground radar failure until a unit's contingency plan can be implemented, or in radar overhead dark areas, permanent echoes or clutter.

(2) Holding Patterns. For the separation of aircraft operating in holding patterns below FL 245 where individual aircraft identity cannot be maintained by a controller.

LIMITATIONS ON RADAR SERVICES

5. Radar Control within controlled airspace (CAS) is not to be limited. Outside CAS, Radar Control and Radar Advisory may be limited.

6. General Limitations. If a controller considers that he cannot maintain a full radar service he is to warn the pilot of the nature of the limitations that may affect the service being provided. Thereafter, the pilot is expected to take the stated limitation into account in his general airmanship. In particular, warning of the limitation is to be given to the pilot in the following circumstances:

- a. When the aircraft is close to the lateral or vertical limits of solid radar cover.
- b. When the aircraft is close to areas of permanent echoes or weather returns.
- c. When the controller considers the performance of his radar is suspect.

7. In Areas of High Traffic Density. When an aircraft is operating in an area of high traffic density, the Controller may have to limit the service he can offer to indicate that standard separation from all traffic cannot be maintained. In such situations the controller should:

- a. Advise the pilot that standard separation from all aircraft cannot be maintained due to traffic density.
- b. Ensure that separating is applied from all known confliction, ie co-ordinated traffic.
- c. Advise the pilot of other observed traffic without giving advisory avoiding action.
- d. Cease service only in very exceptional circumstances.

APPLICATION OF SERVICES

8. Radar Services. Radar Control, Radar Advisory and Traffic Information Services are to be applied in accordance with the status of the airspace within which a participating aircraft is flying. Radar Control is provided within types of airspace in which control is MANDATORY. These are as follows:

- a. Mandatory Radar Service Areas.
- b. Controlled Airspace.
- c. Hebrides Upper Control Area.
- d. Military Training Areas outside published hours.

In other types of airspace, Radar Advisory is the radar service to be provided unless a Traffic Information Service (TIS) has been requested by the pilot subject to the provision of paragraph 11 below.

9. Procedural Service. Procedural Service may be provided by radar controllers under the conditions specified in paragraph 4b. MATO Procedural Service is not to be confused with "Procedural Clearance" available from civil ATS authorities. Pilots are to be advised when they are placed under "Procedural Service".

NOTE: Procedural Service cannot be given below FL 245 except in holding patterns as detailed in paragraph 4b(2).

AREAS WITHIN WHICH AREA RADAR SERVICE IS NOT AUTHORISED

10. Area Radar Services are not to be provided in the following areas:

- a. Control Zones. (1)
- b. Military and aerodrome traffic zones.
- c. Purple airspace.
- d. Special Rules Zones.
- e. Active Prohibited and Danger Areas (unless co-ordinated).

Note (1) Aircraft may be vectored into or through control zones under authorised airfield entry/exit procedures.

OPERATING PROVISIONS FOR TRAFFIC INFORMATION SERVICE

11. The following provisions are to be observed when providing a TIS:

- a. A TIS may be requested by the pilot, or offered by a controller.
- b. The participating aircraft must be operating under VFR, outside of CAS, below FL 240 or within Military Training Areas (MTAs) during their promulgated operating hours, within radar cover, and subject to unit/console capacity. The pilot is responsible for the selection of the manoeuvring area but may request assistance from the controller in finding a suitable location. Exceptionally the controller may suggest repositioning on his own initiative but the pilot is not bound to comply.
- c. The aircraft must be manoeuvring such that a Radar Advisory Service (RAS) is impracticable.
- d. The pilot must state the vertical limits of his flight profile before a TIS is commenced.

e. A controller providing TIS should not initiate co-ordination with other controllers at the same or other unit: he may however seek traffic information. A controller providing RAS may initiate co-ordination with a controller providing TIS, but such co-ordination is to be agreed only in the vertical plane. Aircraft operating under RAS may be deemed to be clear of the TIS aircraft if more than 1,000 ft above or below (2,000 ft above FL 290) the latter's nominated height band. If co-ordination under these conditions is not possible, controllers providing RAS are to offer advisory avoiding action as if the TIS aircraft was unidentified traffic.

f. The pilot is entirely responsible for achieving separation from notified and other traffic.

ARTIS TRAFFIC INFORMATION SERVICE (TIS)

1. When ac are put under TIS the controller is to make a change of service RT call and change the last figure of the ac squawk to a 7, eg "M23 Traffic Information Service, squawk A Code 203 7". *(Change of service & squawk go together - remember to change service & squawk back after TIS)*
2. The controller should monitor the ac as required in the definition of TIS.
3. When an ac in transit is in conflict with the ac under TIS the transit controller should take 5 or co-ordinate. When co-ordinating the preferred solution is to restrict the TIS block.
4. This ideal situation does not exonerate the TIS controller from initiating co-ordination if he thinks it necessary.
5. If 2 controllers have ac requiring general handling in the same area they should negotiate different areas to give the ac.
6. When instructing an ac under TIS to position away from airways, back into solid cover, away from busy airspace etc the phrase "manoeuvre north/southwest" should be used.
7. When TIS is no longer required the ac must be put back under Radar Advisory and the squawk changed. **NB*