SECTION SIX - TERMINAL RADAR SERVICES

Q. What types of radar service may be provided by a terminal radar unit ?

A. Radar Advisory or Radar Information Service (selected units may provide a Radar Control Service).

(JSP 318A/4/2805 amended by ATSORA)

Q. What factors must be taken into consideration by a controller when turning aircraft for the purpose of identification?

A. (1) Airspace Restrictions.

(2) Terrain in the aircraft's reported, estimated, or observed position.

(3) Other radar returns including permanent echoes, clutter etc.

(4) Radar coverage.

(JSP 318A/4/2901)

Q. For what reasons may a radar controller be unable to locate an aircraft response on his display within reasonable range of the pilot's reported position?

A. (1) Aircraft is below radar cover or within an area of poor radar response.

(2) Pilot's reported position is incorrect.

(JSP 318A/4/2901)

Q. How may an aircraft be identified when using the turn method?

A. (1) By ascertaining heading and following a period of track observation, correlating the movement of a particular return with one or more changes of heading of at least 30° as instructed by a controller or notified by a pilot. Where only approximate position information is available a minimum of two turns of not less that 30° are to be used or additional means of identification employed.

(2) By observing a turn of not less than 30° together with relevant DF indications and a period of track observation.

(JSP 318A/4/2903)

Q. How may aircraft be identified when using a position report?

A. This method consists of a period of track observation, associated with heading and position information, based on one or more of the following:
(1) Pilot's reported position.
(2) DF fix.
(3) Position given by another radar controller on a radar handover.

(JSP 318A/4/2904)

Q. What is the departing aircraft method of identification?

A. An aircraft may be identified be observing the radar response of a pre-notified departing aircraft. Identification is to take place within 1NM of the end of the runway in use.

(JSP 318A/4/2905)

Q. What lateral separation should normally be maintained between aircraft?

A. Minimum separation is normally 5NMs.

(JSP 318A/4/3001)

Q. Under what conditions may minimum lateral separation of 5NMs be reduced?

A. Where authorised by Command HQ separation may be reduced to 3NMs, provided that both aircraft are within 40NMs of the radar head, are both recieving a service from the same unit and the radar equipment in use is providing a data update of 10rpm or better.

(JSP 318A/4/3001)

Q. When may the standard vertical separation be reduced and by how much?

A. Vertical separation may be reduced to 500ft within a MATZ or within military airfield traffic patterns including positioning prior to entry into such patterns, provided that terrain clearance requirements are not eroded and that CAS or special rules airspace is not violated.

(JSP 318A/4/3001)

Q. What are the responsibilities of the radar DIRECTOR?

A. (1) Control and Sequencing of aircraft in the GCA pattern.

(2) Control of aircraft handed over on either an internal hand-over or from an outsdie agency (ie CAC).

(3) Services to aircraft as dictated by circumstances or as laid down in local orders.

(4) SRAs when required.

(JSP 318A/1/0304)

Q. What are the four basic types of radar recovery procedure?

A. (1) Overhead approach.

(2) Direct approach.

(3) GCA pattern.

(4) Short pattern circuit.

(JSP 318A/4/3102)

Q. What factors should a controller take into account when directing an aircraft towards final approach?

A. (1) High ground or obstructions.

(2) Areas of radar shadow.

(3) Danger, prohibited and restricted areas.

(4) Radar clutter.

(5) Other traffic.

(6) Separation.

(JSP 318A/4/3102)

Q. Under what circumstances are monitored approaches given?

A. (1) At the request of the pilot.

(2) As laid down in local orders or other instructions.

(JSP 318A/4/3102)

Q. What action is to be taken by a controller during a monitored approach?

A. (1) Advise distances from touchdown if required.

(2) Be prepared to take over control if required.

(3) Give warning of other traffic.

(4) Give warning if aircraft is going well below the glide-path or if for any other reason the approach is becoming hazardous.

(5) Obtain and pass clearances, surface wind and circuit information normally associated with a PAR approach.

(JSP 318A/4/3102)

Q. What are the four parts of a standard GCA pattern?

A. (1) Downwind leg.

(2) Base leg.

(3) 40^{o} leg.

(4) Final approach.

(JSP 318A/4/3103)

Q. What information should be passed to the final controller prior to handover?

A. (1) Aircraft callsign.

(2) Frequency to be used.

(3) Distance from touchdown.

(4) Heading of the aircraft.

(5) Height of the aircraft.

(6) Pilot's minima and intentions.

(7) Any other information relevant to the task or required by local orders or other orders.

(JSP 318A/4/3103)

Q. Under what conditions may the final controller retain control of an aircraft on a short pattern circuit throughout the procedure?

A. When the controller possesses the requisite operating endorsement and has access to SRA element in addition to precision radar.

(JSP 318A/4/3104)

Q. What vital actions should the final controller ensure are completed during the final approach?

A. (1) Immediately prior to descent the pilot is to be warned of his approach to the glidepath and impending descent.

(2) During descent at a distance of approx 3½ to 2½NMs from touchdown, the pilot is to be instructed to carry out final cockpit checks.

(3) During descent the pilot is to be warned that he is approaching his minima.

(JSP 318A/4/3107)

Q. What action should be taken by the final controller if it becomes impossible to maintain precision radar contact?

A. (1) Arrange, where possible, for the approach to continue as a SRA approach and to resume precision approach if and when precision radar contact is regained.

(2) To instruct the pilot to carry out missed approach procedure or

(3) To hand over control to the director/approach controller.

(JSP 318A/4/3107)

Q. What methods may be used for delay action?

A. (1) Dog leg.

(2) Square delay.

(3) Extension or widening of circuit.

(4) Race track delay.

(5) Orbit.

(6) Direct turn from base leg to final approach.

(7) Passing through the centre line and turning back to final approach.

(8) Angular variation of the base leg.

(9) Speed change.

(JSP 318A/4/3201)

Q. What conditions are necessary before handover of an aircraft from one radar controller to another may be effected?

A. (1) Handover is directly from controller to controller.

(2) Aircraft is clear of controller airspace.

(3) Airspace is in an area of overlapping radar cover.

(4) Aircraft is clear of conflicting traffic.

(JSP 318A/4/3401)

Q. What information should be passed from one controller to another when effecting a radar handover?

A. (1) Position and heading.

(2) Flight level, altitude and flight conditions.

(3) Callsign and type.

(4) Intentions.

(5) Service required.

(6) Any other relevant information.

(JSP 318A/4/3401)

Q. What action should be taken by the controller when direct land-line communication between ground agencies is not available for a radar handover?

A. Controller is to pass the position of the aircraft to the pilot and instruct the pilot to 'Free Call' the next agency giving a frequency if possible.

(JSP 318A/4/3402)

Q. What information should be included in the brief by a controller when handing over a control position?

A. (1) The state of all radar and instrument aids.

(2) Serviceability of communication equipment.

(3) The traffic situation.

(4) Any other relevant information.

(JSP 318A/4/3404)

Q. What conditions should prevail before a change of controller is attempted?

A. (1) Suitable point is reached on the recovery of aircraft under the control of that position.

(2) Any emergency incident has been completed or the aircraft has been handed over to another control position.

(3) Oncoming controller signifies his acceptance of the control position.

(JSP 318A/4/3404)
(See also RO307)

Q. What factors should be considered by the controller when positioning aircraft for a radar to visual recovery?

A. (1) Reported cloud base, visibility and weather.

(2) Position of sun or moon.

(3) Approach lighting aids available.

(4) Director's patterns and conflicting traffic.

(5) Other airfields recovery patterns.

(6) Airspace restrictions.

(7) Terrain clearance.

(JSP 318A/4/3502)

Q. Between what levels is a LARS service available in the UK?

A. Between 3000 ft AMSL and FL 95 except below the airspace encompassed by the Northern Joint Radar Advisory Service Area where the upper limit is FL 80.

(JSP 318A/4/3601)

Q. Up to what range from an ATS unit is the LARS provided?

A. 30 NMs

(JSP 318A/4/3601)

Q. What types of Radar service may be offered by a unit participating in the LARS?

A. Radar Advisory and Radar Information.

(JSP 318A/4/3601)

Q. Which documents contain details of the units participating in the LARS?

A. JSP 318, UK Air Pilot and AICs, ERS (BINA).

(JSP 318A/4/3601)

What separation standards should be maintained by a LARS controller?

A. Minimum horizontal separation is to be at least 5NMs except where vertical separation of 1000 ft is known to exist.

(JSP 318A/4/3601)

Q. Under what circumstances may the prescribed minimum separation be reduced by a LARS controller?

A. Within 40 NMs of the radar head separation may be reduced to 3 NMS between identified aircraft provided that both aircraft are receiving a service from the same unit and that the radar equipment in use is providing a data update rate of 10 RPM.

(JSP 318A/4/3601)

What are the responsibilities of the Approach Controller?

A. (1) MATZ penetration

(2) LARS

(3) Climb-out and departure control

(4) Hand-overs to outside agencies

(5) Control of transit traffic other than LARS

(6) Radar to visual recoveries

(7) Control of aircraft in emergency

(8) DF

(9) Such other services as may be laid down in local orders

(JSP 318A/1/0303)

Q. What is a Single Frequency Approach?

A. A procedure whereby pilots will not be required to change radio frequency from the beginning of the instrument approach to touch-down, except that pilots conducting an en-route descent may be required to change frequency when control is transferred from the ATCRU to the terminal facility.

(JSP 318A/5/4207)

Q. What is the standard vertical separation to be applied between identified aircraft by a terminal radar controller?

A. 1000 ft.

(JSP 318A/4/3001)

Q. By which methods may transfer of radar identity on handover be effected?

A. Provided that the observed track is consistent with the reported track/heading, transfer may be effected by one of the following methods:

(1) Where two radar displays are adjacent the aircraft may be indicated by pointing with a finger but controllers are to exercise caution when using this method as parallax errors are likely to occur.

(2) By designation of the radar return in range and bearing from a common reference point such as a navigational facility or geographical position accurately indicated on both radar displays.

NOTE: SSR may be used to assit identify in accordance with JSP 318A 5503.3.

(JSP 318A/4/3403)

Q. What are the exceptions to the procedures for 'Single Frequency Approach' aircraft?

A. (1) In day time, when a non-radar approach is made, aircraft may be instructed to change to tower frequency after the pilot reports being able to proceed by visual reference to the ground.

(2) At night, when in level flight prior to joining the circuit and landing.

(JSP 318A/5/4207)

Q. What are the responsibilities of the final controller?

A. Interpretation of the information presented by the precision approach radar equipment and for passing to the pilot precise heading and glide-path/height information/instructions. Such information/instructions will enable the pilot to effect a safe landing if, when reaching DH/MDH, he has the necessary visual references to complete the approach.

(JSP 318A/1/0305)

SECTION SEVEN - AREA CONTROL

Q. What line of latitude serves as the North/South dividing line between the London and Scottish FIR and UIR.

A. 55° North.

(JSP 318A/5801)

Q. What is the vertical delineation between Middle airspace and Upper airspace.

A. FL245 and above is Upper airspace.

(JSP 318A/4602)

Q. What are the 6 major divisions of Upper airspace over the UK?

A.
1. Upper Airspace Special Rules Area (UASRA)
2. Mandatory Radar Service Area (MRSA)
3. Hebrides Upper Control Area (HUCA)
4. Military Training Areas (MTA)
5. Radar Service Areas (RSA)
6. London Joint Area Organisation (LJAO)

(JSP 318A/4801)

Q. What is the Upper limit of an MRSA?

A. FL 660

(JSP 318A/4803)

Q. What Radar Service may be offered to ac transiting a MTA?

A. RAS or RIS.

(JSP 318A/4805)

Q. When is a controller to apply Radar Control?

A. For flights within:

1. Mandatory Radar Services Areas.
2. Controlled Airspace.
3. Hebrides Upper Control Area.
4. MTAs outside prohibited hours.
5. Special Rules Airspace.

(JSP 318A/Table 46-1)

Q. Can an Area Controller offer a FIS?

A. Yes a FIS may be offered by ATCSU.

(JSP 318A/4604/*)

Q. Define Radar Control.

A. Radar Control is an area radar service in which pilots are given mandatory instructions to enable prescribed separation between ac to be maintained. Changes of heading or flight level are not to be made without the prior approval of the radar controller.

(JSP 318A 4604)