

DIVISIONS OF AIRSPACEINTRODUCTION

1. The airspace over the UK and surrounding waters from surface level to FL 245 is divided into the London Flight Information Region (FIR) south of 55N, the Scottish FIR north of 55N and part of Stavanger FIR at FL 60 and below. There are corresponding London and Scottish Upper Information Regions (UIRs) above FL 245.
2. Certain parts of the FIRs/UIRs have been classified as Air Traffic Zones, Controlled Airspace, Advisory Airspace, Special Rules Airspace and Airspace Reservations (Danger Areas etc). Within these airspaces special rules and procedures apply which are defined in the relevant civil and military documents. The following notes are primarily concerned with the Upper Airspace.

UPPER AIRSPACE COMPOSITION

3. UIRs. London and Scottish - boundary 55N.
4. Upper Airspace Special Rules Area (UASRA). The UASRA exists within the UK National Airspace Boundary, excluding the Hebrides Upper CTA (HUTA), from FL 245 to FL 660, within which special rules exist for ac operating as General Air Traffic (GAT). The area contains a network of Upper ATS Routes, Peak Period Routes, details of which are shown in Planning Section 4.
5. Mandatory Radar Service Area (MRSA). Selected areas in the UK UIRs have been designated MRSAs. Within these areas it is mandatory for all military ac operating as OAT to fly under Radar/Procedural Service from ATCRUs. The vertical extent of MRSAs is from FL 245 to FL 660 inclusive and the lateral boundaries are defined in MATO ASIs: Danger Areas are excluded. Normally ATC radar services for ac in a MRSA are to be provided by the ATCRU responsible for that area which provides a radar service for 24 hours per day.
6. Hebrides Upper Control Areas (HUTA). The HUTA exists from FL 245 to FL 660 within the areas defined in MATO ASIs. The airspace is notified for the purpose of Rule 21 and Rules of the Air and ATC Regulations 1980 (ie it is Controlled Airspace) and lies entirely within the ScATCC(Mil)MRSA. ScATCC(Mil) is jointly responsible with ScATCC(Civ) for the provision of standard NATS separation between flights operating in the HUTA. The ATC procedures for the HUTA and the conditions of entry are laid down in MATO ASIs.
7. Military Training Area (MTA). MTAs have been established within MRSAs from FL 245 to FL 450 to afford freedom of operation to ac carrying out exercises incompatible with normal ATC procedures. Within MTAs, during their published hours of operation, ac may operate without receiving a radar service, or on request, may be given a radar advisory service. Outside the published hours the MTAs revert to MRSA status. The 5 MTAs are: Brawdy (discrete), Lincolnshire, North Wales, Yeovilton (discrete) and Yorkshire.
8. Radar Service Areas (RSA). Above FL 245, the areas outside the boundaries of the MRSAs and HUTA, and within the radar cover of the ATCRUs have been designated RSAs. In addition, the areas above FL 660 but within radar cover are also designated RSAs. Within RSAs ATCRUs may provide a radar advisory service.

RADAR UNITS

9. MATO ATCRUs. Area services are available from the following MATO ATCRUs:

<u>UNIT NAME/CALLSIGN</u>	<u>MRSA</u>	<u>LOCATION</u>
Border Radar	Yes	RAF Boulmer
Brize Radar	No	RAF Brize Norton
Eastern Radar	Yes	RAF Watton
Highland Radar	No	RAF Buchan
London Military Radar (LATCC(MIL)) (callsign - London Mil)	Yes	RAF West Drayton
Midland Radar	No	RAF North Luffenham
Scottish Military Radar (ScATCC(MIL)) (callsign - Scottish Mil)	Yes	RAF Prestwick
Shetland Radar	No	RAF Saxa Vord

10. Autonomous Radar. Area services, including Radar Control in MRSAs, are also authorised at the following autonomous radars:

SOC/CRC Boulmer	RNAS Yeovilton (1)
SOC/CRC Buchan	RNAS Portland (2)
SOC/CRC Neatishead	RAF West Drayton (School of Fighter Cont)
CRP Benbecula	RAE Bedford
CRP Bishops Court	RAE Farnborough (1)
CRP Portreath	A&AEE Boscombe Down (1)
CRP Saxa Vord	BAe Warton
CRP Staxton Wold	BAe Filton

## Notes:

1. These autonomous radars have been approved to provide an Airways Crossing Service, as detailed in MATO ASIs Sect III Instr No 1.
2. RNAS Portland may control aircraft in airways as detailed in MATO ASIs Sect III Instr No 1 Para 1 Note (2).

SUB-DIVISION OF UK AIRSPACE WITH ASSOCIATED MATO RADAR SERVICES

SERIAL NO (a)	TYPE OF AIRSPACE (b)	DESIGNATION AND STATUS (c)	NOTES (d)	MATO RADAR SERVICE (e)
1	UPPER AIRSPACE (UAS)	1. Mandatory Radar Service Areas (MRSAs)	At and above FL 245 to FL 660.	RADAR CONTROL
		2. Hebrides Upper Control Area (HUTA). (Controlled Airspace CAS)	MATO radar services are provided within the radar cover of ScATCC (Mil) and Highland Radar.	RADAR CONTROL
		3. Upper Information Region (UIR) Radar Service Areas (RSAs)	1. At and above FL 245 to FL 660 outside the boundaries of MRSAs (CI) and HUTA (C2) to limits of radar cover.  2. Above FL 660 within radar cover.	RADAR ADVISORY
		4. Military Training Areas	1. At and above FL 245 to designated FLs and contained within MRSAs.  2. Boundaries are defined and special rules apply, BUT ONLY DURING PROMULGATED HOURS OF OPERATION.  3. Outside promulgated hours of operation the area reverts to MRSAs status.  4. Hours of Training Activity are promulgated in RAF FLIP En Route Supplement Northern Europe and North Atlantic (NENA)	During promulgated hours of operation RADAR ADVISORY OR TRAFFIC INFORMATION  Outside promulgated hours of operation RADAR CONTROL

SERIAL NO (a)	TYPE OF AIRSPACE (b)	DESIGNATION AND STATUS (c)	NOTES (d)	MATO RADAR SERVICE (e)
2	MIDDLE AIRSPACE (MAS)	Flight Information Region (FIR)	FL 100 to below FL 245 . outside Controlled Airspace	RADAR ADVISORY OR TRAFFIC INFORMATION SERVICE (TIS)
3	LOWER AIRSPACE (LAS)	Flight Information Region (FIR)	3000 ft amsl up to <sup>below</sup> FL 100 outside Controlled Airspace	RADAR ADVISORY <del>ALSO TIS FOR AIRCRAFT AT FL 50 OR ABOVE OR TIS</del> WITHIN RADAR COVER
			Below 3000 ft amsl outside Controlled Airspace	Generally no Radar Service but when provided RADAR ADVISORY
4	CONTROLLED AIRSPACE (CAS)	Control Areas (including Airways), <del>Control Zones</del>	Below FL 245. Boundaries as Defined. (Areas: Lower/Upper limits as defined) <del>(Zones: From Ground/Sea Level to upper limits as defined)</del>	RADAR CONTROL

NOTE: The London Joint Area Organisation (LJAO) outlined on the MATO radar service diagrams in the RAF FLIP En Route Supplement NENA contains different types of airspace: UAS (MRSA and RSA), CAS, MAS and LAS. Radar Services in the LJAO are applied according to the status of the airspace, as detailed in the table above.

AIRWAYS CROSSING

\* 1. Military aircraft crossing airways are to cross by one of the following methods:

- a. Under the control of an ATCRU.
- b. Procedural Crossing under positive ATC clearance.
- c. In Emergency.
- d. At the Base Flight Level.

PENETRATION OF CAS

\* 2. Aircraft may be vectored through CAS, except Control Zones (1) under radar control without prior clearance or reference to the appropriate airways sector controller, provided instructions are given to ensure that the minimum horizontal separation standards detailed in MATO ASI's (normally 5 nms) are maintained from all observed traffic. // In lieu of horizontal separation vertical separation may be applied when either:-

- \* a. Prior co-ordination has been effected with the appropriate airways sector controller, or
- \* b. Conflicting aircraft are being controlled by the same agency and prior co-ordination has been effected, or
- \* c. SSR and verified mode C data is used as authorised
  - ie 1000' - intentions of traffic known.
  - 5000' - intentions of traffic unknown.

Note: (1) Aircraft are not to be vectored into or through control zones except under authorised airfield entry/exit procedures.

UNDER ATCRU CONTROL

3. Airways Crossing Procedure. Aircraft requiring an Airways Crossing Service will call the appropriate ATCRU, as shown in the UK En Route Supplement NENA, at least 5 minutes before ETA at the nearest edge of the airway. Radar control is to be provided within CAS and when approaching CAS and when positioning an aircraft to cross an airway to ensure separation from aircraft within CAS. // Pilots are to be informed that they are under Radar Control when approaching CAS and under Radar Advisory when clear of CAS. // Airways may be crossed by one of the following methods

- \* a. Radar Crossing. A radar controlled crossing of an airway is to be made whenever possible at right angles to the axis of the airway, and may only be provided when solid radar cover is available for 10 nautical miles each side of the aircrafts track and between points on the aircrafts track 10 miles from each edge of the airway. Within the vertical and horizontal limits of CAS separation is deemed to exist between the crossing aircraft and aircraft squawking 4321 whose mode C indicates a level outside the vertical limits of CAS. This dispensation is not to be applied within 5000 ft of the base of the airway. Separation from all other observed traffic is to be maintained in accordance with MATO ASI's. Primary radar height-finders are not to be used to ensure vertical separation exists.

b. Radar Video Corridors. Certain airways may be crossed using Radar Video Corridors. Detailed procedures for this use are contained in the relevant Unit SOP's and Planning Document.

c. Co-ordinated Crossing. As an alternative to the radar crossing or Radar Video Corridor methods, controllers may request a co-ordinated crossing clearance from the appropriate Airways Sector Controller. The use of this procedure, which is subject to the Airways Sector Controller's approval, is also subject to the following conditions:

- \* (1) The position of the crossing is to be stated in terms readily assimilated by the Sector Controller, eg bearing and distance from an airways reporting point.
- \* (2) The heading or flight level of the co-ordinated crossing aircraft must not be changed without the prior approval of the airways sector controller, otherwise the co-ordinated crossing clearance is automatically cancelled.
- \* (3) Within the confines of the airway the co-ordinated crossing aircraft is deemed to be separated from all traffic (subject to any conditions notified by the Airways Sector Controller).
- \* (4) The controller providing the crossing service is to notify the Airways Sector Controller when the crossing aircraft is clear of the airway.

#### ALTERNATIVE METHODS

4. Procedural Crossing Under Positive ATC Clearance. A flight plan should be filled and clearance to cross must be obtained at least 10 minutes before the intended crossing point. An ATCRU controller may request the clearance on behalf of the pilot. The request is to contain:

- \* ✓ a. Identification and type.
- ✓ b. Position and heading.
- ✓ c. Level and flight conditions.
- ✓ d. Point of crossing.
- ✓ e. Desired crossing level.
- ✓ f. Estimated time of crossing.

5. If, for any reason, the civil controller does not want the aircraft on his frequency during the procedural crossing the aircraft will, nevertheless, be under his procedural control while in CAS. ATCRU controllers working such aircraft must terminate service as they enter CAS. If radar service is required when the aircraft has cleared CAS the ATCRU controller should retain track identity and resume service when the aircraft leaves CAS.

6. In Emergency. When neither a radar nor a procedural crossing can be obtained, an airway may be crossed at an intermediate 500 ft level. Aircraft flying at quadrantal levels of whole thousands of feet are in all cases to climb 500 ft before entering the airway and after crossing are to resume quadrantal levels. The circumstances of such crossing must be reported to the parent ATCC on landing.

3. Base Flight Level. Aircraft may, without ATC clearance, fly at 90° across the base of an airway where the lower limit is defined as a flight level.

#### FLIGHTS JOINING AIRWAYS

8. A flight plan should be filed and a clearance to join is to be requested 10 minutes flying time from the intended joining position. The request is to contain:

- ✓ a. Identification.
- ✓ b. Aircraft type.
- ✓ c. Position, heading, level and flight conditions.
- ✓ d. Departure Aerodrome.
- ✓ e. ETA Point of Entry.
- ✓ f. Route and point of first intended landing.
- ✓ g. Desired level.
- ✓ h. TAS.

9. For aircraft receiving an ATCRU service prior to joining airways, the clearance request can be made in two ways:

a. By the Pilot. If the aircraft has more than one radio and is able to communicate simultaneously with the ATCRU giving service and the airways sector to be joined then the pilot will obtain his own clearance at least 10 minutes before entry.

b. By the Controller. If the pilot is unable to comply with the above, then the ATCRU controller may pass the information listed in para 8 to the airways sector and request clearance for the aircraft to join at least 10 minutes before entry.

10. After clearance has been obtained the aircraft will enter the airway at the cleared time (+ 3 mins), position and flight level. Before the aircraft joins the airway the ATCRU will cease radar service and the pilot will continue on VHF with Airways Control.

#### FLIGHTS LEAVING AIRWAYS

11. When an aircraft wishes to leave an airway and proceed under an ATCRU radar service the captain will:

- a. Contact the appropriate Military ATCRU on its ICF to ascertain that it can provide the service required, and receive the console frequency to call when leaving CAS. In the case of single VHF equipped aircraft, request the civil controller to pass details to the Military ATCRU and obtain a frequency for the aircraft to call on leaving CAS.
- b. Receive permission from the Controlling Authority to leave CAS.
- c. When clear of the airway, contact the Military ATCRU for Radar Service.

\* 12. A radar service is not to be provided to aircraft leaving airways until the aircraft is clear of CAS.

NOTE 14CENTRALIZED APPROACH CONTROLINTRODUCTION

1. Most ATCRU's frequently give a service to aircraft climbing out from, or recovering to, airfields within their radar cover. When an ATCRU allocates a console or consoles solely for the control of their traffic, the service is known as Centralized Approach Control (CAC). Other airfields have formal climbout and recovery procedures involving ATCRU's, but are not busy enough to warrant the allocation of an exclusive console. The traffic from these airfields is handled on any general console.

ATCRU CONSOLE ALLOCATION

2. At a typical ATCRU, some consoles are for general use. These are normally referred to as "upper air", or "middle air" consoles. Additionally, one console may be used by the Supervisor, another by the allocator and some units also have an exclusive console for a co-ordinator. The rest of a units consoles are allocated to CAC and are fitted with the communications appropriate to its task.

CLIMB OUT PROCEDURES

3. Notification. The allocator and CAC controller need to know the flying programme for the airfields they are serving in order to plan properly. ATCRUs with a large CAC commitment have a movements section set up to receive airfield flying programmes, serviceabilities and weathers. Each expected movement is recorded on a flight progress strip, or on a board, for use at the console concerned.

4. Clearance. When an aircraft requiring a CAC service taxis, the airfield calls the CAC controller confirming or updating the previously notified details. At the same time the airfield will request a discrete squawk and "Clearance" (USAF bases use the word "release"). By "clearing" or "releasing" a movement, the CAC controller is merely indicating that he knows of no conflicts to the proposed climbout. Should there be any conflicts, restrictions to its climb level or alterations to its required heading would be passed to the airfield in order to establish separation. Some units pass separate calls for taxi and clearance.

5. Handover. Most CAC handovers from airfield to area control are on known tracks. Additionally, the CAC controller knows the callsign, requested FL and squawk. A slick, shortened, handover, from the airfield to the area radar unit should be accomplished.

6. Disposal. The disposal of an aircraft receiving a CAC service will vary according to the aircrafts intentions.

a. An aircraft flying into another units MRSAs (or normal operating area if in the middle airspace) will normally be handed to that unit direct by the CAC controller.

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- b. An aircraft intending to work with a fighter control agency will, again, normally be handed direct to the SOC/COC.
- c. An aircraft wishing to remain with the unit supplying the CAC, either for general handling or navigation exercise will normally be transferred internally to a general console selected by the allocator.

RECOVERY PROCEDURES

7. Types of Recovery. There are 4 basic types of CAC recovery.
- a. Radar Datum. Most airfields have, as a nominal handover position from CAC to terminal control, a specified radar datum. The CAC controller simply positions the aircraft over or approaching the datum, on a predetermined track and at an associated level and initiates a handover.
  - b. Random Recovery. Where an airfield has no specified datum or where an existing datum is not suitable for a particular recovery, a random recovery may be used. In this case the handover point becomes a position negotiated between the airfield and CAC controllers.
  - c. Fighter Dive Arc. Short endurance, high performance fighter aircraft demand a special type of recovery procedure. Recoveries are to a datum, usually on the extended centre line of the main instrument runway, from a funnel 15° or more either side of the extended centre-line. This funnel is called the "dive arc". Fighters normally operate with a SOC/COC and, after completing their sortie, are pointed at the dive arc entrance by the fighter controller and handed to the CAC controller. The CAC controller turns the recovery towards the datum but delays the descent from high level until the last moment. The handover to the terminal controller takes place in a "handover sector" approaching the datum.

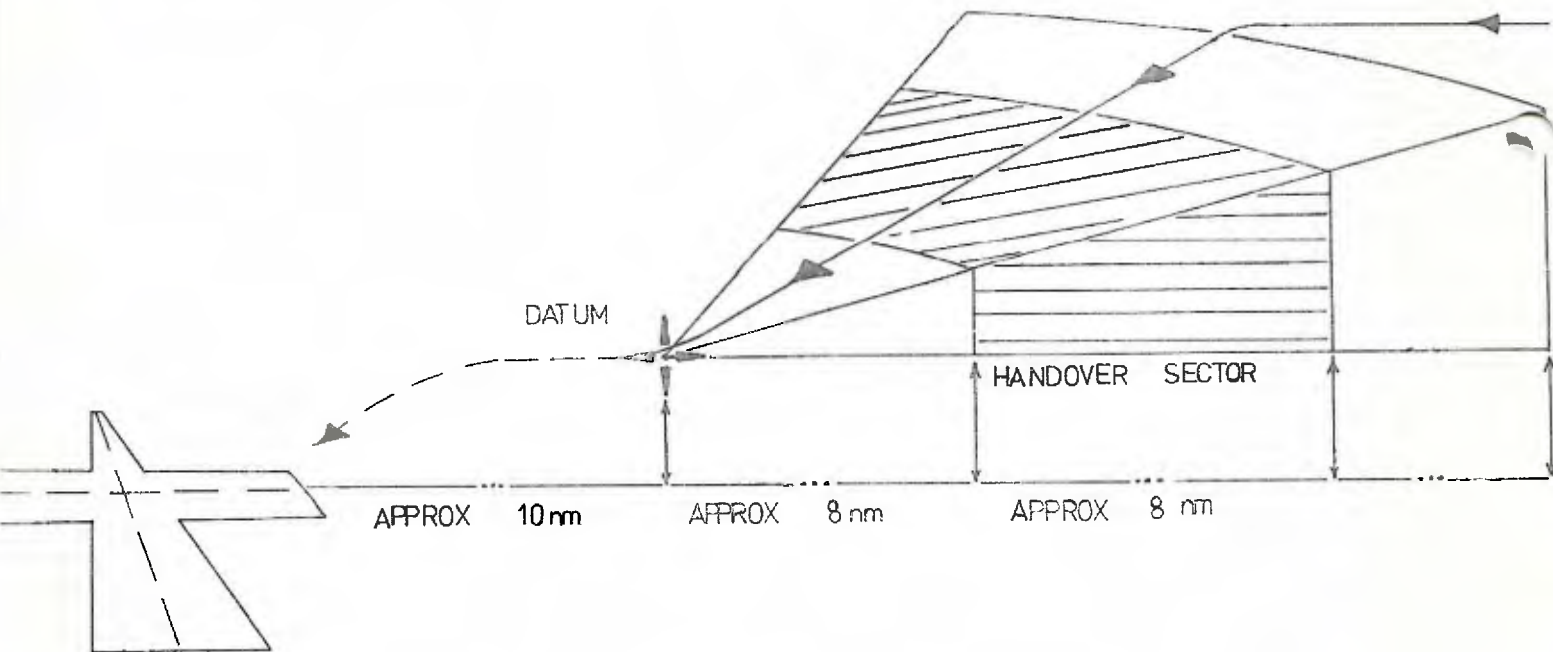


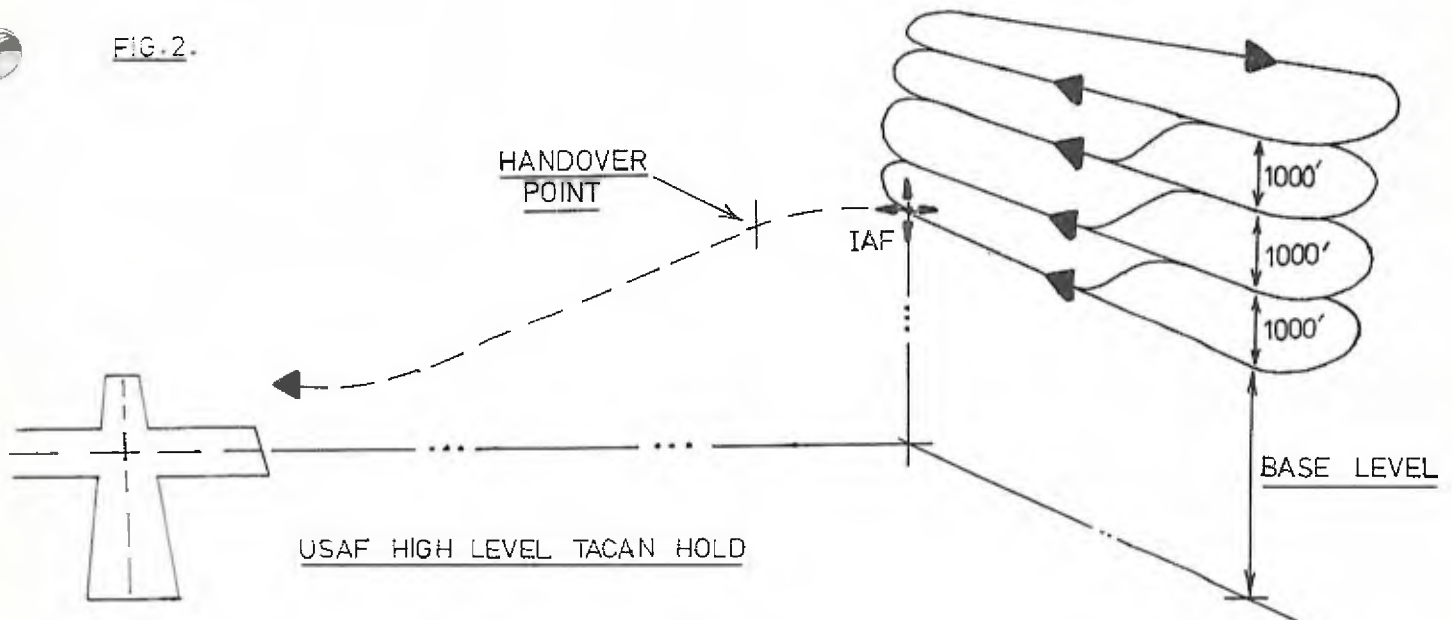
FIG. 1 FIGHTER DIVE ARC

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d. Tacan Recovery. Most USAF bases use a recovery pattern based on the station Tacan. Recovering aircraft fly to an initial approach fix (IAF). Usually at about FL 200, and, if there are no recoveries ahead "penetrate" and follow a set descent pattern to final approach. If there is traffic ahead the aircraft hold in a pattern based on the Tacan "stacked" at 1000' intervals, each descending a level as the aircraft at the bottom of the stack "penetrates". Clearance for the aircraft to leave the fix and "penetrate" must be obtained from the airfield and the handover takes place as the aircraft leaves the IAF descending inbound.

FIG. 2.



8. Estimates and Weather. CAC controllers must pass the weather and airfield state to recovering aircraft as soon as convenient. At the same time, the type of approach requested should be obtained from the pilot. Approval for the type of approach should then be obtained from the airfield controller.

9. Positioning and Sequencing. CAC controllers should remember the following points when positioning and sequencing recovering aircraft.

- a. Distance required for descent from high level.
- b. Wind effect.
- c. Radius of turns.
- d. Runway in use.
- e. Speed differentials.

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- f. Terminal control traffic loading and any minimum spacing requirements.
- g. Base of radar cover when approaching datum.

REQUIREMENTS OF A CAC

10. If an ATCRU is to provide a CAC service to a particular airfield, the following requirements are essential:
- a. Overlapping radar cover between the airfield and ATCRU radars.
  - b. Direct communications between the ATCRU and the airfield. Where there is an exclusive CAC console the lines terminate at that console.
  - c. Agreed and published climbout and recovery procedures.
  - d. A system of notification must operate whereby the CAC controller can be kept informed of the flying programmes and any changes to details.
  - e. The CAC controller must have immediate access to the current airfield state and weather.
  - f. Close liaison must be exercised between the ATCRU and the terminal unit. Frequent visits should be made between the units in order to foster good working relationships and a thorough understanding of each others problems.

Annexes:

- A. Glossary of Terms Associated with CAC
- B. ARTS CAC Procedures
- C. RT Phraseology for the ARTS Molesworth Tacan Recoveries
- D. Loss of RT Procedure for Molesworth Tacan Recoveries

GLOSSARY OF TERMS ASSOCIATED WITH CAC

RAF TERMS

1. Cruise Descent. A descent at a much slower rate than usual. It is often initiated many miles from the datum.
2. Fighter Stud. SOC and CAC normally pass frequencies as fighter stud numbers. The frequencies to which these numbers refer are known to the pilot but are classified. ATCRU controllers and assistants therefore never request the frequency once the associated stud number has been mentioned.
3. Tactical Descent. A very rapid descent, from high level, frequently started within 15 miles of base.
4. Tail Chase. Pairs of fighters following the basic recovery pattern to an airfield, but with the lead aircraft taking evasive action as the second aircraft simulates an attack.

USAF TERMS

5. Diverse Approach. A recovery to an airfield other than by one of the published procedures. A USAF pilot will always request this type of recovery before initiating, and the approach must be cleared by the airfield. USAF pilots will use the phrase "diverse approach" when referring to a PD to an RAF airfield.
6. Dual Ship Penetration. Sometimes called a "holding hands approach", it is a pairs recovery.
7. Expected Approach Clearance (EAC). The time at which it is expected that an arriving aircraft will be cleared to commence penetration. Each USAF aircraft receives an EAC on take-off and any change to this time requested by a pilot must be approved by the destination airfield. A USAF pilot suffering a radio failure will often carry-out a procedural recovery starting at his EAC.
8. Low Approach. Overshoot.
9. Rapcon. A USAF unit, manned solely by controllers, which gives a radar approach control service to arriving aircraft.
10. Tacan Route. A route delineated by Tacan beacons. These routes are published and USAF aircraft use them to fly OAT through airspace used extensively by GAT upper air traffic.
11. X-Ray Treatment. An instrument approach by a formation of aircraft that will split close to the airfield, each aircraft then landing visually.
12. Gate Climb. Maximum rate climb into upper air.

ARTS CAC PROCEDURES

1. Concept. The ARTS CAC Procedures are designed to give students realistic training in the types of CAC services provided by MATO units. These include low-level radar datum recoveries, <sup>diverse recoveries</sup> and the Tacan Approach procedures used by USAF. For the ARTS CAC exercises, hypothetical airfields and patterns have been used. WREKIN RADAR will provide a CAC service to RAF SHOBBDON and RUTLAND RADAR to WEST RAYNHAM and the USAF base at RAF MOLESWORTH. The airfields, their datums and associated standard climbout and recovery patterns are shown at the end of this Annex.
2. Practical Exercises. During the initial CAC exercises (ART 5 and 6), the Operations Room acts as both Wrekin and Rutland Radar. Wrekin Radar will provide a CAC service to RAF Shobdon through the low-level datum. Rutland Radar will only provide a CAC service to RAF Molesworth. In ART 5 and 6 recoveries to RAF Molesworth will be ~~via the low-level datum~~, via the Tacan IAF or from diverse approaches. For all subsequent CAC exercises the Operations Room will act as Rutland Radar providing CAC services to RAF Molesworth and RAF West Raynham. Outbound movements are displayed on flight progress strips at the console. These strips contain callsign and full route details together with ETD.
3. Landline and Communications Procedures. CAC consoles are provided with a discrete landline to their respective CAC airfield. The CAC controller will be notified of taxiing aircraft and on receipt of this call the controller will immediately allocate a discrete SSR code to the aircraft. This will be passed to the airfield by the assistant. The subsequent radar handover will be controller to controller via the direct line. The details of recovering aircraft will be passed by the assistant, on instructions from the CAC controller, to the airfield controller prior to the aircraft reaching the datum or a fix.
4. CAC Climbout Procedures. All departing aircraft will climbout from the airfields using the promulgated standard climbout lanes and will be squawking discrete SSR codes. The identification and handover to the CAC controller will normally be completed as the aircraft approaches FL 50. The aircraft will be in the climb to FL 240, unless another, lower, flight level has been requested. Permission to climb further, into the Upper Airspace, will be given by the CAC controller. The CAC controller will retain control of his aircraft until an external handover is required.
5. CAC Recovery Procedures. The CAC controller is responsible for the separation and sequencing of recovering aircraft. He is also responsible for the allocation of flight levels at the fix or datum. The airfield controller is to be pre-warned of impending recoveries and the aircraft callsign, ETA and type of approach is to be given. Before aircraft are allowed to commence their recoveries to RAF Molesworth, permission must be obtained from the Molesworth Rapcon for the aircraft to penetrate from the fix. The handover to the airfield controller will normally take place as the aircraft leaves the fix inbound or, in the case of a datum approaches the datum.

NOTE 14

SHOBDON  
270°  
FL 60

120°

MOLESWORTH  
040°  
FL 60

020°

MOLESWORTH

310°

IAF  
FL 200

WEST RAYNHAM  
040°  
FL 60

025°

ARTS CAC AIRFIELDS AND THEIR PATTERNS

1 PROCEDURES FOR MOLESWORTH TACAN RECOVERIES

CIRCUMSTANCES	CONTROLLER'S R/T	REMARKS
1. AC en-route to IAF.	Alem 49, resume own navigation to the Molesworth fix. <i>Report steady with heading.</i>	When convenient, controller passes weather, obtains estimate for the fix and number of holding patterns required. Penetration clearance obtained from Molesworth RAPCON. <i>(Via assistant who passes above into Molesworth)</i>
2. AC approximately 20-30 miles from fix, according to cruising level.	Alem 49, descend to FL <i>(200)</i> ..., report level.	Flight level allocated by controller, usually lowest available level in stack. Unless stack is empty, aircraft must not enter from below.
3. AC approaching fix at assigned flight level.	Alem 49, report established in the hold.	Often combined with phrases at para 2 above.
4. AC established in hold, at FL 200.	Alem 49, clear TACAN penetration, report leaving FL 200. <i>(If no penetration clearance just acknowledge call report)</i>	Penetration clearance not to be passed to holding aircraft until they have descended through the stack and are occupying the bottom level.
5. AC approaches the fix for penetration.	Alem 49, Squawk <i>3/A</i> Code 6301.	This phrase may be added to 6 if required.
6. AC calls leaving FL 200.	Alem 49, continue Tacan penetration QNH is <i>22.0</i> ins. <i>Remember - get readback of QNH</i>	Controller immediately opens Molesworth line for handover to RAPCON.
7. Handover to RAPCON.		The handover message is simply "Alem 49 penetrating" a position would only be added if the ac was not in a normal handover position.
8. When instructed by RAPCON.	Alem 49, squawk ident.	The instruction "squawk ident" may be passed to the aircraft before being instructed by Rapcon, but not before you are in communication with RAPCON.
9. When identified by RAPCON.	Alem 49, contact Molesworth 281-3 (CH 18)	
10. To holding aircraft number 2, as number 1 calls leaving FL 200.	Sammy 63, descend to FL 200 report level.	Procedure reverts to step 4.

Penetration clearance given for one ac at a time. If in stack might be best to keep HESA to see clearance.

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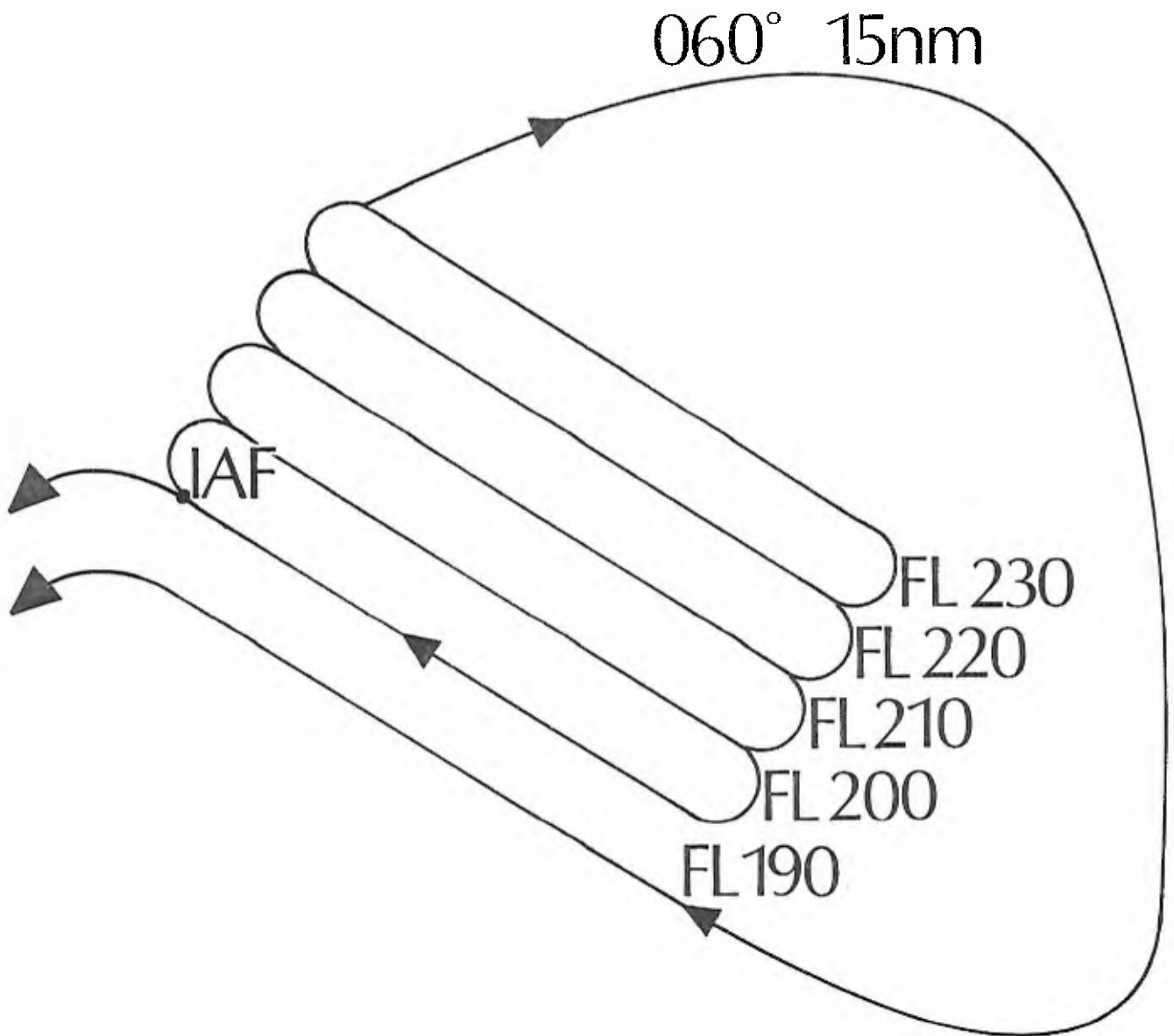
*Open line "Rapcon"*

*ix "Alem 49 squawk ident" then (without a breath) "Alem 49 penetrating" to Rapcon*

Handover

**DONT FORGET AVOIDING ACTIONS - Resolve conflicts first!**

MOLESWORTH LOSS OF R/T PROCEDURE TACAN HOLD



A