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Flying Operations

FLYING OPERATIONS CONDUCTED AT USAF-OCCUPIED ROYAL AIR FORCE (RAF) INSTALLATIONS IN THE UNITED KINGDOM (UK)

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This instruction implements policy and guidance in Air Force Policy Directive (AFPD) 11-1, *Flying-Hour Program*; Air Force Instruction (AFI) 11-101, *Management Reports on the Flying Hour Program*. It applies to all military and nonmilitary organizations conducting flying operations at United States Air Force (USAF)-occupied Royal Air Force (RAF) bases. Send comments and suggested improvements to this instruction on AF Form 847, *Recommendation for Change of Publication*, through channels, to Directorate of Air and Space Operations, Airspace Systems Integration (HQ USAFE/A3YA), Unit 3050 Box 15, APO AE 09094-5015. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 37-123 (will convert to AFMAN 33-363), *Management of Records*, 31 Aug 1994 and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located in AFRIMS (AF Portal).

SUMMARY OF CHANGES

Paragraph 9 and sub-paragraphs updated to current operations RAF Fairford. Paragraph 10 and sub-paragraphs updated to reflect current airspace structure in the United Kingdom. Paragraph 17 updated to reflect current airfields where CAC service is provided. Paragraph 18 and 19 updated to reflect ICAO change to in-flight emergency terminology. PAN PAN has changed to just PAN. **Attachment 1**, references updated to reflect current references. Margin bar (|) indicates new material.

1. Introduction.

1.1. This instruction provides information for aircraft operating in the UK (flight planning, quiet hours/low-level restrictions, airspace structure, radar services, emergency handling, incident reporting and more). USAFE-UK/A3 is responsible for coordinating host nation airspace and Air Traffic Control (ATC) matters for all United States (U.S.) military operations in the UK, contact phone numbers: Defense Switched Network (DSN) (314)-238-

2125. Inside UK, 01638-542125. Outside UK, (Country Code 44) 1638-542125. Should aircrew wish to visit UK ATC facilities, USAFE-UK/A3 is the first Point of Contact (POC). If USAFE-UK/A3 personnel are not available call HQ USAFE/A3CA at DSN: (314) 480-8145 Commercial: 011-49- (0)-6371-47-8145.

1.2. Specific information regarding the conduct of military and nonmilitary flight operations in the UK may be found in the Department of Defense (DoD) Flight Information Publication (FLIP)/Area Planning (AP)/2, the Department of Defense (DoD) Foreign Clearance Guide (FCG), the United Kingdom Military Aeronautical Information Publication (UK MIL AIP), and other USAFE supplements to USAF basic flying instructions.

1.3. Because of the congestion and complexity of certain airspace, it is vital that aircrew remain attentive on frequency, keeping Air Traffic Control (ATC) informed of their intentions. Moreover, the need to utilize current FLIPs cannot be over-emphasized, particularly with regard to the correct addressing of flight plans. Flight plans should be filed following the provisions outlined in FLIP AP/2, Chapter 3, *UK Procedures, Flight Planning section*. Particular attention should be paid to the addressees; the UK is part of the Europe-wide Integrated Flight Planning System (IFPS) and failure to use the correct IFPS address could result in the intended flight being refused entry into IFPS airspace.

1.3.1. An acceptance message from French ATC is required prior to crossing the Flight Information Region/Upper Information Region (FIR/UIR) boundary. Therefore, an aircraft should have an acceptance message prior to departure. Base Operations is the point of contact for obtaining acceptance messages and can coordinate with London ATC Center (LATCC)/London Joint Area Organization (LJAO) for assistance.

2. Quiet Hours.

2.1. Unless otherwise specified all times (in this instruction) are local. If you are unable to determine whether or not a particular situation requires a quiet hour's waiver, contact USAFE-UK/A3, DSN: 238-2125 for guidance. Commanders, aircrews, and maintenance personnel must, to the maximum extent possible, avoid operations during the following UK quiet hours. The following quiet hours are applicable to all USAF-occupied RAF bases in the UK.

2.2. Standard quiet hours are:

2.2.1. Weeknights: Monday through Thursday, 2300 each evening to 0600 the following morning.

2.2.2. Weekends: Friday from 1800 until Monday at 0600.

2.3. UK Bank Holidays (UKBH) and UK National Holidays (UKNH) quiet hours:

2.3.1. Singular Monday UKBH extends weekend quiet hours until Tuesday at 0600.

2.3.2. Good Friday and Easter Monday UKBH extends weekend quiet hours starting Thursday at 2300 through the following Tuesday at 0600.

2.3.3. Other UKBH/UKNH quiet hours are from 2300 the evening before until 0600 the day after the holiday.

2.3.3.1. Bank holidays generally fall on Mondays.

2.3.3.2. Bank holidays are the first and last Monday of May.

2.3.3.3. The last Monday of August (August Bank Holiday).

2.3.3.4. New Year's and Christmas Day, and December 26th (Boxing Day). If New Year's, Christmas, and/or Boxing Day fall on a weekend then the following Monday and occasionally Tuesday become holidays.

3. Operations During Quiet Hours.

3.1. Airfield operations to conduct local training missions are prohibited during quiet hours.

3.2. Limited standard exceptions, listed in paragraph **4**, are established to permit operational flexibility. Additionally, the host base wing commander has quiet hours exception approval authority for their airfield operations. Wing commanders are responsible for establishing internal approval procedures for exceptions to quiet hour operations on their airfields and ensuring units deployed to their wings/units/bases for operational flight purposes are briefed on UK quiet hour operations.

3.2.1. Wing commanders are authorized to delegate approval authority, as deemed necessary.

3.2.2. When exercising this approval authority, wing commanders, or their designated representatives will:

3.2.2.1. Provide written justification for the approved quiet hours deviation, when requested by USAFE-UK/A3, accordingly, USAFE-UK/A3 will notify the MoD UK of all such occurrences.

3.2.2.2. Provide a monthly report of all approved quiet hours deviations to USAFE-UK/A3. As a minimum the report will include aircraft type, date/time of deviation, type of activity, brief rationale for the approval. Reports are due by the 5th duty day of the month for the previous month's activities.

3.3. In all exceptions to quiet hour operations, aircrews will fly a single straight-in approach to a full stop landing with minimal use of reverse thrusting to keep noise levels as low as possible, consistent with safe operation of the aircraft.

4. Standard Exceptions to Quiet Hour Operations.

4.1. The following operations during quiet hours are permitted on weekends and UKBH/UKNH between 0900 and 1800 without approval from local commanders, USAFE-UK/A3 and/or MoD UK:

4.1.1. Higher headquarters (HHQ) directed missions and aero-medical evacuation flights.

4.1.2. Transient arrivals and departures.

4.1.3. Aircraft operations supporting MoD UK recognized air shows or other HQ USAFE/A3 and/or MoD UK approved flying events. Aircrews are not permitted to conduct local training flights or takeoff from and recover to the same RAF base during quiet hours unless aircraft operations are supporting MoD UK or HQ USAFE/A3/10 approved aerial events.

4.1.4. Aircraft deployments to or from USAF occupied RAF bases that will support and/or participate in North Atlantic Treaty Organization (NATO)/MoD UK/HQ USAFE/A3/10 sponsored squadron exchanges and exercises.

4.1.5. Mission essential maintenance engine runs inside hardened aircraft shelters using sound suppression equipment, aerospace ground equipment (AGE), and auxiliary power unit (APU). ***Note:*** When conducting ground engine runs during quiet hours, the goal is to maintain engine run noise below open air, idle engine noise levels. Due to local populace sensitivity, quiet hour engine runs should be limited to the absolute minimum necessary. (Not applicable for 56 Aircraft Maintenance Unit (AMU) engine idle runs conducted in support of the 48th Operations Group (48 OG) operations in paragraph **5**) ***Note:*** Host base wing commanders, or their designated representative, are the approval authority for mission essential maintenance operations listed above without the use of sound suppression equipment. Refer to paragraph **3** for 3 AF-UK/A3 reporting procedures.

5. 352nd Special Operations Group (SOG) and 48 Operations Group (48 OG – Helicopters only) Exceptions to Standard Quiet Hours.

5.1. In the absence of a Ministry of Defense (MoD) UK Air Officer Commanding or MoD UK officer of equivalent status, MoD UK authorizes the 352 SOG and 48 OG to make small scale use of the overland parts of the UK Low Flying System (UKLFS) according to stipulations provided in the UK Military (MIL) AIP. The 352 SOG and 48 OG will adhere to the exceptions as outlined in paragraphs **5.1.1** and **5.1.2** below to accommodate their operational training. These exceptions are applicable only to 352 SOG and 48 OG operations conducted from all USAF-occupied RAF bases in the UK.

5.1.1. From 1 May to 30 Sep:

5.1.1.1. Weeknights: Tuesday through Friday 0200 to 0600. Only a maximum of 30 training sorties for both the 352 SOG and the 48 FW, excluding HHQ directed missions, are authorized per month from 2300 to 0200. Aircraft arrivals, between 2300 to 0200, will be single straight-in approach to a full stop landing.

5.1.1.2. Weekends: Friday from 2330 until Monday at 0600. By exception, when considered essential by the 352 SOG or 48 OG Commander or Deputy Commander, flying may be conducted between 2330 on Friday until 0200 on Saturday according to the following:

5.1.1.2.1. The 352 SOG or 48 OG Commander shall advise USAFE-UK/A3 no less than 3 days in advance (i.e. by 1200 Tuesday) with the type and number of aircraft, times and duration of sorties, a brief description of sortie purpose, and reason why the sortie cannot be conducted at other times.

5.1.1.2.2. Third Air Force - UK/A3 shall make application to the UK MoD Directorate Air Staff (DAS) Lower Airspace (LA) and provide an information copy to DAS Visiting Forces (VF) with 352 SOG and 48 OG requests.

5.1.1.2.3. UK MoD, DAS LA will reply to 3 AF-UK/A3 no less than 1 day in advance (i.e. by 1200 Thursday) with approval of the request which will be passed by USAFE-UK/A3 to the 352 SOG and/or 48 OG accordingly.

5.1.2. From 1 October to 30 April:

5.1.2.1. Weeknights: Monday through Thursday 2330 to 0600.

5.1.2.2. Weekends: Friday from 2330 until Monday at 0600. ***Note:*** Aircraft arrivals between 2300 and 2330 will be single straight-in approach to a full stop landing.

5.1.3. During UKBH/UKNH the 352 SOG and 48 OG will comply with the standard quiet hour procedures outlined in paragraphs **3.1** through **3.3**.

5.2. Any 351st Air Refueling Squadron (ARS) and/or deployed aerial tankers supporting the 352 SOG or 48 OG with in-flight refueling and training may adhere to SOG/48 OG quiet-hours (paragraphs **5.1.1** and **5.1.2**). Tanker aircraft missions supporting SOG/48 OG training and landing after 2300 hours will fly a single straight-in approach to a full-stop landing.

6. MoD UK/HQ USAFE/Wing Approval Requirements and Notification Procedures.

6.1. In accordance with MoD UK procedures, HQ USAFE, through USAFE-UK/A3, is the primary agency designated to negotiate and/or coordinate with the MoD UK for aircraft movements and flight operations into USAF-occupied bases as detailed in this instruction. However, for high profile aircraft deployments to the UK in support of real-world operations, International Relations (USAFE-UK/IR) will notify and liaise with the Defense Attaché (DATT) at the U.S. Embassy London. The DATT is the responsible agency for receiving initial notification and coordinating approval with MoD UK for high profile, real-world deployments. USAFE-UK/A3 and USAFE-UK/IR will work closely to ensure the most current and accurate information is provided to the DATT office.

6.2. The following aircraft operation/deployment scenarios require approval from the host base wing commander and HQ USAFE through USAFE-UK/A3 and MoD UK notification or approval (not applicable to RAF Fairford, see paragraph **9.**). A minimum of 30 days is required for coordination with the MoD UK. **Note:** Sixty days notice may be required if the operation/ deployment qualifies as an unusual aerial activity (UAA). Refer to paragraph **7.** to see if it qualifies as a UAA.

6.2.1. All planned aircraft deployments of five aircraft or more, require MoD UK approval. Deployments of less than five aircraft require MoD UK notification only.

6.2.2. Airfield operations conducted during quiet hours from USAF-occupied RAF bases that support and/or participate in NATO/MoD UK/HQ USAFE sponsored flight operations, require MoD UK notification only.

6.2.3. Any proposed deployment of bomber or stealth aircraft, regardless of the deployment size or location, require MoD UK approval.

6.2.4. U.S. sponsored non-NATO, non-UK, or continental United States (CONUS) based aircraft of any deployment size, require MoD UK approval.

6.2.5. MoD UK approval is required for unusual aircraft types or those of a different mission and design series that could easily attract public attention.

6.2.6. Any airfield operation which varies significantly in operational scale and scope from daily, routine operations, by assigned and/or deployed units conducting flight operations in the UK. Host base officials will consult with USAFE-UK/A3 when they have questions regarding any significant increase in airfield operations that may draw public attention or require MoD UK approval.

6.2.7. MoD UK approval is required prior to the 352 SOG use of Watton Airfield/Drop Zone (DZ) and RAF Fairford during established quiet hours.

6.3. Deployment and exercise planners will send details of deployments and exercises via e-mail to **usafe-uk.a3@mildenhall.af.mil** or **3AF.A33.DET3@mildenhall.af.smil.mil.** USAFE-UK/A3 will process the request for the required level of notification and approval.

6.3.1. E-mail request will provide the following information:

6.3.1.1. Deploying unit, POC, DSN and e-mail address of the POC.

6.3.1.2. Sponsoring unit, POC, DSN and e-mail address of the POC.

6.3.1.3. Type of flying activity or exercise (Tactical Fighter Meet, NATO/Command and Control Air HQ Ramstein/HQ USAFE sponsored exercise, etc.).

6.3.1.4. Inclusive dates of activity or exercise.

6.3.1.5. Deployment/redeployment dates.

6.3.1.6. Planned flight routes into and out of the UK for bomber, stealth, and U-2 aircraft.

6.3.1.7. Numbers/types of aircraft.

6.3.1.8. Scope and scale of operations (e.g., number of sorties per day) anticipated takeoff and landing times.

6.3.1.9. General description of anticipated mission scenarios.

6.3.1.10. Requested airspace and low flying activities.

6.3.2. USAFE-UK/A3 will coordinate with MoD UK and inform the appropriate offices so that Notice to Airmen (NOTAM) and Airspace Coordination Notices (ACN) are published.

6.3.3. Flying activity, which will exceed what was initially coordinated and approved, will not normally be approved.

6.3.4. Units will receive approval from USAFE-UK/A3 for the requested deployment or exercise via e-mail.

6.3.5. The 48th Fighter Wing (48 FW) Commander, or designated representative, will notify USAFE-UK/A3 and the Lakenheath RAF Commander of the following planned flight scenarios:

6.3.5.1. Flying operations and/or surge activity that exceed 70 daily sorties.

6.3.5.2. A single squadron surge that is scheduled to take place immediately prior to or following a two squadron surge.

6.4. The 48 FW Commander, in concert with the RAF Commander, will ensure that the local population is notified at least 1 week in advance of the planned increase in flight activities via public affairs channels.

6.5. All RAF Lakenheath surge flying will be coordinated with MoD UK by USAFE-UK/A3.

7. Unusual Aerial Activity (UAA).

7.1. For deployed units, USAFE-UK/A3 is responsible for submission of all information to Directorate of Airspace Policy (DAP) Airspace Utilization Section (AUS) and MoD UK for potential ACN action according to Joint Service Publication (JSP) 550, *Military Aviation Policy, Regulations and Directives.* If unsure whether or not your planned flight activity constitutes the need for an ACN contact USAFE-UK/A3 for guidance.

7.2. Characteristics of a UAA may include one or more of the following:

7.2.1. A concentration of events in time or airspace, significantly greater than normal.

7.2.2. An inability to conform to the established rules such as visual flight rules (VFR)/instrument flight rules (IFR), quadrantal (below FL245), semi-circular rules (above FL250), or rights-of-way.

7.2.3. Fly-pasts and weapons or attack technique demonstrations.

7.2.4. Local USAFE unit exercises which result in significantly increased aircraft launch rates or mass launches.

7.2.5. Exercises that involve large individual formations of five or more aircraft.

7.2.6. Air shows that include aerial demonstrations.

7.2.7. Intense, non-routine activity concentrated in specific airspace or along flight tracks.

7.2.8. Air operations conducted in such a manner that participants of unusual aerial activity cannot observe normal flight rules and separation altitudes.

8. Operational Restrictions for Non-UK Based Aircraft Operating in the UK.

8.1. UK Low Flying System (UKLFS): Low-level flying by non-UK based USAF aircrews is prohibited unless written approval of MoD UK has been given in advance of the requested low-level flying activity. HQ USAFE, RAF Strike or Group Command Headquarters, as appropriate must sponsor requests for use of the UKLFS associated with events other than NATO-sponsored squadron exchanges.

8.1.1. Low flying is defined for fixed wing aircraft as flying below 2,000 feet Above Ground Level (AGL) unless taking off or landing. Rotary wing and light propeller driven aircraft are considered to be low flying below 500 feet AGL. The UKLFS is for the use of UK based aircrew only. For non-UK based crews flight below 2,000 feet AGL is prohibited without prior approval of the MoD UK. For a full description of the UKLFS see the UK MIL AIP, Part 3 and U.S. DoD FLIP AP/2.

8.1.2. Full details of the planned flights are to be submitted to USAFE-UK/A3 by message or e-mail: **usafe-uk.a3@mildenhall.af.mil**, not less than 35 days prior to the planned flight. Failure to apply for permission 35 days in advance will most likely result in disapproval.

8.1.3. HQ NATO Squadron Exchanges. NATO-assigned USAF squadrons on NATO-approved exchange visits to the UK are permitted to use the UKLFS in accordance with the regulations in the UK MIL AIP. The hosting UK based squadron will confirm

minimum operating altitudes for the exchange squadron and notify 3 AF-UK/A3, who will advise MoD UK at least 1 week in advance of scheduled squadron exchanges.

8.1.4. UKLFS briefing requirements for non-UK based aircrews. Non-UK based aircrews shall not fly in the UKLFS until they receive a face-to-face orientation briefing, on all aspects of flight in the UKLFS, from a qualified British Forces flying officer. The orientation briefing shall take place in the UK unless specifically granted otherwise by the MoD UK and is valid only for specific exercises, deployments, and detachments. Further use of the UKLFS for additional events is conditional based on renewal of approval by the MoD UK and additional orientation briefings. Briefing shall cover as a minimum:

8.1.4.1. The provisions for minimizing noise disturbance.

8.1.4.2. Avoidance of sensitive and prohibited areas.

8.1.4.3. Compliance with NOTAM warnings or restrictions.

8.1.4.4. Booking (scheduling) requirements.

8.2. Range use. Requests for the use of all UK weapons ranges by non-UK based aircraft will be addressed to USAFE-UK/A3 Range Manager for coordination. DSN: 238-3402, Commercial 01638-543402, email: **usafe-uk.a3@mildenhall.af.mil.**

8.3. B-1, B-2, and B-52 flying restrictions in the UK:

8.3.1. The minimum altitude for flight over any UK landmass or within three nautical miles of any coastline is 2,000 feet AGL/above mean sea level (AMSL). The only exceptions are activities related to approved air displays and paragraph **8.3.4**.

8.3.2. Minimum altitude for flight conducted beyond three nautical miles of any coastline is 750 feet AMSL.

8.3.3. B-1, B-2, and B-52 aircraft flying into/through/out of UK airspace will only fly routings reviewed and coordinated by USAFE-UK/A3.

8.3.4. MoD UK may permit flights in Low Flying Area 14 down to 1,000 feet AGL on a case-by-case basis.

9. RAF Fairford Operations.

9.1. RAF Fairford is a forward operating site and therefore flight operations facilities are maintained on a limited status, under 420th Air Base Squadron (ABS) and with HQ USAFE/A3 oversight.

9.2. Quiet hours at RAF Fairford are as stated in paragraph **3.2** and **3.3**.

9.3. All flight operations at RAF Fairford, except those identified as standing exceptions, require the approval of the 420 ABS Site Director (420 ABS/CL), HQ USAFE/A3 and the MoD UK. Coordination with the MoD UK requires at least 30 days advance notice, unless the requested operation is classified as UAA, then 60 days advance notice is required. See paragraph **7.** for UAA.

9.3.1. Approved operations on weekends or UKBH will be conducted between 0900 and1800 hours local.

9.4. Standard exceptions, the 420 ABS/CL is authorized to approve the following operations:

9.4.1. The 352 SOG operations at RAF Fairford.

9.4.2. Flight check operations and authorization for the Tower, Chief Controller to solicit VFR and IFR traffic pattern operations to maintain air traffic controller proficiency.

9.4.3. Authorization for the Air Traffic Manager to solicit VFR and/or IFR traffic pattern operations for air traffic control proficiency.

9.4.4. Other military and /or civil aircraft operations for multiple approaches/pattern operations.

9.5. The 420 ABS/CL is responsible for notifying USAFE-UK/A3 and Airfield Operations Branch (HQ USAFE/A3CA) of any of the following:

9.5.1. When additional ATC or airfield management personnel are required.

9.5.2. Any approved 352 SOG operations.

9.5.3. Any airfield condition, construction, or activity that will restrict, limit, or otherwise render RAF Fairford flight line unusable to aircraft. Also, include the cause and expected duration of the restriction.

9.5.4. Requests from other agencies to use RAF Fairford for flight operations.

10. Division of Airspace.

10.1. FIRs/UIRs. UK airspace is divided into two FIRs and above each is a UIR, the four regions termed collectively as the London and Scottish FIRs/UIRs, and are divided vertically as follows: (see FLIP for boundaries).

10.1.1. UIR. Upper Airspace - FL245 to unlimited.

10.1.2. Lower Airspace from surface to below FL245.

10.2. Controlled Airspace (International Civil Aviation Organization (ICAO) Classes A to E).

10.2.1. Class A: Civil airways below FL245 and certain Terminal Control Areas ((TCA) or Control Areas (CTA)) and Control Zones (CTZ). All airways are identified by the phonetic alphabet. ***Reference:*** RAF Enroute Low Altitude charts for the British Isles.

10.2.2. Class B: Not allocated in the UK.

10.2.3. Class C: FL195 to FL660 contains domestic and international upper air routes for use by General Air Traffic (GAT) and military Tactical Area Navigation (TACAN) routes for use by Operational Air Traffic (OAT). For military purposes all Class C airspace is promulgated as Mandatory Radar Service Areas (MRSA) where Radar Control applies at all times. VFR flight is not permitted while enroute (in transit), but is allowed in areas suitable for maneuvering; however, traffic information is always provided against VFR traffic and standard separation will always be maintained against IFR traffic. ***Reference:*** RAF Enroute High Altitude charts for the British Isles.

10.2.4. Classes D and E: Certain CTAs, Control Zones (CTR) and part of the Scottish Terminal Control Area (TMA). ***Reference:*** RAF Enroute Charts.

10.3. Uncontrolled Airspace (ICAO Classes F and G).

10.3.1. Class F: Civil advisory routes (Advisory Routes (ADR)).

10.3.2. Class G: The remainder of UK airspace (sometimes referred to as the "Open FIR").

10.4. Additional Categories of Airspace. **General**. An Airspace Reservation in the UK is an airspace of defined dimensions above a designated land or water area through which flight may be prohibited or restricted and within which specific activities may be encountered. These areas are notified in the UK AIP (ENR 5.1 including the associated Chart of United Kingdom Airspace Restrictions and Hazardous Areas in ENR 6), Series GSGS 5201 and other civil aeronautical charts, RAF FLIPs and the Mil AIP (ENR 5.1). The status of airspace reservations, in ICAO terms, depends upon the classification of the airspace within which they lie. They include Prohibited Areas, PMP Areas, Restricted Areas, PMR Areas, Danger Areas, AIAAs, ATAs, HIRTAs, MTAs, TRAs and AARAs. In addition to the foregoing safety measures, full use is to be made of radar services, ashore and afloat, to aid pilots of aircraft in keeping clear of prohibited, restricted and danger areas, particularly in conditions of poor visibility.

10.4.1. Temporary Class A airspace is established to protect Royal and some very important people (VIP) flights in fixed wing aircraft. The establishment of such airspace is promulgated by NOTAM. For Royal flights in helicopters, Royal low-level corridors are established by NOTAM.

10.4.2. Military Training Reserved Airspace (MTRA) and Military Training Areas (MTA) are delineated within an MRSA to afford freedom of operation to pilots engaged in flying activities which are incompatible with the provision of Radar Control. (***Reference:*** RAF Enroute Supplement for British Isles and North Atlantic, Upper Airspace Service Areas and MTA section). In addition for flights requiring segregation from other traffic, Managed Danger Areas (MDA) are available in overseas areas from 5,000 feet to FL660.

10.4.3. Military Aerodrome Traffic Zones (MATZ) are established at most military aerodromes for the increased protection of arriving, departing, and circuit traffic. ATC instructions to military pilots within a MATZ are mandatory. In the airspace outside of the Airfield Traffic Zone (ATZ) - a smaller zone within the MATZ - observation of MATZ procedures is not compulsory for civil pilots.

10.4.4. The Lakenheath Aerial Tactics Area (ATA) and Wash ATA are not special use airspace. London Radar provides Traffic Service to aircraft booked into these ATAs. Since these areas exist in uncontrolled airspace, there will be other traffic transiting the areas either under a radar service or not under any service. The controller will provide information on non-ATA traffic passing through the ATA but pilots concerned are responsible for breaking off any tactical maneuvering in order to maintain visual separation.

11. Altimeter Settings.

11.1. Above transition altitude the altimeter setting should be: 29.92 (referred to in the UK as the standard pressure setting).

11.2. Below transition levels.

11.2.1. Civil airfields altimeter setting which gives altitude above main sea level (QNH), with altimeter setting which gives height above ground level (QFE) for radar final approaches.

11.2.2. RAF airfields, QFE.

11.2.3. Royal Navy (RN) airfields, QFE.

11.2.4. USAF-occupied airfields, QNH.

11.3. Regional pressure setting areas are outlined in the RAF Flight Information Handbook, Altimeter Setting Regions Section - UK. QNH is the forecast lowest pressure for each of these areas for transit below 3,000 feet outside controlled airspace, airfield circuits and airfield traffic patterns.

12. Separation Standards.

12.1. Vertical separation standards are in accordance with the RAF Flight Information Handbook, UK Cruising Levels; generally 1000 feet separation is applied although in certain circumstances this may be reduced to 500 feet or extended to up to 5000 feet. (***Reference:*** RAF Flight Information Handbook, UK Cruising Levels).

12.1.1. At and below FL290, apply 1,000 feet vertical separation.

12.1.2. Between FL290 and FL410, apply 1,000 feet for reduced vertical separation minima compliant aircraft, otherwise 2,000 feet vertical separation.

12.1.3. As GAT or OAT above FL245 (effective 15 March 2007, FL245 changes to FL195), semi-circular levels (i.e.: FL250, FL260...). VFR levels are not used.

12.1.4. GAT and OAT IFR traffic below FL245 (effective 15 March 2007, FL245 changes to FL195), quadrantal levels (i.e.: FL155, FL160…). However, if in class A airspace, whole number flight levels (i.e.: FL170, FL180 ...) will be allocated.

12.1.5. As GAT below FL245 (effective 15 March 2007, FL245 changes to FL195), in controlled airspace only, semi-circular levels (i.e.: FL220, FL210...). VFR levels are not used.

12.2. Horizontal.

12.2.1. Five nautical miles (NM).

12.2.2. Three NM between identified traffic within 40 NM of the radar antenna.

12.2.3. When under radar control service, military air traffic controllers are required to maintain 3,000 feet vertical separation or five NM horizontally from all unknown traffic unless coordination is agreed with the other controlling agency. ***Note:*** The five methods available for crossing airways are listed in FLIP AP/2 Chapter 3.

13. GAT/OAT in the UK (*Reference:* FLIP AP/2, Chapter 3, UK Procedures).

13.1. GAT is provided by civil controllers, responsible for traffic flying airways, upper air routes, within terminal maneuvering areas, terminal control areas, and control zones. OAT is controlled by military controllers; service is available to pilots flying anywhere within UK airspace including for traffic flying TACAN routes. Depending upon the nature of the

operation or training mission, sorties can be entirely GAT, OAT, or combination of both. ***Note:*** For OAT flights that revert to GAT it is essential that the correct reversion points are used and that subsequent routings comply with the UK Standard Route Document.

13.2. The majority of U.S. military flying in the UK utilizes OAT, and over the rest of Europe, a combination of OAT/GAT is used. The UK OAT TACAN routes above FL245 provide optimum routing between airfields and working areas. Use of these routes also serves to simplify the coordination required between civil and military ATC agencies. Point-to-point navigation is available when operational requirements negate the use of the OAT TACAN routes.

13.3. Military aircraft may fly GAT provided that they file a flight plan, have the appropriate navigational and communication equipment, and comply with the civil controlling agency. GAT flights departing UK airspace must file a flight plan at least 4 hours prior to estimated time of departure. ***Note:*** In the UK, civil agencies primarily use very high frequency (VHF) and have a very limited ultra-high frequency (UHF) capability.

13.4. Controlled airspace joining procedures.

13.4.1. Pilots must obtain a clearance prior to joining controlled airspace.

13.4.2. If joining within 10 minutes of departure, ATC at the departure airfield will obtain the clearance.

13.4.3. If joining more than 10 minutes after departure, obtain a clearance from ATC at least 10 minutes prior to joining.

14. Radar Services.

14.1. The greatest difference between flying in the UK and in the U.S. is in the application of radar services; the type of service given depends upon the type of airspace being used. It is incumbent upon aircrews to fully understand the implications of the service that they are receiving.

14.2. On initial contact with an ATC unit, a pilot should request the type of service he requires. If the controller cannot provide the type of service requested, the controller will explain the reason for refusal and offer an alternative. Both the pilot and the controller may request a change to the type of service being received at any time. When entering a different type of airspace, the controller will state the type of service the pilot is receiving. It is important to be aware of what service is provided so the pilot knows what procedures to follow.

14.3. Pilots can obtain radar service from an ATC Radar Unit (ATCRU). The locations and frequencies of the ATCRUs are found in the FLIP or chart (***Reference:*** RAF Enroute Supplement for British Isles and North Atlantic). The types of radar service are described in FLIP AP/2 Chapter 3.

15. Radar assistance to aircraft descending through cloud to low-level.

15.1. ATC radar units can generally assist an aircraft descending to low-level until the aircraft reaches either the pilot's safety altitude, or a level set by individual units below which a radar advisory service cannot be provided. If further descent below these levels is

requested, a radar information service may be provided but radar vectors will not be issued. Under all circumstances, the pilot remains responsible for terrain clearance.

15.2. Terminal ATC radar facilities can also assist in low-level descents to the limits prescribed in Joint Service Publication JSP 552, *Military Air Traffic Service Regulations*, paragraph 240.125.1.

16. Low Level Climb-outs (*Reference:* RAF Enroute Supplement, British Isles and North Atlantic).

16.1. Standard Climb-out: Maintain "7001" squawk and contact the appropriate ATC facility if radar service is required. The location of the appropriate facility is shown in the Enroute Supplement, British Isles and North Atlantic. If radar service is not required squawk "7000" with Mode C as close to passing 2,000 feet as safety permits.

16.2. Emergency Climb-out:

16.2.1. Remaining clear of controlled airspace: if priority service is required, call the appropriate ATC radar unit immediately on the unit's initial contact frequency.

16.2.2. Necessitating immediate penetration of controlled airspace: squawk emergency and when safely established in the climb to safe altitude call ATC on 243.0 MHz (Guard) as soon as practicable. This method should also be used if the pilot is unsure of his exact location.

17. Centralized Approach Control (CAC).

17.1. CAC is a climb-out/recovery service provided to selected airfields for the purpose of de-conflicting the flight from other airfields in the area.

17.2. CAC service is provided by London Radar for the following airfields:

17.2.1. Coningsby.

17.2.2. Cottesmore.

17.2.3. Lakenheath.

17.2.4. Lynham.

17.2.5. Marham.

17.2.6. Mildenhall.

17.2.7. Northolt.

17.2.8. Odiham.

17.2.9. St Mawgan.

17.2.10. Valley.

17.2.11. Waddington.

17.2.12. Wittering.

18. Emergencies (*Reference:* RAF Flight Information Handbook, Part 1 and DoD Flight Information Handbook).

18.1. The term "In-flight Emergency" is not used in UK. The prowords "PAN" and "MAYDAY" are the terms used to declare an emergency condition.

18.2. The RAF and DoD FLIP clearly identify the procedures and required information. The key to a swift and successful conclusion to an emergency is to ensure that the controller knows the pilot's problem and intentions as soon as possible.

18.3. Declaring a "PAN" or "MAYDAY":

18.3.1. If under a radar service, declare a "PAN" or "MAYDAY" with the ATC facility.

18.3.2. If not under a radar service, declare a "PAN" or "MAYDAY" on 243.0 or 121.5 MHz and squawk emergency "7700".

18.4. Points to remember:

18.4.1. A"PAN" or "MAYDAY" situation may be downgraded or canceled at any time. Similarly, a "PAN" situation can be upgraded as the situation dictates.

18.4.2. The emergency service is free and there to be used.

18.5. Practice PAN:

18.5.1. The "Practice PAN" is intended to help pilots and controllers practice emergency procedures.

18.5.2. Make a standard emergency transmission on guard, prefixing the transmission with "Practice PAN".

18.5.3. The Distress and Diversion cell will handle the request as a real emergency condition until canceled by the pilot.

19. Distress and Diversion (D&D) Cell.

19.1. The D&D cells at the London and Scottish ATC Centers (LATCC and ScATCC) are unique to the UK; they are manned by RAF ATC staff to provide immediate emergency assistance to aircraft in difficulties within their respective UK FIRs/UIRs. Each maintains a 24 hour listening watch on the emergency aeronautical frequencies. Internationally agreed prowords "PAN", for urgency, and "MAYDAY", for distress, should always be used by pilots to prefix radio calls indicating an airborne emergency.

19.2. The LATCC Mil D&D cell covers the UK FIR/UIR south of N55.00, with ScATCC Mil taking care of the FIR/UIR to the north of the dividing latitude. Any aircraft operating in the UK FIR/UIR can call the D&D cells for assistance. Calls for assistance should be made on either of the two emergency frequencies, 243.0 or 121.5 MHz. Any transmission on 243.0 MHz immediately triggers automatic direction finding equipment, which displays the position of the aircraft and enables the D&D controller to provide immediate assistance. Forward relay radio stations guarantee a fixing service above 5,000 feet throughout LATCC's area of responsibility; however, the minimum altitude for position fixing in the ScATCC's area is 8,500 feet. In addition, the D&D controllers also have access to radar heads, both primary and secondary, which cover the entire UK and are equipped with automatic alerting systems in the event of an aircraft squawking emergency.

19.3. The D&D cell maintains current weather and status reports for all military airfields within the UK. Instant telephone communication is available by priority line to all military and most major civil airfields selected for diversions.

19.4. The D&D controller has direct access to the UK Aeronautical Rescue Coordination Center (ARCC) located at RAF Kinloss near Inverness, Scotland. Once alerted to an incident, the ARCC coordinates all military rescue services, aircraft and naval vessels. In addition, Her Majesty's Coastguard and the Royal National Lifeboat Institution resources can be alerted as required as well as fire, police, ambulance, and mountain rescue teams. The D&D cell can, if required, scramble rescue helicopters by direct radio call on the emergency frequency.

19.5. The D&D system is exercised frequently and all military pilots may carry out practice emergency procedures by prefixing their radio calls with the words "Practice PAN". Pilots should contact the D&D cell on 243.0 MHz or if with an ATC unit, declare the practice on the frequency in use. If calling on 243.0 or 121.5 MHz, listen before transmitting to ensure that an actual emergency is not in progress.

20. Investigation of UK Complaints and Inquiries.

20.1. The UK Defense Flying Complaints Investigation Team (DFCIT), staffed by RAF Police have the responsibility to investigate flying complaints within the UK on behalf of the MoD UK.

20.2. Upon MoD UK notification of a possible flying incident involving DoD aircraft, the DFCIT representative will contact USAFE-UK/A3 and relay the available details of the alleged incident. USAFE-UK/A3 will inquire and determine any potential involvement of a DoD aircraft/crew and notify DFCIT within 1 working day of the results of the initial inquiry.

20.3. The DFCIT will determine the type of interview to be conducted, telephonic or face-to-face. If the interview is telephonic, USAFE-UK/A3 will provide the DFCIT Investigator with the name and contact telephone number of the personnel to be interviewed. If a face-to-face interview is required, USAFE-UK/A3 will setup up the interview. If the personnel are unavailable for the interview due to temporary duty (TDY), leave, etc, USAFE-UK/A3 will provide the DFCIT Investigator an estimated date when the interview may be conducted.

20.3.1. USAFE-UK/A3 will inform the appropriate USAF Group Commander on all information provided to/from DFCIT and invite the Group Commander to the interview.

20.3.2. If a breach of flying regulations is indicated, the appropriate USAF Group Commander will be informed and is solely responsible for any actions taken concerning the unit assigned personnel.

20.4. The DFCIT may take signed statements at interviews and the statements may be kept by DFCIT for their records. Final reports involving U.S. military aircraft may include aircraft call signs and/or mission numbers; however, they will not include interviewed personnel names or their written statements. In the event DFCIT believe that U.S. military aircrew are in breach of flying regulations or may have committed some other offense, they will ensure the relevant U.S. military commander and/or U.S. military investigators are present at the interview. If deemed appropriate, an Article 31, Uniform Code of Military Justice (UCMJ) rights advisement will be provided to those suspected of committing an offense by the U.S.

military commander or investigator prior to conducting the interview and obtaining a statement. The U.S. military commander or investigator should consult with his staff judge advocate to obtain legal advice prior to attending the interview.

21. Breaches of Flying Regulations and ATC Incident Investigations.

21.1. Investigations involving U.S. Military aircraft are coordinated by USAFE-UK/A3 on behalf of the MoD UK.

21.2. Any inquiries regarding breaches of flying regulations and ATC incident investigations within UK airspace should be addressed to USAFE-UK/A3

22. Airprox Reporting and Investigation Procedures.

22.1. If an aircraft is involved in an Airprox/near miss, the pilot should:

22.1.1. Report it to the controller providing the service or to any ATC agency.

22.1.2. Contact the Wing Flying Safety Officer (FSO) upon landing.

22.2. The base will be contacted by the Radar Analysis Cell at LATCC, usually through USAFE-UK/A3, for applicable information.

22.3. A step-by-step guide to the pilot's subsequent action is listed in the Military Aviation Authority Publication 2000 Series, Flying Regulations, 1 July 2011.

23. Royal flights *(Reference:* FLIP AP/2, Chap. 3, UK Procedures Royal flights and the RAF Planning, Part 4 and Flight Information Handbook) (See Safeguard System).

23.1. Royal flights in fixed wing aircraft take place in Class A and Temporary Class A airspace, details of which are available in the Aeronautical Information System (AIS).

23.2. For Royal flights in helicopters, low-level corridors are established. Royal Low Level Corridors (RLLC) are five NM either side of track and extend from the surface up to 1,000 feet above the planned cruising altitudes. Only military aircraft under the control of an ATC unit may penetrate RLLCs.

23.3. Safeguard units are ATC units, indicated in FLIP, who monitor the progress of Royal flights in helicopters and can provide pilots with the progress of the Royal flight.

24. Forms Adopted: Refer to the listed prescribing directive (PD) for guidance on the completion of the form. AF Form 847, *Recommendation for Change of Publication*, PD: AFI 11-215.

DAVID J. SCOTT, Major General, USAF
Director of Operations, Strategic Deterrence and Nuclear Integration

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DoD FLIP AP/2, *Flight Information Publication, Area Planning*, 26 October 2006

DoD Foreign Clearance Guide (FCG), available at: **https://www.fcg.pentagon.mil/fcg.cfm**. For comments or questions contact **fcg@pentagon.af.mil** or on SIPRNET at: **af.fcg@pentagon.af.mil**

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RAF Flight Information Handbook, 19 May 2006

Abbreviations and Acronyms

ABG—Air Base Group

ABS—Air Base Squadron

CAN—Airspace Coordination Notice

AFI—Air Force Instruction

AGE—Aerospace Ground Equipment

AGL—Above Ground Level

AIP—Aeronautical Information Publication

AIRPROX—Air Proximity Report

AMSL—Above Mean Sea Level

AP—Area Planning

APU—Auxiliary Power Unit

ARCC—Aeronautical Rescue Coordination Center

ATA—Aerial Tactics Area

ATC—Air Traffic Control

ATCRU—Air Traffic Control Radar Unit

AUS—Airspace Utilization Section

CAC—Centralized Approach Control

CTA—Control Area

D&D—Distress and Diversion

DAP—Directorate of Airspace Policy

DAS—Directorate Air Staff

DATT—Defense Attaché

DFCIT—Defense Flying Complaints Investigation Team

DoD—Department of Defense

DSN—Defense Switched Network

FIR—Flight Information Region

FL—Flight Level

FLIP—Flight Information Publication

FW—Fighter Wing

GAT—General Air Traffic

HHQ—Higher Headquarters

HQ—Headquarters

ICAO—International Civil Aviation Organization

IFPS—Integrated Flight Planning System

IFR—Instrument Flight Rules

LA—Lower Airspace

LATCC—London Air Traffic Control Center

MATZ—Military Aerodrome Traffic Zones

MHZ—Mega Hertz

MoD—Ministry of Defense

MTA—Military Training Areas

NATO—North Atlantic Treaty Organization

NM—Nautical Mile

NOTAM—Notice to Airmen

OAT—Operation Air Traffic

OG—Operations Group

OPR—Office of Primary Responsibility

PAR—Precision Approach Radar

POC—Point of Contact

RAF—Royal Air Force

QFE—Altimeter setting which gives height above ground level

QNH—Altimeter setting which gives altitude above mean sea level

RLLC—Royal Low Level Corridors

ScATCC—Scottish Air Traffic Control Center

SOG—Special Operations Group

TACAN—Tactical Area Navigation

UAA—Unusual Aerial Activity

UIR—Upper Information Region

UK—United Kingdom

UKBH—United Kingdom Bank Holiday

UKLFS—United Kingdom Low Flying System

UKNH—United Kingdom National Holiday

U.S.—United States

USA—United States Air Force

USAFE—United States Air Force, Europe

VF—Visiting Forces

VFR—Visual Flight Rules

Terms

Airspace Coordination Notice (ACN)—Published for unusual air activity. ACNs are published by the Directorate of Airspace Policy (DAP), Airspace Utilization Section (AUS), through their NOTAM System and via mail to operational USAFE units. The ACN will describe airspace limits and when the airspace will be specifically used for special aerial activity. The intent is to inform other aviators of the requirement to avoid routine flight in the specified airspace.

Airfield Approach—TACAN, Controlled descent through clouds using direction finding equipment (QGH) or surveillance radar approach.

Airfield Operations—All operations on an airfield for the flight of an aircraft, to include from engine start to shutdown, maintenance ground engine runs, open air use of AGE and/or APUs, taxi to/from runway, preflight run up, and take off and landing.

Airprox—Air Proximity or Near miss**.**

Avoiding Action—Indicates that the pilot will receive mandatory or advisory heading and/or altitude changes (depending upon the type of service being provided) to avoid traffic.

Cable—Arresting gear that can be engaged with a tail hook only. Sometimes called hookwire. This cable can be in three positions:

> Up—Supported cable stretched across the runway and raised by rubber grommets.

> Down—Unsupported cable stretched across the runway but without grommets.

> De-Rigged—Removed from the runway.

Circuit—Traffic pattern.

Combine—A call requiring the attention of all pilots from a particular airfield monitoring the frequency, i.e.: "Lakenheath combine, new altimeter 29.95."

Dead Side—Side of runway opposite VFR traffic pattern**.**

Director—Responsible for the control and sequencing of aircraft in the radar circuit (approach control pattern).

Diverse Approach—Enroute (with ATC) to any type final approach for landing.

Free Call—Instruction to contact the next agency where a controller-to-controller handover has not taken place.

Higher Headquarters—For the purpose of this instruction, is a major command or higher level of command.

Higher Headquarters Directed Mission—Any sortie directed by higher headquarters, in accordance with the definition of higher headquarters in this instruction.

Instrument Circuit—Radar pattern.

Line Up—Taxi into position and hold.

Local Commanders—Host base wing commander or their designated representative.

Military Emergency Diversion Aerodrome—Provision of diversion and emergency facilities. Presently, the bases are Leuchars and Lyneham. See RAF FLIP Enroute supplement British Isles and North Atlantic.

Minimum Descent Altitude—During a surveillance radar approach RAF controllers provide pilots with advisory height information during descent on final for either a 3 or 2-degree glide path. When clearance is given to descend for the requested glide path, pilots are expected to maintain the appropriate rate of descent; the clearance to begin descent is NOT a clearance to descend immediately to the minimum descent altitude (this can be done on a USAF surveillance approach). The reason for maintaining a rate of descent appropriate to the glide path and not descending immediately to the minimum descent altitude is an RAF controller can clear other aircraft to cross the final approach course, provided 500 feet vertical separation is maintained from aircraft on final.

Minimum Fuel—The RAF does not use the term “Minimum Fuel” as a fuel state. At RAF airfields, pilots must state fuel remaining in minutes and request priority recovery or declare an urgent/precautionary situation (“PAN-PAN”) as necessary.

One (or appropriate number) In—Aircraft in VFR pattern**.**

One On—Aircraft on runway.

One On Well Up—Aircraft on runway at far end.

Overshoot—Low approach.

Practice Diversion—Enroute descent to any particular airport requested for practice but not to land.

Precision Glidepath Angle—The RAF, PAR glidepaths are adjustable and will permit either 3 degrees (standard) or any variation between 2 and 5 degrees.

Pressure Setting—Altimeter setting.

Regional Pressure Settings (RPS)—The lowest forecast QNH within a designated altimeter setting region. It is valid for one hour and forecasted for one hour ahead. It is used as an altitude pressure datum for aircraft at or below the transition altitude away from an airfield.

Reheat—Afterburner.

Roller—Touch and Go.

Run And Break—Entering initial for a 360 overhead approach.

Runway Approach—PAR or ILS approach.

Runway Visual Range (RVR)—The maximum distance (in meters) in the direction of take-off or landing at which the runway or the specified lights delineating the runway can be seen from a position on the center line at a height corresponding to the average eye level of the pilot at touchdown.

Sortie—One aircraft take off and landing is a sortie. For aircraft formation flights, each aircraft in the flight flies a sortie.

Stopway—Overrun.

Stud—Radio channel or button.

Talkdown—Precision Approach Radar (PAR) approach.

Three Greens—Landing gear is down and locked.

Transient Aircraft—Aircraft based elsewhere in the UK or overseas staging through a USAF-occupied RAF base enroute to a final destination. Aircraft on deployment at USAF - occupied RAF bases are not considered transient aircraft.

Undercarriage—Landing gear.

Unusual Aerial Activity—Flying activity of such magnitude and nature that if conducted in General Use Airspace without prior notice or coordination, would negatively impact the routine flying operations of other airspace users. Such unusual aerial activity requires the issuance of an ACN.

U/S—Unserviceable, for example: “TACAN is U/S."

Visibility—Measured in meters.

Visual Circuit—Closed traffic pattern.