BY ORDER OF THE COMMANDER
INCIRLIK AIR BASE (USAFE)

INCIRLIK AIR BASE INSTRUCTION 17-220

10 MARCH 2026

Cyberspace

SPECTRUM OPERATIONS

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This publication implements DAFI17-220. This applies to all activities operating on Incirlik Air Base (AB) and associated to the 39th Communications Squadron (CS) as specified in the host-tenant support agreements, and public/private organizations that wish to operate Federal Communication Commission (FCC) radio frequency licenses/regulated stations within the Incirlik AB complex. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) listed above using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate chain of command. Requests for waivers must be submitted to the OPR listed above for consideration and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Instruction (AFI) 33-322, *Management of Records and Information Governance Program*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Department of the Air Force (DAF).

1. Overview.

1.1. The electromagnetic spectrum is the range of frequencies of electromagnetic radiation extending from zero to infinity, measured in hertz (cycles per second). The radio frequency spectrum is the group of frequency sub-bands within the allocated electromagnetic spectrum associated with radio wave propagation between 9 kilohertz and 275 gigahertz. The requirements for completing this publication can be found in DAFI17-220 Spectrum management 8 June 2021, 2.1.8.4. This publication provides roles for the Incirlik Installation Commander, Incirlik Communications Commander, Incirlik Installations Spectrum Manager and each user organization, to include but not limited to acquisition, program, operational, test, and tenant units outlined in USAFEI10-505, *Geographically separated Unit and Tenant Support.* IABI17-220 is a compilation of DAFI17-220 and DAFI17-220USAFE_SUP. The Spangdahlem additions can be found in the following: 2.1.1.2.2.; 2.1.1.2.4.; 2.1.1.2.4.1.; 2.1.1.2.4.2.; 2.1.1.3.5.; 2.1.1.3.5.1.; 2.1.1.3.14.1.; 2.1.1.3.14.2.; 2.1.2.3.

1.2. International law, domestic law, and implementing regulations require effective management and use of the electromagnetic spectrum. Within the United States, the electromagnetic spectrum is allocated between federal and non-federal users with portions of the spectrum being shared as noted in the National Telecommunications and Information Administration (NTIA) Manual, National Table of Allocations, and the International Telecommunication Union, Radio Regulations (ITU RR). Federal users must utilize frequency bands allocated for government or shared use in accordance with NTIA Manual. (T-0).

1.3. The Installation Spectrum Manager's spectrum monitoring equipment has the capability to intercept and direction-find communications over unencrypted radio channels. IAW DoDI 8560.01, COMSEC Monitoring, all emitters, telecommunications, and information systems are subject to periodic spectrum monitoring at any time by the 39 CS Installation Spectrum Manager (ISM) office, or as directed by the 39th Air Base Wing (ABW). Communications and radio transmissions on Incirlik AB, are not private, are subject to routine monitoring, interception, and search, and may be disclosed or used for any U.S. government-authorized purpose. This includes security measures (e.g., authentication and access controls) to protect U.S. government interests—not for personal benefit or privacy.

1.4. Incirlik AB Commanders and all tenant organizations must efficiently manage assigned radio frequencies to meet operational mission requirements. Spectrum Operations planning and coordination with proper command authority through the 39 CS ISM is essential for all radio frequency and electromagnetic compatibility matters to provide an environment free from communications interference and protect users in and around the installation against any unintentional communications equipment jamming. The 39 CS ISM contact phone number is: DSN 314-676-1874, Commercial +90 (0)322-316-1874, or e-mail **39CS.ISM.SpectrumManager@us.af.mil**.

2. Roles And Responsibilities.

2.1. **Incirlik Air Base Spectrum Operations.** The lead service at any Joint DoD installation designates a spectrum manager to provide spectrum support for the common functions. At Incirlik AB, service requirements are processed through Host Nation channels after approval from the 39 CS ISM. The 39 CS ISM is responsible to the Host Installation Commander (39 ABW Commander (CC)) through their chain-of-command, for managing all spectrum use on the installation and areas under control of the installation commander. The 39 CS ISM will be the office responsible for fulfilling all Incirlik AB's tenant organizations' spectrum requirements as appointed by the 39 ABW/CC. The 39 CS ISM will:

2.1.1. Ensure the installation spectrum manager has Secret Internet Protocol Router Network (SIPRnet) access with SPECTRUM XXI and data exchange capabilities as well as co-located Non-Classified Internet Protocol Network (NIPR) access.

2.1.2. Process frequency proposals and applications for equipment spectrum certification using the End-to-End Supportability System and SPECTRUM XXI respectively, and ensure submissions are processed through appropriate command channels.

2.1.3. Update Incirlik AB's frequency records. The 39 CS ISM is responsible for actions such as adding, modifying, deleting, or renewing frequency assignments in the Frequency Resource Record System (FRRS) accessed through SPECTRUM XXI.

2.1.4. Educate spectrum users and review unit organization proposals of purchasing spectrum-dependent devices prior to any contractual obligation of the purchase in order to evaluate spectrum supportability.

2.1.5. Ensure using organizations understand the technical parameters and any imposed operational restrictions of their assigned frequencies.

2.1.6. Assist deployable units with identifying spectrum requirements for exercises and contingencies.

2.1.7. Review and validate using organizations frequency assignment requirements, validate existing frequency assignment parameters, and submit modifications, renewal, or deletion actions through command channels in accordance with the NTIA Manual, Annex F. All temporarily assigned frequencies for Incirlik AB Unit Organizations will be reviewed 90 days prior to their expiration date, updated to ensure accuracy of the assignment, and submitted for renewal no later than 30 days prior to the expiration date. Temporary assignments on loan from the 39 CS ISM will be reviewed annually, or one week prior to expiration, whichever is more appropriate for the condition of the loan.

2.1.8. Maintain a current point of contact list for Incirlik AB Unit Organizations. Contact list includes: name, unit, date of positive contact, e-mail address, date estimated return from overseas (DEROS), and phone number. These contacts are also known as the Unit Frequency Monitor (UFM).

2.1.9. Act on behalf of the Host Installation Commander to immediately resolve all electromagnetic radio frequency interference issues and prohibit any radio frequency emitters from operating (cease and desist) when anticipating or noting electromagnetic interference to approved mission essential electromagnetic equipment. The 39 CS ISM is delegated authority to represent the 39 ABW/CC in areas of Spectrum Operations. See **paragraph 4** of this document for more details on the Spectrum Interference Resolution Program.

2.1.10. Submit a follow-up action report of all spectrum interference findings to USAFE Frequency Management Office (FMO) for interference resolution, to the affected user, and to the appropriate chain of command. See **paragraph 4** of this document for more details on the Spectrum Interference Resolution Program.

2.1.11. Provide Incirlik AB organizations to Incirlik AB Spectrum Operations resources and training references.

2.1.12. Issue Radio Frequency Authorizations and/or Temporary Frequency Authorizations (RFAs/TFAs) authorizing the use of assigned RF spectrum within the Incirlik AB area of responsibility. Copies of the approved RFAs/TFAs will be provided to the Project Officer and unit POC. Other copies will be provided as required. The RFAs/TFAs issued by the 39 CS ISM will contain an expiration date on which the authorization expires.

2.1.13. Maintain a current log of all registered FCC non-licensed devices being operated on Incirlik AB. This will be accomplished by the 39 CS ISM through the SPECTRUM XXI registration process with a Standard Frequency Action Format (SFAF) proposal line item 144 with U as the indication on the proposal IAW the Joint Staff J6 Military Command, Control, Communications, and Computers Executive Board (MC4EB) Pub 7, FRRS.

2.1.14. Coordinate with the safety office and weapons safety officer to support the hazard of electromagnetic radiation to ordnance program and provide frequency assignment records for antenna locations IAW DAFI 91-208, *Hazards of Electromagnetic Radiation to Ordnance (HERO) Certification and Management*.

2.1.15. Perform emitter surveys based on resource availability, as required, with assistance from the parent command to ensure spectrum-dependent systems are operated in accordance with frequency licenses.

2.1.16. Provide customer education, guidance, resources, and training for Incirlik AB Spectrum Operations upon request to Incirlik AB Unit Organizations. This training will be held every other month for newly appointed Unit Frequency Monitors. This could include, but not limited to, spectrum allocation processes, electromagnetic spectrum (EMS) briefings, local and external spectrum coordination processes, spectrum interference resolutions, Electronic Warfare (EW), Electronic Attack (EA), Counter-small Unmanned Aerial Systems (C-sUAS), emitter surveys, etc. The 39 CS ISM will make training availability upon request to provide customer education or any relative spectrum information as deemed necessary by the 39 ABW/CC, the 39 CS/CC, or as requested by any other Incirlik AB Unit Organization.

2.1.17. Maintain a continuity binder containing documents necessary to run a successful ISM program. The binder may be digital or physical, this will be determined by the lead ISM.

2.1.18. ISM continuity binder must contain at a minimum the following up to date documents: Emitter survey records, Emitter Listing, ISM appointment letter, Unit Frequency Monitor (UFM) contact list/training status. UFM training slides, Memoranda of Understanding (MOU)/Memoranda of Agreement (MOA).

2.2. **Unit Organizations.** Unit Organizations will comply with the user organization responsibilities outlined in DAFI 17-220. Unit Organizations activities include, but are not limited to acquisition, program, operational, test, and tenant units of Incirlik AB. Unit Organizations will:

2.2.1. Provide a point-of-contact, also known as a Unit Frequency Monitor (UFM), to the 39 CS ISM office for program continuity via e-mail or unit letterhead, i.e. Memorandum for Record, IAW **paragraph 2.1.7** of this document. Units are individually responsible for maintaining an updated contact list for the UFM in the event of personnel changes, contact info updates, or unavailability of the Unit POC.

2.2.2. Assist the 39 CS ISM in reviewing and verifying equipment parameters during mandatory and periodic reviews, IAW NTIA Manual, Annex F.

2.2.3. Obtain a frequency assignment through the 39 CS ISM prior to operation of any spectrum-dependent devices that radiate radio frequency energy. To meet this requirement, the requesting unit will submit a Frequency Request Form (Contact ISM for a copy).

2.2.4. In the event a mandated, standardized frequency request application is published by a higher command (USAFE FMO, EUCOM, HAF, NTIA, etc.) that would replace the Frequency Request form, **paragraph 2.2.3** is null and void, and each Incirlik AB Unit Organization and the 39 CS ISM will use the published application instead.

2.2.5. Verify that emitter information for equipment does or does not exist in the FCC ID database. When a Purchase Approval Request is submitted IAW **para 2.2.5**, include as much information as possible about any spectrum-dependent device (e.g., manufacturer, make, model number, frequency range, power level, etc.). Identify the owning/using organization, as well as the name and phone number of the submitting requestor's unit point of contact.

2.2.6. Contact the 39 CS ISM, at least annually, to discuss spectrum supportability for existing RFAs or any other projected emitter planning requirements (e.g., OPLANs, exercisable UTCs, HUREVAC plans, etc.). This information will be reviewed annually.

2.2.7. Contact the 39 CS ISM prior to physically changing any antenna locations or parameters. The 39th Civil Engineering Squadron (CES) and/or 39 CS will require Unit Organizations to contact 39 CS ISM regarding removing, adding, or modifying any emitter, antenna, location of the antenna, or antenna structure for any spectrum-dependent system on Incirlik AB.

2.2.8. Review any agreements between 39 CES, the 39th Contracting Squadron (CONS), and the 39 CS, at least annually, to ensure the spectrum acquisition and other processes in place are adequate to satisfy the following requirements:

2.2.9. Verify DAFI 17-220, Spectrum Operations, paragraph 2.1.8.4.1: Assessment of local purchase or government purchase card orders for spectrum-dependent systems to determine spectrum supportability prior to the obligation of funds; specifically, if the system is deployed outside the continental United States in accordance with ACP 190 US SUPP-1(D), **Chapter 3**. (T-0).

2.2.9.1. Verify DAFI 17-220, Spectrum Operations, paragraph 2.1.8.4.2: Review of memoranda of understandings or memoranda of agreements that pertain to the use of spectrum-dependent systems. (T-3).

2.2.10. Users will not commit funds or award contracts for the purchase of spectrum dependent equipment prior to obtaining frequency and equipment approval from the 39 CS ISM.

2.2.11. Contact the 39 CS ISM prior to submitting the purchase request for electromagnetic spectrum-dependent equipment and/or devices. Contractual obligations to procure/develop or use spectrum-dependent equipment that utilizes electromagnetic energy shall not be assumed until a frequency certification has been obtained, and the availability of appropriate frequency assignment support is assured.

2.3. **Unit Organizations with a Valid RFA.**

2.3.1. If the using unit has a valid frequency authorization for the device, and the organizations will use the communications equipment IAW the RFA parameters, no further action is required.

2.4. **Unit Organizations that Require an RFA.**

2.4.1. If the Unit Organization does not have an active frequency authorization for an emitter or radio equipment, or if the equipment will be used not in accordance with the active RFA, then the organization must submit a new frequency request proposal to the 39 CS ISM and are advised not to proceed with any purchase or contractual obligation. The Unit Organization will use a Frequency Request Form, when submitting the request to the 39 CS ISM. The form can be obtained by contacting the 39 CS ISM.

2.4.1.1. All Spectrum requirement (Temporary and Permanent) within the EUCOM and AFRICOM AOR requires 90 days of lead-time. This lead-time starts when the USAFE-AFAFRICA Spectrum Operations Management Office receives the request. Additional time must be allotted to ensure the request is processed through the ISM. Requests with less than 75 days lead-time will require a signed late letter as described in the electronic countermeasures 6901.01, United States European Command (USEUCOM) Spectrum Management Manual.

2.4.2. If the Unit Organization's POC information changes, or any proposed modifications to existing emitters become a new planning requirement, that unit is required to contact the 39 CS ISM for continuity and future spectrum project planning efforts.

2.5. **Victim Organization Experiencing Spectrum Interference.** Due to the congestion of the radio frequency spectrum, users may experience interference of assigned frequencies. Users will attempt to resolve spectrum interference at the lowest level, with or without the 39 CS ISM's assistance. Unit Organizations will:

2.5.1. Prohibit any RF emitters from operating (cease and desist) when anticipating or noting electromagnetic interference to approved mission essential electromagnetic equipment.

2.5.2. Log interferences when it is disruptive and recurring, and submit an EMI report. Interference must be reported as prescribed in DAFI 17-221, *Spectrum Interference Resolution Program*. Start documenting any known or unknown sources for spectrum interferences within two hours of experiencing the issue on the DAFI 17-221, Attachment 2 form or EMI report provided by the 39 CS ISM. See **paragraph 4** of this document for more details of Incirlik AB's Spectrum Interference Resolution Program.

2.5.3. Assist in resolving interference by performing a visual verification of antenna, radios equipment, and all other emitters. Assistance from the Unit Organization may include, but is not limited to, performing emitter surveys and providing site access while escorting the 39 CS ISM office through secure areas. The 39 CS ISM may be required to identify and resolve spectrum interference, with the assistance from the Unit Organization experiencing spectrum interference. Please see **paragraph 4** of this document for more details.

2.5.4. Become familiar with how to properly document and report spectrum interference on Incirlik AB. Incirlik AB Unit Organizations can find standard operating procedures in **paragraph 4** of this document.

3. Non-Licensed Devices.

3.1. **Federal and FCC non-licensed devices.** All Incirlik AB Unit Organizations should review section 7.8 of the NTIA Manual, Annex K regarding the use of Federal and FCC non-licensed devices. The US Federal Communications Commission (FCC) approved non-licensed devices are not approved for usage within the EUCOM and AFRICOM AOR. The majority of these devices (i.e. baby monitors, wireless phones, or walkie talkie radios) will cause harmful interference to HN emergency responders and should not be used in this AOR. Examples of non-licensed devices are wireless routers, wireless or lapel microphones, Family Radio Service (FRS) radios (**paragraph 3.2** of this document), cell phone boosters (**paragraph 3.3** of this document), and cordless telephones. The following caveats and warnings may apply:

3.1.1. DoD activities should not use non-licensed equipment for critical tactical or strategic command and control applications essential for mission success, protection of human life, or protection of high-value assets, as they offer no protection of spectrum use in support of operational requirements. Non-licensed devices operate on a non-interference basis, which includes accepting any interference from any federal or non-federal authorized radio station, other non-licensed device, or industrial, scientific, and medical equipment. Essentially, non-licensed devices must not cause interference to licensed stations.

3.1.2. Upon notification by cognizant spectrum management personnel that the device is causing interference, the operator of the non-licensed device shall cease all radiation from the device until it can be proven that further use will no longer cause interference.

3.1.3. Users will not modify, modernize, enhance, or change the equipment's power, antenna, waveform, or information transfer characteristics in any manner that would cause it to violate the NTIA criteria for non-licensed devices or the device's FCC type certification. Any equipment modified from its manufactured certified state will be required to go through recertification with the NTIA or MC4EB.

3.2. **Family Radio Service (FRS) Radios.** FRS is a FCC unlicensed, low-powered service that provides coverage up to 2 miles using frequencies within the FRS frequency pool. FRS radios may be used on any of the 14 FRS channels (typically channels 8-14, check owner's manual for FRS channels), which are shared between all FRS users. This reduces confusion between multiple conversations on the same channel. Privacy codes allow the FRS users to limit the transmissions received to those users on the same channel and privacy code (check owner's manual). Note that any FRS user can listen to any ongoing conversation and can legally break into that conversation. Federal government entities are authorized to purchase and operate radios certified by the FCC in the FRS pursuant to the Code of Federal Regulation (CFR), Title 47, Telecommunication, **Part 95** – PERSONAL RADIO SERVICES, Subpart B - Family Radio Service. Federal users will be accorded the same privileges as non-federal users. FRS users must share each channel, and no user is assured protection from interference caused by another authorized user. FRS users may not purchase and operate FRS radios for planned communications operations that safeguard human life or property. FRS users must comply with the following conditions:

3.2.1. The provisions of CFR, Title 47, Part 95 and Section 7.5.8. of the NTIA Manual.

3.2.2. Federal users and contractors are responsible for all communications using FRS radio equipment. Use must comply with federal, state, and local laws.

3.2.3. The installation commander may prohibit FRS when interference to mission essential spectrum dependent systems/spectrum dependent equipment is anticipated, or to resolve a suspected interference problem.

3.2.4. Federal users and contractors using FRS radios must relinquish channel use for emergency communication messages concerning the immediate safety of life or the immediate protection of property.

3.2.5. Use only FCC certified FRS. Any modification to the equipment cancels the FCC certification and voids authority. Illegal FRS equipment is subject to confiscation.

3.2.6. Units may use FRS devices to communicate with non-government users during AF supported or sponsored community activities, i.e., scouts, Special Olympics, youth activities/sporting events, civil disasters, funeral details for deceased military veterans, etc. In addition, FRS radios may be used for administrative purposes when communicating in warehouses, commissaries, base exchanges, billeting areas, work crews, etc.

3.2.7. Under no circumstance will FRS radios be permitted for use in controlled areas without express written consent of the installation commander and full compliance with all security directives.

3.3. **Consumer Signal Booster (Cell Repeater).** Consumer signal boosters are permitted on Incirlik AB; however, 39 CS ISM approval must be granted prior to any contractual agreements with service providers. In addition, a study performed by the Joint Spectrum Center (JSC) must be completed to ensure there will be no radio frequency (RF) interference to federal systems. If no harmful interference is predicted in the JSC study, use of a consumer signal booster is permitted at the discretion of the 39 CS ISM provided the power levels are maintained at/below FCC class B **Part 15** requirements and are acquired from wireless providers. The repeater may not be modified from the manufacturer's specifications. Use/location of repeaters must be approved by the appropriate local cybersecurity personnel. Repeaters do not require certification and are provided no protection from interference other than what may be experienced in the non-federal bands. These devices can only be used if the following conditions are met:

3.3.1. The subscriber obtains some form of licensee consent to operate the booster, registered with its provider, meets the Network Protection Standard, FCC certified, operated on a secondary, non-interference basis, and must be shut down if it causes harmful interference to a licensed station.

3.3.2. Cellular boosters need to be entered into an FCC database. The 39 CS ISM and/or the owning organization must obtain the account required to register the equipment as part of registering the equipment, so they are aware of the registration requirement with reference to **paragraph 2.2.5** above.

4. Spectrum Interference Resolution Program.

4.1. The focus of the Spectrum Interference Resolution Program is to resolve electromagnetic interference at the lowest level. Incirlik AB Unit Organizations experiencing spectrum interference will:

4.1.1. Begin documenting and reporting information to the 39 CS ISM to initiate safeguards and seek solutions at the lowest level possible. Notification of any electromagnetic radio frequency interference must be reported to the 39 CS ISM within two (2) hours of the start of the event.

4.1.2. Start producing their interference reports based off the instructions listed in DAFI 17-221, *Spectrum Interference Resolution*, Attachments 2 and 3 respectively. The Unit Organizations must evaluate the security sensitivity of the interference on the affected system and classify the report accordingly. Guidelines for classifying interference incidents are contained in CJCSI 3320.02F, *Joint Spectrum Interference Resolution*.

4.2. **Exceptions to Unit Organizations for Reporting Interference.**

4.2.1. Do not report an incident when the event is transient electromagnetic interference from natural sources (e.g., lightning, rain, etc.) or from equipment utilizing commercial licensed frequencies.

4.2.2. Do not report when the interference only affects training frequencies assigned on a non-interference basis (NIB) for training purposes.

4.3. **39 CS ISM Interference Reporting Instructions.**

4.3.1. The 39 CS ISM will work in conjunction with the affected DOD Unit Organizations, non-DOD users, the USAFE FRO, and EUCOM to attempt to resolve the interference at the lowest level possible. More instructions are in **Attachment 5** of this document.

4.3.2. In the event the interference persists and cannot be identified or resolved, the MAJCOM Spectrum Management Office can request assistance directly from the 85th Engineering Installation Squadron (EIS) at Keesler AFB, MS for an initial assessment of the problem, obtain consultation, and recommendations regarding actions, coordination, and techniques that can be used to identify the source and resolve the interference. The 85th EIS provides Quick Fix Interference Reduction Capability (QFRIC) to all Air Force units affected by non-hostile electromagnetic interference.

5. Spectrum Supportability Actions.

5.1. Spectrum Certification. Spectrum certification is the statutory process whereby national regulatory bodies, NTIA and Federal Communications Commission review telecommunications systems for compliance with national spectrum standards and determine electromagnetic compatibility. This applies to Spectrum Dependent Devices (SDD) and Commercial-off-the-shelf (COS), unless specifically exempt, in accordance with the NTIA Manual, Chapter 10.

5.1.1. Local purchases of spectrum-dependent systems will be reviewed by the installation spectrum manager to evaluate spectrum supportability prior to the obligation of funds. If the system will be deployed outside the United States, DAF policy is that HN coordination is required in accordance with the DoDI 4650.01. **(T-0)**

5.1.1.1. Any such device that requires usage in all other USAFE-AFAFRICA nations must be handled on a case-by-case basis through USAFE-AFAFRICA SMO. Sole decision authority rests with the HN.

5.1.1.2. Host nation spectrum supportability coordination in EUCOM AOR is required in accordance with ECM 6901.01, USEUCOM Spectrum Management Manual.

5.1.2. The NTIA, Spectrum Planning Subcommittee, may approve out-of-band requirements with an analysis and justification. Out-of-band operations are operated on a strict non-interference basis. Program offices provide justification for non-compliant systems in accordance with NTIA Manual, Chapter 10. **(T-0)**

5.1.3. To protect receive only systems (e.g. global/weather broadcast receivers) supporting a critical operation, national level spectrum certification is required. The certification application should contain a narrative that describes the criticality of the operation at a specified location. Once spectrum certification is approved, an assignment request is submitted to the NTIA to protect the receive frequency.

5.1.4. Electromagnetic attack systems are exempt from the national spectrum certification process and are supported through the Joint Staff, MC4EB, and Equipment Supportability Permanent Working Group. Systems operated outside the United States and its possessions are coordinated through the appropriate combatant command in accordance with DoDI 4650.01. **(T-0)**

5.2. SSRA, an assessment must be performed by the Department of the Air Force acquisition programs and materiel developers to identify risk as early as possible and affect design and procurement decisions for all SDD. Review these risks at each milestone decision point as outlined in DoDI 4650.01.

5.2.1. The following categories of equipment in the EUCOM and AFRICOM AOR are exempt from the spectrum certification process: **(T-0)**

5.2.1.1. Signal generators.

5.2.1.2. Bench test or antenna-testing equipment.

5.2.1.3. Electronic fuses that activate detonation devices.

5.2.1.4. Unmodified European Conformity (EC) approved COTS Family Radio Service (FRS) transceivers.

5.2.1.5. Unmodified EC approved COTS low power cordless telephones.

5.2.1.6. Cellular telephones used to access a commercial service provider.

5.2.1.7. International Maritime Satellite (INMARSAT) terminals.

5.2.1.8. Infrared and ultraviolet systems used, among other things, to measure heat intensity and spectral signatures of various targets.

5.2.1.9. Lasers and other systems that operate above 3000 Gigahertz (GHz).

5.2.1.10. Global Positioning System receivers universally marketed for civil, industrial, private, and military applications.

5.2.1.11. Radio and radar control heads, bus units, and software or hardware devices that interface with transmitting and receiving equipment, but by themselves do not radiate nor receive electromagnetic energy, except wireless RF modem devices.

5.2.1.12. Antennas that do not radiate RF energy, unless excited from a separate transmitting source.

5.2.2. Department of the Air Force acquisition or materiel development programs, including electromagnetic attack systems, will submit spectrum supportability risk assessment at each milestone decision point in accordance with DoDI 4650.01. **(T-0)**

5.2.3. Quick response programs enter at Milestone C (production and deployment) and go directly to initial operational test and evaluation in accordance with DoDI 4650.01. **(T-0)**

5.2.4. The program manager will insert the NTIA certification stage and number, and approval date into the Information Technology Investment Portfolio System in accordance with AFI 17-110, *Information Technology Portfolio Management and Capital Planning and Investment Control*.

5.3. Department of Defense Electromagnetic Compatibility Standards. Military-Standard-464, *Electromagnetic Environmental Effects (E3) Requirements for Systems,* provides important electromagnetic compatibility and electromagnetic environmental effects standards for DOD SDDs. The Department of the Air Force spectrum programs will adhere to Military-Standard-464 and DoDI 3222.03, *DoD E3 Program*. **(T-0)**

6. DAFI17-220 INCIRLIKAB Supplement Dissemination.

6.1. Copies of this document will be filed with each of the appropriate spectrum stakeholders of the Incirlik AB Spectrum Operations Program and any other pertinent DoD organizations agencies listed here, but not limited to: USAFE/A6NI, 39 WG/CC, 39 CES, 39 CONS, and 39 WSSG. (**39cs.css.commandsection@us.af.mil**)

6.2. If you have any questions, please contact primary point of contact: 39 CS ISM, at any of the following methods: DSN: 314-676-1874 COMM: +90 (0)322-316-1874 or the 39th CS ISM office organizational email at **39CS.ISM.SpectrumManager@us.af.mil**.

ALBERT M. ESPOSITO, Colonel, USAF
Commander, 39th Air Base Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 33-322, *Records Management and Information Governance Program*, 26 June 2025

AFI 48-109, *Electromagnetic Field Radiation (EMFR) Occupational and Environmental Health Program*, 22 April 2020

DAFI 91-208, *Hazards of Electromagnetic Radiation to Ordnance (HERO) Certification and Management*, 6 February 2025

CJCSM 3320.02E, *Joint Spectrum Interference Resolution,* 20 May 2022

Code of Federal Regulation (CFR), Title 47, Telecommunication, Part 95 – PERSONAL RADIO SERVICES, Subpart B - *Family Radio Service (FRS)*

DAFI 17-220, *Spectrum Management*, 8 June 2021

DAFI 17-220_USAFE-AFAFRICASUP, *United States Air Forces In Europe-Air Forces Africa Supplement,* 9 July 2024

DAFI 17-221, *Spectrum Interference Resolution Program,* 31 January 2023

DoDI 3222.03, *DoD Electromagnetic Environmental Effects (E3) Program*, 25 August 2014, Incorporating Change 2, 10 October 2017

DoDI 4650.01, *Policy and Procedures for Management and Use of the Electromagnetic Spectrum*, 9 January 2009, Incorporating Change 1, 17 October 2017

Prescribed Forms

None

Adopted Forms

DAF Form 847, *Recommendation for Change of Publication*

MC4EB Pub 7, *Frequency Resource Record System (FRRS) Standard Frequency Action Format (SFAF)*

Abbreviations and Acronyms

AB—Air Base

ACP—Allied Communications Publication

AFDPO—Air Force Departmental Publishing Office

AFI—Air Force Instruction

CIPS—Cyberspace Infrastructure Planning System

CJCSI—Chairman of the Joint Chiefs of Staff Instructions

CJCSM—Chairman of the Joint Chiefs of Staff Manual

COMSEC—Communications Security

CES—Civil Engineering Squadron

CONS—Contracting Squadron

CS—Communications Squadron

FCC—Federal Communications Commission

DoDI—Department of Defense Instruction

EUCOM—United States European Command

E3—Electromagnetic Environmental Effects

FRS—Family Radio Service

FRRS—Frequency Resource Record System

HERO—Hazards of Electromagnetic Radiation to Ordnance

HN—Host Nation

ISM—Installation Spectrum Manager

ITU RR—International Telecommunications Union Radio Regulation

JP—Joint Publication

MC4EB—Military Command, Control, Communications, and Computers Executive Board

NTIA—National Telecommunications and Information Administration

RFA—Radio Frequency Authorization

RFAT—Temporary Radio Frequency Authorization

SFAF—Standard Frequency Action Format

USAFE—United States Air Forces Europe

USAFE-AFAFRICA—United States Air Forces Europe-Air Forces Africa

USAFE FMO—United States Air Forces Europe Frequency Management Office

UFM—Unit Frequency Monitor

Terms

Allotment (of a radio frequency or radio frequency channel)—Entry of a designated frequency channel in an agreed plan, adopted by a component conference, for use by one or more administrations for a (terrestrial or space) radio communication service in one or more identified countries or geographical areas and under specified conditions. Source: ITU RR.

Assignment (of a radio frequency or radio frequency channel)—Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions. Source: ITU RR.

Commercial—Off-the-Shelf—Spectrum-dependent systems that can be procured by the general public wholesale or retail. Source: National Institute of Standards and Technology.

Electromagnetic Attack—Division of electromagnetic warfare involving the use of electromagnetic energy, directed energy, or anti-radiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability and is considered a form of fires. Source: JP 3-85.

Electromagnetic Compatibility —(1) The condition that prevails when telecommunications equipment is performing its individually designed function in a common electromagnetic without causing or suffering unacceptable degradation due to unintentional electromagnetic interference to or from other equipment in the same environment. Source: NTIA. (2) The ability of systems, equipment, and devices that use the electromagnetic spectrum to operate in their intended environments without causing or suffering unacceptable or unintentional degradation because of electromagnetic radiation or response. Source: JP 3-85

Electromagnetic Environmental Effects (E3)—The impact of the electromagnetic operational environment upon the operational capability of military forces, equipment, systems, and platforms. E3 encompasses the electromagnetic effects addressed by the disciplines of electromagnetic compatibility, electromagnetic interference, electromagnetic vulnerability, electromagnetic pulse, electromagnetic protection, electrostatic discharge, and electromagnetic radiation hazards to personnel, ordnance, and fuels and volatile materials. E3 includes the affects generated by all electromagnetic environment contributors including radio frequency systems, ultra-wideband devices, high-powered microwave systems, lightning, and precipitation static. Source: DoDI 3222.03.

Electromagnetic Spectrum Management—The operational, engineering, and administrative procedures to plan, and coordinate operations within the electromagnetic operational environment. Source: JP 3-85.

Electromagnetic Spectrum Operations—Coordinated military actions to exploit, attack, protect, and manage the electromagnetic environment. Source: JP 3-85.

Electromagnetic Warfare—Military action involving the use of the electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. Source: JP 3-85.

Frequency Assignment—see Assignment (of a radio frequency or radio frequency channel). Source: ITU RR.

Frequency Coordination —(1) The process of obtaining approval to use the radio frequency spectrum via arrangements and technical liaison for the purpose of minimizing harmful interference through cooperative use of the radio frequency spectrum. Source: NTIA. (2) Rules and mechanisms that control how to use the electromagnetic spectrum in specified dimensions (i.e., spatial, time, frequency, power, waveform. Source: JP 3-85. To be effective, the coordination must extend through the planning, proposal, and actual in use phases of radio frequency utilization.

Interference —(1) The effect of unwanted energy due to one or a combination of emissions, radiations, or inductions upon reception in a radio communication system, manifested by any performance degradation, misinterpretation, or loss of information that could be extracted in the absence of such unwanted energy. Source: ITU RR. (2) Any electromagnetic disturbance induced intentionally or unintentionally, that interrupts, obstructs, or otherwise degrades or limits the effective performance of electromagnetic spectrum-dependent systems and electrical equipment. Also referred to as electromagnetic interference. Source: JP 3-85.

Radio Frequency Spectrum —The radio frequency spectrum includes the frequencies from 3.0 kilohertz to 400 gigahertz. The presently allocated spectrum is from 9 kilohertz to 275 gigahertz. Also called electromagnetic spectrum. Source: NTIA.

Spectrum Supportability Risk Assessment —An assessment performed by Department of the Defense for all spectrum-dependent systems to identify risk as early as possible and affect design and procurement decisions. These risks are reviewed at acquisition milestones and managed throughout the system's life cycle. Source: DoDI 4650.01.

National Table of Allocations —Entry in the federal table of frequency allocations of a given frequency band for its use by one or more (terrestrial or space) radio communication services or the radio astronomy service under specified conditions. This term also applies to the frequency band concerned. Source: NTIA.

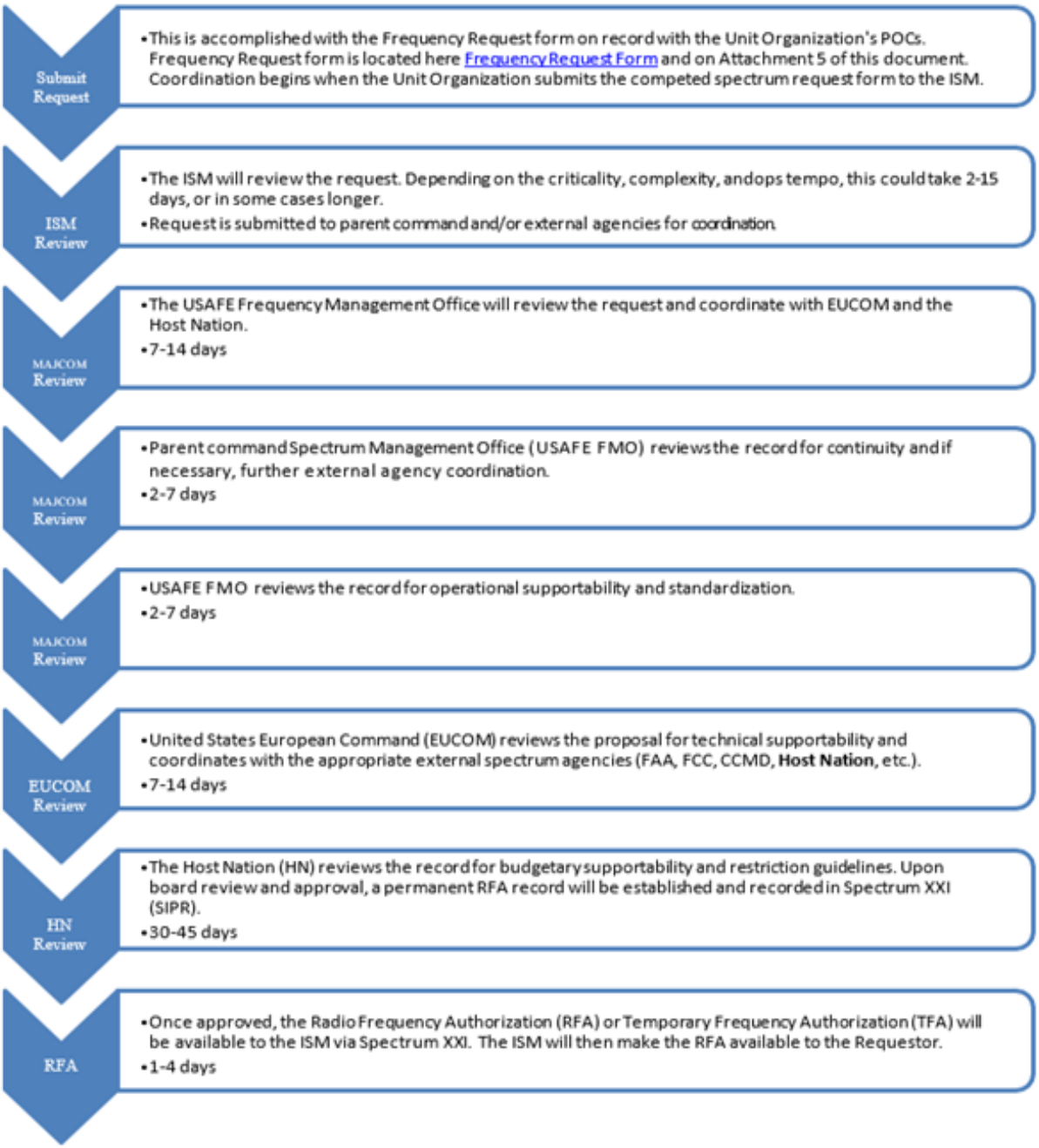
Telecommunication —Any transmission, emission, or reception of signs, signals, writings, images, and sounds or information of any nature by wire, radio, visual or other electromagnetic systems. Source: ITU RR.

United States and its Possessions —Includes the 50 States, District of Columbia, Commonwealth of Puerto Rico, and the territories and possessions (but less the Canal Zone) Source: NTIA.

Attachment 2

OCONUS PERMANENT RADIO FREQUENCY AUTHORIZATION TIMELINE FOR UNIT ORGANIZATIONS: LEAD TIME 90 DAYS

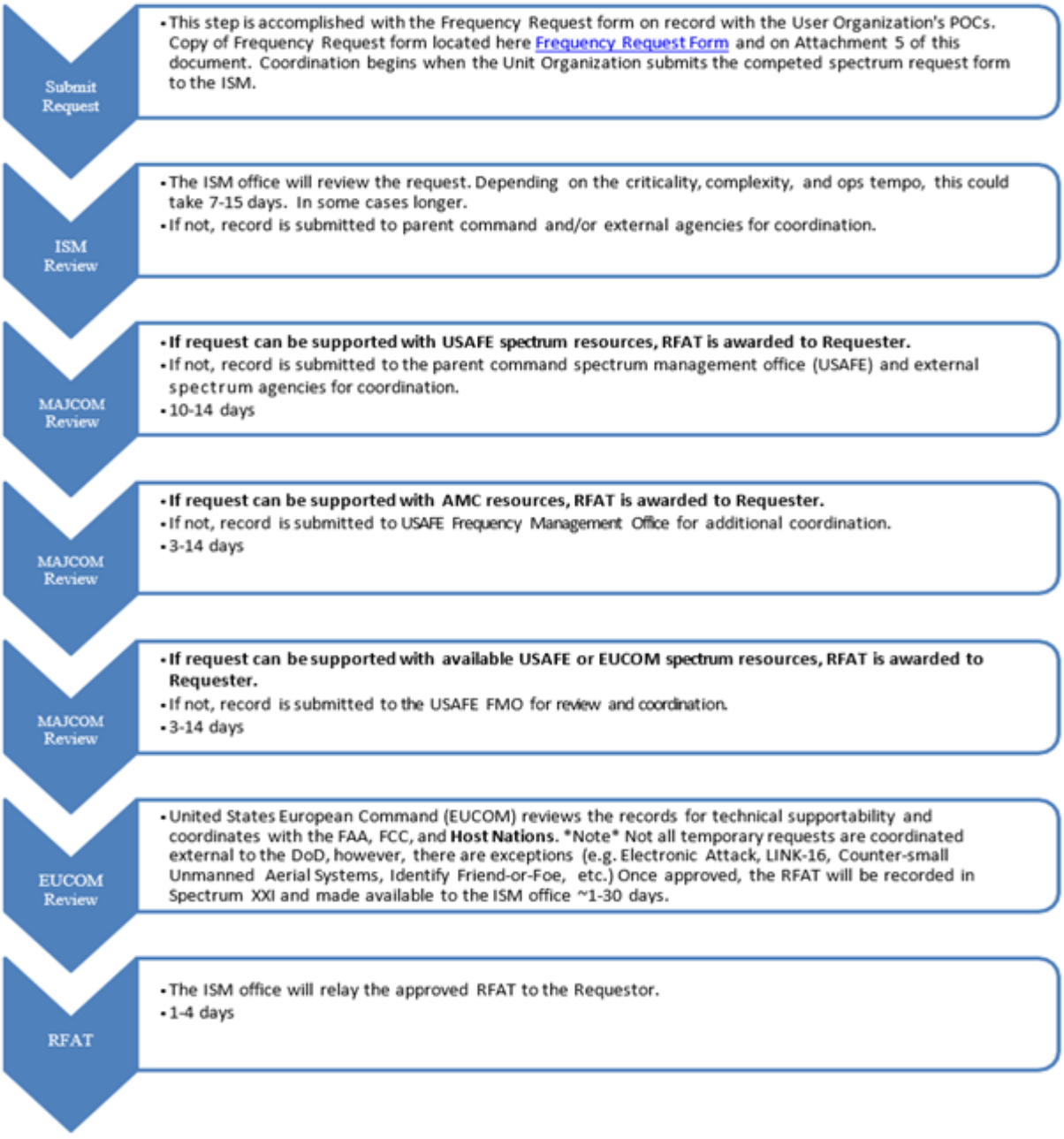
Figure A2.1. OCONUS Permanent Radio Frequency Authorization Timeline for Unit Organizations: Lead Time 90 Days.



Attachment 3

CONUS TEMPORARY RADIO FREQUENCY AUTHORIZATION TIMELINE FOR INCIRLIK AB ORGANIZATIONS: LEAD TIME 30 TO 90 DAYS

Figure A3.1. CONUS Temporary Radio Frequency Authorization Timeline for Incirlik AB Organizations: Lead Time 30 to 90 Days.



Attachment 4

FREQUENCY BANDS

Table A4.1. Frequency Bands.

ITU Band	Radar/IEEE Band	Frequency Ranges	NATO/ EW Band
ELF	---	Less than 3 kHz	---
VLF	---	3 - 30 kHz	---
LF	---	30 - 300 kHz	---
MF	---	300 - 3000 kHz	---
HF	HF	3 - 30 MHz	---
VHF	VHF	30 - 250 MHz	A
		250 - 300 MHz	B
UHF	UHF	300 - 500 MHz	
		500 - 1000 MHz	C
	L	1 - 2 GHz	D
	S	2 - 3 GHz	E
SHF		3 - 4 GHz	F
	C	4 - 6 GHz	G
		6 - 8 GHz	H
	X	8 - 10 GHz	I
		10 - 12 GHz	J
	Ku	12 - 18 GHz	
	K	18 - 20 GHz	
		20 - 27 GHz	K
	Ka	27 - 30 GHz	
EHF		30 - 40 GHz	
	V	40 - 60 GHz	L
		60 - 75 GHz	M
	W	75 - 100 GHz	
		100 - 110 GHz	N
	mm	110 - 200 GHz	
		200 - 300 GHz	O

ELF = Extremely Low Frequency
VLF = Very Low Frequency
LF = Low Frequency
MF = Medium Frequency
HF = High Frequency
VHF = Very High Frequency
UHF = Ultra HighFrequency
SHF = Super High Frequency
EHF = Extremely High Frequency
KHz = Kilo Hertz
MHz = Mega Hertz
GHz = Giga Hertz

Attachment 5

INCIRLIK AB SPECTRUM INTERFERENCE REPORTING AND RESOLUTION

Table A5.1. INCIRLIK AB Spectrum Interference Reporting and Resolution.

Spectrum interference resolution starts with data collection from the victim organization and must be solved at the lowest level possible. Do not report an incident when the event is transient electromagnetic interference from natural sources (e.g., lightning, rain, etc.). Do not report when the interference only affects training frequencies assigned on a non-interference basis (NIB) for training purposes.

Once the Incirlik AB Unit Organization has determined (or could not determine) the source of the interference, the victim organization experiencing the event must start documenting a detailed report, with or without the 39 CS ISM's assistance, within two (2 hours). Victim organizations will follow the steps below:

Step 1: The victim organization experiencing spectrum interference is required to complete the DAFI 17-220 **Attachment 2, Victim Interference Characterization Checklist or** EMI Checklist form experiencing the communications anomaly. Attachment 2 is MANDATORY and is required to be completed by the victim organization, with or without the ISM's assistance, in the event of electromagnetic interference.

Step 2: Once completed, the form will be relayed to the 39 CS ISM office. The victim organization(s) must evaluate the security sensitivity of the interference on the affected system and classify the report accordingly. Guidelines for classifying interference incidents are contained in CJCSM 3320.02E, *Joint Spectrum Interference Resolution*.

Step 3 (ISM responsibility): Prepare an official Joint Spectrum Inference Report (JSIR) on SIPR and submit to the MAJCOM Spectrum Management Office for continuity and tracking. This step may or may not be necessary. If so, then the JSIR will require inputs from each of the ISM, MAJCOM, COCOM, and the victim organizations.