ALARACT 008/2024

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SUBJ/ALARACT 008/2024 – REINFORCE ARMY LINK 16 SPECTRUM ACCESS COORDINATION REQUIREMENTS INCLUDING ONLY THE USE OF CERTIFIED SYSTEMS

THIS ALARACT MESSAGE HAS BEEN TRANSMITTED BY JSP ON BEHALF OF HQDA, DCS, G–6

NARR: THIS ALARACT MESSAGE REENFORCES ARMY LINK 16 TIMELINES AND CERTIFICATION REQUIREMENTS FOR ORGANIZATIONS SUBMITTING TEMPORARY FREQUENCY ASSIGNMENT REQUESTS

1. (U) REFERENCES:

1.A. (U) DOD 4650.1–R1, LINK 16 ELECTROMAGNETIC COMPATIBILITY (EMC) FEATURES CERTIFICATION PROCESS AND REQUIREMENTS, DATED 26 APRIL 2005 (AVAILABLE AT HTTPS://WWW.ESD.WHS.MIL)

1.B. (U) DODI 5025.01, DOD ISSUANCES PROGRAM, DATED 1 AUGUST 2016 (AVAILABLE AT HTTPS://WWW.ESD.WHS.MIL)

1.C. (U) DODI 4650.01, POLICY AND PROCEDURES FOR MANAGEMENT AND USE OF THE ELECTROMAGNETIC SPECTRUM, DATED 9 JANUARY 2009 (AVAILABLE AT HTTPS://WWW.ESD.WHS.MIL)

1.D. (U) MEMORANDUM OF AGREEMENT BETWEEN DEPARTMENT OF DEFENSE AND DEPARTMENT OF TRANSPORTATION, DATED 31 DECEMBER 2002 (SEE ATTACHMENT)

1.E. (U) NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION MANUAL OF REGULATIONS AND PROCEDURES FOR FEDERAL RADIO FREQUENCY MANAGEMENT JANUARY 2022 REVISION OF THE JANUARY 2021 EDITION, DATED JANUARY 2022 (AVAILABLE AT HTTPS://WWW.NTIA.GOV)

1.F. (U) CJCSI 6232.01F, LINK 16 SPECTRUM OPERATIONS AND DECONFLICTION, DATED 12 JANUARY 2023 (AVAILABLE AT HTTPS://WWW.JCS.MIL)

1.G. (U) MIL–STD 461G, REQUIREMENTS FOR THE CONTROL OF ELECTROMAGNETIC INTERFERENCE CHARACTERISTICS OF SUBSYSTEMS AND EQUIPMENT, DATED 11 DECEMBER 2015 (AVAILABLE AT HTTPS://WWW.DAU.EDU)

2. (U) DEPUTY CHIEF OF STAFF (DCS), G–6/DANI–NSR/ARMY SPECTRUM MANAGEMENT OFFICE (ASMO) RECOMMENDS THE FOLLOWING BEST PRACTICES TO AVOID PROCESSING DELAYS AND OBTAINING NATIONAL LEVEL APPROVALS PRIOR TO EVENT START DATES.

2.A. (U) AS DIRECTED BY REFERENCE 1.F, ALL TEMPORARY FREQUENCY ASSIGNMENT (TFA) REQUESTS MUST BE SUBMITTED TO THE NAVY MARINE CORPS SPECTRUM CENTER (NMSC), THE DEPARTMENT OF DEFENSE'S EXECUTIVE AGENT FOR LINK 16 SPECTRUM ACCESS COORDINATION. NMSC REQUIRES ARMY LINK 16 REQUESTORS PROCESS ALL REQUESTS THROUGH DCS, G–6/DANI–NSR/ASMO LINK 16 ACTION OFFICERS. ADDITIONALLY, HEADDQUARTERS, DEPARTMENT OF THE ARMY (HQDA) DCS, G–6 REQUIRES 75 DAYS PRIOR TO EVENT START DATE TO ANSWER ANY CONCERNS ASMO/NMSC MAY HAVE FOR SOFTWARE. USERS MUST SUBMIT TFA REQUESTS THROUGH THE NMSC/ARMY TFA PORTAL, CONTACT HQDA DCS, G-6 AT USARMY.MEADE.HQDA-DCS-G-6.MBX.ASMO-LINK16@ARMY.MIL.

2.A.1. (U) FEDERAL AVIATION ADMINISTRATION (FAA) WILL NO LONGER ACCEPT REQUESTS FOR LINK 16 COORDINATION WITHIN THEIR 30-DAY REVIEW TIMELINE. LETTERS OF LATENESS (WAIVER REQUESTS) SUBMITTED BETWEEN 60 AND 31 DAYS PRIOR TO SCHEDULED EVENT WILL BE CONSIDERED ON A CASE-BY-CASE BASIS.

2.A.2. (U) FAA WILL NO LONGER ACCEPT COORDINATION PACKAGES FOR SYSTEMS WHICH HAVE NOT COMPLETED THE PRELIMINARY ASSESSMENT PROCESS.

2.A.3. (U) ONCE TFA NUMBERS ARE ISSUED, REQUESTORS MUST UPDATE LINK 16 PULSE DECONFLICTION SERVER (LPDS) SUBMISSIONS WITH THE TFA NUMBER IN THE PORTAL.

2.B. (U) ALL LINK 16 TFA REQUESTS MUST BE COORDINATED WITH THE FAA VIA ASMO AND NMSC.

2.C. (U) ALL MODIFICATIONS TO LINK 16 HARDWARE AND SOFTWARE MUST BE CERTIFIED BY THE FAA THROUGH THE NMSC AND THE NAVWAR ELECTROMAGNETIC CAPABILITIES (EMC) FEATURES CERTIFICATION TEAM.

2.D. (U) REQUESTOR SHALL CONFIRM STAGE FOUR AND EMC CERTIFICATIONS OF LINK 16 TERMINALS ARE COMPLETE PRIOR TO THE ARMY 75-DAY TIMELINE IN PARAGRAPH 2.A.

2.E. (U) THE LPDS 2.0 (HTTPS://LPDS2.JTEN.MIL/LPDSWEB/) IS A SCHEDULING TOOL AND DOES NOT GRANT AUTHORITY TO RADIATE IN THE NATIONAL AIR SPACE. AUTHORIZATION IS GRANTED BY THE FAA. FOR ACCESS TO LPDS 2.0 PORTAL, CONTACT HQDA DCS, G-6 AT USARMY.MEADE.HQDA-DCS-G-6.MBX.ASMO-LINK16@ARMY.MIL.

2.F. (U) RADIO TERMINALS ARE DEEMED SUPPORTABLE/NON-SUPPORTABLE BASED UPON NMSC AND NAVWAR EMC FEATURES CERTIFICATION. RADIO TERMINAL, SOFTWARE WAVEFORM, AND PLATFORM MUST BE CERTIFIED TOGETHER. THE LATEST EMC FEATURES MATRIX CAN BE FOUND IN THE TFA PORTAL RESOURCES SECTION. REQUESTORS MUST VALIDATE DESIRED PLATFORM, TERMINAL, AND SOFTWARE VERSIONS AGAINST THE EMC FEATURES CERTIFICATION MATRIX.

2.F.1. (U) THE FAA WILL DENY TFA REQUESTS WITH PLATFORM, TERMINAL, AND SW VERSION COMBINATIONS NOT LISTED IN THE LATEST EMC FEATURES CERTIFICATION MATRIX.

2.F.2. (U) WHEN SUPPLYING PACKAGES IN SUPPORT OF TFA REQUESTS AND DEPENDING ON THE COMPLEXITY OF THE SYSTEMS AND TFA REQUESTS, THE REVIEW OF NON-EMC CERTIFIED EQUIPMENT REQUIRES EXTENSIVE ADVANCE SUBMISSION FOR ADEQUATE FAA ANALYSIS.

2.G. (U) LPDS 2.0 ENTRIES SHALL BE MADE AT LEAST 75 DAYS IN ADVANCE OF THE EVENT.

2.H. (U) REQUESTOR SHALL MONITOR AND VALIDATE LPDS FOR TIME SLOT DUTY FACTOR (TSDF) THRESHOLD LIMITS OVER 100 PERCENT AT 100 NAUTICAL MILES OR OVER 400 PERCENT AT 200 NAUTICAL MILES IN THE JOINT OPERATING AREA (JOA) LISTED IN LPDS. IF TSDF THRESHOLDS ARE EXCEEDED WITHIN THE JOA, A NEW TFA REQUEST OR COORDINATION OF EXCEEDED THRESHOLDS IS REQUIRED IN ACCORDANCE WITH REFERENCE 1.F.

2.I. (U) REQUESTOR MUST ENSURE ALL EVENT AND EQUIPMENT NAMING CONVENTIONS IN LPDS 2.0 MATCH TFA PORTAL SUBMISSIONS.

2.I.1. (U) LPDS ENTRIES AND TFA REQUESTS MUST HAVE MATCHING LPDS AND TFA PLATFORM, TERMINAL, AND SW INFORMATION. FOR EXAMPLE, IF THE LPDS ENTRY SHOWS “STT2 V3 W/ ENHANCED MODEM MODULE (EMM) 3.4.0,” ENTER THE SAME INFORMATION INTO THE TFA REQUEST. ADDITIONALLY, THE NUMBER OF SYSTEMS IN THE TFA REQUEST MUST MATCH THE NUMBER OF SYSTEMS IN THE LPDS ENTRY. THE INFORMATION BETWEEN THE TWO PORTALS MUST MATCH TO ENSURE STREAMLINED PROCESSING AT THE NMSC AND FAA.

2.I.2. (U) THE FAA WILL NON-CONCUR ON TFA REQUESTS WITH TSDF ENTRIES THAT ARE NOT EQUAL TO OR LESS THAN THE TSDF ENTRIES IN THE LPDS PORTAL REQUEST. TO INCREASE THE LIKELIHOOD FOR FAA APPROVAL, REQUESTS MUST USE CONSERVATIVE TSDF CALCULATIONS TO MEET MISSION REQUIREMENTS.

2.J. (U) CONTINUED COORDINATION AND MONITORING OF LINK 16 REQUESTS ARE REQUIRED TO PREVENT DELAYS IN REVIEW AND DECISION TIMELINES.

2.K. (U) DEPARTMENT OF DEFENSE COMPONENTS INVITING ALLY AND PARTNER NATION UNITS TO PARTICIPATE IN ACTIVITIES IN THE NATIONAL AIR SPACE ARE RESPONSIBLE FOR PREPARING AND SUBMITTING COMPLETE AND TIMELY TFA REQUESTS. UNIT AND STAFF PLANNERS WILL INITIATE THE INTERNAL STAFFING PROCESS TO DEVELOP TFA REQUESTS AS EARLY AS POSSIBLE, AND AT A MINIMUM OF 90 DAYS PRIOR TO THE SCHEDULED EXERCISE OR EVENT, TO ENSURE TIMELY SUBMISSION TO THE NMSC.

3. (U) THE TIMELINESS AND ACCURACY OF SPECTRUM COORDINATION IS CRITICAL TO MISSION SUCCESS. COMMUNICATE EARLY AND OFTEN WITH ASMO TO ENSURE ACCURACY AND COMPLETENESS OF SUBMISSIONS. HQDA AIMS TO ENSURE ALL REQUESTS LEAVING ARMY FOR NATIONAL COORDINATION ARE 100 PERCENT COMPLETE AND ACCURATE TO AID EFFICIENT PROCESSING AT THE NMSC AND FAA. FOR QUESTIONS REGARDING THE LINK 16 PROCESS OR SPECTRUM CERTIFICATION, CONTACT MR. ZAK PHOL VIA EMAIL AT SOMSAK.PHOL.CIV@ARMY.MIL OR MR. MELVIN FORD, MELVIN.R.FORD.CIV@ARMY.MIL.

4. (U) THIS ALARACT MESSAGE EXPIRES ON 16 FEBRUARY 2025.

ATTACHMENT:
MEMORANDUM OF AGREEMENT BETWEEN DEPARTMENT OF DEFENSE AND DEPARTMENT OF TRANSPORTATION REGARDING THE 960-1215MHZ FREQUENCY BAND

MEMORANDUM OF AGREEMENT
BETWEEN
DEPARTMENT OF DEFENSE AND
DEPARTMENT OF TRANSPORTATION
REGARDING THE 960-1215 MHZ FREQUENCY BAND

Recognizing the increasing use of radio frequency (RF) spectrum for commercial, civil and military purposes and its vital importance to both national defense and air traffic safety, the Department of Defense (DoD) and Department of Transportation (DoT) enter into this Memorandum of Agreement (MOA).

The 960-1215 MHz band is used by DoD for the Joint Tactical Information Distribution System (JTIDS), the Multifunctional Information Distribution System (MIDS) and other similar systems (termed collectively "Link-16" in this agreement) as a critical element of its Command and Control infrastructure. Continuing restrictions for training and operations within the United States and its Possessions (US&P) would adversely affect DoD's ability to support national security objectives.

DoT interest in this band is based on its importance for aeronautical radionavigation and supporting systems. Rapid growth in commercial and civil aviation during the 21st century will increase the importance of assuring spectrum supportability for existing and new systems that enhance air traffic safety.

In 1978 the National Telecommunications and Information Administration (NTIA) directed the Federal Aviation Administration (FAA) and DoD to work cooperatively to assure spectrum access and mutual compatibility between Link-16 and civil/commercial aeronautical radionavigation systems populating the 960-1215 MHz band. This memorandum of agreement is in conformity with the 1978 NTIA directive and takes into account technological developments, regulatory practices, and new DoT and DoD requirements.

Supporting aviation safety, national defense, and efficient use of government resources, DoT will assure spectrum access for Link-16 systems; DoD will incorporate terminal engineering features to improve those systems' compatibility in accordance with the specifications contained in this and other applicable documents; and both agencies will work cooperatively to support NTIA action to protect both Link-16 and civil/commercial aeronautical systems sharing this portion of the RF spectrum.

Recognizing a mutual interest in assuring spectrum access for critical systems, we enter into this agreement to protect use of the band in the US&P and internationally, and to advocate strongly for the tenets of this agreement as specified in Appendix A in national and international negotiations.

Paul D. Wolfowitz
Deputy Secretary of Defense

NOV 18 2002

Michael P. Jackson
Deputy Secretary of Transportation

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Memorandum of Agreement Regarding the 960-1215 MHz Frequency Band

Appendix A

RECOGNIZING:

Treaties of the International Telecommunication Union (ITU) fully recognize the sovereign right of each State to regulate its telecommunications including all transmissions, emissions, and receptions of radio frequency signals subject to that State's jurisdiction.

Customary international law and bilateral and multilateral international agreements recognize that military aircraft, vessels and spectrum-dependent systems are treated differently from civil and commercial aircraft, vessels and spectrum-dependent systems. For example, the 1944 Convention on International Civil Aviation states expressly in Article 3 that it shall be applicable only to civil aircraft and shall not be applicable to state aircraft.

The 960-1215 MHz band is allocated by the Radio Regulations for Aeronautical Radionavigation Service (ARNS) and Radionavigation Satellite Service (RNSS) systems, and the development of electronic aids to navigation.

The Joint Tactical Information Distribution System (JTIDS), the Multifunctional Information Distribution System (MIDS), and other similar systems are critical to Department of Defense (DoD) missions associated with command and control and radionavigation.

FAA and DoD systems dependent upon the 960-1215 MHz spectrum must be coordinated to assure mutual spectrum access.

APPLICABILITY:

This agreement applies to MIDS terminals including MIDS Low Volume Terminal (LVT) variants (LVT-1, LVT-2, and LVT-3/Fighter Data Link); Integrated Communications Navigation and Identification Avionics (ICNIA); JTIDS terminals including JTIDS Class 1, Class 2, Class 2M, and Class 2H; and future systems incorporating the JTIDS/MIDS waveform implementation (e.g., the Joint Tactical Radio System). For the purposes of this agreement, all these systems will be collectively referred to as "Link-16."

SPECIFICATIONS:

1. DoT and DoD will support appropriate service allocation and station class designations for systems meeting the minimum technical/regulatory requirements as specified by the NTIA and international spectrum usage agreements. Both agencies will work cooperatively to protect civil and military systems sharing the 960-1215 MHz.

2. DoD will limit uncoordinated Link-16 operations in accordance with the spectrum restrictions outlined in the NTIA Spectrum Certification as approved by the NTIA Office of Spectrum Management (OSM), Associate Administrator. Relaxation of these restrictions in the 1030-1215 MHz band on a system-by-system, case-by-case, or other appropriate basis may be approved

based on Interdepartment Radio Advisory Committee (IRAC) review of testing documentation that concludes relaxation will not result in harmful interference to authorized users of the band.[1]

3. Upon final certification approval, DoT will support a permanent United States and Possessions (US&P) assignment for Link-16 operations within the constraints identified in the NTIA spectrum certification.

4. DoD will ensure that by 2020, all Link-16 terminals are capable of re-mapping frequencies from below 1030 MHz to the sub-band above 1030 MHz. Any Link-16 terminal produced after July 1, 2007 will be capable of remapping. These terminals are expected to begin fielding no later than January 1, 2009. All fielded Link-16 terminals will incorporate the remapping capability by 2020. Inclusion of the remapping capability in Link-16 terminals produced prior to July 1, 2007 (JTIDS terminals excluded) will be handled when the systems are brought in for depot maintenance and/or are scheduled for other system updates to the Link-16 terminal. DoT and DoD will meet annually to review the progress of this effort with the goal of ensuring maximum compatibility between Link 16 and aviation systems. DoD will utilize this capability as required within the US&P to prevent harmful interference to aviation systems approved by NTIA via a stage 4 spectrum support certification for operation in the 960-1215 MHz band and implemented below 1030 MHz. This capability will be utilized to remap the minimum number of frequencies required to preclude harmful interference based on approval by NTIA through the SPS process. DoD will not use the requirement to remap frequencies from the Link-16 "hopset" as a rationale for objecting to such aviation systems.

5. DoT will work with the NTIA and other Federal Agencies to ensure aviation systems subject to US Government regulation using frequencies above 1030 MHz (including Galileo, Global Positioning System (GPS) L5[2], and other systems with global availability)) will be designed to satisfy their minimum performance standards in their intended electromagnetic environment, including Link-16 operations complying with conditions and restrictions reflected in the Link-16 NTIA spectrum certification or any subsequent certifications. DoT will also work with the Department of State, the Federal Communications Commission, the NTIA, and DoD to support the US Government's efforts to ensure aviation systems not under US jurisdiction whose receivers may operate in the US&P (including Galileo and other systems with global availability) will be designed to the same standard outlined in the preceding text.

6. DoT will ensure that future aeronautical radionavigation systems, electronic aids to air navigation, or other systems subject to its jurisdiction that are to be implemented using spectrum

[1] Such relaxations might include higher Time Slot Duty Factor (TSDF) (in excess of 100%) and reduced geographic areas (less than 100 nm).

[2] In the event that the mitigation strategies defined in the Interagency GPS Executive Board (IGEB) "Implementation of a Third Civil GPS Signal" Final Report should prove insufficient to protect civil use of the GPS L5 signal, the option to require remapping Link-16 carriers in the 1164-1188 MHz band in lieu of a like number of below-1030 MHz Link-16 carriers (the total number of frequencies remapped to accommodate DoT systems shall not exceed 14) will be retained. Studies to support such an option will be developed within the Spectrum Planning Subcommittee and approved by NTIA. Conclusion of this agreement satisfies the intent of the IGEB Final Report, which states "The DoD will include a priced option in the full-rate production MIDS request for proposal (RFP) to remap up to seven selectable, contiguous MIDS frequencies in the 960-1215 MHz band."

in the 1030-1215 MHz band will be designed to satisfy their minimum performance standards in their intended electromagnetic environment, including Link-16 systems operating in conformance with the approved IRAC spectrum certification. DoT will also ensure future aeronautical radionavigation systems approved by NTIA via a stage 4 spectrum support certification for operation in the 960-1215 MHz band and implemented below 1030 MHz will take into account Link-16 operations within the constraints of the NTIA spectrum certification or any subsequent spectrum certifications on Link-16 frequencies not subject to remapping.

7. DoT will authorize operations exceeding the terms of this agreement on a case-by-case basis. DoT and DoD will develop coordination procedures to accommodate Link-16 training exercises involving 51-channel operations, operations exceeding approved spectrum certification criteria, and operations involving non-US and new Link-16 terminals/platforms.

8. DoT and DoD will develop 51-channel coordination procedures regionally, taking into account the expected aviation system density and services and the DoD operating areas in that geographic location.[3]

9. DoT will not require compatibility between Link-16 and Universal Access Transceiver (UAT) receivers on military platforms. UAT transmitters may be required on military platforms.

10. Only those electromagnetic compatibility (EMC) features directly affected by the engineering change will be subject to re-certification.[4] It is expected that the monitoring function can be accomplished by a suitable revision to the uniform frequency monitor.

11. DoT will not require new EMC testing or additional restrictions with regard to existing ARNS systems (Mode S, Air Traffic Control Radar Beacon System, Traffic Alert and Collision Avoidance System, Distance Measuring Equipment (DME)/N and DME/P, and/or the 1090 Automatic Dependent Surveillance-Broadcast extended squitter) and RNSS systems (GPS L5 and Galileo) as a result of remapping.

12. DoT will promote the development of robust aviation systems that lend themselves to improved compatibility with 51-frequency JTIDS terminals through cooperation with RTCA Inc., industry, and DoD.

13. DoT and DoD will jointly submit to NTIA a recommended specification and methodology to facilitate the terminal EMC features certification of Link-16 systems operating in the 960-1215 MHz band, within 30 days of the signature of this MOA. Subsequent to NTIA approval of the specification and a successful demonstration of the implementation of the

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[3] Intent is to ensure the entire US&P is not restricted for a projected operational environment that exists only in the vicinity of high-density air traffic areas like Los Angeles International Airport.

[4] The baseline for all EMC Features monitoring methodology, periodic verification requirements, and procedures for the performance of EMC Features Demonstrations must be mutually established by DoD and FAA for all MIDS production and follow-on terminals.

specification/methodology, DoT will endorse DoD's certifying all future Link-16 terminals' compliance, eliminating the need for future NTIA EMC features demonstrations.

14. DoD and DoT will promote the terms of this agreement in international forums (e.g., DoD will encourage North Atlantic Treaty Organization (NATO) and other international Link-16 users to implement a similar, compatible remapping capability, and DoT will work with the International Civil Aviation Organization (ICAO) and other civil aviation organizations to ensure new systems will recognize that they face environments in some countries which include Link-16 electromagnetic environments as specified in the NTIA spectrum certification.

15. DoD and DoT will seek to implement all the terms of this agreement in good faith. If circumstances change, both DoD and DoT will work together to resolve any disputes. The failure by one Department to comply with the terms of the agreement may be a basis for the other Department to terminate the agreement.