JOINT COMMUNICATIONS ELECTRONICS OPERATING INSTRUCTIONS

References:

b. CJCSI 3320.01 Series, “Joint Electromagnetic Spectrum Operations”

1. Purpose. To establish policy, assign responsibilities, and provide guidance for the planning, coordination and production of the joint communications-electronics operating instruction (JCEOI).

2. Cancellation. CJCSI 3320.03B, 18 January 2011, is canceled.

3. Applicability. This instruction is applicable to the Joint Staff, joint activities, the Department of Defense, Combatant Commands, Services, and agencies, to include joint task forces (JTF), U.S. elements of combined commands and DoD elements of the intelligence community. Combatant Commands, the Services, and agencies will develop procedures for implementing this instruction.

4. Policy. To facilitate a more seamless transition into a combined and/or joint operational environment, the Services, Defense agencies and joint activities are encouraged to incorporate the described policies and procedures into their unique contingency operations, training and exercises.

   a. All unified Combatant Commands and the U.S. elements of combined commands are directed to develop and use a JCEOI to support routine and contingency operations, training, and exercises.
b. The JCEOI offers some degree of communications security (COMSEC) protection by directing changes to call signs, call words and frequencies on a daily basis. Implementation of these daily changes increases the difficulty for an adversary to obtain essential elements of friendly information by monitoring unencrypted radio nets. All unified Combatant Commands and the U.S. elements of combined commands are directed to use daily changing call signs, call words, and frequencies except for those situations noted below:

(1) Call signs and call words should be changed daily on all nets and/or circuits not secured with an encryption device. Exceptions may be necessary when operational needs or safety of life issues outweigh the benefits of COMSEC protection. Units will maintain the capability to implement changing call signs and call words in the event that secure capability is lost.

(2) Tactical nets and/or circuits operating in single-channel mode should change frequencies daily. Exceptions to this may be necessary when operational needs outweigh the benefits of this COMSEC protection or because of platform-related electromagnetic compatibility limitations, radio frequency propagation limitations or insufficient spectrum resources.

(3) When using secure, frequency-hopping radio systems such as the single-channel ground and airborne radio system (SINCGARS), it is likely there will not be a requirement to use daily changing call signs, call words or frequencies. However, because of changes in force structure or capabilities, commanders may designate these nets as single channel. Therefore, the ability to implement daily changing call signs, call words and frequencies will be maintained.

(4) Predetermined suffix and expander lists differ from the default JCEOI suffix and expander lists that are provided in Joint Automated Communications Electronics Operating Instruction System (JACS), and will need to be coordinated and agreed upon by all organizations involved in a joint operational activity.

c. All unified Combatant Commands and the U.S. elements of combined commands are directed to develop, maintain, and document policy and procedures for the creation, maintenance and distribution of theater hopsets. This policy will include direction and guidance for the Service components within their command on the standardization and common use of hopsets throughout the Combatant Commander’s theater of operations. Depending on the size of the force structure, distinct loadsets may need to be used since it is more likely that a large theater may contain regional divisions large enough to require distinct regional hopsets.
d. All unified Combatant Commands and the U.S. elements of combined commands are directed to develop, maintain, and document policy and procedures for the use of COMSEC keys within loadsets.

e. Master Net List (MNL)

(1) During deliberate and crisis action planning, an MNL will be developed and maintained to meet planned net requirements. At a minimum, MNLs will contain all anticipated nets (e.g., UCC 1, JTF 3, AC 11) for the supported operation plan (OPLAN) or concept plan (CONPLAN). These MNLs must be reviewed periodically to ensure they accurately depict the requirements identified in the associated plan.

(2) When deemed appropriate by the Combatant Commander or JTF Commander, if release authority has been delegated, MNLs that have been prepared for U.S. forces may be provided to allies in accordance with (IAW) the requirements and procedures of DoDD 5230.11.

f. All unified Combatant Commands and the U.S. elements of combined commands are directed to develop and maintain one active JCEOI for use in ongoing operations and at least one reserve JCEOI available for use in the case of JCEOI compromise. The exercise JCEOI should be published and renewed monthly.

g. Creation and use of a common JTF JCEOI during contingency operations should be assessed for feasibility. Once created, if deemed feasible, the JTF JCEOI would sustain operations for the duration of the mission. The mission commander may elect to use the JCEOI of the Combatant Command and adopt it as the common JCEOI for the mission. The JTF planner or the commander may choose not to do this.

5. Definitions. See Glossary.


7. Summary of Changes. This revision reflects a general update to ensure instruction is current with today’s defensive posture. It updates JCEOI creation procedures and maintains JACS as the joint standard for JCEOI creation. References, contact information, and glossary are also updated.

8. Releasability. This instruction is approved for public release; distribution is unlimited. Copies are also available through the Government Printing Office on the Joint Electronic Library CD-ROM.
9. **Effective Date.** This instruction is effective upon receipt.

For the Chairman of the Joint Chiefs of Staff:

[Signature]

DAVID L. GOLDFEIN, Lt Gen, USAF
Director, Joint Staff

Enclosures:

A - Responsibilities
GL - Glossary
DISTRIBUTION

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ENCLOSURE A

RESPONSIBILITIES

1. Chairman of the Joint Chiefs of Staff will:

   a. Provide policy oversight for maintaining a joint standard for the exchange of JCEOI information.

   b. Identify, assess, and recommend measures to ensure the JCEOI process is mutually supporting and effective in joint and combined operations.

   c. Deconflict and coordinate call word dictionaries with the Combatant Command J-6s and Services.

   d. Establish and chair an Ad Hoc working group under the cognizance of the Military Communications-Electronics Board Frequency Panel as a forum to formulate policy, resolve problems, and manage the JCEOI program. The Ad Hoc working group membership will follow guidelines established by the frequency panel.

2. Unified Combatant Commanders will:

   a. Establish command-specific policy and guidance for development and use of the JCEOI consistent with this instruction that uniquely applies to their area and command structure.

   b. Function as the controlling authority for their JCEOIs.

   c. Establish a JCEOI management function to control the JCEOI process, structure, and procedures to support planned and ongoing operations.

      (1) Ensure that all applicable annexes of CONPLANs and OPLANs contain a completed JCEOI MNL, and coordination instructions for JCEOI structure and information exchange; and ensure that information is published to the call word dictionary.

      (2) Establish and publish procedures for designating unique call words and call signs for the JCEOI MNL units and organizations.

      (3) Ensure liaison is made with appropriate foreign military and multilateral forces (e.g., United Nations forces, North Atlantic Treaty Organization) operating as part of combined operations to ensure that unique requirements are met as part of a coalition JCEOI.
(4) Establish a JCEOI centralized database used in planning, historical and contingency purposes.

3. Combatant Command J-2s will:

   a. Identify applicable net requirements to the J-6 for inclusion in the MNL.

   b. Publish the security classification guidance for all information regarding JTF or JTF Commander mission.

   c. Provide a listing of nets on the MNL to be published in the Joint Restricted Frequency List (JRFL), if any.

4. Combatant Command J-3s will:

   a. Identify applicable net requirements to the J-6 for inclusion in the MNL.

   b. Provide J-6 with the force structure and concept of operations (CONOPs).

   c. Coordinate with J-2 to validate nets on the MNL to be published in the JRFL, if required.

5. Combatant Command J-6s will:

   a. Develop, produce, and maintain contingency MNLs for their supported and supporting CONPLANs, OPLANs, and functional plans.

   b. Distribute guidance for the use of JACS for JCEOI production.

   c. Establish internal policy during all operations for use of the JCEOI.

   d. Serve as the central point of contact for the JCEOI until the JTF J-6 is activated (stood up).

   e. Ensure distribution plans for the JCEOI are established.

   f. Ensure a deconflicted call-word dictionary is available for forces operating within the AOR.

   g. Exercise or delegate JCEOI generation authority.

   h. Provide technical support to the JTF J-6.

   i. Ensure that all Combatant Commander voice and data net requirements are considered for inclusion in the joint layer of the MNL.
j. To the greatest extent practical, establish local procedures to include relevant input from interagency partners in the JCEOI development process.

NOTE: Within the bounds of proper classification, the finished JCEOI will be shared with interagency participants in a given operation with the approval of the local commander.

k. Establish procedures to determine secure or nonsecure status (e.g., at the net controller level) of Combatant Commanders voice and data nets and/or circuits.

l. Establish a common joint net providing the capability to coordinate across theaters of operations or ground elements in support of cease fire requirements (i.e. channel six is common joint net on all radios).

6. When activated, the Commander, JTF (CJTF) will:

   a. Follow and expand upon Combatant Commanders’ JCEOI development guidance.

   b. Assume the Combatant Commanders’ responsibilities outlined in paragraph 2 above for the JTF’s geographic AOR.

   c. Ensure nets are operated IAW paragraph 4.c. of the basic instruction of this publication.

   d. Establish procedures to determine secure or nonsecure status (e.g., at the net controller level) of JTF voice and data nets and/or circuits.

7. JTF J-2 will identify applicable net requirements to the JTF J-6 for inclusion in the MNL.

8. JTF J-3 will:

   a. Identify applicable net requirements to the JTF J-6 for inclusion in the MNL.

   b. Provide the JTF J-6 with the force structure and CONOPs.

9. JTF J-6 will:

   a. Develop, produce and maintain contingency MNLs for their supported and supporting OPLANs.
b. Serve as the central point of contact for the JCEOI once activated (stood up).

c. Assume the Combatant Commanders J-6 responsibilities outlined in paragraph 5 above for the JTFs geographic AOR.

d. Coordinate and obtain the frequency resources used for the operation.

e. Coordinate, obtain, and modify the joint layer of the JCEOI, as required.

f. Consolidate the MNL data received from the component forces, joint special operations task force and any coalition partners. Consolidate MNL with associated interagency partners as required.

g. Deconflict frequencies, call signs, call words, smoke and pyrotechnic signals, signs and countersigns, and other frequently changing information for publication in the JCEOI.

h. Construct reserve editions to the current JCEOI for distribution in electronic and paper format as required.

i. When directed, generate, and distribute theater-level transmission security keys and hopsets for frequency hopping equipment.

j. Establish guidance for performing emergency supersession procedures and over-the-air-rekeying.

10. DoD Components will:

a. Ensure personnel assigned to develop the JCEOI have appropriate security clearances to operate in a joint environment.

b. Ensure all net requirements supporting the JTF are passed to the Combatant Command J-6 or JTF J-6 IAW established procedures.

c. Construct a complete MNL and submit frequency resource requirements to the JTF J-6 or JTF frequency manager IAW established procedures once notified of JTF involvement.

d. Establish internal policy IAW this instruction and during all operations under the train-as-you-fight concept.

11. The Services and joint activities will establish internal policies and procedures to operate the DoD standard JCEOI information system consistent with this instruction. Personnel tasked to develop MNLs and generate JCEOIs should be formally trained and hold the appropriate level security clearance.
12. Director, National Security Agency will:

   a. Execute the information security responsibilities of the Secretary of Defense in support of the JCEOI development process and distribution.

   b. Provide guidance for use of call signs and call words in support of the JCEOI and security considerations involved with distribution and release of data and software to coalition forces.

13. The Commander, Joint Spectrum Center, under the operational direction of the Joint Staff/J-6 and the Defense Information Systems Agency (references c and d) will:

   a. Assist in the development of policy and guidance for the JCEOI to Combatant Commanders and/or JTF Commanders.

   b. Provide direct support teams, as required, to the Combatant Commanders and/or JTF Commanders in support of JCEOI development and use.

14. Electromagnetic spectrum - dependent equipment users will:

   a. Adhere to the policies set forth by the Combatant Commanders and/or JTF Commanders concerning JCEOI development and use.

   b. Operate equipment within the parameters set forth by the JCEOI and obtain approval from the controlling authority or delegated representative to modify those parameters if such modification is required.

   c. Operate according to the instructions set forth in the JCEOI and IAW special instructions (i.e., call sign, call word, sign, and countersign).
# Glossary

**PART I -- ABBREVIATIONS AND ACRONYMS**

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PART II – DEFINITIONS

area of responsibility. The geographic area associated with Combatant Command within which a Combatant Commander has authority to plan and conduct operations. Also called AOR. (JP 1-02)

call sign. A combination of alphanumeric, or phonetically pronounceable characters (trigraph) that identifies a communication facility, command, authority, activity or unit; used primarily for establishing and maintaining communications.

call word. Pronounceable words that identify a communications facility, command, authority, activity or unit; serves the same functionality as the call sign.

coalition. An ad hoc arrangement between two or more nations for common action. (JP 1-02)

combatant command. A unified or specified command with a broad continuing mission under a single commander established and so designated by the President, through the Secretary of Defense, and with the advice and assistance of the Chairman of the Joint Chiefs of Staff. Combatant Commands typically have geographic or functional responsibilities. (JP 1-02)

combatant command (command authority). Nontransferable command authority established by title 10 (Armed Forces), United States Code, section 164, exercised only by commanders of unified or specified Combatant Commands unless otherwise directed by the President or the Secretary of Defense. Combatant Command (command authority) cannot be delegated and is the authority of a Combatant Commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training and logistics necessary to accomplish the missions assigned to the command. Combatant Command (command authority) should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Combatant Command (command authority) provides full authority to organize and employ commands and forces as the Combatant Commander considers necessary to accomplish assigned missions. Operational control is inherent in Combatant Command (command authority). (JP 1-02)


**Combatant Commander.** A commander of one of the unified or specified Combatant Commands established by the President. (JP 1-02)

**combined.** Between two or more forces or agencies of two or more allies. (When all allies or Services are not involved, the participating nations and Services shall be identified; e.g., combined navies.) (JP 1-02)

**combined force.** A military force composed of elements of two or more allied nations. (JP 1-02)

**communications security.** The protection resulting from all measures designed to deny unauthorized persons information of value that might be derived from the possession and study of telecommunications or to mislead unauthorized persons in their interpretation of the results of such possession and study. Communications security includes cryptosecurity, transmission security, emission security, and physical security of communications security materials and information. Also called COMSEC. (JP 1-02)

**controlling authority.** The authority that is designated to a command or individual designated having the responsibility for overall protection, distribution, and documentation of COMSEC for specific communications systems as described in NSTISSI 4006.

**concept plan.** An operation plan in an abbreviated format that would require considerable expansion or alteration to convert it into an operations plan or operation order. An operation plan in concept format contains the Combatant Commander’s strategic concept, and those annexes and appendixes deemed necessary by the Combatant Commander to complete planning. Generally, detailed support requirements are not calculated and time-phased force and deployment data files are not prepared. A concept plan with time-phased force and deployment is the same as a concept plan except that it requires more detailed planning for phased deployment of forces. Also called CONPLAN. (JP 1-02)

**deconfliction.** A systematic management procedure to coordinate the use of the electromagnetic spectrum for operations, communications, and intelligence functions. This procedure minimizes possible interference issues that might arise after frequency assignment. (JP 1-02)

**electromagnetic operational environment.** The electromagnetic operational environment includes background environmental information; the hostile, friendly, UN, host nation, and coalition forces electromagnetic order of battle within the joint task force area of responsibility; and area of influence.

**electromagnetic compatibility.** The ability of systems, equipment, and devices that utilize the electromagnetic spectrum to operate in their intended
operational environments without suffering unacceptable degradation or causing unintentional degradation because of electromagnetic radiation or response. It involves the application of sound electromagnetic spectrum management; system, equipment, and device design configuration that ensures interference-free operation; and clear concepts and doctrines that maximize operational effectiveness. Also called EMC. (JP 1-02)

**electromagnetic spectrum.** The range of frequencies of electromagnetic radiation from zero to infinity. It is divided into 26 alphabetically designed bands. Also called EMS. (JP 1-02)

**essential elements of friendly information.** Key questions likely to be asked by adversary officials and intelligence systems about specific friendly intentions, capabilities and activities to obtain answers critical to their operational effectiveness. Also called EEFI. (JP 1-02)

**expander.** A single letter code (A through Z) used in conjunction with a suffix and call sign to identify a sub-element of the position, mission, or function.

**frequency assignment (resource).** Authorization given by an administration, or other authority, for a radio station or other emitter to use a specific frequency under specified conditions in a given area of influence or interest.

**generated joint communications-electronics operating instruction.** The final product of all inputs consisting of randomly generated data that was initially input into the UN-generated joint communications-electronics operating instruction. From this product, a user can define output pages and revise many of the products based on requirement changes or output options.

**generation authority.** The authority placed upon a staff component, individual or commands having overall responsibility for generating the JCEOI. This includes gathering all information from subordinate elements, combining requirements, making changes to the original document and creating reserve editions.

**joint automated communications-electronics operating instruction system.** Joint standard software used to produce a joint communications-electronics operating instruction. Also called JACS.

**joint communications-electronic operating instruction.** An electronic or paper product that consist of the Joint Force command, control, and communications directory of units, call signs, and words and frequencies. Additionally, the joint communications-electronic operating instruction provides procedures for conducting electronic, visual and verbal communications methods (e.g., sign or countersign, smoke or pyrotechnics, suffix and expanders) to supplement or enhance radio communications. Also called JCEOI.
joint force commander.  Combatant Commander, subunified commander or JFC authorized to exercise Combatant Command (command authority) or operational control over a joint force designated by the President or Secretary of Defense.  (JP 1-02)

joint restricted frequency list.  A time and geographically oriented listing of TABOO, PROTECTED, and GUARDED functions, nets, and frequencies limited to the minimum number of frequencies necessary for friendly forces to accomplish objectives.  Also called JRFL.

joint spectrum management.  Planning, coordinating, and managing joint use of the electromagnetic spectrum through operational, engineering, and administrative procedures.  The objective of spectrum management is to enable electronic systems to perform their functions in the intended environment without causing or suffering unacceptable interference.  (JP 1-02)

joint task force.  A joint force that is constituted and so designed by the Secretary of Defense, a Combatant Commander, a subunified commander or an existing joint task force commander.  Also called JTF.  (JP 1-02)

master net list.  A communications list containing the following: net name or description, net ID, organizational code, restrictions, frequency type, power, reuse class, reuse zone, and call word or color word requirements.  List is developed for an operations plan to support requirements that can reasonably be expected in an area of responsibility.

operation plan.  An operation plan for the conduct of joint operations that can be used as a basis for development of an operation order.  An operation plan identifies the forces and supplies required to execute the Combatant Commanders strategic concept and a movement schedule of these resources to the theater of operations.  The forces and supplies are identified in time-phased force and deployment data (TPFDD) files.  Operation plans will include all phases of the tasked operation.  The plan is prepared with the appropriate annexes, appendixes and TPFDD files as described in the Joint Operation Planning and Execution System manuals containing planning policies, procedures and formats.  Also called OPLAN.  (JP 1-02)

secure mode.  In the communications context, a generic term referring to a method of communications that denies information to unauthorized recipients.  The channel, circuit, or net is secured by physical means or by the provision of on-line crypto equipment (cryptographic) as appropriate.

sign/countersign.  A confidential word challenge and its reply.  Challenge and reply words are usually classified.  (JP 1-02)
single-channel ground and airborne radio system capable radio. A specific radio that has the capability to transmit and receive in a frequency hop mode. Such a radio can also operate on a single frequency and generally operates in the 30 MHz to 88 MHz range.

spectrum-dependent equipment. Any electronic system (transmitter or receiver or both) that utilizes the electromagnetic spectrum.

suffix. A two digit number (01-99) used in conjunction with tactical organization’s call sign to indicate a specific position, mission, and function. Suffixes may be further expanded by letter (expander) to identify a sub-element of the position, mission, or function identified by the suffix.

task force. A temporary grouping of units, under one commander, formed for the purpose of carrying out a specific operation or mission. (JP 1-02)