



CHAIRMAN OF THE JOINT CHIEFS OF STAFF INSTRUCTION

J-6

DISTRIBUTION: A, B, C, J, S

CJCSI 3320.03

23 September 2002

JOINT COMMUNICATIONS ELECTRONICS OPERATION INSTRUCTIONS

References:

- a. DODD 4630.5, 11 January 2002, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)"
- b. DODD 5230.11, 16 June 1992, "Disclosure of Classified Military Information to Foreign Governments and International Organizations"
- c. CJCSI 3220.01, current edition, "Electromagnetic Spectrum Use in Joint Military Operations"
- d. CJCSM 3220.01, current edition, "Joint Operations in the Electromagnetic Battlespace"

1. Purpose. In accordance with (IAW) reference a, Enclosure B, to issue policy and guidance for planning, coordinating, and controlling electromagnetic spectrum use in military operations. To develop and implement joint doctrinal concepts and associated operational procedures to achieve interoperability of IT and NSS capabilities employed by US military forces and, where required, with joint, combined, and coalition forces and with other US Government departments and agencies. References a through d are provided for further reading.

2. Cancellation. CJCSI 3320.03, 1 January 1999, is canceled.

3. Applicability. This instruction applies to the Joint Staff, Services, unified commands, US elements of combined commands, Defense agencies, and joint activities.

4. Policy. All unified combatant commands (COCOM) and the US elements of combined commands are directed to develop and use a Joint Communications-Electronics Operation Instruction (JCEOI) to support contingency operations, training, and exercises. In order to facilitate a more seamless transition into a combined/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. The JCEOI is a two-part document. Part one is a directory of radio net or units and their associated frequencies, call signs, call words, and listed by time period. Part two contains supplemental procedures for electronic, visual, and verbal interactions such as sign/countersign, smoke/pyrotechnics, and suffix/expanders.

b. The JCEOI offers some degree of communications security (COMSEC) protection by changing 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.

c. Use of changing call signs, call words, and frequencies.

(1) Call signs and call words should be changed daily on all nets/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/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 (EMC) limitations, radio frequency (RF) propagation limitations, or insufficient spectrum resources.

(3) When using secure, frequency-hopping radio systems such as the integrated communications security (ICOM) Single-Channel Ground and Airborne Radio System (SINCGARS), these do not require 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.

d. Contingency-Master Net List (MNL)

(1) During deliberate and crisis action planning an MNL will be developed and maintained. These MNLs will contain all anticipated nets (i.e., COCOM 1, JTF 3, AC 11, etc.) for the supported OPLAN, CONPLAN, or OPORD. 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 US forces may be provided to allies in accordance with the requirements and procedures of DOD Directive 5230.11.

5. Definitions. See Glossary.

6. Responsibilities. See Enclosure.

7. Summary of Changes. This revision:

a. Updates all references to the term CINC with combatant commander(s).

b. Replaces all references to Joint Spectrum Management System with Spectrum XXI.

c. Reflects current Spectrum Management Engineering Software.

d. Modifies the Glossary using Joint Publication 1-02, "Department of Defense Dictionary of Military and Associated Terms," 12 April 2001.

8. Releasability. This instruction is approved for public release; distribution is unlimited. DOD components (to include the combatant commands), other federal agencies, and the public may obtain copies of this instruction through the Internet from the CJCS Directives Home Page -- <http://www.dtic.mil/doctrine/jel/jel.htm>. 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.

A handwritten signature in black ink, appearing to read "James A. Hawkins". The signature is fluid and cursive, with the first name "James" and last name "Hawkins" clearly distinguishable.

JAMES A. HAWKINS
Major General, USAF
Vice Director, Joint Staff

Enclosures:

- A -- Responsibilities
- GL -- Glossary

DISTRIBUTION

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ENCLOSURE

RESPONSIBILITIES

1. Chairman of the Joint Chiefs of Staff will:

a. Provide policy oversight on the development of a joint standard for and exchange of JCEOI information.

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

c. Coordinate deconflicted call word dictionaries with the combatant commander J-6s and Services.

2. Combatant commanders with geographic AORs 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 OPLANs and applicable annexes address coordination among forces for JCEOI structure and exchange of information.

(2) Establish procedures for deconfliction of call signs and call words within their AOR.

(3) Ensure liaison is made with appropriate foreign military and multilateral forces (e.g., United Nations Forces, NATO) operating as part of combined operations to ensure that unique requirements are met as part of a CJCEOI.

(4) Establish a JCEOI centralized database used in planning, historical, and contingency purposes.

3. COCOM, J-2, 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 CJTF, mission.
4. COCOM, J-3, will:
 - a. Identify applicable net requirements to the J-6 for inclusion in the MNL.
 - b. Provide J-6 with the force structure and CONOPs.
5. Combatant commanders, J-6, will:
 - a. Develop, produce, and maintain contingency MNLs for their supported and supporting OPLANs.
 - b. Promulgate guidance using a DOD standard JCEOI Information System 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 AOR.
 - g. Exercise and delegate JCEOI generation authority.
 - h. Provide technical support to the JTF, J-6.
 - i. Ensure that all combatant commanders voice and data net requirements are considered for inclusion in the joint layer of the MNL.
 - j. Establish procedures to determine secure/nonsecure status (e.g., at the net controller level) of combatant commanders voice and data nets/circuits.
6. When activated, the 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 4c(2) of the basic instruction of this publication.
 - d. Establish procedures to determine secure/non-secure status (e.g., at the net controller level) of JTF voice and data nets/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. When activated, 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 JTF's geographic AOR.
 - d. Obtain the frequency resources used for the operation.
 - e. Obtain and modify the joint layer of the JCEOI, as required.
 - f. Consolidate the MNL data received from the AFFOR, NAVFOR, ARFOR, MARFOR, JSOTF, and any coalition partners.
 - 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 (TSK's) and hopsets for frequency hopping equipment.

10. Components will:

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

b. Ensure all net requirements supporting the JTF are passed to the COCOM, J-6, or JTF, J-6, IAW with established procedures.

c. Construct a complete MNL and submit frequency resource requirements to the JTF, J-6, /JTF frequency manager IAW established procedures.

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

11. Services will equip and train personnel to operate the DOD standard JCEOI information system. Personnel who develop MNLs and generate JCEOIs should be formally trained and hold the appropriate level security clearance.

12. Joint activities will establish internal policy and procedures for the use of a standard information system for JCEOI's consistent with this instruction. The current systems available to produce JCEOI's are the RBECS and the JACS.

13. Director, National Security Agency, is responsible for:

a. Executing the INFOSEC responsibilities of the Secretary of Defense in support of the JCEOI development process and distribution.

b. Providing 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.

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

a. Assist in the development of policy and guidance for the JCEOI to combatant commanders/JTF commanders.

b. Provide direct support teams, as required, to the combatant commanders/JTF commanders in support of JCEOI development and use.

15. Electromagnetic-dependent equipment users will:

a. Adhere to the policies set forth by the combatant commanders/JTF commanders concerning JCEOI development and use.

b. Operate equipment within the parameter set forth by the JCEOI and obtain approval from the controlling authority or delegated representative to modify those parameters.

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

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GLOSSARY

PART I -- ABBREVIATIONS AND ACRONYMS

AFFOR	Air Force Forces
AOI	area of interest
AOR	area of responsibility
ARFOR	Army Forces
CJCEOI	Coalition Joint Communications-Electronics Operation Instruction
CJTF	Commander, Joint Task Force
COCOM	combatant command (command authority)
COMSEC	communications security
CONOPs	concept of operations
CONPLAN	operation plan in concept format
DISA	Defense Information Systems Agency
DOD	Department of Defense
E3	electromagnetic environmental effects
EA	electronic attack
EEFI	essential elements of friendly information
EMC	electromagnetic compatibility
EMI	electromagnetic interference
EW	electronic warfare
IAW	in accordance with
ICOM	integrated communications security
INFOSEC	information security
IT	information technology
JACS	Joint Automated Communications System
JCEOI	Joint Communications-Electronics Operation Instruction
JFC	joint force commander
JSOTF	joint special operations task force
JTF	joint task force
MARFOR	Marine Corps Forces
MNL	Contingency Master Net List
NATO	North Atlantic Treaty Organization
NAVFOR	Navy Forces

OJT	on-the-job training
OPLAN	operations plan
OPORD	operation order
RBECS	Revised Battlefield Electronic Communications- Electronics Operation Instruction System
RF	radio frequency
SINCGARS	Single-Channel Ground and Airborne Radio System
TF	task force
TSK	Transmission Security Key

PART II -- DEFINITIONS

area of influence. A geographic area wherein a commander is directly capable of influencing operations by maneuver or fire support systems normally under the commander's command or control. (The area of influence also includes the electromagnetic environment, surrounding the AOR where a potential for electromagnetic interaction exists. (Joint Pub 1-02)

area of interest (AOI). That area of concern to the commander, including the area of influence, areas adjacent thereto, and extending into enemy territory to the objectives of current or planned operations. This area also includes areas occupied by enemy forces that could jeopardize the accomplishment of the mission. (Joint Pub 1-02)

area of responsibility (AOR)

1. The geographic area associated with combatant command within which a combatant commander has authority to plan and conduct operations.

2. In naval usage, a predefined area of enemy terrain for which supporting ships are responsible for covering by fire on known targets or targets of opportunity and by observation. (Joint Pub 1-02)

call sign. A combination of alpha-characters or phonetically pronounceable characters (trigraph), which 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. (Joint Pub 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. (Joint Pub 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 JFCs 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). Also called COCOM. (Joint Pub 1-02)

combatant commander. A commander in chief of one of the unified or specified combatant commands established by the President. (Joint Pub 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.) (Joint Pub 1-02)

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

communications security (COMSEC). 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. Also called COMSEC. COMSEC includes cryptosecurity, transmission security, emission security, and physical security of communications security materials and information. (Joint Pub 1-02)

contingency Master Net List (MNL). An MNL developed for an OPLAN to support requirements that can reasonably be expected in an AOR.

controlling authority. The authority that is designated to a command or individual designated having the responsibility for overall protection, distribution, and documentation of a JCEOI.

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.

DOD standard JCEOI Information System. System designated by the Joint Chiefs of Staff as the standard for development and production of the JCEOI. Current standard system is the Revised Battlefield Electronic Communications-Electronics Operation Instruction System (RBECS). Joint Automated Communications-Electronics Operation Instruction System (JACS) is being implemented now in the forces for our future standard.

electromagnetic battlespace. The electromagnetic battlespace includes background environmental information; the hostile, friendly, United Nations (UN), host nation, and coalition forces electromagnetic order of battle, within the JTF AOR 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. (JP 1-02)

electromagnetic environmental effects (E3). The impact of the electromagnetic environment upon the operational capability of military forces, equipment, systems, and platforms. It encompasses all electromagnetic disciplines, including electromagnetic compatibility and electromagnetic interference; electromagnetic vulnerability, electromagnetic pulse, electronic protection, hazards of electromagnetic radiation to personnel, ordnance, and volatile materials; and natural phenomena effects of lightning and precipitation static. (Joint Pub 1-02)

electromagnetic interference (EMI). Any electromagnetic disturbance that interrupts, obstructs, or otherwise degrades or limits the effective performance of electronics and electrical equipment. It can be induced intentionally, as in some forms of information operations (IO), or

unintentionally, as a result of spurious emissions and responses, intermodulation products, and the like. (Joint Pub 1-02)

electromagnetic spectrum. The range of frequencies of electromagnetic radiation from zero to infinity. It is divided into 26 alphabetically designed bands. (Joint Pub 1-02)

electronic attack (EA). That division of electronic warfare considered a form of fires, involving the use of electromagnetic energy, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability. (Joint Pub 1-02)

electronic warfare (EW). Any military action involving the use of electromagnetic and direct energy to control the electromagnetic spectrum or to attack the enemy. (Joint Pub 1-02)

essential elements of friendly information (EEFI). 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. (Joint Pub 1-02)

frequency assignment. Authorization given by an administration, or other authority, for a radio station or other emitter to use a specific frequency under specified conditions.

generated JCEOI. The final product of all inputs consisting of randomly generated data that was initially input into the UN-generated JCEOI. 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, changes to the original document, and for creating reserve editions.

information operations (IO). Actions taken to affect adversary information and information systems while defending one's own information and information systems. (Joint Pub 1-02)

Joint Automated Communications System (JACS). Software used to produce a JCEOI. JACS has been selected to replace RBECS.

Joint Communications Electronic Operation Instruction (JCEOI). A document that is created to provide the JFC the voice and data network architecture to support operations. This document provides the technical characteristics of the net. A JCEOI contains or relates to the following subsections:

joint force commander (JFC). 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. (Joint Pub 1-02)

joint task force (JTF). 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. (Joint Pub 1-02)

on-the-job training (OJT). A method of military training that imparts knowledge of procedures to a trainee to accomplish a task without the trainee attending a class of formal instruction.

operation plan (OPLAN). Any plan, except for the Single-Integrated Operational Plan, for the conduct of military operations. Plans are prepared by combatant commanders in response to requirements established by the Chairman of the Joint Chiefs of Staff and by commanders of subordinate commands in response to requirements tasked by the establishing unified commander. Operation plans are prepared in either a complete format (OPLAN) or as a concept plan (CONPLAN).

operation order (OPORD). A directive issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation. (Joint Pub 1-02)

OPLAN. An operation plan for the conduct of joint operations that can be used as a basis for development of an operation order (OPORD). An OPLAN 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 TPFDD files. OPLANs 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. (Joint Pub 1-02)

Revised Battlefield Electronic Communications Electronics Operation Instructions System (RBECS). Current DOD standard software used to

produce a JCEOI. (DOD is moving to implement JACS as the standard in June 2003.)

secure mode. A generic term referring to a method of communications that denies information to unauthorized recipients. The channel/circuit/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 word that are usually classified.

Single-Channel Ground and Airborne Radio System (SINCGARS). A specific radio that has the capability to frequency hop from 30 MHz to 88 MHz ranges.

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

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. (Joint Pub 1-02)

task force (TF)

1. A temporary grouping of units, under one commander, formed for the purpose of carrying out a specific operation or mission.

2. A semipermanent organization of units, under one commander, formed for the purpose of carrying out a continuing specific task.

3. A component of a fleet organized by the commander of a task fleet or higher authority for the accomplishment of a specific task or tasks. (Joint Pub 1-02)

telecommunications. Any transmission, emission, or reception of signs, signals, writings, images, sounds, or information of any nature by wire, radio, visual, or other electromagnetic systems. (Joint Pub 1-02)

ungenerated (or raw data) JCEOI. Contains the MNL, call sign/call word dictionaries, index pages, reference pages, smoke and pyrotechnic signals definitions, suffix and expander pages, page definition (net groups), separation plans, share plans and reuse plans.