



Department of Defense DIRECTIVE

NUMBER 3222.4

July 31, 1992

Incorporating Through Change 2, January 28, 1994

USD(A)

SUBJECT: Electronic Warfare (EW) and Command and Control Warfare (C2W)
Countermeasures

- References:
- (a) Directive 3222.4, "Electronic Warfare Administration," January 28, 1980 (hereby canceled)
 - (b) DoD Directive 4600.4, "Command, Control, and Communications (C3) Countermeasures," August 27, 1979 (hereby canceled)
 - (c) [DoD Directive 5000.1](#), "Defense Acquisition," February 23, 1991
 - (d) DoD Directive 3222.2, "Department of Defense Electromagnetic Compatibility Program (EMCP)," August 20, 1990
 - (e) [DoD Directive 3100.3](#), "Cooperation with Allies in Research and Development of Defense Equipment," September 27, 1963
 - (f) DoD Directive 7750.5, "Management and Control of Information Requirements," August 7, 1986

1. REISSUANCE AND PURPOSE

This Directive reissues reference (a) and replaces reference (b) to update the administration of and organizational responsibilities for EW and **C2W** in the Department of Defense.

2. APPLICABILITY

This Directive applies to the Office of the Secretary of Defense (OSD), the Military Departments, the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Unified

and Specified Commands, and the Defense Agencies (hereafter referred to collectively as "the DoD Components"). The term "Military Services," as used herein, refers to the Army, the Navy, the Air Force, and the Marine Corps.

3. DEFINITIONS

3.1. Command and Control Warfare (C2W). The integrated use of operations security (OPSEC), military deception, psychological operations (PSYOP), electronic warfare (EW), and physical destruction, mutually supported by intelligence, to deny information to, influence, degrade or destroy adversary command and control capabilities, while protecting friendly command and control capabilities against such actions.

3.2. Electronic Protection (EP). That division of electronic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability.

3.3. Electronic Warfare (EW). Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy.

3.4. Wartime Reserve Modes (WARM). Characteristics and operating procedures of sensor, communications, navigation aids, threat recognition, weapons, and countermeasure systems that:

3.4.1. Will contribute to military effectiveness if unknown to or misunderstood by opposing commanders before they are used; but

3.4.2. Could be exploited or neutralized if known in advance.

4. POLICY

It is DoD policy to:

4.1. Ensure the development and acquisition of weapon systems, automated planning systems, and all-source intelligence information that effectively support **C2W** strategies.

4.2. Ensure that assessments by the DoD Components of vulnerabilities of friendly and hostile command and control (C2) are robust and that viable C2 of friendly and allied forces prevail.

4.3. Ensure the development and acquisition of robust war-fighting EW systems in accordance with DoD Directive 5000.1 (reference (c)), while maximizing commonality of resources among the Services and Agencies.

4.4. Develop and maintain an investment strategy that ensures an orderly process between the identification of the requirement and the development and/or acquisition of EW systems to meet the stated requirement.

4.5. Encourage cooperative EW system developments and the application of *C2W* strategies between the United States and its allies.

4.6. Ensure that operational requirement documents, mission need statements, and subsequent development, design, and test of systems shall consider and incorporate, where appropriate, *C2W* and *EP* capabilities.

4.7. Ensure that the potential for mutual interference between U.S. and allied systems is evaluated under DoD Directive 3222.2 (reference (d)) before production of U.S. systems.

4.8. Ensure effective intelligence support is provided over the life cycle of EW systems, WARM capabilities, *EP*, and *C2W*.

4.9. Ensure a vulnerability assessment strategy is considered over the life cycle of a system, and *EP* is considered at all Milestone Reviews.

5. RESPONSIBILITIES

5.1. The Under Secretary of Defense for Acquisition shall:

5.1.1. Be the DoD focal point for EW and tactical *C2W* within the Department of Defense.

5.1.2. Provide guidance on EW and tactical *C2W* policy.

5.1.3. Coordinate international EW system development and acquisition issues between the United States and its allies consistent with DoD Directive 3100.3 (reference (e)).

5.1.4. Ensure that tactical **C2W** programs, tactics, and employment are coordinated among the DoD Components and with allied nations, as necessary.

5.1.5. Provide oversight for development and acquisition of tactical land, sea, air, space, or undersea EW systems and application of WARM and tactical **C2W** strategies.

5.1.6. Review EW programs for duplication and maximum multi-Service applications. When common requirements exist and acquisition efficiencies can be realized, ensure the Services and/or Agencies are committed to joint EW designs and acquisitions.

5.1.7. Review and approve quick reaction capability programs.

5.1.8. Ensure that EP and WARM are considered throughout the system's and/or subsystem's life cycle and addressed by the Defense Acquisition Board's (DAB) program and milestone reviews.

5.1.9. Provide matrix EW technical and/or management support within the OSD on request.

5.1.10. Ensure the compatibility of U.S. tactical C2W systems so as to avoid unintentional disruption of other U.S. or allied systems.

5.1.11. Ensure availability of capabilities for development and operational test and evaluation (OT&E), including coordinated hardware and software simulations, hybrids, chambers, simulators, and open air ranges, to evaluate EW systems and the EP of weapon systems.

5.1.12. Ensure that a system is tested in an EW environment during development test and evaluation (DT&E), including the requirements for EP testing.

5.1.13. Ensure that adequate science and technology programs exist to provide technology for development and acquisition of EW systems and to support tactical C2W strategies.

5.1.14. Coordinate with the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C3I)) in the establishment of an overall comprehensive C2W strategy.

5.1.15. Ensure the development and use of common databases and presentation techniques in support of EW systems, WARM capabilities, and tactical C2W strategies in development, planning, and operations.

5.1.16. Ensure life-cycle intelligence support through the conceptualization, development, testing, employment, and deployment of EW systems, WARM capabilities, and tactical C2W strategies.

5.1.17. Ensure the coordination of the provisions of databases and specifications of U.S. systems with the Intelligence Community when EW equipment is sold overseas.

5.2. The Assistant Secretary of Defense for Command, Control, Communications, and Intelligence shall:

5.2.1. Be the DoD focal point for strategic C2W within the Department of Defense.

5.2.2. Provide guidance on strategic C2W policy.

5.2.3. Ensure the compatibility of U.S. C3 systems so as to avoid unintentional disruption of other U.S. or allied systems.

5.2.4. Ensure, in coordination with Under Secretary of Defense for Acquisition (USD(A)), that adequate science and technology programs exist to provide technology to support strategic C2W strategies.

5.2.5. Ensure that strategic C2W programs, tactics, and employment are coordinated among the DoD Components and with allied nations, as necessary.

5.2.6. Ensure the development and use of common databases and presentation techniques in support of strategic C2W planning and operations.

5.2.7. Coordinate with the USD(A) in the establishment of an overall comprehensive C2W strategy.

5.2.8. Ensure life-cycle intelligence support in support of strategic C2W strategies.

5.3. The Director, Operational Test and Evaluation, shall ensure electronic systems are tested to adequately assess the EW capability, including EP, during OT&E, including combined DT&E and/or OT&E.

5.4. The Secretaries of the Military Departments shall:

5.4.1. Identify EW and WARM-related operational requirements; conduct research, development, test, and evaluation (RDT&E) on EW systems and WARM capabilities; acquire EW and WARM capabilities; and ensure that EP is considered at each stage in the life cycle of electronic equipment.

5.4.2. Develop, in consultation with the Director of the Defense Intelligence Agency (DIA) and other intelligence agencies, current and projected baseline threat data and intelligence requirements throughout the life cycle of EW projects and support C2W strategies. With the current, projected, reactive, and technically feasible threats, develop a baseline threat scenario to be used by program managers developing systems.

5.4.3. Identify and ensure availability of logistics and manpower resources to meet readiness requirements, and conduct EW, WARM, and C2W training programs.

5.4.4. Ensure that EW, WARM, and C2W programs and databases achieve maximum standardization, interoperability, and compatibility in fulfilling common worldwide requirements. When common requirements exist and acquisition efficiencies can be realized, a commitment to joint EW designs and acquisitions shall be made. Establish joint program offices when common EW or C2W equipments are identified.

5.4.5. Coordinate with the USD(A) and the ASD(C3I), as appropriate, on all international EW, WARM, and C2W initiatives before submission at international forums.

5.4.6. Provide data, to include test data, to the Director of the DIA of U.S. systems, especially on EW systems and WARM capabilities, that have been sold to foreign countries.

5.5. The Chairman of the Joint Chiefs of Staff shall:

5.5.1. Serve as the focal point for consideration of joint and combined EW, WARM, and C2W operational matters to avoid duplication of effort and to encourage standardization, interoperability, and compatibility in fulfilling and approving of common requirements.

5.5.2. Coordinate consideration of EW, WARM, and C2W operational matters affecting relations with U.S. allies to ensure that agreed U.S. positions are established and appropriate coordination and follow-up actions are completed.

5.5.3. Advise the USD(A) and the ASD(C3I), as appropriate, on matter that affect EW, WARM, and C2W policy.

5.5.4. Ensure continuity of U.S. efforts in the North Atlantic Treaty Organization's (NATO's) Military Committee to improve allied EW and C2W capability.

5.5.5. Provide joint operational doctrine, policy, procedures, and strategic concepts or objectives to govern the coordination and employment of EW, WARM, and C2W.

5.5.6. Evaluate the capability of the Unified and Specified Commands to operate in a C2W environment representative of the anticipated threat, recommend appropriate corrective actions to the Secretary of Defense, or recommend appropriate corrective action to the Commander of the Unified and Specified Commands.

5.5.7. Ensure that the EW, WARM, and C2W planning strategies and capabilities are exercised in joint and combined exercises and tests with particular emphasis on maximizing the stress placed on the ability to interoperate between and among the Services and U.S. allies, including the operational validity of the common databases.

5.6. The Director of the Defense Intelligence Agency shall:

5.6.1. Develop, with the support of the Military Services and other intelligence agencies, current and projected baseline threat data for use in developing EW projects, WARM capabilities, and C2W strategies throughout their life cycles.

5.6.2. Validate the DoD Components' system threat assessment reports (STAR) for acquisition category (ACAT) 1 D programs (and ACAT 1 up to Milestone 1). Validate threat databases and threat assessment procedures used by the DoD Components in preparing system threat assessment for acquisition categories I-IV and highly sensitive classified programs.

5.6.3. Assist the Military Services in evaluating current, projected, technically feasible, and reactive threats in support of major decisions on EW specifications and requirements.

5.6.4. Provide support and advice to commanders for planning and conducting C2W.

5.7. The Director of the National Security Agency shall provide signals intelligence (SIGINT) and information systems security (INFOSEC) support for EW and WARM projects and C2W strategies in response to validated and confirmed requirements levied through appropriate channels. SIGINT shall be made available, through direct delivery where applicable, to operational and intelligence users in support of joint and combined operations.

5.8. The Director of the Defense Information Systems Agency (DISA) shall ensure that:

5.8.1. DISA architectures consider EW, EP, and C2W.

5.8.2. DoD and allied standards and interoperability are adequately addressed in the requirements and development process.

5.8.3. Interoperability testing is performed to verify that the requirements are met.

6. PROCEDURES

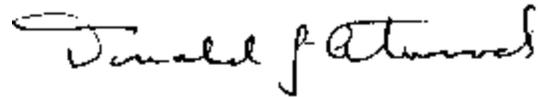
Each DoD Component shall identify and maintain an organization to oversee its EW, EP, and C2W activities.

7. INFORMATION REQUIREMENTS

The reporting requirements in this Directive are exempt from licensing in accordance with subparagraph E.4.a. of DoD Directive 7750.5 (reference (f)).

8. EFFECTIVE DATE

This Directive is effective immediately.

A handwritten signature in cursive script that reads "Donald J. Atwood".

Donald J. Atwood
Deputy Secretary of Defense