

U.S. Department of  
Homeland Security

United States  
Coast Guard



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# Electronics Manual



COMDTINST M10550.25C

May 2015



Commandant  
United States Coast Guard

US Coast Guard Stop 7710  
2703 Martin Luther King Jr Ave SE  
Washington, DC 20593-7710  
Phone: (202) 475-3466

COMDTINST M10550.25C  
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COMMANDANT INSTRUCTION M10550.25C

Subj: ELECTRONICS MANUAL

1. PURPOSE. This Manual promulgates the United States Coast Guard policy and references for the electronics community, which includes military and civilian members. This policy includes procuring, installing, maintaining, and safely supporting electronic equipment within the Coast Guard. This Manual also provides policy on the professional development of technicians.
2. ACTION. All Coast Guard unit commanders, commanding officers, officers-in-charge, deputy/assistant commandants, and chiefs of headquarters staff elements shall comply with the provisions of this Manual. Internet release is authorized.
3. DIRECTIVES AFFECTED. Electronics Manual, COMDTINST M10550.25B, is cancelled.
4. BACKGROUND.
  - a. Coast Guard modernization and implementation of the new Coast Guard business support model was the catalyst to update this Manual. Under the modernized construct, Coast Guard Headquarters establishes policy and Coast Guard Command, Control, Communications, Computers and Information Technology Service Center (C4ITSC) establishes techniques, tactics, and procedures (TTP) to implement that policy. This approach requires synergy and alignment between such policy and TTP. While the C4ITSC has published some process guides to codify electronics and C4IT TTP, additional guides are needed. The C4ITSC has a strategy and team dedicated to producing additional guides as quickly as possible.

DISTRIBUTION – SDL No. 166

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NON STANDARD DISTRIBUTION

- b. This Manual has thirteen chapters, ranging from “Overview and Organization” to “Training.” Each chapter, starting with Chapter 2, is divided into two sections: (A) Policy and (B) Resources. The Policy section will provide detailed information if an external Policy does not exist. The Policy section will contain summary information if an external Policy does exist. A list of Resources concludes each chapter. A portal site has been created which provides hyperlinks to Resources for each chapter. The site is located here:  
<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>
5. DISCLAIMER. This document is intended to provide operational requirements for Coast Guard personnel and is not intended to nor does it impose legally binding requirements on any party outside the Coast Guard.
6. MAJOR CHANGES. This Manual updates out-of-date organizational, administrative, and technical support information for the installation, maintenance, and repair of electronic equipment.
7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.
  - a. The development of this Manual and the general policies contained within it have been thoroughly reviewed by the originating office in conjunction with the Office of Environmental Management, and are categorically excluded (CE) under current USCG CE # 33 from further environmental analysis, in accordance with Section 2.B.2. and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series). Because this Manual contains guidance on, and provisions for, compliance with applicable environmental mandates, Coast Guard categorical exclusion #33 is appropriate.
  - b. This directive will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policies in this Manual must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), DHS and Coast Guard NEPA policy, and compliance with all other environmental mandates. Due to the administrative and procedural nature of this Manual, and the environmental guidance provided within it for compliance with all applicable environmental laws prior to promulgating any directive, all applicable environmental considerations are addressed appropriately in this Manual.
8. DISTRIBUTION. No paper distribution will be made of this Manual. An electronic version will be located on the following Commandant (CG-612) web sites. Internet:  
<http://www.uscg.mil/directives/>, and CGPortal:  
<https://cgportal2.uscg.mil/library/directives/SitePages/Home.aspx>.
9. RECORDS MANAGEMENT CONSIDERATIONS. This Manual has been evaluated for potential records management impacts. The development of this Manual has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C.

3101 et seq., National Archives and Records Administration (NARA) requirements, and the Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not have any significant or substantial change to existing records management requirements.

10. FORMS/REPORTS. The forms referenced in this Manual are available in USCG Electronic Forms on the Standard Workstation or on the Internet: <http://www.uscg.mil/forms/>; CG Portal <https://cgportal2.uscg.mil/library/forms/SitePages/>
11. REQUEST FOR CHANGES. Change requests shall be direct to Commandant (CG-64).

MARSHALL B. LYTLE /s/  
Rear Admiral, U.S. Coast Guard  
Chief Information Officer



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## CHAPTER 1. OVERVIEW AND ORGANIZATION

### A. Overview.

1. As a part of the United States Coast Guard reorganization in 2009, Deputy Commandant for Mission Support (DCMS) established a revised Mission Support Organization to achieve a cross-domain business model for asset management, foster sustainability through standard processes, and provide disciplined configuration management, enterprise decision-making, and pushed logistics support.
2. DCMS supports the Service's transition to a unified logistics system based on a bi-level maintenance model consisting of depot- and organizational-level maintenance throughout the entire Coast Guard. This product-line management concept streamlines service to the field, giving field operators more efficient access to information, tools, and material needed to execute the mission. DCMS is responsible for all facets of life-cycle management of Coast Guard assets from acquisition through decommissioning. This includes cutters, boats, aircrafts, buildings, and information technology.

### B. Organization.

1. DCMS has four Assistant Commandants, (1) Commandant (CG-1) Human Resources; (2) Commandant (CG-4) Engineering and Logistics; (3) Commandant (CG-6) Command, Control, Communications, Computers, and Information Technology (C4IT); (4) Commandant (CG-9) Acquisition. The DCMS Assistant Commandants define policy, recommend technical authority delegations to the Commandant, exercise oversight of the Logistics/Service Centers (LC/SCs), define requirements, and allocate resources over their respective functional responsibilities. This centralization of policy, planning, and oversight enhances Coast Guard operations by providing consistent services across the enterprise, optimizing resource allocation, and rationalizing the organizational structure.
2. DCMS has a Director of Operational Logistics (DOL) to ensure timely delivery of effective and integrated mission support during steady state and contingency operations. It also has a Force Readiness Command (FORCECOM) that optimizes CG Human Performance to enhance premier mission execution. The References section at the end of the chapter provides information about the other DCMS entities. Figure 1-1 displays the DCMS organization.

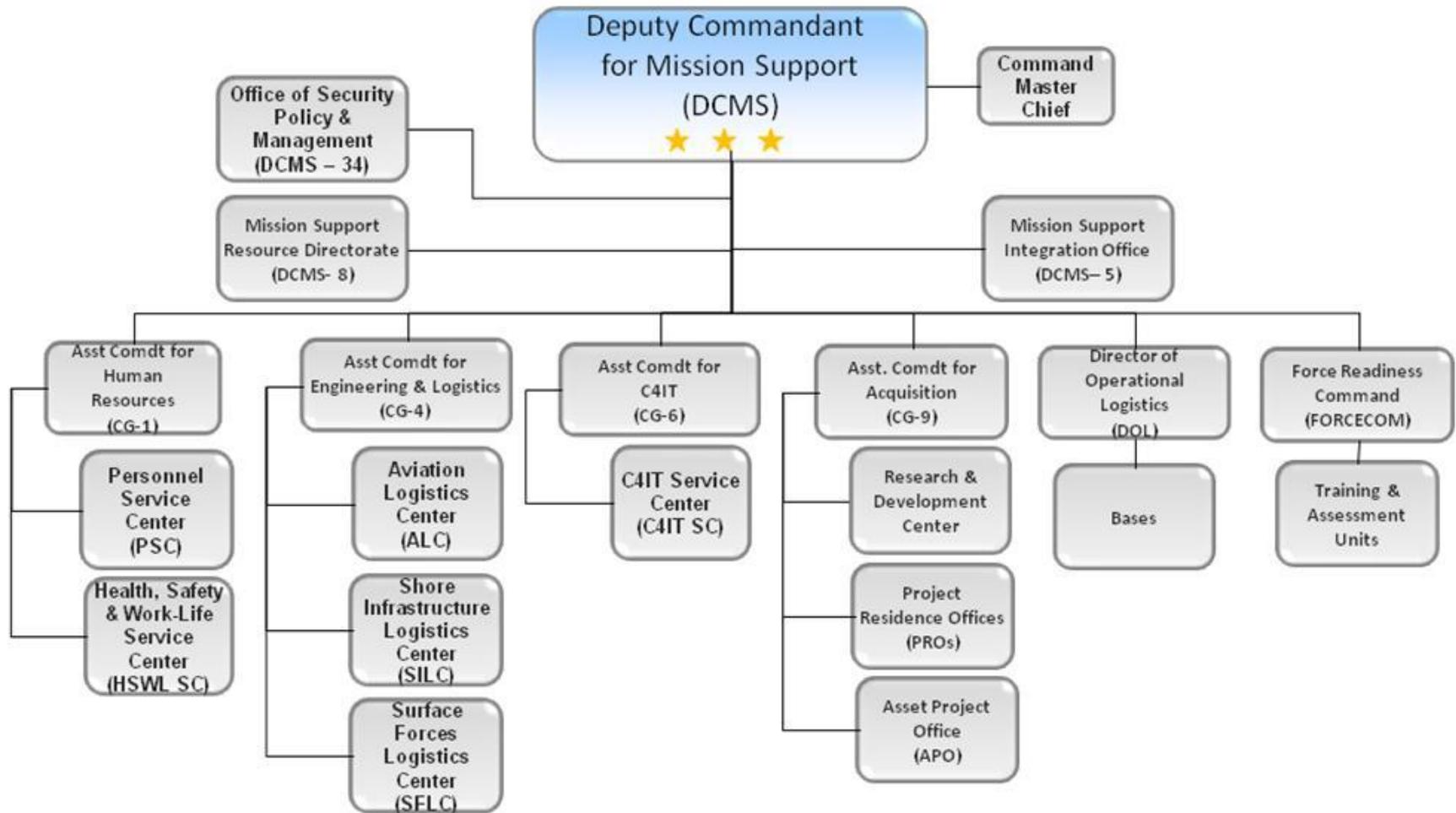


Figure 1-1 - DCMS Organization

3. Assistant Commandant for Human Resource (CG-1). Commandant (CG-1) missions are to meet the people needs of the Coast Guard and the needs of Coast Guard people. The Directorate also has the mission to determine accurate manpower requirement positions, and then fill those positions with proper military and civilian personnel.
4. Assistant Commandant for Engineering and Logistics (CG-4). Commandant (CG-4) develops, deploys, and maintains resources necessary to sustain capabilities to meet operational requirements. This includes performing or assisting in planning, design, construction, acquisition, renovation, maintenance, outfitting, and alteration of cutters, boats, aircraft, motor vehicles, Aids to Navigation, and shore facilities. Commandant (CG-4) is composed of three Centers of Excellence:
  - a. Surface Forces Logistics Center (SFLC). SFLC in Baltimore, Maryland, provides surface force logistics that enable depot-level maintenance, engineering, supply, procurement, and information services.
    - (1) SFLC Product Lines provide logistics and engineering support for the naval assets that fall within the product line. The Product Line (PL) is the primary point of contact for the operational unit, and the single point of accountability for any asset-related issue, system, or equipment. SFLC Product Line engineering sections are responsible for initiation and/or review of platform configuration and engineering change requests/projects including supporting documentation and validating operational need and justification.
    - (2) Base Naval Engineering Departments, formerly Naval Engineering Support Units (NESU), are field-level commands of the SFLC that report to the SFLC Chief, Industrial Operations Division (IOD). The IOD maintains technical authority, while Base Commanders maintain administrative authority. In coordination with PLs, the Naval Engineering Departments interact with Districts, Sectors, Base C4IT Departments, and the units as part of the overall support scheme for cutters and boats throughout Coast Guard.
    - (3) Coast Guard Yard in Curtis Bay, Maryland, is an essential part of the Coast Guard core industrial base and fleet support operations. The Yard is a contracted resource for the electronics community as it provides Time Compliant Technical Orders (TCTO) and installation services for radar, communications and navigational equipment.
  - b. Aviation Logistics Center (ALC). ALC in Elizabeth City, North Carolina, provides aviation logistics that enable depot-level maintenance, engineering, supply, procurement, and information services. Under an established Memorandum of Agreement (MOA) and Responsible, Accountable, Consulted, and Informed (RACI) Matrix, the C4ITSC directly supports ALC's Engineering Services Division (ESD). This is in alignment with the Aircraft Configuration Control Board (ACCB) process. The C4ITSC has direct representation on the ACCB Feasibility Board. The C4ITSC is also in partnership with ALC ESD for joint support of the Mission System Sustainment Lab (MSSL). The MSSL is a combined Command, Control, and Communications Engineering Center (C3CEN) and Telecommunications and

Information Systems Command (TISCOM) support lab with detached personnel supporting the fielded Command and Control Mission System suite on the HC-144 and HC-130J aircraft.

- c. Shore Infrastructure Logistics Center (SILC). SILC in, Norfolk, Virginia, provides shore activity logistics that enable depot-level maintenance, engineering, supply, procurement, and information services. SILC coordinates with the C4ITSC for construction, relocation, and expansion of shore facilities.
5. Assistant Commandant for Command, Control, Communications, Computers, and Information Technology (C4IT) (CG-6).
    - a. Commandant (CG-6) serves as the Chief Information Officer (CIO) and leverages the value of Information Technology (IT) for performing Coast Guard missions by developing and aligning enterprise strategies, policies, and resource decisions with Coast Guard strategic goals, mandates, and customer requirements. Commandant (CG-6) designs, develops, deploys, and maintains Coast Guard C4IT solutions.
    - b. CG-6 Technical Authority COMDTINST 5230.79 (series) establishes the authority for design, development, deployment, security, protection, and maintenance of Coast Guard C4IT systems and assets. Commandant (CG-6) uses its Technical Authority responsibilities and interactions with asset and system acquirers in providing best-value systems engineering and technical products to achieve best performance within total cost of ownership constraints. It is essential throughout the design, development, and sustainment of Coast Guard C4IT systems that Commandant (CG-6) addresses key technical and support issues. The Commandant (CG-6) organization develops and employs collaborative systems engineering processes that provide C4IT systems for the Coast Guard. C4IT includes any enterprise equipment, interconnected system, subsystem of hardware and software, or any national security system, used in the automatic acquisition, storage, manipulation, management, movement, control, display (including geospatial technologies), switching, interchange, transmission (wired or wireless telecommunications), or reception of data, voice, video, or information.

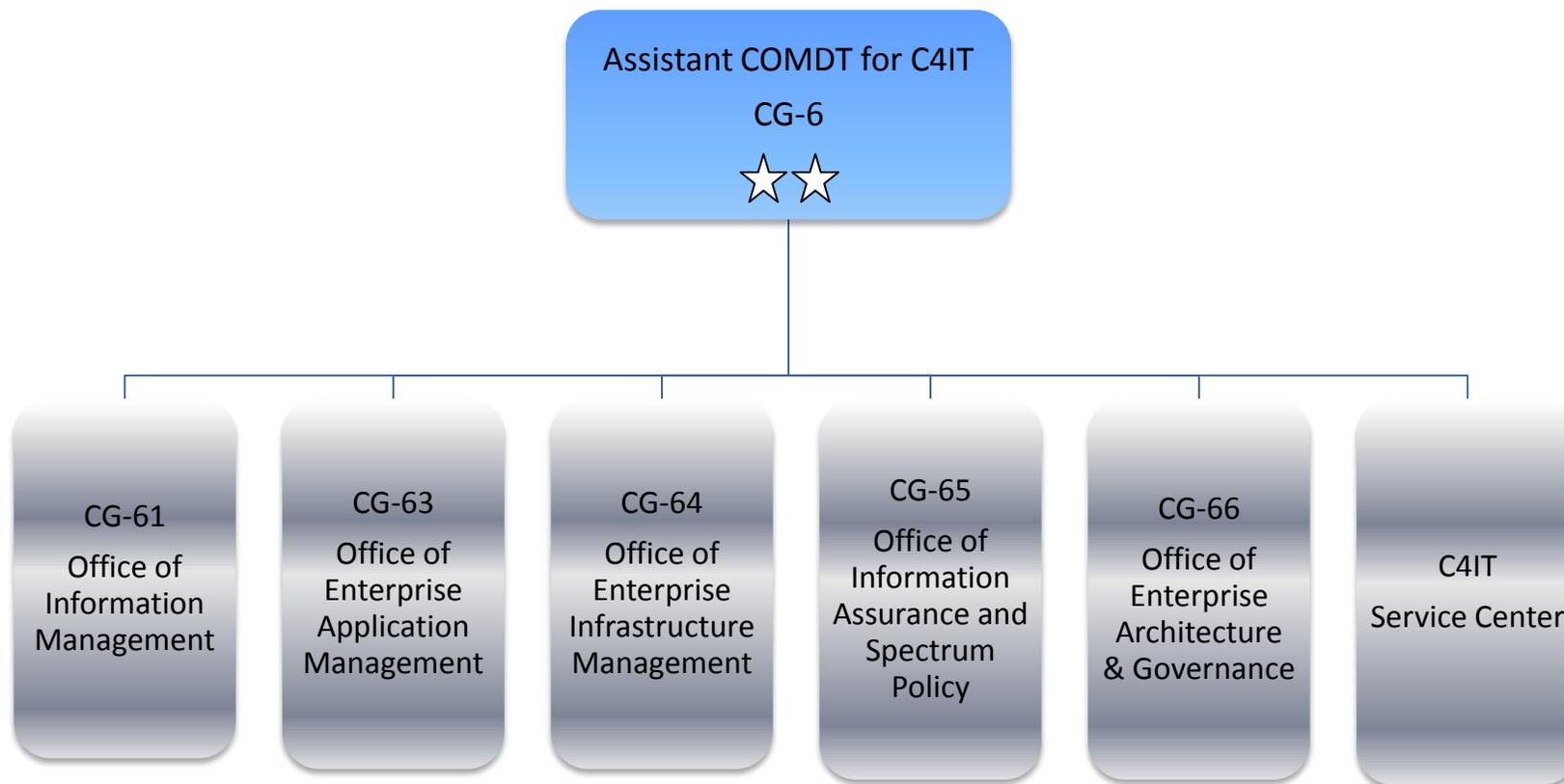
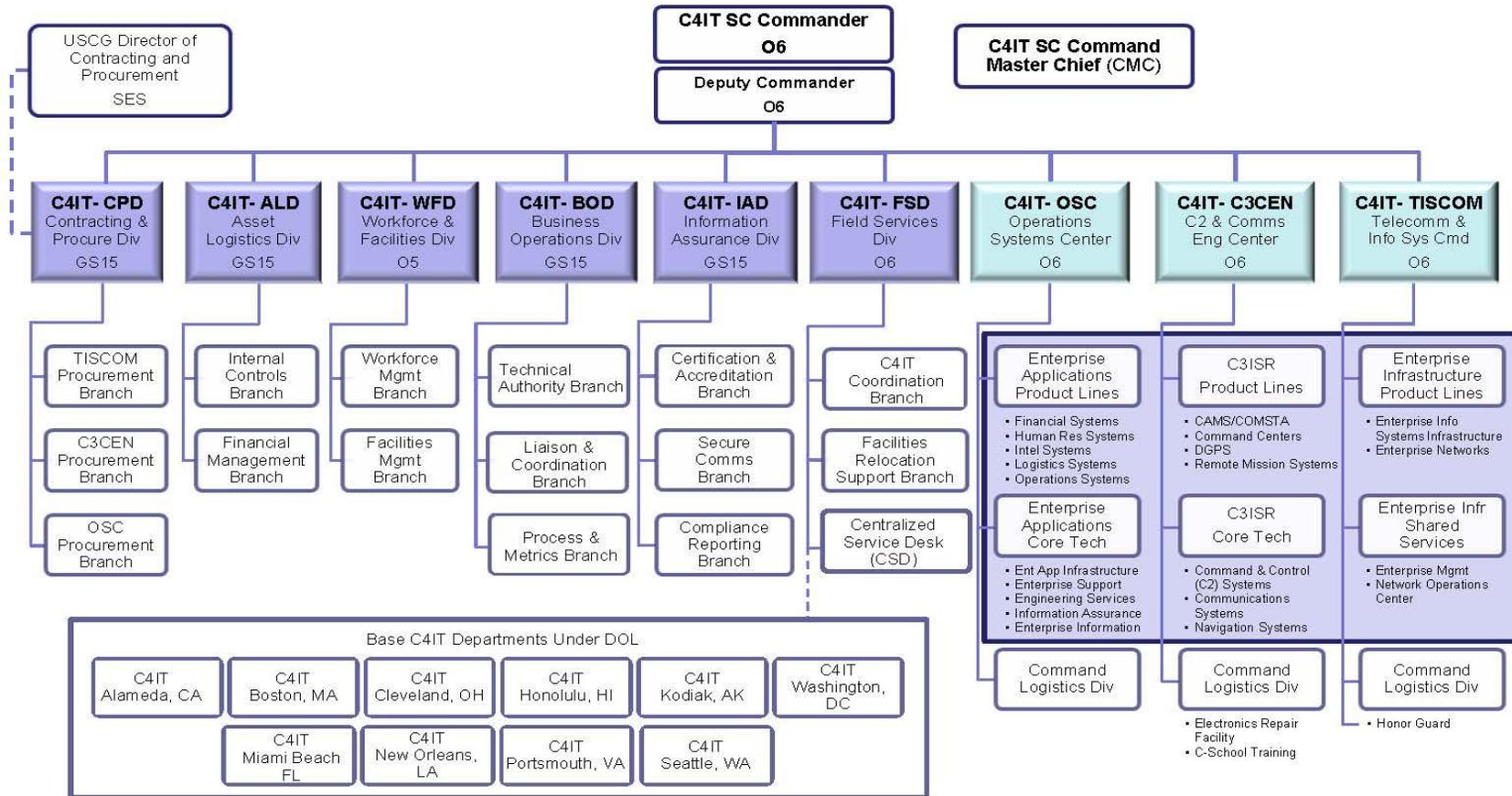


Figure 1-2 - CG-6 HQ Organization

- c. Commandant (CG-6) is composed of five Offices and one Service Center (see Figure 1-2):
- (1) Office of Information Management (CG-61). Commandant (CG-61) is responsible for the development and administration of policy for the following programs: Coast Guard Directives and Publications program, Freedom of Information (FOI) and Privacy Acts (PA), Postal, Records, Forms, Information Collection (IC), E-Government, and Correspondence.
  - (2) Office of Enterprise Applications Management (CG-63). Commandant (CG-63) is responsible for establishing policy and performing centralized management of all System Development Life Cycle phases for C4IT enterprise applications Coast Guard-wide. Commandant (CG-63) serves as the customer interface for introduction of all new business requirements, manages Enterprise Architecture (EA) coordination, and provides oversight for the design, development, and acquisition of new application systems and operations. They also oversee maintenance and enhancement of legacy application systems.
  - (3) Office of Enterprise Infrastructure Management (CG-64). Commandant (CG-64) is responsible for establishing policy and performing centralized management of all System Development Life Cycle phases for C4IT infrastructure Coast Guard-wide. Commandant (CG-64) serves as the customer interface for introduction of all new business requirements, manages EA coordination and provides oversight for the design, development, and acquisition of new infrastructure systems and operations. They also oversee maintenance and enhancement of legacy infrastructure systems.
  - (4) Office of Information Assurance and Spectrum Policy (CG-65). Commandant (CG-65) is responsible for promoting and protecting all C4IT infrastructure and its associated information. It develops and integrates effective defense-in-depth security strategies, technologies, policies, controls, and standards to ensure the reliability and availability of the Coast Guard's C4IT enterprise infrastructure to enable successful mission execution. Commandant (CG-65) aligns security and information assurance oversight in the execution of the Coast Guard Telecommunications Program (CGTP) through effective planning, evaluation, and adoption of telecommunications technology standards, and creation and enforcement of telecommunications policy.
  - (5) Office of Enterprise Architecture and Governance (CG-66). Commandant (CG-66), in collaboration and partnership with the lines of business, leads development and maintenance of the agency EA and C4IT Strategic Plan. Commandant (CG-66) supports sound capital planning and investment control (CPIC) and governance activities through technical architecture reviews of projects, products, and standards. Furthermore, Commandant (CG-66) validates requirements to ensure alignment with EA and C4IT plans, supports mission technology alignment, information sharing and component re-use, systems interoperability, technology standards, performance measurement, and information assurance. Commandant (CG-66) also promotes IT management best practices to enhance operational effectiveness and efficiency.

- (6) Command, Control, Communications, Computers, and Information Technology Service Center (C4ITSC). C4ITSC is responsible for: design, development, procurement, and deployment of all C4IT systems; depot-level maintenance of C4IT assets (IT, radios, radars, navigation systems, C2 systems, etc.); management and protection of Coast Guard's IT infrastructure; acquisition of C4IT assets; support with management of C4IT budget; promulgation of electronics support Tactics, Techniques, and Procedures (TTP) in the form of process guides and other documents. The C4ITSC shall develop and maintain process guides and other documentation to provide guidance, as appropriate, on the implementation of the CG-6 policies contained in this manual. The C4ITSC has six Shared Services Divisions to support the electronics community and consolidate electronics and information systems support from three Centers Of Excellence (see Figure 1-3):

# C4IT Service Center Organization



18 December 2014

Figure 1-3- C4ITSC Organization

- (a) Contracting and Procurement Division (CPD). CPD serves as principal advisor and first point of contact for procurement matters at C4ITSC. It provides oversight, guidance and management of the entire C4ITSC contracting process to include contract support to all Divisions. CPD manages all C4ITSC contracts from initial issue through closeout in accordance with Department of Homeland Security (DHS) and Coast Guard policies to meet audit requirements and proper stewardship expectations. Additionally, CPD provides procurement policy guidance and training to all C4ITSC procurement officials to ensure a well-trained work force properly adheres to DHS and Coast Guard policies.
- (b) Asset Logistic Division (ALD). ALD serves as the fiscal and supply lead for the C4ITSC. ALD tracks and monitors status of all resource proposals from the entire Coast Guard for impact to the C4ITSC and integration into the five-year plan. ALD provides oversight, guidance, and management of the entire C4ITSC contracting process including contract support, warranty administration, and contractor maintenance program administration. It processes invoice payments for all contracts. ALD prepares all financial statements and cost accounting reports for the C4ITSC; oversees the C4ITSC credit card program and travel budget; coordinates with the Coast Guard inventory control point for development and enforcement of supply support policy and procedures, inventory management, stocking, and distribution. It also conducts disposal of obsolete systems and components.
- (c) Workforce Facilities Division (WFD). WFD oversees administration of military and civilian personnel programs at the C4ITSC. It provides facility management for the C4ITSC facilities and acts as primary liaison with Command Staff Advisors (CSA) on civilian issues such as staffing, position classification, employee relations, and labor management relations. WFD also manages C4IT's military and civilian Personnel Allowance List (PAL) overseeing preparation and submission of all requests for personnel action. Finally, it manages C4IT training and personnel security in coordination with the COEs and other Shared Services Divisions.
- (d) Business Operations Division (BOD). BOD leads strategic planning, business analysis, business process/implementation, and measurement management for the C4ITSC. BOD provides statistical, analytical, and business modeling services to the C4ITSC while also analyzing seasonal demand trends, safety levels, stock position, procurement lead-time, mission change and operational plans to determine material support requirements and develop long-range forecasts for base year and up to five future years for material requirements. It also acts as C4IT technical authority on cutter and boat acquisitions and shepherds C4IT systems into sustainment. Additionally, the BOD develops and maintains departmental metrics for critical activities to gauge program

success and identify areas of concern and report data to Business Services.

(e) Information Assurance Division (IAD). IAD ensures compliance, reporting, information systems security and systems security analysis for all Classified and Sensitive But Unclassified (SBU) Networks and systems across the Coast Guard. It coordinates with and supports Commandant (CG-651) and field units with all Cyber and Information System Security (ISS) related activities and the protection of all Coast Guard systems and the information it contains. It acknowledges, disseminates, and reports Department of Defense (DoD) Information Assurance Vulnerability Management (IAVM) alerts, DHS Information Security Vulnerability Management (ISVM) alerts, U.S. Cyber Command (USCYBERCOM) Orders and Directives, and DHS CIO Tracking alerts. IAD provides management of the Vulnerability Management System (VMS). It provides security assessments and guidance for TCTO/Software and Hardware, System Development Life Cycle (SDLC) evaluations for IA requirements, Blue Team security assessments for CG IT systems, and Website Vulnerability Scanning. IAD conducts IA violation investigations. It also provides Independent Verification & Validation (IV&V) scanning for enterprise C4IT systems, a Coast Guard wide scanning program, identification of security weaknesses, and recommend corrective actions.

(f) Field Services Division (FSD).

[1] FSD oversees Base C4IT Departments (formerly Electronic Systems Support Units [ESU]) and Electronic Support Detachments (ESD) to provide depot-level electronics and IT support for all mission execution requirements. ESDs also provide organizational-level support.

[2] From a maintenance perspective, FSD manages the C4IT component of cutter Drydock and Dockside availabilities. It provides management of C4IT projects during new construction, relocation, or expansion to shore facilities coordinating with the applicable C4IT Core Technologies/Product Lines as well as SFLC and SILC Product Lines. It provides management and technical support for C4IT test equipment. Additionally, FSD manages AFC-30, AFC-42 (Casualty Reports [CASREP]/ Integrated Logistic Support [ILS]/Drydock/Dockside), and AFC-80 (Navy Type Navy Owned [NTNO]) funding for all Base C4IT Departments.

[3] FSD provides oversight and management of the Coast Guard Centralized Service Desk (CSD). Under direction of FSD, the CSD provides consistent service by ensuring all users have the same interface for C4IT support, regardless of location. Additionally,

the CSD provides a single touch point internally within the C4IT program, giving Base C4IT Departments and the C4IT Product Lines at TISCOM, OSC, and C3CEN a unified pathway for incident management and request fulfillment.

- (g) Operations System Center (OSC). Located in Martinsburg, West Virginia, OSC is a government-owned, contractor-operated facility with the primary function of providing full life-cycle support for operationally focused Coast Guard Automated Information Systems.
- (h) Command, Control, Communications, Engineering Center (C3CEN). Located in Portsmouth, Virginia, C3CEN develops, builds, fields, trains, and supports advanced electronic command, control, and navigation systems. C3CEN facilitates evolutionary engineering that focuses on rapid deployment of essential functionality followed by planned improvements based on enhanced or refined requirements. In addition to providing maintenance and troubleshooting assistance for its assigned systems that are beyond the scope or capability of organizational-level support, C3CEN provides a point of contact for technical liaison and information through the Centralized Service Desk (CSD).
- (i) Telecommunications and Information Systems Command (TISCOM). Located in Alexandria, Virginia, TISCOM serves as the Coast Guard Center of Excellence (COE) for enterprise IT infrastructure. As such, TISCOM develops, deploys, secures, and supports Coast Guard IT Infrastructure for both the Sensitive But Unclassified (SBU) and SECRET enterprises.

6. Assistant Commandant for Acquisition Directorate (CG-9).

- a. Commandant (CG-9) is responsible for Coast Guard's multi-billion dollar recapitalization investment portfolio that includes major acquisition programs and projects. The fundamental aspect of recapitalization (replacing obsolete or cost-prohibitive assets) is that it achieves a sustainable fleet and field readiness. Commandant (CG-9) accomplishes recapitalization objectives by acquiring new assets, or upgrading legacy platforms, mission systems and/or facilities. These investments facilitate readiness by delivering cutters; small boats; aircraft; and electronic Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems that meet specified performance requirements.
- b. The Program Authority is the Commandant (CG-9) acquisition project manager. The Program Authority, in conjunction with the Contracting Authority and Program Sponsor, has cognizance over the acquisition and acceptance of the asset or system. In executing its acquisition responsibilities, the Program Authority works collaboratively with the Technical Authority (notably the C4ITSC BOD-Technical Authority Branch) from program inception to include and administer established policies, standards, guidelines, architecture, and best practices. The Program Authority, in conjunction

with the Contracting Authority, implements results of the Technical Authority's adjudication of changes and deviations to established standards. The Program Authority facilitates collaborative efforts between industry and government members.

- c. Commandant (CG-9) also oversees the Research and Development Center (RDC). The RDC in Groton, Connecticut, is responsible for evaluating the feasibility of mission execution solutions and providing operational and risk-management analysis at all stages of the acquisition process. The Coast Guard Research, Development, Test, and Evaluation (RDT&E) program enhances acquisition and mission execution by providing applied scientific research, development, testing, and evaluation of new technologies for the maritime environment. The RDT&E program pursues technologies that improve the way Coast Guard does business. At any given time, the RDC is working on numerous projects that support short, medium, and long-range requirements across all major missions.
  7. Director of Operational Logistics (DOL). DOL ensures timely delivery of effective and integrated mission support during steady state and contingency operations. DOL-3 is directly relevant to the electronics community because it serves as the first line supervisor to all Base Commanding Officers. It also serves as coordinator and liaison between Bases and Technical Authorities at each DCMS Logistics and Service Centers. Additionally, a team within DOL-3 executes the Logistics Compliance Inspection (LCI) program. The team manages compliance in conjunction with the Logistics and Service Centers to ensure standardization of mission support delivery.
  8. Force Readiness Command (FORCECOM). FORCECOM, located in Norfolk, VA, optimizes CG Human Performance to enhance premier mission execution by providing: Clear Tactics, Techniques, and Procedures; Relevant Sustainment Training; Quality Assessments. FORCECOM has four Divisions:
    - a. Tactics, Techniques, and Procedures (TTP) Division (FC-P). FC-P integrates and standardizes the rapid development, publication, and maintenance of Coast Guard TTPs, based on a foundation of field feedback and lessons learned.
    - b. Training Division (FC-T). FC-T delivers performance support to the field that includes relevant resident and distance training and performance support tools. They use human performance technology to ensure that data driven training is driven by field needs and is aligned with policy.
    - c. Assessment Division (FC-A). FC-A conducts data analysis driven by policy, TTP, and training to assist units to optimize resources and capabilities. By applying readiness metrics, human performance cycle, and identifying readiness gaps, they drive systematic resolutions and maximize unit readiness.
    - d. Exercise Support Division (FC-ES). FC-ES provides professional support and expertise in the design, development, conduct, and after-action reporting for all-threats/all-hazards contingency exercises.
- C. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
CG-6 Technical Authority	COMDTINST 5230.79 (series)
Command, Control, Communications, Computers and Information Technology (C4&IT) Enterprise Architecture (EA) Policy	COMDTINST 5230.68 (series)
USCG DCMS Field Support Concept of Operations	N/A

Table 1-1- Chapter 1 Resources



## CHAPTER 2. ACQUISITION

A. Policy. Acquisition policies ensure systems satisfy customers' needs, increase the probability of system success, minimize risk, and minimize total-life-cycle cost.

1. Major system acquisitions include equipment, services, and intellectual property (e.g., software, data, etc.) that are acquired by the Coast Guard through purchase, construction, manufacture, lease, or exchange and may also include improvements, modifications, replacements, or major repairs. A complete system includes processes and people; integration, testing, logistics, and training as well as the human operator, maintainer, supporter and trainer who are all components of the overall system.
  - a. Commandant (CG-9) and C4ITSC BOD-Technical Authority Branch (TAB) shall collaborate with stakeholders for all C4IT major acquisitions or for major acquisitions with a C4IT component. This collaboration will ensure major acquisitions follow Commandant (CG-9) Major System Acquisition Manual (MSAM), COMDTINST M5000.10 (series), for governance and DHS System Engineering Life Cycle (SELC), which is contained in the MSAM, for systems engineering.
  - b. Further, this collaboration will ensure major acquisitions successfully transition from the SELC to the SDLC for Operations and Maintenance (O&M) as required by the MSAM. C4ITSC BOD-TAB shall ensure entrance criteria are satisfied for the SDLC O&M Phase. Commandant (CG-6) will place the major acquisition system into the SDLC O&M Phase after the entrance criteria have been satisfied.
2. Non-major acquisitions are those investments that are below the threshold for investments as defined in the MSAM and are relatively high visibility, high risk, complex, essential to mission execution, or require significant integration. Non-major acquisitions follow Commandant (CG-9) Non-Major Acquisition Process (NMAP), COMDTINST M5000.11 (series), for governance and Commandant (CG-6) Command, Control, Communications, Computers and Information Technology (C4&IT) System Development Life Cycle (SDLC) Policy, COMDTINST 5230.66 series, for system engineering. Commandant (CG-6) will designate SDLC roles, in writing, to the specific Coast Guard organizations or individuals, as necessary, to ensure alignment and accountability.
3. Advance sustainable acquisitions to ensure that new contract actions including task and delivery orders, for products and services with the exception of acquisition of weapon systems, are energy-efficient (Energy Star or Federal Energy Management Program (FEMP) designated), water-efficient, bio-based, environmentally preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT) certified), non-ozone depleting, contain recycled content, or are non-toxic or less toxic alternatives, where such products and services meet agency performance requirements.
  - a. Executive Order (EO) 13423, "Strengthening Federal Environmental, Energy, and Transportation Management", mandates:
    - (1) Consider the "End-Of-Life" cost in the overall costs of electronic equipment acquisition.

- (2) Promote purchasing of green electronics certified as meeting stringent environmental performance criteria that address environmental impacts across the entire lifecycle of the products.
    - (3) Ensure expansion of quality green electronics certification programs, including EPEAT, to consider environmental impacts across entire product lifecycles and to cover additional types of electronics.
  - b. Executive Order (EO) 13514, “Federal Leadership in Environmental, Energy, and Economic Performance”, mandates:
    - (1) Ensure procurement preference for EPEAT-registered electronic products.
    - (2) Ensure the procurement of Energy Star and FEMP designated electronic equipment.
4. Significant supporting acquisition policies are summarized below:
  - a. Command, Control, Communications, Computers and Information Technology (C4&IT) Investment Management Policy, COMDTINST 5230.71 (series), and its associated C4IT investment management practices provides information on C4IT investment, management roles, and responsibilities.
  - b. DHS Information Technology Integration Management (ITIM), Management Directive (MD) 0007.1 (series), requires Information Technology Acquisition Review (ITAR) approvals for all C4IT procurement investments over \$100,000 prior to obligation. ITAR packages with a Total Estimated Potential Value (TEPV) between \$100K and \$2.5M require Coast Guard CIO approval. ITAR packages with a TEPV \$2.5M and greater require DHS CIO approval.
  - c. Command, Control, Communications, Computers and Information Technology (C4&IT) Enterprise Architecture (EA) Policy, COMDTINST 5230.68 (series), drives the EA process that is essential for taking a strategic approach to planning and managing C4IT resources and making effective use of limited IT dollars.
  - d. Command, Control, Communications, Computers and Information Technology (C4&IT) Infrastructure Management Policy, COMDTINST 5230.70 (series), addresses enterprise utilities of standardized telecommunication, computer hardware and software components, and services that enable Coast Guard personnel to access, use, and store information needed to perform their jobs and accomplish Coast Guard missions.
  - e. U.S. Coast Guard Security and Information Assurance (SIA) Manual, COMDTINST M5500.13 (series), ensures that the Coast Guard Information Assurance program and its associated processes are a part of the SDLC process. Furthermore, all C4IT systems must demonstrate that they incorporate IT security controls aligned with Federal Information Processing Standards (FIPS) publications and National Institute of Standards and Technology (NIST) guidance to meet Federal Information Security Management Act (FISMA) and Office of Management and Budget (OMB) guidance.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Command, Control, Communications, Computers and Information Technology (C4&IT) Enterprise Architecture (EA) Policy	COMDTINST 5230.68 (series)
Command, Control, Communications, Computers and Information Technology (C4&IT) Infrastructure Management Policy	COMDTINST 5230.70 (series)
Command, Control, Communications, Computers and Information Technology (C4&IT) Investment Management Policy	COMDTINST 5230.71 (series)
Command, Control, Communications, Computers and Information Technology (C4&IT) System Development Life Cycle (SDLC) Policy	COMDTINST 5230.66 (series)
DHS Acquisition Directive (AD)	DHS (AD) 102-01
DHS Acquisition Instruction/Guidebook	DHS 102-01-001
DHS Information Technology Integration Management (ITIM)	Management Directive (MD) 0007.1 (series)
DoD Technology Readiness Assessment (TRA) Guidance	N/A
Executive Order (EO) Federal Leadership in Environmental, Energy, and Economic Performance	13514
Executive Order (EO) Strengthening Federal Environmental, Energy, and Transportation Management	13423
Financial Resource Management Manual – Procedures (FRMM-P)	COMDTINST M7100.4 (series)
Financial Resource Management Manual (FRMM)	COMDTINST M7100.3 (series)
Major System Acquisition Manual (MSAM)	COMDTINST M5000.10 (series)
Non-Major Acquisition Process (NMAP)	COMDTINST M5000.11 (series)
Security and Information Assurance (SIA) Manual	COMDTINST M5500.13 (series)
Simplified Acquisition Procedures (SAP) Manual	COMDTINST M4200.13 (series)
Total Ownership Cost Guiding Principles	COMDTINST M4140.1 (series)
U.S. Coast Guard Personal Property Management Manual	COMDTINST M4500.5 (series)
USCG System Development Life Cycle (SDLC) Practice Manual	SDLC Product #107

Table 2-1- Chapter 2 Resources



### CHAPTER 3. SYSTEM DEVELOPMENT LIFE CYCLE (SDLC)

A. Policy. The Command, Control, Communications, Computers and Information Technology (C4&IT) Development Life Cycle (SDLC), COMDTINST 5230.66 (series), is a methodology for developing Coast Guard C4IT systems through a progression of activities for conceptual planning, planning and requirements definition, design, development and testing, implementation, operations and maintenance, and disposition. A C4IT system is any combination of related people, methods or processes, hardware, software, data and telecommunications components utilized to accomplish mission or business needs. The SDLC governs systems development and support by System Development Agents (SDAs), System Support Agents (SSAs), and those employed to deliver or support Coast Guard C4IT systems. SDAs and SSAs may develop local implementing practices to augment the SDLC. However, local practices must meet all requirements of the SDLC.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Command, Control, Communications, Computers and Information Technology (C4&IT) System Development Life Cycle (SDLC) Policy	COMDTINST 5230.66 (series)
USCG System Development Life Cycle (SDLC) Practice Manual	SDLC Product #107

Table 3-1- Chapter 3 Resources



## CHAPTER 4. SAFETY

- A. Policy. All Coast Guard technicians are required to know and apply safety policies and best practices in a manner consistent with applicable directives. Extensive safety guidance exists within Coast Guard, DoD, other government agencies, and commercial directives.
1. Lock-Out/Tag-out.
    - a. Shipboard equipment shall be isolated in accordance with Equipment Tag-Out Procedure, COMDTINST 9077.1 (series).
    - b. Shore equipment shall be isolated in accordance with 29 CFR 1910.147 and 1910.331-.335.
  2. Energized Equipment.
    - a. Energized equipment is any system or component where energized circuits are readily accessible to incidental contact with tools or personnel.
    - b. Personnel working on afloat assets shall comply with the safety precautions and guidelines provided in the Shipboard Regulations Manual, COMDINST 5000.7 (series) and Naval Ships' Technical Manual (NSTM) Chapter 300 when working on energized equipment.
    - c. Personnel working on shore assets shall comply with CFR 1910.332 and 1910.333 when working on energized equipment.
  3. Wire and Antenna Safety. The following applies to all electronic repair and maintenance actions near wires and antennae:
    - a. Wire Antenna Safety. Danger signs and other safety markings shall be posted in the antenna's vicinity in accordance with Radiation Hazard Control drawings. These drawings can be found on Naval Engineering Technical Information Management System (NE-TIMS) for cutters and shore units.
    - b. Rotating Antenna Safety.
      - (1) Antenna Safety Disconnect Switches are installed and used on cutters for all rotatable antenna systems. Use of these switches will prevent both antenna rotation and system radiation prior to personnel entering the antenna swing circle. These switches may be installed below the antenna platform, on or near the base of the mast, or in the pilothouse depending upon the cutter class, but shall be easily accessible and clearly marked. Antenna Safety Disconnect Switches shall not be used in lieu of applicable equipment tag-out/lock-out procedures.
      - (2) When in use, placards shall be placed on the safety switches indicating the date, time, and name of the individual placing the placard.
  4. CPR Training and Certification. Prior to working on electrical and electronic equipment, all Electronic Technicians and Information Systems Technicians shall be

Cardiopulmonary Resuscitation (CPR)/Automatic External Defibrillator (AED) certified by an accredited training source, which includes certified CG member instructors who are authorized by the command.

5. Protective Equipment. PPE must be available for use in work areas and is required for working on electrical or electronics equipment per unit safety regulations, the Hazardous Communication for Workplace Materials, COMDTINST M6260.21 (series), and the Electrical Safety Program as described in the Naval Engineering Manual COMDTINST M9000.6 (series). Technicians must maintain safety equipment and ensure devices are ready-to-use at all times.
6. Safety Devices and Equipment.
  - a. Shorting/grounding probes, rated at 25,000 volts, shall be available to discharge electrical equipment capable of storing electrical energy in accordance with NSTM Chapter 300.
  - b. Safety devices, including AEDs, shall be inspected, tested, and documented periodically to ensure that they are functioning properly.
7. Electronic Workbenches.
  - a. Units with Electronic Technicians shall maintain at least one electrically safe workbench complying with or exceeding the safety standards contained in NSTM Chapter 300-H.
  - b. All workbenches shall have signs posted above the workbenches indicating whether they are electrically safe in accordance with NSTM Chapter 300-H.
8. General and Power Tool Safety.
  - a. Portable electric tools or equipment plugged into receptacles shall be equipped with a ground wire and three-prong plug, except for double insulated tools which may have a two-prong plug as permitted by NSTM Chapter 300.
  - b. All portable electric tools and equipment shall be inspected and tested in accordance with NSTM Chapter 300.
9. Rubber Floor Matting. Rubber floor matting shall be MIL-DTL-15562 compliant.
10. High Voltage and Power.
  - a. High voltage warning and danger signs shall be posted conspicuously, generally at eye level, on equipment containing more than 1000 volts aboard cutters and on equipment containing more than 600 volts at shore facilities.
  - b. Equipment with more than one power source exceeding 12 volts shall have a permanent label conspicuously affixed warning personnel that multiple power sources exist and identifying the location of the circuit breakers or cut-out switches of the power sources.

11. Handheld Radios.

- a. All handheld radios procured by Coast Guard units shall be approved intrinsically safe in accordance with FM Global standards 3600 and 3610.
- b. Handheld radios shall be certified for the following hazardous location Classes, Divisions, and Groups as defined in Article 500 of the National Electric Code:
  - (1) Classes I, II, and III.
  - (2) Division I.
  - (3) Groups D, F, and G.

12. Battery Safety. The Coast Guard currently uses three types of batteries (1) Lead acid, (2) Nickel Cadmium (NiCad) and (3) Lithium. Different battery types shall be stored and disposed in accordance with the Hazardous Waste Management Manual, COMDTINST M16478.1 (series).

13. Combat Systems Operational Sequencing System (CSOSS). CSOSS is a collection of books that contain system documentation providing step-by-step procedures and information necessary to operate, isolate, and perform casualty control for combat, navigation, and communications systems. CSOSS shall be developed for cutters with an onboard weapon system and C4ISR suite beginning with the WMSL class cutters. SFLC-ESD-EOB manages the program with oversight from Commandant (CG-64) for NTNO electronic systems and C4ITSC for non-NTNO electronic systems.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Cutter Organization Manual	COMDINST M5400.16 (series)
Electrical Protective Devices	29 CFR 1910.137
Electromagnetic Environmental Effects (E3) Policy	COMDTINST 2450.1 (series)
Emergency Eyewash and Shower Equipment	ANSI Z358.1
Equipment Tag-Out Procedure	COMDTINST 9077.1 (series)
Fall Protection Code	ANSI Z359.1
FM Global - Approval Standard for Electrical Equipment for Use in Hazardous (Classified) Locations - General Requirements	Class Number 3600
FM Global - Approval Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division I, Hazardous (Classified) Locations	Class Number 3610
Handling and Disposal of Polychlorinated Biphenyls	COMDTINST M16478.2 (series)
Hazardous Waste Management Manual	COMDTINST M16478.1 (series)
National Electric Code	NEC Article 500
Naval Engineering Manual	COMDTINST M9000.6 (series)
Naval Engineering Technical Information Management System (NE-TIMS) Website	N/A
Naval Ships' Technical Manual - Electric Plant - General	NSTM Chapter 300
Occupational and Safety Health Standards - Electrical	29 CFR 1910.332-.333
Protecting Personnel from Electromagnetic Fields	DoDI 6055.11
Safety and Environmental Health Manual	COMDTINST M5100.47 (series)
Shipboard Regulations Manual	COMDTINST M5000.7 (series)
Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear	ASTM F2413
Standard Specification for Rubber Insulating Matting	ASTM D178
Standard Test Methods for Foot Protection	ASTM F2412
Switchboard Matting	MIL-DTL-15562 (series)
The Control of Hazardous Energy (Lockout/Tagout)	29 CFR 1910.147
Tower Manual	COMDTINST M11000.4 (series)

Table 4-1- Chapter 4 Resources

## CHAPTER 5. INSTALLATIONS

A. Policy. Coast Guard electronics installation policies vary depending upon the domain (surface, aviation, ashore). The electronic installation policy discussed in this Manual is for surface and shore. Complying with formal installation policy will result in the commonality of purpose among all domains to provide safe, efficient, reliable, and properly configured electronic installations. This policy will assure that all Coast Guard electronics system installations are consistent for each asset and/or system. Electronic system installation shall be implemented as specified by the applicable engineering authority responsible for that asset or system. All personnel responsible for electronic system installation activities shall adhere to the following objectives:

1. Be familiar with modernized and non-modernized procedures that may change as the Coast Guard moves forward to fully modernized processes.
2. Ensure system nomenclatures are assigned to group components for inclusion in Configuration Management and Property Management programs.
3. Adhere to DOD-STD-2003 Electrical Plant Installation Standard Methods. Also, adhere to Navy Installation Maintenance Book (NIMB) Installation Standards, NAVSEA SE000-00-EIM-110 and NSTM Chapter 400-Electronics NAVSEA S9086-ND-STM-000 for electronic equipment/systems installations on Coast Guard cutters and boats.
4. Apply spectrum management requirements in accordance with Commandant (CG-652) Spectrum Management Policy and Procedures, COMDTINST M2400.1 (series).
5. Comply with the Coast Guard Tempest Program, COMDTINST M2241.6 (series).
6. Complete a System Operation Verification Test (SOVT) at the conclusion of all electronics installations at any Coast Guard unit, ashore or afloat.
7. Submit a Ship's Configuration Change Form, OPNAV 4790/CK (and 4790/CK-2 continuation form, if necessary), or equivalent form for ashore installations, for equipment configuration changes including installations, modifications, relocations, or removals.
8. Adhere to Executive Order (EO) 13514, "Federal Leadership in Environmental, Energy, and Economic Performance" by:
  - a. Enabling power management, duplex printing, and other energy-efficient or environmentally preferable features on all eligible agency electronic products.
  - b. Implementing best management practices for energy-efficient management of servers and data centers.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Aeronautical Engineering Maintenance Management Manual	COMDTINST M13020.1 (series)
DOD Electrical Plant Installation Standard Methods	DOD-STD-2003
Equipment/System Integrated Logistics Support Plan (EILSP) and Equipment Support Sheet (ESS) Development and Maintenance Responsibilities	COMDTINST 4105.7 (series)
Executive Order (EO) Disposal of Computers for Learning	12999
Executive Order (EO) Federal Leadership in Environmental, Energy, and Economic Performance	13514
Maintenance Management Policy	COMDTINST 4790.3 (series)
Naval Engineering Manual	COMDTINST M9000.6 (series)
Naval Ships' Technical Manual – Electronics	NSTM Chapter 400 - NAVSEA S9086-ND-STM-000
Naval Shore Electronics Criteria, Installation Standards and Practices	NAVELEX 0280-LP-900-8000
Navy Installation Maintenance Book (NIMB) Installation Standards	NAVSEA SE000-00-EIM-110
Ship's Configuration Change Form	OPNAV 4790/CK
Ship's Configuration Change Form Continuation Sheet	OPNAV 4790/CK (C)
Spectrum Management Policy and Procedures	COMDTINST M2400.1 (series)

Table 5-1- Chapter 5 Resources

## CHAPTER 6. MAINTENANCE

A. Policy. Coast Guard electronics maintenance policies vary depending on the domain (surface, aviation, ashore). The electronic maintenance policy discussed in this chapter is for surface and shore. This policy also applies to aviation equipment when it is maintained by Electronics Technicians.

1. Planned Maintenance System (PMS). Units using planned maintenance practices have achieved significant reductions in corrective maintenance actions. PMS is mandatory at all Coast Guard units.
  - a. Training material shall not be used to conduct maintenance.
  - b. Recurring maintenance shall not be conducted without a Maintenance Procedure Card (MPC) approved by the CG-6 designated System Development Agent (SDA) or System Support Agent (SSA).
2. Objectives.
  - a. Ensure Coast Guard units maintain the level of operational readiness necessary for Coast Guard missions.
  - b. Provide standardized planned maintenance procedures for electronic equipment within the Coast Guard.
  - c. Provide the necessary and required tools to plan, schedule, and perform effective planned/preventative maintenance.
  - d. Track maintenance hours in the appropriate logistics systems to help support the maintenance staffing model.
3. Levels. As defined in Maintenance Management Policy, COMDTINST M4790.3 (series), the Coast Guard uses a bi-level maintenance model consisting of Organizational and Depot level activities.
  - a. Organizational-Level (O-Level) Maintenance. Routine maintenance performed in the field to maintain equipment in a full mission-capable status. O-Level maintenance is grouped under categories of diagnostics, inspections, servicing, handling, and preventive/corrective maintenance. Operational units and *Electronics Support Detachments* (ESDs) normally perform O-Level maintenance. Conditions to be met for units to perform O-Level preventive and corrective maintenance are: **1**) capability (trained and equipped); **2**) capacity (available personnel resources); and **3**) authorization. ESDs are staffed to routinely perform O-Level maintenance on authorized systems aboard designated units that are not resourced or not fully resourced to perform their O-Level maintenance. For units that have an Electronics Technician, but are not fully resourced to perform all of the O-Level maintenance necessary to maintain their equipment in a full mission-capable status, the unit and the ESD collaborate to optimize the maintenance performed, based on resource availability. O-Level maintenance activities may be consolidated and performed by

Product Lines, Core Technologies, Base C4IT Departments, industrial activities, or a contractor for efficiency purposes or as part of a D-Level maintenance action.

- b. Depot-Level (D-Level) Maintenance. Maintenance that is beyond the field units' and ESDs' technical and/or resource capabilities. D-Level maintenance consists of repairs requiring special equipment and skills; major overhauls or the rebuilding of parts, assemblies, subassemblies, components, and end items. This includes the manufacture of parts, modifications to the component, special testing, and reclamation as required. Engineering Changes, including new equipment installations, equipment removals and equipment relocations are also classified as D-Level maintenance actions. Product Lines, Core Technologies, Base C4IT Departments, industrial activities, and contractors normally perform D-Level maintenance. ESDs and operational units are not staffed or resourced to perform D-Level maintenance; however, they may execute D-Level maintenance activities on a "by-exception" basis through collaboration with the C4IT Service Center's *Field Services Division* (FSD), who maintains Technical Authority over Base C4IT Departments and ESDs), or the Operational Commander (i.e. Area or District Commander for operational units). D-Level maintenance activities for C4IT are tasked, resourced and managed by Product Lines and Core Technologies within the C4IT Service Center.

4. Tracking.

- a. Recording of all Coast Guard maintenance actions is required by entering the information in the appropriate computerized maintenance application.
- b. SFLC and ALC shall determine the computerized maintenance application for tracking surface and aviation assets under their authority, respectively. The C4ITSC shall determine the computerized maintenance application for tracking shore-side assets under their authority.

5. Types.

- a. Preventive Maintenance. Preventive maintenance of electronic equipment consists of actions necessary to keep systems and equipment operating at their designed level of performance.
- b. Corrective Maintenance. Corrective maintenance of electronic equipment consists of actions and operations needed to restore inoperative equipment, or equipment operating at a reduced capability, to an operational condition.
- c. Progressive Maintenance. Progressive maintenance of electronic equipment includes Miniature/Microminiature (2M)/Module Test Repair (MTR) work center equipment maintenance, MTR screening, normal 2M progressive maintenance repair process, and emergency 2M progressive maintenance repair process.

- (1) The 2M/MTR program is a Navy based program the Coast Guard adopted in support of Navy Type Navy Owned (NTNO) equipment installed on board Coast Guard Cutters. Electronics Technicians attend a four-week intensive soldering course and one-week instruction course on the MTR equipment suite at TRACEN

Yorktown. The MTR program is based on component level troubleshooting involving analysis of analog signatures. C3CEN is the Program Manager for the 2M/MTR program. Activities that do not have 2M/MTR capabilities shall send suspect Electronic Assemblies (EAs) to C3CEN Electronic Repair Facility (ERF) in Baltimore, MD or to their supporting Base C4IT Department or Electronic System Support Detachment (ESD) if that unit has access to 2M/MTR capabilities. The ERF, Base C4IT Department, or ESD shall screen and repair the EA when feasible.

- (2) 2M/MTR Work Center Equipment Maintenance. The 2M/MTR work center equipment must be maintained in accordance with the applicable planned maintenance schedules and controlling documents.
6. Navy Type Navy Owned (NTNO). NTNO systems shall be maintained in accordance with the Maintenance Management Policy, COMDTINST 4790.3 (series), and the Navy's Ships Maintenance and Material Management (3-M) System Policy, OPNAVINST 4790.4. See Chapter 9 of this Manual for more information.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Aeronautical Engineering Maintenance Management Manual	COMDTINST M13020.1 (series)
Equipment/System Integrated Logistics Support Plan (EILSP) and Equipment Support Sheet (ESS) Development and Maintenance Responsibilities	COMDTINST 4105.7 (series)
Executive Order - Disposal of Computers for Learning	12999
Maintenance Management Policy	COMDTINST 4790.3 (series)
Naval Engineering Manual	COMDTINST M9000.6 (series)
Naval Engineering Technical Information Management System (NE-TIMS) Website	N/A
Naval Shore Electronics Criteria, Installation Standards and Practices	NAVELEX 0280-LP-900-8000
Navy's Ships Maintenance and Material Management (3-M) System Policy	OPNAVINST 4790.4
Spectrum Management Policy and Procedures	COMDTINST M2400.1 (series)
Technical Manual Application System (TMAPS) Website	N/A

Table 6-1- Chapter 6 Resources



## CHAPTER 7. LOGISTICS/SUPPLY

A. Policy. This chapter addresses requirements for conducting Coast Guard Electronics Logistic/Supply actions in accordance with applicable directives. Electronics logistics policies are located in System Integrated Logistics Support (SILS) Policy Manual, COMDTINST 4105.8 (series); Equipment/System Integrated Logistics Support Plan (EILSP) and Equipment Support Sheet (ESS) Development and Maintenance Responsibilities, COMDTINST 4105.7 (series); U.S. Coast Guard Logistics Handbook, COMDTINST M4000.2 (series). Supply policies are located in the Supply Policy and Procedures Manual, COMDTINST M4400.19 (series). Assets and units that have undergone Logistics Modernization are Modernized Units and those that are operating under a traditional Naval Engineering and Electronics support infrastructure are Non-Modernized Units.

1. Logistics/Supply Objectives. Integrated Logistic Support (ILS) for electronic systems shall satisfy the 10 standard elements of logistics as defined in U.S. Coast Guard Logistics Handbook, COMDTINST 4000.2 (series). The elements are:
  - a. Maintenance Planning.
  - b. Supply Support.
  - c. Support and Test Equipment.
  - d. Manpower and Personnel.
  - e. Training and Training Support.
  - f. Technical Data / Publications.
  - g. Computer Resources Support.
  - h. Facilities.
  - i. Packaging, Handling, Storage, and Transportation (PHS&T).
  - j. Design Interface.
2. Logistics Compliance Inspection (LCIs). Units undergo LCIs every three years by Director of Operational Logistics (DOL-3). During the LCI, inspectors will use a logistics compliance checklist. In order to prepare for the inspection, Base C4IT Departments may obtain the checklist from the C4ITSC-FSD.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Asset Logistics Management Information System (ALMIS) Online Application	N/A
CMPlus Physical Inventory Process Guide	N/A
Coast Guard Logistics Information Management System (CG-LIMS)	N/A
Coast Guard Parts Availability Research Tool (CG PART)	N/A
Configuration Management Plus (CMPlus) Software	N/A
Equipment/System Integrated Logistics Support Plan (EILSP) and Equipment Support Sheet (ESS) Development and Maintenance Responsibilities	COMDTINST 4105.7 (series)
FED LOG Website	N/A
Federal Logistics Data (FED LOG) Program for the U.S. Coast Guard	COMDTINST 4400.22 (series)
Federal Logistics Information System (WebFLIS)	N/A
FLS-Mobile Asset Manager (MAM) Online Application	N/A
Naval Engineering Technical Information Management System (NE-TIMS) Website	N/A
Navy Logistics Library (NLL)	N/A
Navy Supply Center	N/A
Serviceable and Unserviceable Tag (Aviation)	Form CG-1557B /Stock Number 7690-01-HS1-5129
Serviceable/Unserviceable Material Tag	DD-1577-2 7530-01-GF2-9270 / 0102-LF-016-0700
SFLC MTI Website	N/A
Supply Policy and Procedures Manual	COMDTINST M4400.19 (series)
System Integrated Logistics Support (SILS) Policy Manual	COMDTINST M4105.8 (series)
U.S Coast Guard Configuration Management Policy	COMDTINST 4130.6 (series)
U.S. Coast Guard Logistics Handbook	COMDTINST M4000.2 (series)
Unserviceable (Repairable) Tag – Material	Form DD-1577-2 / Stock Number 0102-LF-016-0700

Table 7-1- Chapter 7 Resources

## CHAPTER 8. TEST EQUIPMENT

- A. Policy. The Coast Guard Electronic Test Equipment Program (CGETEP) provides total life cycle support for all test equipment under the Program. The major services governed and directed by the Program are configuration management, inventory management, replacement, and calibration of test equipment. The following policy applies to Base C4IT Departments, ESDs, and ship/shore units with organic ET/IT support. The program does not cover Headquarters units including TISCOM, C3CEN, OSC, Coast Guard Research and Development Center, SFLC, training centers, and the aviation community.
1. General. Unit allowances for electronic TE shall be based on the unit's Ship/Shore Portable Electrical/Electronic Test Equipment Requirements List (SPETERL) provided by the CGETEP. The CGETEP does not apply to test equipment owned and operated by contractors performing electronics maintenance services to the Coast Guard.
  2. Funding. Funding for the life-cycle support of electronic test equipment is provided per the following:
    - a. The Sponsor is responsible for initiating the funding process for electronic TE associated with any new asset or new C4IT system as identified by the System Development Agent. Recurring AFC-42 and AFC-30 funding are needed for proper lifecycle support of TE through the CGETEP.
    - b. The C4ITSC-FSD funds configuration management, replacement, and repair using AFC-42 funds.
    - c. Base C4IT Departments receive AFC-30 funds to calibrate TE for units they support. Therefore, units that have electronic systems organizational level maintenance performed by Base C4IT Departments will not receive AFC-30 funds for calibration.
    - d. All units with organic ET support receive AFC-30 funds for TE calibration per the AFC-30 budget model. Those units can participate in the CGETEP, but they must fund participation in the Program. Requests to participate in the CGETEP must be coordinated with C4ITSC FSD through the respective Area. Otherwise, those units must coordinate and fund their own test equipment calibration services.
    - e. NTNO SPETE equipment falls under the CGETEP and is supported with Navy AFC-80 funds.
  3. Roles and Responsibilities.
    - a. Commandant (CG-644) shall act as Program Director for the CGETEP.
    - b. C4ITSC BOD-TAB shall work with Commandant (CG-9), other Commandant (CG-6) entities, and Product Lines/Core Technologies to provide the requisite recurring AFC-42 and AFC-30 funding for proper lifecycle support of new electronic test equipment.
    - c. C4ITSC FSD shall:

- (1) Provide guidance for the planning, development, and selection of authorized electronic test equipment to include allowancing, maintenance, repair, standardization, recapitalization, and disposal.
  - (2) Provide guidance for the lifecycle support of electronic test equipment.
  - (3) Establish and maintain an agreement with the NAVSEA Test Measurement Diagnostic Equipment (TDME) for the administration of the CGETEP.
  - (4) Review and approve unit SPETERLs and related ACRs.
  - (5) Establish and maintain TE unit allowance, accountability, total asset visibility, configuration management, replacement, and disposal processes.
  - (6) Establish and maintain TE calibration service processes, to include:
    - (a) Identifying which test equipment requires calibration.
    - (b) Identifying authorized calibration facilities.
    - (c) Providing guidance on “Calibration Overdue” waivers.
  - (7) Establish a CGETEP Manager.
  - (8) Establish the roles and responsibilities of unit Test Equipment Petty Officers.
  - (9) Establish critical success factors and related metrics to monitor the performance of the CGETEP, to include a process to assess a unit’s compliance with the CGETEP.
- d. All Units shall:
- (1) Ensure applicable Test Equipment (TE) manuals are accessible and current. Each piece of TE shall have an adequate user’s manual or information sheet that is readily available.
  - (2) Ensure TE is available to meet all maintenance test requirements.
  - (3) Reduce the quantity of unnecessary General Purpose Electronic Test Equipment (GPETE).
  - (4) Ensure TE condition is inspected and maintained in ready-for-use status including current calibration.
  - (5) Ensure all non-serviceable TE (pending disposition/repair/out of calibration) is segregated from calibrated/ready-for-use TE.
  - (6) Ensure only Sub-Category (SCAT)-coded Test Equipment is used during maintenance.
  - (7) Route Allowance Change Requests (ACR) to C4ITSC-FSD Test Equipment Manager for approval.

- (8) Enter all electronics test equipment in the Fleet Logistics System (FLS) under the unit OPFAC. Capitalized electronics test equipment shall also be entered in Oracle FAM.
  - (9) Manage Navy Type Navy Owned (NTNO) Special Purpose Electronic Test Equipment (SPETE) in accordance with Support of Navy Type Navy Owned Combat Systems, COMDTINST 7100.2 (series).
  - (10) Complete an annual report that validates existence and calibration status of all TE at the unit. All units are required to complete and submit the report even if the unit is not participating in the CGETEP Program. The report shall be submitted to the C4ITSC Electronics TE Calibration Program by the end of the FY’s second quarter.
- e. C4IT Core Technologies and Product Lines shall:
- (1) Inform the CGETEP Manager of any newly required test equipment for existing C4IT equipment and systems.
  - (2) Ensure all current Maintenance Procedure Cards and technical manuals for C4IT equipment and systems have the correct test equipment listed.
- f. EMOs of units with ETs shall designate in writing a Test Equipment Petty Officer.
- g. ESD Supervisors shall designate in writing a Test Equipment Petty Officer.
- h. All technicians shall notify their unit Test Equipment Petty Officer when out-of-calibration or broken test equipment is identified.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Calibration Laboratories	ANSI Z540
NAVSEA Test, Measurement and Diagnostic Equipment (TMDE) and Calibration Programs	NAVSEAINST 4734.1
Navy Test, Measurement, and Diagnostic Equipment (TMDE), Automatic Test Systems (ATS), and Metrology and Calibration (METCAL)	OPNAVINST 3960.16 (series)
Support of Navy Type Navy Owned Combat Systems	COMDTINST 7100.2 (series)
Technical Manuals: Calibration Procedures– Preparation	MIL-PRF-38793C

Table 8-1- Chapter 8 Resources



**CHAPTER 9. NAVY TYPE NAVY OWNED (NTNO) EQUIPMENT**

A. Policy. The Navy Combat Systems Branch (CG-6432) works with Headquarters Commandant (CG-41) and Commandant (CG-45) to align resources that provide support for all Navy Type Navy Owned (NTNO) systems. These systems reside on cutters, aircraft and ashore. NTNO Policy is contained in Support of Navy Type Navy Owned Combat Systems, COMDTINST 7100.2 (series).

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Support of Navy Type Navy Owned Combat Systems	COMDTINST 7100.2 (series)

Table 9-1- Chapter 9 Resources



**CHAPTER 10. DISPOSAL**

A. Policy. The disposal of electronic equipment and systems takes place when a vessel is decommissioned/retired, shore unit is closed, or when an upgrade occurs. Disposal actions are governed by policies in the U.S. Coast Guard Personal Property Management Manual, COMDTINST M4500.5 (series), and Supply Policies and Procedures Manual, COMDTINST M4400.19 (series). Disposal of aviation related electronic equipment shall comply with the Aeronautical Engineering Maintenance Management Manual, COMDTINST M13020.1 (series). Additional policies are:

1. Sensitive Information. Personnel involved in the disposal of electronic equipment shall take appropriate steps to prevent the loss/compromise of sensitive information such as Personally Identifiable Information (PII), which may be contained on electronic equipment.
2. Classified Equipment. Personnel involved in the disposal of classified equipment shall contact their local Electronic Key Management System (EKMS) Manager before taking any action.
3. Cutter Disposal and Boat Retirement. Policy is contained in Disposal of Cutters and Retirement of Boats, COMDTINST 4571.1 (series). Additionally, responsibilities below refer to C4IT aspects of cutter disposal and boat retirement:
  - a. Office of Enterprise Infrastructure Management (CG-64).
    - (1) Approves list of C4IT equipment requested for removal by C4ITSC.
    - (2) Maintains records of equipment removed.
  - b. C4ITSC.
    - (1) Sends Commandant (CG-64) a list of proposed C4IT equipment to be removed.
    - (2) Coordinates and executes removal of C4IT equipment.
    - (3) Documents all items removed and associated dollar value.
4. Environmental Considerations. Executive Order (EO) 13423, “Strengthening Federal Environmental, Energy, and Transportation Management”, and EO 13514, “Federal Leadership in Environmental, Energy, and Economic Performance”, mandate “Green” environmental actions:
  - a. Use environmentally sound practices with respect to disposition of all agency excess or surplus electronic products.
  - b. Maximize re-utilization of all waste and materials contained or used in electronic equipment while avoiding local destruction and using Defense Logistics Agency Disposition Services (formerly DRMO/DRMS) as much as possible.
  - c. Refurbish existing electronic equipment for reuse with minimum consumption of energy.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Aeronautical Engineering Maintenance Management Manual	COMDTINST M13020.1 (series)
Disposal of Cutters and Retirement of Boats	COMDTINST 4571.1 (series)
Executive Order (EO) Federal Leadership in Environmental, Energy, and Economic Performance	13514
Executive Order (EO) Strengthening Federal Environmental, Energy, and Transportation Management	13423
Supply Policies and Procedures Manual	COMDTINST M4400.19 (series)
U.S. Coast Guard Personal Property Management Manual	COMDTINST M4500.5 (series)

Table 10-1- Chapter 10 Resources

## CHAPTER 11. PROPERTY MANAGEMENT

### A. Policy.

1. Proper tracking and accounting of the acquisition, use, and disposal of Coast Guard electronics equipment is required to comply with DHS and Coast Guard property management policies. The primary policy document for electronics equipment is the U.S. Coast Guard Personal Property Management Manual, COMDTINST M4500.5 (series).
2. The relationship between property and configuration is particularly important. The Finance Center enters capitalized electronic systems by title and total value in the CG property management database (i.e., Oracle FAM) and CG units enter the system configuration into the CG configuration management database (i.e., FLS for non-modernized assets and ALMIS modernized assets). Commandant (CG-6) Directorate and Associated Duties, COMDTINST 5401.5 (series), and Coast Guard Configuration Management Manual, COMDTINST 4130.6 (series), describe governance of configuration. The combination of information in property and configuration management databases produces a complete record for a system. At a minimum, CG units shall validate the configuration of capitalized electronics systems during the mandatory physical inventory for property. Commandant (CG-8) will review the physical inventory reports.

### B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Asset Logistics Management Information System (ALMIS) Online Application	N/A
Coast Guard Configuration Management Manual	COMDTINST 4130.6 (series)
Commandant (CG-6) Directorate and Associated Duties	COMDTINST 5230.69 (series)
Fleet Logistics System (FLS)	N/A
Supply Policy and Procedures Manual (SPPM)	COMDTINST M4400.19 (series)
U.S. Coast Guard Personal Property Management Manual	COMDTINST M4500.5 (series)

Table 11-1- Chapter 11 Resources



## CHAPTER 12. CONFIGURATION MANAGEMENT

A. Policy. Overarching configuration management (CM) policy is contained in Commandant (CG-4) Coast Guard Configuration Management Manual, COMDTINST 4130.6 (series). Commandant (CG-6) Command, Control, Communications, Computers and Information Technology (C4&IT) Configuration Management (CM) Policy, COMDTINST 5230.69 (series) provides roles and responsibilities needed to support the electronics configuration management program. Roles are in alignment with the C4IT System Development Life Cycle (SDLC). Pertinent roles and responsibilities for the support community are:

1. System Development Agent (SDA). The SDA is the individual, unit, firm, agency, or organization that performs, or has the responsibility for, the design, development, implementation, and support of C4IT systems, as well as the acquisition of C4IT products or services. The SDA has a critical role in the CM process including the following responsibilities:
  - a. Perform approved CM practices for assigned systems.
  - b. Provide competent technical authority for any requested changes.
  - c. Develop and submit technical proposals to implement any requested changes.
  - d. Serve as technical evaluator for development issues and advisor to the Configuration Control Board (CCB) and other CM stakeholders. More than one SDA may be technical agents for the CCB.
  - e. Collaborate with the Sponsor's Representative and the Asset Manager to define design and development requirements or solutions.
  - f. Make design and development changes as approved by the CCB.
  - g. Define, track, and evaluate CM performance measures pertaining to development throughout the life cycle.
2. System Support Agent (SSA). The SSA is the individual, unit, firm, agency, or organization that performs or has the responsibility for the maintenance, support, and availability of C4IT systems. The SSA participates in all aspects of the CM process. The SSA has the following responsibilities:
  - a. Perform approved CM practices for assigned systems.
  - b. Serve the CCB and other CM stakeholders as the technical evaluator for support issues.
  - c. Provide competent technical authority for any requested change.
  - d. Provide competent technical authority for identifying, developing, and resolving support requirements associated with any change.
  - e. Collaborate with the Sponsor's Representative and the Asset Manager to define support requirements and support solutions.

f. Define, track, and evaluate CM performance measures pertaining to support throughout the life cycle.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Coast Guard Configuration Management Policy	COMDTINST M4130.6 (series)
Command, Control, Communications, Computers and Information Technology (C4&IT) Configuration Management (CM) Policy	COMDTINST 5230.69 (series)

Table 12-1- Chapter 12 Resources

## CHAPTER 13. TRAINING

### A. Policy.

1. Responsibility. Unit EMOs, supervisors, or senior technicians shall administer a formal unit technical training program to provide personnel with the skills and knowledge to proficiently operate and maintain installed or supported electronic systems. All technicians attached to a unit, even though separated by departments, should coordinate common training topics whenever possible.
  - a. Larger units may designate a Training Petty Officer to develop training schedules and manage training program documentation.
  - b. Formal technical training shall be held as often as needed and practical for the unit, with a goal of one formal training session per week.
2. Minimum Required Training. Unit technical training programs shall consist of at least the following training:
  - a. Initial and re-certification of Cardio-Pulmonary Resuscitation (CPR) in accordance with an approved authority. See Chapter 4 of this Manual for more information.
  - b. Initial and annual training in general electrical safety and unit specific safety practices, policies and hazards including tag out/lock out procedures.
  - c. Annual training for general electronics support:
    - (1) Troubleshooting fundamentals.
    - (2) Operation of general and special purpose test equipment.
  - d. Annual training for each installed or supported system to include:
    - (1) Tag out/lock out procedures.
    - (2) Maintenance philosophy, technical assistance and support structure.
    - (3) Equipment capabilities, operation, and functional checks.
    - (4) Technical documentation, system block diagrams and power distribution.
    - (5) Symptom recognition and troubleshooting.
3. Recommended Additional Training.
  - a. Duty and advancement qualifications.
  - b. Maintenance fundamentals.
  - c. Technical administration and documentation such as:
    - (1) CASREP and ALMIS discrepancy procedures.

- (2) Quality Assurance and Test Equipment Petty Officer duties.
- (3) Configuration change and equipment transfer documentation.
- (4) Procurement and mandatory turn-in procedures.
- (5) Maintenance scheduling and reporting.
- (6) Commandant Instructions and Process Guides overview.

B. Resources. Hyperlinks for Resources can be found here:

<https://cgportal2.uscg.mil/communities/10550/SitePages/Home.aspx>

TITLE	DOCUMENT NUMBER
Performance, Training and Education Manual	COMDTINST M1500.10 (series)

Table 13-1- Chapter 13 Resources

**APPENDIX A - Acronyms**

<b>ACRONYM</b>	<b>DEFINITION</b>
3-M	Maintenance, Material, and Management
ACCB	Aircraft Configuration Control Board
ACMS	Asset Computerized Maintenance System
ACN	Activity Control Number
ACR	Allowance Change Request
AD	Acquisition Directive
ADA	Acquisition Decision Authority
ADE	Acquisition Decision Event
AED	Automatic External Defibrillator
AEL	Allowance Equipage List
ALC	Aviation Logistics Center
ALD	Asset Logistics Division
ALMIS	Asset Logistics Management System
ANSI	American National Standards Institute
AOCR	Annualized OM&S Consumption Report
APA	Appropriated Parts Account
APL	Allowance Parts List
ASTM	American Society for Testing and Materials
ATE	Automated Test Equipment
ATS	Automatic Test System
BOD	Business Operations Division
C3CEN	Command, Control, and Communications Engineering Center
C4ISR	Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance
C4IT	Command, Control, Communications, Computers and Information Technology
CAMS	Communication Area Master Station
CASREP	Casualty Report
CBRN	Chemical, Biological, Radiological and Nuclear
CCA	Circuit Card Assembly
CCB	Configuration Control Board
CDM	Configuration Data Manager
CDMD-OA	Configuration Data Managers' Database - Open Architecture
CFO	Chief Financial Officer
CFR	Code of Federal Regulations
CG PART	Coast Guard Parts Availability Research Tool
CGETE	Coast Guard Electronic Test Equipment
CGETEP	Coast Guard Electronic Test Equipment Program
CG-LIMS	Coast Guard Logistics Information Management System
CGPMS	Coast Guard Planned Maintenance System
CGTO	Coast Guard Technical Order
CGTS	Coast Guard's Telecommunications System

ACRONYM	DEFINITION
CIO	Chief Information Officer
CKO	Chief Knowledge Officer
CM	Configuration Management
CMplus	Configuration and Management Plus
COCO	Contracting and Procurement Division
COE	Center of Excellence
CONOPS	Concept of Operations
COTR	Contracting Officer Technical Representative
COTS	Commercial Off the Shelf
CPIC	Capital Planning and Investment Control
CPR/AED	Cardiopulmonary Resuscitation/Automatic External Defibrillator
CSA	Command Staff Advisor
CSD	Centralized Service Desk
CSOSS	Combat Systems Operational Sequence System
CT	Core Technology
CTM	Core Technology Manager
CTPS	Calibration Test Program Set
DBM	Database Manager
DCA	Damage Control Assistant
DCMS	Deputy Commandant for Mission Support
DCO	Deputy Commandant for Operations
DGPS	Differential Global Positioning System
DHS	Department of Homeland Security
DLR	Depot-Level Repairable
DoD	Department of Defense
DOE	Department of Energy
EA	Enterprise Architecture
EA	Electronic Assembly
EC	Engineering Change
ECP	Engineering Change Proposal
EILSP	Equipment/System Integrated Logistics Support Plan
EIMB	Electronics Installation and Maintenance Book
eLOG	Electronic Log
EMI	Electromagnetic Interference
EMO	Electronics Material Officer
EMR	Electromagnetic Radiation
EO	Executive Order
EOB	Electronics and Ordnance Branch
EPEAT	Electronic Product Environmental Assessment Tool
ERF	Electronics Repair Facility
eRMS	Electronic Retrograde Management System
ESD	Electronics Systems Support Detachment
ESD-DD	Electronics Systems Support Detachment – Detached Duty
ESS	Equipment Support Sheet

ACRONYM	DEFINITION
ESU	Electronics Support Unit
ET	Electronics Technician
ETE	Electronic Test Equipment
FCC	Federal Communications Commission
FED LOG	Federal Logistics Data
FIPS	Federal Information Processing Standards
FISMA	Federal Information Security Management Act
FLIS	Federal Logistics Information System
FLS	Fleet Logistics System
FMP	Fleet Modernization Program
FORCECOM	Force Readiness Command
FOUO	For Official Use Only
FRMM	Financial Resource Management Manual
FRMM-P	Financial Resource Management Manual – Procedures
FSD	Field Services Division
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GPETE	General Purpose Electronic Test Equipment
GSA	General Services Administration
HAZMAT	Hazardous Material
HERF	Hazards of Electromagnetic Radiation to Fuel
HERO	Hazards of Electromagnetic Radiation to Ordnance
HERP	Hazards of Electromagnetic Radiation to Personnel
HM&E	Hull Mechanical and Electrical
IA	Information Assurance or Installing Activity
IAD	Information Assurance Division
IAVM	Information Assurance Vulnerability Management
ICCP	Inventory Control and Compliance Project
ICP	Inventory Control Point
ILS	Integrated Logistic Support
ILSP	Integrated Logistics Support Plan
IMS	Intermediate Maintenance Standards
IOD	Industrial Operations Division
ISA	Industrial Service Activity
ISD	Industrial Service Detachment
ISO	International Organization for Standardization
ISVM	Information Security Vulnerability Management
IT	Information Technology
ITAR	IT Acquisition Review
ITIM	Information Technology Integration Management
IUID	Item Unique Identification
JQR	Job Qualification Requirement
LOTO	Lock-Out / Tag-Out
LRE	Long Range Enforcer

ACRONYM	DEFINITION
LRU	Line Replaceable Unit
LSP	Logistics Support Plan
MAT	Maintenance Augmentation Team
MD	Management Directive
MDD	Maintenance Due Date
MDAP	Major Defense Acquisition Program
METCAL	Metrology and Calibration
MIL-DTL	Military - Detail Specification
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPC	Maintenance Procedure Card
MPE	Maximum Permissible Exposure
MRC	Maintenance Requirement Card
MRS	Medium Range Surveillance
MSAM	Major System Acquisition Manual
MSDS	Material Safety Data Sheet
MSG	Maintenance Steering Group
MTI	Mandatory Turn In
MTR	Module Test and Repair
MWA	Maintenance & Weapons Augmentation Activity
NARA	National Archives and Records Administration
NAVAIR	Naval Air Systems Command
NAVEDTRA	Naval Education and Training
NAVELEX	Naval Electronics Systems Command
NAVICP	Naval Inventory Control Point
NAVSEA	Naval Sea Systems Command
NAVSHIPS	Naval Ship Systems Command
NAVSISA	Navy Supply Information Systems Activity
NAVSO	Navy Support Office
NAVSUP	Naval Supply Systems Command
NAVSYSKOM	Navy Systems Command
NCSL	National Conference of Standards and Laboratories
NES	Naval Engineering Support
NESU	Naval Engineering Support Unit
NE—TIMS	Naval Engineering – Technical Information Management System
NICP	Navy Instrument Calibration Procedure
NIMB	Navy Installation Maintenance Book
NIST	National Institute of Standards and Technology
NMAP	Non Major Acquisition Process
NPMS	Navy Planned Maintenance System
NRFI	Not Ready for Issue
NSTM	Naval Ships' Technical Manual
NSWC	Naval Surface Warfare Center
NTNO	Navy Type Navy Owned

ACRONYM	DEFINITION
OET	Office of Engineering and Technology
OLSS	Operational Logistics Support Summaries
OM&S	Operating Materials and Supplies
OMB	Office of Management and Budget
OOC	Out of Commission
OOD	Officer of the Deck
OPNAV	Office of the Chief of Naval Operations
OSC	Operations Systems Center
OSHA	Occupational Safety and Health Administration
OTI	Ordnance Technical Inspection
PAL	Personnel Allowance List
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limit
PG	Process Guide
PHS&T	Packaging Handling Storage and Transportation
PIR	Physical Inventory Reporting
PL	Product Line
PLM	Product Line Manager
PM	Planned Maintenance
PMM	Preventative Maintenance Manager
PMS	Planned Maintenance System
PQS	Personnel Qualification Standard
PU	Prime Unit
QA	Quality Assurance
R&D	Research and Development
RADHAZ	Radiation Hazard
RCM	Reliability Centered Maintenance
RDC	Research Development Center
RDT&E	Research Development Test and Evaluation
RF	Radio Frequency
RFI	Ready for Issue
RIK	Replacement in Kind
SAE	Society of Automotive Engineers
SAP	Simplified Acquisition Procedures
SAR	SHIPALT Record
SBU	Sensitive But Unclassified
SC	Service Center
SCAT	Sub Category
SCLSIS	Ship Configuration and Logistics Support Information System
SCTO	Special Compliance Technical Order
SDA	System Development Agent
SDLC	System Development Life Cycle
SDS	Safety Data Sheet
SELC	System Engineering Life Cycle

ACRONYM	DEFINITION
SFLC	Surface Forces Logistics Center
SILC	Shore Infrastructure Logistics Center
SKED	Navy PMS scheduling software
SOH	Safety and Occupational Health
SOVT	System Operation Verification Test
SOW	Statement of Work
SPAWAR	Space and Naval Warfare Systems Command
SPETE	Special Purpose Electronic Test Equipment
SPETERL	Ship/Shore Electrical/Electronic Test Equipment Requirements List
SPPM	Supply Policies and Procedures Manual
SSA	System Support Agent
SSG	SFLC Support Gram
T.O.	Technical Order
TCTO	Time Compliance Technical Order
TEPV	Total Estimated Potential Value
TFBR	Technical Feedback Reporting
TISCOM	Telecommunications and Information Systems Command
TMDE	Test Measurement and Diagnostic Equipment
TOC	Total Ownership Cost
TRA	Technology Readiness Assessment
TTP	Tactics, Techniques, and Procedures
USCYBERCOM	U.S. Cyber Command
USO	Unit Safety Officer
WAT	Weapons Augmentation Team
WFD	Workforce and Facilities Division
WQSB	Watch, Quarter, and Station Bill
WSF	Weapons System File