DEPARTMENT OF TRANSPORTATION U.S. COAST GUARD CG-3303C-09 (Rev. 11-02)	**RECORD OF PERFORMANCE QUALIFICATIONS** **ET**

INSTRUCTIONS

Record of Performance Qualifications shall be completed for enlisted personnel of the Coast Guard as outlined in the Enlisted Performance Qualifications Manual, COMDTINST M1414.8 (series). As proficiency in each performance qualification is demonstrated by actually performing the task listed, the DATE and INITIALS column shall be completed. Personnel are required to demonstrate proficiency in all new performance qualifications assigned to their rating. Performance qualifications previously demonstrated, dated and initialed off will not be recertified. Some performance qualifications include intent statements to help clarify the requirements of the task that is to be performed.

RATING	**ABBREVIATION**
ELECTRONICS TECHNICIAN (Effective for the NOV 2003 Active Duty and the OCT 2003 Reserve SWE)	ET

DATE COMPLETED ALL PERFORMANCE QUALIFICATIONS FOR RATE LEVEL

E-4	**E-5**	**E-6**
E-7	**E-8**	**E-9**

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NUMBER**

SIGNATURE OF SUPERVISOR

DATE	NAME/SIGNATURE	INITIALS	RATE	UNIT

REMARKS

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

A. MAINTENANCE & ADMINISTRATION

4.01 **OBTAIN** parts and assemblies from inventory per the CMPlus User's Guide, and MICA

Intent: *The technician must be able to access the CMPlus system, locate the required part or assembly, verify the correct part listing, identify storage location, and quantity available. The technician must be able to retrieve the part from storage, verify correct, and make entries into CMPlus to subtract part from inventory.*

4.02 **OBTAIN** work assignments from the CMPlus database per the CMPlus User's Guide.

Intent: *The technician must be able to access the CMPlus system and print out all daily and weekly work requirements for his employee/position. Work assignments include all system generated PMS requirements, repair orders and any supervisor assignments manually entered into the system.*

4.03 **RECORD** maintenance actions (completed and deferred) into the CMPlus database per the CMPlus User's Guide.

Intent: *The technician must be able to access the CMPlus system, download data from a portable bar code reader or manually enter data on completed or deferred preventive or corrective maintenance actions.*

5.01 **UPDATE** ship's/unit's drawings and blueprints to match as-built configuration IAW Naval Engineering Manual, COMDTINST 9000.6 (series) or Civil Engineering Manual, COMDTINST M11000.11 (series), and applicable MLC instructions.

Intent: *Identify available drawings (and note missing drawings) and compare recorded (drawing) information to the actual installation. The technician must redline drawings and submit for correction following current policy.*

5.02 **REPORT** an equipment casualty as per Operational Reports, NWP 1-03-1, Casualty Reporting (CASREP) Procedures (Materiel), COMDTINST M3501.3 (series), and MLC Standard Operating Procedures.

Intent: *Understand the requirements for CASREPS, CASCORS, and UPDATES, how to draft Initial, Update, Correction, and Cancellation messages, and route through chain of command for release.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

5.03 **AUDIT** the spare parts and modules inventory authorized by the MICA per the Electronics Manual, COMDTINST M10550.25 (series) and the CMPlus User's Guide.

Intent: *Conduct a spot-check of inventory accuracy. Randomly select at least 5% of items allowed in inventory and compare the recorded quantity and location with the actual quantity and location and update records as required.*

5.04 **PROCURE** spare parts, modules, and maintenance supplies using CM-Plus, FEDLOG, and commercial catalogs; IAW the Simplified Acquisitions Procedures Handbook, COMDTINST M4200.13 (series); the Supply Policy and Procedures Manual, COMDTINST M4400.19 (series); ELC SupportGram, and the CMPlus User's Guide.

Intent: *Identify the various types of ordering processes (Purchase Order, MILSTRIP) and types (turn in, buy new), determine the proper process to use and successfully identify, price, and order required parts and supplies.*

5.05 **VERIFY** the Electronics Installation Record (EIR) per the Electronics Manual, COMDTINST M10550.25 (series) and the CMPlus User's Guide.

Intent: *To verify the accuracy of the EIR, for funding, staffing, and PMS requirements. Under limited supervision the technician must perform an inventory of at least 25% of electronics equipment required to by recorded in the EIR. The technician must compare the recorded noun name, model/part number, serial number, and location with the actual equipment and update records as required.*

5.06 **SUBMIT** a feedback report (FBR) to correct a deficiency in CGPMS as per the Electronics Manual, COMDTINST M10550.25 (series) and the CGPMS User's Guide.

Intent: *Understand the types of feedback reports, the requirements for a feedback report, and how to complete one.*

5.07 **SUBMIT** form OPNAV 4790C/K to document an electronics equipment configuration change IAW the Electronics Manual, COMDTINST M10550.25 (series), Supply Policy and Procedures Manual (SPPM), COMDTINST M4400.19 (series), and the 3M manual, OPNAVINST 4790.

Intent: *Understand the requirements for an accurate configuration record, when a configuration document must be submitted, and how to complete and submit the required forms.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

5.08 **VERIFY** publications in the electronics department technical library as per the Electronics Manual, COMDTINST M10550.25 (series) and Directives, Publications, & Reports Index, COMDTNOTE 5600.

Intent: *Verify that all required publications are available and current. Verify that at least two current (field changes entered) copies of technical/operators manual for each piece of operational equipment and one technical/operators manual for each piece of test equipment are available.*

5.09 **IMPLEMENT/INSTALL** a Field Change (all types) to an electronics equipment and/or system IAW the Electronics Manual, COMDTINST M10550.25 (series), Ordnance Manual, COMDTINST 8000.6 (series), and Navy Installation and Maintenance book: General Maintenance book (NAVSEA SE000-01-IMB-010, EIMB – General Maintenance, Part VI.

Intent*: To ensure electronics personnel understand the authority and requirements for modifying electronic equipment. Personnel are aware of the various types of modifications, how they are tracked, and how to implement each type of change.*

6.01 **PREPARE** work schedules for subordinates using CMPlus per the CMPlus User's Guide or other methods as prescribed by local policy.

Intent: *Understand the requirements and complexity of developing work schedules for technicians to conduct PMS, repairs, installations, and other work as required to meet mission requirements and standard of service policy. Schedule must be prepared to cover a week at minimum.*

6.02 **VERIFY** the unit's Coast Guard Planned Maintenance System (CGPMS) is accurate IAW the Electronics Manual, COMDTINST M10550.25 (series) and the CGPMS User's Guide.

Intent: *To ensure the Index of Maintenance Procedures (IMP) includes all assigned equipment and all required Maintenance Procedure Cards (MPC) are current and available.*

6.03 **VERIFY** the unit's Navy PMS and configuration reports IAW Ship's Maintenance and Material Management (3M) Manual, OPNAVINST 4790.4 (series), and the CMPlus User's Guide.

Intent: *To ensure that all procedures are current and available in the workbook and working cards for all assigned equipment are available; submit documentation for any required changes or replacements.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

6.04 **DEVELOP** a PMS schedule for all equipment for at least one quarter; IAW Electronics Manual, COMDTINST M10550.25 (series), CGPMS User's Guide, and Ship's Maintenance and Material Management (3M) Manual, OPNAVINST 4790.4 (series).

***Intent**: Prepare schedules to ensure all equipment is maintained as required, considering workload among personnel, personnel availability, other ship's/units work, and operational schedule.*

6.05 **COMPLETE** a MICA revision per the Electronics Manual, COMDTINST M10550.25 (series), Supply Policy and Procedures Manual (SPPM), COMDTINST M4400.19 (series), and the MICA User's Guide.

***Intent:** Understand the requirements of establishing an accurate inventory of parts and equipment and the procedures required correct errors, including establishing requirements, addition/deletion of parts and error reporting.*

6.06 **SUBMIT** a maintenance project using the Current Ship's Maintenance Program (CSMP) per the Naval Engineering Manual, COMDTINST M9000.6 (series) and the CMPlus User's Guide, or Shore Station Maintenance Record (SSMR) per the Civil Engineering Manual, COMDTINST M11000.11 (series), and the Electronics Manual, COMDTINST M10550.25 (series).

***Intent:** Understand when a CSMP or SSMR is required and how to complete and submit a request.*

6.07 **TRACK** the status of maintenance projects under the Current Ship's Maintenance Program (CSMP) per the Naval Engineering Manual, COMDTINST M9000.6 (series) and the CMPlus User's Guide, or Shore Station Maintenance Record (SSMR) per the Civil Engineering Manual, COMDTINST M11000.11 (series), and the Electronics Manual, COMDTINST M10550.25 (series).

***Intent:** Understand the complexities of the CSMP/SSMR process and establish the status of projects for your unit within the process.*

6.08 **SCHEDULE** unit test equipment for calibration per the Electronics Manual, COMDTINST M10550.25 (series), MLC SOP, and the CMPlus User's Guide.

***Intent:** Understand the requirements for calibrating test equipment and schedule development to meet calibration requirements and avoid equipment use conflicts.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

7.01 **VERIFY** the technical compliance of assigned electronics systems per the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *Review the results from a groom or other system wide evaluation to establish that all supported electronic systems are operating within prescribed specifications and requirements. Initiate any required actions to repair/replace those systems not meeting specifications.*

7.02 **PREPARE** an electronics department annual budget IAW the Electronics Manual, COMDTINST M10550.25 (series), Accounting Manual, COMDTINST M7300.4 (series), Part II, and applicable Area/MLC SOP.

Intent*: Develop an annual budget using previous spending data and future spending requirements estimates. Understand budget development requirements, spending limitations, accounting classifications, and the submission process.*

8.01 **DEVELOP** an Engineering Change Request in accordance with the Naval Engineering Manual, COMDTINST M9000.6 (series), Electronics Manual, COMDTINST M10550.25 (series), and current MLC policies.

Intent: *Understand requirements for an ECR, the ECR process and how to complete and submit an ECR.*

B. PERFORMANCE & TRAINING

5.01 **TRAIN** electronics personnel in operating General Purpose Electronics Test Equipment (GPETE) per the Electronics Manual, COMDTINST M10550.25 (series) and the equipment technical manual.

Intent*: Provide instruction, formal or OJT, to electronics personnel on the application, operation, capability, and availability, of general purpose test equipment for maintaining and repairing electronics equipment.*

5.02 **TRAIN** electronics personnel in the major signal flow and power distribution of assigned electronic systems per the Electronics Manual, COMDTINST M10550.25 (series) and equipment technical manuals.

Intent*: Provide instruction, formal or OJT, to electronics personnel on the signal flow and power distribution of assigned electronics equipment/systems to provide cross-training to assist or assume maintenance and repair responsibilities.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

6.01 **PREPARE** an annual training plan per the Electronics Manual, COMDTINST M10550.25 (series), Training and Education Manual, COMDTINST M1500.10 (series) and Cutter Training and Qualification Manual, COMDTINST M3502.4 (series).

***Intent**: Understand the requirements for training, the various topics that are required or should be covered, and dealing with scheduling conflicts.*

6.02 **TRAIN** personnel in operation and maintenance of assigned electronic systems per the Electronics Manual, COMDTINST M10550.25 (series), Ordnance Manual, COMDTINST 8000.6 (series), and the equipment technical manuals.

***Intent**: Cross-train personnel. Provide instruction, formal or OJT, to electronics personnel on the maintenance and operation of assigned electronics equipment/systems to assist or assume maintenance and repair responsibilities.*

6.03 **TRAIN** personnel in applicable safety procedures for working in and around installed electronics equipment per the Electronics Manual, M10550.25 (series).

***Intent**: To ensure all ship/unit personnel are aware of the hazards and safety requirements of working in and around electronics equipment, including use of safety equipment and location of power cutoffs.*

6.04 **TRAIN** personnel on safety precautions with equipment, personnel, and explosive material, in relation to radio frequency (RF) hazards/hazards of electromagnetic radiation to ordnance (HERO) fields IAW Electromagnetic Radiation Hazards (Hazards to Ordnance), OP 3565, Vol 2, and systems technical manuals.

***Intent**: Provide instruction, formal or OJT, to all ship/unit personnel on the hazards and precautions required for handling ordnance/explosives around RF radiation sources.*

7.01 **TRAIN** electronics personnel in Coast Guard electronics administration, supply and maintenance procedures per the Electronics Manual, COMDTINST M10550.25 (series), Supply Policy and Procedures Manual (SPPM), COMDTINST M4400.19 (series), and ELC SupportGram.

***Intent**: Provide instruction, formal or OJT, to personnel on sources of information for procedures and policies on the management of electronics equipment/systems and the application of those procedures and policies.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

7.02 **TRAIN** electronics personnel on the organizational structure and role of each level of the Coast Guard's maintenance hierarchy; including ESD, ESU, NESU, MAT, MLC, SMEF, ELC, and HQ as described in the Electronics Manual, COMDTINST M10550.25 (series).

***Intent**: Provide instruction, formal or OJT, to personnel to ensure that personnel know the role of each part of the chain of command for support and operation of units, systems, and equipment in the Coast Guard.*

7.03 **REVIEW** the Electronics Technician competencies (old Qualification Codes) for accuracy and currency IAW Coast Guard Enlisted Qualification Codes Manual, COMDTINST M1414.9 (series).

***Intent**: To ensure that the requirements to earn a competency and those available are in alignment with the current work environment and Coast Guard needs.*

8.01 **REVIEW** the Electronics Technician Enlisted Performance Qualifications (EPQs) IAW the Enlisted Performance Qualifications Manual, COMDTINST M1414.8 (series).

***Intent:** To ensure that the EPQs are consistent with the current world of work for ET's. Identify errors, omissions, and recommend changes in the EPQs to ensure alignment with the current ET world of work and requirements to meet CG mission needs. Submit recommendations to the ET RFMC at Commandant (G-SRF).*

8.02 **TRAIN** electronics personnel on the process of determining the levels of and acquiring electronics maintenance funding per the Electronics Manual, COMDTINST M10550.25 (series), Accounting Manual, COMDTINST M7300.4 (series), Part II, and applicable Area/MLC SOP.

***Intent**: Provide instruction, formal or OJT, to electronics personnel on how funding is developed and the types (AFC's) of funding for use in maintaining and replacing electronics systems, equipment, repair parts, and supplies.*

8.03 **VALIDATE** staffing levels for electronics personnel vs. workload requirements and submit recommendations for changes per the Staffing Standards Manual, COMDTINST M5312.11 (series).

***Intent**: To understand the workloads (PMS, Corrective, installs, removals, travel, etc...) imposed on your personnel, the distribution of resources, and the requirements to change staffing to ensure safe and effective distribution of personnel and workloads.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

9.01 **VALIDATE** the metrics in use at your unit and how they are used to develop quality of service standards within your organization. Submit recommendations for change to your Commanding Officer. Criteria and recommendations should be based on, Unit's SOP, Commandant's Quality Award Guidebook, and CG Measurement Strategy and Responsibilities, COMDTINST 5224.9 (series).

Intent: *To understand the measurements in use at your unit to ensure optimal support of units, systems, and personnel within your AOR*.

9.02 **TRAIN** personnel on the Integrated Logistics Support process for developing the maintenance and logistics support philosophies for electronics equipment using the policies as outlined in the System Integrated Logistics Support (SILS) Command Policy Manual, COMDTINST 4105.8 (series) and MLC or SMEF EILSP or Project Managers Guide as applicable.

Intent*: Provide instruction, formal or OJT, to personnel on the process involved in developing a logistics support plan for an electronic system and the content of the Electronics Integrated Logistics Support Plan (EILSP).*

C. SPECIAL & EMERGENCY PROCEDURES

4.01 **DEMONSTRATE** the procedures for extinguishing an electrical fire per the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *The technician must demonstrate the proper procedure for extinguishing an electrical fire, including selection of proper type of extinguisher to use.*

4.02 **DEMONSTRATE** the procedure for rescuing an electric shock victim from an energized circuit as required by the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *The technician must demonstrate the procedure for identifying an electric shock victim. Follow procedures for moving the victim (using cane or pull rope and/or securing power). Follow all applicable precautions to prevent further injury to the victim or injury to himself and obtain assistance for the victim.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

4.03 **DEMONSTRATE** the procedure for performing Cardio-Pulmonary Resuscitation per current Coast Guard instructions, American Heart Association, or American Red Cross guidelines.

Intent: *The technician must demonstrate the proper procedure for determining need, initiating, and performing single person, adult, CPR for a minimum of 5 minutes. Procedures followed must be in accordance with current recommended procedures of the American Heart Association*

4.04 **DEMONSTRATE** tag-out/tag-in procedures for electronics/electrical equipment for maintenance and/or repair as required in the Electronics Manual, COMDTINST M10550.25 (series) and Equipment Tag-Out Procedures, COMDTINST 9077.1 (series).

Intent: *The technician must demonstrate the proper procedure for determining the need to tag-out and tag-in equipment or circuits and properly tag-out/tag-in as required. The technician must complete the process observing all safety and procedural requirements.*

4.05 **DEMONSTRATE** procedures for working aloft, including harness and safety line inspection, wearing of safety harness and head protection and hazards posed by stack gasses or RF radiation sources as required by the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *The technician must describe equipment required to go aloft, safety procedures to follow, and permissions required. Technician must conduct a safety check of all equipment and demonstrate the proper procedure for wearing and using.*

4.06 **IDENTIFY** the hazards presented and protective measures required as listed in a Material Safety Data Sheet (MSDS), Electronics Manual, COMDTINST M10550.25 (series), Hazard Communication of Workplace Materials, M6260.21 (series), Hazardous Waste Management Manual, COMDTINST 16478.1 (series), and applicable Material Safety Data Sheets (MSDS).

Intent: *The technician must demonstrate the safety and storage requirements as listed on a MSDS. At a minimum the technician must be able to identify skin/eye irritant, flammability, flash point, chemical interactions, and respiratory/ventilation precautions.*

4.07 **DEMONSTRATE** the procedures to measure a voltage in excess of 300V per the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *The technician must demonstrate the proper procedure for measuring a voltage in excess of 300 V. The technician must complete the process observing all safety and procedural requirements.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

4.08 **DEMONSTRATE** the procedures to test high voltage gloves per the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *The technician must state the inspection requirements and demonstrate the proper procedure for testing high voltage gloves and shells.*

5.01 **INSPECT** electronics equipment spaces to ensure required warning signs are posted per the Electronics Manual, COMDTINST M10550.25 (series) and Navy Installation and Maintenance book General Maintenance book (NAVSEA SE000-01-IMB-010, EIMB – General Maintenance, Part VI. Signs include, but are not limited to:

- RF Radiation Hazard
- High Voltage Warning
- Shock Hazard Warning
- CPR
- Multiple Power Sources
- Permissible RF exposure areas
- Toxic Gas warning
- Hearing Protection requirements

Intent: *Understand why and where signs are required, ensure that signs are posted for the safety of all personnel, and take actions required to correct any discrepancies.*

5.02 **DEMONSTRATE** the destruction of documents and equipment as required in the unit emergency destruction plan.

Intent: *Understand what documents/equipment must be destroyed, the conditions and authority required to implement destruction and the acceptable methods used for destruction.*

5.03 **DEMONSTRATE** safety precautions required to eliminate/limit exposure to RF radiation IAW enclosures four, five, six and seven of DODINST 6055.11 "Protection of DoD Personnel from Exposure to Radio Frequency Radiation and Military Exempt Lasers" and the Electronics Manual, COMDTINST M10550.25 (series).

Intent*: Technician knows the sources of RF hazards, exposure limitation methods, physical hazards associated with exposure, and permissible exposure limits to RF radiation.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

6.01 **INSPECT** the safety conditions and equipment in all department areas of responsibility per the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *Inspect all assigned electronics equipment and spaces for safety hazards, interlocks in place, exposed wiring or terminals, and the condition of required safety equipment (grounding wands, HV gloves, etc…).*

7.01 **DEVELOP** a department hazardous materials management plan per the Hazardous Materials Management Manual, COMDTINST M16478.1 (series) and the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *Understand the requirements of a HAZMAT plan and consequences of failing to properly handle HAZMAT.*

D. ELECTRONICS SYSTEMS

4.01 **WEATHERPROOF** an exposed connector IAW Navy Installation and Maintenance book General Maintenance book (NAVSEA SE000-01-IMB-010, EIMB – General Maintenance, Part VI.

Intent: *Know when and why protection is required and demonstrate the proper procedures to protect exposed connectors from damage or failure caused by water intrusion.*

5.01 **MAINTAIN** fault protection, lightning protection, and signal reference ground subsystems IAW Standard Practice for Shipboard Bonding, Grounding, and other Techniques for Electromagnetic Compatibility and Safety, MIL-STD-1310G, Grounding Bonding and Shielding for Common Long haul/Tactical Communications Systems Including Ground Based Communications-Electronics Facilities and Equipment, MIL-STD-188-124B, Grounding, Bonding, & Shielding for Electronic Equipment & Facilities, MIL-HDBK-419A, and the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *Understand the purpose and operation of protection circuits. Ensure that power protection circuits are installed and working to protect equipment from power surges and sags in the power system and power surges (lightning) through external wiring and antennas.*

5.02 **TRACE** a point-to-point connection through multiple compartments in accordance with ship's COEDS.

Intent: *Understand how to interpret a COED listing and translate to physical wiring points for tracing wiring throughout a Cutter.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

5.03 **DEMONSTRATE** proper storage, handling, and installation practices and precautions for the following cables IAW the Electronics Manual, COMDTINST M10550.25 (series), Navy Installation and Maintenance book General Maintenance book (NAVSEA SE000-01-IMB-010, EIMB – General Maintenance, Part VI. and manufacturers instructions.

- Stranded/Solid single & multiconductor wire
- Coaxial cable
- Heliax
- Multiple conductor
- Fiber Optic
- Cat-5 Network Cable

Intent: *Understand the requirements, limitations, and characteristics of the various types of wire and cable. This includes current, voltage, power capacity, frequency limitations, bend radius, and environmental considerations. Demonstrate the proper selection, installation, and storage requirements for each type of conductor.*

6.01 **INSPECT** facility ground systems per the Standard Practice for Shipboard Bonding, Grounding, and other Techniques for Electromagnetic Compatibility and Safety, MIL-STD-1310G, Grounding Bonding and Shielding for Common Long haul/Tactical Communications Systems Including Ground Based Communications-Electronics Facilities and Equipment, MIL-STD-188-124B, Grounding, Bonding, & Shielding for Electronic Equipment & Facilities, MIL-HDBK-419A, and the Electronics Manual, COMDTINST M10550.25 (series).

Intent: *Understand the requirements of a grounding system, causes and symptoms of noise and EMI generation and ground loops. Examine grounding and bonding points to determine correct bonding methods and conductivity. Evaluate bonding for potential source of electromagnetic interference. Ensure that bonding and grounding methods meet standards and initiate action to correct any deficiencies.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

To successfully complete these qualifications the technician must complete all common requirements listed in sections A through D for the required grade and the required grade in any one specialty only.

Technicians are not required to remain in the previous specialty for subsequent pay grade qualifications. Technicians may change specialties between pay grades by completing the specialty qualifications in the desired grade only. To be eligible for promotion all qualifications for the desired pay grade in any one specialty must be completed.

Technicians are not required to qualify on the same systems within a specialty as they progress. It is encouraged that technicians qualify on multiple systems within a specialty or across specialties to increase their knowledge and skills.

Specialty qualifications for each grade are the same in content, but not context. The qualification in each grade must be completed at the level described in the intent statement for the qualification and the definition listed for the grade on page 41.

Specialty Qualifications are required and cannot be waived or deferred.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

E. COMMUNICATIONS SPECIALTY

This intent applies to qualifications 4.01 and 4.02.

Intent: *Understand how to use the PMS system, complete a PMS procedure, and develop familiarity with the PMS requirements for communications equipment. When provided the indicated PMS assignments, tools, test equipment, and supplies, the technician must complete the procedure (under supervision) observing all safety and procedural requirements and complete all required records.*

4.01 **PERFORM** ***at least two*** planned maintenance procedures on ***at least two*** of the communications systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

4.02 **PERFORM** planned maintenance on an antenna and transmission cable, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG Maintenance Procedure Cards, and the equipment technical manual.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This intent applies to qualifications 4.03 and 4.04.

Intent: *Understand theory of operation of communications equipment, logical troubleshooting procedures, how to identify lowest level of repair, use of standard tools and test equipment, and safety precautions required when working in energized equipment. Under supervision, the technician should be able to identify major failure symptoms and follow logical procedures to isolate the faulty assembly or component.*

4.03 **TROUBLESHOOT *at least two*** of the non-operational communications systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

4.04 **TROUBLESHOOT** a non-operational antenna system (including transmission line and patch/switch panel), to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the antenna system technical manual and the MICA.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This Intent applies to qualifications 4.05 and 4.06.

Intent: *Demonstrate the proper selection and use of tools, including soldering, precautions required (ESD, power source shut off, safety) while repairing equipment. Under supervision the technician must be able to repair the equipment or system and verify that it is operating within specifications after repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

4.05 **PERFORM** corrective maintenance on at least two of the non-operational communications systems to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

4.06 **PERFORM** corrective maintenance on a non-operational antenna system (including transmission line and patch/switch panel), to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the antenna system technical manual and the MICA.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This intent applies to qualifications 5.01 and 5.02.

Intent: *The technician must be able to identify required PMS assignments from a schedule and select the appropriate MPC cards from the PMS library. The technician must identify all tools, test equipment, and supplies required to complete the PMS procedure. The technician must complete the procedure observing all safety and procedural requirements and complete all required records.*

5.01 **PERFORM *at least two*** planned maintenance procedures on ***at least two*** of the communications systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

5.02 **PERFORM** planned maintenance on a antenna and transmission cable, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG Maintenance Procedure Cards, and the equipment technical manual.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This intent applies to qualifications 5.03 and 5.04.

Intent: *With limited supervision, the technician must be able to diagnose an equipment or system failure and isolate the failure to the lowest repairable unit. The technician must follow logical troubleshooting procedures. The technician must identify all tools, test equipment, and supplies required to troubleshoot the equipment/system. The technician must complete the process observing all safety and procedural requirements and complete all records.*

5.03 **TROUBLESHOOT** ***at least two*** of the non-operational communications systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

5.04 **TROUBLESHOOT** a non-operational antenna system (including transmission line and patch/switch panel), to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the antenna system technical manual and the MICA.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This Intent applies to qualifications 5.05 and 5.06.

Intent: *With limited supervision, the technician must be able to repair the equipment or system and verify that it is operating within operational specifications after repair. The technician must identify the lowest level repairable level and repair or replace the failed part accordingly. The technician must identify all tools, test equipment, and supplies required to complete the repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

5.05 **PERFORM** corrective maintenance on at least two of the non-operational communications systems to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

5.06 **PERFORM** corrective maintenance on a non-operational whip antenna system (including transmission line), to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the antenna system technical manual and the MICA.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This intent applies to qualifications 6.01 and 6.02.

Intent: *The technician must be able to identify required PMS assignments from a schedule and select the appropriate MPC cards from the PMS library. The technician must identify all tools, test equipment, and supplies required to complete the PMS procedure. The technician must complete the procedure observing all safety and procedural requirements and complete all required records.*

6.01 **PERFORM *at least two*** planned maintenance procedures on ***at least two*** of the communications systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

6.02 **PERFORM** planned maintenance on a antenna and transmission cable, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG Maintenance Procedure Cards, and the equipment technical manual.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This intent applies to qualifications 6.03 and 6.04.

Intent: *The technician must be able to diagnose an equipment or system failure and isolate the failure to the lowest repairable unit. The technician must follow logical troubleshooting procedures. The technician must identify all tools, test equipment, and supplies required to troubleshoot the equipment/system. The technician must complete the process observing all safety and procedural requirements and complete all records.*

6.03 **TROUBLESHOOT** ***at least two*** of the non-operational communications systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

6.04 **TROUBLESHOOT** a non-operational antenna system (including transmission line and patch/switch panel), to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the antenna system technical manual and the MICA.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This Intent applies to qualifications 6.05 and 6.06.

Intent: *The technician must be able to repair the equipment or system and verify that it is operating within operational specifications after repair. The technician must identify the lowest level repairable level and repair or replace the failed part accordingly. The technician must identify all tools, test equipment, and supplies required to complete the repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

6.05 **PERFORM** corrective maintenance on ***at least two*** of the non-operational communications systems to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/URC-116(V) HF Communications System
- R-2368(V)3 LF/MF/HF Receiver
- RT-9000A HF Communications System
- AN/WSC-3(V) UHF Communications System
- MILSATCOM System
- AN/URC-114(V) HF Communications System
- AN/URT-41(V) HF Transmitter
- CEXH-RF-755A HF Transmitter
- CEJD-MSR-XXXX (ITT McKay) HF Communications System
- KY-58, KG-84, USC-43 Secure Communications equipment

6.06 **PERFORM** corrective maintenance on a non-operational whip antenna system (including transmission line and patch/switch panel), to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the antenna system technical manual and the MICA.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

F. NAVIGATION SYSTEMS SPECIALTY

4.01 PERFORM *at least two* Planned Maintenance procedures on ***at least two*** of the navigation systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *Understand how to use the PMS system, complete a PMS procedure, and develop familiarity with the PMS requirements for navigation equipment. When provided the indicated PMS assignments, tools, test equipment, and supplies, the technician must complete the procedure (under supervision) observing all safety and procedural requirements and complete all required records.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

4.02 **TROUBLESHOOT *at least two*** of the non-operational navigation systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *Understand theory of operation of navigation equipment, logical troubleshooting procedures, how to identify lowest level of repair, use of standard tools and test equipment, and safety precautions required when working in energized equipment. Under supervision, the technician should be able to identify major failure symptoms and follow logical procedures to isolate the faulty assembly or component.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

4.03 PERFORM Corrective Maintenance on ***at least two*** of the non-operational navigation systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *Demonstrate the proper selection and use of tools, including soldering, precautions required (ESD, power source shut off) while repairing, and general safety required during a repair. Under supervision the technician must be able to repair the equipment or system and verify that it is operating within specifications after repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

5.01 PERFORM *at least two* Planned Maintenance procedures on ***at least two*** of the navigation systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *The technician must be able to identify required PMS assignments from a schedule and select the appropriate MPC cards from the PMS library. The technician must identify all tools, test equipment, and supplies required to complete the PMS procedure. The technician must complete the procedure observing all safety and procedural requirements and complete all required records.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

5.02 **TROUBLESHOOT *at least two*** of the non-operational navigation systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *With limited supervision, the technician must be able to diagnose an equipment or system failure and isolate the failure to the lowest repairable unit. The technician must follow logical troubleshooting procedures. The technician must identify all tools, test equipment, and supplies required to troubleshoot the equipment/system. The technician must complete the process observing all safety and procedural requirements and complete all records.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

5.03 PERFORM Corrective Maintenance on ***at least two*** of the non-operational navigation systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *With limited supervision, the technician must be able to repair the equipment or system and verify that it is operating within operational specifications after repair. The technician must identify the lowest level repairable level and repair or replace the failed part accordingly. The technician must identify all tools, test equipment, and supplies required to complete the repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

6.01 **PERFORM *at least two* Planned Maintenance** procedures on ***at least two*** of the navigation systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *The technician must be able to identify required PMS assignments from a schedule and select the appropriate MPC cards from the PMS library. The technician must identify all tools, test equipment, and supplies required to complete the PMS procedure. The technician must complete the procedure observing all safety and procedural requirements and complete all required records.*

6.02 **TROUBLESHOOT *at least two*** of the non-operational navigation systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *The technician must be able to diagnose an equipment or system failure and isolate the failure to the lowest repairable unit. The technician must follow logical troubleshooting procedures. The technician must identify all tools, test equipment, and supplies required to troubleshoot the equipment/system. The technician must complete the process observing all safety and procedural requirements and complete all records.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

6.03 PERFORM Corrective Maintenance on ***at least two*** of the non-operational navigation systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- AN/SPS-69 RADAR
- AN/SPS-73 RADAR
- CELZ-RASCAR 2500C RADAR
- LORAN, DGPS, or GPS Positioning Receiver
- IES-KDF-538, 580, or 581 Direction Finder
- AN/SQN-18 Depth Indicator
- CRP-V-850 Depth Indicator
- DGPS Transmitter Site
- AN/FPN-44/45A LORAN Transmitter
- AN/FPN-64 SSX LORAN Transmitter
- AN/FPN-60 LORAN Timing & Control Set

Intent: *The technician must be able to repair the equipment or system and verify that it is operating within operational specifications after repair. The technician must identify the lowest level repairable level and repair or replace the failed part accordingly. The technician must identify all tools, test equipment, and supplies required to complete the repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

G. TACTICAL/WEAPONS SYSTEMS SPECIALTY

4.01 PERFORM at least two Planned Maintenance procedures on ***at least two*** (or MK-92 only) of the tactical/weapons systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- APX-72 IFF Transponder (cannot be used with the AIMS MK-12)
- AIMS MK-12 IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *Understand how to use the PMS system, complete a PMS procedure, and develop familiarity with the PMS requirements for tactical equipment. When provided the indicated PMS assignments, tools, test equipment, and supplies, the technician must complete the procedure (under supervision) observing all safety and procedural requirements and complete all required records.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

4.02 TROUBLESHOOT *at least two* (or MK-92 only) of the non-operational tactical/weapons systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- APX-72 IFF Transponder (cannot be used with the AIMS MK-12)
- AIMS MK-12 IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *Understand theory of operation of tactical equipment, logical troubleshooting procedures, how to identify lowest level of repair, use of standard tools and test equipment, and safety precautions required when working in energized equipment. Under supervision, the technician should be able to identify major failure symptoms and follow logical procedures to isolate the faulty assembly or component.*

4.03 PERFORM Corrective Maintenance on ***at least two*** (or MK-92 only) of the non-operational tactical/weapons systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- APX-72 IFF Transponder (cannot be used with the AIMS MKII)
- AIMS MKII IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *Demonstrate the proper selection and use of tools, including soldering, precautions required (ESD, power source shut off) while repairing, and general safety required during a repair. Under supervision the technician must be able to repair the equipment or system and verify that it is operating within specifications after repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

5.01 **PERFORM at least two** Planned Maintenance procedures on ***at least two*** (or MK-92 only) of the tactical/weapons systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- APX-72 IFF Transponder (cannot be used with the AIMS MK-12)
- AIMS MK-12 IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *The technician must be able to identify required PMS assignments from a schedule and select the appropriate MPC cards from the PMS library. The technician must identify all tools, test equipment, and supplies required to complete the PMS procedure. The technician must complete the procedure observing all safety and procedural requirements and complete all required records.*

5.02 **TROUBLESHOOT** ***at least two*** (or MK-92 only) of the non-operational tactical/weapons systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- APX-72 IFF Transponder (cannot be used with the AIMS MK-12)
- AIMS MK-12 IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *With limited supervision, the technician must be able to diagnose an equipment or system failure and isolate the failure to the lowest repairable unit. The technician must follow logical troubleshooting procedures. The technician must identify all tools, test equipment, and supplies required to troubleshoot the equipment/system. The technician must complete the process observing all safety and procedural requirements and complete all records.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

5.03 **PERFORM Corrective Maintenance** on ***at least two*** (or MK-92 only) of the non-operational tactical/weapons systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- APX-72 IFF Transponder (cannot be used with the AIMS MK-12)
- AIMS MK-12 IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *With limited supervision, the technician must be able to repair the equipment or system and verify that it is operating within operational specifications after repair. The technician must identify the lowest level repairable level and repair or replace the failed part accordingly. The technician must identify all tools, test equipment, and supplies required to complete the repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

6.01 **PERFORM at least two** Planned Maintenance procedures on ***at least two*** (or MK-92 only) of the tactical/weapons systems listed below, provided applicable technical documentation, appropriate electronic test equipment, and tools IAW the Electronics Manual, COMDTINST M10550.25 (series), USCG/USN Maintenance Procedure Cards, and the equipment's technical manual.

- APX-72 IFF Transponder (cannot be used with the AIMS MK-12)
- AIMS MK-12 IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *The technician must be able to identify required PMS assignments from a schedule and select the appropriate MPC cards from the PMS library. The technician must identify all tools, test equipment, and supplies required to complete the PMS procedure. The technician must complete the procedure observing all safety and procedural requirements and complete all required records*.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

6.02 **TROUBLESHOOT *at least two*** (or MK-92 only) of the non-operational tactical/weapons systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- APX-72 IFF Transponder (cannot be used with the AIMS MK-12)
- AIMS MK-12 IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *The technician must be able to diagnose an equipment or system failure and isolate the failure to the lowest repairable unit. The technician must follow logical troubleshooting procedures. The technician must identify all tools, test equipment, and supplies required to troubleshoot the equipment/system. The technician must complete the process observing all safety and procedural requirements and complete all records.*

6.03 **PERFORM** Corrective Maintenance on ***at least two*** (or MK-92 only) of the non-operational tactical/weapons systems listed below to the Lowest Reparable Unit when provided applicable technical documentation, test equipment, and tools IAW the equipment technical manual and the MICA.

- APX-72 IFF Transponder (cannot be used with the AIMS MK-12)
- AIMS MK-12 IFF System
- AN/URN-25 TACAN System
- AN/SPS-40E Air Search RADAR
- AN/SLQ-32(V) EW System
- AN/WLR-1H EW System
- MK-92 Fire Control System (single requirement)
- MK-15 Close In Weapons System (CIWS)
- AN/SVD-1 Optical Sight

Intent: *The technician must be able to repair the equipment or system and verify that it is operating within operational specifications after repair. The technician must identify the lowest level repairable level and repair or replace the failed part accordingly. The technician must identify all tools, test equipment, and supplies required to complete the repair. The technician must complete the process observing all safety and procedural requirements and complete all records to record completion of the repair.*

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

Glossary

ANALYZE: Methodically identify and evaluate the circuits and signals used in an electronics system to determine the characteristics and specifications of the equipment or system.

APPLY: To use or assign to a specific purpose as relevant to the application.

AUDIT: Physically sight and count a random selection of supplies or property and document the results.

CALCULATE: Determine a value by mathematical methods, reasoning, or practical experience.

COMPLETE: Follow a process or procedure from initial identification to submission of any required reports or forms.

CONDUCT: To direct an action or evolution as the leader (supervisor).

DEMONSTRATE: To show proficiency in accomplishing a task by simulation or actual performance without actual follow through due to safety or efficiency consequences. (Examples: Cardio-Pulmonary Resuscitation)

DEVELOP: Determine requirements from directives issued by competent authority, establish local requirements, and prepare directive for compliance.

EVALUATE: Determine the status of an assembly, equipment, or system by comparing the results of tests, inspections, or other measurements to design specifications or established requirements.

IDENTIFY: To define the elements, purpose, characteristics, and input and output signals of individual electronic circuits and determine their relation to each other and the system as a whole.

INSPECT: Examine, test, measure, or evaluate people, spaces or equipment for installation, operation, and performance in accordance with established standards, specifications, drawings, technical manuals, directives, policies or other requirements.

INSTALL: Place a new or modified system or equipment and/or software in service in accordance with established procedures, standards, specifications, drawings, directives, and policies.

LOAD: Transfer a software program from storage media to computer memory.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

MAINTAIN: All activities that serve to increase the mean time between failure (MTBF) and/or decrease the total time inoperative (TTI) of electronic equipment or systems. (See maintenance philosophy considerations in next section.)

NEUTRALIZE: Deliver ordnance to an identified target until it is no longer a threat.

OBTAIN: To physically acquire an item from storage, including completion of any required inventory records.

PERFORM: To begin a task and carry through to completion in accordance with applicable instructions and regulations.

PREPARE: Plan, gather, and assemble information to produce a document (i.e., forms and schedules.)

PROCURE: To purchase a required item through an authorized process.

RECORD: To document required information in a record book, database, or other application for later retrieval and review.

REPAIR: To return an electronic assembly to operational status by replacing components or conductors.

REPORT: To gather data and provide information to higher authority in a defined format for an event.

REVIEW: To examine a document or process for accuracy in content and/or format and report errors or updates to the author or controlling authority.

SCHEDULE: To develop a plan, based on time, for allocating resources, people and equipment, and scheduling deadline to accomplish assigned tasks.

SUBMIT: To prepare a report or form following a defined process and forwarding it to the prescribed authority.

TRACE: To physically identify and follow a conductor or conductor bundle (electron or light) from one termination point to another.

TRACK: To follow the course or progress of an item. i.e. a target on a PPI or a project from submission of request to actual project completion.

TRAIN: Convey knowledge, demonstrate skills; and measure the transfer of those skills and knowledge using a defined lesson plan and methodology.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE
TROUBLESHOOT: To identify a failure at the lowest repairable level in a system or equipment following a logical process. **UPDATE**: Change existing information and records to accurately align them with correct or most recent data, and if required, submit changes to controlling authority to incorporate changes. **VALIDATE**: Determine if information contained in records or developed standards is accurate and applicable to current organization. **VERIFY**: To determine the accuracy of recorded information by comparing to physical evidence.		

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

This is a “definition” of what is expected from each level of technician when applying the level of competence determination to successfully complete a performance based qualification.

ET3: Can configure from directions/job aid and perform basic operations on trained equipment. Can perform Planned Maintenance, minor troubleshooting, and minor corrective maintenance on trained systems as part of a team under direct supervision of a Journeyman or Master technician. Can locate and use standard hand tools, test equipment, and supplies.

ET2: In addition to the ET3 requirements, the ET2 should be able to perform installations, modifications, and removals of electronics equipment. Can document equipment capabilities and operations. Can procure standard supplies and parts. Can work independently on assigned tasks with limited supervision, provides one-on-one supervision of apprentice technicians and small teams. Can provide technical training on installed equipment.

ET1: All the above AND Supervision of teams of both apprentice and Journeyman technicians (multiple). Can develop maintenance scheduling, establish equipment requirements, and develop installation, modification, removal plans. Can initiate tasking and work independently without supervision. Can provide training on Coast Guard processes/procedures.

ETC: All the above AND Budget Development AND Management, Training Management, Identifying Equipment Requirements, Liaison with outside entities on Technical Issues, Local Level Project Management, Contracting, Development of Equipment Changes.

ETCS/ETCM: All the above AND Supervision within remote AOR, Multi-Unit Budget Development, Multi-Unit Training Requirements, Multi-Unit Project Management, "All" aspects of career mentoring to people in and out of rating, Liaison with Management (Officers) CG wide, on technical and personnel issues.

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

TECHNICAL REFERENCE LIBRARY FOR ELECTRONICS TECHNICIANS

References cited in the qualifications.

CMPlus User's Guide
MICA User's Guide
Naval Engineering Manual, COMDTINST 9000.6 (series)
Civil Engineering Manual, COMDTINST M11000.11 (series)
Operational Reports, NWP 1-03-1
Casualty Reporting (CASREP) Procedures (Materiel), COMDTINST M3501.3 (series)
Electronics Manual, COMDTINST 10550.25 (series)
Simplified Acquisitions Procedures Handbook, COMDTINST M4200.13 (series)
Supply Policy and Procedures Manual (SPPM), COMDTINST M4400.19 (series)
ELC Support Gram
3M manual, OPNAVINST 4790.4 (series)
Directives, Publications, & Reports Index, COMDTNOTE 5600
Accounting Manual, COMDTINST M7300.4 (series), Part II
Protection of DoD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers, DODINST 6055.11, encl. 4, 5, 6, 7
Training and Education Manual, COMDTINST M1500.10 (series)
Cutter Training and Qualification Manual, COMDTINST M3502.4 (series)
Ordnance Manual, COMDTINST 8000.6 (series)
Electromagnetic Radiation Hazards (Hazards to Ordnance), OP 3565, Vol 2.
Coast Guard Enlisted Qualification Codes Manual, COMDTINST M1414.9 (series)
Enlisted Performance Qualifications Manual, COMDTINST M1414.8 (series)
Staffing Standards Manual, COMDTINST M5312.11 (series)
Commandant's Quality Award Guidebook
Coast Guard Measurement Strategy and Responsibilities, COMDTINST 5224.9 (series)
Acquisition and Management of Integrated Logistics Support for Coast Guard
American Heart Association CPR
Equipment Tag-Out Procedures, COMDTINST 9077.1 (series)
Hazard Communication of Workplace Materials, M6260.21 (series)
Hazardous Waste Management Manual, COMDTINST 16478.1 (series)
Navy Installation and Maintenance book General Maintenance book (NAVSEA SE000-01-IMB-010, EIMB – General Maintenance, Part VI
System Integrated Logistics Support (SILS) Command Policy Manual, COMDTINST M4105.8 (series)

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

Hazardous Materials Management manual, COMDTINST M16478.1 (series)

Standard Practice for Shipboard Bonding, Grounding, and other Techniques for Electromagnetic Compatibility and Safety, MIL-STD-1310G

Grounding Bonding and Shielding for Common Long haul/Tactical Communications Systems Including Ground Based Communications-Electronics Facilities and Equipment, MIL-STD-188-124B

Grounding, Bonding, & Shielding for Electronic Equipment & Facilities, MIL-HDBK-419A, Vols. 1 & 2

Other Publications of Interest

Systems Times

Electronics Materiel Identification Manual, COMTINST M4410.5 (series)

One technical manual for each item of test equipment.

Two technical manuals for each assigned equipment.

National Electric Code, NFPA 70

National Lighting Code, NFPA 78

Shrader's Electronic Communications, McGraw Hill

Electronics Installation and Maintenance Books (EIMB)

- General Handbook
- Installation Standards Handbook
- Electronics Circuits Handbook
- Test Methods and Practices
- Reference Data
- EMI Reduction Handbook
- General Maintenance Handbook
- Communications
- Radar
- Sonar
- Test Equipment
- Countermeasures

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**

RATING: ELECTRONICS TECHNICIAN	INIT	DATE

Navy Electricity and Electronics Training Series (NEETS)

Module Title

1. Matter, Energy and Direct Current
1. Alternating Current and Transformers
2. Circuit Protection, Control and Measurement
3. Electrical Conductors, Wiring Techniques and Schematic Reading
4. Generators and Motors
5. Electronic Emission, Tubes and Power Supplies
6. Solid-State Devices and Power Supplies
7. Amplifiers
8. Wave-Generation and Wave-Shaping Circuits
9. Wave Propagation, Transmission Lines and Antennas
10. Microwave Principles
11. Modulation Principles
12. Number Systems and Logic Circuits
13. Microelectronics
14. Synchros, Servos and Gyros
15. Test Equipment
16. Radio Frequency Communications Principles
17. Radar Principles
18. Technician's Handbook
19. Glossary and Index
20. Test Methods and Practices
21. Introduction to Digital Computers
22. Magnetic Recording
23. Introduction to Fiber Optics

NAME *(Last, First, Middle Initial)*	**SOCIAL SECURITY NO.**