#### CHAPTER 1

### ORGANIZATION AND ADMINISTRATION

This text is designed for use by the junior line officer, warrant officer, or limited duty officer who is assigned to shipboard electronics material officer (EMO) duties. It is intended to furnish a practical approach to the maintenance and logistic support of electronic equipment and also to serve as a ready reference for use in carrying out administrative duties. In this publication the terms shipboard electronics material officer, shipboard electronics officer, electronics readiness officer, electronics coordination officer and electronics maintenance officer are synonymous.

From inspections of electronic material aboard ships throughout the past several years, inspecting officers have concluded that the good material condition of shipboard electronic equipment is more often the result of administrative rather than of technical ability. Extensive electronic training is not needed in order to administer the electronics division; however, knowledge of the capabilities, limitations, and reliability of the equipment is a requirement in fulfilling the duties of the EMO. With this information, the EMO will be able to tell others what to expect from the equipment and whether it is operating according to design capabilities. It is not part of the EMO's job to repair inoperative equipment or adjust equipment that does not meet performance standards; however, the EMO is required to direct and coordinate equipment maintenance programs.

#### MISSION OF THE ELECTRONICS DIVISION

In simple terms, the mission of the electronics division is to ensure the operational readiness of all assigned electronic equipment. To fulfill this requirement, the electronics division must be organized efficiently to perform preventive and corrective maintenance, train personnel, maintain and submit records and reports, maintain and clean electronic spaces, administer electronics supply, and inventory equipment. A brief description of these requirements is given under the section covering the EMO duties and responsibilities. They are described in detail in ensuing chapters.

#### DUTIES AND RESPONSIBILITIES OF AN EMO

The electronics material officer's general duties, outlined in OPNAVINST 3120.32 series, Standard Organization and Regulations of the U.S. Navy, are as follows:

"The EMO is responsible, under the operations officer, for the readiness of all assigned electronic equipment, for the administration of electronics material maintenance, for the conduct of technical maintenance, and for the repair of all shipboard electronic equipment other than weapons control radar and equipment specifically assigned to another division. In ships having a combat systems department, the preceding general duties and the following special duties are assumed by the electronics coordination officer (ECO). The electronics coordination officer reports directly to the combat systems officer."

Further specific duties are detailed in OP-NAVINST 3120.32 series and serve as the basis of the EMO's responsibilities. The shipboard duties and responsibilities of the EMO may be divided into two main areas; material and administration. These two areas are not entirely separate and should be viewed as interdependent. They are, however, distinct elements of the EMO's responsibilities.

#### **Material Duties**

PREVENTIVE MAINTENANCE.—Regularly scheduled maintenance actions performed to prevent equipment malfunction are categorized as preventive. Ideally, preventive maintenance is designed to preclude malfunctioning, but practically, it is recognized as a program for minimizing the amount of corrective maintenance that would otherwise be required. The primary means of administering preventive maintenance is the Planned Maintenance System (PMS).

CORRECTIVE MAINTENANCE.—Maintenance activity performed on equipment after a malfunction has occurred is defined as corrective. Its purpose is to restore equipment that is not operating to its maximum capability.

EQUIPMENT INSTALLATION.-The installation of electronic equipment by the ship's force for special operating commitments or other reasons is the responsibility of the EMO. Installation criteria are governed by various instructions and directives, depending upon the equipment involved and the type of installation. Equipment installations accomplished by other than the ship's force may require the EMO to assume test, acceptance, and reporting responsibilities. Accounting for configuration changes in the ship's equipment is under the cognizance of the Naval Sea Systems Command, through the Ship Equipment Configuration Accounting System (SECAS). Configuration change reports are made in accordance with OPNAVINST 4790.4 using the 4790/CK form (see chapter 4 for details).

FIELD CHANGES.—Field changes are properly authorized modifications to equipment accomplished by personnel on ships or at maintenance facilities. Field change kits and field change information are disseminated under the Field Change Program administered through the command having cognizance over specific equipment (For example, Naval Sea Systems Command, NAVSEA; Naval Electronics Systems Command). Field changes are mandatory, and they must be installed correctly and in a timely manner. The EMO is guided by the instructions accompanying each field change kit.

#### **Administrative Duties**

Shipboard training and the maintenance of material are two major factors contributing to battle readiness. Although one cannot be said to be more important than the other, training is always a prerequisite to maintenance. Shipboard training contributes to the ship's ability to function as a fighting unit, directly through operational training and indirectly through maintenance training. For the electronics division, the subject of most divisional instruction is electronics maintenance. The training of electronics technicians in operational areas occurs in interdivisional drill during general quarters and during refresher training.

The EMO, as a division officer, is responsible for preparing a divisional training program. Divisional training objectives are designed to provide personnel with training in their assigned duties, general military matters, advancement, and personal improvement.

To provide uniformity of training and to assure adequate training time, the division training program is an extension of ship and department training plans. The administration of shipboard training programs is covered in detail in *Standard Organization and Regulations of the* U.S. Navy, OPNAVINST 3120.32 series. The extent to which the schedules and records of training specified in OPNAVINST 3120.32 series are maintained current determines, in a large measure, the success of the division training program.

Training often includes use of personnel qualification standards (PQS) for watchstation qualifications. A watchstation, as it applies to PQS, refers to those positions normally assigned by a watchbill, usually of 4-hour duration, and, in the majority of cases, operator oriented. Further information on PQS may be found in OPNAVINST 3500.34 series and in the test entitled NAVEDTRA 43100-1B, *PQS Managers Guide*.

SUPERVISION AND ASSIGNMENT OF ELECTRONICS TECHNICIANS.—Direct technical supervision of electronics technicians (ETs) is the job of the leading electronics technician or group supervisor. Officer supervision entails knowing who is on what job, what progress is being made, and any difficulties that have arisen which could keep the job from being completed on time. It means that the EMO should tour the electronics spaces at least once a day. The direct assignment of an individual to a particular job is usually delegated to the leading electronics technician. However, the EMO is ultimately responsible for the administration of maintenance, and will want to know who is doing what job.

RECORDS AND REPORTS.—The EMO is responsible for maintaining records and submitting, at periodic intervals, certain material and operational reports on electronics equipment. Records relating to the custody, inventory, status, and disposition of electronic equipment are maintained by electronics personnel under the direction of the EMO.

Rules governing the requirements for equipment record keeping may be found in the Naval Ships' Technical Manual, NAVSEA series; the Electronics Installation and Maintenance Book (EIMB) General, NAVSEA 0967-LP-000-0100; the Ship Equipment Configuration Accounting System (SECAS) Program Manual; and the Maintenance and Material Management (3-M) Manual, OPNAVINST 4790.4. The latter two publications deal with programs in which the EMO has a major responsibility for recordkeeping and reporting. Additionally, the EMO has a responsibility for reporting equipment casualties by message or speedletter under the Casualty Reporting System detailed in NWP 7.

MAINTENANCE AND CLEANLI-NESS.—The upkeep and cleanliness of a space reflect the degree of supervision and division administration. They contribute toward proper maintenance, because dust can inhibit the ventilation of electronics equipment, causing overheating with resultant circuit breakdown. In addition, dust as an abrasive can cause parts to wear excessively.

ADMINISTATION OF ELECTRONICS SUPPLY.—Without an adequate supply of spare parts, tools, and test equipment, the maintenance of electronic equipment would be impossible.

Each department is allocated a certain amount of funds for a quarterly period. The department head then determines, through the division officers, how much money each division will need to function. The electronics division requires tools, consumables, and equipage items to replace those lost, expended, or surveyed.

These needs should be accounted for in the EMO's input to the annual budget; however, care must be taken to ensure requirements are valid and within budget constraints. The Coordinated Shipboard Allowance List (COSAL) assures that a supply of spare parts is kept on hand. The EMO should be familiar with the procedures for drawing on-board spares and should understand how the supply department replenishes its stock of parts through the COSAL.

KEEPING THE CO INFORMED.—No ship can perform effectively if the commanding officer is not aware of the capability of all its systems at any given moment. If a piece of equipment fails or is not operating to design specifications, the EMO should use the chain of command, informing the operations officer of the problem verbally through the equipment status section of the operations department daily 8 o'clock report. It then becomes the operations officer's responsibility to relay the information to the commanding officer.

#### STANDARD SHIP ORGANIZATION

Standardization has resulted in shipboard organization being much the same on all ships in the Navy, differing only when it is necessary to accomodate specific functions of unique types of ships. The Standard Organization and Regulations of the U.S. Navy, OPNAVINST 3120.32 series (more commonly referred to as the standard organization and regulations manual or the SORM) fully describes the ship's organization, outlines the duties and responsibilities of the various departments and divisions, gives the procedures for accomplishing the various tasks and duties, and lists the ship's regulations. In addition, most ships have department organization manuals, and some ships may have division organization manuals.

Organization is the orderly arrangement of materials and personnel by functions. Sound shipboard organization is a requisite for good shipboard administration. A shipboard organization, designed to carry out the objectives of command, is based on a division of activities and on the assignment of responsibilities and authority to individuals within the organization.

The responsibility for organization of the officers and crew of a ship is assigned to the commanding officer by U.S. Navy Regulations 1973 and OPNAVINST 3120.32 series. The executive officer is responsible, under the commanding officer, for the organization of the command as a whole, while the heads of departments are assigned the duty of organizing their departments for readiness in battle and assigning individuals to stations and duties within their respective departments.

#### **Battle Organization**

The requirements for battle form the basis for the organization of combat ships and, as appropriate, for the organization of noncombatant ships. Functional groups, such as those shown in figure 1-1, are headed by key officers and comprise the battle organization of such ships. The officers man specified stations and control the activities of personnel under their direction. Functional group control contributes flexibility to the battle organization, thereby increasing its effectiveness when executing the plan for battle, or variations thereof, necessitated by the tactical situation.

The commanding officer as head of the battle organization exercises command control and is responsible, during action, for engaging the enemy. The commanding officer is assisted in these tasks by the navigator, operations officer, weapons officer, engineer officer, damage control assistant, air officer (aircraft carriers), electronics material officer, and combat cargo officer (amphibious operations), each of whom has cognizance over a major control function of the ship in battle. These functions (fig. 1-1) include ship control, operations control, weapons control, engineering control, damage control, electronics casualty control (see NWIP-50-1 Battle Organization), and debarkation control. When embarked, the air group commander is responsible to the commanding officer in matters affecting the air group's readiness.

Additional information concerning shipboard battle organization is available in Battle Control (U), NWIP 50-1 series. Information concerning the damage control battle organization is contained in Appendix 1 of NWIP 50-1 series.

#### **Shipboard Organization**

In many departments, the division of personnel in the shipboard organization (fig. 1-2 or fig. 1-3, depending on whether there is a combat systems configuration on board) closely approximates that in the shipboard battle organization. Ordinarily, the EMO is responsible to the operations officer under both battle and administrative organizations. However, the requirements of an administrative organizational structure must allow for the accomplishment of certain functions which have no place in battle. In the day-to-day routine, the needs for training and maintenance are emphasized.

OPNAVINST 3120.32 series prescribes the administrative organization for all types of ships. The navigation department, operations department, weapons department, engineering department, and supply department are the five basic departments found in all ships.

Departments are organized into divisions which, insofar as practicable, are assigned battle stations, thus permitting their employment as units under their own officers and petty officers. OPNAVINST 3120.32 series lists the standard letter and numeral designations of divisions of all types of ships. When it is necessary to establish a division not listed or when functions of two or more divisions are combined in a single



Figure 1-1.-Typical shipboard battle organization chart.



### SHIPBOARD ELECTRONICS MATERIAL OFFICER

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division, the type commander assigns a suitable letter or numeral designation which conforms as nearly as possible to those designations listed.

#### ORGANIZING THE ELECTRONICS DIVISION

The first step in effective administration, without which a division cannot function properly, is the setting up of a good organization. The procedure generally followed when initially organizing a division is: (1) setting down on paper and adequately defining all the duties and responsibilities assigned to the division; (2) grouping the duties, by function, so that they may be properly administered; (3) preparing an organizational chart delineating each area of responsibility and a chain of command; and (4) assigning specific personnel to each duty.

The proper assignment of available personnel for the upkeep of equipment (and for other necessary duties) is most essential. It is particularly critical if the division is under its allowance, or if the available technicians are inexperienced. The leading petty officer must be alert to the qualifications of the on-board technicians.

If the division is well staffed, it will be possible and practicable to assign the inexperienced personnel to some of the more experienced crew members. In this case, the leading petty officer should be sure that the experienced personnel are teaching the others and not using them merely as toolbox carriers.

Although the establishment of an electronics repair organizational chart is primarily the responsibility of the EMO, the leading ET has an important part in the organization plan.

Electronics repair organizational charts are useful for responsibility assignments. It is not possible to set up a standard electronics organizational chart because of ship/equipment differences, however a fairly simple approach for organizing the division is to utilize the 3-M organization that exists on the ship, using billet numbers instead of names (see the PQS Managers' Guide, NAVEDTRA 43100-1B). Another type of chart (a little more cumbersome) is the type presented in figure 1-4. The names of the ETs assigned to the various groups of equipment are written under the appropriate blocks. The top name in the list is the ET in charge of that particular group. In the final breakdown of duties, a certain number of equipment units may be assigned to an individual ET. An advantage of such an arrangement is that it places the responsibility for the maintenance of certain equipment on individual ETs.

In smaller vessels the equipment to be maintained and the electronics personnel available are, of course, reduced proportionately.

From the standpoint of personnel assignment, it is very important that the Ship Equipment Configuration Accounting System (SECAS) be maintained accurately and kept current. The SECAS is used as a basis for assigning electronics personnel to ships by Navy Enlisted Classification (NEC) to maintain certain electronics equipment that may be on board.

A check of the Enlisted Distribution and Verification Report (EPMAC-EDVR-1080) in the ship's office will enable the EMO to determine whether the ETs on board are qualified to maintain the type of electronics equipment installed.

Technicians should be cross-trained on all equipment on board ship whenever possible. This practice broadens their knowledge and perspective. It will also ensure that there will be several individuals available with good working knowledge of each piece of equipment.

Each person should also be assigned administrative "paper work" in keeping with the rating. When practicable, personnel should be rotated among the various types of paper work. It is a good practice to rotate each individual from special assignments to routine operations or evolutions such as the Special Sea and Anchor Detail Bill, the Replenishment Bill, the Rescue and Assistance Bill, and the Landing Party Bill.

Since routine operations, to a technician, mean the accomplishment of preventive and corrective maintenance, it is mandatory to include an Electronics Casualty Control Bill. The items in the following list should be included in this bill (with the following information given for each item: a description of the system, a block diagram showing all check points and the



Figure 1-4.—Electronics repair organizational chart.

location of all components that comprise the system, and any other information that will facilitate the accomplishment of the required maintenance):

- Antenna systems (both communications and radar)
- Power distribution system
- Gyro distribution system
- IFF data distribution system

Radar data distribution system

Transmitter/receiver patching and/or switching system

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Location of test equipment and tool boxes

Procedures and routes to obtain repair parts (including battle repair parts)

Routes used to procure repair parts during general quarters

Means of communicating between all electronic spaces (sound-powered phones, voice tubes, etc.)

Specific locations of CO<sub>2</sub> extinguishers in electronic spaces

Location of all ventilation switches

Tty patching details

BCM system details

Dry air system details

Cooling water system details

In addition to the operational bills listed, there are other bills, such as the Hazards of Electromagnetic Radiation to Ordnance (HERO) Bill, the Emission Control (EMCON) Bill, and the Cold Weather Bill, that may be required for certain situations. The Cold Weather Bill describes certain routine operations that are necessary when operating at extreme temperatures, such as procedures for deicing exposed equipment and draining wave guides.

Information on the HERO Bill may be found in chapter 3 of this text. The EMCON Bill concerns the use of radiating equipment.

On some occasions the use of radiating equipment can be more dangerous than valuable. Using electronic warfare (EW) techniques to detect (intercept) our electromagnetic radiations, an enemy force may locate our force long before we are in a position to engage. Needless to say, such detection could seriously impair the mission of the force. Emission control is utilized mainly to deny intercept early warning to an enemy in order to reduce the chance of being detected.

Although the control of electromagnetic radiations does not fall specifically within the scope of electronics maintenance, basic aspects and considerations of EMCON are important to the EMO because of their impact on the planning and accomplishment of maintenance. To accomplish emission control within the force, the officer in tactical command (OTC) imposes conditions of silence on transmitting equipment by means of an EMCON plan or EMCON annex to the OpOrder/OpPlan.

Conditions of electronic silence may range from complete silence to unrestricted use of transmitting equipment. Conditions of silence for various portions of the rf spectrum ordinarily apply to all equipment using the affected frequencies.

The EMCON plan may be imposed on particular frequency bands or on types of equipment. Restrictions imposed on one type of emission are accompanied by corresponding restrictions on other equipment using the same part of the frequency spectrum.

Various degrees of silence are defined for naval use. The unqualified term "silence" indicates that complete restrictions are in effect. By referring to ATP 1, Volume II, the Allied Naval Signal Book, proper signals can be issued, restricting radiations below any designated frequency. Under certain conditions it may not hold true, but as a general rule the detectable range increases as the frequency becomes lower. The higher the frequency, the more closely the electromagnetic wave approaches a line-of-sight transmission. Although surface ship radar waves might not be detected by a surfaced submarine at a distance of 75 miles, the force may be detected and tracked by high-flying aircraft. Such considerations are the basis for the commander's decision regarding EMCON condition.

At times, complete silence would work to the detriment of the force. For example, it is obvious that nothing is to be gained by maintaining silence when in actual contact with the enemy.

After all alternatives have been considered, the commander may issue an EMCON plan; include a statement on EMCON in the communication annex; or, if the operation is one for which specific times for EMCON can be anticipated, the commander may promulgate a separate annex scheduling the degree of silence for electronic equipment.

Figure 1-5 is a sample EMCON Bill extract.

#### **Emergency Bills**

Emergency bills are prepared by the type commander. They serve as a checkoff list and guide

EMITTING	I DNAUGUER	OPERATING	INDEX NO.	PERSONNEL TO NOTIFY	CHLION OL	(I.ALLIA VELO	DA DIA T-	ULPMENT	EQUIPMENT EMISSION STATUS	NOT	NOTIFIED	
& LOCATION	RANGE IN MHz	FR EQUENCY MHz	(TABLE E. ATP 1, Vol. II)	I & II		IV			ITON MANDAG			SET
cic				CIC OFF	CIC WO	cic wo						
AN/SP8-10	5450-5825	5510	C3, 15, 100, 132									
AN/UPX-1	1030	1030	13, 126, 127									
AN/UPX-12	1090	1090	13, 126, 127									
WEA PONS				WP CONT OFF (JC CIRCUIT)	DIR OFF (JC CIR- CUIT)	WEA PONS OFFICER						
MK XX	7600-8400	7750	19, 101, 134									
ASW				ASW EVAL (1 JS CIR- CUIT)	SONAR SUPV (29 MC)	SONAR SUPV (29 MC)						
AN/SQS-29	8 kHz	8 kHz	14, 85, 109									-+-
AN/UQC-10	8.3-11.3 kHz	9 kHz	14, 16, 85, 109								-	
AN/UQN-18	20 kHz	20 kHz	14, 15, 110	NAVIGATOR	QMOW	QMOW						_
сомм				RADIO SUPV (1 JX)	RADIO SUPV (21 MC)	RADIO SUPV (21 MC)						
AN/URC32#1	2-30	2360 kHz	16, 88, 114							_		
AN/URC32#2	2-30	3250 kHz	16, 88, 114									
AN/SRC#1	220-400	235	16, 89, 90, 122									
SILENCE CONDITION	NOITIGI	TIME ORD	DERED	TIME SET								

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Figure 1-5.—Sample EMCON Bill extract.

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in assigning personnel to emergency stations and in training them to cope with emergencies. The general emergency bill supplants the previous Collision Bill and the Abandon Ship Bill. It is developed to include contingencies such as explosions or extensive fires. Other ship's emergency bills are the Man Overboard Bill and the Nuclear, Biological, and Chemical Defense Bill. It is usually not necessary to prepare special division emergency bills, since all emergencies aboard ship are adequately covered in the ship's emergency bills. An important exception, however, is the Emergency Destruction Bill, which should list all of the classified publications and equipment that must be destroyed prior to abandoning ship, their location, the methods of destruction and priority of destruction. The assignment of personnel (by billet or rate) responsible for their destruction must be included.

## Watch, Quarter, and Station Bill

The Watch, Quarter, and Station (WQS) Bill is a summary of personnel assignments to stations or duties specified in each of the ship, department, or division bills. The WQS Bill is the one document that division personnel may use to find all of their assignments. For this reason, the WQS Bill should be prominently posted in one of the electronics spaces, usually in the ET shop. In addition, personnel should be notified whenever changes are made.

The forms used for WQS Bills vary with the types of ships. Type commanders usually prescribe the WQS format for ships under their administrative control. Leading petty officers should know the capabilities and limitations of assigned personnel; therefore they should be able to offer invaluable assistance in maintaining the WQS Bill. In addition to a knowledge of the capabilities of the division personnel the preparation of the WQS Bill entails an application of the basic principles of leadership.

#### DIRECTIVES

Directives are instructions or notices used by command at any echelon to prescribe policies, organization, procedures, or methods which serve as guides for controlling the decisions and actions of subordinates. The Navy Directives Systems, SECNAVINST 5215.1 series, establishes the directive system for the Navy and sets forth a simple and uniform plan for issuing, filing, and maintaining directives under the system. Directives are assigned identifying numbers according to their subjects as listed in SECNAVINST 5210.11 series, Department of the Navy Standard Subject Identification Codes.

#### TERMINOLOGY

The following definitions of policies, procedures, orders, instructions, and regulations are necessary for an adequate understanding of the purpose of directives.

A military POLICY prescribes the course of action to be followed in a given situation. Policies are best effected through written means, for they are used in determining the action required in recurring situations. Policies established at the top echelon are broad and general, whereas those established at lower echelons must be specific, conforming to the policies established by higher command.

A military PROCEDURE is a series of coordinated steps for the performance of functions.

A military ORDER is a formal oral or written command, issued by a superior officer to a subordinate, which establishes a rule or regulation or delegates authority for the performance of a function.

A military REGULATION is a rule which sets forth standards governing the conduct of individuals.

The term INSTRUCTION denotes the imparting of information concerning the methods for the accomplishment of a mission and specifying the manner and condition: of performance in the execution of projects and programs.

Navy INSTRUCTIONS are directives that have a long term reference value and continue in effect until cancelled by the originator. Instructions may contain information of a continuing nature or information that requires continuing action. Instructions are also used to direct actions that cannot be completed in the near future or actions that must be taken at a future date. Navy NOTICES are directives that are applicable for a brief period of time (usually 6 months or less) and provide for automatic cancellation on a prescribed date or under a certain condition. Notices may require action that can be completed upon receipt. Notices may also contain announcements and items of current interest.

#### FORMAT

Directives may be of the letter type or publication type. A publication type of directive differs from a letter type in that it is normally equipped with covers and contains a title page, a letter of promulgation, a record of changes page, a table of contents, and an alphabetical index of contents. The ship's organization and regulations manual is a directive in publication form.

Certain shipboard directives, however, are excluded from the directives system. The directives excluded are the captain's night order book, the ship's plan of the day, the engineer officer's night order book, the officer of the deck's standing order book, and the officer of the deck's memoranda.

# PROMULGATION AND DISSEMINATION

The commanding officer promulgates the ship's directives system by the issuance of two instructions. The first prescribes the directives to be issued in the system, the responsibilities of originators of the directives, and the directives' control points and their functions; the instructions for departmental and divisional use of the system; and the standards for reproducing the ship's directives. The other promulgates the distribution lists for the ship's directives.

The ship's directives system provides for the wide dissemination of the policies of the commanding officer, the executive officer, and the heads of departments, and supplies subordinate officers with a medium for the issuance of amplifying and supplementary instructions placing the policies in effect. The system ensures that the policies and procedures used in the administration and operation of the ship are continually in keeping with the plans and policies of the Navy Department and of the fleet and type commanders by permitting integration of the ship's directives with those from higher authority.

#### CORRESPONDENCE

Initiating and handling correspondence is part of an EMO's responsibility. Refer to the *Correspondence Manual of the Navy* for formats, policies, procedures and other useful information. The Division Officer's Guide provides information on the following correspondence subjects:

References

Basic rules

Naval correspondence

Standard naval letters

Memorandum

Naval speedletters

Naval messages

Other naval correspondence

An indispensable source for information, procurement, and guidance of naval warfare publications is the NWP Ø series. Information on naval communications can be found in NTP 4, Basic Communications Doctrine, and NWP 7, Operational Reports (previously mentioned). Detailed supply message procedures may be found in NAVSUP Publication 485, Afloat Supply Procedures. A smaller and more practical publication that every EMO should have is the *MILSTRIP/MILSTRAP* Desk Guide, NAV-SUP PUB 409, 0503-LP-409-0075. It contains much of the routine information contained in NAVSUP 485.