

TECHNICAL DOCUMENT 3152
December 2003

Acquisition and Development of System Command (SYSCOM) Technical Manuals

A Guide for SSC San Diego Employees

Approved for public release;
distribution is unlimited.

SSC San Diego

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SSC San Diego
San Diego, CA 92152-5001

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ACRONYMS

A

ACN	Advance Change Notice
AEL	Allowance Equipage List
AER	Alterations Equivalent to Repair
APL	Allowance Parts List
ASCII	American Standard Code for Information Interchange
ATIS	Advanced Technical Information Support

C

CA	Canceled
CAGE	Commercial And Government Entity
CD-ROM	Compact Disk - Read Only Memory
CDM	Configuration Data Manager
CDMD-OA	Configuration Data Managers Database - Open Architecture
CDRL	Contract Data Requirements List
CI	Commercial Item
CLIN	Contract Line Item Number
CONOPS	Concept of Operations
COR	Contracting Officer's Representative
COTS	Commercial Off-the-Shelf
CSTOM	Combat System Technical Operations Manual

D

DID	Data Item Description
DoD	Department of Defense
DoN	Department of the Navy
DRRB	Data Requirements Review Board
DTD	Document Type Definition

E

E-MAIL	Electronic Mail
ECP	Engineering Change Proposal
ESWBS	Expanded Ship Work Breakdown Structure
ETM	Electronic Technical Manual
E-TMARC	Electronic-Technical Manual Acquisition Requirements Checklist

F

FAR	Federal Acquisition Regulation
FCB	Field Change Bulletin
FI	Final Issue
FMS	Foreign Military Sales
FOMM	Functionally Oriented Maintenance Manual
FOUO	For Official Use Only
FPSR	Forms and Publications Status Report
FRC	Final Reproducible Copy
FTS	Federal Telephone Service
FV	Foreign Vessel

G

GFM	Government Furnished Material
GL	Grade Level

H

HM&E	Hull, Mechanical, and Electrical
------	----------------------------------

I

IC	Integrated Circuit
ID	Identifier
IETM	Interactive Electronic Technical Manual
ILO	Integrated Logistics Overhaul
ILS	Integrated Logistic Support
IOC	Initial Operating Capability
IPB	Illustrated Parts Breakdown
IPR	In-Process Review
ISEA	In-Service Engineering Agent
ITP	Index of Technical Publications

J

JCP	Joint Committee on Printing
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L

LCM	Life Cycle Manager
LMI	Logistic Management Information
LSA	Logistic Support Analysis

M

MPA	Manual Preparing Activity
M-SPECS	Modular Specification System

N

NAVEDTRACOM	Naval Education And Training Command
NAVICP	Naval Inventory Control Point
NAVSEA	Naval Sea Systems Command
NAVSUP	Naval Supply Systems Command
NAVSURFWARCEN	Naval Surface Warfare Center
NDI	Non-developmental Item
NETL	NAVSEA Engineering Technical Library
NI	Never Issued
NLL	Naval Logistics Library
NSLC DET LANT	Naval Sea Logistics Center Detachment Atlantic
NSDSA	Naval Systems Data Support Activity
NSN	National Stock Number
NSWC PHD	Naval Surface Warfare Center Port Hueneme Division
NSWCD	Naval Surface Warfare Center Division

O

OB	Obsolete
OGL	Overall Grade Level
OPNAV	Operations Naval
ORDALT	Ordnance Alteration
OSB	Operational Stations Book

P

PEO	Program Executive Officer
PHD NSWC	Port Hueneme Division, Naval Surface Warfare Center
PI	Preliminary Issue
PYWI	Planning Yard Work Items
POC	Point of Contact
PPL	Preferred Products List
PR	Procurement Request
PY	Planning Yard

Q

QA	Quality Assurance
----	-------------------

R

RA	Requesting Activity
RAC	Rapid Action Change
RAID	Redundant Arrays of Independent Disks
RCN	Report Control Number
RGL	Reading Grade Level
RI	Change Incorporated in Basic
RIC	Repair Identification Code

S

SIB	Ship Information Book
SGML	Standard Generalized Markup Language
SOW	Statement of Work
SPA	Stocking Point Activity

SPAWAR	Space & Naval Warfare Systems Command
SSCC	Standard Subject Classification Code
SSIL	System/Subsystem Interface List
SU	Superseded
SYSCOM	Systems Command

T

TAB	Training Aid Booklet
TDMIS	Technical Data Management Information System
TEMP	Test and Evaluation Master Plan
TLMS	Technical Library Management System
TM	Technical Manual
TMARC	Technical Manual Acquisition Requirements Checklist
TMCR	Technical Manual Contract Requirement
TMDER	Technical Manual Deficiency/Evaluation Report
TMIN	Technical Manual Identification Number
TMIN-R	Technical Manual Identification Number Request
TMINS	Technical Manual Identification Numbering System
TMMA	Technical Manual Maintenance Activity
TMMP	Technical Manual Management Program
TMP	Technical Manual Plan
TMQA	Technical Manual Quality Assurance
TMSR	Technical Manual SEATASK/SPATASK Requirement
TOM	Technical Operations Manual
TRS	Technical Repair Standard

U

UD Under Development

UIC Unit Identification Code

V

VIN Volume Identification Number (used with CD-ROMs)

W

WFWG Windows for Workgroups

INTRODUCTION

This manual describes how to acquire, develop, and maintain System Command (SYSCOM) Technical Manuals (TMs) for SYSCOM sponsors such as Naval Sea Systems Command (NAVSEA) and Space and Naval Warfare Systems Command (SPAWAR). TMs are the primary information source for technical training, installation, operation, testing, maintenance, and repair associated with NAVSEA/SPAWAR systems or equipment. Unless adequate and suitably written TMs already exist, new manuals must be developed and procured as part of all NAVSEA/SPAWAR systems, equipment, or major component acquisitions. No other forms of technical information will be purchased without specific justification.

Common TM problems include the following:

- Inconsistencies
- Spelling mistakes, grammatical errors, and typographic errors
- Technical errors
- Incorrect references to other sections, pages, etc.
- Ambiguities of message arising from poor sentence structure
- Formatting inconsistencies and problems (trying to cram too much information onto one page)
- Revision errors
- Print quality
- Reduced size of engineering drawings

The Naval Systems Data Support Activity (NSDSA) is the NAVSEA- and SPAWAR-designated field activity responsible for the centralized management of TMs and technical services in support of the NAVSEA/SPAWAR Technical Manual Management Program (TMMP). NSDSA is the NAVSEA and SPAWAR center of excellence for TM infrastructure/support.

This manual is written for Space and Naval Warfare Systems Center, San Diego (SCC San Diego) employees and shows how to perform the following tasks when developing SYSCOM TMs:

1. Acquire SYSCOM TMs.
2. Create a Technical Manual Contract Requirement (TMCR) or Technical Manual SEATASK/SPATASK Requirement (TMSR) using NSDSA's homepage at <http://nsdsa.phdnswc.navy.mil>.
3. Obtain Technical Manual Identification Numbers (TMINs), National Stock Numbers (NSNs), and Volume Identification Numbers (VINs) (for Compact Disk-Read Only Memory [CD-ROMs]) from NSDSA.

4. Support and maintain SYSCOM TMs.
5. Update the Technical Data Management Information System (TDMIS) database.
6. Ensure that TM management principles are imposed on contractors, subcontractors, field activities, and other Government activities as necessary and appropriate.
7. Provide for sustainment throughout life cycle through Technical Manual Management Authority (TMMA) assignment. TMMA performs the following:
 - Manages TM(s) throughout life cycle through change/revision process
 - Monitors readiness and sustainability of deployed systems
 - Supports fielded systems
 - Modifies/upgrades fielded systems as required
8. Ensure Reading Grade Level (RGL) appropriate for readers of the TM.
9. Dispose of TMs in accordance with SECNAVINST 5510.36, Department of the Navy (DoN) Information Security Program (ISP) Regulation and NAVSEA/SPAWAR S0005-AA-PRO-010/E0005-AC-HBK-010, Operations and Life Cycle Procedures, Section 16, Paragraph 16.6.

TM ACQUISITION

TECHNICAL MANUAL PLAN

Before developing a Technical Manual Plan (TMP), ask the following questions:

1. What are the technical, maintenance, and Logistic Management Information (LMI) data input requirements?
2. How does TM development relate to LMI, maintenance planning, and training?
3. What quality assurance (QA) program will ensure quality TMs?
4. What will be the acceptance criteria for the TMs?
5. What are the printing, life cycle maintenance, and distribution requirements?

Develop and update the TMP throughout the system/equipment life cycle to identify required TMs:

1. Develop an Electronic Technical Manual (ETM) (if needed) Concept of Operations (CONOPS)
2. Ensure adequate definition of TM requirements
3. Establish mission and support criteria
4. Find out what the user requires
5. Establish Program/TM milestones
6. Synchronize with hardware scheduling and related Integrated Logistic Support (ILS) events
7. Establish organizational functions and responsibilities

TECHNICAL MANUAL ACQUISITION PLAN

The Technical Manual Acquisition Plan identifies the technical information requirements tailored to the user community. The plan should cite TM types required to support system/equipment and should reference applicable TM specifications and TMCRs/TMSRs. The plan should also include budget information to ensure adequate TM funding. A valuable spreadsheet for estimating TM costs is available at the following URL: <http://nsdsa.phdnswc.navy.mil/includes/prntcst20xls.xls>. TMs developed under contract should be cited as separate, individually funded Contract Line Item Numbers (CLINs).

Concept of Operations

To develop a planning document, see S0005-AA-PRO-010, NAVSEA/SPAWAR Operations and Life Cycle Support Procedures, at the following URL: <http://nsdsa.phdnswc.navy.mil>

Early Acquisition Planning

Early acquisition planning focuses on the following:

1. Timely budgeting of funds to cover all TM requirements
2. Timely authorship of TMs to coincide with hardware delivery
3. Timely review, production, and control of TM products

As program changes occur, TM plans must be updated to reflect the changed program and hardware requirements.

TM Requirements

To determine TM requirements, ask the following questions:

1. Does an approved U.S. Navy TM exist? If not, new system/equipment procurements must include supporting TMs for installation, operation, testing, maintenance, overhaul, and repair.
2. Do commercial TMs exist? If commercial item (CI)/non-developmental item (NDI) (formerly COTS/NDI) TMs are used, supplemental data may be required. CI/NDI TMs must be prepared to U.S. Navy specifications, not to “best commercial practices.”

If no CI/NDI TMs exist, or if 30% or more of a TM must be changed, a new TM must be acquired that follows COTS Equipment Manual Requirements (MIL-DTL-24784/4). Evaluate CI/NDI TMs early in the planning/acquisition phases to determine whether the manuals meet specified TMCR requirements. Operation, maintenance, troubleshooting, and installation must support U.S. Navy requirements.

“Buying Commercial and Non-Developmental Items: A Handbook” is another valuable publication on CI/NDI acquisitions. The handbook is available through the Defense Standardization Program (DSP)/Defense Logistics Agency (DLA) at <http://www.dsp.dla.mil/documents/sd-2.html>. Engineering data requirements are identified as LMI. Logistics Management Information (MIL-PRF-49406) is the performance specification for LMI and identifies format requirements for data requirements. LMI Points Of Contact (POC) include the following:

- NAVSEA (202) 781-1831 NAVSEA 04L2
- SPAWAR (619) 524-7250/Defense Switched Network (DSN) 524

SSC San Diego employees must talk to the Patent Counsel for specific legal advice on acquiring data rights for the U.S. Navy for publication of CI/NDI TMs.

CI/NDI TM Acquisition

All acquisitions will make maximum use of CI/NDI hardware and its existing technical documentation to avoid unnecessary research and development costs. CI is the most frequently used form of NDI. (See the general policy statement cited in NAVSEA/SPAWAR Instruction 4160 Series addressing CI/NDI and COTS.) Use the following procedure to develop a CI/NDI TM:

1. Conduct a market survey and look into commercial alternatives for acquiring hardware/equipment. (See the NDI Handbook for discussion of supply support.)
2. Screen the TDMIS (discussed later in this manual) and other indices identifying Department of Defense (DoD) and CI manuals for existing TMs usable as a baseline.
3. Determine availability of CI TMs.
4. Order existing CI/NDI TMs in digital form from the equipment manufacturer/supplier, other DoD sources, or the NAVSEA/SPAWAR Engineering Technical Library (NETL). Only when digital format media are unavailable should hard copy TMs be acquired.
5. Order standard commercial formatted diskette copies of available new CI manuals; if no digital copy is available, get a hard copy from the hardware contractor.
6. Evaluate existing CI/NDI TMs against the TMCR based on MIL-DTL-24784A/4 to determine the following:
 - Whether maintenance procedures support the intended maintenance concept
 - Whether operations, maintenance, troubleshooting, installation, repair, and supply support instructions are compatible with SYSCOM requirements
 - Whether more data would be required to provide adequate system/equipment life cycle support. (The advantage of providing supplemental data within the existing manual should be considered.)
7. Check availability of digital TM formats (commercial or military)
8. Review stocking and distribution provisions now in place.
9. Acquire new CI/NDI TMs, supplements, and updates in digital or hard copy formats. When economical, procure copies of the existing commercial application program used to produce the TMs.
10. Ensure the following:
 - TMs (including NDI/COTS) are procured under a single CLIN and through a TMCR. See Section 6 of NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP).
 - CI/NDI manuals and supplementary data are quality controlled and certified. See Section 11 of NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP).
 - Unique TMINs and NSNs are bar-coded and on the front cover of each hard copy manual or magnetic disk. See Section 12 of NAVSEA/SPAWAR TMMP Operations and Life-Cycle Support Procedures (E0005-AC-HBK-010TMMP).

- CI/NDI manuals and supplementary data are duplicated (whether hard copy or disks) in the quantity required for initial distribution, use, and stock. See Section 13 of NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP).
- One copy of the CI/NDI hard copy or magnetic disk is stored at the NAVSEA/SPAWAR Engineering Technical Library. See Section 14 of NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP).
- Limited data rights are acquired whenever possible. SSC San Diego employees must talk to the Patent Counsel on acquiring data rights for the U.S. Navy.

CI/NDI Acquisition Types

Because CI/NDI systems and equipment are rarely specifically designed to withstand severe environmental conditions, it is often difficult to evaluate their suitability for military use. SYSCOMs frequently procure items for use in environments ranging from air-conditioned land facilities to over-heated spaces on combatant ships. CI/NDI procurements generally fall into one of four categories:

- As is (no changes)
- Modified (to meet functional requirements)
- Ruggedized (to meet selected harsh environmental conditions)
- Militarized (to meet any expected environment)

NOTE: All systems classified "mission critical" must pass full military specification environmental testing (that is, be completely "militarized.")

CI/NDI TM Suitability/Compatibility Criteria

In all CI/NDI hardware acquisitions, available commercial TMs must be evaluated for their compatibility and suitability based on TM requirements. Decisions to depart from the "as is" hardware status of previous procurements will generally affect the suitability and compatibility of available manuals. See Figure 1.

To be suitable for use in support of systems and equipment, a CI/NDI technical manual must:

1. Exist for "non-developmental item" ("off-the-shelf") commercial equipment
2. Precisely reflect the configuration of the hardware
3. Be fully compatible in technical content with the equipment maintenance plan
4. Be comprehensible by the intended principal users
5. Allow updates to the hardware configuration throughout its expected life cycle

6. Be obtainable with limited rights in data for Government use, reproduction, replication, and distribution
7. Follow all MIL-DTL-24784A/4 requirements
8. Require change to no more than 30% of its content
9. Be subject to the same TMCR, TMIN, and stocking processes as military TMs. See Sections 6, 12, and 14 of NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP), respectively, for information regarding each of these processes.

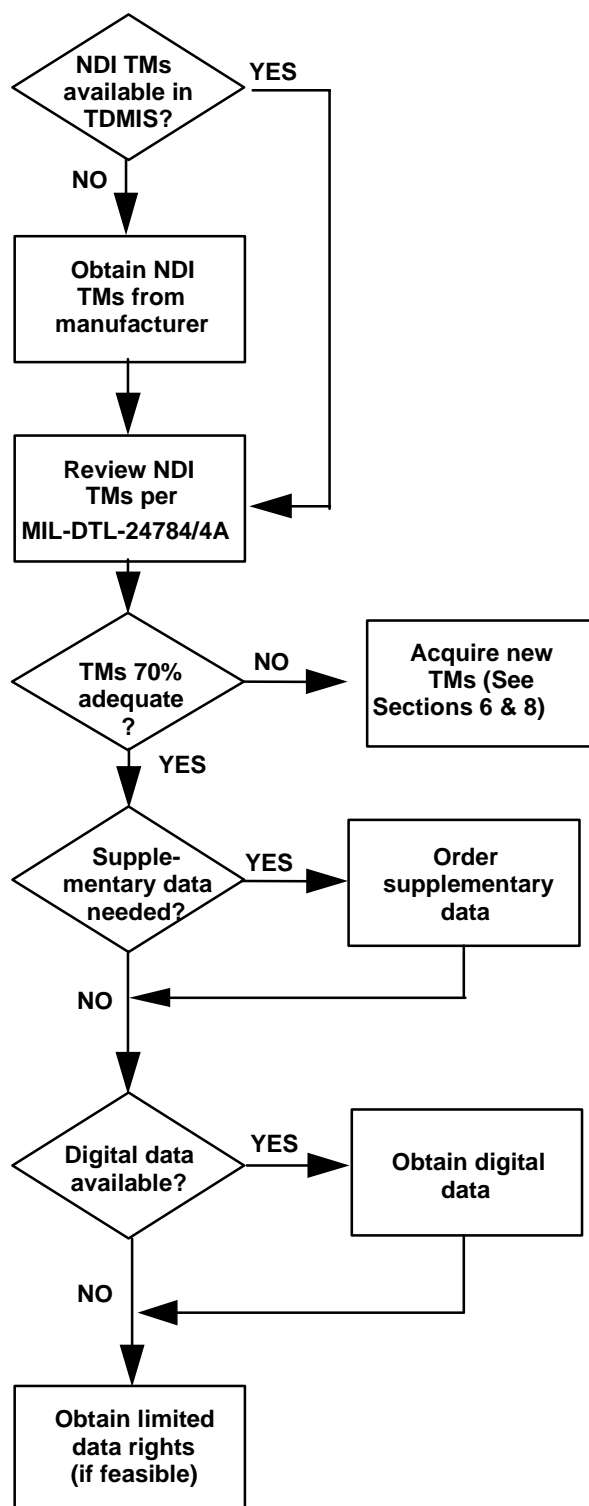


Figure 1. CI/NDI (COTS) TM decision path.

The complexity of the system or equipment acquired is a major factor in determining CI/NDI compatibility. To be acceptable under the requirements of MIL-DTL-24784A/4, a commercial manual for a simple item must include the following:

1. Assembly instructions
2. Parts list
3. Lubrication card (where applicable)

To ensure compatibility with U.S. Navy operation, maintenance (and maintenance philosophy), troubleshooting, and installation requirements, a commercial manual for a complex item must include the following:

1. Safety precautions
2. Preparation for use and installation instructions
3. General theory of operation
4. Maintenance instructions
5. Storage requirements
6. Parts lists
7. Illustrations
8. Caution and warning labels

Existing Technical Manuals

Existing TMs may be updated through a permanent change, an update revision, a complete revision, or a supplement. Use the following guidelines to decide whether a change, revision, or supplement is needed.

Permanent Change. The total number of change pages is less than 25% of the TM.

Update Revision. At least 25 to 50% of TM pages changed. Format and style stay the same.

Complete Revision. More than 50% of pages changed.

Supplement. Used only when classified information must be separated from body of text or when particular hardware model must be described independent of overall hardware population.

ACQUISITION

The second major stage of the TM process translates the planning stage into firm contractual or tasking requirements to prepare needed TMs and changes. The Acquisition Manager decides the type of manual, product, and the specification(s) or requirements under which the product will be prepared, the preparation of a TMCR, and when necessary, the development of contractual documents such as Contract Data Requirements List (CDRL) and Statement of Work (SOW). The

TMCR identifies and defines the TM products and non-product data items delivered. The CDRL directs the contractor to prepare and deliver data meeting set approval and acceptance criteria. The SOW has tasking information for generating the TM product and data requirements.

Solicitations and Contracts Procedures

Use the following procedure to incorporate TM requirements into NAVSEA/SPAWAR solicitations and contracts. TMs must be specifically identified in the CDRL (DD Form 1423) by a TM number/title or by category with reference to a contract specification/list.

1. Determine the TM coverage necessary to support the systems/equipment acquired.
2. Identify TM requirements by TM number/title, category, or specification. Create a TMCR from NSDSA through the online Modular Specification System (M-SPECS) Program.

The Data Requirements Review Board (DRRB) prepares the TM requirements portion of the Procurement Request (PR), solicitation, or contract. The Acquisition Manager forwards the TM requirements (as part of complete procurement package) to the DRRB or the contracting office, as applicable, for processing. The Acquisition Manager ensures that a new M-SPECS-generated TMCR has been developed for each procurement and that it has been reviewed, coordinated, and numbered in compliance with TMMP policy before entry into the procurement or tasking process. NSDSA ensures that there are no duplications in the acquisition of data. The activity reviews TM data requirements and recommends changes or approves them. NSDSA returns the TM procurement package to acquisition activity. The Acquisition Manager incorporates required review changes to the TM procurement package and resubmits for approval, if necessary.

Limitations on Procurement

New TMs, revisions, and changes shall be procured only to an approved U.S. Navy specification, standard, or TMCR. Maximum use shall be made of commercially available TMs and their supplements that meet specified requirements. All NAVSEA/SPAWAR TMCRs shall be prepared in accordance with the following guidelines:

- a. An approved TMCR is mandatory for all procurements of TMs, CI/NDI manuals, change packages, or revisions. The TMCR lists all TMs by type and associated specifications required for their development, and describes QA products and procedures. As part of the procurement of each system/equipment, Acquisition Managers responsible for acquiring the related TMs must provide an approved TMCR and applicable CDRL and SOW to cover all requirements specified by the project TMP. NAVSEA 04L3/SPAWAR 04L-2 will randomly review TMCRs, including changes and revisions, to ensure conformance with TMMP policy and provide advice as to acceptability.
- b. A TMCR is invoked in contracts as an attachment to the CDRL. It is a complete document tailored to the unique needs of a specific procurement and provides the contractor with the TM product preparation and delivery requirements. Any deviations, waivers to specifications, special instructions, or requirements tailoring (previously accomplished) are then incorporated into the M-SPECS produced TMCR through communication/coordination between the Acquisition Manager and the M-SPECS Team at NSDSA

c. For development of TMs, the Command will use a tasking document (TMCR/TMSR) that reflects the same requirements as contained in NAVSEA/SPAWAR TMCRs.

New Procurements

For new TM procurements, all TM product data items procured under a given contract are to be identified in a single TMCR. This TMCR is to be treated as an attachment to the CDRL exhibit for TMs. Separate TMCRs are not to be completed for various contract option years under a single contract. Note that the TMCR replaces the Data Item Descriptions (DIDs) previously used by NAVSEA/SPAWAR to procure manuals. DIDs are not referenced in the CDRL for TM products except for limited types of commercial manuals and related supplementary data. The following DIDs (generally cited with the TMCR) may be used only for the acquisition of commercial manuals and CI/NDI supplementary data (1) before the weapon-system development phase, or (2) for equipment not related to a ship or weapon system, or (3) not used by fleet operating forces:

DID	DATA ITEM
DI-TMSS-80527	Commercial Off-the-Shelf (COTS) Manuals
DI-TMSS-80528	Supplementary Data for COTS Manuals

Solicitations and Contracts TM Requirements

Statement of Work (SOW). The work effort required of the contractor to support technical publication preparation is defined in Section 3.0 of the contract SOW. Samples of SOW paragraphs are provided in Attachment (D-1) in NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP). All associated TM QA items are defined as non-product data items and are also procured through the SOW/CDRL process.

Contract Data Requirements List (CDRL). CDRLs are to be used for ordering TMs, change packages, revisions, and related non-product data items for all hardware procurements. When TMs are required for the engineering development phase or for full-scale development, where the full scope of the TM effort may be unknown, the TMCR and CDRLs are to require known items such as book plan(s), QA provisions, and the type of manual(s) developed to military specifications or purchased "off-the-shelf." The TMCR is updated when the program requirements are more clearly defined. Specific instructions regarding acquisition of TMs (product items) and QA items (non-product items) are given in Appendix D of NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP). A sample CDRL is in Attachment (D-3) of the same document.

CDRL Tracking. Contractor's progress in accumulating and preparing the data in the TM must parallel the development of the equipment or system so that the manual is available for delivery with the equipment. Periodic reviews must also be scheduled to conform to certain deliveries within the CDRL schedule for TM products. See Section 11 of NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP).

Follow-On Procurements. Delivery requirements for TM changes or revisions necessitated by hardware modifications are to be required concurrently with the hardware modification.

Update Provisions. All revisions and change packages procured to reflect a hardware modification are required to concurrently correct all known outstanding deficiencies including all applicable Advance Change Notices (ACNs).

Deliverable Copy. The deliverable copy is to be in the Final Reproducible Copy (FRC) form specified in the TMCR except as identified in the following subparagraphs.

a. For all Functionally Oriented Maintenance Manual (FOMM) contracts, the Joint Committee on Printing (JCP) authorization 23383, as required by Public Law 44 of the U.S. Code and Navy Procurement Directives, is to be cited as the justification to procure photolithographic negatives (if necessary).

b. Delivery of commercial CI/NDI manuals should be in the quantity required for initial distribution, use, and stock, unless it is in the best interest of the Government to reprint copies from a clean copy of the commercial manual. In this case, one copy of the properly identified commercial manual is to be provided, with supplementary data, if applicable.

c. Solicitations, and contracts for new TMs should provide for automated transmission and storage of technical data by electronic means in addition to the delivery of FRC in magnetic or optical media. See Section 16 of NAVSEA/SPAWAR TMMP Operations and Life Cycle Support Procedures (E0005-AC-HBK-010TMMP).

Delivery Requirements. Acquisition schedules for TMs, change packages, revisions, or supplements should allow sufficient time for contractor validation, Government review and verification, and printing/replication before delivery to users. Preliminary issues are to be delivered according to program requirements, but before delivery of the first hardware. Except for follow-on procurements, approved and validated preliminary manuals are to be delivered for use during training and verification and with the delivery of initial production equipment. Final manuals are scheduled for delivery after verification of production equipment. For follow-on procurements, approved and verified TMs should be delivered and packaged with the hardware. Any changes identified are to be incorporated into the final manual before packaging and shipping of the system or equipment.

Development Contract Post-Award Conference. Host a Post-Award Conference to perform the following tasks:

1. Review/approve contractor TM QA and Validation Plans
2. Schedule and conduct TM in-process reviews (IPRs)
3. Review Statement of Objectives/SOW against TMCR
4. Resolve ambiguities/questions
5. Ensure "level playing field"
6. Agree on deviations/deletions and request TMCR amendment
7. Record decisions/agreements

The contract must be signed by the Government and the contractor. The Post-Award Conference shall include the following participants:

- Chairperson: Government/Logistic Element Manager (LEM)
- Project Manager/Lead: Contractor
- Contract Administrator: Government
- Technical Manual Quality Assurance (TMQA): Contractor
- Production Personnel as required
- Engineering: Contractor/Government/In-Service Engineering Agent (ISEA)/Laboratory Contract Manager (LCM)
- Fleet representation
- Recorder: Contractor

In-Process Reviews

Use IPRs to ensure TM quality and to perform the following tasks:

1. Periodically review progress, typically, at 30, 60, and 90% (NAVSEA) or 25, 50, and 75% (SPAWAR) of completion
2. Review text, illustrations, and Illustrated Parts Breakdown (IPB)
3. Ensure technical/editorial flow
4. Ensure SOW/TMCR compliance
5. Conduct final IPR before review of manuscript delivery

The NAVSEA/SPAWAR 4160/10 Technical Manual In-Process Review (IPR) Discrepancy Disposition Record (Figure 2) is a valuable tool for conducting IPRs. The contractor may request IPRs. IPRs shall include the following participants:

•Chair: Government Contracting Officer's Representative (COR)/Technical Representative (TR)/LEM

- Project Manager/Lead: Contractor
- Contract Administrator: Government
- TMQA: Contractor
- Production Personnel as required

- Engineering: Contractor/Government/ISEA/LCM
- Fleet representation
- Recorder: Contractor

Delivery of TM Draft Copies

Upon delivery of TM draft copies, perform the following tasks:

- Review and approve TM draft copies
- Obtain TMINS/NSNs
- Develop TM Validation Plan for Preliminary TMs
- Update TM digitization requirements (CONOPs)
- Develop TM Verification Plan
- Update TMP milestones
- Conduct TM validation (contractor) (see Figure 3)
- Conduct TM verification (government) (see Figures 4 and 5)
- Develop FRC
- Update digitized data files
- Government certifies final TMs in accordance with NAVSEA/SPAWAR S0005-AA-PRO-010/E0005-AC-HBK-010 Operations and Life Cycle Procedures , Section 11, paragraph 11.5.1

Full-Rate Production and Deployment

When TM is ready for full-rate production and deployment, perform the following tasks:

- Obtain CD-ROM Volume Identification Number (VIN) and NSN for electronic TMs
- Publish and distribute new paper TMs, changes, and/or revisions
- Develop TM change control procedures
- Enforce warranty of data
- Provide for TM storage/retrieval through Navy Logistics Library (NLL) or alternate carrying point

Sustainment Phase Operation and Support

Provide for sustainment throughout life cycle through Technical Manual Management Authority (TMMA) assignment. TMMA performs the following:

1. Manages TM(s) throughout life cycle through change/revision process
2. Monitors readiness and sustainability of deployed systems
3. Supports fielded systems
4. Modifies/upgrades fielded systems as required

System/Equipment Disposal Phase

The System/Equipment Disposal Phase may include disposal, demilitarization, detoxification, waste storage, or recycling. This phase marks the end of economic or physical service life and disposal of the system. TM disposal is described in SECNAVINST 5510.36, Department of the Navy (DoN) Information Security Program (ISP) Regulation and NAVSEA/SPAWAR S0005-AA-PRO-010/E0005-AC-HBK-010, Operations and Life Cycle Procedures , Section 16, Paragraph 16.6.

Insert classification of IPR Report here and at bottom of page. **CLASSIFICATION:**

TECHNICAL MANUAL IN - PROCESS REVIEW (IPR) DISCREPANCY DISPOSITION RECORD			
INSTRUCTIONS: Use this report to indicate technical manual - IPR discrepancies and recommend changes. Continue on 8 - 1/2" x 11" paper if additional space is needed.			
1. TECHNICAL MANUAL TITLE		2. TECHNICAL MANUAL IDENTIFICATION NUMBER	3. CHANGE/REV NUMBER
4. TMCR NO.	5. CONTRACTOR NAME/CONTRACT NO.		6. TO BE REVIEWED (PT, CHAP, PG, ETC.)
7. REQUIRED COVERAGE <input type="checkbox"/> OPERATIONAL <input type="checkbox"/> INTERMEDIATE <input type="checkbox"/> ORGANIZATIONAL <input type="checkbox"/> DEPOT		8. OVERALL EVALUATION <input type="checkbox"/> EXCELLENT <input type="checkbox"/> FAIR <input type="checkbox"/> COMPLETE <input type="checkbox"/> GOOD <input type="checkbox"/> POOR <input type="checkbox"/> INCOMPLETE	
9. DISCREPANCY CLASSIFICATION			
A. NON-COMPLIANT AREA <input type="checkbox"/> LSA MAINTENANCE PLAN-TMP <input type="checkbox"/> PROVISIONING (SPARE PARTS) <input type="checkbox"/> SPECIFICATION FORMAT		B. TECHNICAL DISCREPANCY AREA <input type="checkbox"/> TECHNICAL ACCURACY <input type="checkbox"/> PARTS OR TEST/SUPPORT EQUIPMENT <input type="checkbox"/> SCOPE <input type="checkbox"/> MAINTENANCE ENVIRONMENT <input type="checkbox"/> SEQUENCING <input type="checkbox"/> OTHER <input type="checkbox"/> TECHNICAL ACCURACY (EXPLAIN IN REMARKS, BLOCK 11)	
10. DISCREPANCY INFORMATION			
A. SECT/PART/CHAP/ PAGE/PARAGRAPH/ FIGURE NUMBER	B. TMCR/SPEC REFERENCE PARAGRAPH	C. DISCREPANCY	D. RECOMMENDED DISPOSITION

NAVSEA/SPAWAR 4160/10 (Front)

CLASSIFICATION: _____

Figure 2a. Technical Manual In-Process Review (IPR) Discrepancy Disposition Record (Front).

A. SECT/PART/CHAP/ PAGE/PARAGRAPH/ FIGURE NUMBER	B. TMCR/SPEC REFERENCE PARAGRAPH	C. DISCREPANCY	D. RECOMMENDED DISPOSITION
11. REMARKS			
12. ACTIVITY NAME (Please Print)		13. SIGNATURE	
14. ACTIVITY CODE	15. ACTIVITY ADDRESS (Do Not Abbreviate)		
16. DSN/FTS PHONE NUMBER		17. DATE SIGNED	

NAVSEA/SPAWAR 4160/10) (Back)

Figure 2b. Technical Manual In-Process Review (IPR) Discrepancy Disposition Record (Back).

TECHNICAL MANUAL VALIDATION CERTIFICATE	
TECHNICAL MANUAL TITLE	
TECHNICAL MANUAL IDENTIFICATION NUMBER	DATE
CONTRACT/TMCR NO.	
I - VALIDATION	
<p>Except as stated in II, the technical manual identified above has been satisfactorily validated in accordance with all requirements of the applicable TMCR and the approved Validation Plan. The technical manual is hereby certified to be accurate and complete, and the information, instructions, text, and illustrations conform in all respects to the applicable general and detailed specifications.</p>	
II - EXCEPTIONS	
<p>EXCEPTIONS (Brief Description and References)</p>	<p>AUTHORIZED BY (Government Representative Name/Code)</p>
<p>SIGNATURE OF CONTRACTOR'S PUBLICATIONS QUALITY ASSURANCE OFFICER</p>	
DATE	

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Figure 3. Technical Manual Validation Certificate.

VERIFICATION DISCREPANCY/DISPOSITION RECORD					
TECHNICAL MANUAL IDENTIFICATION NO:		PRIME PARAGRAPH:	VERIFICATION PLANNING DATA: CARD NO. OF	VERIFICATION DATE:	DISCREPANCY RECORD SHEET OF
DISCREP- ANCY NO.	PARA. FIGURE, OR TABLE NO.	VERIFICATION DISCREPANCY		DISPOSITION	

NAVSEA/SPAWAR 4160/4

Figure 4. Verification Discrepancy Disposition Report.

TECHNICAL MANUAL VERIFICATION INCORPORATION CERTIFICATE	
TECHNICAL MANUAL TITLE	
TECHNICAL MANUAL IDENTIFICATION NUMBER	DATE
CONTRACT/TMCR NO.	
I - VERIFICATION INCORPORATION	
<p>All the discrepancies and deficiencies recorded during verification of the technical manual identified above have been corrected or resolved in accordance with the disposition column of the Verification Discrepancy/Disposition Record and incorporated into the Final Reproducible Copy (FRC). The technical manual is approved by:</p> <p style="text-align: right;"> _____ Cognizant Government Management Activity </p> <p style="text-align: right;"> _____ Letter/Message Date </p>	
II - REMARKS	
SIGNATURE OF CONTRACTOR'S PUBLICATIONS QUALITY ASSURANCE OFFICER	DATE

NAVSEA/SPAWAR 4160/6

Figure 5. Technical Manual Verification Incorporation Certificate.

DISTRIBUTION STATEMENTS

All DoD components generating or responsible for TMs shall determine their distribution availability and mark them appropriately before primary distribution. Documents recommended for public release must first be reviewed in accordance with DoD Directive 5230.

Managers of technical programs shall assign appropriate distribution statements to technical documents generated within their programs to control the secondary distribution of those documents.

All newly created unclassified DoD technical documents shall be assigned distribution statement A, B, C, D, E, F, or X.

DISTRIBUTION STATEMENTS FOR USE ON TECHNICAL DOCUMENTS

The following distribution statements and notices are authorized for use on DoD technical documents:

Distribution Statement A. Approved for public release; distribution is unlimited.

This statement may be used only on unclassified technical documents that have been cleared for public release by competent authority in accordance with DoD Directive 5230.9, "*Clearance of DoD Information for Public Release*," April 2, 1982. Technical documents resulting from contracted fundamental research efforts will normally be assigned Distribution Statement A, except for those rare and exceptional circumstances where there is a high likelihood of disclosing performance characteristics of military systems, or of manufacturing technologies that are unique and critical to defense, and agreement on this situation has been recorded in the contract or grant.

Technical documents with this statement may be made available or sold to the public and foreign nationals, companies, and governments, including adversary governments, and may be exported.

This statement may not be used on technical documents that formerly were classified unless such documents are cleared for public release in accordance with DoD Directive 5230.9.

This statement shall not be used on classified technical documents or documents containing export-controlled technical data as provided in DoD Directive 5230.25, "*Withholding of Unclassified Technical Data From Public Disclosure*," November 6, 1984.

Distribution Statement B. Distribution authorized to U.S. Government Agencies only (fill in reason) (date of determination). Other requests for this document shall be referred to (insert controlling DoD office).

This statement may be used on unclassified and classified technical documents.

Reasons for assigning distribution statement B include:

Foreign Government Information

To protect and limit distribution in accordance with the desires of the foreign government that furnished the technical information. Information of this type normally is classified at the ***Confidential*** level or higher in accordance with DoD 5200.1-R, "Information Security Program Regulation," June 1986, authorized by DoD Directive 5200.1, June 7, 1982.

Proprietary Information

To protect information not owned by the U.S. Government and protected by a contractor's "limited rights" statement, or received with the understanding that it not be routinely transmitted outside the U.S. Government.

Critical Technology

To protect information and technical data that advance current technology or describe new technology in an area of significant or potentially significant military application or that relate to a specific military deficiency of a potential adversary. Information of this type may be classified or unclassified; when unclassified, it is export-controlled and subject to the provisions of DoD Directive 5230.25, "Withholding of Unclassified Technical Data From Public Disclosure," November 6, 1984.

Test and Evaluation

To protect results of test and evaluation of commercial products or military hardware when such disclosure may cause unfair advantage or disadvantage to the manufacturer of the product.

Contractor Performance Evaluation

To protect information in management reviews, records of contract performance evaluation, or other advisory documents evaluating programs of contractors.

Premature Dissemination

To protect patentable information on systems or processes in the developmental or concept stage from premature dissemination.

Administrative or Operational Use

To protect technical or operational data or information from automatic dissemination under the International Exchange Program or by other means. This protection covers publications required solely for official use or strictly for administrative or operational purposes. This statement may be applied to manuals, pamphlets, technical orders, technical reports, and other publications containing valuable technical or operational data.

Software Documentation

Releasable only in accordance with DoD Instruction 7930.2, "ADP Software Exchange and Release," December 31, 1979.

Specific Authority

To protect information not specifically included in the above reasons and discussions, but which requires protection in accordance with valid documented authority such as Executive Orders, classification guidelines, DoD or DoD Component regulatory documents. When filling in the reason, cite "Specific Authority (identification of valid documented authority)."

Distribution Statement C. Distribution authorized to U.S. Government Agencies and their contractors (fill in reason) (date of determination). Other requests for this document shall be referred to (insert controlling DoD office).

Distribution statement C may be used on unclassified and classified technical documents.

Reasons for assigning distribution statement C include:

Foreign Government Information	Same as distribution statement B.
Critical Technology	Same as distribution statement B.
Software Documentation	Same as distribution statement B.
Administrative or Operational Use	Same as distribution statement B.
Specific Authority	Same as distribution statement B.

Distribution Statement D. Distribution authorized to the Department of Defense and U.S. DoD contractors only (fill in reason) (date of determination). Other requests shall be referred to (insert controlling DoD office).

Distribution statement D may be used on unclassified and classified technical documents.

Reasons for assigning distribution statement D include:

Foreign Government Information	Same as distribution statement B.
Administrative or Operational Use	Same as distribution statement B.
Software Documentation	Same as distribution statement B.
Critical Technology	Same as distribution statement B.
Specific Authority	Same as distribution statement B.

Distribution Statement E. Distribution authorized to DoD Components only (fill in reason) (date of determination). Other requests shall be referred to (insert controlling DoD office).

Distribution statement E may be used on unclassified and classified technical documents.

Reasons for assigning distribution statement E include:

Direct Military Support	The document contains export-controlled technical data of such military significance that release for purposes other than direct support of DoD-approved activities may jeopardize an important technological or operational military advantage of the United States. Designation of such data is made by competent authority in accordance with DoD Directive 5230.25.
Foreign Government Information	Same as distribution statement B.
Proprietary Information	Same as distribution statement B.
Premature Dissemination	Same as distribution statement D.
Test and Evaluation	Same as distribution statement B.
Software Documentation	Same as distribution statement B.
Contractor Performance Evaluation	Same as distribution statement B.
Critical Technology	Same as distribution statement B.
Administrative or Operational Use	Same as distribution statement B.
Specific Authority	Same as distribution statement B.

Distribution Statement F. Further dissemination only as directed by (inserting controlling DoD office) (date of determination) or higher DoD authority.

Distribution statement F is normally used only on classified technical documents, but may be used on unclassified technical documents when specific authority exists (e.g., designation as direct military support as in statement E).

Distribution statement F is also used when the DoD originator determines that information is subject to special dissemination limitation specified by paragraph 4-505, DoD 5200.1-R, *“Information Security Program Regulation,”* June 1986, authorized by DoD Directive 5200.1, June 7, 1982.

Distribution Statement X. Distribution authorized to U.S. Government Agencies and private individuals or enterprises eligible to obtain export-controlled technical data in accordance with DoD 5400.7-R (date of determination). Controlling DoD office is (insert).

Distribution statement X shall be used on unclassified documents when distribution statements B, C, D, E, or F do not apply, but the document does contain technical data as explained in DoD Directive 5230.25, "Withholding of Unclassified Technical Data From Public Disclosure," November 6, 1984.

This statement shall not be used on classified technical documents; however, it may be assigned to technical documents that formerly were classified.

EXPORT CONTROL WARNING

All technical documents that are determined to contain export-controlled technical data shall be marked "Warning—This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751, et. seq.) or the Export Administration Act of 1979, as amended, Title 50, U.S.C., App.2401 et. seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25." When it is technically infeasible to use the entire statement, an abbreviated marking may be used, and a copy of the full statement added to the "Notice To Accompany Release of Export-Controlled Data" required by DoD Directive 5230.25 DoD Directive 5230.25, "Withholding of Unclassified Technical Data From Public Disclosure," November 6, 1984.

HANDLING AND DESTROYING UNCLASSIFIED/LIMITED DISTRIBUTION DOCUMENTS

Unclassified/Limited Distribution documents shall be handled using the same standard as "For Official Use Only (FOUO)" material, and will be destroyed by any method that will prevent disclosure of contents or reconstruction of the document. When local circumstances or experience indicates that this destruction method is not sufficiently protective of unclassified limited distribution information, local authorities may prescribe other methods but must give due consideration to the additional expense balanced against the degree of sensitivity.

CONTRACTOR-IMPOSED DISTRIBUTION STATEMENTS

Part 27, Subpart 27.4 to the DoD Supplement to the Federal Acquisition Regulation (FAR) stipulates control procedures for contractor-controlled technical data to which the Government has limited rights. In this case, an approved statement from the DoD Supplement to the FAR shall appear on all copies of each document. Unmarked or improperly marked technical documents supplied by a contractor shall be handled in accordance with the DoD Supplement to the FAR. Limited rights information shall be assigned distribution statements B, E, or F.

The limited rights statement shall remain in effect until changed or canceled under contract terms or with the permission of the contractor, and until the controlling DoD Component notifies recipients of the document that the statement may be changed or canceled. Upon cancellation of the statement, the distribution, disclosure, or release of the technical document shall then be controlled by its security classification or, if unclassified, by the appropriate statement selected from this Directive.

DoD Supplement to the FAR, Part 27, Subpart 27.4 defines limited rights as the right to use, duplicate, or disclose technical data in whole or in part, by or for the U.S. Government with the

expressed limitation that such technical data, without the written permission of the party furnishing such technical data, may not be:

Released or disclosed in whole or in part outside the Government.

Used in whole or in part by the Government for manufacture, or in the case of computer software documentation, for reproduction of the computer software.

Used by a party other than the Government, except for:

Emergency repair or overhaul work only by or for the Government, when the item or process concerned is not otherwise reasonably available to enable timely performance of the work, provided that the release or disclosure outside the Government shall be made subject to a prohibition against further use, release, or disclosure.

Release to a foreign government, as the interest of the United States may require, only for information or evaluation within such government or for emergency repair or overhaul work by or for such government under the above conditions.

REQUESTING A TMCR/TMSR

INTRODUCTION

Technical Manual Contract Requirements (TMCRs) and Technical Manual SEATASK/SPATASK Requirements (TMSRs) compile specifications and definitions applicable to specific TM products acquired to support new or modified systems or equipment. All procurements of NAVSEA/ SPAWAR TMs (including CI/NDI manuals), change packages, and revisions require a TMCR. NAVSEA/SPAWAR TMCRs are custom-generated by M-SPECS. NSDSA operates and maintains M-SPECS. Manuals produced by contractors for the Government require a TMCR. Manuals produced by the Government in-house require a TMSR.

The Acquisition Manager specifies details about the TM products required through submission of the Electronic Technical Manual Acquisition Requirements Checklist (E-TMARC) to NSDSA. E-TMARC requests are submitted online through the M-SPECS web site at the following URL: <http://nsdsa.phdnswc.navy.mil/>. Click on the MSPECS tab.

The TM Acquisition Manager performs the following tasks:

1. Identifies TM procurement requirements and enters/submits requirements through the online M-SPECS E-TMARC
2. Makes initial contact with the M-SPECS Team at NSDSA through the web site and electronic mail (e-mail) correspondence to describe any specification tailoring requirements and any pertinent waivers approved by SEA 04L3/SPAWAR 04L-2
3. Submits completed E-TMARC to NSDSA online. References or forwards copies of any pertinent SEA 04L3/SPAWAR 04L-2 letters or memos granting waivers

NSDSA reviews the E-TMARC and accompanying tailoring requests for TMMP compliance and produces TMCRs/TMSRs in response to E-TMARC submittals. NSDSA notifies the Acquisition Manager when:

1. Requested tailoring requirements are incompatible with policies and procedures of the TMMP
2. A duplicate or similar TM exists
3. TM has changes (not annotated on E-TMARC), proposed changes, and outstanding Technical Manual Deficiency/Evaluation Reports (TMDERs), for change or revision requests only
4. TM, change, or revision is under development by another activity or is under the cognizance of another activity

NSDSA generates a TMCR/TMSR that reflects approved DoD specifications and standards. The TMCR/TMSR identifies and includes TM specification numbers to be used in the development process. The Acquisition Manager views the requested TMCRs/TMSRs through the M-SPECS Web site. If further tailoring, corrections, changes, or clarification are desired, the Acquisition Manager contacts NSDSA.

NSDSA responds as necessary to ensure that the final TMCR/TMSR meets all requirements and is acceptable to the acquisition management activity. The Acquisitions Manager should enter the number of the accepted TMCR/TMSR in the appropriate segments of the CDRL and solicitation or tasking documents.

For NAVSEA/SPAWAR headquarters acquisitions, incorporate the TMCR as an attachment to the CDRL in the procurement package before submission to the DRRB or contracts directorate, as appropriate.

GATHERING INFORMATION

You will need to answer the following questions:

1. Who is procuring the manual?
2. Who is the requester of the TMCR?
3. Who is the contractor?
4. What is the nomenclature of the equipment?
5. Do you have the number of the tasking document or a contract number established yet?
6. Will a contractor or the government be building the manual or will you be buying it off-the-shelf?
7. Is this an amendment to an already existing TMCR?
8. Do you know what type of TMCR to request? NSDSA provides TMCRs for 21 types of TMs.
9. Are you revising an existing TM or just inserting change pages into the existing manual?
10. Do technical repair standards already exist for the type of equipment you are purchasing?
If not, will you need to have either an ordnance, Hull, Mechanical, and Electrical (HM&E), or electronic type to support the equipment?
11. Do you need a parts list or an IPB in the manual?
12. Will the manual be a single or multi-volume manual?
13. What size will your manual be?
14. Will your manual be classified, and who will get distribution on it? Training Commands, repair depots?
15. What data deliverables do you need from the contractor to manage your technical manual?
16. What product deliverables do you want your contractor to deliver and have stated on the CDRL?

17. Is the Government going to furnish to the contractor Government Furnished Material (GFM)?
If they are, what will be provided?
18. Is there anything unusual in your procurement that will require waivers from the standard specifications? Do you have the address and POC for the person to contact on this issue?

If your acquisition fits one of the 21 TMCR categories, you must use M-SPECS TMCRs. According to NAVSEAINST 4160.3A and SPAWAR instruction 4160.2A:

"Technical manuals shall be acquired in accordance with a Technical Manual Contract Requirement (TMCR). The TMCR is mandatory for use in all procurements of technical manuals, changes, and revisions, and shall be an attachment to the Contract Data Requirements List (CDRL). For internal development of technical manuals, the Command shall use a Technical Manual SEATASK Requirement (TMSR) instead of a TMCR."

This policy standardizes the procurement, style, format, and content of NAVSEA and SPAWAR TMs. TMCRs are an important part of Acquisition Reform. TMCRs tailor the TM acquisition to include only what is needed for procurement. For more information about TMCRs and acquisition reform, visit the Navy Acquisition Reform Web site at <http://www.acq-ref.navy.mil>.

TMCR TYPES

M-Specs TMCRs are available for the following types of Equipment and Systems:

1. Change Package
2. Update Revisions
3. CSTOM (Combat System Technical Operations Manual)
4. COTS (Commercial Off-the-Shelf)
5. OSB (Operational Stations Book)
6. TRS (Technical Repair Standard) for HM&E
7. TRS for Electronic Equipment
8. TRS (Technical Repair Standard) for Ordnance Equipment
9. TAB (Training Aid Booklet)
10. SIB (Ship Information Book)
11. HM&E Equipment
12. HM&E Equipment (Single Component)
13. Electronic and integrated circuit (IC) Equipment

14. Electronic and I/C Equipment, Service Test
15. Electronic and I/C Equipment, Experimental
16. HM&E and Electronic & I/C System
17. Surface Missile Subsystem or Equipment
18. Surface Missile System
19. Interactive Electronic Technical Manual (IETM) for HM&E Equipment
20. IETM for Electronic Equipment
21. IETM for System

If your equipment or system does not fall into any one of these types, NSDSA does not have the data to support your acquisition. You will have to cite in your SOW the type of manual you want to buy and the specification used to build it. You may order as many types of TMCRs as you require for your procurement.

ONLINE AND MAILING A TMARC

M-SPECS no longer accepts paper TMARCs.

CDRL (DD FORM 1423)/DID (DD FORM 1664).

When MIL-M-85337A, Technical Manual Quality Assurance Program, is cited in an acquisition that incorporates a CDRL (DD Form 1423), the data requirements identified must be developed as specified by the approved TMCR and delivered in accordance with the contract CDRL. When the provisions of the Federal Acquisition Regulation (FAR) are invoked and the DD Form 1423 is not used, the specified DIDs will be made available in accordance with the contract or purchase order requirements.

AMENDING/TAILORING A TMCR

If new requirements are added or deleted, and the contract has already been awarded, a TMCR must be amended. Amending a contract involves re-negotiations and may increase Government cost.

E-mail NSDSA with the changes that you want in your amendment. Be sure to include the TMCR number. NSDSA will produce the amendment and post it in the M-SPECS Repository. They will send you an e-mail when the amendment is complete and posted. NSDSA prefers that if the contract has not been awarded, you request another TMCR to fit your particular acquisition. Since it only takes a few minutes, this will save you time. There is no problem if you end up not using your original TMCR. Be sure to ask NSDSA to cancel your original TMCR/TMSR to avoid confusion.

Tailoring down is acceptable and encouraged. It is the process of deleting unnecessary requirements from the TMCR/TMSR. You save the Government money and the government will receive a better product.

Tailoring up involves adding new requirements or non-approved requirements. This action is allowed on a one-time unique acquisition. However, you must request a waiver. Deviations or waivers shall be in writing and shall be for a specific period of time and for a specific program element and function. Obtain waivers or deviations from the provisions of NAVSEAINST 4160.3A from Naval Sea Systems Command, Chief Engineer for Logistics (SEA 043) or from Space and Naval Warfare Systems Command, Chief Engineer for Logistics (SPA 05L3).

The Acquisition Manager is responsible for reviewing the TMCR/TMSR for adequacy and accuracy of the procurement. If any further tailoring, corrections, or changes are desired, contact M-SPECS before awarding the contract. M-SPECS will respond as necessary to ensure that the final TMCR/TMSR meets all requirements and is acceptable to the acquisition management activity.

If the rework involves items selected on the E-TMARC, then request another TMCR/TMSR that reflects your new requirements.

M-SPECS is making every attempt to keep current on the latest changes in the TMMP world. NSDSA uses the "Assist On-Line Workstation CD-ROM" and Internet sources such as the Office of the Under Secretary of Defense for Acquisition and Technology and MIL-SPEC Reform for the latest information on specifications and standards.

NSDSA's database is constantly updated to keep current. The data in last year's TMCR will not necessarily be the same as this fiscal year. Customers must come in for a new TMCR for each new acquisition. This action will ensure that the latest data requirements are used.

If you notice a mistake during your TMCR/TMSR creation session, then press the Delete Document button and return to the E-TMARC by either pressing the Create New Document button or arrowing back several screens to the E-TMARC. Make your changes and create another TMCR. (Note: the TMCR/TMSR number may or may not be the same, depending on system use).

CANCELING A TMCR/TMSR

If you notice a mistake after your TMCR/TMSR creation session, then create a new TMCR/TMSR and ask NSDSA to cancel the old TMCR/TMSR by sending them an e-mail. E-mail M-SPECS with the number and date of your TMCR/TMSR, and NSDSA will take care of it.

TECHNICAL MANUAL IDENTIFICATION NUMBERING SYSTEM (TMINS)

INTRODUCTION

The U.S. Navy produces thousands of technical publications each year. The Standard Technical Manual Identification Numbering System (TMINS) establishes a standard versatile way to assign a unique, significant, and self-indexing identification number to each TM or separately bound portion of a TM. Whether developing a TM through a contractor or in-house, SSC San Diego employees must acquire a unique TMIN and NSN for TMs sponsored by SYSCOMs such as NAVSEA, NAVAIR, or SPAWAR.

TMIN numbers are printed on all the following:

- New TMs and revisions
- Existing TMs
- Commercial manuals and supplements (used by operating forces or in support of the Fleet)
- Technical publications and documents (used by the operating forces)
- Change packages and Rapid Action Changes (RACs) to existing TMIN-numbered manuals and documents

NSNs are unique numbers assigned by the Naval Supply Systems Command (NAVSUP). The numbers are bar coded on all publications in the lower left-hand corner of the cover or title page. The numbers can never be reissued.

NEW MANUALS

Use the TMIN-R form to request the assignment of identification numbers. This form provides primary information to management information systems that track TM availability and status. To ensure adequate data for both uses, you must complete applicable fields 1 through 23 of the TMIN-R for a new manual. If you do not fill out the required entries, TMIN assignment may be delayed or rejected. The number assignment process is available online through TDMIS.

CHANGES, REVISIONS, AND ADD-ON MANUALS

If a completed TMIN-R was previously submitted for a publication, less information is required to request a TMIN for a change package, RAC, or revision of that publication. The baseline data collected and computer-stored for the first volume of a set can also be applied to the remainder of the manuals in the set. In the Instructions for Filling In A TMCR that begin on page 38 of this manual, an asterisk (*) highlights those entries that must be filled out when requesting a TMIN for a change, revision, or add-on manual.

NOTE: Additional entries not marked with an asterisk should be filled out to correct or update information that has changed since it was originally provided.

Use the following procedure to acquire a TMIN:

1. Request the assignment of SYSCOM TMINs through the TMINs module TDMIS for all new TMs (including acceptable CI/NDI TMs, change packages, RACs, and revisions) as early in the acquisition process as possible. TMIN should be requested at least 3 months before completion of the FRC.
2. Request TMIN-R through the TMINs module in TDMIS or submit NAVSEA Form 4160/5 from Naval Inventory Control Point (NAVICP) per NAVSUPPUB 2002. (This is the only form now available through the supply system.) Local duplication of the form is acceptable (Figure 6). If you are a TDMIS user with TMINs access, submit an E-TMINR through TDMIS.
3. Coordinate concurrent TM change requests from two or more activities with the LCM. Ensure the TM change sequence and level reflect the equipment installation sequence and modification level. The TM change sequence and level will follow the equipment modification sequence. Once the TM change level is resolved, request that NSDSA issue the TMIN or reassign a currently outstanding number.
4. Expedite the preparation of the TMIN-R to support the Acquisition Manager in making equipment modifications. Also expedite TM change reviews and technical certification so as not to delay production of equipment-modification-related TM changes.

NOTE: TDMIS uses a new process for TMMA's to grant TMMA approval to activities requesting changes or revisions to their manuals. The requestor will be required to input the TMIN request into TDMIS and notify the TMMA by e-mail for TMMA approval. The e-mail process is temporary until a screen correction is made to the TMMA Request Approval screen in TDMIS. This correction will allow the TMMA to be notified (through TDMIS) that TMIN-Rs are pending for TMMA approval and allow notification to the requestor that approval has been granted (through TDMIS).

TMINS guide information, N000-00-IDX-00 Revision Three, Stock Number 0910-LP-273-7800, Operations Naval (OPNAV) Application Guide and Index for Navy Standard Technical Manual Identification Numbering Systems, is available on the NSDSA Web site at <http://nsdsa.phdnswc.navy.mil>

The following TMINS example shows how the numbering system works. Bold letters or numbers highlight the character or number discussed.

EE-205-AA-OMI-010/OE326(V)

First character = SYSCOM

E - SPAWAR

S – NAVSEA

T – MSC or Foreign Military Sales (FMS)

NA – NAVAIR

TO – Air Force

TM/FM – Army

N – TMINS Guide

EE-205-AA-OMI-010/OE326(V)

Standard Subject Classification Code (SSCC) = TM subject or Equipment;

E205 = SPAWAR antenna

EE-205-**AA**-OMI-010/OE326(V)

Subject Serial Code = Normally a non-significant code to differentiate items within the same SSCC group:

AA – First number assigned within the E205 SSCC

EE-205-AA-**OMI**-010/OE326(V)

TM acronym = Type of publication:

OMI – Operation and Maintenance Instructions

Some other TM acronyms include the following:

ECP – Engineering Change Proposal

FCB – Field Change Bulletin

HBK – Handbook

MMA – Maintenance Manual all levels

MMC – Maintenance Manual Commercial

For a complete list of acronyms, refer to the OPNAV Application Guide and Index for Navy Standard Technical Manual Identification Numbering Systems.

EE-205-AA-OMI-**010**/OE326(V)

Serial/Issue codes = volume, part or change level information:

010 – Basic issue or volume one of a multi-volume set

EE-205-AA-OMI-010/**OE326**(V)

Suffix = mandatory for classified TMs or can be used to identify a group of manuals that come under the same program

MANUAL APPLICABILITY

17. EQUIPMENT APPLICABILITY INFORMATION

APL/AEL: EQUIPMENT DESIGNATOR (CODE MARK MOD/AN DESIGNATOR):

DRAWING NO:

MODEL/PART NO.:

MARK & MOD:

SIZE/TYPE/SERIES:

MANUFACTURER'S NAME:

MANUFACTURER'S CAGE:

18. SHIP/SHORE APPLICABILITY INFORMATION:]

SHIP TYPE/HULL NO.

CLASS

SHIP TYPE/HULL NO.

CLASS

19. APPLICABLE ALTERATIONS/MODIFICATIONS (SHIPALT, ORDALT, MACHALT, ECP, FIELD CHANGE):

20. PAGE COUNT:

21. FRC RETENTION POINT:

UIC:

IOC:

22. FMS PRICE:

23. NARRATIVE OF SUBJECT, PURPOSE, OR FUNCTION OF EQUIPMENT, OR PURPOSE OF CHANGE TO MANUAL, OR REMARKS:

24A. PROPOSED DISTRIBUTION LIST ATTACHED:

☐ YES☐ NO

24B. BASELINE DISTRIBUTION LIST REQUIRED:

☐ YES☐ NO

25. QUANTITY TO BE PRINTED:

INITIAL DISTRIBUTION
FOR STOCK (2 YEARS)
TRAINING

FOR NSDSA USE ONLY

26. NSDSA ACTION:

☐ APPROVED☐ DISAPPROVED

27. TMIN-R CTRL NO.:

28. APPROVED BY (SIGNATURE)

29. DATE:

NAVSEA 4160/5 (REV. 9/2002) (Back)

Figure 6b. Technical Manual Identification Number Request (TMIN-R) (Back).

INSTRUCTIONS FOR FILLING IN A TMIN-R

These are brief instructions on filling in a TMIN-R. For more detailed information, please use the TMINS Guide (N0000-00-IDX-000/TMINS). The TMINS guide is on the NSDSA Web site in the TMMP area under TMMP reference materials at <http://nsdsa.phdnswc.navy.mil>.

***BLOCK 1. FROM:**

Provide requesting activity's complete mailing address.

***BLOCK 2. IN REPLY, REFER TO:**

Provide the internal serial number assigned to the TMIN-R by the requesting activity and the date the TMIN-R is filled out.

NOTE: This information will be referenced on the TMINS letter you will receive. If you have many TMIN-Rs with similar equipment, you might find this information helpful.

***BLOCK 3. REQUESTER:**

UIC - Provide the activity's five-digit Unit Identification Code (UIC).

IOC - Provide the Internal Office Code (IOC) of the person requesting the number.

POC - Enter the full name of the person requesting the number.

NOTE: Government activity and POC. The person indicated in this block will be the one contacted if questions arise on the information on the form, and who will receive the official TMINS number assignment correspondence.

COMMERCIAL PHONE NUMBER - Provide the POC's phone number.

DSN PH. NO - Provide the POC's DSN phone number.

***BLOCK 4. TO:**

Address is preprinted. You may mail the TMIN-R to Commander, NAVSURFWARCENDIV, 4363 Missile Way, Port Hueneme, CA 93043-4307 Attn: Code 5E30; fax: (805) 228-0726; e-mail: martineztg@phdnswc.navy.mil

***BLOCK 5. SUBJECT PUBLICATION IS APPLICABLE TO:**

Check the box that reflects the type of equipment the TM supports.

***BLOCK 6. SECURITY CLASSIFICATION:**

Check the block to indicate the TM's highest level of security classification.

***BLOCK 7. TECHNICAL MANUAL MANAGER/TMMA:**

ACTIVITY - Provide the name of the Navy TM manager/TM maintenance activity (TMMA) responsible for managing, preparation, or update of the TM.

UIC - Provide the five-digit UIC of the activity named above.

IOC - Provide the Internal Office Code of the individual responsible for managing the TM.

POC - Provide the name of the responsible individual.

COMMERCIAL PH. NO - Provide the POC's commercial phone number.

DSN PH. NO - Provide the POC's DSN phone number.

NOTE: If the TMMA is not the same as the requesting activity, TMMA approval must be obtained by the requester, and sent to NSDSA, Tona Martinez, Code 5E30 (e-mail: martineztg@phdnswc.navy.mil; fax: (805) 228-0726) before a TMINs will be assigned. NSDSA will hold a TMIN-R pending TMMA approval for 60 days. If approval is not received by NSDSA, the TMIN-R will be returned to the requester as disapproved.

***BLOCK 8. MAINTENANCE LEVEL:**

Mark the applicable level(s) of maintenance covered by the TM.

***BLOCK 9. COPY FREEZE (PUBLICATION) DATE:**

This is the date that will be on the title page of the TM.

Data received before the copy freeze date can be prepared as reproducible copy without further approval. Data received after the copy freeze date requires approval through the formal change process before it can be included.

***BLOCK 10. RIGHTS IN DATA:**

Mark the appropriate block. "unlimited" - means the Government owns total rights to the data. "limited" - means the manufacturer retains ownership of the data and the government may only use it for installation, test, operation & maintenance purposes.

***BLOCK 11. ESTIMATED DISTRIBUTION DATE:**

Provide the estimated distribution date of the TM. (The estimated date should make reasonable allowances for reproducible copy to be prepared, printing to be completed, and the actual distribution to be made.)

***BLOCK 12. MANUAL PREPARING ACTIVITY:**

Provide information regarding the activity actually preparing the TM.

GOVT. ACTIVITY, UIC, IOC, CONTRACTOR, CAGE - The same type of information required in blocks 3 and 7.

CONTRACT NO - Provide the contract number under which the publication is procured.

TMCR/TMSR - Provide the Technical Manual Contract Requirement (TMCR) number if the TM is being prepared by a contractor, or the Technical Manual SEATASK Requirement (TMSR) number if the TM is being prepared in-house or by another government activity. (This is a mandatory field for most equipment manuals. Visit the following Web site for information and to register and request a TMCR/TMSR number: <http://nsdsa.phdnswc.navy.mil>. If you would like to speak to an M-SPECSs (TMCR) POC, contact Alan Hatmaker (805) 228-0360 or David Garcia (805)228-0331.

***BLOCK 13A. DISTRIBUTION STATEMENT:**

Check the block and circle the appropriate letter to indicate which distribution statement will be printed on the cover and title page of the TM. The proper statement will be indicated in the TMCR/TMSR.

***BLOCK 13B. DISTRIBUTION RESTRICTION:**

Mark the applicable box to indicate if the TM's distribution is to be restricted beyond those restrictions imposed by the distribution statement.

***BLOCK 14. STOCKING POINT:**

Provide the UIC of the activity where the TM will be stocked.

***BLOCK 15A. FOR CHANGE TO EXISTING MANUAL:**

Mark the appropriate box (one box only, unless you mark change, then you may mark whether the change is technical or administrative.)

BASIC PUB NO/SUPERSEDED PUB NO. - Provide the basic TM number that is being changed/revised etc.

LETTER/NO OF CHG OR REV - Provide the change number/letter or revision level that you are requesting.

DATE - Provide the date of the basic TM that is being updated.

SINGLE VOL OR MULTI VOL/PART - Mark the appropriate box to indicate if the basic TM is a single or multi volume/part manual.

INCLUDES: ACN/TMDER CONTROL NUMBERS - Provide all of the Advance Change Notice (ACN)/Technical Manual Deficiency Evaluation Report (TMDER) control numbers that are cleared by the update.

BLOCK 15B. FOR NEW MANUAL:

Mark the appropriate box to indicate if the TM is a CI/NDI TM or a military specification manual and also if the manual will be single or multi-volume.

TYPE OF MANUAL - Describe the type of TM it is—maintenance, parts list, installation & operation, TRS, IETM, etc.

NOTE: If there is a TM for the same equipment being used already, for example, a maintenance manual, and you are making a TRS or installation TM, provide the TM number of the existing TM so that the TM numbers can be given the same SSCC and subject serial.

BLOCK 15C. FOR REVISIONS, NEW MANUALS & ADD-ONS: (RECOMMENDED TMIN)

If you are revising an old NAVSEA number, you may use this block to recommend your revision number be assigned to a certain SSCC. You may also recommend a SSCC for a new manual, for instance, if you have other books for similar equipment and want this book in the same area.

If you need further information about SSCCs, see chapter 3 of the TMINS Guide (N0000-00-IDX-000/TMINS).

***BLOCK 16. PUBLICATION TITLE:**

For changes, provide the title printed on the basic TM. For revisions and new TMs, the title should reflect the equipment/hardware covered by the TM, including: model no., part no., type, size, etc. (provide as much information as possible; NSDSA uses this information for research purposes to eliminate duplicate TM's in the system.)

VOL NO/PART NO. - If the TM is a single volume, disregard this area. If the TM is multi-volume, the Vol/Part No. should correspond with the publication subtitle and SEC class.

PUBLICATION SUBTITLE - If the TM is a single volume, disregard this area. If the TM is multi-volume, provide the title/content for each volume/binder.

SEC CLASS - If the TM is a single volume, disregard this area. If the TM is multi-volume, provide the security classification for each volume/binder.

***BLOCK 17. EQUIPMENT APPLICABILITY INFORMATION:**

APL/AEL - Provide the Allowable Parts List (APL)/Allowable Equipage List (AEL) numbers assigned to the equipment covered by the TM. If the APL/AEL numbers have not been assigned yet, provide the estimated completion date of the APL/AEL.

(Call NSDSA when APLs are received. The more information NSDSA has in the computer, the better products the Fleet will receive!)

EQUIPMENT DESIGNATOR (CODE MARK MOD/AN DESIGNATOR) - Provide the equipment designator information: mark and mod, model/part no., "AN" designator. You may also provide the manufacturer's name, CAGE and address.

ESWBS – Expanded Ship Work Breakdown Structure. This is not a mandatory area.

***BLOCK 18. SHIP/ShORE APPLICABILITY INFORMATION:**

Provide all the ship types and hull numbers or ship class that the TM is applicable to.

BLOCK 19. APPLICABLE ALTERATIONS/MODIFICATIONS (SHIPALT, ORDALT, MACHALT, ECP, FIELD CHANGE):

Provide the indicated information that is applicable to the TM.

BLOCKS 20, 21 AND 22:

Not mandatory areas.

BLOCK 23. NARRATIVE OF SUBJECT, PURPOSE OR FUNCTION OF EQUIPMENT OR PURPOSE OF CHANGE TO MANUAL OR REMARKS:

Use this space for additional information pertaining to the TM.

Details about where the equipment will be used and what systems and equipment this equipment works with is helpful to us when assigning a TM number.

BLOCK 24A. PROPOSED DISTRIBUTION LIST ATTACHED:

Mark the appropriate box. Are you providing a proposed Distribution List?

BLOCK 24B. BASELINE DISTRIBUTION LIST REQUIRED:

If you want a distribution list and labels, call (805) 228-0471 or access the distribution module in TDMIS and request the list and labels online.

BLOCK 25. QUANTITY TO BE PRINTED:

Provide the estimated number of TMs to be printed and stocked.

The rest of the form is for NSDSA.

Figure 7 provides instructions on what information to include on the TM Title Page. Figure 8 shows an example of a TM Title Page. Figure 9 shows an example of a TM List of Effective Pages.

SECURITY CLASSIFICATION

PUBLICATION NUMBER Enter TMIN.

Formerly (previous publication number)

VOLUME NO./PART NO. **REVISION NO.**

TYPE OF PUBLICATION Enter a generic term for the type of manual such as Maintenance Manual, Technical Repair Standard, Integrated Logistic Support Plan, Reference Standards Book, Crew Station Manual, Training Aid Booklet, etc.


(MAINTENANCE LEVELS) Enter maintenance levels if restrictive.

**NOMENCLATURE OF EQUIPMENT -
TYPE, MODEL, PART NUMBER,
NATIONAL STOCK NUMBER
OR
SUBJECT**

Prime Title

SUBTITLE Enter subtitle, e.g., Operating Instructions, Illustrated Parts Breakdown, etc. below prime title.

Manufacturer of Equipment
Contract Number



Supersede Notice When a publication supersedes a previous edition, a supersede notice shall be placed in the space indicated.

Special Handling Notice
Effective Date Notice
Downgrading Notice

DISTRIBUTION STATEMENT

Authority Notice

PUB STOCK NO.

BAR CODE

TMINS NO.

DATE Changed title pages shall show a change letter and date below the date of the basic manual when a change is issued.

CHANGE-DATE



CH TMINS NO.

SECURITY CLASSIFICATION

To be affixed by NPPSO

Spacing between the necessary information shall be such as to result in an attractive well balanced cover page.

Figure 7. Title Page format instructions.

SE211-FB-MMA-011/SPS-10B		
VOLUME 1, PART 1		
FOMM SUPPORT VOLUME		
RADAR SET (SURFACE SEARCH)		
AN/SPS-10B		
CHAPTER 1 — GENERAL INFORMATION		
CHAPTER 2 — OPERATION		
CHAPTER 3 — THEORY OF OPERATION		
CHAPTER 4 — SCHEDULED MAINTENANCE		
CHAPTER 5 — INSTALLATION		
COMPASS ASSOCIATES INC. 5811 RAINBOW WAY SQUARE, VA 22101		
NOO024-77-C-6124		
		
THIS MANUAL SUPERSEDES:		
NAVSEA 0967-LP-071-5010	NAVSEA 0967-LP-156-3010	NAVSEA 0967-LP-484-7010
0967-LP-103-8010	0967-LP-156-3040	0967-LP-484-7020
0967-LP-103-8020	0967-LP-440-9010	0967-LP-583-1010
0967-LP-103-8060	0967-LP-445-7010	0967-LP-950-5010
<small>"DISTRIBUTION AUTHORIZED TO THE DEPARTMENT OF DEFENSE AND DoD CONTRACTORS ONLY: ADMINISTRATIVE OR OPERATIONAL USE - 14 JANUARY 1987. OTHER REQUESTS SHALL BE REFERRED TO COMMANDER, NAVAL SEA SYSTEMS COMMAND (09T3)"</small>		
<small>PUBLISHED BY DIRECTION OF COMMANDER NAVAL SEA SYSTEMS COMMAND</small>		
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> <small>0951LP0123451</small>  <small>SE211FBMMA011</small> </div> <div style="text-align: right;"> 25 OCTOBER 1978 Change C- 14 JANUARY 1987 SE211-FB-MMA-00C </div> </div>		

TITLE
BLOCK

Figure 8. Title Page example.

LOEP

SE211-FB-MMA-011/SPS-10B

Radar Set
AN/SPS-10B

LIST OF EFFECTIVE PAGES

Dates of issue for the original and changed pages are:

Orig SE211-FB-MMA-000/SPS-10B 25 October 1978
 Ch A SE211-FB-MMA-00A/SPS-10B 2 February 1980
 Ch B SE211-FB-MMA-00B/SPS-10B 11 November 1981
 Ch C SE211-FB-MMA-00C/SPS-10B 14 January 1987

The total number of pages in this publication is 82 consisting of the following:

<u>PAGE NO.</u>	<u>CHANGE*</u>	<u>PAGE NO.</u>	<u>CHANGE*</u>
TITLE	C	4-1	A
A	C	4-2	B
1-1	O	4-3 thru 4-14	C
1-2	A	4-15	B
1-3	B	4-16	O
1-4 thru 1-10	C	4-17 thru 4-19	C
1-11/Blank	O	4-20	A
2-1	C	4-21	O
2-2	B	4-22	A
2-3 thru 2-8	O	5-1/5-2	C
2-9	C	5-3	B
2-10	B	5-4 thru 5-19	O
3-1 thru 3-10	O	5-20	C
3-11/Blank	B	5-21/Blank	B

* Zero in this column indicates an original page.

A

Change C

Figure 9. Example of a completed List of Effective Pages.

CD-ROM NUMBERING SYSTEM

The centrally managed NAVSEA/SPAWAR CD-ROM numbering system accomplishes the following:

1. Upon request, and before initial bundling, replication, and distribution, assigns each CD-ROM a unique CD-ROM Media Volume Identification Number (VIN) and a unique NSN.
2. Once obtained, prints these numbers on all newly developed and revised CD-ROMs.
3. Places NSNs on all CD-ROMs per NAVSUP requirements.
4. Ensures the correct CD is being read.
5. Allows CD to be imported into Advanced Technical Information Support (ATIS) System.
6. Allows TDMIS users the capability to determine which TMs are part of a CD.

CD-ROM numbers (VINs and NSNs) should be requested from the NSDSA early in the acquisition/update process. Instructions for preparing a VIN request form are included in S0005-AC-PRO-010, Interactive Electronic Technical Manual (IETM) Process Plan, Appendix I. Only the activity responsible for the acquisition or maintenance of a CD-ROM can request VINs or NSNs. When TDMIS-certified, TMMAs may assign their own VINs through TDMIS and may update TDMIS CD data under their cognizance.

VOLUME IDENTIFICATION NUMBERS

The VIN is used to manage and identify CD-ROMs. The VIN is the NAVSEA/SPAWAR TMMP standard method of assigning a unique identification number to each CD-ROM.

The VIN is 11 alphanumeric characters (the first 11 characters of the 32 character ISO 9660 format volume identifier) written in the header of the CD-ROM media. The first six characters of the VIN are the UIC of the activity responsible for the acquisition and maintenance of the CD-ROM. The UIC is followed by the next sequential number for CD-ROM assignment from that activity. The sequential number is assigned and tracked by TDMIS. VIN structure is as follows:

N4667800001 (example only)

NATIONAL STOCK NUMBERS

An NSN is required on all CD-ROMs. The NSN is unique to a CD-ROM and cannot be reused (i.e., on an updated CD-ROM). The Forms and Publications Status Report (FPSR) is used to assign NSNs and to enter stocking data in the NAVSUP indexing system. NAVSUP PUB 2002 (indexed report of stocking information) is published from this system.

An FPSR is prepared for all new CD-ROMs, including updated CD-ROMs. NSDSA prepares FPSRs for all new VINs issued. An FPSR must be received at NAVSUP at least 30 days before the scheduled production of CD-ROM masters to provide time for VIN incorporation into the CD-ROM's header (digital) information.

To request the assignment of NAVSEA/SPAWAR identification numbers for all new CD-ROMs, perform the following tasks:

1. Request Media Volume Identification Number Request forms (Figure 10) from NSDSA or download through access to the NSDSA Web site at <http://nsdsa.phdnswc.navy.mil/>
2. Complete a VIN request form for each CD-ROM using the guidance and instructions in S0005-AC-PRO-010, Interactive Electronic Technical Manual (IETM) Process Plan, Appendix I. Acquire TMMA approval before VIN request submittal. Ensure NSDSA receives copy of approval by e-mail. Distribution list information (if available) should accompany the VIN.
3. Obtain a waiver from NAVSEA 04L3/SPAWAR 04L-2 if the CD-ROM will not be developed as ATIS-compatible.
4. If a CD-ROM effort is canceled, superseded, or delayed beyond 3 months past the Estimated Distribution Date, notify NSDSA of the need to cancel the VIN and NSN or extend the copy freeze date.
5. Ensure that the assigned VIN is incorporated in the digital header of the CD-ROM. Verify that the VIN and NSN are included on the CD-ROM label before distribution.
6. Ensure that NSDSA receives a copy of the CD-ROM when finished.
7. Verify that an NSN is on the CD-ROM master and on each CD-ROM replicated.
8. Do not replicate any CD-ROM without an NSN.
9. As required, or if directed by the printing/replication order, prepare and add the NSN to the CD-ROM.

MEDIA VOLUME ID NUMBER REQUEST

INSTRUCTIONS:

1. For requests involving fewer than ten (10) documents per CD, complete Parts, II, III, and IV, then:

Fax request to: (805) 228-0726

Code 5E30, Attn: Stacy Diaz or Louie Candelaria

Email: Candelarial@phdnswc.navy.mil or DiazSA@phdnswc.navy.mil

Mail: Commanding Officer, Naval Surface Warfare Center, Port Hueneme
Division, 4363 Missile Way, Port Hueneme CA 93043

Attn: Stacy Diaz or Louie Candelaria, Code 5E30

2. For requests involving ten or more documents per CD:

a) Create a DOS formatted diskette containing Part IV information in ASCII format.

b) Complete Parts II and III of this request.

c) Mail the diskette (containing Part IV info) and this request (containing Part II and III info) to the address shown above.

PART I: *FOR NSDSA USE ONLY*

1. VOLUME ID NUMBER: _____

2. DATE ASSIGNED: _____

3. STOCK NUMBER: _____

4. SYSTEM FIELD VALUE: _____

5. FAMILY FIELD VALUE: _____

PART II: REQUESTOR INFORMATION

TODAY'S DATE: _____

1. ACTIVITY: _____

2. UIC: _____

3. POC NAME: _____ 4. CODE: _____

5. PHONE: _____ 6. FAX: _____

7. CD MAINTENANCE ACTIVITY: _____

Figure 10. Media Volume ID Number Request Form.

8. ARE YOU THE TMMA FOR ALL TECHNICAL MANUALS ON THIS CDROM?

☐ Yes ☐ No

TMMA CONCURRENCE FOR EACH TECHNICAL MANUAL ON THIS CDROM MUST BE RECEIVED BY NSDSA PRIOR TO ASSIGNMENT OF MEDIA VOLUME ID NUMBER. CONCURRENCE BY FAX, EMAIL OR LETTER IS APPROPRIATE

PART III: CD INFORMATION

1. CD TITLE:

2. REVISION/VERSION NUMBER: _____

3. DATE OF ISSUE (PROPOSED): _____

3a. IS THIS A SUPERSEDING CDROM? ☐ Yes ☐ No

IF THIS IS A SUPERSEDING CDROM, WHAT VOLUME ID NUMBER IS THIS SUPERSEDING AND DATE?

4. DISTRIBUTION STMT: _____

5. CLASSIFICATION: _____

6. ATIS Compatible: ☐ Yes ☐ No

If your CD will NOT be ATIS compliant, you must request a waiver from
(NAVSEA) AnderM@navsea.navy.mil or
(SPAWAR) Dave.Williamson@spawar.navy.mil

Please CC to DiazSA@phdnswc.navy.mil and CandelariaL@phdnswc.navy.mil

7. PROPOSED DISTRIBUTION LIST ATTACHED: ☐ Yes ☐ No

8. BASELINE DISTRIBUTION LIST REQUIRED: ☐ Yes ☐ No

8A. What ships/ship classes are applicable to this CD

Figure 10. Media Volume ID Number Request form. (continued)

9. STOCKING POINT Information:

A. UIC: _____

B. Internal Office Code: _____

C. POC: _____

D. Phone (Comm): _____ E. Phone (DSN): _____

10. IS THIS A MULTIVOLUME CDROM? DOES INFORMATION ON THIS CDROM CONTINUE ON A SECOND OR THIRD CDROM?

☐ Yes ☐ No

11. AUTHORING SOFTWARE: _____

12. RETRIEVAL SOFTWARE: _____

13. WHICH OF THE FOLLOWING APPLIES TO THIS CDROM:

(a) ☐ RASTER WITH INTELLIGENT ELECTRONIC INDEXING CLASS (1)(b) ☐ ELECTRONIC TECHNICAL MANUAL (ETM) (ASCII PAGES) WITH INTELLIGENT INDEXING CLASS (2)(c) ☐ INTERACTIVE ELECTRONIC TECHNICAL MANUAL (IETM) CLASS(PLEASE Check One) (3) ☐ (4) ☐ (5) ☐(d) ☐ TECHNICAL MANUALS ON THIS CDROM WILL ALSO BE MAINTAINED/PUBLISHED IN PAPER FORM

PART IV: DOC. ID/TM DATA

IF YOU ARE REVISING AN EXISTING MANUAL TO BE ON CDROM ONLY, PLEASE MAKE SURE YOU HAVE OBTAINED A NEW TMINS NUMBER FROM TONA MARTINEZ, (805) 228-0434, DSN 296-0434 (Martineztg@phdnswc.navy.mil).

NOTE: IF YOUR CDROM CONTAINS AN IETM.NDX, PLEASE ENSURE YOUR TECHNICAL MANUAL NUMBER/REVISION LEVEL ARE ENTERED AS SHOWN ON TDMIS, OTHERWISE, YOUR TECHNICAL MANUAL NUMBERS WILL NOT BE DISPLAYED IN TDMIS UNDER CDROM PUB LIST SCREEN.

Figure 10. Media Volume ID Number Request form. (continued)

DOC. ID / TM NUMBER	REV	DATE	CHG	DATE
1				
2				
3				
4				
5				
6				
7				
8				
9				

FOR ADDITIONAL INFORMATION CONTACT:

Louie Candelaria, Port Hueneme Division (PHD), Naval Surface Warfare Center (NSWC) Code 5E30, (805) 228-7170, DSN 296-7170; Fax (805) 228-0726, DSN 296-0726 or Email: Candelarial@phdnswc.navy.mil

Stacy Diaz, PHD NSWC Code 5E30, (805) 228-8162, DSN 296-8162; Fax (805) 228-0726, DSN 296-0726 or Email: DiazSA@phdnswc.navy.mil

Figure 10. Media Volume ID Number Request form. (continued)

ADVANCED TECHNICAL INFORMATION SUPPORT (ATIS) SYSTEM

ATIS SOFTWARE VERSIONS

Version 4.1/4.2 (16-bit) is stand-alone software that runs on Windows® For Work Groups through Windows® NT. The networks version uses Novell 3.12 file server with a CD-ROM Jukebox and CD-ROM Tower. The Version 1.2/1.3 (32-bit) standalone software runs Windows® through Windows® NT 4.0. The Network version uses a Windows® NT 4.0 server with a CD-ROM jukebox or Redundant Arrays of Independent Disks (RAID) and CD-ROM Tower.

ATIS INSTALLATION ON SHIPS

There are 130 ships running 16-bit software (54 networked and 34 standalone). There are 157 ships running 32-bit software (149 networked [140 with RAID] and 59 standalone).

Ships are being migrated to Windows® NT based on schedule agreed upon by Type Commanders (TYPCOMS) and SPAWAR. RAID will replace jukeboxes as funding and schedule permits. Software will migrate to Windows® 2000.

ATIS COMPATIBILITY

ETM/IETM CD-ROM MANAGEMENT AND TESTING LETTER ser 04L3/039 of 23 JUL 99 discusses testing. A copy of this document is posted at <http://nsdsa.phdnswc.navy.mil/>. IETM developers must forward an advance copy of CD-ROM to NAVSEALOGCEN DET LANT for ATIS compatibility testing. ATIS compatibility testing procedures can be found at the following Web site: <http://navycals.dt.navy.mil/ietm/ietmdeve.html>

IETM INDEX VERIFICATION

NAVSEALOGCEN DET LANT verifies the following:

- CD-ROM Volume ID is in TDMIS and has the status of "UD" (Under Development)
- IETM.NDX format is valid—agrees with the specification
- Revision is two numbers (00, 01, .. , 99) or 00 and a letter (00A, 00B, ..., 00Z)
- Date Field is valid—Date must be between 19900101 and the date. This is the date of the IETM, not the date of the publication. This date is used to determine the newest of two copies of the IETM.

For IETM.NDX lines with entry type of TM, the following are also required to be true:

- TMINs number is in TDMIS.
- TDMIS status for the revision is "FI" (Final Issue), "PI" (Preliminary Issue), or 'UD'.
- Change history matches the change history of an applicable TDMIS publication.

ATIS COMPATIBILITY TESTING

Standalone (16- and 32-bit ATIS) testing includes compatibility testing for Windows NT and Windows 95. Network (16- and 32-bit ATIS) testing includes the following:

- Novell server with Windows for Workgroups (WFWG) and Windows 95 and Windows NT clients
- Windows NT server with Windows 95 and Windows NT clients
- ETM CD-ROM in tower
- ETM CD-ROM in jukebox
- ETM CD-ROM on RAID

COMPLETION OF TESTING

If IETM Viewer software is not on the SPAWAR Preferred Products List (PPL) (see http://www.massolant.navy.mil/ppl/Documents/PPL_SOFT.HTM and Preferred Products List (PPL)/System/Subsystem Interface List (SSIL) naval message FM CINCLANTFLT NORFOLK VA//NG//DTG 081804Z FEB 02), CD-ROM is forwarded to SPAWAR for Environment Compatibility Testing (ECT). IT-21 PPL Testing is also required. There is a fee for testing ETM CDs in various configurations. For more information, see the following URL: <http://www.scn.spawar.navy.mil/ppl/it21test.htm>. For NMCI Testing requirements, see the Navy Marine Corps Intranet Application Resource Guide.

If the IETM Viewer software is on the SPAWAR PPL, the Master CD-ROM is returned to the developer with ATIS certification. If the CD-ROM fails either IETM.NDX Verification or ATIS compatibility, the Master CD-ROM is returned to the developer with appropriate documentation. Naval Sea Logistics Center Detachment Atlantic (NSLC DET LANT) will change the status of the ATIS Compatible Field in TDMIS from NO to YES when the IETM has passed ALL testing.

TOOLS AND AIDS FOR DEVELOPERS

ATIS compatibility testing procedures are provided at the following URL: <http://navycals.dt.navy.mil/ietm/ietmdeve.html>.

IETM.NDX Wizard, a graphical interface for creating IETM.NDX file entries, is available at http://nsdsa.phdnswc.navy.mil/tmmp/ietm_wizard.zip. The file can be sent ahead of time by e-mail with the volume label of CD-ROM. Contact other developers or ETM Working Groups who use the same or similar ETM View packages.

For development of a web ATIS, see MIL HBK 511, the Department of Defense Handbook for Interoperability of Interactive Electronic Technical Manuals (IETMs). This handbook provides guidance on the development and implementation of ETMs to achieve interoperability through a common interface (web browser). The handbook is available at the following URL: <http://navycals.dt.navy.mil/ietm/webstuff/HDBK511.PDF>

POINTS OF CONTACT

ATIS Help Desk: (301) 744-4911

- ATIS Project Leader: (301) 744-6201
- IETM Testing POC: (301) 744-6287

Order NAVSEA Raster CDs: (805) 228-0426

Order SPAWAR Raster CDs: (805) 228-8142

TECHNICAL DATA MANAGEMENT INFORMATION SYSTEM (TDMIS)

PURPOSE

The Technical Data Management Information System (TDMIS) tracks hard copy and electronic technical manuals to equipment relationships throughout their life cycle. Customers use the system to request TMINS Assignment and CD-ROM VID assignment. The system also generates FPSRs for TM and CD-ROM NSN assignment, corrections, and cancelations. TDMIS verifies the latest revisions and changes needed for a system or equipment. It also has distribution lists for all ships and shore activities. TDMIS is a TM management tool for NAVSEA, SPAWAR, and NAVAIR air traffic control and landing systems.

CAPABILITIES

TDMIS is an Oracle® relational database that has information on more than 300,000 publications and changes, including publication-to-equipment relationships and equipment-to-ship relationships. The database has 655,000 lines of code and 381 tables/views. The database is Windows®-based and supports multiple users (2,100 users in the Fleet and shore-wide). TDMIS is Windows® 95/98/NT-compatible. Auto registration and initial software downloads can be made at the TDMIS Web site at <http://nsdsa.phdnswc.navy.mil>.

TDMIS data interfaces with the following systems:

- Configuration Data Manager Database-Open Architecture (CDMD-OA)
- Technical Library Management System (TLMS)
- Naval Logistics Library (NLL/NAVSUP)
- Advanced Technical Information Support (ATIS) System

TM INFORMATION

TDMIS includes the following TM information:

- Publication title
- Revision level(s) and date(s)
- Change level(s) and date(s)
- National Stock Number (NSN)
- Technical Manual Maintenance Activity (TMMA), Stocking Point Activity (SPA), Requesting Activity (RA) and Manual Preparing Activity (MPA)
- Status of TM (UD, FI, CA, etc.)
- Security classification

- System Command (SYSCOM)
- Repair Identification Codes (RICs) –APL/AEL
- Ship, class, and equipment applicability
- Publication digital conversion status
- Technical Manual Deficiency and Evaluation Report (TMDER) and Advance Change Notice (ACN)
- Submarine unique management data

CD-ROM INFORMATION

TDMIS includes the following CD-ROM information:

- CD number
- Issuing activity
- CD issue date
- Status of CD (UD, FI, CA, etc.)
- CD title
- NSN
- ATIS compatibility
- Technical Manual Maintenance Activity (TMMA), Stocking Point Activity (SPA), Requesting Activity (RA)
- Security classification
- Ship and class applicability
- List of all TMs on each CD

OUTPUTS

TMDIS provides the following database outputs:

- System and equipment publication requirements for a single activity, ship, or an entire Battle Group (Index of Technical Publication [ITP])
- Publication digital conversion status (part of the ATIS CD Raster pipeline and the Standard Generalized Markup Language [SGML] production Naval Surface Warfare Center [NSWC] Port Hueneme Division [PHD] and Naval Surface Warfare Center Division [NSWCD] Philadelphia)

- CD-ROM applicability to a ship or equipment
- Publications/TMs on each CD-ROM
- Type of digital data (e.g., SGML, raster, etc.)
- Technical Manual Deficiency/Evaluation Report (TMDER) tracking
- Multiple Principle Executive Officer (PEO)-unique data
- Data transferred to and from NLL and NAVSUP databases
- Configuration Data Manager Database-Open Architecture (CDMD-OA) data files
- Data files for TLMS
- Distribution list and mailing labels
- Provides data files to Integrated Logistic Overhaul (ILO) activities

LIFE CYCLE TRACKING

TMDIS accomplishes life cycle tracking through the following status codes:

UD:	Under development
FI:	Final issue
OB:	Obsolete
SU:	Superseded
CA:	Canceled
NI:	Never Issued
FV:	Foreign Vessel
PI:	Preliminary Issue
RI:	Change Incorporated in Basic

TM MAINTENANCE

TM technical content must always be accurate and current. TMs must reflect the current hardware configurations, ordnance, machine, and ship alterations, Alterations Equivalent to Repair (AERs), and Planning Yard Work Items (PYWIs). TMs must be corrected to reflect instances that are not hardware modifications (technical-TMDER or administrative-grammatical).

PERMANENT CHANGE PACKAGES

Use a Regular Change Package if less than 25% of the TM requires updating. Rapid Action Change (RAC) Packages expedite the update of a TM to incorporate TMDERs, Advance Change Notices (ACNs), or Field Change Bulletins (FCBs). RACs are issued as a Permanent Change but have less stringent guidelines than the Regular Change Package process. See the Guidelines for the RAC Process on page 15-7 of NAVSEA/SPAWAR S0005-AA-PRO-010/E0005-AC-HBK-010.

ADVANCE CHANGE NOTICES (ACNs)

The TMMA uses ACNs to issue safety-related information by naval message. The criteria for issuing ACNs are as follows:

1. Someone could get hurt or killed
2. Equipment could become damaged
3. Mission could be stopped
4. Technical problems that involve safety could be resolved
5. Naval message issued within 10 days
6. Permanent Change Package or Revision incorporates change into TM within 6 months

ACN numbers are obtained through the TDMIS Deficiency Module. Contact the NSDSA POC: (805) 228-6153 DSN 296-6153. ACN Numbers will be either Numerical (1/1, 2/3) Stock # type TM or Alpha (1/A, 2/C) TMINs # type TM.

TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORTS (TMDERS)

Introduction

Technical Manual Deficiency/Evaluation Reports (TMDERS) are the primary method for TM users to report TM discrepancies to the TMMA. Send a naval message to submit urgent TMDERS. Any of the following may be used to submit unclassified TMDERS:

1. NSDSA's Web site: <http://nsdsa.phdnswc.navy.mil/tmder/tmder.asp?lvl=1>
2. TDMIS Deficiency Module
3. E-Mail attachment: tmder@phdnswc.navy.mil

4. Paper

Classified TMDERs shall be submitted by paper ONLY.

The submitter assigns a TMDER Tracking Number: UIC-Calendar Year-Consecutive Number

Example: (N00039-01-0057)

Attach appropriate/affected TM pages if submitting a paper TMDER. Upload attachments into TDMIS when using the TDMIS Deficiency Module to report the Deficiency (Unclassified ONLY).

TMTA Responsibilities

The TMTA receives, reviews, analyzes, and resolves TMDER and informs the TMDER originator of the status. Urgent TMDERs shall be completed in 3 working days. Routine TMDERs can be completed in 90 calendar days. The TMTA updates Deficiency Module Status in the TDMIS database and incorporates the TMDER as part of the next Permanent Change or Revision.

TDMIS Active TMDER/ACN Status Codes

The following are the active TMDER/ACN status codes used in the TMDIS database:

- 00 – Delinquent
- 01 – In Evaluation
- 02 – ACN Scheduled/Not Yet Issued
- 03–Non-Safety Technical Review—On Hold
- 04 – Not Used
- 05 – Submarine CAN
- 06 – Change/Revision Scheduled
- 07 – Change Required—No Funding
- 08 – ACN Issued
- 09 – Low Impact TMDER
- G1 – TMDER Open for User Input
- G2 – TMDER Pending Evaluation (TMTA has not accessed TDMIS yet)

TDMIS Final Resolution TDMER/ACN Status Codes

The following are the final resolution TMDER/ACN status codes used in the TMDIS database:

- F1 – Transferred to other SYSCOM
- F1 – Transferred to other SYSCOM
- F2 – No Change Required
- F3 – TM Change or Revision Issued
- F4 – Final No Copy at TMMA
- F5 – Canceled by Administrative Action
- F6 – RAC Issued
- F7 – TM Superseded
- F8 – Responded to by NSDSA
- F9 – Not Used

SUBMITTING A TMDER THROUGH THE INTERNET

TMDER Publication Validation Screen

When you type a publication number on this screen, the system will bump your number against the NSDSA database. If the publication is found, you will be taken to a Technical Manual Deficiency/Evaluation Report (TMDER) form. If the publication is not found, you will be given an opportunity to re-enter the technical manual number. If you are again told that the publication is not found, contact NSDSA TMDER Support for help. It may be that the publication is not under NAVSEA/SPAWAR cognizance, or it may not be an active publication, or it may simply be a matter of formatting your number to match the NSDSA database.

TMDER Form

When you first enter the TMDER Form screen, the Publication Number, Revision Number, Publication Date, and Title will be filled in for you. If the Revision, Date, or Title do not match the publication you are reporting, do not try to alter them on the screen. Use one of the Recommended Changes to Publication blocks to explain any differences.

If your TMDER is against a particular Change to the publication, enter the Change number and Change Date in the appropriate blocks. The Date format is MM/DD/YYYY. Leave these fields blank if not reporting against a Change.

Report Control Number (RCN)

The Report Control Number (RCN) consists of the following 12 digits:

- 6 digits, your activity's UIC, i.e., N46678, R22178, C1M7A4, Q90616.
- 2 digits, the calendar year. These two digits will be filled in automatically by the system.
- 4 digits, any unique alphanumeric characters. Try not to use "0000" or "0001". The numbers must be unique, and these are most likely already taken. Use your first and last initials followed by a series number such as DP01, DP02, DP03, etc.

If your requested RCN is already found in the NSDSA database, the RCN will be reassigned, and you will be notified by e-mail of the new number.

Recommended Changes to Publication

This is the most important part of your TMDER. You need to state the problem clearly and precisely. You must include an entry under page number and paragraph number even if that entry is simply "All" or "NA". Describe the discrepancy you have found as precisely as you can. Take all the room you need up to 3,000 characters.

IMPORTANT:

Do not use symbols in your descriptions. For example: Say 4-inch pipe rather than 4" pipe, or 32 degrees rather than 32°, or 300 lbs instead of 300#.

Originator Information

Fill out the originator information as completely as possible. You may leave the DSN field blank if you do not have one. The COMM No field must include your area code. The formatting will fill in automatically for you, so just enter the numbers. If you are aboard a vessel, fill out the Station/Hull UIC and Hull No fields; otherwise, these may be left blank. All other fields are required.

Print View

Before you submit your TMDER, you should make a copy of it for your records. Clicking Print View will bring up a text box with the information that you have included on the form. You may print this or save it to a file.

Submit TMDER

When you click this button, a quick edit check will be performed to verify that all required fields have entries. The TMDER will then be forwarded to NSDSA for review and submission to the TMMA.

Attachments

If you have an example of the problem, or a copy of the page in question, you may submit that information separately by e-mail. Send an e-mail to tmder@phdnswc.navy.mil and submit your copy as an attachment to the e-mail. Be sure to give the publication number and RCN in the body of your e-mail.

After your TMDER is submitted, your TMDER will be received at NSDSA as an entry in the Deficiency Module of the TDMIS database. It will be reviewed and forwarded within TDMIS to the TMMA of record.

You will receive an e-mail within a day or two letting you know that the TMDER was received and to whom it was submitted.

You can expect a response directly from the TMMA within 90 calendar days. If you do not receive a response by the end of that time, contact NSDSA TMDER Support and request follow-up on your TMDER.

Your comments are IMPORTANT. The errors or omissions that you identify now can be fixed for future users. Your help is needed to ensure that all users have the most current and accurate data available.

REVISION

Use Update Revisions when 25 to 50% of the TM requires updating. Revisions follow the existing TM structure.

COMPLETE REVISION

Use a complete revision when 50% or greater of the TM requires updating. For a complete revision, develop an entirely new TM and structure.

(Insert Classification of Publication Here) CLASSIFICATION:

Ref: NAVSEAINST 4160.3A NAVSEA S0005-AA-PRO-010/TMMP

NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)			
INSTRUCTION: Continue on 8 ½" x 11" paper if additional space is needed. 1. Use this report to indicate deficiencies, problems, and recommendations relating to a publication. 2. For CLASSIFIED TMDERs see OPNAVINST 5510H for mailing requirements. 3. Print clearly and carefully. 4. For TMDERs that affect more than one publication, submit a separate TMDER for each. 5. Submit TMDERs at web site http://nsdsa.phdnswc.navy.mil or mail to address on reverse.			
1. PUBLICATION NO.	2. VOL/PART	3. REV/DATE or CHG/DATE	4. SYSTEM/EQUIPMENT ID
5. TITLE OF PUBLICATION			6. REPORT CONTROL NUMBER (6 digit UIC-YY-any four: xxxxxx-01-xxxx)
7. RECOMMENDED CHANGES TO PUBLICATION			
7a Page #	7b Para #	7c RECOMMENDED CHANGES AND REASONS	
8. ORIGINATOR'S NAME and WORK CENTER	9. DATE	10. PHONES Commercial/DSN/FAX Include extensions	11. TMMA of manual (NSDSA will complete)
12. Ship or Activity Name and Address (Include UIC/CAGE/HULL)			13. ORIGINATOR'S E-MAIL ADDRESS

NAVSEA 4160/1 (REV 3/2001)

Figure 11. Technical Manual Deficiency/Evaluation Report (Front).

FOLD HERE AND TAPE SECURELY
PLEASE DO NOT STAPLE

INCLUDE COMPLETE ADDRESS

USE
PROPER
POSTAGE

FOR OFFICIAL USE ONLY

**COMMANDER
CODE 5E30DP BLDG 1388
NAVSURFWARCENDIV NSDSA
4363 MISSILE WAY
PORT HUENEME CA 93043-4307**

FOLD HERE AND TAPE SECURELY
PLEASE DO NOT STAPLE

Figure 11b. Technical Manual Deficiency/Evaluation Report (Back).

READING GRADE LEVEL

WHAT IS READING GRADE LEVEL?

Reading Grade Level performs the following functions:

1. Assigns a score by referring to reading grade norms for 8th or 9th grade level
2. Matches the material to the intended user
3. Verifies the suitability of the material for the intended audience
4. Indicates whether the writing is on course with readability or if there are problems with the text

WHO USES READING GRADE LEVEL?

Reading Grade Level is used by education, industry, government, and the military.

HOW IS READING GRADE LEVEL PERFORMED?

Use the requirements specified in MIL-DTL-24784, Appendix B “Style of Writing,” paragraph 40, “Level of Writing.”

Calculate using the modified Flesch–Kincaid Reading Ease Formula, which evaluates two factors, difficulty of vocabulary and sentence structure.

SAMPLE SELECTION

Count the number of text pages in the TM, including all full and partial text pages (do not count pages containing only illustrations, tables, lists, etc.)

For TMs with 90 or more pages, select every 10th page to sample.

Select a text passage of 200 words or to the end of the sentence containing the 200th word. Do not include headers, etc.

THE CALCULATION

- In each sample:
 - Count all words through the end of each sentence containing the 200th word
 - Count the number of sentences
 - Count the number of syllables in each word
- Distribution list and mailing labels
- Count all numbers as one syllable

- Count all acronyms/abbreviations as one word unless they spell a word of two or more syllables
- Count as one syllable all words in the baseline word list for TMs
- Add the total number of words from all samples
- Add the total number of sentences from all samples
- Add the total number of syllables from all samples
- Calculate average sentence length (divide total words by total sentences)
- Calculate average syllables per word (divide total syllables by total words)
- Calculate the Overall Grade Level (OGL) of the TM by the following formula:

$$\text{OGL} = 0.39 (\text{average number of words}) + 11.8 (\text{average number of syllables}) - 15.59$$
- Calculate the grade level (GL) of each sample by running the formula against the averages for each sample
- Target OGL = 9 (ninth grade level) +/-1 grade

IMPROVEMENTS

“Baseline Word Lists For NAVSEA/SPAWAR Technical Manuals” SL160-AA-LST-010/EL160-AA-LST-010 includes:

- Common TM vocabulary
- General Electronics
- Propulsion Engineering
- Communications and Navigation
- Weapons Systems
- Ships Mechanical and Electrical

The Word List is available online at the following URL:

<http://nsdsa.phdnswc.navy.mil/tmmp/baseword/bword1.htm>

WORD LIST CALCULATIONS

- Assign a syllable count of “one” to words that appear on applicable word lists.
- Apply a Modified Flesch–Kincaid Formula to calculate OGL/Reading Grade Level (RGL).
 - Manual calculation

–Computer calculation

MORE IMPROVEMENTS

NAVSEA/SPAWAR developed a baseline word list word substitution program to substitute word “one” in test passage for words found in a baseline word list. The DOS-based program is available at the NSDSA web site. Remember—reading grade level must be certified on the NAVSEA/SPAWAR Technical Manual Certification Sheet (Figure 12).

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