

**NOTICE OF
CHANGE**

**NOT MEASUREMENT
SENSITIVE**

MIL-HDBK-1221
NOTICE 1
30 September 1999

**DEPARTMENT OF DEFENSE
HANDBOOK
FOR
EVALUATION OF
COMMERCIAL OFF-THE-SHELF
(COTS)
MANUALS**

TO ALL HOLDERS OF MIL-HDBK-1221:

1. THE FOLLOWING PAGES OF MIL-HDBK-1221 HAVE BEEN REVISED AND
SUPERSEDE THE PAGE LISTED:

<u>NEW PAGE</u>	<u>DATE</u>	<u>SUPERSEDED PAGE</u>	<u>DATE</u>
i/ii blank	30 Sep 99	i/ii blank	28 Aug 95
iii - vi	30 Sep 99	New pages	
9-10	30 Sep 99	9-10	28 Aug 95
37/38 blank	30 Sep 99	37/38 blank	28 Aug 95

2. CHANGES ARE INDICATED WITH VERTICAL BARS.

3. RETAIN THIS NOTICE AND INSERT BEFORE TABLE OF CONTENTS.

4. Holders of MIL-HDBK-1221 will verify that page changes and additions indicated above have been entered. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the handbook is completely revised or canceled.

Custodians:

Army - TM
Navy - OS
Air Force - 16
DLA - CC

Preparing Activity:

Army - TM

Review Activities:

Army - AR, AL, AT, AV, CR, ME
MI, CU

Navy - AS, EC, MC, OM, SA, SH, TD

Air Force - 01, 10

DLA - GS, CT

Project number:

TMSS O326

User Activities:

Army - MD

Navy - CG

Air Force - 11, 13, 19, 70, 71, 80, 82, 84

AMSC N/A

AREA TMSS

MIL-HDBK-1221

FOREWORD

1. This military handbook is approved for use by all Departments and Agencies of the Department of Defense.
2. This handbook is for guidance only. This handbook cannot be cited as a requirement. If it is, the contractor does not have to comply.
3. Beneficial comments (recommendations, additions, deletions) and any pertinent data that may be used in improving this document should be addressed to: USAMC Logistics Support Activity, ATTN: AMXLS-AP, Redstone Arsenal, AL 35898-7466, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter. Comments may be given using FAX number: 205-955-9850 (DSN 645), or E-Mail address: cheryl.casey@logsa.army.mil. \$

i/ii blank

Supersedes page i/ii blank of MIL-HDBK-1221

MIL-HDBK-1221

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
	FOREWORD	i
1.0	SCOPE	1
1.1	Scope	1
1.2	Application	1
2.0	APPLICABLE DOCUMENTS	1
2.1	Government Documents	1
2.1.1	Specifications, standards, and handbooks	1
2.2	Order of precedence	1
3.0	ACRONYMS AND DEFINITIONS	2
3.1	Acronyms used in this handbook	2
3.2	Definitions	2
3.3	Caution	2
3.4	Commercial off-the-shelf (COTS) manual	2
3.5	Comprehensibility	2
3.6	Contracting activity	2
3.7	Note	2
3.8	Supplemental data	3
3.9	Warning	3
3.10	Weapon systems	3
4.0	EVALUATION CRITERIA	3
4.1	Style and format	3
4.1.1	Comprehensibility/readability/legibility	3
4.1.2	Arrangement	3
4.1.3	Size	3
4.1.4	Safety	3
4.1.5	Warnings, cautions, and notes	3
4.1.6	Federal environmental protection standards	3
4.1.7	Illustrations	3
4.1.8	Maintenance	4
4.1.9	Copyright release/rights in data	4
4.2	Content requirements	4
4.2.1	Front matter	4
4.2.1.1	Cover	4
4.2.1.2	Table of contents	4
4.2.1.3	Safety precautions	5
4.2.2	Introduction	5
4.2.3	Preparation for use and installation instructions	5

NEW PAGE

MIL-HDBK-1221

<u>PARAGRAPH</u>		<u>PAGE</u>
4.2.4	Principles of operation	5
4.2.5	Operating instructions	6
4.2.6	Maintenance and servicing instructions (preventive And corrective)	6
4.2.6.1	Cleaning and lubrication	6
4.2.6.2	Performance verification	6
4.2.6.3	Inspection	7
4.2.6.4	Troubleshooting	7
4.2.6.5	Disassembly, repair, replacement, reassembly, and checkout	7
4.2.7	Reprogramming	7
4.2.8	Preparation for shipment	7
4.2.9	Storage	7
4.2.10	Parts list	8
4.2.10.1	Parts list information	8
4.2.10.2	Parts listing	8
4.2.10.3	Common commercial parts	8
4.2.11	Operational and maintenance illustrations	9
4.2.11.1	Diagrams	9
4.2.11.2	Symbols	9
4.2.12	Overhaul instructions	10
4.2.13	Interactive Electronic Technical Manuals (IETM)	10
5.0	SUPPLEMENTAL DATA	10
5.1	General	10
5.1.1	Identifying Technical Publication Sheet	10
5.1.2	Style, format, and form	10
5.2	Content/format selection summary	10
5.3	Warranty information	11
5.4	Advertising	11
5.5	Equipment/model coverage	12
5.6	End item identification	12
5.7	Publication number and date	12
5.8	List of effective pages	12
5.9	Lubrication instructions	12
5.10	Spare/repair parts	12
5.11	Copyright release/rights in data	12
6.0	NOTES	12
6.1	Intended use	12
6.2	Sample qualification	13

NEW PAGE

MIL-HDBK-1221

<u>PARAGRAPH</u>		<u>PAGE</u>
6.3	Acceptability Certification	13
6.4	Subject term (keyword) listing	13
 <u>FIGURES</u>		
1	Example - identifying technical publications sheet for a commercial manual	14
2	Example - identifying technical publications sheet for a commercial manual/supplemental data	15
3	Example - approval and procurement record page	16
APPENDIX A - COTS MANUAL EVALUATION		17
APPENDIX B - ACCEPTABILITY CERTIFICATION (COTS MANUAL) . .		23
APPENDIX C - CONTENT/FORMAT SELECTION SUMMARY		27
INDEX		35

v/vi blank

NEW PAGE

MIL-HDBK-1221

Example:

Figure and Index No.	Part No.	Part Name (Nomenclature or Description)
2-4	Commercial	NUT, Hex head, plain steel, 1/4-20 UNC-3B
2-5	Commercial	WIRE, Electrical, copper, tin plated, No. 14 AWG, 19 strand of No. 27 AWG, 0.250 in. dia.

4.2.11 **Operational and maintenance illustrations.** Manuals should contain illustrations (line drawings, photographs or halftones) for locating and identifying all components significant to operation and maintenance and to show configuration and parts relationship for removal and disassembly procedures. Photographs (prescreened) should be detailed and sharp, free of heavy shadows, distorted objects, and cluttered foregrounds or backgrounds, and should give good contrast from white, middle tones, and black. Freehand sketches should not be acceptable.

4.2.11.1 **Diagrams.** As applicable, the following diagrams should be included in the manual:

- a. Simplified functional block.
- b. Locator.
- c. Piping.
- d. Plumbing.
- e. Hydraulic.
- f. Schematic.
- g. Electrical.
- h. Logic.
- I. Other, as necessary.

4.2.11.2 **Symbols.** Symbols used on illustrations and diagrams should be standard or common to the trade or commodity. Where nonstandard symbols are used, explanations should be provided. \$

Supersedes page 9 of MIL-HDBK-1221

MIL-HDBK-1221

4.2.12 **Overhaul instructions**. When applicable, the manual should include overhaul instructions to return the equipment to mission-capable condition. As a minimum, the instructions should include the following:

- a. List of support equipment, special tools, and facilities required.
- b. List of mandatory parts.
- c. Preshop analysis, as applicable.
- d. Step-by-step procedures for performing all functions including disassembly, removing, replacing, diagnosing, installing, repairing, assembly, in-process testing, adjusting, and inspecting.
- e. Final tests to assure satisfactory performance of the equipment or system overhauled.

4.2.13 **Interactive Electronic Technical Manuals (IETM)**. The common requirements for digital form IETM'S, designed for interactive display, can be found in MIL-M-87268, Manuals, Interactive Electronic Technical: General Content, Style, Format, and User-Interaction Requirements.

5. SUPPLEMENTAL DATA

5.1 **General**. If after evaluation, it is determined the manual requires supplemental data, the § supplemental data should be prepared using the following guidance.

5.1.1 **Identifying Technical Publication Sheet**. The contracting activity may require the contractor to prepare an Identifying Technical Publication Sheet. An example is shown in Figure 1. The Identifying Technical Publication Sheet should be tailored to reflect only information applicable to the acquisition. MIL-M-38784 provides guidelines for the appropriate distribution statement, disclosure notice, destruction notice, and authority notice. Other pertinent data should be inserted by the contractor as provided by the Government.

5.1.2 **Style, format, and form**. Unless otherwise specified, general style and format of supplemental data should be in accordance with MIL-M-38784.

5.2 **Content/format selection summary**. The content of the supplemental data should be as specified on the Content/Format Selection Summary Sheet (Appendix C). The supplemental data should be presented in the following order:

Supersedes page 10 of MIL-HDBK-1221

MIL-HDBK-1221

Custodians:

Army - TM
Navy - OS
Air Force- 16
Defense Logistics Agency - CC %

Preparing Activity:

Army - TM
Project TMSS 0306

Review Activities:

Army - AR, AL, AT, AV, CR, ME, MI, CU
Navy - AS, EC, MC, OM, SA, SH, TD
Air Force - 01, 10,
Defense Logistics Agency - GS, CT

User Activities:

Army - MD
Navy - CG
Air Force - 11, 13, 19, 70, 71, 80, 82, 84