

TECHNICAL MANUAL

OPERATOR'S ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS)

VOLUME I
OPERATION, INSTALLATION,
AND REFERENCE DATA

VOLUME II
SCHEDULED MAINTENANCE

VOLUME III
TROUBLESHOOTING

THERMAL SYSTEM TEST SET

(4931-01-119-7092)

DISTRIBUTION STATEMENT: Approved for public release; distribution unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

DECEMBER 1986

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DEPARTMENT OF THE ARMY
Washington, D.C. 31 December 1986

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RPSTL current as of technical manual date

Software PN 12303273 Revision D, current as of technical manual date.

Reporting Errors and Recommending Improvements

You can help improve this manual. If you find any mistakes or if you know a way to improve the procedures, please let us know. Mail your letter DA Form 2028 (Recommended Changes to Publication and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, U.S. Army Armament, Munitions and Chemical Command, Attn: AMSMC-MAS, Rock Island, Illinois 61299-6000. A reply will be furnished to you.

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NOTE

This manual is divided into three bindings. The first binding consists of volumes I, II, and III and front matter for all three bindings. The second binding consists of volume IV and an index for volumes I through IV. Test set schematic and functional diagrams are contained in the third binding.

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TM 9-4931-381-14&P-1

TECHNICAL MANUAL

**VOLUME I
OPERATION, INSTALLATION,
AND REFERENCE DATA**

THERMAL SYSTEM TEST SET

CHAPTER 1 INTRODUCTION

1-1. Scope. This manual tells you about the Thermal System Test Set (TSTS). In the rest of the manual, the TSTS may be called the test set. The test set is used to check faulty assemblies that have been removed from the M1 Tank Thermal Imaging System (TIS) and the M60A3 Tank Thermal Sight (TTS) AN/VSG-2. The test set finds faulty components and modules inside these assemblies. The manual tells you how to operate, troubleshoot, and repair the test set. This manual is for use by Direct Support (DS) and General Support (GS) repair persons.

1-2. Maintenance Forms and Records. Maintenance forms, records, and reports, which are to be used by maintenance personnel at all levels, are listed in DA PAM 738-750, The Army Maintenance Management System (TAMMS).

1-3. Equipment Improvement Recommendations (EIR). If your test set needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put your suggestion on an SF 368 (Quality Deficiency Report). Mail the SF 368 to us at: Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD, Rock Island, IL 61299-6000. We will send you a reply.

1-4. Administrative Storage. Administrative storage procedures shall be in accordance with TM 740-90-1, Administrative Storage of Equipment. The placement of the test set in administrative storage for short periods of time, up to six months, requires no special care or maintenance.

1-5. Destruction to Prevent Enemy Use. Destruction of the test set will be done only by order of unit commander. The test set does not contain self destruct devices. Demolition by mechanical means, explosives, gun fire, or burning will make the test set useless to the enemy. To keep the enemy from getting useful information, the test set should be completely destroyed, if possible, in accordance with TM 750-244-2, Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

1-6. Manual Organization. This manual is divided into four volumes. The contents of each volume are described below.

a. Volume 1, Operation, Installation, and Reference Data. This volume has test set functional and physical descriptions to give you general information to help you understand how the test set works and what it does. Detailed operating procedures and a description and use of all operator controls and indicators tell you how to set up, checkout, and operate the test set. A tabulated data sheet tells you the physical, functional, and environmental characteristics of the test set. Appendix A of this volume lists all publications referenced in the manual. Appendix B is the Components of End Item and Basic Issue Items Lists. Appendix C lists all of the expendable supplies that you will need to do test set maintenance.

b. Volume II, Scheduled Maintenance. This volume contains the scheduled verification requirements for the test set. Appendix A to this volume contains the Maintenance Allocation Chart (MAC).

c. Volume III, Troubleshooting. This volume gives you troubleshooting procedures, an operator assisted self test (OAST), and supporting information for troubleshooting a faulty test set. The troubleshooting procedures are shown as a series of illustrated flowcharts. Each flowchart traces a fail code to a replaceable item. The OAST is used to checkout the test set after repairs have been made. Supporting data consists of diagrams and illustrations that will help you in doing the troubleshooting task procedures.

d. Volume IV, Maintenance. This volume contains nonscheduled maintenance task procedures for the test set. Maintenance procedures and information in this volume cover corrective maintenance action to repair the test set. Cleaning, painting, and other general maintenance instructions are also included in the volume. Appendix A of volume IV contains the Repair Parts and Special Tools List (RPSTL). Appendix B lists tools that must be fabricated to do the maintenance tasks.

1 -7. Use of English and Metric System Units. All temperature measurements, dimensions, and weights specified in this manual are expressed in English units followed by the metric equivalent in parentheses. A conversion chart is located on the inside of the back cover of this manual.

1 -8. Abbreviations: Following is a list of abbreviations contained in this manual.

AC	Alternating Current
ADJ	Adjustment
AMP	Ampere
AMP	Amplifier
ASSY	Assembly
AST	Automatic Self Test
ATTN	Attention
AUX	Auxiliary
AZ	Azimuth
BD	Board
BII	Basic Issue Items
BIT	Built In Test
BITE	Built In Test Equipment
BKT	Bracket
BLK	Black
BX	Box
C	Celsius
C	Crew
CAT.	Category
CB	Circuit Breaker
CCA	Circuit Card Assembly
CCW	Counterclockwise
CD	Card
CKT	Circuit